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INTERNATIONAL SOCIETY AND SUSTAINABLE
DEVELOPMENT GOALS

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International Society and Sustainable Development Goals

(Eds.)

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First edition, december 2016



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Editorial Aranzadi, S.A.U.
Camino de Galar, 15
31190 Cizur Menor (Navarra)
ISBN: 978-84-9135-464-2
DL NA 2173-2016

Printed in Spain.

Typesetting: Editorial Aranzadi, S.A.U.
Printing: Rodona Industria Gráfica, SL
Polígono Agustinos, Calle A, Nave D-11
31013 – Pamplona

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20) Thomas Brooks, heads science and knowledge at the International Union for Conservation of Nature (IUCN), based in Switzerland. His background is in threatened species conservation, especially of birds, and in biodiversity hotspots, especially in Asian, South American, and African tropical forests. He has authored 237 scientific and popular publications.

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Abbreviations

AAAA, Addis Ababa Action Agenda.
ADLI, Agriculture Development Led Industrialization.
AESOP, Association of European Schools of Planning.
ASTIPI, African Science, Technology and Innovation Policy Initiative.
BIT, Bilateral Investment Treaties.
BOT, Build-Operate-Transfer.
BP, British Petroleum.
BRICS, Brazil, Russia, India, China and Sudafrica.
CAP, Comprehensive Agricultural Policy.
CBD, Convention on Biological Diversity.
CCR, Convention on the Rights of the Child.
CEDAW, Convention on the Elimination of all forms of Discrimination Against Women.
CESCR, Committee on Economic, Social and Cultural Rights.
CGIAR, Consortium of International Agricultural Research.
CLTS, Community Led Total Sanitation.
CRC, Convention on the Rights of the Child.
DBO, Design-Build-Operate.
DW, Developing World.
DYT, Dzongkhag Yarga y Tshogchung.
EAP, East Asia and the Pacific.
ECtHR, European Court of Human Rights.
ECHR, European Convention on Human Rights.

ECOSOC, United Nations Economic and Social Council.
EECA, Eastern Europe and Central Asia.
EIAR, Ethiopian Institute for Agricultural Research.
ESC, Economic, Social and Cultural.
EURA, European Urban Research Association.
FAO, Food and Agricultural Organization.
FDI, Foreign Direct Investments.
FGT, Foster-Greer-Thorbecke.
FSB, Financial Stability Board.
FYP, Five-Year Plan.
GA, General Assembly.
GATT, General Agreement on Tariffs and Trade.
GDP, Gross Domestic Product.
GEO, Global Environment Outlook.
GHG, Greenhouse Gas.
GPEAN, Global Planning Association Network.
GSDR, Global Sustainable Development Report.
GWP, Global Water Partnership.
HDI, Human Development Index.
HIV, Human Immunodeficiency Virus.
HLPF, High Level Political Forum.
HLPF, United Nations High Level Political Forum.
IAEG-SDGs, Inter-Agency and Expert Group on Sustainable Development Goal Indicators.
IATT, Inter-Agency Task Team.
ICAO, International Civil Aviation Organization.
ICCPR, Covenant on Civil and Political Rights.
ICESCR, International Covenant on Economic, Social and Cultural Rights.
IEA, International Energy Agency.

ABBREVIATIONS

IEC, Index of Electoral Competitiveness.
ILO, International Labour Organization.
IMF, International Monetary Fund.
IMO, International Maritime Organization.
IPU, Inter-Parliamentary Union.
IQ, Institutional Quality.
IRENA, International Renewable Energy Agency.
ISID, Inclusive and Sustainable Industrial Development.
IWRM, Integrated Water Resource Management.
JPOI, Johannesburg Plan of Implementation.
KCD, Knowledge and Capacity Development.
LAC, Latin America and the Caribbean.
LDCs, Least Developed Countries.
MAPS, Mainstreaming, Acceleration and Policy Support.
MDGs, Millennium Development Goals.
MENA, Middle-East and North Africa.
MSMEs, Micro, Small and Medium Enterprises
MVA, Manufacturing Value Added.
NAFTA, North American Free Trade Agreement.
NARS, National Agricultural Research System.
NGOs, Non Governmental Organizations.
NIEO, New International Economic Order.
OD, Open Defecation.
ODA, Official Development Assistance.
ODF, Open Defecation Free.
OECD, Organization for Economic Co-Operation and Development.
OFIC, Fund for International Development.
OHCHR, Office of the High Commissioner for Human Rights.
OPEC, Organization of the Petroleum Exporting Countries.

OWG, Open Working Group.

PADETES, Participatory Demonstration and Training Extension System.

PASDEP, Plan for Accelerated and Sustained Development to End Poverty.

PBCs, Performance-Based Contracts.

PG, Political Governance.

PoU, Prevalence of Undernourished.

PPP, Purchasing Power Parity.

RARIs, Regional Agricultural Research Institutes.

READ, Rural Economy Advancement Programme.

SA, South Asia.

SCPP, Sustainable Consumption and Production Programmes.

SDGs, Sustainable Development Goals.

SSA, Sub-Saharan Africa.

STI, Science, Technology and Innovation.

TFM, Technology Facilitation Mechanism.

TFP, Total Factor Productivity.

TOSSD, Total Official Support for Sustainable Development.

TRIMs, Trade Related Investment Measures.

TRIPs, Trade Related Intellectual Properties.

TST, Technical Support Team.

TTIP, Transatlantic Trade and Investment Partnership.

UAA, Urban Affairs Association.

UCLG, United Cities and Local Governments.

UDHR, Universal Declaration of Human Rights.

UHC, Universal Health Coverage.

UN, United Nations.

UNACLA, United Nations Advisory Committee of Local Authorities.

UNCED, United Nations Conference on Environment Development.

ABBREVIATIONS

UNCTAD, United Nations Educational, Scientific and Cultural Organization.

UNDP, United Nations Development Program.

UNDESA, United Nations Department of Economic and Social Affairs.

UNDG, United Nations Development Group.

UNDHR, Universal Declaration Of Human Rights.

UNEP, United Nations Environment Programme.

UNFCCC, United Nations Framework Convention on Climate Change.

UNFPA, United Nations Populations Fund.

UNGA, United Nations General Assembly.

UNHCR, United Nations High Commissioners for Refugees.

UNICEF, United Nations Children's Fund.

UNIDO, United Nations Industrial Development Organization.

UNO, United Nations Organization.

UNODC, United Nations Office on Drugs and Crime.

UNTT, United Nations System Task Team.

WASH, Water, Sanitation and Hygiene.

WB, World Bank.

WFS, World Food Summit.

WHO, World Health Organization.

WMO, World Meteorological Organization.

WSSD, World Summit on Sustainable Development.

WSUP, Water and Sanitation for the Urban Poor.

WTO, World Trade Organization.

WDR, World Development Report.

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Previous note

The Chair on Development and Poverty Eradication aims at promoting the engagement of universities around the world in achieving the 2030 Agenda for Sustainable Development through training, advocacy and research. It was established by the United Nations «Sustainable Development Goals Fund (SDG-F)» and its academic secretariat is hosted by the Rey Juan Carlos University, as permanent secretariat of the network «Universities fighting against poverty».

As part of the Chair's work, this book introduces an overall view of the Sustainable Development Goals. Authors have conducted specific studies on each of the SDGs, as well as introduction and conclusions, which could be extremely useful to readers.

We would like to express our gratitude to all the authors and coordinators of the book. Indeed, all of them make a valuable contribution and effort in preparing a book of these dimensions and features. The engagement of the authors and coordinators in achieving the publication of this book has been enormous and we trust that the results will help raise awareness on SDGs. In addition to academic articles, the book includes a sustainable development reference list which contains a selection of academic articles in English, French and Spanish. The majority of the authors have also introduced more specific literature in each chapter.

The international community needs to make an authentic effort to achieve the SDGs. To accomplish this task, academic studies should play a key role. By researching and studying the SDGs, in all their different dimensions, academia can contribute to inform policy making for eradicating poverty and ensuring the welfare of everyone, leaving no one behind.

The analysis and recommendations of this report do not necessarily reflect the official views of the SDG Fund Secretariat, the United Nations or its Member States.

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Chapter 1

The sustainable development goals: an introduction¹

PALOMA DURÁN Y LALAGUNA

UN Sustainable Development Goals Fund

SUMMARY: 1. WHAT'S NEW IN THE NEW DEVELOPMENT AGENDA?. 2. UNIVERSALITY: WHAT DOES IT MEAN?. 3. PRIVATE SECTOR AS AN ENGINE OF SUSTAINABLE DEVELOPMENT. 4. UNIVERSITIES: GETTING READY FOR SDGS. 5. CONCLUSIONS: THE ROAD AHEAD. REFERENCES.

ABSTRACT:

This introductory chapter briefly describes the major theoretical and practical tenets underlying the new 2030 Agenda for Sustainable Development and its implications for a new approach to development and international cooperation, radically different from previous international development paradigms. Using the experience of the SDG Fund, a UN interagency mechanism, the author argues that one of the key transformations that the new sustainable development agenda brings (and also the key for its success) is how the new landscape of development actors (international organizations, different government authorities, civil society, but also business, private sector and philanthropists) come to play new roles. How the world would look like in 2030 will greatly depend on how these different development agents come together and how they find new ways of partnering. The chapter ends with a particular reference to universities and SDGs.

1. Director UN-SDG Fund and former Professor, Law School, Complutense University, Spain. The views of this paper don't necessarily reflect the official position of the UN or the SDG-Fund. The author wanted to especially thank Raul de Mora for his work done since he prepared a first outline of this paper.

1. WHAT'S NEW IN THE NEW DEVELOPMENT AGENDA?

With great fanfare and optimism, world leaders of 193 countries agreed upon a new development agenda in September 2015 at the United Nations headquarters in New York. The Agenda 2030 for Sustainable Development and its accompanying Sustainable Development Goals (SDGs) were born following the previous Millennium Development Goals set to expire in 2015. A first proposal was already incorporated in the Rio+20 Conference Declaration of 2012. What was initially named as post-2015 agenda become the agenda 2030. For the Agenda 2030 to be successful it is necessary first and foremost to understand why this agenda is substantially different from the manner in which international development was understood (and operated) in the recent past.

One of the greater criticisms received by the Agenda is its ambition reflected in an expansive menu of goals (17) and targets (169). Major international media referred to the list as the «169 commandments» (The Economist, 2015), «the impossible long list» (Time, 2015) or «senseless, dreamy and garbled» (Foreign Policy, 2015) or «a high-school wish list on how to save the world» (referred to by William Easterly in his article in Foreign Policy, 2015). At the moment of writing this text, discussion is still ongoing on how this list of goals and targets are going to be measured and what indicators are going to assess success. Perhaps all this criticisms missed one of the key strengths of the agenda. This wide set of SDGs is mainly the result of the inclusive process that led to their approval, in a very different manner from their precursors, the MDGs. Starting in Rio+20, for more than three years, open and wide consultations took place all over the world in what is considered by the UN as one of most inclusive processes in the adoption of an international agreement in its history. Online surveys with more than 9 million responses (results can be downloaded from <http://data.myworld2015.org/>, hundreds of national consultations at the local level, dozens of thematic global consultations (ranging from food security, nutrition to peace and governance), a high level panel of eminent persons (UN High Level Panel, 2013) and open discussions at the UN offices in New York in the so-called Open Working Group provided ample opportunities for UN Member States (who at the end of the day have the responsibility to put forward and approve resolutions and agreements at the UN) to listen to young people, civil society, experts, UN Agencies and businesses around the world. In addition, this process coincided with two other relevant and related international negotiation processes, the financing for sustainable development framework (Addis Ababa Conference, July 2015) and the Climate Change Agreement (Paris, December 2015).

These discussions made clear that the traditional approach to development wasn't fit for a new geopolitical and economic context. During the last decades, development was measured mainly in terms of Official Development Assistance, frequently unidirectional from donor countries to developing countries, covering mainly social needs (education, hunger, health, nutrition) and with little attention to underlying structural inequalities and climate change. Development aid projects were mostly led by international development organizations and civil society.

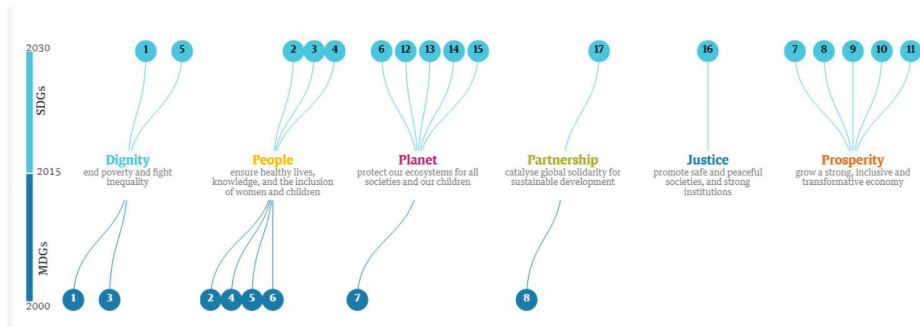
An analysis to the final document approved in September 2015, highlights some important innovation and considerations in the understanding of development aid:

- *Moving from averages to universal inclusion.* Perhaps not better captured than in the premise «leave no one behind» put forward by the High Level Panel of Eminent Persons (UN Panel, 2013). While MDGs', targets read, «reduce by half», SDGs affirm «ensure everyone». Full development can't be sustained when communities and societies are left behind, disconnected and disfranchised.

- *An increased focus on inequalities.* For leaving no one behind, it is necessary to understand what factors are influencing the unequal access to opportunities. Gender, geography, ethnicity...often explain the unequal enjoyment of opportunities. This obviously coincides with a new focus on inequality all over the world and particularly in western countries after the financial and economic crisis of 2008 with outstanding voices such as Stieglitz (2012), Picketty (2014) and others gaining unprecedented visibility in global and mainstream media. The attention to inequalities marks a substantial theoretical change not only in the way of understanding development but also in the manner of measuring impact and results, highlighting the need to improve access to disaggregated data. It also requires unearthing the factors underlying inequalities, many times intersecting (Kabeer, 2010). Therefore, inequalities can't be addressed in an isolated manner.

- *From a social and mainly anti-poverty strategy to an integrated agenda that incorporates the three dimensions of sustainable development: social development, inclusive economic growth and environmental protection.* Graph 1, extracted from an infographic published by the British newspaper, The Guardian, visually displays these changes in comparison to the SDGs, by using the general framework of the 5Ps highlighted in the UN Secretary General Report of 2014: people, prosperity, peace, partnership and planet (Ki-moon, 2014). However, defining the three

dimensions of sustainable development with a good number of goals is not enough. The three dimensions of sustainable development require that to measure the impact of SDGs or any particular initiative aimed at achieving them social, environmental and economic elements need to be factored in. For example, from a pure economic analysis some projects may look like unfeasible or «expensive» but if social and environmental elements are factored in, the assessment of impact can be substantially different. It is no coincidence that with in just a few months of the adoption of the 2030 Agenda two other key global agreements were agreed upon: the Climate Change Agreement of Paris and the Addis Ababa Action Agenda of the Third International Conference on Financing for Sustainable Development.



Graph 1. Differences between MDGs and SDGs, *The Guardian*

– *Public sector can't go alone.* Such an ambitious and integrated agenda necessarily requires joint action. Public sector, governments and intergovernmental institutions, can't tackle by themselves the challenges ahead. Perhaps this is not better affirmed than in the Addis Ababa Accord on Financing Sustainable Development. There is in part a realisation of the need for additional financing to achieve the SDGs (estimates have been put at trillion of dollars annually by different calculations such as those by the multilateral development banks (2015), but more importantly there is the notion that civil society and particularly business and private sector have an important role to play. Even if often contested, the 2030 Agenda makes it evident that businesses are going to be key in achieving the SDGs. Later in this text, a further discussion on the role of private sector in SDGs follows.

– *A new geographical order.* The traditional distinction between donor and beneficiary countries doesn't reflect the new geographical order any more. The 15 years of MDGs saw the world take some of the largest

strides in poverty reduction and the rise of new geopolitical powerhouses. Emergent economies, including the BRICS and beyond acquired a new role that wasn't reflected in the frequent differentiation between developing and developed countries used in the past. ODA from traditional donors hasn't kept up with development needs and in many cases has stabilized or even fallen (OECD/DAC 2015). During this period, more than 30 countries moved from low-to middle-income status and many of these «poor developing countries have themselves become net donors, rather than recipients» (CUNY, 2016). This has been accompanied by the rise of «South-South Cooperation» as an instrumental element in international development cooperation. According to Quadir (2013), emerging donors such as China, India, Brazil and South Africa have changed the aid paradigm from a narrative of conditionality to a new focus on the strategic needs of partner countries.

– *Peace and governance at the core of SDGs.* Low on the list of SDGs, lays what it is perhaps the most difficult and strikingly different element in the menu of sustainable development. With the incorporation of goal 16 (its late arrival to the list is due to the difficult negotiations during the drafting of the 2030 Agenda), the message is clear: there can not be sustainable development without peace and without strong institutions. All development gains are easily lost if peace is not guaranteed and conflict and crisis explode. With this in mind, particularly within the UN, starts a significant change in the understanding of the UN's operations, blurring the separation between the UN's three traditional areas of action: security and peacekeeping, human rights and development. Obviously just by including a goal doesn't necessarily mean that peace and security will be entrenched in development programmes. For this reason, there are efforts to better align these three elements. «The challenges of sustaining peace», the title of a report by a group of experts, to the UN Secretary General includes a description of some of the elements affecting sustainable peace (United Nations, 2016). A high level meeting on this matter will take place in 2017 and the new UN Secretary General will produce a report 60 days ahead of this event. It is expected that a greater interlinkage between peace and sustainable development will make «peace sustained».

It is evident that the open and inclusive discussion process that gave birth to the Sustainable Development Goals allowed the inclusion of elements that otherwise would have been left out. As is often repeated by development practitioners and policymakers, sustainable development is «not business as usual» for the development world. Substantial changes took place in the geopolitical, moral, ethical, ecological and economic underpinnings of the agenda. Moreover, all these elements have a clear

influence on how all-different development actors, traditional and non-traditional, (governments, international organizations, businesses, civil society and universities) will find their place and fulfill their responsibilities in achieving the SDGs. Before analyzing some implications for these actors it is necessary to dedicate some space to review what is perhaps one of the most pressing elements in the new Agenda: the so-called universality.

2. UNIVERSALITY: WHAT DOES IT MEAN?

Probably one of the most highlighted and often mentioned differences in SDGs from the previous development agenda is their universality. As stated in its preamble, the Agenda 2030 for Sustainable Development is a universal agenda that applies to everyone everywhere. It is a radically new understanding of development and it poses questions in terms of responsibilities, ethical understanding of development and how development should be financed².

However it is clear that different definitions of universality showcase the lack of agreement over what universality means. Universality means recognizing that sustainable development issues exist in all countries, regardless of their income levels. It also acknowledges the existence of international global public goods that can only be protected and built through cross-border collaboration. Poverty, inequality, social exclusion, maternal and child mortality, unemployment and environmental degradation are not confined to developing countries (UNEP/UNCHR, 2016). The UN Secretary General's Synthesis Report stated «all countries will need to change, each with its own approach, but each with a sense of the global common good.» (Ki-moon, 2014) Universality does not mean that «one size fits all» or that national sovereignty is to be set aside. Transposing a global agenda to the national level will require some tailoring.

Universality also implies that responsibility is shared among countries and among public and private actors. The premise of universality is the principle of «Common but Differentiated Responsibilities» that indicates that all actors can contribute to the achievement of SDGs but have different modalities to do so. Finding ways to reconcile the requirement of universal applicability with national differentiation will shape development cooperation and national sustainable development plans.

Does this mean that development cooperation definitions have to change? Universality has some relevant consequences on financing

2. For a good discussion on different ethical and moral approaches to global poverty reduction, THOMAS POGGE (2004) reviews Rawls thesis of purely causation of poverty.

sustainable development and measuring it. For some authors, ODA as a measure of development cooperation is now obsolete and insufficient and new alternatives, such as the Total Official Support for Sustainable Development (TOSSD) put forward by the OECD/DAC are being designed and discussed, usually accompanied by conflicting views from donors and non-donors as it may include elements not considered traditional development aid. There are discussions whether sustainable development investments in developed countries should be reckoned as development cooperation. Some authors (Alonso and Glennie, 2015) defend nevertheless that development cooperation should be highly focused on developing countries (Graph 2).

Graph 2. What is development cooperation? (Alonso and Glennie, 2015)

Table 1: What is development cooperation?

| Purpose | Characteristics | Type |
|--|---|---|
| Guaranteeing universal basic standards of social protection Promoting convergence among countries' standards of living Supporting efforts of developing countries to actively participate in the provision of international public goods | Explicitly intended to support national or international development priorities Not driven by profit: Discriminates in favour of developing countries Based on cooperative relationships that seek to enhance developing country ownership | Financial (and in kind) transfer Capacity support Policy change |

A concrete experience can exemplify how sustainable development finance is changing. The SDG Fund³, a United Nations mechanism that brings together UN Agencies, governments, private sector, academia and civil society, aware of the transformations in the financing landscape introduced the modality of matching funds. Every programme, at the country level, should be able to mobilize at least the same amount of resources as those provided by the Fund. To a great extent these matching funds come from traditional donors and UN agencies, but national governments, particularly in middle-income countries, are bringing more of their own national resources. For instance, more than 25% of the resources allocated to the SDG Fund programmes are coming from non-

3. The SDG Fund was created in 2014 for the implementation of the new agenda 2030. A multi donor and multi agency mechanism it is currently working in 22 countries, with 16 agencies of the UN and implementing almost \$70M. More information about the Fund can be found on its webpage: www.sdgfund.org.

DAC governments. By requiring matching funds these projects became more sustainable, more likely to be scaled-up and increased national ownership by government authorities.

Universality also implies universality of action. Agenda 2030 is an agenda of action, where all actors need to play a role and where all actors are to benefit if SDGs are moved forward and achieved. Taking into account the purposes of this publication, it is worthwhile to take a closer look at two actors that are gaining new ground with the SDGs: private sector and universities.

3. PRIVATE SECTOR AS AN ENGINE OF SUSTAINABLE DEVELOPMENT

Private sector had a very residual role in the drafting and implementation of MDGs, something that is changing substantially with the new development agenda. SDGs require joint action and there is almost no SDG that can be achieved without the participation of private sector. As highlighted in a report published by the SDG Fund with Harvard University and Business Fight Poverty, «it would be hard to drive such development forward without business being on board» (Helen Clark, statement, event Business Call to Action, November 2013). In fact as the Addis Ababa Action Agenda noted, development actors should focus on «unlocking the transformative potential [of the private sector... and invite] businesses to apply their creativity and innovation toward solving sustainable development challenges and to engage as partners in the development process». However, in spite of a growing emphasis on the role of private sector it is still necessary to identify mechanisms for engaging it in the work of SDGs. This is the case for example with the United Nations. Its several agencies, with a few exceptions, have very limited experience and practical successful examples of working with the private sector in truly participatory partnerships.

Changing this situation is one of the key objectives of the SDG Fund and as a first step the Fund established a Private Sector Advisory Group, formed by business leaders of different industries and from all regions of the world, for guiding the SDG Fund in building a roadmap for how public-private alliances can provide large-scale solutions for achieving the new SDGs. In November 2015, together they launched a report titled «Business and the United Nations» to shed light on the challenges of engaging UN with private sector and governments.

Among its conclusions, the report highlighted the need to move

beyond a philanthropic or «resource mobilization model» (private sector seen as a source of financial resource by development organizations) to a «core business model» of using the core business resources of private actors in achieving SDGs (private sector seen as an actor). For example, by developing new technologies, services, products or business models that address poverty, hunger, environmental protection or health, the private sector can have a multiplying effect in improving lives around the world, and in doing so improving their prospects. The report highlighted the very unique knowledge and understanding that businesses have of their customers which enhances their capacity to develop products and services that are sustainable and will be incorporated and accepted by customers. Business communication channels can also promote the SDGs and, most importantly, the values associated with the 2030 agenda: that social, economic and environmental sustainability are indivisible, taking into account the challenges of the current world.

SDG Fund joint programmes are engaging businesses in different ways, with preliminary results from monitoring reports suggesting that public-private partnerships can contribute to achieving development goals, capacity building, wealth distribution, and sustainable economic growth. However the planning, design and monitoring processes and culture of businesses and development organizations (UN Agencies, NGOs and others) vary substantially. For this reason it is necessary to identify and develop new tools to co-design, co-create, co-implement and co-evaluate programmes.

It is a fact that many businesses are already integrating SDGs in their sustainability reports and other reporting mechanisms. As a complete package with goals and targets, many businesses find it easier to track their contribution, particularly taking into account that the 17 goals and 169 targets cover most of the key business areas of companies around the world. This allows companies to «cherry pick» the SDGs they believe they are in a better position to achieve. A survey by PwC among business and citizens unearthed a surprisingly high SDG awareness amongst the business community (92%) compared to the general population (33%). Equally important, at that moment 71% of the companies participating in the poll had already started to take action and had started planning how to respond to SDGs.

This obviously doesn't mean that responsibility is shifting from the public to the private sector. In fact in the abovementioned study respondents see government as having the prime responsibility of achieving SDGs. There are also some concerns that the participation

of businesses in development could contribute to a privatization of international development aid (for example, see Global Policy Forum's report in 2015 by Adams and Martens).

The experience from the SDG Fund shows that private sector has no interest in taking over development aid. On the contrary, companies discovered an enormous potential for improving business opportunities, motivating employees and strengthening long-term relationships with key stakeholders. Individual corporate social responsibility initiatives have a greater impact when partnering with public sector and international institutions. And this approach fits well with fulfilling their environmental and social responsibility.

4. UNIVERSITIES: GETTING READY FOR SDGS

It is no coincidence that this publication is part of a new initiative by the SDG Fund to promote greater participation of universities in SDGs. As the world is changing rapidly, universities are adapting to the new landscape context. The traditional separation between academia and the professional world is becoming more porous and dynamic.

Higher education was never explicitly involved in the MDGs as either a development goal in its own right, or as a potential agent to address other development goals (Roberts and Ajai-Ajagbe, 2013). The focus was on primary education and particularly on access to primary education (not educational outcomes). Progressively, MDGs and international development became a discipline of study that acquired higher interest by students and researchers. Universities of course contributed also by producing research, data and analysis on the MDGs experience. It could be said that universities «followed the MDGs» from the outside.

At the SDG Fund we are convinced that universities will be at the core of 2030 Agenda. Target 4.3 refers specifically to universities by demanding equal access for all women and men to affordable and quality technical, vocational and tertiary education, «including university». For some education specialists, this has been one of the first occasions on which the UN has so strongly affirmed that inequality in access to higher education is a driver of poverty.

Indeed, at the SDG Fund we are convinced that universities are going to play at least three key roles in fulfilling the 2030 Agenda for Sustainable Development:

– *Expanding human capital* with an SDG perspective. First, by instructing students who understand how SDGs are going to be important and

required to make their world better and more sustainable. SDGs should not only be made a part of international development programmes' curricula but also of all those disciplines that are expected to contribute to their achievement (that is, in almost every discipline). It is not only about memorizing or learning the 17 goals, but about embedding sustainable development principles across disciplines. SDGs are not isolated goals but deeply interconnected and universities will need to educate their students to understand the social, economic and environmental implications on their future careers and professional work. Second, universities will also be a part of new training programmes for non-university students. Massive open online courses are a clear example of what can be done in this realm and many more hybrid-training formats will contribute to continuous and lifelong learning modalities.

– *Research.* Researchers at universities have a privileged vantage point to look at the different SDGs, understand what approaches are more effective and provide research on the process of implementing the 2030 Agenda. Some of the topics will require new conceptual frameworks, for instance to better understand the interlinkages and correlations among different goals. Research will help us better understand the costs of implementing the SDGs, but also the opportunity costs of not investing sufficiently in the SDGs. Action-oriented research, understanding its different users (policy-makers but also private sector and civil society), will be extremely necessary. As a universal agenda, researchers should help to understand SDGs at the global but also at the local level, their underlying similarities and differences among countries and territories. Taking into account that the 2030 Agenda puts its focus on leaving no one behind and lifting out of poverty those in most need, collaboration among universities may tackle the unequal distribution of universities and research centres. Oftentimes the poorest of the poor live in areas without universities or without research centres that can provide the most basic research on understanding the sustainable development needs of those areas.

– *Implementing the agenda.* As observers, universities are becoming more and more active in multi-stakeholder partnerships for SDGs. University researchers and students are participating hands-on in projects by contributing with their expertise, time and financial resources. They can contribute to the transfer of knowledge and to build the tools that SDGs will require. Universities do indeed invest in development, a trend that is becoming more frequent amongst the academic world. This «clinical» approach, as it could be defined, facilitates interventions first-hand in the field. However, it is important university development projects are not

isolated and as much as possible are integrated in to greater efforts that include government, civil society and private sector. For example, a SDG Fund programme in Sierra Leone is working in Kono, paradoxically one of the poorest districts of the countries in spite of a highly productive mining industry (minerals and gold). After more than 10 years of conflict and the Ebola outbreak in 2014, Columbia University is collaborating in a joint programme with UN Agencies, private sector and national government to use geographical information system (GIS) technologies to better understand the territory and track its recovery after the severe crisis that affected it.

Aware of the tremendous potential of universities to contribute to SDGs, the SDG Fund has established a University Chair that in collaboration with researchers, students and universities across the world will advocate for universities to have a be a more central role of the work to be done in the next 15 years. One of the first initiatives of the Chair is the publication of this book in which university specialists across the world provide a general overview of the 17 SDGs.

5. CONCLUSIONS: THE ROAD AHEAD

The world is facing a unique moment in the understanding of the international relations. A growing tension between globalists and anti-globalists is evident in political discourse and media narratives (see for example, the cover of the *The Economist* in July 2016). Traditionally development goals were globalists' territory. Agenda 2030 if read carefully is a roadmap that can bridge this divide. Agenda 2030 is apparently a global agenda, adopted at the United Nations, but it is first and foremost a local action plan that needs to address the pressing challenges of inequality, environmental degradation and social injustice for everyone everywhere. It is a shared task for all of us to work on for the next 15 years. We need to understand that development is changing and that all actors have a role to play, including universities.

REFERENCES

- ALONSO, José A., and JONATHAN GLENNIE (2015). «What is development cooperation?» 2016, Development Cooperation Forum Policy Briefs. No. 1. 2015.
- ADAMS, B., & MARTENS, J. (2015). *Fit for Whose Purpose?: Private Funding and Corporate Influence in the United Nations*. GPF.

KI-MOON, B. (2014). The road to dignity by 2030: ending poverty, transforming all lives and protecting the planet. Synthesis report of the Secretary-General on the post-2015 sustainable development agenda. NY: *United Nations*, 4.

KABEER, N. (2010). Can the MDGs provide a pathway to social justice? The challenge of intersecting inequalities. *Child Poverty and Inequality*, 57.

OECD/DAC (2015), Multilateral Aid 2015: Better Partnerships for a Post-2015 World.

Panel, UN High Level. «A new global partnership: Eradicate poverty and transform economies through sustainable development.» *New York, NY: United Nations* (2013).

PIKETTY, T. (2014). *Capital in the Twenty-first Century*. Print.

POGGE, Thomas (2004). «Assisting the global poor.» The ethics of assistance: Morality and the distant needy: 260-88.

Price Water House Cooper (2015) Make it your business: Engaging with the Sustainable Development Goals.

QUADIR, Fahimul (2013). «Rising Donors and the New Narrative of «South-South Cooperation: what prospects for changing the landscape of development assistance programmes?» *Third World Quarterly* 34.2 (2013): 321-338.

Multilateral Development Banks (2015). From billions to trillions. MDB contributions to financing sustainable development. Policy Note. <http://www.worldbank.org/mdgs/documents/FfD-MDB-Contributions-July-10-2015.pdf>.

ROBERTS, L. and AJAI-AJAGBE, P. (2013). Higher education and the Millennium Development Goals: where are we coming from, and where are we going?

SDG Fund, Harvard University and Business Fights Poverty (2015). Business and the United Nations. Working Together: Towards the Sustainable Development Goals: A framework for Action. Available at <http://www.sdgfund.org/business-and-un>.

STIEGLITZ, J. (2012). *The Price of Inequality. How Today's Divided Society Endangers Our Future*. New York City.

The Economist (2015). <http://www.economist.com/news/leaders/21647286-proposed-sustainable-development-goals-would-be-worse-useless-169-commandments>.

Time (2015). <http://time.com/4052109/un-sustainable-development-goals/>.

United Nations (2016): <http://www.un.org/en/peacebuilding/pdf/150630%20Report%20of%20the%20AGE%20on%20the%202015%20Peacebuilding%20Review%20FINAL.pdf>.

UNEP and UNHRCO (2015). «Universality in the Post 2015 Sustainable Development Agenda», UNEP and UN Human Rights Office of the High Commissioner.

United Nations (2012) The Future We Want.» Outcome document of the United Nations Conference on Sustainable Development June 2012.

Chapter 2

Sustainable development goals: a principle and several dimensions¹

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SUMMARY: 1. INTRODUCTION. 2. FEATURES OF THE EVOLUTION OF SUSTAINABLE DEVELOPMENT. 3. STRUCTURE OF THE PRINCIPLE OF SUSTAINABLE DEVELOPMENT. 4. PRINCIPAL DIMENSIONS OF SUSTAINABLE DEVELOPMENT. 5. CONCLUSIONS.

ABSTRACT:

Sustainable development is a notion which has an impact in the International Legal Order. In fact, it is an evolutive and cumulative concept. Its effects depend on how some structural principles of International Law are applied. Sustainable Development Goals (SDG), which were set down in 2015, offer an opportunity to regard the sustainable development as a «constitutional principle». As a consequence, rights and obligations could arise from this principle. The notion of sustainable development is reinforced thanks to SDG. Sustainable development various dimensions would indeed help to set it up as a fundamental principle, but, at the same time, however, they could weaken the meaning and scope of this principle. The International Community needs a principle by which the sustainable

1. This work has been carried out under the framework of the «Acciones de Dinamización, Redes de Excelencia, del Plan Nacional de I+D+i, Nuevos Desafíos del Derecho Internacional, (Ref. DER2015-69273-REDT), MINE-CO/FEDER, UE». It forms part of the «Proyecto de la Cátedra sobre desarrollo y erradicación de la pobreza» (SDG-FUND y URJC) V528; y del proyecto I+D «Actores económicos internacionales y derechos humanos. Especial relevancia para España». DER2014-55484-P.

development is recognised and, at the same time, States obligations may be established, including, if necessary, international responsibility.

1. INTRODUCTION

The international community has decided to implement a project of enormous significance that will finally ensure the welfare of humanity. On 25 September 2015, the General Assembly of the United Nations passed Resolution 70/1 with the Declaration of: «transforming our world: the 2030 Agenda for Sustainable Development», which establishes 17 objectives and 169 targets. The Agenda means a «plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom»². Nothing closer to reality and further from what is immediately possible. The Sustainable Development Goals (SDG) nevertheless structure a conceptual and regulatory framework in which the principle of sustainable development must be asserted. The proclamation of this assertion will undoubtedly be the last step in the evolution that the concept has been experiencing for some time³.

2. Preamble, <http://www.un.org/sustainabledevelopment/es/2015/09/la-asamblea-general-adopta-la-agenda-2030-para-el-desarrollo-sostenible/>.
3. Some titles: Th. M. PARRIS and R. W. KATES, Characterizing and measuring sustainable development, *Annual Review of Environment and Resources*, vol. 28, 2003, pp. 559-586; J. D. SACHS, From Millennium Development Goals to Sustainable Development Goals, *www.thelancet.com*, vol. 379, June, 2012; N. QUENTAL; J. M. LOURENÇO and F. NUNES DA SILVA, Sustainable development policy: goals, targets and political cycles, *Sustainable Development*, volume 19, Issue 1, pp. 15-29, January/February 2011; Ch. VOIGT, *Sustainable Development as a Principle of International Law. Resolving Conflicts between Climate Measures and WTO Law*, Leiden, 2009; N. SCHRIJVER, *The Evolution of Sustainable Development in International Law: Inception, Meaning and Status*; Leiden 2008 (The Evolution of Sustainable Development in International Law: Inception, Meaning and Status, RCADI, vol. 329, 2007, pp. 217-412); V. BARRAL, *Le développement durable en droit international. Essai sur les incidences juridiques d'une norme évolutive*, Paris, 2015; y Sustainable Development in International Law: Nature and Operation of an Evolutive Legal Norm, *EJIL* (2012), vol. 23 no. 2, pp. 377-400; M. C. CORDONIER SEGGER; M. W. GHERING and A. NEWCOMBE, *Sustainable Development in word investment international*, Kluwer Law International, 2011; A. J. RODRIGO HERNÁNDEZ, *El desafío del desarrollo sostenible: los principios de derecho internacional relativos al desarrollo sostenible*, Fundación Privada Centro de Estudios Internacionales, Barcelona, 2015; J. JUSTE RUIZ, El principio del desarrollo sostenible en el Derecho internacional y europeo del Ambiente: Algunas reflexiones conclusivas», *Il principio dello sviluppo sostenibile nel Diritto internazionale ed Europeo dell'ambiente*, Società Italiana di Diritto Internazionali, XI Congreso, Alghero 16-17 giugno 2006, 2007, pp. 333-356; P. MERCADO PACHECO, *Desarrollo sostenible y gobernanza: retóricas del derecho global y de la justicia ambiental*, *Derecho, globalización, riesgo y medio ambiente*, Valencia, 2012, R. BERMEJO GARCÍA, El derecho al desarrollo: un derecho complejo de contenido variable, *ADI*, 1985, pp. 211-243; and MATSUI, The road to sustainable development: evolution of the concept

The 2030 Agenda establishes far reaching goals. It is an enormous task that raises numerous issues for analysis. The reality of development goes much further than the 17 SDGs in the strict sense, however the Goals attempt to outline a favorable scenario to ensure the equality and welfare of the human beings that inhabit the planet. This is why the year 2015 was established as the perfect time to address a new agenda for the present international community⁴.

The 2030 Agenda is presented in a very ambitious way and takes into account many more elements of sustainable development than those included in the Millennium Development Goals (MDGs). Undoubtedly, «The SDGs are to succeed the Millennium Development Goals (...), but are much broader in their scope. Unlike the MDGs, which were focussed on social issues, the SDGs set out targets across all three dimensions –social, economic and environmental– of sustainable development. Furthermore, while the MDGs were targeted at developing countries, the SDGs are applicable to all countries»⁵.

The complex structure of the SDGs should not prevent an appreciation of their true value, which goes beyond achieving the targets set. Each one of the SDGs summarises the status of the issue, but as a group, they express the significance that sustainable development must have at an international level. The SDGs therefore make an outstanding contribution to the notion of sustainable development and, in particular, provide a perspective of the international reality that must necessarily be translated into political and legal terms. The SDGs constitute a step forward on the road leading to the assertion of sustainable development not only as a political principle, but also one with legal effects. In fact, «the September 2015 Summit to adopt the post-2015 development agenda agreed a significant expansion in the number of goals and targets by comparison

of development in the UN, in K. GINTHER and others, *Sustainable development and good governance*, Dordrecht, 1995, pp. 53-71; and D. TLADI, *Sustainable development in International Law*, Preotia, 2007.

4. It was stated that «este año representa un momento histórico a nivel mundial. Estamos siendo testigos de la construcción de una nueva agenda de desarrollo que definirá qué objetivos debe alcanzar la humanidad no sólo para satisfacer sus necesidades básicas, sino también para garantizar una vida digna a las generaciones presentes y futuras. Ante problemáticas tan devastadoras como la extrema pobreza, la enorme desigualdad entre las personas, la inequidad entre géneros y una creciente degradación ambiental, los países decidieron este año adoptar un nuevo marco de trabajo para los próximos 15 años que reemplazará los Objetivos del Milenio», *ABC de los objetivos de desarrollo sostenible: la importancia de la dimensión ambiental en la nueva agenda mundial de desarrollo*, Colombia, 2015, p. 3.
5. *Objetivos de desarrollo sostenible, Guía de implementación nacional para OSC dedicadas a SDSR*, London, 2015, p. 2.

with the MDG framework. This was with a view to ensuring that the agenda was transformative. In turn, this reflected a majority belief that an integrated and multi-dimensional approach would prove a more fruitful way forward»⁶.

The expression «sustainable development» forms part of the terminology habitually used in international relations, however is yet to reach a stage in which all its practical effects are a reality. The mere structuring and gradual achievement of the MDGs will constitute the foundations for a new beginning for the international community. The key issue to resolve is whether the steps taken by the international community in recent years have enabled sustainable development to become a fundamental structural principle and, therefore, if the dimensions of this development, included in different international instruments, completely express the effects of such a notion. The proclamation of the SDGs and implementation of the 2030 Agenda should be sufficient for a general assertion of sustainable development, in its different dimensions, as an essential principle of the international legal system.

2. FEATURES OF THE EVOLUTION OF SUSTAINABLE DEVELOPMENT

The definition of the content and scope of sustainable development must be based on the past events that have contributed to the notion. Resolution 70/1 highlighted the importance of «the outcomes of all major United Nations conferences and summits which have laid a solid foundation for sustainable development and have helped to shape the new Agenda»⁷.

The concept of development and, therefore, the meaning of sustained development originated in the second half of the 20th Century. After the initial approaches in the sixties and seventies, such as the United Nations Conference on the Human Environment, which took place in Stockholm from 5 to 16 June 1972, the importance of the International Conferences held in the nineties must be highlighted. In particular, we should not overlook the major contributions of the First United Nations Conference on the Environment and Development held in Río de Janeiro in 1992⁸.

6. J. LUNN; E. DOWNING; and L. BOOTH, The Sustainable Development Goals and the post-2015 development agenda, *Briefing Paper*, no. 7291, 28 September 2015, p. 23. Vid. FERNÁNDEZ LIESA, C. R., Transformaciones de Derecho internacional por los Objetivos de desarrollo sostenible, *Anuario Español de Derecho internacional*, 2016.

7. A/Res/70/1, paragraph 11.

8. In addition, «the World Summit on Sustainable Development, the World Summit

However, it would be the Millennium Declaration on 8 September 2000, under the framework of the United Nations, which specifically established the Millennium Development Goals (MDGs) and definitively placed emphasis on the *essential nature of the notion of sustainable development*.

From that moment on, it was at least made clear that «los *Objetivos* declaran (...) una doble intencionalidad: de un lado, la voluntad de avanzar en una acción más concertada a favor del desarrollo y del bienestar mundial, coordinando las actuaciones de cada país y las de los Organismos internacionales en tareas que muestren su compromiso con los sectores más pobres de la Tierra, en diálogo con la ciudadanía; de otro, dotando a estas entidades y, en general, a las personas interesadas, de criterios, procedimientos e indicadores con los que evaluar las políticas que se adopten en cada contexto»⁹. Irrespective of the results that are eventually achieved, the Millennium Summit Meeting established the foundations for all stakeholders in the international community to be able to incorporate the goals into their public policies and regulate them accordingly¹⁰.

The concept of development began to be seen, in real terms, as *an international community value*, which facilitated its acceptance as a principle and its scope of activity in international relations¹¹. The adoption of the *Millennium Declaration* represented a wise combination of the need to reach specific and accurate targets and the will to equip the concept of development with elements that allow it to become a fundamental principle of international order.

The United Nations Conference on Sustainable Development held in

for Social Development, the Program of Action of the International Conference on Population and Development, the Beijing Platform for Action and the United Nations Conference on Sustainable Development. We also reaffirm the follow-up to these conferences, including the outcomes of the Fourth United Nations Conference on the Least Developed Countries, the third International Conference on Small Island Developing States, the second United Nations Conference on Landlocked Developing Countries and the Third United Nations World Conference on Disaster Risk Reduction», A/Res/70/1, paragraph 11.

9. J. A. CARIDE GÓMEZ, Nuevas perspectivas para un futuro viable: los Objetivos de Desarrollo del Milenio, *Revista de Educación, número extraordinario* 2009, (Ejemplar dedicado a: Educar para el desarrollo sostenible), pp. 77-78.
10. The United Nations, *Millennium Development Goals*, 2015 Report, New York, 2015.
11. A. J., RODRIGO, El desarrollo sostenible como uno de los propósitos de las Naciones Unidas, en X. PONS, *Las Naciones Unidas desde España. 70 Aniversario de las Naciones Unidas. 60 Aniversario del ingreso de España en las Naciones Unidas*, Barcelona, 2015, pp. 265-291.

*Río de Janeiro in 2012*¹² identified the components of this notion for the purposes of international order. The Conference incorporated the aspects that enable the definition of the essential elements of sustainable development and accurately designed the available dimensions and their effects on international order. Point 4 de *la Final Declaration* states that «poverty eradication, changing unsustainable and promoting sustainable patterns of consumption and production and protecting and managing the natural resource base of economic and social development are the overarching objectives of and essential requirements for sustainable development» (...). It is necessary «to achieve sustainable development by promoting sustained, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting the integrated and sustainable management of natural resources and ecosystems that supports, inter alia, economic, social and human development while facilitating ecosystem conservation, regeneration and restoration and resilience in the face of new and emerging challenges». In addition, each of the development dimensions that should exist is highlighted. There is a «need to further mainstream sustainable development at all levels, integrating economic, social and environmental aspects and recognizing their interlinkages, so as to achieve sustainable development in all its dimensions»¹³.

The establishing of the SDGs in September 2015 is the result of an historical process that not only identified the specific targets, but also added the perspectives that define the notion of sustainable development. This notion is enriched, acquiring new perspectives and strengthening existing ones. In addition, its nature as a *fundamental value* of the international community is consolidated and, perhaps, the process finally commenced towards it becoming an *essential principle* of international order. It was said that «es necesario que la Agenda Post-2015 esté basada en principios y valores compartidos. No hace falta inventárselos o acordarlos a través de procesos tediosos de negociación. En los tratados internacionales, las

12. Without overlooking the *World Summit on Sustainable Development*, held in Johannesburg, South Africa, in 2002. The Summit undertook «a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development – economic development, social development and environmental protection – at the local, national, regional and global levels», paragraph 5. In particular, it acknowledged that «poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social development are overarching objectives of and essential requirements for sustainable development», paragraph 11.

13. A/CONF.216/L.1, 19 June 2012, paragraphs 3 and 4.

declaraciones y resoluciones políticas, sobre todo la Declaración de Río de 1992 y la Declaración del Milenio de 2000, los gobiernos *han acordado principios fundamentales* que son cruciales para las relaciones nacionales e internacionales»¹⁴.

Numerous political-legal instruments have incorporated the content of the SDGs and the notion of sustainable development and its implications for the international community. The aim is therefore to discover the scope of these instruments and what value has to be assigned, also from a legal perspective, to the positions held in this regard by States and other relevant stakeholders on the international scene. The definition of sustainable development or, at least, the principal elements that comprise the notion, are extremely useful to structure the architecture of the international society of the 21st Century, if the goals and targets of the 2030 Agenda are to be effective.

An evaluation of the notion of sustainable development has two realities: Firstly, *sustainable development is an «accumulative notion»* that has been enriched with political, social and regulatory components over time. This accumulation raises many elements of doubt. Secondly, *sustainable development is a «dependent notion»* that requires the existence of certain principles of international order to produce legal effects. Sustainable development lacks autonomy in many respects and only deploys its effects in the simultaneous presence of principles that regulate the different issues involved.

3. STRUCTURE OF THE PRINCIPLE OF SUSTAINABLE DEVELOPMENT

Has the notion of sustainable development initiated the process of being elevated to a structural principle of international order since the proclamation of the SDGs? Is this proclamation still insufficient to ensure that sustainable development has a «constitutional» status? The *evolutionary nature* of the notion of sustainable development suggests that it should be understood as *one of the international community's essential values* and, with much more difficulty, an incipient principle of the international legal system.

i) *Development* is one of the main *values inspiring international society*.

14. J. MARTENS, Hacia un marco de objetivos universales de sostenibilidad como parte de una agenda post-2015, la agenda de desarrollo post-2015: ¿más de lo mismo o el principio de la transición?, *Economistas Sin Fronteras, Dossiers EsF*, no. 11, September 2013.

Numerous political-legal instruments confirm the fact that *sustainable development* forms part of the international community's values and it has been included in major instruments. The 1972 *Stockholm Declaration on the Environment* claimed that «the protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all Governments». Principle 8 was thus established: «Economic and social development is essential for ensuring a favorable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life».

Principle 1 of the 1992 *Río Declaration on the Environment and Development* clearly stated that «Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature». The 2000 *Millennium Declaration*, as part of respect for nature as a fundamental value of international relations in the 21st Century, also stated that «Prudence must be shown in the management of all living species and natural resources, in accordance with the precepts of sustainable development». Finally, the *Final Document of the 2012 Conference on Sustainable development* began by renewing the «»commitment to sustainable development and to ensuring the promotion of an economically, socially and environmentally sustainable future for our planet and for present and future generations»¹⁵.

The assertion of development as an *inherent and unique value* of the international community of our times has received numerous adhesions. The central issue is to determine whether or not there has been any progress from the concept of development as an essential value of the international society to its consideration as a *structural principle of international order*. This would imply going beyond mere political commitment and deeply penetrating the framework of international obligations.

ii) The international community has been claiming its endorsement of development, however it is not easy to define accurate and enforceable obligations that emanate from a «principle» of this kind. The proclamation of the 17 SDGs provides a practical mechanism that does not guarantee

15. The G.A. Resolution 70/1 stats that: «On behalf of the peoples we serve, we have adopted a historic decision on a comprehensive, far-reaching and people-centred set of universal and transformative Goals and targets. We commit ourselves to working tirelessly for the full implementation of this Agenda by 2030. We recognize that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development», paragraph 2.

that sustainable development will become a fundamental principle. From this perspective, the notion of sustainable development would explain certain issues:

Firstly, the SDGs make sense in light of the serious *inequalities in the international society*. Inequality has an integrated focus in the SDGs, not only in relation to States, but also individuals. This was expressed by the United States delegation as follows: «Despite stimulating remarkable progress, the Millennium Development Goals let large pockets of key populations, and even whole countries, slip through the cracks. This Agenda's emphasis on leaving no one behind and on ensuring progress for the most vulnerable is a notable and critical change. We are pleased to see it. We welcome its specific emphasis on the inclusion of all groups and all people (...)»¹⁶. Inequality must therefore form part of the analysis that leads to the achieving of the SDGs and constitutes a key issue in reaching the goals and targets defined. However, at the same time, inequality is a reality that must be taken into account in the political-legal structuring of the concept of development.

Secondly, fulfillment of the SDGs is only possible with *the participation of the stakeholders* that currently comprise and integrate the international society. The 2030 Agenda highlights the importance of the participation of the *multiple stakeholders* in order to achieve the Goals¹⁷. This need is fundamental for States, but also requires the involvement of individuals, nations and, of course, International Organizations. In the final document of the *United Nations 2012 Conference on Sustainable development*, a special mention was made of the value of «the diversification of actors and stakeholders engaged in the pursuit of sustainable development», although «the continued need for the full and effective participation of all countries, in particular developing countries, in global decision making» was also highlighted.

16. General Assembly of the United Nations, A/69/PV.101, p. 26.

17. Resolution 70/1 specifically states that «the new Goals and targets will come into effect on 1 January 2016 and will guide the decisions we take over the next 15 years. All of us will work to implement the Agenda within our own countries and at the regional and global levels, taking into account different national realities, capacities and levels of development and respecting national policies and priorities. We will respect national policy space for sustained, inclusive and sustainable economic growth, in particular for developing States, while remaining consistent with relevant international rules and commitments. We acknowledge also the importance of the regional and subregional dimensions, regional economic integration and interconnectivity in sustainable development. Regional and subregional frameworks can facilitate the effective translation of sustainable development policies into concrete action at the national level», paragraph 21.

Development is one of the principal goals of the international community. The initial expressions of the Development Program precisely highlighted that «Development is one of the main priorities of the United Nations. Development is a multidimensional undertaking to achieve a higher quality of life for all people. Economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development»¹⁸.

As the ultimate expression of the international community's desire to eliminate poverty and ensure human welfare, the SDGs *have contributed to strengthening the notion of sustainable development* and bringing it closer to the category of a «constitutional principle» of international order. The formation of an «international constitutional order» nevertheless requires the existence of principles not only of a political but also a legal nature. The SDGs can be achieved, even if partly, despite the inexistence of a fundamental principle. In other words, the very formation of the SDGs is based on a political perspective and therefore involves commitments of an eminently political nature.

Nevertheless, there are certain significant issues at stake:

Firstly, the fundamental principles of the legal system summarize the *values* they defend and that are present in how the international community behaves. The different instruments that have been adopted in relation to sustainable development show that it is an *increasingly more important value* for States, International Organizations and the other stakeholders that intervene in current international relations. The *right to development* having been practically consecrated and the *notion of sustainable development* asserted, the failure is seen as the delay in implementing international regulations concerning development and the absence of joint action to convert rules and principles with limited legal enforceability, as they are often in the form of recommendations, into international legal norms¹⁹. Sustainable development is yet to form part of the fundamental principles of international law, although the process began some time ago for it acquire constitutional status. At least there exists a close link between development and the international community.

Secondly, the notion of sustainable development *does not have conceptual, political or legal autonomy*. This delays it being structured as a fundamental principal of international law. The notion of sustainable development essentially expresses its close link to certain international legal principles,

18. Development Program, A/RES/51/240, October 15, 1997, paragraph 1.

19. V. BARRAL, *Sustainable Development in International Law cit.*, pp. 377 et seq.

however it is yet to reach its own autonomy as an independent principle of the international legal system. In particular, the relationship between development and the principle of international cooperation, fully consecrated as International Law, the principle of international protection of human rights, an established and accepted principle by the international community and the principle of international protection of the environment, which is in the crystallization phase, is what conditions the assertion of sustainable development as a constitutional principle of the legal system.

a) *Development and international cooperation.* The process of sustainable development reaching the category of a fundamental principle of international law has begun and must form part of the framework of international solidarity. The only way for the international system to be able to adapt to new realities is to penetrate deeper into *universal solidarity*. Thus, the nexus that has always existed between development and international cooperation. Development has been a specific expression of the *fundamental principle of international cooperation* based on international law since the mid seventies of the 20th Century. The notion of sustainable development is linked to the principle of international cooperation but, in fact, goes beyond it. Accordingly, the principle of international cooperation is insufficient to express the entire content, scope and dimensions of sustainable development.

b) *Development and international protection of human rights.* The right to development implies that economic inequality should not be approached only in terms of inter-State relations, but also in a more global and integrated manner that is ultimately referred to *human beings*. The right to development is a human right. *The Declaration of the Right to Development* of 1986 attempts to include such rights as part of positive law. The Preamble of the Declaration is swamped by references to human rights and its articles design the content of the «human right of development» (paragraph 1 of article 2). The right to development is a human right and *is exercised in the context of the international protection of human rights*.

The Declaration at the *Second World Conference on Human Rights* in Vienna in 1993 constituted a significant step forward in this respect. During his speech to open the Conference, the Secretary General of the United Nations recalled the link between democracy, development and human rights, by saying that «one thing is sure: there can be no long-lasting development without the promotion of democracy and, therefore, the respect for human rights»²⁰. Point 8 of the Declaration of Vienna

20. *World Conference on Human Rights*, United Nations, 1993, pp. 20-21.

establishes the relationship between democracy, development and respect for human rights and fundamental freedoms, on the basis that «The international community should support the strengthening and promoting of democracy, development and respect for human rights and fundamental freedoms in the entire world», entirely devoting points 10 and 11 to define the content of the right to development, along the lines established by the Declaration of the Right to Development.

However, it is unclear whether it has reached autonomy and can be asserted as a fundamental principle of international law, despite the support received from the respect and protection of human rights. The legal situation is unclear. Nevertheless, according to A. Chueca Sancho «la positivación del derecho al desarrollo no es un fenómeno emergente sino consolidado. Estamos ante un derecho, formulado en términos jurídicos, regulado por el Derecho Internacional; la obligatoriedad jurídica de este derecho es además asumida (de un modo más o menos claro) por los Estados, las Organizaciones Internacionales e incluso muchos individuos»²¹. However, what are still missing are specific obligations resulting from the right to development, in addition to defined mechanisms of guarantees and protection. Nevertheless, the assertion of sustainable development as a human right would contribute to strengthening the link with the international protection of human rights and provide it with the autonomy and self-sufficiency required to become a fundamental principle of international order.

c) *The close link between development and the environment has specifically enabled discussion of sustainable development.* Numerous international instruments have highlighted this link. It is mentioned in point 17 of the Declaration by the 2012 United Nations Conference on Sustainable Development, which recognized «the importance of the three Rio conventions for advancing sustainable development, and in this regard we urge all parties to fully implement their commitments under the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity and the United Nations Convention to Combat Desertification in those countries experiencing serious drought and/or desertification, particularly in Africa, in accordance with their respective principles and provisions, as well as to take effective and concrete actions and measures at all levels and enhance international cooperation». The international protection of the environment is an emerging principle of

21. A. CHUECA SANCHO, El derecho al desarrollo en el ámbito internacional, *Desarrollo, maldesarrollo y cooperación al desarrollo*, Seminario de Investigación para la paz, Zaragoza, 1997, p. 33.

international law, although with a different structure and content to the possible principle of sustainable development.

Sustainable development is conceived as a materialization of the international protection of the environment and one of the priorities of such protection. Economic growth and the fight against poverty cannot imply the deterioration of ecosystems, nor pose a risk to life on the planet. The SDGs are based on this premise and constitute an ideal link between development and environmental protection, which has been highlighted on numerous occasions. Point 9 of the GA Resolution 70/1 of 2015 stated that: «We envisage a world in which every country enjoys sustained, inclusive and sustainable economic growth and decent work for all. A world in which consumption and production patterns and use of all natural resources – from air to land, from rivers, lakes and aquifers to oceans and seas – are sustainable. One in which democracy, good governance and the rule of law, as well as an enabling environment at the national and international levels, are essential for sustainable development, including sustained and inclusive economic growth, social development, environmental protection and the eradication of poverty and hunger. One in which development and the application of technology are climate-sensitive, respect biodiversity and are resilient. One in which humanity lives in harmony with nature and in which wildlife and other living species are protected».

Neither international protection of the environment nor sustainable development have become fundamental principles of international order. The link between the two realities has strengthened and promoted the notion of sustainable development, which constitutes the basis of the SDGs. The SDGs are perhaps the last step towards the assertion of sustainable development as a fundamental principle, which is inferred by Point 5 of Resolution 70/1: «This is an Agenda of unprecedented scope and significance. It is accepted by all countries and is applicable to all, taking into account different national realities, capacities and levels of development and respecting national policies and priorities». Acceptance and compliance by States will be the determining factor of the process of converting sustainable development into a «constitutional» principle of international law.

4. PRINCIPAL DIMENSIONS OF SUSTAINABLE DEVELOPMENT

International practice shows that the notion of development has gradually been incorporating different components. The incorporation of these elements has made sustainable development a complex issue

and hindered its definition. The acceptance of the term sustainable development is therefore an achievement that has political and regulatory consequences. The *multi-dimensional nature of development* is observed in the political-legal instruments that deal with the issue and have been adopted in many different scenarios. Furthermore, «beyond these essential components of sustainable development, a vast array of legal standards and principles is further closely connected to its realization. When implemented, these participate in the integration of environmental protection and economic and social development, and thus help to achieve sustainable development»²². International practice has confirmed this position and repeatedly pointed out that development can only be achieved if its *three main dimensions* are addressed²³.

The combination of the three dimensions could encourage the existence of a norm and the appearance of *sectorial principles* that inspire and constrain the behavior of States. The different political-legal instruments dealing with development have highlighted these principles²⁴.

Also, the combination of the three basic dimensions of sustainable development is not only theoretical, but also has practical effects in implementing development policies and programs, as well as imposing obligations of a legal nature. The consequences of a complete definition of sustainable development at least provides States with guidelines on conduct and targets to reach. The content of Resolution 70/1 points in this direction and proposes an action plan that combines the different dimensions of sustainable development. According to point 13 of the Declaration «Sustainable development recognizes that eradicating poverty in all its forms and dimensions, combating inequality within and among countries, preserving the planet, creating sustained, inclusive and

22. V. BARRAL, *Desarrollo Sostenible cit.*, p. 381. For A. J. RODRIGO HERNÁNDEZ, the concept of sustainable development has «una pluralidad de dimensiones, algunas de ellas no necesariamente incompatibles entre sí. Este carácter multidimensional de la noción permitiría explicar el desarrollo sostenible como un objetivo político de primera magnitud tanto en el plano internacional como en el estatal y el local (...)», A. J. RODRIGO HERNÁNDEZ, *El concepto de desarrollo sostenible en el derecho internacional, Agenda ONU: Anuario de la Asociación para las Naciones Unidas en España*, n.º 8, 2006-2007, p. 162.

23. Certain authors have claimed the existence of four dimensions. «Le cadre pour le développement durable décrit l'engagement de la société en faveur de Quatre objectifs interdépendants: le développement économique (notamment la fin de l'extrême pauvreté), l'inclusion sociale, la durabilité environnementale et la bonne gouvernance (notamment la sécurité)», X. LAN; J. D. SACHS; G. SCHMIDT-TRAUB; y L. TUBIANA, *Définir des objectifs de développement durable à l'horizon 2030*, Janvier 2013.

24. A comprehensive study is provided by A. J. RODRIGO HERNÁNDEZ, *El desafío del desarrollo sostenible cit.*, pp. 95 et seq.

sustainable economic growth and fostering social inclusion are linked to each other and are interdependent».

The three dimensions of sustainable development complement each other. The joint incorporation of the three dimensions gives rise to an evolution of international order and encourages the existence of much broader approaches. The notion of sustainable development opens the door to new areas of the international legal system, in which a range of issues merge together. The SDGs are also projected in this direction and have created their own independent space in which specific sectors of international order acquire meaning. The focus on sustainable development has penetrated the regulations and norms governing International Economic Law, as well as the behavioral patterns and principles observed in the international protection of the environment. The link between sustainable development and the international protection of human rights is therefore established.

The incorporation of at least three dimensions into the concept of development has major practical consequences. Firstly, it facilitates the adopting of criteria that will help achieve the goals and targets established in the 2030 Agenda. Secondly, it enables development to be conceived as *complete and integrated* and the goals and targets included in Resolution 70/1 to be reached using the appropriate mechanisms. Finally, the application of the SDGs is *clearer*, given that the different components of the notion of development are included from the beginning.

We clearly see *some of the consequences* of each dimension incorporated into sustainable development, both from a theoretical and practical conception. Dimensions that can also be extended, as known, to *institutional and security* aspects of development and to issues of a *cultural nature*²⁵.

i) Sustainable development forms part of the suitable framework to create the conditions that guarantee *an economic scheme* that enables the SDGs to be achieved. Sustainable development undoubtedly has *content of an economic nature* and its enforceability and effectiveness also depend on economic circumstances. The link between economic growth

25. The institutional and security dimensions were referred to 16 of the SDGs. However, there are very few mentions in Resolution 70/1 to the cultural dimension. There are only very marginal references to cultural diversity. V. GUEVREMONT, *La reconnaissance du pilier culturel du développement durable: vers un nouveau mode de diffusion des valeurs culturelles au sein de l'ordre juridique mondial*, A.C.D.I., 2012, pp. 163-195; and M. NISHIUMI, *The cultural aspects of sustainable development*, J.Y.I.L., 2014, pp. 305-332.

and development has been a constant on the international scene and the different instruments dealing with development have repeatedly identified the relationship, in broad terms. The SDGs are also constantly moving in this direction. Sustainable development must be conceived within the framework of International Economic Law. The aim is to emphasize the need for *international economic laws* to provide for the regulations governing development. In the current international community, the issues relating to development are not marginal, but instead play a central role in the processes of creation of economic norms. Development is one of the key components of International Economic Law.

With different degrees of success, the international community has implemented numerous strategies intended to guarantee economic growth and development. Achievement of the SDGs will not be possible outside an economic scope that allows for growth and promotes the components of development. Point 13 of Resolution 70/1 is explicit in this regard. The expression «sustained economic growth» is constantly repeated in the 2030 Agenda and constitutes one of the basic requirements for the SDGs to be achieved.

The Resolution itself on the Right to Development establishes this link between *economic order and the right to development* in paragraph 3 of article 3, as follows: «States have the duty to co-operate with each other in ensuring development and eliminating obstacles to development. States should realize their rights and fulfill their duties in such a manner as to promote a new international economic system based on sovereign equality, interdependence, mutual interest and co-operation among all States, as well as to encourage the observance and realization of human rights». This link makes the achievement of the SDGs more viable. Economic cooperation is therefore a *necessary condition* to be able to reach such goals and States have undertaken a commitment to act under the framework of sustained economic growth.

The economic dimension of sustainable development is essential to be able to assert the significance of the notion in international law and, especially, to extract legal consequences and effects from the behavioral patterns and guidelines upon which the SDGs are based. Without economic growth, it will not be possible to reach these targets, no matter how sustained such growth is supposed to be. Economic relations on the international scene are now projected in a much broader framework and as a highly important dimension in order to achieve the SDGs.

ii) Sustainable development has a *social dimension*. All the instruments that have been adopted highlight this dimension and emphasise the

implications of the social dimension on development. In fact, «economic development based only on an increase in the growth rate and transfer of financial resources to developing countries was not sufficient if it did not also involve social justice in the form of reduction of poverty, illiteracy and disease, as well as the inequality between men and women; in other words if it did not provide material and moral benefits to people²⁶. A new dimension is therefore opened up with respect to development, that can be conceptually understood as the search for *social development*.

The eradication of poverty has become the principal Development Goal. Point 11 of the 2000 Millennium Declaration states that: «We will spare no effort to free our fellow men, women and children from the abject and dehumanizing conditions of extreme poverty, to which more than a billion of them are currently subjected. We are committed to making the right to development a reality for everyone and to freeing the entire human race from want». The first MDG is precisely «to eradicate extreme poverty and hunger. This is the most solid and broad social consideration». The SDGs also highlight the issue. Point 2 of Resolution 70/1 states that «eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development». The first SDG is specifically to «end poverty in all its forms everywhere». The importance of the social dimension is therefore guaranteed in the 2030 Agenda.

Development is not only linked to economic growth, investment and financial flows, but has gradually acquired a *social nature*. Development has also gone beyond the mere protection of the environment. It is said that «el desarrollo sustentable implica no solo limitar la actividad económica para preservar y proteger el medio ambiente, sino abordar el desarrollo con un enfoque que enfatiza la importancia fundamental de la equidad dentro del sistema económico. Esta equidad es a la vez intrageneracional, en el sentido de que persigue corregir el desequilibrio en materia de riqueza y desarrollo económico entre el mundo desarrollado y el mundo en desarrollo dándole prioridad a las necesidades de los pobres, como

26. For this author, «en la actualidad, el desarrollo social es uno de los componentes imprescindibles para el desarrollo sostenible y uno de los objetivos políticos de primera magnitud que se han incorporado a la agenda internacional en los últimos años del siglo pasado, en particular, a partir de la Cumbre mundial sobre desarrollo social celebrada en Copenhague los días 11 y 12 de marzo de 1995», A. J. RODRIGO HERNÁNDEZ, *El concepto de desarrollo sostenible en el derecho internacional cit.*, pp. 178 and 180.

intergeneracional, en el sentido de que busca una justa distribución de costos y beneficios a través de las generaciones»²⁷.

The social dimension of development nevertheless has two complementary facets: firstly, the social facet of development implies the assertion of *human development*. The human being, thanks to the incorporation of a new ethical dimension in the consideration of international economic relations²⁸, becomes the recipient of international norms not only in relation to the *protection of human rights*, in the strict sense, but also the *preservation and improvement of the environment*. This establishes a clear link between development and the protection of human rights, which will have not only political but also legal consequences.

The emergence and formation of new rights and the strengthening of rights with a social content that have already been acknowledged will be the main consequences of this link. Resolution 70/1 recognises «that the dignity of the human person is fundamental, we wish to see the Goals and targets met for all nations and peoples and for all segments of society. And we will endeavour to reach the furthest behind first» and, at the same time, the new agenda is based on «the Universal Declaration of Human Rights, international human rights treaties, (...). It is informed by other instruments such as the Declaration on the Right to Development». Specifically, point 19 of the 2015 Declaration claims that «We reaffirm the importance of the Universal Declaration of Human Rights, as well as other international instruments relating to human rights and international law. We emphasize the responsibilities of all States, in conformity with the Charter of the United Nations, to respect, protect and promote human rights and fundamental freedoms for all, without distinction of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, disability or other status».

In addition, all the above is without consideration of development as a human right and the theoretical and practical implications of such a consideration. In fact, «development is understood as a human right, characterised by multi dimensional objectives and components, with different owners (to the extent development falls within the scope of people or groups), being progressive (process of improvement and the

27. A. BOYLE A., Derecho internacional y desarrollo sustentable, *Revista de Estudios internacionales*, vol. 37, n.º. 147, 2004, p. 7.

28. Cf. V. ABELLÁN HONRUBIA, Algunas consideraciones sobre el Nuevo Orden Económico Internacional, *R.F.D.U.C., ONU año XL*, Madrid, 1987, p. 220.

satisfaction of needs that can always be improved) and implementation both at national and international levels»²⁹.

The social dimension of development leads us to consider *multiple aspects of the aims* pursued by sustainable development. The formation of SDGs lies mainly in the achieving of targets with a social content. A large part of the 17 SDGs address social needs and, in some cases, economic and environmental targets are strictly formulated in social terms. Despite the fact that the expression «social development» is not used a great deal in Resolution 70/1, a mere glance at the Declaration, the goals and targets of the new 2030 agenda clearly shows the importance given to social content.

A range of aspects of the SDGs have a social significance and, in fact, the main areas in which social targets must be reached are covered. Education, health, housing and employment, as the most significant, are present in the notion of sustainable development. They either appear independently in some of the SDGs or are naturally inserted in the framework of the SDGs with a social content that are more extensive. Ultimately, the social dimension of the SDGs is present and re-affirms the social content of the notion of sustainable development to the extent that it would not be possible to conceive the notion and the resulting political and legal consequences without seriously taking into account the social components of development.

iii) It would not be possible to understand sustainable development without an *environmental dimension*. Without doubt, «la protección del medio ambiente es uno de principales objetivos de la Comunidad internacional y un componente esencial del desarrollo sostenible»³⁰. Development has even been understood as sustainable development, due to the incorporation of all the issues relating to the international protection of the environment. Point 3 of the 2015 Declaration expresses the commitment «to ensure the lasting protection of the planet and its natural resources». Resolution 70/1 is impregnated with references highlighting the environmental dimension of development. Point 7 of the Declaration, in particular, envisages «A world where we reaffirm our commitments regarding the human right to safe drinking water and sanitation and where there is improved hygiene; and where food is sufficient, safe, affordable

29. Institut Català Internacional per la Pau, *Escenarios posconflicto en Colombia, Agenda, oportunidades y hoja de ruta. Relatoría del seminario*, Barcelona, May 5, 6 and 7 2014, p. 23 (translation).

30. A. J. RODRIGO HERNÁNDEZ, *El concepto de desarrollo sostenible en el derecho internacional cit.*, pp. 183-184.

and nutritious. A world where human habitats are safe, resilient and sustainable and where there is universal access to affordable, reliable and sustainable energy». In addition to their social content, the SDGs deal with the environmental issue. Many of the objectives are addressed to issues of this kind. In particular, to combat climate change; conserve and use oceans, seas and marine resources sensibly; and protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.

Incorporation of the environment into the notion of development has been progressive and included in numerous international instruments. It was necessary for economic growth to be accompanied by the issue of the environment. Point 33 of Resolution 70/1 states «that social and economic development depends on the sustainable management of our planet's natural resources. We are therefore determined to conserve and sustainably use oceans and seas, freshwater resources, as well as forests, mountains and drylands and to protect biodiversity, ecosystems and wildlife». Accordingly, a very close link was established between economic development and the environment, despite belonging to different areas of international order.

It was particularly as of 1992 when this link commenced and the concept of sustainable development arose with force. In effect, «la integración de la protección del medio ambiente y el desarrollo económico era un objetivo importante de la Conferencia de las Naciones Unidas sobre el Medio Ambiente y el Desarrollo, expresado en el Principio 4 de la Declaración de Río»³¹. Since then, the notion of sustainable development can only be addressed on the basis of specific consideration for the environment.

The progressive incorporation of different dimensions into the notion of sustainable development undoubtedly strengthens the concept and facilitates the possibility of it achieving the *category of principle* and therefore creating obligations. Nevertheless, the notion could lose certain aspects of its conceptual and legal autonomy and be conditioned by the components, with their respective rights and obligations. In other words, although the dimensions of the notion of sustainable development enrich the relevant political-legal principal and therefore enable compliance with the SDGs, the issue arises as to whether or not the proliferation of dimensions somehow weakens the formation of sustainable development as a structural principle of international order.

31. A. BOYLE, *Derecho internacional y desarrollo sustentable cit.*, p. 7.

5. CONCLUSIONS

The creation of the SDGs is the result of the desire of States to achieve a better world and eliminate poverty and inequality in the international society. The new 2030 Agenda is an ambitious plan that identifies principles and behaviour patterns for States that also involve all the stakeholders that intervene in modern international society. However, the framework in which these goals are to be enforced must incorporate components of a legal and not only a political nature. It is not enough to seek mere political goals that, if not fulfilled, do not involve any international liability. The way in which the States have proclaimed the SDGs refers to both the principal upon which development is based, as well as the main dimensions through which the notion is currently expressed. It is difficult to accurately define the notion of sustainable development and reduce its meaning in legal terms is complicated. At least, «a pesar de que es posible identificar los componentes principales del concepto, dista mucho de saberse cuáles son sus consecuencias normativas específicas, o incluso cómo se relacionan entre sí o con el derecho de los derechos humanos y el derecho internacional económico»³².

The only way to acknowledge the efficiency of the SDGs is to increasingly improve the notion of sustainable development and link it to some of the essential principles of international order. The notion gives rise to principles, norms, guidelines and behavioural patterns that are often combined with difficulty to distinguish political commitment and certain mandatory conduct with a legal significance. In any case, the notion has contributed to strengthening certain sections of the international legal system. The effects that the New Agenda could have on international order and, at least, the way in which the principle of sustainable development has been strengthened as an independent principal of such system must therefore not be overlooked.

The SDGs are the last step towards the assertion and consecration of sustainable development as a *structural principle of current international law* and States would be well advised to begin extracting consequences from the enormous number of commitments contained in the New 2030 Agenda. The SDGs should therefore not be understood as a mere pragmatic plan of action, but also as an instrument capable of forcing the States that belong to the international community to assume their obligations in the areas covered by sustainable development. The acceptance of the SDGs has been universal, as was the approval and implementation process of the MDGs. This universal nature must be converted into a *structural*

32. *Ibid.*, p. 17.

principle recognised by States, scientific doctrine and international case law. Nothing currently prevents sustainable development from forming part of the principles that provide the structure of international order and give rise to the main regulations governing how the international community lives together.

The existence of different dimensions of the notion of sustainable development must not be confused when specifying the obligations resulting from a notion of this kind. Neither should it make such notion more complex and variegated. The combination of these dimensions must benefit the creation of accurate obligations in areas that are not covered by any of the essential principles of international order. These dimensions fulfil the function of strengthening the protection of the rights recognised and also affect the issues that require greater acceptance by the international community. *The economic dimension* provides the framework in which the economic integration³³ of States is structured as a fundamental factor in order to reach economic growth and development, all of which without overlooking the fact that this economic development must be sustained. *The social dimension* outlines rights with a social content and strengthens them in the universal and regional systems of human rights while, at the same time, launching a challenge of enormous dimensions to the international community to undertake the political commitment of *eradicating hunger and poverty on the planet*³⁴. *The environmental dimension* also strengthens the role of the principle of international environmental protection and outlines the most relevant sectors in which the international community must act to protect ecosystems. This dimension is fundamental to understand the notion of sustainable development³⁵.

33. Paragraph 21 of Resolution 70/1 highlights the importance to «acknowledge also the importance of the regional and subregional dimensions, regional economic integration and interconnectivity in sustainable development. Regional and subregional frameworks can facilitate the effective translation of sustainable development policies into concrete action at the national level».

34. Paragraph 24 of Resolution 70/1 emphasises the commitment «to ending poverty in all its forms and dimensions, including by eradicating extreme poverty by 2030. All people must enjoy a basic standard of living, including through social protection systems. We are also determined to end hunger and to achieve food security as a matter of priority and to end all forms of malnutrition».

35. Paragraph 33 of Resolution 70/1 states «that social and economic development depends on the sustainable management of our planet's natural resources. We are therefore determined to conserve and sustainably use oceans and seas, freshwater resources, as well as forests, mountains and drylands and to protect biodiversity, ecosystems and wildlife. We are also determined to promote sustainable tourism, to tackle water scarcity and water pollution, to strengthen cooperation on desertification, dust storms, land degradation and drought and to promote resilience and disaster risk reduction».

The 2015 Declaration, as the last step until now towards sustainable development, constitutes a rebellion against the principles that have not reached the category of structural principles of international order and also the belligerence of those that do not wish to remain as obligations of «hot steam». The principle of development and international protection of the environment aspire to become structural principles of international law that result in precise norms and impose obligations on other stakeholders in international relations, as well as granting rights. In short, the creation of some of the commitments undertaken by these principles involve international liability.

The principles governing the protection of human rights and international cooperation, recognised and consolidated in international order, are intended to provide content, since they were proclaimed as fundamental principles. On the one hand, rights with a social content certainly require determined support from the international community and the implementation of mechanisms that ensure their compliance. In addition, cooperation must be expressed not only as a generic obligation, but also through specific obligations to cooperate in achieving sustainable development. It is here that the *sectorial principles* will be of vital importance to the notion of sustainable development.

Reality is pressing. The 2030 Agenda constitutes the recognition of political commitment, the definition of conduct guidelines, the establishment of behavioural patterns and the acceptance of achieving sustainable development in all its manifestations. However, in the end, it will be the States that must meet all these needs. The truth is that «the primary enforcers of international norms remain the states themselves, and although sustainable development may be used by judges, it is not addressed to them. It is addressed to legal subjects, i.e., states. States are under an obligation to pursue sustainable development; they are bound by an obligation of means, and by implementing these countless treaties they contribute, day after day, to progressively making sustainable development requirements real»³⁶.

36. V. BARRAL, *Sustainable Development cit.*, p. 398.

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Chapter 3

Sustainable development in international law: general issues¹

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SUMMARY: 1. APPROACH TO THE NOTION OF SUSTAINABLE DEVELOPMENT. 2. AN INTEGRATED CHALLENGE FOR THE INTERNATIONAL COMMUNITY. 3. THE NATURE OF SUSTAINABLE DEVELOPMENT. 4. THE GOVERNANCE OF SUSTAINABLE DEVELOPMENT IN GLOBALIZATION. 5. PRIVATIZATION AND SUSTAINABLE DEVELOPMENT. 6. TRANSNATIONAL CORPORATIONS, HUMAN RIGHTS AND DEVELOPMENT. 7. INTERNATIONAL LAW BY OBJECTIVES. 8. SUSTAINABLE DEVELOPMENT AS A MYTH AND UTOPIA. 9. SUSTAINABLE DEVELOPMENT: BETWEEN SOFT LAW AND HARD LAW.

ABSTRACT:

Sustainable development goals are one of the central issues of the current international agenda. This route map has a number of blank pages, which will have to be filled by the progressive development of international law and by the national and international policies. This contribution analyses different juridical questions and their relevance for International law.

1. This work is the result of the research project DER 2014-55484-P, called International Economic Stakeholders and Human Rights. Special relevance for Spain as well as with the research project «Acciones de Dinamización, -Redes de Excelencia-, del Plan Nacional de I+D+i, Nuevos Desafíos del Derecho Internacional, (Ref. DER2015-69273-REDT), MINECO/FEDER, UE».

1. APPROACH TO THE NOTION OF SUSTAINABLE DEVELOPMENT

It is not easy to approach the notion of sustainable development. The well-known *Our Common Future Report*² states that it is development that ensures present needs are met, without compromising the ability of future generations to meet their own needs. This inter-generational approach has been supplemented by other approaches based on an environmental perspective since the 1992 Río de Janeiro Earth Summit. It would later evolve towards a social inclusion approach, especially as of the 2002 Johannesburg Summit on Sustainable development. In 2012, the Final Declaration of the Río+20 Summit offered the following three-fold vision of sustainable development:

«We reaffirm the need to achieve sustainable development by promoting sustained, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting integrated and sustainable management of natural resources and ecosystems that supports, inter alia, economic, social and human development while facilitating ecosystem conservation, regeneration and restoration and resilience in the face of new and emerging challenges»³.

The international community is facing a major economic, social and environmental challenge, which constitutes the central issue of the current international Agenda. It was already in the *Millennium Goals* and present in projects such as the United Nations Global compact, the debates on social corporate responsibility, the role of transnational corporations in globalization and the guiding principles for business enterprises and human rights. However, the passing by the United Nations General Assembly of the *Sustainable Development Goals in 2015* finally provided the global route map for the international community.

This route map has a number of blank pages, which will have to be filled by the progressive development of international law and by the national and international policies that provide it with content. Sustainable development is in fashion and, according to the accurate opinion of Rodrigo, this has led to an *inflated use of the expression, which runs the risk of it being distorted, if not becoming irrelevant*⁴.

2. Report by the World Commission on Environment and Development «Our Common Future» (A/42/427 annex), called the Brundtland Report.

3. *Final Outcome Document Río+20*, General Assembly of the United Nations 2012, par. 4.

4. RODRIGO, A.J., *El desafío del desarrollo sostenible*, Tribuna Internacional 17, 2015, p. 18. Vid. DÍAZ BARRADO, C. M., «Los objetivos de desarrollo sostenible: un principio de

If successful, the expression will result in a major development of international law. The challenge faced by sustainable development has a series of *features*. It is a *general, integrated and universal challenge*. As a *general challenge*, its goals are multiple, reaching up to seventeen and deal with a wide range of issues such as poverty, hunger, health and deprivation, the absence of violence, access to education, physical, mental and social welfare, access to drinking water and sanitation, better hygiene and food, safe human habitats and affordable, reliable and sustainable energy⁵.

All these goals are related to the effective enjoyment of human rights. They must be more than simple rhetoric, but rather real and effective which, in the modern world, does not only depend on the development of international and national human rights regulations. This is a new approach for international human rights law. An approach that is not based as much on the human rights/State obligation binomial, but on promoting national and international policies that facilitate a context for human rights to exist and not as much on classical legal techniques, but rather on promoting a certain line of action by governments and the international community. In my opinion, it therefore constitutes a supplement rather than an alternative. We trust that it will not dilute what has already been achieved from a legal perspective. In other words, a State that progresses in the indicators, but does not meet its international obligations in human rights can use the situation.

These SDGs constitute a *universal challenge*, as they require intense cooperation from all the international community (the so-called *Global Alliance for Sustainable Development*) and the adopting of measures by all stakeholders, especially corporations.

It is a *new, recent and revolutionary challenge*. New to the extent that awareness only arose very recently, in particular as of the Declaration: *the future we want*, at the 2012 United Nations General Assembly, of the need to «for renewed and strengthened global partnership to implement sustainable development». It also means a novelty that moves from a north south approach to one that affects all countries, as all of them are subject to the SDGs, unlike the MDGs (Millennium Development Goals), which were based on the developed-developing countries logic.

The measures to be taken to achieve the SDGs also mean a qualitative transformation of how the international society functions. It is a challenge

naturaleza incierta y varias dimensiones fragmentadas», *Anuario Español de Derecho Internacional*, 2016 , pp. 7 et seq.

5. Vid. in this regard *Transforming our world: the 2030 Agenda for sustainable development*. Resolution passed by the General Assembly on 25 September 2015.

that, if reached, will mean that development is compatible with the environment and human rights. It is an *integrated and indivisible challenge* that requires policies that are conceived entirely under this coordinated perspective.

The SDGs can contribute to strengthening the *environment* as well as *human rights*. In this respect, the *2030 Agenda for sustainable development* highlights people, the planet and prosperity⁶. Its target is to *build pacific, just and inclusive societies that protect human rights and create the conditions for economic, sustainable, inclusive and sustained growth*. According to the UN General Assembly, it is a *long journey towards human dignity*, in which no-one should be left behind.

2. AN INTEGRATED CHALLENGE FOR THE INTERNATIONAL COMMUNITY

The United Nations passed seventeen sustainable development goals⁷. Goal number thirteen states that urgent measures must be taken to combat *climate change* and its effects. Amongst other measures, it includes strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. Another measure is to include integrating climate change measures into national policies, strategies and planning. We should also improve education, awareness-raising and human and institutional capacity on climate change mitigation and implement the commitment undertaken at the Convention on Climate Change for 2020, mobilizing more than 100,000 million dollars annually to address the needs of developing countries, fully operationalize the Green Climate Fund and promote mechanisms for raising capacity for effective climate change-related planning and management. Each one of the seventeen goals has its own route map, with more than 169 measures and

6. *Transforming our world: the 2030 Agenda for sustainable development*. Resolution passed by the General Assembly on 25 September 2015.

7. The goals are: 1. End poverty in all its forms everywhere. 2. End hunger, achieve food security. 3. Healthy life. 4. Inclusive and equitable education. 5. Gender equality. 6. Water and sanitation. 7. Affordable energy. 8. Sustained, inclusive and sustainable growth. 9. Resilient infrastructure, inclusive and sustainable industrialization. 10. Reduce inequality in countries. 11. Inclusive cities and human settlements. 12. Sustainable consumption and production. 13. Climate change. 14. Sustainable use of oceans, seas and marine resources. 15. Sustainable use of terrestrial ecosystems, sustainable management of forests, combat desertification, halt land degradation and halt biodiversity loss. 16. Promote peaceful and inclusive societies for sustainable development. 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

major challenges, but more difficulties, meaning that we are faced with a complex task of enormous importance to the international community.

If we continue with climate change and look at what has been done in recent times, we see that each goal is a world in itself. In June 2016, France was the first industrialized country to ratify the Paris Convention, the entry into force of which required a minimum of at least 55% of the global emissions with a greenhouse effect. The convention had been the main result of the *Paris Conference on Climate Change* between 195 countries, which adopted a text on 12 December 2015. The international community pursues the reduction of greenhouse gas emissions, which requires a consensus and the adopting of measures to mitigate, adapt and make ecosystems more resilient to global warming. The difficulties in reaching an agreement resulted from the interests of countries such as China, the United States, the European Union, India, Russia and Japan, as the main countries responsible for the emissions.

To deal with climate change is an enormously complex challenge for many reasons⁸. It is very difficult to mobilize the international community, because States have different interests and positions (exporters and importers of fossil fuels; rich and poor countries; large and small consumers of energy; more and less vulnerability; democratic governments or not, etc.). In addition, the climate crisis affects future rather than current generations, which does not mobilize politicians. It is a long-term challenge that requires highly complex and coordinated measures that may have powerful opponents with major interests.

The fight against climate change takes place under the framework of a *world risk society*, amongst others. The global risks are mainly of an ecological, financial and terrorist nature. In the international society, this has led to new paradigms and alliances between States and stakeholders to anticipate response to prevent such risks from becoming catastrophes⁹. The international society has also increased its knowledge (*society of knowledge*).

In such a society, the government or governance should be based on knowledge. However, the complexity of the challenges to the international community is so high that it is probably only possible to *manage doubt*, on

8. SACHS, J., *The Age of sustainable development*, Columbia University Press, New York, 2014, prologue by BAN KI-MOON, Secretary General of the United Nations, Paidós Empresa, 2016, 602 pages.

9. Vid. BECK, U., *The World Risk Society*, Paidós, 317 pages (original title *Weltrisikogesellschaft*, published in 2007 in Frankfurt and translated into Spanish in 2008).

the basis of the criteria of prudence, knowledge and precaution. According to Innerarity¹⁰, this is because although science has increased the amount of safe knowledge, when it comes to highly complex systems such as climate, it is increasingly more difficult to obtain cause and effect explanations or accurate forecasts. This results in «non-knowledge», the management of decisions in situations of doubt. Neither is this society of knowledge necessarily transferred to institutional strength, as the ability of the State to impose its decisions becomes weaker¹¹.

We find ourselves at the beginning of what J. Sachs calls the *age of sustainable development*, which is actually a «project» seeking the interaction between complex systems, such as the economy, global society and the environment. All of this requires a *holistic approach*, in the sense that the international society should, at the same time, seek economic, social and environmental goals and good governance¹².

This governance can no longer be limited to governments, but must also include other stakeholders, such as transnational corporations, which must also respect the rules, the environment and goals such as the eradication of extreme poverty. Sustainable development – according to Sachs¹³– seeks to achieve four basic goals in a *good society*: economic prosperity; social inclusion and cohesion; environmental sustainability; and good governance by the main stakeholders, governments and corporations.

3. THE NATURE OF SUSTAINABLE DEVELOPMENT

The expression sustainable development leads to the question as to its nature and, firstly, if *there exists a human right to sustainable development*. Art.1.1. of UNGA Res. 41/128 (1986) (*Declaration on the right to development*) considers the right to development to be an inherent human right. By virtue of this right, «every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized». Along the same lines, art. 22 of the African Charter on Human and People's Rights, of 27 June 1981 (conceived only as a right of people), Res. 4 (XXXIII) of the United Nation Human

10. INNERARITY, D., *The democracy of knowledge. For an intelligent society*, Paidós, 2011, 256 pages, p. 64.

11. INNERARITY, D., *The democracy of knowledge*, op. cit., pages 88 et seq.

12. Vid. SACHS, J., *The age of sustainable development*, Prologue by BAN KI-MOON, Paidós, 2014, pages 19-21.

13. SACHS, J., *The age of sustainable development*, cit., p. 21.

Rights Commission of 1977, the 1993 Vienna Convention, as well as other international instruments¹⁴.

The 1986 Declaration established the foundations for the concept of the right to development to be considered as a *multidimensional human right of progressive enhancement*. Different international instruments and declarations have stated that the right to development constitutes a human right. According to Cançado Trindade¹⁵ «había cristalizado definitivamente en el Derecho internacional de los derechos humanos que, de esa manera, se va ampliando y enriqueciendo, constituyendo el nuevo ethos de nuestro tiempo». Gross Espiell was one of the pioneers in considering the right to development as an individual right, resulting from the recognition of economic, social and cultural rights and the right to life¹⁶.

Along the same lines, Flory¹⁷ claimed that the right to development is to people what human rights are to the individual, as it represents the transposition of human rights to an international community level, with the content of social rights. From this perspective, the right to development constitutes a *right that synthesizes a series of human rights*, as claimed by García-Amador¹⁸.

Some authors believed that the right to development was not a mere addition or juxtaposition of rights, but rather a different right that implied a new approach to the international human rights strategy, whose

14. Vid. OLIVA MARTÍNEZ, D., *El derecho al desarrollo y la cooperación internacional*, Cideal, 2012; MANERO SALVADOR, A., «Cuestiones jurídicas sobre el derecho al desarrollo como derecho humano», *Derechos y libertades*, n.º 15, 2006, pages 257-279.
15. CANÇADO TRINDADE, A.A., *Tratado de direito internacional dos direitos humanos*, vol. II, Safe, Porto Alegre, Brasil, 1999, p. 329.
16. GROSS ESPIELL, H., *Derecho internacional del desarrollo*, Cuadernos de la Cátedra J.B. SCOTT, Universidad de Valladolid, 1975, 56 pages; id «El derecho al desarrollo veinte años después: Balance y perspectivas», *Reflexiones tras un año de crisis*, Universidad de Valladolid, 1996, p. 38; PÉREZ GONZÁLEZ, M., «Algunas reflexiones sobre el derecho al desarrollo en su candidatura a derecho humano», *El Derecho internacional en un mundo en transformación. Liber Amicorum en homenaje al Prof. E. JIMÉNEZ DE ARECHAGA*, Montevideo, 1995, pages 321 et seq.
17. FLORY, M., «Inégalité économique et évolution du Droit International», *Pays en voie de développement et transformation du Droit International*, Colloque d'Aix en Provence, SFDI, 1974, pages 11-40, p. 34.
18. GARCÍA-AMADOR, F.V., *El derecho internacional del desarrollo. Una nueva dimensión del Derecho internacional económico*, Civitas, 1987; CANÇADO TRINDADE, A., «The contribution of recent World conferences of the United Nations to the relations between sustainable development and economic, social and cultural Rights», *Les hommes et l'environnement. En hommage à Alexander Kiss*, Edition Frinon-Roche, Paris, 1998, pages 119-146.

*conceptual autonomy lies in its nature of a right to means*¹⁹. In this respect, the rapporteur Sengupta defined the right to development as a *right to a process* – in particular – of development, in which all human rights and fundamental freedoms can be materialized²⁰. This approach does not add anything new to the criteria of indivisibility, interdependence and legal nature of all human rights. To not consider the right to development as the sum of a series of rights, but rather as a right to a process adds nothing new, because the materialization of rights is always progressive.

To be able to speak of human development with sound judgment does not mean that it can be strictly understood as an individual human right. The construction of development as an individual human right has a purpose and symbolic meaning, due to its ethical dimension²¹. But it does not constitute an individual human right, strictly speaking, as «the consideration of development, the environment or peace as human rights –despite the obvious ideological dimension of including such values into the international legal system–, is difficult to apply to International law, given the problems in identifying the holder, how they are exercised, the mechanisms required to protect and guarantee them and how they can be enforced»²².

Sustainable development could be defined as a *bridging concept*, according to the General Secretary of the United Nations, aimed not only

19. ABELLÁN HONRUBIA, V., «Algunas consideraciones sobre el nuevo orden económico internacional», *ONU: Año XL*, Revista de la Facultad de derecho de la Universidad Complutense, 13, monográfico, Madrid, abril de 1987, pages 213-221; PÉREZ GONZÁLEZ, M., «El derecho al desarrollo como derecho humano», *El derecho al desarrollo o el desarrollo de los derechos*, Editorial Complutense, p. 96; M'BAYE, K., «Le droit au développement comme un droit de l'homme», *Révue des droits de l'homme*, 1972, pages 503 et seq.; VV.AA., FERNÁNDEZ LIESA, C., MARIÑO MENÉNDEZ, F., *El desarrollo y la cooperación internacional*, Universidad Carlos III de Madrid-BOE, Madrid, 1997.
20. SENGUPTA, A., *Tercer Informe del experto independiente sobre el Derecho al desarrollo*, presentado de conformidad con la Res. 2000/5, de la Comisión de derechos humanos (grupo de trabajo sobre Derecho al desarrollo), E/ CN.4/2001/WG.18/2, de 2 de enero de 2001.
21. FLORY, M., «A propos des doutes sur le droit au développement», *Les hommes et l'environnement. En hommage à Alexander Kiss*, 1998, pp. 165 ss.; VASAK, K., «Le droit International des droits de l'homme», *RCADI*, 1974-IV; URIBE VARGAS, «La troisième génération des droits de l'homme», *RCADI*, 1984, t. 359; M'BAYE, «Le droit au développement comme un droit de l'homme», *Révue des droits de l'homme*, 1972, 505 pp; ALSTON, P., ROBINSON, M., *Human Rights and development. Towards mutual reinforcement*, Oxford University Press, 2005.
22. ABELLÁN HONRUBIA, V., «Sobre el método y los conceptos en Derecho internacional público», *Soberanía del Estado y DI. Homenaje al Prof. J.A. CARRILLO SALCEDO*, Sevilla, 2005, pages 55-74, p. 73.

at joining the three economic, social and environmental development areas, but also developed and developing countries, governments, corporations, the civil society, scientific knowledge and public policy and present and future generations. These new concepts of development are not measured in classical terms of international obligations, but rather by per capita income, GDP, social indicators, human development indicators, nutrition, energy services, loss of species rate and biodiversity, as well as many others. The fundamental aim of sustainable development is for these three foundations to be a single target and to achieve progress in compliance with commitments that enable it. In addition, sustainable development is linked to the three interrelated transitions: demography and stabilization of the global population; development and sharing of profits equally amongst all segments of global society; to ensure that the use of materials and production of waste is compatible with the planet's capacity of regeneration and absorption.

From a human rights perspective, authors such as Juste Ruiz²³ have considered that the *human right to sustainable development* has been formulated and progressively recognized since the declaration of Stockholm on the human environment in 1972, which already retained certain essential elements of sustainable development, as well as by other subsequent international instruments such as the Charter on Economic Rights and Duties of the States of 1974 (art. 30) or the World Charter for Nature; but principally, the *Rio Declaration on Environment and Development* (1992) and other more recent instruments.

Other authors such as Rodrigo²⁴ deal with the *nature of sustainable development from a broader perspective, both as a political objective* ²⁵*and a legal concept*. In this legal dimension, it would also have a series of manifestations in its increasingly growing legal value. Firstly, sustainable development would be an international legal principle. Legal doctrine is divided with regard to the characteristics of the principle, as either

23. JUSTE RUIZ, J., «El desarrollo sostenible y los derechos humanos», *Soberanía del Estado y derecho internacional. Homenaje al Profesor Juan Antonio Carrillo Salcedo*, Universities of Córdoba, Seville and Málaga, Seville, 2005, pages 757-778.

24. RODRIGO, A.J., *El desafío del desarrollo sostenible*, Tribuna Internacional, op. cit., p. 68 et seq.

25. As it appears, for example in the Spanish sustainable development strategy passed by the Council of Ministers on 23 November 2007; or in international instruments, such as the preamble to the Convention on Biological Diversity of 1992, the framework Convention of the United Nations on climate change (1992) and the 1997 Kyoto protocol, the United Nations Convention on desertification of 1994 and the Cartagena Protocol on biotechnology safety under the convention of biological diversity of 2000.

material (giving rise to the obligation of achieving a result) or procedural (a mere process). Rodrigo also reflects on the possible interstitial nature of sustainable development as a legal concept²⁶, in other words, it would not regulate the conduct of its subjects nor be directed towards them, but rather operate between primary norms with the aim of changing their scope and effects and establishing new relations between them; he also analyzes sustainable development as a primary norm that gives rise to behavioral obligations and as a human right. However, essentially and with sound judgment, the author considers sustainable development to be a methodological framework for the creation and application of public policy and international legal regulations²⁷; thus providing a series of tools that helps decisions to be reached with respect to discourse, grounds, analysis, substance, process and interpretation that can help to synthesize, relate, fertilize, harmonize and integrate the different aspects linked to the objective, which can be incorporated into the processes of preparation and application of public policy and international law.

4. THE GOVERNANCE OF SUSTAINABLE DEVELOPMENT IN GLOBALIZATION

Since the fall of the Berlin wall, the international society has appeared as a *society of uncertainty*²⁸. The change to a new order is by passing through disorder. *Globalization* has been linked more to the economy, from a neoliberal perspective, rather than to rights or other values. Globalization is a Western term with different connotations of universalization and internationalization and, as a concept, has not contributed values nor provided a space for politics, by broadening the economic space, without increasing political space and by replacing political reasoning with technical reasoning²⁹.

Kofi Annan –*We the Peoples. The Role of the United Nations in the 21st Century*– stated that the main task in the 21st Century consists in ensuring that globalization is a positive force for the entire world population, instead of leaving millions people in misery. Stiglitz saw the light at the end of the tunnel –*Another world. Against market fanaticism*³⁰– in which he claims

26. RODRIGO, A.J., *El desafío del desarrollo sostenible*, op. cit., p. 73.

27. Vid. RODRIGO, A.J., *El desafío del desarrollo sostenible*, op. cit., pages 76 et seq.

28. DUPUY, R.J., *L'humanité dans l'imaginaire des nations*, Collège de France, Julliard, 1991, p. 122.

29. DE VEGA, P., «Mundialización y derecho constitucional: la crisis del principio democrático en el constitucionalismo actual», *REP*, April/June 1998.

30. STIGLITZ, J.E., *Un autre monde. Contre le fanatisme du marché*, Fayard, Paris, 2006, pages 37, 58, 67.

that the problem is the non-democratic management of globalization. In his analysis of the crisis at the beginning of the 21st Century, Fontana considers that the interests of large wealthy corporations and financial speculation have been benefited for the last two decades. The uneven economic recovery is destroying some of the old social conquests, privatizing politics and, eventually, the State itself, requiring a restriction of democratic freedoms, mainly in the USA. He claims that the policies of austerity have worsened the situation of rights in Europe and, in global terms, the consequences are a world of poverty and conflict³¹.

Crossing globalization's valley of tears, according to Habermas, appears to delegitimize a system that is subject to market forces and converted into an instrument to achieve its objectives. This situation is not good for sustainable development or human rights.

Neither is the phenomenon of the *dual world*³², in the sense that together with a world of institutions, legality, international organizations and States, there is a world of living forces, in this particular case, transnational corporations and markets. And all this has taken place without a transformation of the international legal and political architecture capable of organizing globalization or the de-territorialization of law or the new digital world in which national and international life takes place. All these phenomena have joined others that are better known, such as the weakening of States and economic globalization. Some predicted the return to the Middle Ages, according to Alan Minc, to a world without authority. Others predicted an irreversible decline in the social welfare state and the European social model. Others referred to the new law of the jungle.

These are not good times for human rights and development, which are not the key issues on the international Agenda. The 2030 Agenda is therefore considered positive, irrespective of its major weaknesses, as it attempts to draw attention and debate to solidarity objectives and the promotion of values. We should avoid preaching catastrophe, as it will only bode for misfortune. The world has always taken steps forward and backward, into light and dark. *Sustainable development* is a strong idea that can avoid the loss of the precious human rights that took the international community so much effort to build in the 20th Century.

To make sustainable development possible under the framework of

31. FONTANA, J., *El futuro es un país extraño. Una reflexión sobre la crisis social de comienzos del siglo XXI*, Pasado&Presente, Barcelona, 2013, 230 pages.

32. La expresión es de DUPUY, R.J., «Le dédoublement du monde», *RGDIP*, 1996/2, p. 320.

globalization is not an easy task, as pointed out by the Secretary General of the United Nations in 2005 – *A broader concept than freedom: development, security and human rights for all*– sometimes, the agreements reached by the international community are just hot air³³. This requires *institutional and regulatory transformation that enables globalization to be humanized and governed*³⁴.

New *world governance* is necessary. At the time, the proliferation of international organizations changed the structure of the international society, as highlighted by authors such as Reuter, Friedmann and Dupuy. The era of the co-existence of States was overcome and a new international cooperation phase commenced and gave rise to an institutional model of international society that would co-exist with the inter-State model, which was to remain. Globalization has produced a certain weakening of international organizations and the phenomenon of institutional fragmentation, in spite of the proliferation of international organizations. The weakening of the State has not produced the correlative strengthening of international institutions. In present international life, *soft law* and *soft institutions* have proliferated with the so-called *global law*. This term relates to *governance*, a term linked to the neo-liberal process.

The international society of the 21st Century must *manage* the weakening of the State, globalization and the crisis of the nation-State model, the strengthening of a civil society without suitable participation channels, the strengthening of informal groups in international society and the digital society. This *international architecture* comes from the Second World War and is not strong enough to deal with the basic challenges, such as the environment, the economy, ecology, human rights, solidarity, dispute management, peace and sustainable development, amongst others.

The international community now has renewed goals, the SDGs, however they lack renewed architecture. The Secretary General of the United Nations promoted the *Sustainable Development Solutions Network*³⁵, which advised on the creation of the SDGs that later gave rise to inter-governmental negotiations. At present, the institutional framework for

33. *Report by the Secretary General of the United Nations*, KOFI ANNAN, on 21 March 2005, paragraphs 128-131.

34. Vid. CARRILLO SALCEDO, J.A., *Globalización y orden internacional*, inaugural lesson of the University of Seville, 2004-2005, p. 25; FARIÑAS DULCE, M.J., *Globalización, ciudadanía y derechos humanos*, Instituto de derechos humanos Bartolomé de las Casas, Dykinson, 2000, 60 pages; FEYTER, K., «Globalization and human Rights», *International human rights law in a global context*, GÓMEZ ISA, F., FESTER, K. De (Eds.), Universidad de Deusto, Bilbao, 2008, pages 51-96.

35. SACHS, J., *La era del desarrollo sostenible*, cit., p. 563.

the governance of sustainable development is not capable of meeting the challenge. The 2012 Conference highlighted the need to debate governance and reform the institutions taking part in the implementation of the United Nations sustainable development program, in particular the Commission on Sustainable Development and the United Nations program for the environment; in addition to reforming the sustainable development institutions.

The institutional architecture of sustainable development has to be renewed. It is still entrenched in international conferences, as well in United Nations bodies such as the *Commission on Sustainable Development*, created in 1992 to follow up on the United Nations Conference on Environment and Development and, later, the Johannesburg Plan of Implementation, following the 2002 Sustainable Development Summit. Comprised of 53 members, the UN system promotes sustainable development, encourages policies and supports alliances. Since 2002, more than 360 public-private *sustainable development associations* have been created. Also relevant is the *Executive Committee on Economic and Social Affairs*, as well as initiatives such as UNO-Water, UNO-Energy and UNO-Oceans. At a regional level, commissions have promoted action and development and strategy plans, especially in relation to the fight against poverty. From an environmental perspective, since the sixties, institutions such as UNEP and national institutions and NGOs have been promoted. In the environmental framework, there is greater institutional strength than in the economic framework, which still has post-war institutions and the social foundations. In fact, there still does not exist, for example, an international environmental organization that deals with such a complex issue in an integrated way, but rather a proliferation of bodies and disperse regulations, with thousands of instruments that is extremely difficult to manage in a decentralized society.

In any case, what is required is an *international structure of sustainable development that is equal to the challenge*, which currently does not exist, either under the framework of the United Nations, or that of other international institutions. It is true that a World Alliance has been proposed for revitalized sustainable development, with the support of financial measures for development adopted by the Third International Conference on the Financing for Development (Addis Abeba action agenda) and passed by the General Assembly on July 27, 2015 (Res. 69/313, annex), amongst other measures. However, there is a lack of substantial international structure for sustainable development. Accordingly, making a virtue out of necessity, the United Nations highlights the responsibility of governments to reach the SDGs over the next fifteen years. Indicators are

therefore being developed to monitor and control government progress in reaching their goals.

5. PRIVATIZATION AND SUSTAINABLE DEVELOPMENT

Another concerning issue for sustainable development and human rights is the phenomenon of *privatization*. Many of the seventeen sustainable development goals can be achieved if corporations contribute. However, the term privatization in international law means that State responsibilities and public services that directly affect human rights are privatized and provided by non-public stakeholders, which can affect the enjoyment and very concept of human rights. The Committee on the Rights of the Child³⁶ pointed out that a State's obligation to respect the rights of children includes the obligation to ensure that private providers of services act in accordance with legal provisions, meaning that there are indirect obligations for such entities. The obligations undertaken pursuant to international Treaties on human rights directly bind States and the so-called horizontal effect is not produced, however States will only comply with their international obligations if they act in such a way as to protect people against the acts or failure to act by private entities to order ensure that rights are respected³⁷.

In this context, the responsibility of corporations is particularly evident. At Nuremberg, the issue was raised of the breach of human rights by the forced labor of prisoners, to the benefit of corporations³⁸. In any case, there are still current issues relating to the Second World War and the compensation of people that were victims of the holocaust and exploited by different types of corporations, such as banks, insurance companies, manufacturers, etc., which has given rise to global compensation agreements and compensation through other means, such as international

36. General observation n.º 5, of 2003 on the general measure of implementation of the convention relating to the rights of the child, of 27-XI-2003, par. 42.

37. In this regard, General observation n.º 31. Nature of the obligations imposed on States under the Convention, 26-V-2004, par. 4.

38. Vid. the comment by MARTÍN BURGOS, J.A., «Inmunidades jurisdiccionales de los Estados, normas internacionales de la Unión Europea y Derechos humanos», *Libro homenaje a DÁMASO RUIZ-JARABO COLOMER*, CGPJ, 2011, page 78 et seq.; ESPOSITO MASSICI, C., *Inmunidad del Estado y derechos humanos*, Thomson, 2007; REQUEJO, M., «Transnational human rights claims against a State in the European area of freedom, justice and security– A view on ECJ judgement, 15 February 2007-C-292/65, Lechoritou and some recent regulations», *The European Legal forum*, 5-2007, pages 206-211.

claims commissions (insurance companies) and compensation *ex gratia* by foundations, etc³⁹..

Nowadays, many of the threats to human rights do not always come directly from States, but rather from non-State stakeholders and the lack of capacity or willingness on the part of States to control them. This has led to an increasingly greater focus on the issue of the *implementation of international human rights law in private matters* and a conceptual change in the traditional view of human rights in the relationship between the State and private entities.

The change would be from a central State approach to international law itself to another approach more in line with current needs. However, it is not easy, as it involves a rupture of the traditional distinction between public/private, State/non-State and government/non-government. The issue of the obligations of non-State stakeholders has been strengthened by phenomena such as the globalization of the international economy –and the power of transnational corporations–, privatization of public services (education, health, prisons, water, communications and police forces), the fragmentation of States and the power of non-State rebel groups, amongst others⁴⁰.

6. TRANSNATIONAL CORPORATIONS, HUMAN RIGHTS AND DEVELOPMENT

The role of transnational corporations in the international society was reconsidered during de-colonization, according to which there were structural injustices that had to be changed⁴¹. This led to the pursuit of a new international economic order and the beginning of work that would give rise to codes of conduct by the UNO, ILO (1977 Declaration) and the OECD⁴².

39. Vid. On this issue SHELTON, D., *Remedies in International human Rights law*, Oxford University Press, 2005-2006, 498 pages, page 432.

40. Vid. an analysis in CLAPHAM, A., *Human Rights obligations of non-State actors*, Oxford, 2006, 605 pages. By the same author *Human Rights in the private sphere*, Clarendon Press, Oxford, 1993, 380 pages.

41. Vid. as an example of this approach DRAI, R., THUAN, C., MINH, T., BERNARD, J.P., FONTAINE, J.M., *Multinationales et droits de l'homme*, Puf, 1984.

42. Vid. SPRÖTE, W., «Negotiations on a United Code of conduct on transnational Corporation», *GYIL*, 1990, 331; MUCHILINSKI, P., «Attempts to extend the accountability of transnational corporations: The role of UNCTAD», KAMMIRS, T., ZARIFI, S., (eds.), *Liability of Multinational corporations under International law*, Kluwer, 2000, pages 97-117; MARTÍN-ORTEGA, O., *Empresas multinacionales y derechos humanos*

It gave rise to new debate, for example, on the convenience of granting transnational corporations international legal personality. Authors such as Charpentier objected, considering that it would open up international relations to groups whose main goal is profitability and that are not subject to any kind of political control⁴³. The debate was inappropriate, because it confused the notions of sovereignty and legal personality. To acknowledge the international legal personality of transnational corporations and ensure they comply with international law and the national law of the countries in which they operate is not a bad idea and does not involve granting political or any other kind of legitimacy.

In our opinion, it would be advisable to acknowledge the international legal personality of transnational corporations for the purposes of control and liability. We should recall that in the sixties and seventies, the market economy was dominated by States and corporations could not change the machinery of the international economic system, but now things are different and the situation has become «uncontrollable»⁴⁴.

Furthermore, there are now *codes of conduct for multinational corporations*⁴⁵ –which have not been very effective– and coalitions in favor of change, such as the one proposed by Annan⁴⁶ in 1999 on good practice. On 31 January 1999, the Secretary General of the UNO, Kofi Annan, presented the *Global Compact* at the Davos Forum, which has been criticized for its non-binding nature, its loopholes and other reasons. ECOSOC created a Commission of transnational corporations. In 1998, a working group was created to produce a new code of conduct which, on 26 August 2003, presented *UN regulations on the responsibility of transnational corporations and other business*

en el Derecho internacional, Bosch, Barcelona, 2008, p. 345; ALSTON, P., *Non State actors and human Rights*, Oxford University Press.

43. CHARPENTIER, M.J., «Tendances de l'élaboration du droit international public coutumier», *L'élaboration du droit international public*, SFDI, París, 1975, pages 105 et seq, p. 129.
44. BERMEJO GARCÍA, R., «Las empresas transnacionales como actores y sujetos potenciales en la sociedad internacional», *Perspectivas actuales de los sujetos de derecho*, Colección Peces-Barba, n.º 2, BARRANCO, C., CELADOR, O., VACAS FERNÁNDEZ, F., (Coords.), Departamento de Derecho internacional, filosofía y eclesiástico, UC3M, 2012, page 89 et seq.
45. Vid. MERCIAI, P., *Les entreprises multinationales en Droit international*, Bruylant, Bruxelles, 1993, 414 pages. LADOR-LEDERER, J.J., *International non governmental organizations and economic entities*, Leyden, 1963; ANGEL, H.G., «Multinational corporate enterprises», *RCADI*, t. 125, 1968-III, pages 447-600; SEIDL-HOHENVELDERN, Y., «International economic law», *RCADI*, 198, 1986-II, pages 21-264; WALLACE, D., *International regulation of multinational corporations*, New York, 1976.
46. ANNAN, K., *Common Destiny. New Resolve. Annual Report on the Work of the Organization*, 2000, New York, par. 23, p. 7.

enterprises in relation to human rights, which established the obligations to be met by corporations with regard to human rights. The project was non-binding. The Human Rights Commission passed a Resolution on 20 April 2005 addressed to the Secretary General creating the figure of a special Representative of human rights and transnational corporations. Finally, on 16 July 2011, the Human Rights Council passed *guiding principles on the effects of the acts of transnational corporations on human rights*⁴⁷. The Council adopted the report by the special Representative of the Secretary General on human rights and transnational corporations, John Ruggie (A/HRC/17/31 of 21-III-2011). These guiding principles currently constitute a good guide to human rights for both States and corporations, although they raise many issues that are beyond the scope of this study.

7. INTERNATIONAL LAW BY OBJECTIVES

The SDGs also raise issues relating to the very conception of international law. Initially, the minimum function of international law, according to Kelsen, is to distribute authority amongst States (the spheres of validity of State legal systems). The introduction of objectives into the legal system as a whole, for international law, is nothing new to the international community. What is new is the way it is being done.

It is nothing new, as it is an old technique that has been linked to international human rights law and, more recently, to international development law. Authors like Dupuy⁴⁸, Mahiou⁴⁹ and Carrillo Salcedo⁵⁰ have conceived international law as a *law of aims, committed*

47. Vid. MÁRQUEZ CARRASCO, C., *España y la implementación de los Principios Rectores de las Naciones Unidas sobre empresas y derechos humanos: oportunidades y desafíos*, VV.AA., Huygens editorial, 2014, 791 pages. ESTEVE MOLTO, J., «Los principios rectores sobre las empresas transnacionales y los derechos humanos en el marco de las Naciones Unidas, para proteger, respetar y remediar: ¿Hacia la responsabilidad de las corporaciones o la complacencia institucional?», *Anuario español de Derecho internacional*, vol. 27, 2011, pages 317-35. HEINEMAN, A., «Business enterprises in public International law: the case for an International code of corporate responsibility», *Essays in honour of Judie B. Simma*, Oxford University Press, 2011, page 718 et seq.

48. Vid. DUPUY, R.J., «Droit international et disparités de développement. Cours général de droit international public», *RCADI*, 1979-IV, t. 165, page 120 et seq.

49. Vid. also the goals (in the area of sources, review of institutions and of principles and norms) of international development law, MAHIOU, A., «Droit international et développement», *Cursos euromediterráneos Bancaja de Derecho internacional*, vol. III, 1999, CARDONA, J. (dir.), Aranzadi editorial, 2000, pages 29-140, in particular pages 34-40, p. 35-36.

50. Cf. CARRILLO SALCEDO, J.A., «Permanence et mutations en droit international», *Boutros Ghali. Amicorum discipulorumque Liber*, Bruylant, Bruxelles, 1998, p. 300.

to change. According to Dupuy, the specific nature of international law is its aim, whereas Mahiou refers to the law of commitment (with respect to development). More recently, Carrillo Salcedo pointed out the «insufficiency of traditional international law and the need for new international law that, if it wants to meet the challenge (...), must address a community system that is adapted to the dimensions of the planet and whose principal and immediate goal is the balanced and harmonious development of all mankind, considered as a whole».

In this regard, in the sociology of law, the *intentionalists* and functionalists analyze the *aims* that guide the system. In law, authors like Duguit and Scelle analyzed law from a social needs (objectivists) perspective a century ago, thus overcoming the *ius positivum* of the 19th Century with social concern. In the 20th Century, the postulates of normativism gave way to the internationalists, such as Visscher⁵¹, Friedmann⁵², Thierry⁵³, R.J. Dupuy, P.M. Dupuy and J.A. Carrillo Salcedo. These authors conceive international law according to its *function of transforming international society*, overcoming axiological relativism and formalism. This does not mean understanding international law only from an ethical and finalist perspective, which was criticized by D. Kennedy⁵⁴. However, it is also true that certain projects and commitments have generated the necessary breeding ground for proposals of reform to solve common problems.

The *Right to Development* has traditionally been classified as finalist and theological order oriented towards a mission (right for development). This is how it is addressed by authors such as Bollecker-Stern⁵⁵, Gros Espiell,

51. VISSCHER, C., *Teorías y realidades en derecho internacional público*, Bosch, Barcelona 1962, pages 135 and 141.
52. FRIEDMANN, W., «Droit de coexistence et droit de cooperation. Quelques observations sur la structure changeante du droit international», page 1 – et seq., p. 9.
53. THIERRY, H., «Internationalisme et normativisme en droit international», *Guy de Lacharrière et la politique juridique extérieure de la France*, Masson, París, 1989, p. 371. «L'évolution du droit international. Cours général de droit international public», *RCADI*, 1990-III, 222 pages, pages 17-19.
54. KENNEDY, D., *Rompiendo moldes en el Derecho internacional: Cuando la renovación es repetición*, Cuadernos internacional 3, Universidad Autónoma de Madrid, traducción y prólogo de Ignacio Forcada, Dykinson, 2002, in particular pages 27-30.
55. BOLLECKER-STERN, B., «Le droit international du développement: un droit de finalité», *La formation des normes en droit international du développement*, FLORY, M., HENRY, J., CNRES, 1984; GROS ESPIELL, H., «El derecho al desarrollo veinte años después: Balance y perspectivas», *Reflexiones tras un año de crisis*, VV.AA., Universidad de Valladolid, 1996, pages 27-59, p. 32; TOUSCOZ, J., «Les Nations Unies et le droit international économique. Rapport introductif», *Les Nations Unies et le droit international économique*, SFDI, VV.AA., Pedone, París, 1987, p. 16; FLORY, M., *Droit international du développement*, Puf, París, 1977; FEUER, G., CASSAN, H., *Droit*

Touscoz, Flory, Pellet, Peláez Marón, Bennouna, Slinn, Bouveresse, Mahiou, Mbaye⁵⁶, Bermejo⁵⁷ and Gutiérrez Espada⁵⁸, Colliard⁵⁹. Sustainable development must be seen in the same classic approach, which still has a mythical-utopian aspect.

8. SUSTAINABLE DEVELOPMENT AS A MYTH AND UTOPIA

The objectives of a legal system are related to the concept of law as a *claim to rights*⁶⁰, in which the notion of myth and utopia, as well as soft law and hard law both play a role. The *development myth*, according to R.J. Dupuy⁶¹ serves a driving and mobilizing force. Unlike myths – which in legal discourse synthesize a legal reality – utopias are more present as *lege ferenda* and serve the ideological function of international law. We use the term utopia as a *project* to be implemented in international law, a driving force towards the transformation and changing of the law⁶². A utopia defines the horizons of legal change, normally to defend the weak and the values of justice. Utopian thinking builds ideal societies, in other words those that still do not exist, which does not mean they cannot be achieved⁶³.

international du développement, Dalloz, 2 edition, 1991; PELLET, A., *Droit international du développement*, Que sais-je?, 1731, Puf, Paris, 2 edition, 1987; BENNOUNA, M., *Droit international du développement*, Berger-Levrault, 1982; SNYDER, F., SLINN, P., *International law of development*, London, 1987; BOUVERESSE, J., *Droit et politique du développement et de la coopération*, Puf, 1990.

56. Vid. M'BAYE, K., «Le droit au développement en droit international», *Essays in international law in honour of judge M. Lachs*, Martinus Nijhoff Publishers, 1984, pages 163-177, p. 163.
57. BERMEJO. *Vers un nouvel ordre économique international. Etude centrée sur les aspects juridiques*, Editions Universitaires Fribourg Suisse, 1982, pages 15 and 16.
58. GUTIÉRREZ ESPADA, C., «Sobre las funciones, fines y naturaleza del derecho internacional contemporáneo», *Homenaje al Prof. Mariano Hurtado Bautista*, 1992, p. 69.
59. COLLIARD, C.A., «Spécificité des Etats. Théorie des status juridiques particuliers et d'inégalité compensatrice», *Mélanges offerts à Paul Reuter. Le droit international: unité et diversité*, Pedone, Paris, 1981, pages 153-180, p. 180.
60. Cf. PÉREZ GONZÁLEZ, M., «El derecho al desarrollo como derecho humano», *El derecho al desarrollo o el desarrollo de los derechos*, Ed. Universidad Complutense, VV.AA., p. 96; FLORY, M., «La politique juridique extérieure et le nouvel ordre économique international», *Guy de Lacharrière et la politique juridique extérieure de la France*, De. Masson, 1989, Paris, 158-266, p. 265.
61. DUPUY, R.J., *La clôture du système international. La cité terrestre*, Puf, Paris, 1989, p. 31.
62. In this regard, DUPUY, R.J., «Droit, révolution, utopie», *Révolution et Droit international*, p. 435; FRANCK, T., «Legitimacy in the international system», *AJIL*, 1988/4, pages 705-759.
63. RAMIRO AVILÉS, M.A., *Utopía y derecho. Análisis de la relación entre los modelos de sociedad*

In this regard, *sustainable development forms part of the utopia of the modern day international community*. Utopia must place us outside a social-historical or real perspective of the legal system, although excess realism can be negative, as what appears to be utopian today may be possible in the future. We cannot envisage or build a world based on disconnected utopian models. We should not wear Walt Disney rose-colored glasses⁶⁴, however we should not forget that certain past visionaries (or visions) have contributed to making things happen. International law has been enriched by concepts and ideas that have guided political acts, resulted in projects and international institutions and, finally, been incorporated into positive law⁶⁵.

In the history of international law, *many utopias from the past are reflected in the principles and rules of present day law*. Dreyfus⁶⁶ compared the doctrinal images of international law at the end of the 19th Century with the realities of the 20th Century, reaching the conclusion that many of the utopian aspirations of legal doctrine became a reality or, at least, helped progress, for example, towards the utopia of codification, compulsory international jurisdiction, the existence of international Courts and Organizations, the federalist or European Union utopias. These utopias guide legal progress from driving forces, concepts and visions⁶⁷. Today, the utopia is sustainable development.

The mythification of certain concepts is relevant, given that, on occasion, they end up penetrating the legal system. Certain mythical symbols and ideals have great metaphoric potential that contributes to re-affirming the underlying values of the legal system and ideologically transferring the content of its principles and rules: *universal peace*,

ideal y los sistemas normativos, Doctoral thesis, Universidad Carlos III de Madrid-Instituto de Derechos Humanos Bartolomé de las Casas, Getafe, April 2000, 779 p. 18.

64. LACHS, M., *Le monde de la pensée en droit international*, p. 18.

65. Utopia has a more important role in international law than it is normally attributed. It performs functions particularly related to *lex ferenda*, by denying and rejecting rules, supporting others and anticipating the future, a frequent characteristic of utopia, according to Serge Sur, being to refer to a transcendental, absolute law and rather produce circumstantial law. Vid. SUR, S., «Système juridique international et utopie», *Archives de philosophie du droit*, t. 32, *Le droit international*, Sirey, 1981, pages 35-45.

66. DREYFUS, S., «D'un siècle à l'autre: Remarques sur l'image du droit international public», *Boutros Ghali Amicorum discipulorumque Liber. Paix, Développement, démocratie*, Bruylant, Bruxelles, 1998, pages 359 et seq.

67. NAFZIGER, A.R., «The functions of religion in the International system», *The influence of religion on the development of International law*, cit., 1991, pages 149 et seq., p. 151.

*democracy and even abstract humanity*⁶⁸. Here is where the *power of words* comes into play, as the basic fabric of the system.

Caution is required with respect to the virtues of metaphoric myths under the framework of the creation of law, as they may lead to us losing sight of the legal objective of a negotiation and thus benefit the inaccuracy or vagueness of terminology. In such case, the *légitimité annonciatrice*⁶⁹, as the idea of the suitability of law to justice, has been present on numerous occasions at United Nations General Assemblies, contributing to the transformation of legality. For example, the new international economic order failed in its maximalist attempts, however, despite certain disappointments, the utopias helped to transform the solidarity approach to international law.

International law is therefore developed with references to *universal myths* that, on occasion, become part of the legal system, or at least partly. The *utopia* invokes *legal change*, normally in the interests of the weaker members of the system. This means that utopias provide law with an *ideological dimension that projects intellectual and moral representations and references* that are added to its organizational and registry dimension (S. Sur). In this respect, it could be considered, as indicated by Sur with his *utopian dimension of international law for the weak*, which tends or should tend to compensate or correct inequality, his *organizational dimension for equals* and his *registry dimension for the strong*, which reinforces its position and advantages⁷⁰.

Certain areas of international law are affected by utopian approaches, such as *international development law*, *international human rights law*, *the prohibition of the use of force and the establishment of the collective security system*. The *Universal Declaration of 1948* established a utopian horizon⁷¹. At present, the so-called third generation rights symbolize new utopias. The *utopia of peace through law* has been shared and has given rise to multiple peace projects, the creation of the Society of Nations and the

68. CAHIN, G., «Apport du concept de mythification aux méthodes d'analyse du droit international», *Le droit des peuples à disposer d'eux-mêmes. Méthodes d'analyse du droit international. Mélanges offerts à Charles Chaumont*, Pedone, Paris, 1984, pages 89-115, p. 92.

69. Vid. in this regard DUPUY, R.J., *La Communauté internationale entre le mythe et l'histoire*, Economica, Paris, 1986, pages 119, 120.

70. SUR, S., «Système juridique international et utopie», *Archives de philosophie du droit*, t. 32, Le droit international, Sirey, 1987, p. 41.

71. CARRILLO SALCEDO, J.A., *Dignidad frente a la barbarie. La declaración universal de derechos humanos, cincuenta años después*, Minima Trotta, Madrid, 1999, p. 26.

United Nations⁷². The United Nations Charter therefore has dual legal and utopian (programmatic, ideological, almost religious) dimensions, as well as being a constitutional legal document on the one hand and an ideological-political instrument, on the other, which seeks the ideal of peace through law⁷³. The utopia serves the purpose of showing the way, but the road still has to be travelled⁷⁴.

In the past, the myth of peace through law was contrasted by the absolute inefficacy of international law and the myth of the state of nature by that of peace through a super-state power⁷⁵. In the same way, a reactionary myth is the mythical, mystical and hyperbolic conception of sovereignty as an absolute notion, which leads to the rejection of the existence of international law. In recent times, the myth of *developpism* has prevailed over the *ideology of development*⁷⁶, growth being the justifying principle of asymmetric globalization. This is a *reactionary utopia* that should be counteracted by a humanist and alternative project that enables the construction of a *global political system that does not serve the global market, but rather defines its parameters just as the State-nation historically represented the social framework of the national market*⁷⁷. The utopia of sustainable development should therefore not be seen as something that cannot be achieved, but rather as a gradually achievable project.

9. SUSTAINABLE DEVELOPMENT: BETWEEN SOFT LAW AND HARD LAW

Sustainable development is becoming a particularly suitable area for soft law, which does not mean that hard law is irrelevant or does not exist.

72. GOYARD-FABRE, S., *La construction de la paix ou le travail de Sisyphe*, Vrin, 1994, pages 225 et seq.

73. DUPUY, P.M., «L'enfer et le paradigme: libres propos sur les relations du droit international avec la persistance des guerres et l'objectif idéal du maintien de la paix», *Mélanges H. Thierry. L'évolution du Droit international*, Pedone, Paris, 1998, pages 186-199, in particular 188 and 191 to 194.

74. PONS RAFOLS, X., «La participación de España en el sistema de acuerdos de fuerzas de reserva de las operaciones de mantenimiento de la paz», *Agenda ONU*, n.º 2, 1999, pages 123-164, p. 147.

75. Vid. sobre estos mitos y sus contra-mitos DUPUY, R.J., «L'illusion juridique. Réflexions sur le mythe de la paix par le droit», *Guy de Lacharrière et la politique juridique extérieure de la France*, Masson, Paris, 1989, pages 245-257, p. 252.

76. DE VEGA, P., «Mundialización y derecho constitucional. La crisis del principio democrático en el constitucionalismo actual», *Revista de estudios políticos*, abril/junio, 1998, pages 13 et seq. p. 16.

77. AMIN, S., *El capitalismo en la era de la globalización*, Paidós, Barcelona, 1997, p. 19.

According to Weil⁷⁸, there exists a *dual crisis in international law*, with the weakening of the expansion of international law and the appearance of super-laws (*ius cogens*).

In this respect, the blurring of the legality of regulations that can be generated by utopian discourse is the result of mistaking aspirations and the evolution of law, the imaginary and reality, as what occurred with the NIEO⁷⁹, which basically constituted a reference to *desirable law* (*unripe, soft law*), but not to positive law (*hard law*)⁸⁰. However, as pointed out above, we should not overlook the fact that utopia plays a role in *lex ferenda* when it demands a change in the law, the amendment of *lex lata*, as occurs in the international law of sustainable development.

Soft law plays an important role in the interpretation of positive law, the gradual transformation of its content, the behavior of subjects and the transformation of *opinio iuris*⁸¹. Soft law is important because it evidences the constant transformation of international law and its growth. In the gradual development of international sustainable law, the transformation of *soft law* into *hard law* is also important. What would have helped was the success of the initiative of the Human Rights Council via Resolution 26/9, of June 2014, which consisted in the preparation of a *legally binding instrument to regulate, in international human rights law, the activities of transnational corporations and other business enterprises*⁸².

78. WEIL, P., «Le droit international en quête de son identité», RCADI, cit. pages 227 et seq.

79. BENNOUNA, M., «Réalité et imaginaire en droit international du développement», *Le droit des peuples à disposer d'eux-mêmes. Méthodes d'analyse du droit international. Mélanges offerts à Charles Chaumont*, Pedone, Paris, 1984, pages 59-72, p. 67.

80. PELLET, A., «Le «bon droit» et l'ivraie– Plaidoyer pour l'ivraie (Remarques sur quelques problèmes de méthode en droit international du développement)», *Le droit des peuples à disposer d'eux-mêmes. Méthodes d'analyse du droit international. Mélanges offerts à Charles Chaumont*, Pedone, Paris, 1984, pages 465-525, p. 470. REISMAN, M., «The concept and functions of soft law in international politics», *Essays in honour of judge Raslim Olawale Elias*, vol. 1. Contemporary international law and human rights, BELLO, E., SAN, A., Edit, Martinus Nijhoff Publishers, 1992, pages 135-144, p. 144.

81. BOTHE, M., «Legal and non legal norms: A Meaningful existence of non-binding agreements», *NYIL*, 1977, 1980, pages 65-95; SCHACHTER, O., «The twilight existence of non binding agreements», *AJIL*, 1977, pages 294-304; CHINKIN, C., «The challenge of soft law», *ICLQ*, 1989, pages 850-866; EISEMANN, P.M., «Le gentlement's agreement comme source du Droit international», *JDI*, 1979, pp. 326-348; VIRALLY, M., «La distinction entre textes internationales de portée juridique et textes internationaux dépourvus de portée juridique», *Annuaire de l'Institut de DI*, 1983, pages 166 et seq.

82. Vid. in this regard LÓPEZ, C., SHEA, B., «Negotiating a treaty on business and human rights: a Review of the first intergovernmental session», *Business and human rights journal*, 1, 2015, pages 111-116.

The initiative behind Res. 26/9 was sponsored by Ecuador, South Africa, Bolivia, Cuba and Venezuela and supported by some six hundred civil organizations. However, it was unsuccessful, given that the Human Rights Council received the support of 20 States and the opposition of 14, which included the United States and Member States of the European Union, with the abstention of a further 13 States⁸³.

From the very beginning of the working group debates, it was clear that there were certain problems that could prevent a Treaty on the issue. The notion of a corporation, scope of business and the stakeholders subject to the Treaty, as well as the human rights that would be at stake and the nature of the obligations that would be imposed upon corporations were just some of the difficulties that arose.

But to make progress in this regard is not an easy task, for a number of reasons. Transnational corporations operate in a context of a weakening of States, in which the scenario is a scarcity of international regulations. Humanizing globalization requires having control over non-subjects (such as corporations), not only to encourage self-regulation but also reduce de-regulation, subject to market law. There are many issues that need clarification, such as the existence of a fragmented legal system in different institutions (the United Nations, European Union, OECD, International Labor Organization, treaties, States, self-regulation) and conventions such as international instruments of *soft law*. This dispersion of law hinders the identification of a legal system based on *soft law*.

On the other hand, progress is being achieved with *new instruments*, such as national and international strategies and national plans. These instruments are different to classic international Treaties and more in line with soft law, however they generate international practice that gradually changes the legal system. Along these lines, although the draft bill of law called the National Plan for Human Rights and Corporations («*Plan nacional de derechos humanos y empresas*»)⁸⁴ is at a standstill in Spain, this is not the case in other countries where it does exist, such as the United Kingdom, Holland, Denmark, Finland and Lithuania, amongst others. The United Nations working group on human rights and transnational corporations has for several years been recommending that States develop

83. SCHUTTER, O. De, «Towards a New Treaty on business and human rights», *Business and human rights journal*, 1, 2015, pages 41-67.

84. Vid. in this regard O'BRIEN, M., MEHRA, A., BLACKWELL, S., POULSEN-HANSEN, C.B., «National action plans: Current Status and future prospects for a New business and human rights governance Tool», *Business and human rights Journal*, 1, 2015, pages 117-126.

national plans and, in 2015, the United Nations Global Compact published guidelines, as did the Council of the European Union one year before. The aim of the guidelines is for States to develop the relevant international standards in their internal legal systems. The idea has its pros and contras, as although it encourages States to develop their commitments on the issue, there are certain problems. These problems include, amongst others, the fact that the scope, content and practices covered are highly restrictive and the basis of evaluation of corporations is not comprehensive and objective. Finally, the monitoring of the progress in reaching the SDGs may not coincide with the philosophy of international law. As stated in the 2030 Agenda for sustainable development, the processes of follow up and examination are guided by the principle of voluntary performance⁸⁵.

Similarly and to conclude, it should be pointed out that the progress of sustainable development in international law gives rise to the appearance of new principles and rules, many of which will have a long road to travel before being consolidated from soft law into hard law. Evidence of this is in the study by prof. J. Rodrigo on the principles of international law relating to sustainable development. They include the principles of sustainable use of natural resources, inter and intra-generational equity, common but differentiated responsibilities, precaution, public participation and access to information and justice, proper management of public issues (good governance) and the principle of integration of the economic, social and environmental aspects of sustainable development⁸⁶.

85. *Transforming our world: the 2030 Agenda for sustainable development*, cit., par. 74.

86. Vid. in this regard RODRIGO, J., *El desafío del desarrollo sostenible*, cit., pages 95-191.

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Chapter 4: goal 1

Goal I of the sustainable development goals (SDG1)¹

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SUMMARY: 1. INTRODUCTION. 2. THE CONCEPT, MEASUREMENTS AND TRENDS IN POVERTY. 3. A FOCUS ON THE LEAST DEVELOPED COUNTRIES (LDCS). 4. THE DETERMINANTS OF POVERTY. 4.1. *Gender inequality*. 4.2. *Political Economy*. 4.3. *Market imperfections and service delivery*. 5. ASSESSMENT OF PROGRESS TOWARDS STRUCTURAL TRANSFORMATION: THE CASE OF LDCS. 6. CONCLUSION: ERADICATING POVERTY – IMPLICATIONS FOR POLICY. REFERENCES.

ABSTRACT:

As a sequel to the Millennium Development Goal 1 (MDG1), the Sustainable Development Goal 1 (SDG1) states, «No poverty. End poverty in all its forms everywhere». SDG1 is built on seven targets which should be achieved by 2030. These targets are quite broad and go beyond monetary poverty. While targets 1 and 2 relate directly to expected achievements as ends, the remaining targets are meant to support these first two targets. The present chapter focuses on target 1: «By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day». The chapter assesses how developing countries,

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especially least developed countries, have performed so far in eradicating poverty. Issues explored include: determinants of poverty; inequality, with special emphasis on gender; political economy; market imperfections and service delivery; and progress toward structural transformation. Policy implications are drawn involving both internal and external actors.

1. INTRODUCTION

As a sequel to the Millennium Development Goal 1 (MDG1), the Sustainable Development Goal 1 (SDG1) goes a bit further, and states: *«Goal one: No poverty. End poverty in all its forms everywhere»*. This is a monumental statement, for it is about ending all forms of poverty, not just monetary poverty, and not just developing countries, as was essentially the case with MDG1. SDG1 is built on seven targets which should be achieved by 2030. These are:

1. «By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day»
2. «By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions»
3. «Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable».
4. «By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance».
5. «By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters».
6. «Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions».
7. «Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive

development strategies, to support accelerated investment in poverty eradication actions» (UNDP, 2016).

While targets 1 and 2 relate directly to expected achievements as ends, the remaining targets are meant to support these first two targets. The present chapter will focus on target 1, in terms of how countries, especially developing countries, have performed so far in eradicating poverty. Unfortunately, sufficient data exist only for monetary poverty for any type of trends over time, though multidimensional poverty has emerged as a more comprehensive measure of poverty. Hence, statistical evidence will be provided for only monetary poverty. It is assumed that the monetary income would allow an individual to have command over goods and services in correspondence to his/her needs.

Existing evidence shows that the main target of MDG1 to cut global poverty in half by 2015 from its levels in 1990 was met. However, this success was primarily due to the dramatic reductions in poverty in the East Asia and the Pacific (EAP), particularly China. Unfortunately, in sub-Saharan Africa (SSA) and much of South Asia (SA), progress on poverty was limited. In the other regions of the world, namely, Middle-East and North Africa (MENA), Latin America and the Caribbean (LAC), Eastern Europe and Central Asia (EECA), poverty rates, measured at the \$1.25 and \$2.00 levels for instance, were generally low in the 1980s and 1990s and actually showed slight declines (Fosu, 2016).

2. THE CONCEPT, MEASUREMENTS AND TRENDS IN POVERTY

We focus here on the concept of «extreme poverty», by which it is meant the deprivation of basic human needs: including food, safe drinking water, sanitation facilities, shelter, and health, complemented with the reality that the individual often lacks the education or information to change his/her condition. A more general concept involving multi-dimensional poverty would entail the «capability approach» à la Sen, where other forms of capability including economic and political freedom would also be accounted for. Due to the usual problems of data availability, however, we shall limit the present analysis to the money-metric measure of poverty, under the assumption that for the very poor most of the basic needs for survival entail economic elements that could be met by access to money. (Fosu, 2014).

We shall adopt the money-metric value of \$1.25 per day, expressed

in 2005 PPP-adjusted international dollars, as the relevant poverty line, which is the traditionally adopted measure of the line for «extreme poverty». However, the current measure of extreme poverty uses the \$1.90 poverty line expressed in 2011 PPP-adjusted international dollars². The data are derived mostly from POVCALNET of the World Bank, which provides reasonably comparable data for a large number of countries (see Ravallion et al., 2009).

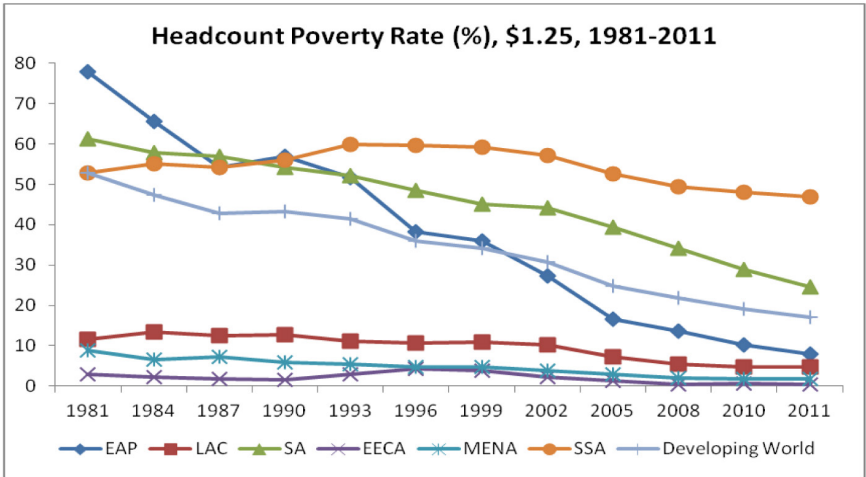
The measures of poverty are the three Foster-Greer-Thorbecke (FGT) poverty measures: the poverty *headcount*, poverty *gap*, and poverty *squared gap*. The headcount, also known as poverty incidence, is the proportion of the population with incomes below the poverty line. It is arguably the most popular measure of poverty; for instance, MDG1 is based on this measure. It is also the most easily computed and conceptually understood measure of poverty.

Nevertheless, the headcount has a significant shortcoming: it does not reflect the extent to which the poor are worse off in income terms. The poverty gap attempts to correct this defect by providing a measure of the poverty *spread*, that is, how far on average the poor's incomes fall below the poverty line. Thus the poverty gap provides a rough indication of the minimum amount of resources required to eradicate poverty, provided that these resources are efficiently channeled to the right beneficiaries. Furthermore, the squared poverty gap, which measures the *severity* of poverty, reflects better the income of the very poor, than does the poverty gap.

Trends in (extreme) poverty rates for the various global regions are shown in Figures 1a, 1b, and 1c for the headcount, poverty gap and poverty gap squared, respectively, for the \$1.25 line.

2. We shall henceforth refer to the \$1.25 and \$1.90 poverty lines with the understanding that they are equivalent, but denominated in 2005 and 2011 PPP-adjusted dollars, respectively.

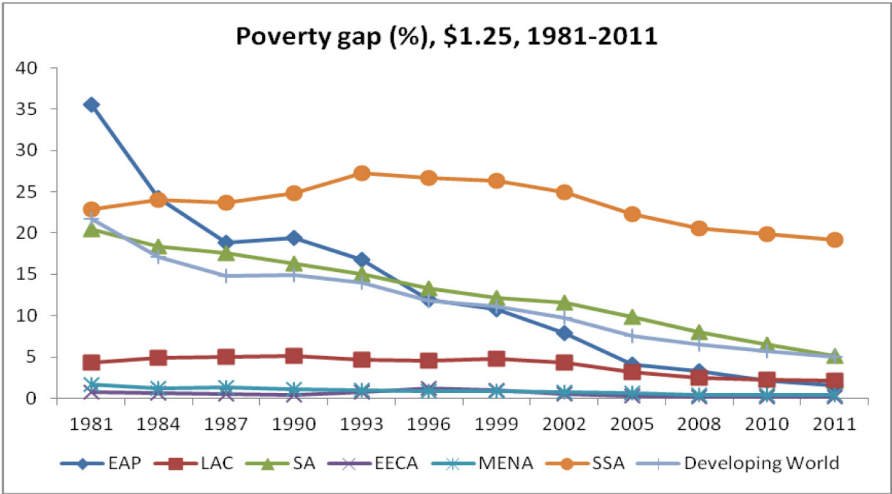
Figure 1a: Poverty trends (\$1.25), by region: *Headcount (Incidence)*



Notes: EAP = East Asia and Pacific; LAC = Latin America and the Caribbean; SA = South Asia; EECA = Eastern Europe and Central Asia; MENA = Middle East and North Africa; SSA = Sub-Saharan Africa. \$1.25 is in 2005 PPP-adjusted dollars.

Data source: World Bank, 2015a

Figure 1b: Poverty trends (\$1.25), by region: *Poverty Gap*

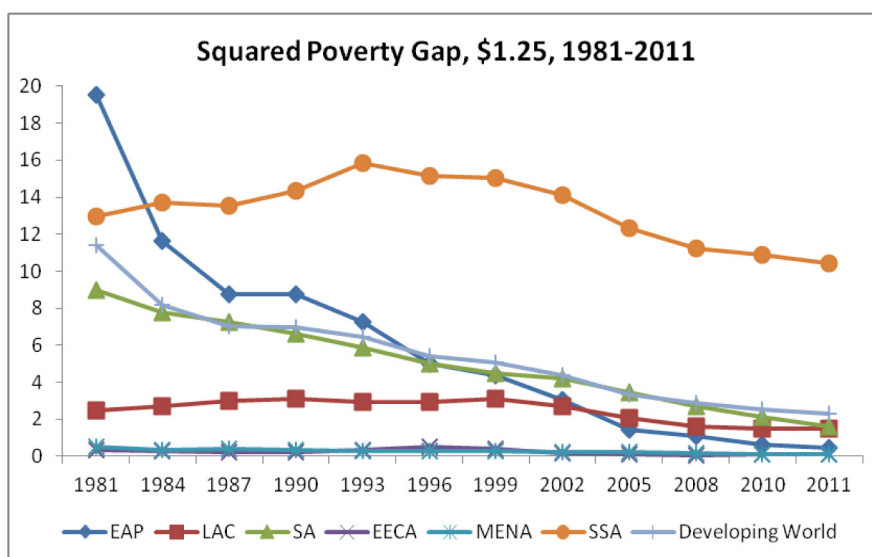


Notes: EAP = East Asia and Pacific; LAC = Latin America and the Caribbean; SA = South Asia; EECA = Eastern Europe and Central Asia; MENA = Middle

East and North Africa; SSA = Sub-Saharan Africa. \$1.25 is in 2005 PPP-adjusted dollars.

Data source: World Bank, 2015a

Figure 1c: Poverty trends (\$1.25), by region: Squared Poverty Gap



Notes: EAP = East Asia and Pacific; LAC = Latin America and the Caribbean; SA = South Asia; EECA = Eastern Europe and Central Asia; MENA = Middle East and North Africa; SSA = Sub-Saharan Africa. \$1.25 is in 2005 PPP-adjusted dollars.

Data source: World Bank, 2015a

On the one hand, the lowest level of poverty, measured by the headcount, is exhibited by Eastern Europe and Central Europe (EECA), followed by the Middle-East and North Africa (MENA), and then by Latin America and the Caribbean (LAC). The levels are less than 5 percent each. Furthermore, the poverty rates of these regions have remained at less than 5 percent, as they did in 1981.

On the other hand, the largest levels in 1981 were displayed by East Asia and the Pacific (EAP), South Asia (SA) and by sub-Saharan Africa (SSA)/Developing World (DW). By 2011, however, the corresponding permutation (from highest to lowest) is shown as: SSA, SA, DW, and EAP. Undoubtedly, among these high-initial-poverty regions, EAP has

demonstrated the greatest progress on poverty, followed by DW, SA, and then SSA.

The trends in the poverty gap are similar to those in the headcount: EECA, MENA and LAC still had the lowest levels of poverty in 1981, with the levels remaining relatively low over the period. Meanwhile, EAP's poverty rate was by far the largest in 1981, followed by that of SSA, DW and then SA. Again, EAP displayed the largest progress by far, followed by DW, and then SA, with SSA showing the least progress among the four regions with relatively high initial poverty rates. The trends for the poverty gap squared are similar to those of the poverty gap.

However, any focus of effort on poverty must be at the country level, where national governments are demarcated. In this regard, the latest levels of poverty at the \$1.90 (2011 PPP-adjusted dollars) per-day level by country globally are presented in table A1³. We make several observations emanating from this table. First, the three FGT poverty measures are highly positively correlated as apparent from the co-movements of the decile numbers across the FGT measures (headcount, gap, and squared gap poverty). This observation is important because it suggests that policy measures that reduce, say, the headcount, which is often the popular instrument of focus for policy, may suffice for the other poverty measures as well. Indeed, analyzing African data, Fosu (2016, p. 10) observes that «the responsiveness of the poverty rate measured by the headcount, as in the case of MDG1 for instance, would constitute a relative lower bound and should thus suffice for assessing the spread and severity of poverty as well.»

Second, SSA represents by far the region with the largest relative frequency of countries with the highest levels of poverty (countries with high decile numbers, say 10, 9 and 8), thus requiring the greatest attention. While the data used for the Figures 1a-c are population-weighted averages and those in table A1 are simple averages, the regional pictures portrayed by the figures and table numbers differ somewhat, but they each tell important stories. For example, EAP was observed to exhibit smaller poverty levels than SA by the figures» numbers, but it is the other way round from the table. This is because certain relatively small

3. Note that higher frequencies of country data are obtainable by combining household consumption survey data with national income accounts statistics (see, e.g., BHALLA, 2002; BOURGUIGNON and MORRISON, 2002; CHOTIKAPANICH et al., 1997, 2007; PINKOVSKIY and SALAI-I-MARTIN, 2009; QUAH, 2002). However, given the usual problems with national accounts data (e.g., Jerven, 2013) it is generally advisable to focus on the World Bank data, which exhibit relatively high inter-country comparability (see RAVALLION et al., 2009).

countries in EAP have high poverty rates in the region, e.g., Micronesia-Urban, Solomon Islands, and Papua New Guinea. If the objective is to reduce poverty overall for the region, then the picture from the figures» numbers should be the gauge; however, the simple averages tell us that there are likely to be countries with large poverty rates that require a focus of attention. Indeed, that the mean is generally much larger than the median in all regions in table A1 (except SSA where the means are respectively only slightly larger than the medians) suggests that there are a small number of countries in a given region that exhibit relatively large poverty rates and thus skew the mean to the right. Such evidence further points to the need to ferret out these countries with the relatively large poverty rates for appropriate attention. Thus, attempts to achieve SDG1 must ensure, inter alia, that such countries, as well as SSA generally, are accorded resources proportionate with the challenge.

Third, a large majority of the countries with the highest levels of poverty are least developed countries (LDCs). Hence, to attain SDG1 commensurate attention must be paid to these countries. We shall, therefore, focus on this group of countries, in order to appropriately inform policies for achieving SDG1⁴.

3. A FOCUS ON THE LEAST DEVELOPED COUNTRIES (LDCS)⁵

With more than 75 percent (40 percent) of their citizens living in poverty (extreme poverty), least developed countries (LDCs) as a group are the poorest and the most vulnerable countries in the world (UN, 2011). These countries are generally characterized by low per capita income, low level of human capital development and structural bottlenecks that hinder economic growth and human development. There are currently 48 LDCs, but usable data for assessing progress on poverty are available for only 29 of the countries. LDCs also tend to be susceptible to external shocks

4. It must be noted, though, that there are non-LDCs that have very high poverty rates, e.g., Micronesia-Urban, Nigeria, Papua New Guinea, St. Lucia, Suriname, Swaziland, Turkmenistan, and Uzbekistan namely. Conversely, there is at least one LDC that has relatively low levels of poverty, namely, Bhutan. Nonetheless, these are few exceptions, and the analysis of the current LDCs should be informative for these high-poverty but non-LDC countries as well, while the low-poverty Bhutan as an LDC should provide positive lessons for the other countries.

5. This and subsequent sections borrow generously from Fosu (2014), which was commissioned by the Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (OHRLLS), United Nations Headquarters, New York. Special thanks to OHRLLS are in order.

(e.g., terms of trade and financial flows) as well as internal shocks (e.g., climatic and conflict), given their inability to prevent or insure against such shocks. Achieving SDG1 requires particular attention to growth sustainability and poverty eradication in these countries, which would call for meaningful structural transformation. In turn, while internal reforms are called for, external support is critical, if these countries are to eradicate extreme poverty.

The data for LDCs, as the case for the country data generally, are derived from (occasional) surveys and therefore are available as frequently as the country surveys are conducted. Thus there are, for instance, as many as eight data observations for Bangladesh and Zambia each, but only two each for Angola, Gambia and Timor-Leste (table A2). The data series also begin as early as 1980 for Madagascar, and as late as 2006 for Togo. The data are, however, quite current, with most series ending in the late 2000s. These data show that in most cases the three poverty rates have been trending downward, especially since the 1990s. The only exceptions, that is, among those LDCs for which data are available, are Madagascar, Yemen and Zambia.

To provide an overall picture of poverty, income, and inequality for the LDCs, table A3 reports summary statistics on the headcount ratio (latest year for which data was available at the time of the analysis in 2014), average income, and the measure of inequality (both initial and latest years). The poverty rate ranges from as low as 1.6 percent in Bhutan to as high as 81.3 percent in Burundi and Madagascar, and averages 44.2 percent (mean). Meanwhile the average monthly income is highest in Bhutan at 124.6 2005 PPP international dollars per month and lowest in Burundi at 26.4 dollars; the mean is 53.2 dollars. Measuring the level of inequality, the Gini coefficient is highest in CAR in both the initial and final years at 61.3 percent and 56.3 percent, respectively; the mean in the initial year is 42.9 percent and 40.4 percent in the final year.

The above statistics in table A3 suggest that despite certain common characteristics, the LDCs are quite heterogeneous, at least in terms of poverty, income and inequality. Such heterogeneity is an asset, though, as it should help delineate among those countries that have succeeded in their progress on poverty and those that have not. Appropriate lessons could then be learnt toward achieving SDG1.

We, however, compare the characteristics of LDCs as a group with a global sample of developing countries⁶. The global sample mean

6. This is a global sample of developing countries from all regions of the world that had

poverty rate is 20.4 percent, about one-half that of the LDCs sample of 44.2 percent. The Gini coefficient is roughly the same at 42.6 percent for the global sample as compared with 40.4 percent for the LDCs; however, the mean monthly income is 176.04 dollars for the global sample, more than three times that of the LDCs sample of 53.18 dollars. Hence, the evidence presents rough statistical indication that the LDCs sample exhibits on average both much higher poverty rates and substantially lower incomes, though similar levels of inequality, as the global sample. These comparative statistics suggest that the poverty responsiveness to income growth and inequality changes would be lower in LDCs than in other countries, and that the difference is likely the result of the differences in income, rather than in inequality, between LDCs and other developing countries⁷.

Presented in table A4 is empirical analysis of LDCs' performance on poverty reduction. We observe, first, that there has been steady progress since the 1990s for both groups of countries, and on all three poverty measures. Second, the poverty rate of LDCs relative to that of DW is lowest for the headcount ratio, followed by the poverty gap and then by the squared poverty gap. This result holds in both 1993 and 2010, and suggests that the use of the policy-popular headcount measure, as in the MDGs for instance, actually understates the LDCs' rate of poverty, relative to the DWs', based on spread or depth. Third, the comparative poverty rate has actually increased between 1993 and 2010, at a rate in excess of 40 percent for each of the measures. These results are consistent with the higher rates of poverty reduction reported in table A4. Thus while LDCs have generally made substantial progress on poverty, they are nonetheless farther behind the DWs today than they were about two decades ago.

4. THE DETERMINANTS OF POVERTY

In order to gauge the likelihood of SDG1 being achieved, it is important to understand the determinants of poverty, to begin with.

at least two data points in the World Bank database available for computing growth rates (Fosu, 2011, table A1), similar to the current selection of the LDCs sample. For comparability the global-sample statistics are for the 2000s period.

7. Fosu (2011) estimates the (absolute) income elasticity and inequality elasticity of poverty to be both positive functions of the level of income and negative functions of initial inequality, so that the lower income in LDCs would imply less responsiveness of poverty to changes in income or in inequality (for further details see Fosu, 2011).

The growth-inequality-poverty nexus

The critical role of income distribution in poverty reduction is spelt out in great detail in the seminal studies of Datt and Ravallion (1992) and Kakwani (1993), *inter alia*. These are country-specific studies, which do not lend themselves to comparing the results with those for other countries. A number of authors have, however, extended the analysis to measure inter-country differences in the transformation of income growth to poverty reduction. Using cross-country African data, Ali and Thorbecke (2000), for example, find that poverty is more sensitive to income inequality than it is to income.

A subset of such inter-country studies, moreover, underscores the important role of inequality in determining the *responsiveness* of poverty to economic growth (e.g., Adams, 2000; Easterly, 2000; Ravallion, 1997). These authors were especially concerned with the role of inequality in the effectiveness of specific policies. Ravallion (1997), for instance, econometrically tested the «growth-elasticity argument» that while low inequality helps the poor share in the benefits of growth it also exposes them to the risk of contraction. Likewise, assessing the effectiveness of the Bretton Woods Institutions' programs, Easterly (2000) specified growth interactively with the level of inequality in the poverty-growth equation, and observed that the impact of the programs was enhanced by lower levels of inequality. Finally, Adams (2004) emphasized the importance of properly defining growth, but also presented elasticity estimates showing that the responsiveness of poverty to income growth is larger for the group with the lower level of inequality.

To further underscore the crucial nature of inequality in the poverty-growth relationship, Fosu (2008a, 2009, 2010a, 2010b, 2010c, 2011, 2015, 2016) has more recently derived and estimated analysis-of-covariance and other interactive models. The first four and latest two of these studies are on African economies, while the fifth and sixth employ global samples of developing countries. The results generally provide further support for the important role of inequality in the poverty-growth transformation.

Some empirical evidence for LDCs

Table 1a presents evidence on progress on poverty, as well as on per capita GDP, income and inequality (Gini). The intended period to be examined is the 1990s to the present. However, due to data availability, different periods are specified for the various countries. To ensure comparability across countries, therefore, the growth rates are *annualized* via dividing the difference across years by the number of intervening

years. As apparent from the table, all LDCs in the sample exhibit positive progress on poverty, except for three countries: Madagascar, Yemen and Zambia. This finding holds for all the three measures of poverty.

Table 1a: Annualized Growths of: Poverty Measures, Per Capita GDP, Income, and Inequality (Gini index)

| Country | Period | Pov. growth, \$1.25 | Pov. Gap growth, \$1.25 | Squared pov. Gap growth, \$1.25 | Per capita GDP growth | Income growth | Inequality growth |
|---------------|-----------|---------------------|-------------------------|---------------------------------|-----------------------|---------------|-------------------|
| Angola | 2000-2009 | -2.50 | -6.65 | -10.25 | 8.13 | -0.56 | -3.54 |
| Bangladesh | 1992-2010 | -2.69 | -4.21 | -5.56 | 3.65 | 2.25 | 0.84 |
| Bhutan | 2003-2012 | -30.67 | -36.56 | -37.97 | 6.28 | 6.11 | -2.11 |
| Burkina Faso | 1994-2009 | -3.12 | -5.75 | -7.60 | 3.03 | 2.13 | -1.62 |
| Burundi | 1992-2006 | -0.25 | -0.71 | -1.26 | -2.93 | 0.76 | -0.01 |
| Cambodia | 1994-2009 | -5.82 | -8.17 | -9.98 | 5.48 | 2.35 | -0.40 |
| CAR | 1992-2008 | -1.75 | -3.80 | -5.22 | 0.95 | 4.55 | -0.53 |
| Ethiopia | 1995-2011 | -4.25 | -5.95 | -7.26 | 4.05 | 1.82 | -1.08 |
| Gambia | 1998-2003 | -13.37 | -21.24 | -27.57 | 1.08 | 13.32 | -1.21 |
| Guinea | 1991-2007 | -4.74 | -9.02 | -12.29 | 0.58 | 8.35 | -1.09 |
| Guinea-Bissau | 1993-2002 | -0.71 | -2.41 | -3.62 | -1.64 | -1.64 | -3.31 |
| Lao PDR | 1992-2008 | -3.10 | -3.72 | -3.90 | 4.54 | 2.34 | 1.18 |
| Lesotho | 1993-2003 | -2.62 | -3.73 | -4.20 | 2.12 | 1.49 | -0.99 |
| Madagascar | 1993-2010 | 0.67 | 1.28 | 1.67 | -0.31 | -1.52 | -0.26 |
| Malawi | 1998-2010 | -2.49 | -4.69 | -6.20 | -0.17 | 3.34 | -1.13 |
| Mali | 1994-2010 | -3.34 | -7.36 | -10.44 | 2.66 | 4.15 | -2.66 |
| Mauritania | 1993-2008 | -4.02 | -5.03 | -5.71 | 1.34 | 1.16 | -1.42 |
| Mozambique | 1996-2003 | -2.52 | -4.11 | -5.04 | 5.08 | 3.66 | 0.22 |
| Nepal | 1996-2010 | -7.20 | -10.91 | -13.85 | 2.33 | 4.25 | -0.51 |
| Niger | 1992-2008 | -3.20 | -5.44 | -7.35 | 0.10 | 2.67 | -0.27 |
| Rwanda | 2000-2011 | -1.51 | -2.95 | -4.08 | 5.14 | 2.37 | -0.12 |
| Senegal | 1991-2011 | -3.99 | -6.62 | -8.78 | 0.79 | 2.52 | -1.48 |
| Sierra Leone | 2003-2011 | -0.39 | -2.49 | -4.20 | 2.45 | -0.90 | -2.31 |
| Tanzania | 1992-2007 | -0.45 | -0.36 | -0.31 | 2.25 | 0.71 | 0.70 |
| Timor-Leste | 2001-2007 | -5.77 | -12.79 | -18.63 | -2.15 | 1.99 | -3.55 |
| Togo | 2006-2011 | -6.31 | -5.10 | -3.93 | 0.71 | 5.97 | 2.65 |
| Uganda | 1992-2009 | -3.59 | -5.35 | -6.62 | 3.80 | 3.47 | 0.23 |
| Yemen, Rep. | 1998-2005 | 4.40 | 4.74 | 5.31 | 1.54 | -1.04 | 1.71 |

| Country | Period | Pov. growth, \$1.25 | Pov. Gap growth, \$1.25 | Squared pov. Gap growth, \$1.25 | Per capita GDP growth | Income growth | Inequality growth |
|------------------|-----------|---------------------|-------------------------|---------------------------------|-----------------------|---------------|-------------------|
| Zambia | 1993-2010 | 0.77 | 0.97 | - 0.70 | 0.67 | - 0.47 | 0.52 |
| | | | | | | | |
| Mean | | - 3.95 | - 6.14 | - 7.78 | 2.06 | 2.61 | - 0.74 |
| Median | | - 3.10 | - 5.03 | - 5.71 | 1.54 | 2.34 | - 0.53 |
| | | (Lao PDR) | (Mauritania) | (Mauritania) | (Yemen) | (Lao PDR) | (CAR) |
| Std. Dev. | | 6.01 | 7.54 | 8.49 | 2.56 | 3.13 | 1.51 |

Notes: The data used is from the PovcalNet database (World Bank, 2014a). The figures are annualized by taking the difference in the log of the latest-year and the beginning-year values and dividing by the number of years between the periods $\times 100$ percent.

Furthermore, since changes in income and inequality are the crucial determinants of the progress on poverty, the annualized growth rates of these variables are also presented in table 1a. Note that income increased for all the sample countries, except for Angola, Guinea-Bissau, Madagascar, Sierra Leone, Yemen, and Zambia. Similarly, inequality fell for the majority of the countries, with Bangladesh, Laos, Mozambique, Tanzania, Togo, Yemen, and Zambia the exceptions. Thus in most of the sample of 29 LDCs, income increased while inequality fell, with reinforced favorable implications for poverty reduction.

A note on the extent to which the oft-cited per capita *GDP* growth statistic reflects (per capita) *income* growth is in order. As is clear from table 1a, the former may not always accurately reflect the latter, which measures income (consumption) at the household level and is therefore the more relevant variable in explaining poverty reduction. For example, Angola experienced a large annualized per capita GDP growth of 8.1 percent, yet its income actually fell slightly during the same period. Similarly, per capita GDP growth was positive while income growth was negative for Yemen and Zambia. In contrast, though per capita GDP fell for Burundi, Malawi and Timor-Leste, the respective incomes of these countries rose. The implication, then, is that per capita GDP data, which are more easily obtainable, may not actually reflect income (consumption) data at the household level, which are based on occasional surveys and are more difficult to come by.

The Angola case is particularly noteworthy, where we observe a substantial

increase in GDP but a decrease in income at the household level. Apparently the lion's share of the GDP growth is not trickling down to the common person. This outcome is likely explained in great part by the fact that most of the country's GDP is driven by oil exports. For example, oil production and its supporting activities contribute about 85% of GDP (CIA Factbook, 2014). Hence, the distribution of the export revenues is very likely skewed toward capital and relatively high skilled labor. Moreover, much of the country's infrastructure is still damaged or undeveloped from the 27-year-long civil war (*ibid.*). Thus, progress toward poverty reduction may be impeded by the limited spatial distribution of economic activities.

Nevertheless, Angola has made some progress on poverty reduction through a decrease in income inequality, from a Gini coefficient of as high as 58.6 percent in 2000 to 42.7 percent in 2009 (table A3). Strikingly, through the improvement in income distribution, Angola has succeeded in substantially reducing the poverty spread and depth, both of which tend to be relatively sensitive to changes in inequality, even though the progress on the headcount ratio is mediocre.

Table 1b, which assigns quintile numbers to the data for the various variables, provides a more illustrative comparative basis, than table 1a does, for judging the progress on the variables shown in table 1a. Note that throughout this report a *lower* quintile number indicates *better* progress, so that a quintile number of 1 for Bhutan across all the variables implies that the country performed at the top on each of the variables among the sample LDCs. In contrast, with quintile numbers of nearly all 5 across the variables, Zambia performs at the bottom, and so does Yemen. The other countries fall somewhere in between. For example, Cambodia performs in the top quintiles on poverty reduction (1 on the headcount and poverty gap and 2 on the squared poverty gap); yet its performance on both income growth and inequality changes is relatively modest (median quintiles). A potential explanation of the Cambodia case is the likelihood of high responsiveness (elasticity) of poverty with respect to both income and inequality, as will be elaborated later in the chapter.

Table 1b: Growths of: Poverty Measures, Per Capita GDP, Income, and Inequality (Gini index), by quintile

| Country | Top Quintile (Pov. growth) | Top Quintile (Pov. gap growth) | Top Quintile (Squared pov. gap growth) | Top Quintile (Per capita GDP growth) | Top Quintile (Income growth) | Top Quintile (Inequality growth) |
|---------------|----------------------------|--------------------------------|--|--------------------------------------|------------------------------|----------------------------------|
| Angola | 4 | 2 | 2 | 1 | 5 | 1 |
| Bangladesh | 3 | 3 | 3 | 2 | 3 | 5 |
| Bhutan | 1 | 1 | 1 | 1 | 1 | 1 |
| Burkina Faso | 3 | 2 | 2 | 2 | 3 | 2 |
| Burundi | 5 | 5 | 5 | 5 | 4 | 4 |
| Cambodia | 1 | 1 | 2 | 1 | 3 | 3 |
| CAR | 4 | 4 | 3 | 4 | 1 | 3 |
| Ethiopia | 2 | 2 | 2 | 2 | 4 | 3 |
| Gambia | 1 | 1 | 1 | 3 | 1 | 2 |
| Guinea | 2 | 1 | 1 | 4 | 1 | 2 |
| Guinea-Bissau | 4 | 5 | 5 | 5 | 5 | 1 |
| Lao PDR | 3 | 4 | 4 | 1 | 3 | 5 |
| Lesotho | 3 | 4 | 4 | 3 | 4 | 3 |
| Madagascar | 5 | 5 | 5 | 5 | 5 | 4 |
| Malawi | 4 | 3 | 3 | 5 | 2 | 2 |
| Mali | 2 | 2 | 1 | 2 | 2 | 1 |
| Mauritania | 2 | 3 | 3 | 3 | 4 | 2 |
| Mozambique | 4 | 4 | 4 | 1 | 2 | 4 |
| Nepal | 1 | 1 | 1 | 2 | 1 | 3 |
| Niger | 3 | 2 | 2 | 5 | 2 | 4 |
| Rwanda | 4 | 4 | 4 | 1 | 3 | 4 |
| Senegal | 2 | 2 | 2 | 4 | 2 | 2 |
| Sierra Leone | 5 | 4 | 4 | 4 | 5 | 1 |
| Tanzania | 5 | 5 | 5 | 3 | 4 | 5 |
| Timor-Leste | 1 | 1 | 1 | 5 | 4 | 1 |
| Togo* | 1 | 3 | 4 | 4 | 1 | 5 |
| Uganda | 2 | 3 | 3 | 2 | 2 | 4 |
| Yemen, Rep. | 5 | 5 | 5 | 3 | 5 | 5 |
| Zambia | 5 | 5 | 5 | 4 | 5 | 5 |

Notes: The classification is done based on the data provided in table 1a. The first quintile represents the best and the 5th quintile is the worst performance on each all variable.

Focusing on poverty progress, the top-to-bottom quintiles for poverty reduction in the headcount ratio are provided below:

Top 1 quintile: Bhutan, Cambodia, Gambia, Nepal, Timor-Leste, and Togo.

Top quintile 2: Ethiopia, Guinea, Mali, Mauritania, Senegal, and Uganda.

Median quintile: Bangladesh, Burkina Faso, Lao PDR, Lesotho, and Niger.

2nd bottom quintile: Angola, CAR, Guinea-Bissau, Malawi, Mozambique, and Rwanda.

Bottom quintile: Burundi, Madagascar, Sierra Leone, Tanzania, Yemen, and Zambia.

We note, furthermore, that the quintile distributions of countries for the poverty gap and squared poverty gap measures are very similar to that of the headcount ratio, though there are notable exceptions (see columns 1-3 of table 1b)⁸. Hence, the rest of the report will focus on the headcount ratio, with the understanding that the main conclusions likely pertain to the other poverty measures as well, subject to the above caveat.

To better understand the relative performance on poverty, we now assess the relative roles of income growth and inequality changes in poverty reduction. Table 2 reports the results of decomposing poverty reduction during the respective recent periods shown in table 1a. The first column in the table reproduces the actual observed poverty reduction presented in table 1a. The second column (column A) reports the estimated amount of poverty reduction attributable to income growth, column B that attributable to inequality changes, while the last column (A+B) is the sum of both.

8. For example, Togo performs in the top quintile on the headcount ratio but in the median and penultimate bottom quintiles, respectively, on poverty gap and squared poverty gap, mainly as a result of a worsening income distribution. In contrast, Angola's progress is ranked in the penultimate bottom quintile for the headcount ratio, but in the penultimate top quintile for the gap and gap squared, respectively, thanks to its improving income distribution.

Table 2: Contributions of Growths in Income and Inequality to Poverty Reduction LDCs experiencing poverty reduction

| | | A | B | A+B |
|---------------|---------------|---------------|---------------|---------------|
| Country | Povg | EY*dlnY | EG*dlnG | Pred Povg |
| Angola | - 2.50 | 0.55 | - 3.00 | - 2.44 |
| Bangladesh | - 2.69 | - 5.34 | 2.35 | - 2.99 |
| Bhutan | - 30.67 | - 14.99 | - 7.63 | - 22.62 |
| Burkina Faso | - 3.12 | - 2.04 | - 0.98 | - 3.02 |
| Burundi | - 0.25 | - 0.89 | - 0.01 | - 0.90 |
| Cambodia | - 5.82 | - 5.16 | - 1.15 | - 6.31 |
| CAR | - 1.75 | - 1.34 | 0.29 | - 1.05 |
| Ethiopia | - 4.25 | - 3.69 | - 2.51 | - 6.20 |
| Gambia, The | - 13.37 | - 18.16 | - 1.74 | - 19.90 |
| Guinea | - 4.74 | - 7.86 | - 0.53 | - 8.39 |
| Guinea-Bissau | - 0.71 | 1.44 | - 1.88 | - 0.43 |
| Lao PDR | - 3.10 | - 5.32 | 3.26 | - 2.06 |
| Lesotho | - 2.62 | - 2.12 | - 1.65 | - 3.77 |
| Malawi | - 2.49 | - 2.12 | 0.08 | - 2.04 |
| Mali | - 3.34 | - 3.22 | - 0.61 | - 3.83 |
| Mauritania | - 4.02 | - 2.29 | - 3.59 | - 5.88 |
| Mozambique | - 2.52 | - 3.59 | 0.11 | - 3.48 |
| Nepal | - 7.20 | - 9.34 | - 1.31 | - 10.65 |
| Niger | - 3.20 | - 4.10 | - 0.39 | - 4.49 |
| Rwanda | - 1.51 | - 5.07 | - 0.30 | - 5.36 |
| Senegal | - 3.99 | - 2.83 | - 1.51 | - 4.34 |
| Sierra Leone | - 0.39 | 1.26 | - 2.64 | - 1.37 |
| Tanzania | - 0.45 | - 0.98 | 0.73 | - 0.25 |
| Timor-Leste | - 5.77 | - 3.36 | - 6.57 | - 9.93 |
| Togo | - 6.31 | - 13.87 | 7.94 | - 5.93 |
| Uganda | - 3.59 | - 4.47 | 0.26 | - 4.21 |
| Mean | - 4.63 | - 4.57 | - 0.88 | - 5.46 |

LDCs experiencing poverty increases

| | | | | |
|-------------|-------------|-------------|-------------|-------------|
| Madagascar | 0.67 | 0.99 | 0.03 | 1.02 |
| Yemen, Rep. | 4.40 | 2.86 | 6.60 | 9.46 |
| Zambia | 0.77 | 0.63 | 0.60 | 1.23 |
| Mean | 1.95 | 1.49 | 2.41 | 3.90 |

Notes: A: Predicted poverty growth by income, B: predicted poverty growth by inequality; A+B: predicted poverty growth by both income and inequality. Computed as based on the formula $p = yE_y + gE_g$, where p is the predicted poverty rate, y the income growth, E_y the income elasticity, g the Gini (inequality) growth, and E_g the inequality elasticity, with the elasticities computed in table A6; $A = yE_y$ and $B = gE_g$. For details of the procedure see Fosu (2011).

We note that in nearly all the sample LDCs, income growth reduced poverty; the only exceptions are Angola, Guinea-Bissau, and Sierra Leone. While inequality changes are also estimated to have resulted in poverty reduction in most of the countries, in eight of them (Bangladesh, CAR, Lao PDR, Malawi, Mozambique, Tanzania, Togo and Uganda), this was not the case. Thus in most of the countries changes in income and in inequality reinforced each other to reduce poverty. In Angola, Guinea-Bissau, and Sierra Leone, reductions in poverty were entirely the result of favorable changes in inequality. Meanwhile, income growth was totally responsible for poverty reductions in Bangladesh, CAR, Lao PDR, Malawi, Mozambique, Tanzania, Togo and Uganda. Finally, among these poverty-reducing LDCs, income growth was by far the main contributor to the progress, consistent with the extant literature for developing countries generally (Dollar and Kraay, 2002; Fosu, 2011).

Also shown in table 2 are the three countries where poverty increased: Madagascar, Yemen and Zambia. In all cases both income and inequality contributed to the retrogression. The model, though, appears to considerably overestimate poverty increases in Yemen, perhaps explaining the overall overestimation for the three countries as a group.

Overall, despite appreciable country differences, growth then appears to be the dominant variable explaining progress on poverty in LDCs. However, the role of inequality is not inconsequential. Below we further explore this notion.

The concept: Inequality and the growth-poverty dynamics

The crucial role of inequality in poverty reduction is in two parts: (1)

declining levels of inequality tend to decrease poverty, by redistributing income growth more favorably (relatively inclusive growth); and (2) lower initial inequality raises the rate at which income growth is transformed to poverty reduction, even if the level of inequality does not change.

Yet, inequality can also influence growth itself. According to the classical approach (the Kuznets inverted-U hypothesis; see for instance Alghion and Bolton, 1997), growth is enhanced by a rising level of inequality. This is because a higher concentration of income, in a relatively undeveloped country where most people are poor, tends to raise savings and the rate of investment, for with greater discretionary income, the rich tend to save more than the poor. It is only when the country reaches a higher level of development that growth is enhanced by falling inequality, as most income groups are at sufficiently high standard of living, so that spreading income more equally would allow for greater participation in saving and investment. The extant literature suggests that whether or not this hypothesis holds depends on country-specific circumstances. For example, many of the East Asian countries have historically been able to achieve higher growth via lower inequality.

The more recent competing political-economy hypothesis suggests, however, that higher inequality levels might rather reduce growth by fomenting greater political and social instability. Such instability would in turn result in higher uncertainty and lower investment, more unproductive rent-seeking activities, higher transaction costs, and heightened insecurity of property rights (Thorbecke and Charumilind, 2002).

Indeed, the higher inequality that fosters a larger initial rate of poverty may in turn lead to even higher levels of poverty, resulting in poverty persistence. Ravallion (2012), for instance, finds that a larger level of initial poverty tends to beget more poverty. This finding may be explained by the tendency of the poor to experience unique conditions that tend to trap them into becoming even poorer. Many of these conditions, including the ownership of minimal capital (human, physical and/or financial) usually the consequence of the initial distribution of assets (Birdsall and Londono, 1997; Deninger and Squire, 1998), are in turn the result of inequality, which we discuss below.

Determinants of growth, inequality and poverty: an illustration with LDCs

Much of the economic literature is about economic growth. A growth-enhancing environment is usually defined as that which exhibits «political stability with reasonably market-friendly policies» (Fosu and O'Connell, 2006). Thus «economic freedom» (EF), measuring the market-friendliness of the economic environment is a necessary ingredient for the growth

process. Unfortunately, many of the LDCs lack data on EF. Based on the 16 LDCs with data, we compute zero-order correlation coefficients between EF and per capita GDP growth, income growth, inequality growth, and poverty growth. These coefficients are reported in table 3.

Table 3: Zero-order Correlation Coefficients: Economic Freedom (EF) vs. Growths of Per capita GDP, Income, Inequality and Poverty

| | Economic Freedom (EF) |
|-------------------|---------------------------------------|
| PC. GDP Growth | 0.693 (3.60) [0.0029] |
| Income growth | 0.1906 (0.73) [0.4796] |
| Inequality Growth | 0.39 (1.59) [0.1349] |
| Pov. Growth | - 0.072 (-0.27) [0.7912] |

Notes: t-values and p-values are in parentheses and brackets, respectively. The data on EF are for 16 LDCs from the Gwartney et al., 2012; data are missing for the remaining 13 countries out of the 29. EF ranges from 0 (lowest) to 10 (highest). Average values of EF were computed using data from early and mid-1990's to the latest year for which poverty data is available, and correspond generally to the periods over which poverty progress is assessed. Note that generally these coefficients measure association, but do not necessarily imply causality from EF to the economic outcomes. However, arguably, a better business environment represented by higher EF would encourage greater production and hence higher economic growth.

As anticipated, there is a strong positive relationship between EF and per capita GDP growth. However, EF does not appear to be related to the other variables: income growth, inequality growth or poverty growth. This outcome suggests that promoting EF alone may not lead to the growth inclusiveness that is necessary for poverty eradication.

Attenuating inequality would, however, usually enhance growth inclusiveness and, therefore, poverty reduction. But what are the determinants of inequality, in the first place? The level of inequality in

a given country tends to depend on the mode of development. From a conceptual perspective, one would expect income distribution to be worse in a capitalistic country than in a socialistic one. This expected outcome is because the latter system tends to rely on government as the dominant allocator of resources, with greater empowerment to redistribute resources more equitably. The potential downside, however, is that there is the tendency for the economic outcome to be inefficient, often with adverse implications for economic growth. In practice, though, most economies are rather mixed, and policies matter. Whether relatively capitalistic or not, tax policies could be made more progressive to provide support for the poor. Presented below are three of the modalities via which inequality and poverty may be determined: gender inequality, political economy, and market imperfections and service delivery.

4.1. GENDER INEQUALITY

Women represent a large share of the world's poorest people. Therefore, eradicating extreme poverty entails a great focus on gender inequality issues in the areas of education, health and employment opportunities. Over recent years, increasing attention has been shifting to the importance of gender equality to growth and poverty reduction in the developing world (Blackden, 1999; Klasen, 2000; Morrison et al., 2007). Morrison et al (2007) find a positive correlation between poverty reduction and gender equality measured by the female-to-male ratio of human development indices for 73 countries, and also between per capita GDP growth and gender equality. They also provide evidence that gender equality enhances women's decision making, as well as improves children's health and educational achievement and women's access to markets and employment opportunities which, in turn, affect income growth and poverty reduction in the long run.

Women's empowerment in LDCs has been limited by several constraints such as: lack of formal education; discrimination in the credit, land and technology markets; market imperfections; wage gaps in the labour market; and other long-standing socio-cultural barriers: (1) attaching less importance to the education of girls compared to boys; (2) women cultivating land for producing food crops and men cultivating land for cash crops; and (3) women/girls inheriting less assets, such as land, than men/boys. Such gender inequality can result in poverty traps, where such cultural practices result in higher gender-related poverty, leading to a less inclusive growth process and, in turn, to greater poverty.

The majority of women in LDCs work in the agricultural sector.

Women's employment outside this sector remains modest due to the lack of education and skills, wage gaps and gender discrimination in the labour market. In terms of education, however, there has been overall a significant improvement in girls' primary and secondary school enrolment rates and in the gender parity in primary and secondary level enrolments in LDCs. The ratio of girls to boys at the secondary level in LDCs has increased from 0.58 in 1991 to 0.81 in 2008 (UN, 2011).

In Bhutan for example, where poverty reduction has been exemplar according to the data presented above (table 1a), the gender parity index (GPI)⁹ has increased from 0.78 in 1998 to 1.05 in 2012 for the primary level enrolment, and from 0.83 to 1.01 over the same period for the secondary level enrolment (UNSD, 2014). At the tertiary level, though, the disparities persist. The average ratio of female to male in tertiary education in Bhutan is approximately 0.64 in 2012¹⁰ (World Bank, 2014). The GPI in tertiary level enrolment is 0.68 (2011) for Bhutan, 0.93 (2011) in Madagascar, and 0.54 (2010) in Burundi (UNSD, 2014).

Furthermore, progress towards the elimination of disparities in the labour market has been slow. The average ratio of female to male labour force participation rate in LDCs has increased only slightly from 73.3 percent in 1990 to 78.0 percent in 2012¹¹, translating to an annual growth rate of 0.28 percent over the last two decades. One of the major barriers to women's labour force participation is the amount of time and effort women spend carrying out domestic activities (Barwell, 1996; Morrison et al, 2007). Due to the lack of adequate infrastructure in LDCs, especially water and energy infrastructures, women expend a substantial amount of effort and time to provide firewood and water for the household and, therefore, are unable to concentrate on income-generating activities (Barwell, 1996).

In order to achieve gender parity as part of the MDGs, many LDCs have given special attention to gender equity in their poverty reduction strategies and development plans. For instance, in Bhutan, a country that has reduced poverty phenomenally, government has made progress towards the reduction in gender disparities via the provision of economic opportunities for women, especially those in the rural areas, by enhancing their access to credit facilities, markets and social services (IMF, 2010). In 2012, Bhutan was ranked 92 out of 148 on the Gender Inequality

9. GPI is defined as the ratio of girls to boys.

10. Author's computation using data from World Bank (2014b).

11. Author's computation using data from World Bank (2014b).

Index (GII)¹². Cambodia and Nepal, also successful countries in poverty reduction, were ranked 96 and 102, respectively. The GII value was about 0.46 for Bhutan, 0.47 for Cambodia and 0.48 for Nepal. As poor-progress countries on poverty, on the other hand, Tanzania and Sierra Leone were ranked 119 and 139 with GII values of 0.56 and 0.64, respectively. Indeed, Yemen was dead last among the sample LDCs on progress on poverty, also dead last on GII, that is, ranked 148 out of 148 (UNDP, 2013).

4.2. POLITICAL ECONOMY

Weak institutional quality (IQ) is likely to constitute a major hindrance to progress on poverty. To provide some evidence for LDCs, we first present in table 4a measures of IQ by country. These are «rule of law», «government effectiveness», «control of corruption», as well as «political stability and absence of violence/terrorism». Conceptually, each measure ranges from -2.5 to 2.5, with a mean of zero and a larger value indicating a higher level of IQ. A positive (negative) value means above (below) the global mean. Among the sample LDCs, these measures range from -1.44 (Angola) to 0.22 (Bhutan), -1.45 (CAR) to 0.43 (Bhutan), -1.30 (Angola) to 0.69 (Bhutan), and -1.87 (Burundi) to 0.81 (Bhutan), respectively. It is interesting that Bhutan, which is the best performer on all the three measures of poverty reduction, is also the best performer on IQ across all the four measures. Similarly, the worst performing countries on IQ are also *generally* in the lowest quintiles for poverty reduction¹³. This mapping is of course among the extreme performers. But what is the overall distribution for IQ that could better inform us about its relationship with poverty reduction?

-
12. The GII is a measurement of gender inequality. It measures the gender-based inequalities in reproductive health, empowerment, and economic activity. A higher value connotes a higher level of inequality (UNDP, 2013).
 13. Burundi is in quintile 5 (lowest) on all three measures of poverty, while Angola is in quintile 5 for the headcount but exceptionally does well on the poverty gap and squared poverty gap measures, ranking in the second top quintile. CAR is ranked in quintile 4 for both the headcount and squared poverty gap and quintile 3 for the squared poverty gap.

Table 4a: Institutional Quality (IQ) Measures (1996-2012)

| Country | Rule of law | Government effectiveness | Control of corruption | Political Stability and Absence of Violence/ Terrorism |
|---------------|-------------|--------------------------|-----------------------|--|
| Angola | - 1.44 | - 1.18 | - 1.30 | - 1.00 |
| Bangladesh | - 0.88 | - 0.72 | - 1.07 | - 1.24 |
| Bhutan | 0.22 | 0.43 | 0.69 | 0.81 |
| Burkina Faso | - 0.51 | - 0.65 | - 0.22 | - 0.14 |
| Burundi | - 1.30 | - 1.30 | - 1.10 | - 1.87 |
| Cambodia | - 1.11 | - 0.90 | - 1.08 | - 0.60 |
| CAR | - 1.43 | - 1.45 | - 1.06 | - 1.67 |
| Ethiopia | - 0.77 | - 0.69 | - 0.70 | - 1.42 |
| Gambia, The | - 0.26 | - 0.59 | - 0.57 | 0.24 |
| Guinea | - 1.38 | - 1.06 | - 0.93 | - 1.53 |
| Guinea-Bissau | - 1.42 | - 1.20 | - 1.07 | - 0.80 |
| Lao PDR | - 0.98 | - 0.90 | - 1.07 | - 0.29 |
| Lesotho | - 0.15 | - 0.27 | - 0.07 | 0.06 |
| Madagascar | - 0.50 | - 0.66 | - 0.16 | - 0.20 |
| Malawi | - 0.26 | - 0.56 | - 0.51 | - 0.07 |
| Mali | - 0.35 | - 0.80 | - 0.54 | - 0.02 |
| Mauritania | - 0.66 | - 0.54 | - 0.35 | - 0.30 |
| Mozambique | - 0.65 | - 0.48 | - 0.48 | 0.21 |
| Nepal | - 0.65 | - 0.72 | - 0.58 | - 1.56 |
| Niger | - 0.71 | - 0.82 | - 0.84 | - 0.54 |
| Rwanda | - 0.80 | - 0.48 | - 0.21 | - 0.95 |
| Senegal | - 0.19 | - 0.27 | - 0.29 | - 0.36 |
| Sierra Leone | - 1.12 | - 1.28 | - 0.90 | - 0.74 |
| Tanzania | - 0.39 | - 0.49 | - 0.67 | - 0.38 |
| Timor-Leste* | - 0.99 | - 1.04 | - 0.82 | - 0.53 |
| Togo | - 0.89 | - 1.36 | - 0.88 | - 0.41 |
| Uganda | - 0.50 | - 0.49 | - 0.83 | - 1.21 |
| Yemen, Rep. | - 1.21 | - 0.91 | - 0.89 | - 1.74 |
| Zambia | - 0.51 | - 0.80 | - 0.69 | 0.22 |

| Country | Rule of law | Government effectiveness | Control of corruption | Political Stability and Absence of Violence/ Terrorism |
|------------------|-------------|--------------------------|-----------------------|--|
| | | | | |
| Mean | – 0.75 | – 0.77 | – 0.66 | – 0.62 |
| Median | – 0.71 | – 0.72 | – 0.70 | – 0.53 |
| | (Niger) | (Nepal) | (Ethiopia) | (Timor-Leste) |
| Max | 0.22 | 0.43 | 0.69 | 0.81 |
| | (Bhutan) | (Bhutan) | (Bhutan) | (Bhutan) |
| Min | – 1.44 | – 1.45 | – 1.30 | – 1.87 |
| | (Angola) | (CAR) | (Angola) | (Burundi) |
| Std. Dev. | 0.44 | 0.39 | 0.42 | 0.69 |

Notes: The average values over the period 1996-2012 were computed using data on rule of law, government effectiveness, control of corruption and Political stability and absence of violence/terrorism from the World Governance Indicators (WGI, 2013). For all the variables, the data ranges approximately from –2.5 to 2.5, where –2.5 is the lowest and 2.5 is the highest score. * For Timor-Leste, with respect to government effectiveness and political stability variables, the averages were calculated over the period 2002-2012 due to non-availability of data.

Table 4b presents IQ performance by quintile. Countries like Bhutan, Senegal, Burkina Faso, Ethiopia, Gambia, Mali, and Senegal do well on these IQ measures, and also on poverty reduction (table 1b). Similarly countries like Burundi, CAR, Guinea-Bissau and Yemen perform poorly on both IQ and poverty progress. There are exceptions, however; for example, Cambodia, Nepal, Guinea, and Timor-Leste do well on poverty reduction but perform badly on institutional quality, while Guinea, Lesotho, Madagascar, Mozambique, and Tanzania do relatively well on IQ but poorly on poverty progress. On average, though, what is the relationship between institutional quality and performance on poverty?

Table 4b: Institutional Quality (IQ) Measures, by quintile

| Country | Top Quintile (Rule of law) | Top Quintile (Government effectiveness) | Top Quintile (Control of corruption) | Top Quintile (Political Stability and Absence of Violence/Terrorism) |
|---------------|-------------------------------|--|---|---|
| Angola | 5 | 5 | 5 | 4 |
| Bangladesh | 4 | 3 | 5 | 4 |
| Bhutan | 1 | 1 | 1 | 1 |
| Burkina Faso | 2 | 2 | 1 | 2 |
| Burundi | 5 | 5 | 5 | 5 |
| Cambodia | 4 | 4 | 5 | 3 |
| CAR | 5 | 5 | 4 | 5 |
| Ethiopia | 3 | 3 | 3 | 5 |
| Gambia, The | 1 | 2 | 2 | 1 |
| Guinea | 5 | 4 | 4 | 5 |
| Guinea-Bissau | 5 | 5 | 5 | 4 |
| Lao PDR | 4 | 4 | 5 | 2 |
| Lesotho | 1 | 1 | 1 | 1 |
| Madagascar | 2 | 2 | 1 | 2 |
| Malawi | 1 | 2 | 2 | 2 |
| Mali | 1 | 3 | 2 | 1 |
| Mauritania | 3 | 2 | 1 | 2 |
| Mozambique | 3 | 1 | 2 | 1 |
| Nepal | 2 | 3 | 2 | 5 |
| Niger | 3 | 4 | 3 | 3 |
| Rwanda | 3 | 1 | 1 | 4 |
| Senegal | 1 | 1 | 1 | 2 |
| Sierra Leone | 4 | 5 | 4 | 4 |
| Tanzania | 2 | 1 | 3 | 3 |
| Timor-Leste | 4 | 4 | 3 | 3 |
| Togo | 4 | 5 | 4 | 3 |
| Uganda | 2 | 2 | 3 | 4 |
| Yemen, Rep. | 5 | 4 | 4 | 5 |
| Zambia | 2 | 3 | 3 | 1 |

Notes: The classification is done based on the data provided in table 4a. The first quintile represents the best performance and the 5th quintile the worst performance.

To answer the above question, we compute zero-order correlation coefficients between each of the above IQ measures and the growth in poverty. These coefficients are presented in table 4c. We find that the growth in poverty is significantly and negatively related to all the measures¹⁴, suggesting that higher IQs are associated with greater progress on poverty. In an attempt to identify possible channels via which this influence might have been transmitted, we additionally report in table 4c the correlation coefficients measuring the possible respective relationships between the IQ measures, on the one hand, and income growth and changes in inequality, on the other. Although nearly all the estimated coefficients exhibit the correct signs (positive for income and negative for inequality), as expected, none of them are statistically significant. It appears, therefore, that the significant positive relationship between institutional quality and progress on poverty may be attributable to a more complicated interactive relationship involving income growth and inequality changes.

Table 4c: Zero-order Correlation Coefficients: Governance Variables vs. Growths of Poverty, Income and Inequality (Gini Index)

| | Pov. Growth | Income Growth | Inequality Growth |
|--|-------------------------------------|----------------------------------|-------------------------------------|
| Rule of Law | - 0.48 (-2.87) [0.008] | 0.28 (1.51) [0.142] | 0.01 (0.04) [0.968] |
| Government Effectiveness | - 0.55 (-3.40) [0.002] | 0.18 (0.98) [0.338] | - 0.03 (-0.17) [0.864] |
| Control of corruption | - 0.55 (-3.45) [0.002] | 0.17 (0.92) [0.366] | - 0.13 (-0.68) [0.504] |
| Political Stability and Absence of Violence/ Terrorism | - 0.45 (-2.59) [0.015] | 0.18 (0.97) [0.341] | - 0.16 (-0.85) [0.402] |

Notes: t-values and p-values are in parentheses () and brackets [], respectively. The sample equals the 29 LDCs. Note that generally these coefficients measure association, but do not necessarily imply causality from IQ to the economic outcomes. However that IQ is related to poverty reduction but not to the other outcome variables suggests that the direction is likely to go from IQ to poverty reduction.

14. The correlation coefficients are negative, and are highly significant according to the respective t ratios.

But does the nature of the political framework as defined by political governance (PG) a reliable crucible for IQ? To answer this question, we present in table 5a three measures of PG by country: Index of Electoral Competitiveness (IEC), Executive Constraint (XCONST), and Polity Score (POLITY). To facilitate the analysis, we further assign quintile numbers, with as usual a higher number corresponding to a lower level of a given measure (see table 5b). The results appear mixed when compared with the rating using the IQ measures (table 4b). For example, countries like Mali, Madagascar, Malawi, and Senegal score in the top quintiles on both the political governance and IQ, while Angola and Burundi for instance also perform very poorly on both measures. However, countries like Bhutan, Burkina Faso, and Rwanda, which were in the top quintiles on IQ, now perform poorly under PG. Conversely, certain countries performing badly on IQ are now in the top quintiles under PG: e.g., Gambia and Rwanda.

**Table 5a: Evolution of Political Governance in LDCs:
Index of Electoral Competitiveness (IEC),
Executive Constraint (XCONST) and Polity as Score (POLITY)**

| Country | Period | IEC | XCONST | POLITY |
|---------------|-----------|------|--------|--------|
| Angola | 2000-2009 | 2.66 | 3.00 | - 2.20 |
| Bangladesh | 1992-2010 | 6.37 | 4.68 | 4.63 |
| Bhutan | 2003-2012 | 3.43 | 2.80 | - 2.00 |
| Burkina Faso | 1994-2009 | 5.12 | 2.63 | - 1.88 |
| Burundi | 1992-2006 | 4.36 | 2.27 | 0.40 |
| Cambodia | 1994-2009 | 6.00 | 3.63 | 1.25 |
| CAR | 1992-2008 | 5.91 | 3.94 | 2.24 |
| Ethiopia | 1995-2011 | 6.12 | 3.00 | - 0.65 |
| Gambia | 1998-2003 | 6.83 | 2.00 | - 5.00 |
| Guinea | 1991-2007 | 5.34 | 2.76 | - 1.94 |
| Guinea-Bissau | 1993-2002 | 4.65 | 3.40 | 3.20 |
| Lao PDR | 1992-2008 | - | 3.06 | - 7.00 |
| Lesotho | 1993-2003 | 5.64 | 4.45 | 6.18 |
| Madagascar | 1993-2010 | 6.86 | 5.50 | 6.72 |
| Malawi | 1998-2010 | 7.00 | 5.38 | 5.62 |
| Mali | 1994-2010 | 6.72 | 5.00 | 6.71 |
| Mauritania | 1993-2008 | 5.90 | 3.06 | - 5.06 |

| Country | Period | IEC | XCONST | POLITY |
|--------------|-----------|------|--------|--------|
| Mozambique | 1996-2003 | 7.00 | 4.00 | 5.00 |
| Nepal | 1996-2010 | 4.80 | 4.67 | 2.60 |
| Niger | 1992-2008 | 6.47 | 4.76 | 4.06 |
| Rwanda | 2000-2011 | 4.67 | 2.75 | – 3.42 |
| Senegal | 1991-2011 | 6.95 | 4.48 | 3.75 |
| Sierra Leone | 2003-2011 | 7.00 | 5.56 | 6.11 |
| Tanzania | 1992-2007 | 5.78 | 3.00 | – 1.75 |
| Timor-Leste | 2001-2007 | 4.65 | – | – |
| Togo | 2006-2011 | 6.83 | 2.33 | – 3.33 |
| Uganda | 1992-2009 | 5.24 | 2.89 | – 3.33 |
| Yemen, Rep. | 1998-2005 | 6.51 | 2.00 | – 2.00 |
| Zambia | 1993-2010 | 6.75 | 5.00 | 4.39 |

Notes: IEC was computed as the first principal component of the legislature index of electoral competitiveness and the executive index of electoral competitiveness (see Fosu, 2008), using data from the Database of Political Institutions (DPI, 2012). The data on XCONST and POLITY are from Polity IV Project. For both IEC and XCONST, 1 represents the lowest and 7 the highest. POLITY ranges from –10 (strongly autocratic) to +10 (strongly democratic). The sample size equals 28 in each case, with Lao PDR omitted from the estimates involving IEC, and Timor-Leste from estimates involving XCONST and POLITY, due to missing data.

Table 5b: Evolution of Political Governance, by quintile

| Country | Top Quintile (IEC) | Top Quintile (XCONST) | Top Quintile (POLITY) |
|--------------|--------------------|-----------------------|-----------------------|
| Angola | 5 | 4 | 4 |
| Bangladesh | 3 | 2 | 2 |
| Bhutan | 5 | 4 | 4 |
| Burkina Faso | 4 | 5 | 4 |
| Burundi | 5 | 5 | 3 |
| Cambodia | 3 | 3 | 3 |
| CAR | 3 | 3 | 3 |
| Ethiopia | 3 | 4 | 3 |
| Gambia | 2 | 5 | 5 |

| Country | Top Quintile (IEC) | Top Quintile (XCONST) | Top Quintile (POLITY) |
|---------------|--------------------|-----------------------|-----------------------|
| Guinea | 4 | 4 | 4 |
| Guinea-Bissau | 5 | 3 | 2 |
| Lao PDR | – | 3 | 5 |
| Lesotho | 4 | 2 | 1 |
| Madagascar | 1 | 1 | 1 |
| Malawi | 1 | 1 | 1 |
| Mali | 2 | 1 | 1 |
| Mauritania | 3 | 3 | 5 |
| Mozambique | 1 | 2 | 1 |
| Nepal | 4 | 2 | 3 |
| Niger | 2 | 1 | 2 |
| Rwanda | 5 | 5 | 5 |
| Senegal | 1 | 2 | 2 |
| Sierra Leone | 1 | 1 | 1 |
| Tanzania | 3 | 4 | 3 |
| Timor-Leste | 5 | – | – |
| Togo | 2 | 5 | 5 |
| Uganda | 4 | 4 | 5 |
| Yemen, Rep. | 2 | 5 | 4 |
| Zambia | 2 | 1 | 2 |

Notes: The classification is done based on the data provided in table 5a. The first quintile represents the best performance and the 5th quintile the worst performance.

What the above quintile-based discussion suggests is that there is no clear pattern of performance between IQ and PG. To shed more light on the issue, we present in table 5c zero-order correlation coefficients between the PG and IQ variables. Interestingly, while the coefficients are positive, as anticipated, none are statistically significant, suggesting that there is little relationship between IQ and PG, at least as measured by the present variables. Thus the current evidence does not support the hypothesis that a particular form of political framework is required for achieving the poverty-reducing IQ. The appropriate political framework appears to be country setting-specific (spatial or temporal)¹⁵.

15. The global environment is also crucial for determining appropriate actions for LDCs. This issue is further discussed below, with implications for policy.

**Table 5c: Zero-order Correlation Coefficients:
Political Governance (PG) vs. Institutional Quality (IQ)**

| | IEC | XCONST | POLITY |
|--|---------------------|-------------------|--------------------|
| Rule of Law | 0.229 [0.240] | 0.2235 [0.253] | 0.1359 [0.490] |
| Government Effectiveness | – 0.0403 [0.839] | 0.0381 [0.847] | – 0.025 [0.900] |
| Control of Corruption | – 0.0175 [0.930] | 0.0933 [0.637] | 0.0758 [0.701] |
| Political Stability and Absence of Violence/Terrorism | 0.2113 [0.281] | 0.2196 [0.262] | 0.1183 [0.550] |

Notes: Figures in brackets are p-values. The correlation coefficients are estimated using data presented in tables 5a and 4a. Note that generally these coefficients measure association, but do not necessarily imply causality in either direction. The sample size equals 28 in each case, with Lao PDR omitted from the estimates involving IEC, and Timor-Leste from estimates involving XCONST and POLITY, due to missing data.

4.3. MARKET IMPERFECTIONS AND SERVICE DELIVERY

The lack of adequate infrastructure is a major constraint to economic growth and poverty reduction. Several empirical and theoretical studies support the view that infrastructure development is a key to achieving economic development and eradicating poverty, through growth but also via reducing inequality in developing countries (Estache, Foster and Wodon 2002; Calderon, 2008; Estache and Wodon, 2010; Ogun, 2010).

Inadequate transport network limits access to regional and global markets and therefore hampers the competitiveness of countries' exports. The performance of the agricultural sector is highly affected by transportation costs of agricultural inputs and outputs. Farmers in the rural areas often experience great difficulties in conveying fertilizers from the store house to the farm, and their produce from the farm to the market place, especially in the rainy season due to the poor state of roads. Thus, a huge amount of time, effort and income that could have been employed for improving crop yield and marketing is expended on circumventing the transportation impediments. The problem is compounded by the lack of storage facilities. Indeed, government policies that subsidize fertilizers for producing perishable products are doomed to fail, mainly because much of the increased yield rots due to limited market access and the lack

of storage facilities. In addition, poor access to transport isolates the rural inhabitants from social services such as education and health care. Poverty traps are, therefore, likely to be created in such rural settings, stymieing any progress towards the reduction of spatial inequality and hampering poverty reduction particularly in these areas where the majority of people live.

In developing countries generally, a considerable proportion of the overall budget for the transport sector must be allocated toward infrastructure investments (USAID, 2006). In the majority of LDCs and other high-poverty countries, however, little or inadequate investment is undertaken in the construction of roads, railways and ports¹⁶. The existing transport infrastructure is in a poor state of disrepair due to the lack of maintenance or to destruction resulting from civil wars. For example, during the 2003-2007 post-war period Sierra Leone's power-sector deficiencies and poor roads significantly held back per capita growth (Pushak and Foster, 2011).

Adequate water and electricity supply and provision of sanitation services contribute positively to sustainable development and poverty alleviation. Sufficiently reliable electricity and water infrastructure enhances the living condition of households by cutting the income and time spent on providing drinkable water and energy resources for heating, lighting and cooking. In many LDCs, economic growth and progress on poverty have been retarded by the deficiencies in the electricity sector. For example, in Sierra Leone about 1 to 5 percent of the population have access to electricity in the urban areas, but only one percent of the rural population are able to access piped water (Pushak and Foster, 2011).

Furthermore, the majority of LDCs and other low-income countries face many challenges in providing equitable and efficient public services to the population. Governments' inadequate supply of infrastructure services and inefficient distribution policies inhibit countries' progress on inequality and poverty. The majority of the rural communities have minimal access to water and electricity, sanitation, or to social services such as education, health care, banking services, thanks mainly to the long distances or costly transport (explicit or implicit) between households' residences and the facilities and services being provided. Improvements in public service delivery would, therefore, enhance households' incomes

16. It should be noted, though, that the present situation is gradually being reversed, with rising investment in physical infrastructure in many LDCs, financed in part through growing economic ties with China.

by allowing for reallocation of time from domestic activities to income-generating work (Barwell, 1996).

As part of its public administration reforms the Bhutanese government has implemented a decentralisation programme with the aim of ensuring an equitable distribution of improved social infrastructure (water and electricity supply) and quality services in the area of education and health (Dorji, 2010). Consequently, there has been a tremendous improvement in the accessibility to public services, leading to an enhancement of living conditions of the poorest. Such reforms must have certainly contributed to the impressive progress on poverty in Bhutan.

Further country illustrative examples

Although several country narratives have been provided above to illustrate the inequality growth-poverty dynamics, especially as related to gender inequality, political economy, as well as market imperfections and service delivery, we now present additional detailed country examples. We provide detailed coverage for both «success» and «failure» in order to illustrate the various typologies.

Case 1– Bhutan: A development success story

Among the LDCS presented here, Bhutan was the most successful country on all three measures of poverty reduction, and on per capita GDP growth, income growth, and reduction in inequality. How did the country manage to make such spectacular progress? The answer seems to lie in the leadership of the monarchy to enhance IQ. This feat was achieved by a series of apparently effective five-year plans, including decentralization, which have succeeded in improving political and administrative functions through capacity building, and enhancing public service delivery. (IMF, 2010a).

Since the 1960's, Bhutan's development has been guided by a series of five-year plans (FYP), implemented with the support of various donors and development partners. Under the first five development plans (1961-87), the country made significant progress in agriculture, irrigation and forestry, as well as electric power generation and road transportation. Starting from the mid-1970s, the Bhutanese government has implemented numerous hydropower projects with the technical and financial assistance of India, the main importer of hydropower from Bhutan. With the revenues generated through the hydropower sector, the country was able to finance a large part of its five-year plans. In the sixth FYP (1987-91), priorities were given to education and skill development in the area of trade and industry through personal training

and other programmes. Government also encouraged the private sector to provide local employment, as part of its decentralization program, and promoted small and medium state industries in various sectors (Worldmark Encyclopaedia of Nations, 2007).

In the seventh FYP (1992-97), government prioritized the preservation of national identity and economics of self-sufficiency, protection of natural environment, privatization in the manufacturing and services, as well as human resource development. In addition to achieving national self-sufficiency, the preservation of national identity and human resource development, the eighth FYP (1998-2003) further focused on strengthening national security, improving quality of life and private sector development (Royal Government of Bhutan, 2000). Also during the eighth FYP, both political and administration decentralization programmes were implemented with the introduction of the Gewog Yargay Tshogchung (GYT) and the Dzongkhag Yargay Tshogchung (DYT) Acts 2002, instructing the creation of local governments for the development, management and administration of communities, district and sub-district (Royal Government of Bhutan, 2011). The decentralization was implemented with a key emphasis on community participation in decision making, planning and implementation of socio-economic programmes in order to ensure sustainable and equitable socio-economic development. It was recently advanced by the introduction of the Local Government Act 2009 (Royal Government of Bhutan, 2011).

The ninth FYP (2003-2008) was based on the improvement of domestic tax revenue and on intensive rural development. Furthermore, under the tenth five-year plan (2008-2013), targeted poverty reduction programmes such as the Rural Economy Advancement Programme (REAP), which focused on extreme poverty reduction and the National Rehabilitation Programme, were initiated and successfully implemented (Royal Government of Bhutan, 2013). The eleventh five-year plan (2013-2018) is currently under implementation with a focus on poverty and inequality reduction.

Over the recent years the Bhutanese government has been committed to improving democratic institutions and governance through institutional transparency and accountability, efficient legal system, reduction of corruption and women empowerment (Royal Government of Bhutan, 2011). The government's actions to strengthen the judiciary system have led to a significant improvement in judiciary and legal services to the general public.

Case 2– Burundi: Conflict and development failure

Among the LDCs presented here, Burundi ranks in the bottom quintile on all three poverty measures. It also scores poorly on (per capita) GDP growth, income growth, and on improvements in income distribution. These outcomes result very much from the thirteen-year internal open conflict, which has resulted in poor physical infrastructure, corruption and low administrative capacity, inter alia. Indeed, the country ranks among the worst on all the four IQ measures. An effective conflict resolution and revitalization, both economic and political, therefore appears to be the only real solution to addressing the development challenge in such conflict/post-conflict countries (see, for example, Fosu, 2005).

Burundi's economy has been affected by a prolonged period of ethnic violence, civil war and political instability. After the power-sharing agreement in 2003, a new constitution was adopted and a new Burundian government elected in 2005 (CIA Factbook, 2014), following which the country undertook economic and administration reforms in order to stabilize the economy and improve governance. These reforms led to a significant increase in growth, which has not been sustained. Despite the effort of the government to consolidate peace and national reconciliation, the country remains fragile in terms of security due to localized incidents of violence. The low administrative capacity and the lack of adequate infrastructure have rendered the business climate unattractive, thus hindering foreign investment and private sector development in the country.

Before the war started in 1993, Burundi's public administration was known as one of the best in Africa. But now, the country is perceived as one of the 24 most corrupt countries in the world (USAID, 2006). The legal system is often abused by the political dispositions, thus explaining the widespread corruption in the country especially in the public procurement, taxation and customs. The lack of capacity both at the central and local levels remains a major constraint to efficient public service delivery, making these services unreliable and difficult to access. The weakness of government institutions and legal system has also led to several conflicts on the questions of ownership and land tenure among the population (Jooma, 2005).

As in the case of other post-conflict countries, Burundi has lost a large part of its existing infrastructure due to the war. The prolonged period of ethnic-based war left the country in a poor social and economic state. Burundi is characterised by particularly poor transportation network. The provision of basic health and education services is highly inadequate,

especially in rural areas. As a result there is an increase in disability and death from malaria, HIV/AIDS and other diseases. Despite the abundant water resources, safe water supply is still a problem in the country due to the lack of infrastructure and inadequate distribution (AfDB, 2011c). Because of insufficient power supply, less than 2 percent of the population in Burundi have access to electricity as compared to 41 percent in other low-income developing countries (AfDB, 2009). Firewood and charcoal represent 90 percent of the energy used (AfDB, 2011c). The country also has huge deficiencies in telecommunication network density and internet access. With only 3 percent of the population covered by telecommunication services, there is a serious lack of communication and very limited access to information.

Furthermore, the majority of the rural population, which represent about 90 percent of the country's population, rely on subsistence agriculture as their source of livelihood (AfDB, 2009). Yet, the Burundian the agricultural sector is struggling, due to structural constraints such as high density of rural population, leading to low productivity, environmental degradation, high unemployment, and persistent conflict (USAID, 2006). The lack of land, the use of traditional farming methods and the increasing population have led to an overexploitation and erosion of agricultural lands, which are increasingly becoming less fertile (AfDB, 2011c).

Case 3– Tanzania: Fairly good growth but little development

Tanzania evinces fairly good per capita GDP growth (median quintile) but poor progress on poverty on all the poverty measures (bottom quintile). This performance is essentially explained by the stylized facts showing that income growth has been poor (penultimate bottom quintile) and inequality is exacerbated (bottom quintile). Such an outcome is because the country's high economic growth has been driven mainly by relatively capital-intensive sectors with low employment generation¹⁷.

Tanzania's high economic growth began in 2000, following economic reforms, with an average GDP growth of 6.8 percent between 2000 and 2012 as compared to 3.3 percent for 1990-99 (World Bank, 2014b). The

17. It must be noted that the Tanzanian case presented here is based on data for 2007, which was the latest year with data when the analysis was conducted. More recently in 2012, however, the Tanzania case has changed substantially, with headcount poverty for instance decreasing from the 67.9 percent reported in table A2 to 46.6 percent about a half-decade later in 2012 (see table A1). Thus, the various policies indicated in the last paragraph of Case 3 appear to have borne fruits. Thus, the illustration here should be considered as a case that prevailed circa 2007.

strong GDP growth, however, has not resulted in a significant increase in (household) income. The growth has mainly been driven by relatively capital-intensive sectors with low employment generation such as in communications, financial services, construction, manufacturing, mining, tourism, and retail trade sectors, rather than in agriculture where approximately 80 percent of households are engaged (UN, 2014; World Bank, 2014b).

Even though the agricultural sector in Tanzania employs about 77 percent of the workforce and accounts for 80 percent of exports earnings, the sector's production remains traditional and mainly based on smallholder production system (World Bank, 2014b; Nangale, 2012). Agricultural production faces many challenges such as the lack of adequate infrastructure, technology, inputs and credits, and it remains highly dependent on rainfall. Investment in the sector remains sluggish as a result of the low agricultural productivity (UN, 2014), with the sector's contribution to GDP declining from 33.8 percent in 1998 to 27.7 percent in 2012 (World Bank, 2014b).

In contrast, the contribution of the industrial sector has increased from 20.1 percent to 25.0 percent of GDP between 1998 and 2012, powered largely by FDI inflows, with the sector as the largest recipient. On average, about 43.3 percent of total FDI inflows were recorded by the mining and quarrying during 2008-11, followed by the manufacturing sector which recorded about 17.4 percent over the same period (Bank of Tanzania, 2012). However, employment generation in the industrial sector remains low, with only 4 percent of the total workforce employed in the sector in 2006 (World Bank, 2014b). Furthermore service, the largest contributor to GDP, employed only about 19 percent of the workforce in 2006 for instance (World Bank, 2014b). Growth in the sector is driven mainly by sub-sectors such as tourism, financial services, construction, information and communications (MoFEA, 2009), which tend to be capital rather than labor intensive.

In order to reduce poverty through employment creation, the Tanzanian government has adopted and implemented various policies and programmes, such as the National Employment policy in 1997, the National Youth Development Policy 2007 and Youth Action Plan 2011-2015, and Youth Entrepreneurship Facility Programme. These programmes focus on raising financial support for micro credit schemes for the youth, women, entrepreneurs and other vulnerable groups, skills training through vocational education and training, management and business training and counseling as well as review of labour and

employment related laws (Nangale, 2012). It appears that these policies have borne fruits, as the poverty headcount has subsequently declined substantially from the 67.9 percent in 2007 to 46.6 percent in 2012.

Case 4– Uganda: Good growth and appreciable progress on poverty, though inequality is a problem

Among Uganda presents the case of good growth (both per GDP and income) but considerable exacerbation of inequality (penultimate bottom quintile). This record is explained apparently by the government's relative focus on improving conditions in the urban and certain regions, leading to increasing spatial inequality.

Until the rule of Yoweri MUSEVENI in 1986, internal tensions and economic mismanagement in the post-independence period in Uganda created an unstable politico-economic environment (CIA Factbook, 2014), resulting in low growth and macroeconomic imbalances. In 1987 the Ugandan government, with the support of the international institutions, embarked on economic reforms. The reforms entailed mainly price and trade liberalization, fiscal and currency reforms (IMF, 2010b). Consequently, growth accelerated and has been sustained accompanied by improvements in macroeconomic indicators, together with some export and economic-activity diversification (IMF, 2010b). According to World Bank (2011, p. 13):

Key elements of these changes are diversification of household livelihood portfolios rooted in strong growth of private wage and salary employment and non-farm household enterprises, and increased agricultural productivity among agricultural households...Thus while agriculture remains a source of income for 75 percent of households in Uganda, many supplement it with income from other activities which are often more productive...This diversification increased household incomes, directly through an expansion of the income base and indirectly by boosting agricultural income.

The above reforms have resulted in substantial GDP and income growth and appreciable declines in poverty (table 1b). However, the progress has been faster on the headcount ratio than on the poverty gap and squared gap, thanks to the increasing inequality (ibid.). There is a notable income disparity between the rural and urban populations, and between the various regions in Uganda. The Eastern and the Northern regions of the country account for two thirds of the poorest population (World Bank, 2011). This situation is partly attributable to the existence of conflicts and insecurity, especially in the northern region, but also to the inadequate public service delivery in these regions, which may not

be unrelated to the instability in those regions. According to World Bank (2011, p. 9):

While access to primary education is relatively equal across regions, the same is not true for secondary education and electricity in which access in the North and the East lags behind the Central region. About 62 percent of households in Kampala have access to electricity but a mere one and two percent in the North and East respectively have access to electricity. At 9 percent and 14 percent, the North and the East respectively have the lowest net secondary school enrollment – dwarfed by Kampala and the Central region where net secondary enrollments are 44 percent and 27 percent, respectively...There is a big rural-urban divide in access to services too. Urban areas have better access to all public services other than sanitation. To the extent that public investment crowds in private investment, these areas are doubly disadvantaged. It is therefore not surprising in Uganda that poverty is higher where access to public services is lowest.

5. ASSESSMENT OF PROGRESS TOWARDS STRUCTURAL TRANSFORMATION: THE CASE OF LDCs

Figure A1 presents some evidence on structural transformation in the sample of 29 LDCs, in terms of the contribution to GDP by the various sectors over time: agriculture, industry and services. Unfortunately, such a distribution is rather gross. For instance, industry comprises both mining and manufacturing, with the former known to exhibit relatively low labor intensiveness and hence minimal implications for poverty reduction. Similarly, service is likely to be heterogeneous, including both high-value IT services and relatively low-valued restaurant and retail, especially in the informal sector, with the latter employing by far the majority of workers in the sector. Hence, this «structural transformation» depiction provides only a rough picture of the development process.

Implications for inequality and poverty reduction

Nonetheless, the data shows that among the very top performers on poverty reduction – Bhutan, Cambodia, Gambia, Nepal, Timor-Leste and Togo – (table 1b)¹⁸, Bhutan and Timor-Leste have each had a major structural change with a significant decline in the share of the agricultural sector in GDP and an increase in the share of the industrial sector. This

18. Note that even though ranked in the top-most quintile on poverty progress, Gambia's and Togo's periods of analysis are rather short: 1998-2003 and 2006-2011, respectively. Hence, these countries are not typical of the other countries in the top quintile, which have sufficiently long periods for a more statistically meaningful analysis.

phenomenon holds, though to a lesser degree, for Cambodia as well. In Ethiopia (in the penultimate top quintile on poverty reduction), in contrast, there has been a rise in the share of the agricultural sector accompanied by a decline in service, coincidental with the 1995-2011 period of significant poverty reduction.

In Bhutan, the share of agriculture has decreased substantially since the 1990's, from 34.9 percent in 1994 to 25.9 percent in 2003, and to 15.9 percent in 2011. Meanwhile the industrial sector grew remarkably, from 39.4 percent in 2003 to 43.9 in 2011, even though there has been a slight decline more recently since 2007, partly absorbed by an increasing service sector. The structural shifts towards the industrial and service sectors in Bhutan have been accompanied by substantial increases in income growth and reductions in inequality, which have in turn been translated to considerable poverty reduction. This progress can, at least in part, be attributable to the government's commitment to socio-economic transformation through the development of economic and physical infrastructure, coupled with the country's sustained allocation of resources to the social sector (IMF, 2010a; see also Case 1).

With respect to Cambodia, the data shows a decline in the share of agriculture in GDP and increases in both the industrial and service sector shares from the early 1990's to the mid-2000s. However, from the year 2006 the share of agriculture began to increase, from 31.6 percent to 35.6 percent in 2012 due to the agricultural and rural development reforms implemented by the Cambodian government as part of its poverty reduction strategies. Consequently, there has been a significant progress in the area of health, education and agricultural production over the last decade, which has contributed to major poverty reduction (UNCSD, 2012a). Meanwhile, the share of industry fell from 27.6 percent to 24.3 percent over the same period, partly absorbed by the increase in the agricultural share.

Ranked in the second-top quintile (table 1b), Ethiopia has had a structural shift from the service sector to agriculture over the recent years when the country has experienced significant poverty reduction (1995-2011). The share of the service sector, which had followed an upward trend since the 1990's, has declined from its crest of 45.0 percent in 2004 to 41.1 percent in 2012. This fall in the service share was absorbed by the increase in agriculture, from 40.9 percent to 48.8 percent over the same period. The agricultural sector has apparently, then, contributed significantly to both income growth and decreases in inequality and, hence, to considerable poverty reduction over recent years. As detailed in Case 5 bellow, this feat

could be attributable primarily to the comprehensive policy emphasis on agriculture. This policy was initiated via the Agriculture Development Led Industrialization (ADLI) strategy adopted by the Ethiopian government in 1994. The focus was on the improvement of the productivity of smallholder farms and labour-intensive industrialization through the improvement of agricultural research, agriculture extension services, and access to markets and financial services.

Case 5– Ethiopia: Agriculture takes the lead

The agriculture sector in Ethiopia employs 85 percent of the population, accounts for almost 50 percent of GDP and 90 percent of the country's exports, and is also a source of livelihood in the rural areas where the majority of the population lives (CIA Factbook 2014). Since the 1990s, the Ethiopian government has been committed to agricultural development as a means to promoting socio-economic growth and alleviating poverty and food insecurity especially in the rural areas.

Agriculture Development Led Industrialization (ADLI) strategy was adopted by the Ethiopian government in 1994. The strategy focused on the improvement of the productivity of smallholder farms and labour-intensive industrialization through the improvement of agricultural research, agriculture extension services, and access to markets, and financial services. The agricultural extension services were improved through the implementation of the Participatory Demonstration and Training Extension System (PADETES), focused on technological packages combining credit, fertilizers, improved seeds, veterinary services and better management practices (Diao, 2010). The ADLI has become the basis for the reforms, policies and strategies implemented in Ethiopia over the last decade.

Furthermore, between 2005 and 2010, the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) was implemented. As part of the PASDEP, government has increased its investment in rural infrastructure, irrigation development and enhanced land tenure security. The strategy also included the diversification and commercialization of agriculture production through product diversification and a gradual shift to high-value crops for domestic consumption and export.

The government has also encouraged research by investing in the development of the National Agricultural Research System (NARS), including the Ethiopian Institute for Agricultural Research (EIAR), the Regional Agricultural Research Institutes (RARIs) and affiliates of the Consortium of International Agricultural Research (CGIAR) (MoARD, 2010). Farmers Training Centers and 25 Agriculture Training and

Vocational Education and Training through which farmers are educated on crop production, water resources utilization and management and building community-level institutions for coordinated activities, have been established in different regions (Berhanu, 2012).

Differences in the pattern of structural change are also notable among the poorest performers on poverty (quintile 5): Burundi, Madagascar, Sierra Leone, Tanzania, Yemen and Zambia. In Tanzania, for example, progress on income inequality and poverty has been rather slow, despite a significant structural shift away from agriculture towards industry and services, a pattern that is incidentally similar to that of Bhutan. The share of agriculture fell from 46.8 percent in 1997 to 27.6 percent in 2012, while over the same period, the share of industry and services rose from 14.3 percent to 25.0 percent and from 38.9 percent to 47.4 percent, respectively. Thus, the industrial sector seems to have significantly contributed to GDP growth, with per capita GDP growing by an average of 2.3 percent annually during 1992-2007 (table 1a). As already noted, however, this increase in per capita GDP has not been translated to sufficient increases in the relatively consequential income at the household level, which rose at an annualized rate of only 0.7 percent (table 1a). Moreover, income inequality rose during this period. Poverty therefore fell only slightly. An explanation behind this phenomenon is detailed above in Case 3.

Sierra Leone, however, has not achieved any form of structural transformation during the postwar period. Following 11 years of civil war, the contribution of agriculture to GDP has exhibited an upward trend, from 48.7 percent in 2001 to 56.7 percent in 2011, thanks to the stimulation of subsistence and commercial farming as part of the National Agriculture Development Program (African Development Bank, 2011a). Meanwhile, industrial contribution has been stagnant, with the industrial share remaining at roughly 8.4 percent during this period, and with the mining sector constituting the main component of industry (Lancaster, 2007). Correspondingly, the share of the service sector has declined from 42.7 percent in 2001 to 35.0 percent in 2011. Thus, as a consequence of the postwar reconstruction, there has so far been significant per capita GDP growth, which is yet to be translated to appreciable income growth and poverty reduction. On the positive side, however, the reduction in inequality has been tremendous, ranking Sierra Leone among the top quintile in the LDCs sample (table 1b).

Thus, among the both top and poor performers on poverty, there appear to be varying levels of structural transformation. This mixed role suggests that it is not the mere structural change that matters. Instead, what is

likely to be consequential for poverty reduction is a more meaningful transformation that increases productivity in sectors where most of the citizens earn their living, as well as reallocates resources into those sectors with higher and increasing productivity.

6. CONCLUSION: ERADICATING POVERTY – IMPLICATIONS FOR POLICY

We have observed that raising income growth and attenuating income inequality are the main policies for reducing extreme poverty in LDCs. However, unless accompanied by significant income growth, redistributing income to decrease inequality in very low income countries could actually be perverse, for such redistribution could actually render more people poor. Policy makers in such countries must, therefore, ensure ex-ante that the countries' idiosyncratic characteristics would be supportive of redistributive strategies toward poverty eradication.

We have also revealed that on average income growth is the main contributor to poverty reduction globally, in Africa, and in LDCs, despite significant differences across countries with respect to the relative roles of income and inequality. Thus, there should be a focus on policies that are likely to accelerate and sustain growth. Such policies would include not only those that enlarge the factors of production, in terms of capital accumulation (human as well as physical), but also measures that enhance total factor productivity (TFP). Indeed, in the case of African countries, most of which are LDCs, TFP is found to be the main factor behind both the dismal historical growth as well the more recent growth resurgence (Fosu, 2013a). Thus while there is the need to increase human and physical capital accumulation, we must ensure that such accumulation is applied efficiently. In this regard, infrastructures (physical, human and institutional) are critical, and it is infrastructure development that is likely to attract both domestic and foreign direct investment (Fosu, 2013b).

Yet the external environment remains crucial for countries' ability to achieve sustained growth. First, the structure of low-income, high-poverty economies is such that they tend to be vulnerable to external shocks, such as those related to the terms of trade (TOT). This phenomenon is explained mainly by the stylized fact that these economies are generally less diversified than others and depend mainly on primary exports, which tend to experience high price volatility. The volatility in turn adversely affects economic growth (e.g., Broda and Tille, 2003; Cavalcanti et al., 2011). The inability to smooth out revenues from economic booms to busts renders such economies particularly vulnerable to significant price-

reducing shocks. Hence, there must be appropriate policies to improve economic diversification. Interestingly, infrastructural policies that are growth-enhancing are also those that provide the conducive environment for economic diversification.

Second, with increased globalization the external environment is much more competitive today than a half-century ago. While the increased competitiveness may produce economically efficient outcomes globally, it may on the downside result in «race to the bottom». The solution to such a problem cannot, therefore, be individual-country specific. Instead, it calls for the establishment of global minimum standards. And yet the present international economic order seems to have become less favourable for many LDCs. Today, the World Trade Organization (WTO) rules greatly define the policy space. Based on the synthesis of a large number of country cases, Fosu (2013b, p. 9) writes:

«The case studies clearly show that government has an active role in developing the requisite capability, whether in infrastructure or in technological adoption and updating. It also takes time for countries to gear up to the challenge. As the case studies show, the leverage of government often entailed the use subsidies, tariffs and other restrictive measures to prepare countries for the challenge. For example, China had succeeded in developing much of its capability involving many of such measures before acceding to the WTO in 2001. On the one hand, being a member of the WTO has major potential benefits with respect to receiving non-discriminatory trade arrangements, inter alia. This can be particularly beneficial for small and poor countries bereft of the clout for favourable bargaining. Unfortunately, on the other hand, WTO rules currently restrict countries from the use of certain measures to advance their industrialization, thanks in great part to the trade related investment measures (TRIMs) and trade related intellectual properties (TRIPs). The former limits government action in protecting its industries while the latter constrains the use of external technology. Finding ways to relieve the constraint for the low-income and least-developed countries should help provide a more level playing field for these countries¹⁹.»

The irony, though, is that the developed countries of today enjoyed a much larger policy space historically. Fosu (2013c, p. 13) bemoans:

19. Although WTO also provided implementation-time windows for low-income and least-developed countries, these windows are long closed for many. Although there have been recent efforts to renew these exemptions, the implementation has been rather limited, especially in the case of the TRIPs. There is also the anti-dumping provision of the WTO to protect countries. Unfortunately, it would be too costly for poor developing countries to take advantage of this provision.

«As apparent from the case studies, many of the developed countries were able to employ consistently the leverage of government in the economy, including the use of government subsidies and more freely available technological ideas. Under WTO, however, this political space has now been severely limited, via particularly the TRIMs and TRIPs agreements...Unfortunately, the measures may be severely constraining, especially for low-income and least-developed countries (LDCs). Finding ways in which to relieve the constraint for these countries, therefore, would help to level the playing field for them, from an intertemporal equity perspective at least.»

Third, there has been the tendency of developed countries to protect especially their agricultural markets, as in the case of the comprehensive agricultural policy (CAP) of the European Union. Such measures include subsidies to developed countries' farmers that are likely to put LDCs in particular at a competitive disadvantage. In this regard, there should be appropriate compensatory measures to address the situation.

Fourth, the recent financial crisis, which began in the developed world since about 2008, may have dampened growth prospects in low-income developing countries, with GDP growth at 4.2 percent in 2013, for instance, compared with 5.9 percent in the pre-crisis 2007 year (World Bank, 2014b). Meanwhile, net official development assistance (ODA) as a proportion of gross national income (GNI) received by low-income countries has fallen from 17.3 percent in 2007 to 11.6 percent in 2012 (*ibid.*). Remittances have filled the gap only somewhat, increasing from 6.5 percent of GNI in 2007 to 7.9 percent in 2012²⁰. Thus appropriate policies should be considered to mitigate the potential adverse implications for especially LDCs and other high-poverty, low-income countries.

Fifth, regardless of the system of government, building a capable government is essential. After all, the cumulative evidence of development success from the developing world suggests that government has a crucial role in the production of the requisite capabilities for sustained growth (Fosu, 2013b). But LDCs, characteristically fragile and vulnerable, are precisely those countries that tend to require substantial capacity development. Assessing the impact of the 2008-2009 financial and economic crises on African countries, Fosu (2013d, 1103) for instance writes: «Although low-income and fragile countries appear to be holding up well generally, many of these economies require external assistance.

20. Although these more accessible figures are for low-income countries, they are likely to approximate reasonably well those for the LDCs, as these two sets of countries likely share a large intersection.

Above all, the commitment to improved economic and political governance must continue. Such a commitment should be bolstered synergistically by the realization of the development partners' commitment of external assistance.»

Yet, policies that increase growth need not lead to significant poverty reduction. For example, we have observed in this chapter that enhancing economic freedom is positively correlated with growth but not with poverty reduction, because apparently the resulting growth is not sufficiently inclusive. IQ is positively associated with poverty reduction, however, suggesting that better emphasis be placed on improving IQ in tandem with any enhancement of economic freedom.

IQ in turn requires an appropriate political framework. As observed above, however, there seems to be no particular political framework that qualifies as the best crucible for generating IQ. Instead, it appears that countries' idiosyncratic characteristics in space and time may determine the optimal political framework, at least given the relatively short-run nature of the current analysis. For example, Bhutan, the most successful country on poverty reduction in our LDC sample, actually does poorly on measures of democracy, ranking in the bottom two quintiles. Nonetheless, it performs in the very top quintile on IQ. In contrast however, Senegal, another top performer on poverty reduction, does well on both democratic governance and IQ.

Sixth, reducing inequality is crucial for poverty reduction in certain countries. Thus understanding the idiosyncratic characteristics of countries in this regard is essential. Of particular importance is the need to attenuate gender inequality, inter alia, if overall inequality is to be effectively managed. In addition, decreasing market imperfections and improving service delivery would be necessary for sustaining growth. Such policies would also likely reduce spatial inequality, especially if they are appropriately targeted to bridge the rural-urban divide.

Seventh, the chapter has also uncovered that *meaningful* structural transformation could be good for poverty reduction. The broad categorization into agriculture, industry and service, for which there is ample data, is inadequate in terms of portending significant poverty reductions. Instead, the emphasis should be on resource allocation into higher and increasing productivity sectors, irrespective of the broad category in which that sub-sector might reside.

Eight, the existence of poverty traps is likely to require the employment of special policies, such as assisting the poor acquire investment assets that can improve their future income, including mitigating the risk of

intergenerational poverty. These policies would likely include social protection programs, such as contingency cash transfers as well as health and other forms of insurance programs (Thorbecke, 2013).

Finally, the availability of reliable data is critical. After all, without such data it would be impossible to monitor the progress toward the achievement of SDG1. It would, therefore, be enormously beneficial to place policy emphasis on obtaining accurate and reliable data for especially those countries with very high poverty rates currently, such as LDCs, and thus require the most attention. Such an undertaking should be under the management and/or oversight of a well-resourced international body, in order to ensure compatibility across countries.

REFERENCES

ADAMS, R. H. (2004), «Economic growth, inequality and poverty: Estimating the growth elasticity of poverty», *World Development*, 32(12), 1989-2014.

African Development Bank (2009). «An Infrastructure Action Plan for Burundi: Accelerating Regional Integration», Retrieved from <http://www.afdb.org>.

African Development Bank, AfDB (2011a). «Infrastructure and Growth in Sierra Leone», Summary Report, Retrieved from [http://www.afdb.org/fileadmin/uploads/afdb/documents/project_and_operations/IIAPshort\(En\)Interieur.pdf](http://www.afdb.org/fileadmin/uploads/afdb/documents/project_and_operations/IIAPshort(En)Interieur.pdf).

African Development Bank, AfDB (2011b). «Togo Country Strategy Paper, 2011-2015», Country Operations Department. Retrieved from <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Togo-CSP2011-2015FullFinal.pdf>.

African Development Bank, AfDB (2011c). «Burundi: Country Strategy Paper 2012-2016», Country Regional Department East A. Retrieved from <http://www.afdb.org>.

African Economic Outlook (2012). «Togo», Retrieved from <http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/PDF/TogoFullPDFCountyNote.pdf>.

AGHION, P., and P. BOLTON (1997), «A Theory of Trickle-Down Growth and Development», *Review of Economic Studies*, 64(2): 151-72.

ALI, A. A. and E. THORBECKE (2000). «The State and Path of Poverty

in Sub-Saharan Africa: Some Preliminary Results,» *Journal of African Economies*, Vol. 9, AERC Supplement 1, 9-40.

Bank of Tanzania (2012). «Foreign Private Investment and Investor Perception», Tanzanian Investment Report 2012. Retrieved from <http://www.bot-tz.org>.

BARWELL, I. (1996). «Transport and the village: Findings from African village-level travel and transport surveys and related studies». World Bank Discussion Paper 344. Africa Region Series. Washington, D.C.: World Bank.

BERHANU, K. (2012). «The Political Economy of Agricultural Extension in Ethiopia: Economic Growth and Political Control», FAC Political Economy of Agricultural Policy in Africa (PEAPA) work stream. Retrieved from www.future-agricultures.org.

BHALLA, S.S. (2002), «Imagine there is no country», Washington: Institute for International Economics.

BIRDSALL, N. and J. L. LONDONO (1997). «Asset Inequality Matters: An Assessment of the World Bank's Approach to Poverty Reduction.» *American Economic Review*, 87(2): 32-37.

BLACKDEN, C. M. (1999). «Gender, Growth, and Poverty Reduction». World Bank, Washington, DC. World Bank, <https://openknowledge.worldbank.org/handle/10986/9873> License: CC BY 3.0 Unported.

BOURGUIGNON, F. and MORRISON, C. (2002) «Inequality among world citizens: 1890-1992», *American Economic Review*, 92 (4), 727-744.

BRODA, C and C. TILLE (2003), «Coping with Terms of Trade Shocks in Developing Countries,» *Current Issues in Economics and Finance*, 9(11), pp. 1-7, Federal Reserve Bank of New York.

CALDERÓN, César; SERVÉN, Luis. 2008. Infrastructure and Economic Development in Sub-Saharan Africa. World Bank, Washington DC. Retrieved from <https://openknowledge.worldbank.org/handle/10986/6988>.

CAVALCANTI, T.V., MOHADDES, and M. RAISSI (2011), «Commodity Price Volatility and the Sources of Growth,» *IMF Working Paper*, WP/12/12.

CHOTIKAPANICH D, W.E. GRIFFITHS and D.S.P. RAO (2007). «Estimating and Combining National Income Distributions using Limited Data». *Journal of Business and Economic Statistics* 25:97-109.

CHOTIKAPANICH, D., M.R. VALENZUELA and D.S.P. RAO (1997), «Global and Regional Inequality in the Distribution of Income: Estimation with Limited/Incomplete Data», *Empirical Economics*, 20, 533-546.

CIA Factbook (2014). The World Factbook. Retrieved Apr. 2014 from <https://www.cia.gov/library/publications/the-world-factbook/>.

DOLLAR, D. and A. KRAAY (2002). «Growth is Good for the Poor,» *Journal of Economic Growth*, 7(3), 195-225.

DATT, G. and M. RAVALLION (1992). «Growth and Redistribution Components of Changes in Poverty: A Decomposition to Brazil and India in the 1980s,» *Journal of Development Economics*, Vol. 38, pp. 275-295.

DEININGER, K. & L.SQUIRE, (1998). «New ways of looking at old issues: inequality and growth,» *Journal of Development Economics*, 57(2), 259-287.

DIAO, X. (2010). «Economic Importance of Agriculture for Economic Development and Poverty Reduction: The Case Study of Ethiopia», Global Forum on Agriculture, Paris, OECD.

DOLLAR, D. and A. KRAAY (2002). «Growth is Good for the Poor,» *Journal of Economic Growth*, 7(3), 195-225.

EASTERLY, W. (2000). «The Effect of IMF and World Bank Programs on Poverty,» Washington, DC: World Bank, mimeo.

DOLVEN, B., R. MARGESSON and B. VAUGHN, (2012). «Timor-Leste: Political Dynamics, Development and International Involvement», Congressional Research service, CRS Report for Congress, www.crs.gov.

FOSU, A. K. (2005), «Post-conflict Economies in Africa: Synthesis and Lessons,» in A. K. FOSU and P. COLLIER, eds., *Post Conflict Economies in Africa*, New York: Palgrave/Macmillan, chapter 14, pp. 231-240.

FOSU, A. K. (2008a), «Inequality and the Growth-Poverty Nexus: Specification Empirics Using African Data,» *Applied Economics Letters*, 15(7-9), 563-566.

FOSU, A. K. (2008b), «Democracy and Growth in Africa: Implications of Increasing Electoral Competitiveness,» *Economics Letters*, September, 100 (3), 442-444.

FOSU, A. K. (2009), «Inequality and the Impact of Growth on Poverty: Comparative Evidence for Sub-Saharan Africa,» *Journal of Development Studies*, 45(5), 726-745.

Fosu, A. K. (2010a), «The Effect of Income Distribution on the Ability of Growth to Reduce Poverty: Evidence from Rural and Urban African Economies,» *American Journal of Economics and Sociology*, 69(3), 1034-1053.

Fosu, A. K. (2010b), «Does Inequality Constrain Poverty Reduction Programs? Evidence from Africa,» *Journal of Policy Modeling*, 32(6), 2010, 818-827.

Fosu, A. K. (2010c), «Inequality, Income, and Poverty: Comparative Global Evidence,» *Social Science Quarterly*, 91(5), 1432-1446.

Fosu, A. K. (2011), «Growth, Inequality, and Poverty Reduction in Developing Countries: Recent Global Evidence,» CSAE Working Paper WPS/2011-07, Centre for the Study of African Economies, University of Oxford.

Fosu, A. K. (2013a), «African Economic Growth: Productivity, Policy Syndromes and the Importance of Institutions,» *Journal of African Economies*, 22(4): 523-551.

Fosu, A. K. (2013b), «Achieving Development Success: Synthesis of Strategies and Lessons from the Developing World,» in A. K. Fosu (ed.), *Achieving Development Success: Strategies and Lessons from the Developing World*, Oxford: Oxford University Press, chapter 1, pp. 1-22.

Fosu, A. K. (2013c). «Development Success: Historical Accounts from the More Advanced Countries,» in A. K. Fosu (ed.), *Development Success: Historical Accounts from More Advanced Countries*, Oxford: Oxford University Press, November 2012, chapter 1, pp. 1-19.

Fosu, A. K. (2013d). «Impact of the Global Financial and Economic Crisis on Development: Whither Africa?» *Journal of International Development*, 25(8): 1085-1104.

Fosu, A. K. (2014). «Extreme Poverty in Least Developed Countries in the Context of the Post-2015 UN Development Agenda and the Sustainable Development Goals», a final report submitted to the Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (OHRLLS), United Nations Headquarters, New York.

Fosu, A. K. (2015). «Growth, Inequality and Poverty in Sub-Saharan Africa: Recent Progress in a Global Context,» *Oxford Development Studies*, 43(1): 44-59.

Fosu, A. K. (2016). «The Recent Growth Resurgence in Africa and Poverty Reduction: Assessing the Context and Evidence,» CSAE Working

Paper WPS/2016-11, Centre for the Study of African Economies (CSAE), University of Oxford, UK.

FOSU, A. K. and S. A. O'CONNELL (2006), «Explaining African Economic Growth: The Role of Anti-growth Syndromes,» in Francois Bourguignon and Boris Pleskovic, editors, *Annual Bank Conference on Development Economics (ABCDE)*, Washington, DC: World Bank, pp. 31-66.

GWARTNEY, J. D, J. C. HALL, and R. LAWSON (2012), «Economic Freedom of the World: 2012 Annual Report,» Vancouver, BC: The Fraser Institute.

IMF (2010a). «Bhutan: Poverty Reduction Strategy Paper», IMF Country Report No 10/180, Washington, D.C.: International Monetary Fund.

IMF (2010b). «Uganda: Poverty Reduction Strategy Paper», IMF Country Report No. 10/141, Washington, D.C.: International Monetary Fund.

IV Constitutional Government (2012). «Goodbye conflict, welcome development», AMP Government Snapshot 2007-2012. Retrieved from timor-leste.gov.tl/wp-content/uploads/2012/07/ACBD_en.pdf.

JERVEN, Morten (2013), «Comparability of GDP Estimates in Sub-Saharan Africa: The Effect of Revisions in Sources and Methods since Structural Adjustment,» *Review of Income and Wealth*, 51, S1, pp. S16-S36.

JOOMA, M. B. (2005). «In Transit? The Socio-economic Transformation of Burundi», *African Security Review*, 14(2).

KAKWANI, N. (1993). «Poverty and Economic Growth with Application to Cote d'Ivoire,» *Review of Income and Wealth*, Vol. 39, 121-139.

KALWIJ, A. and A. VERSCHOOR (2007), «Not by Growth Alone: The Role of the Distribution of Income in Regional Diversity in Poverty Reduction,» *European Economic Review*, 51, pp. 805-829.

KLASEN, Stephan (2000). «Does Gender Inequality Reduce Growth and Development? Evidence from Cross-Country Regressions». Collaborative Research Center 386, Discussion Paper 212.

LANCASTER, C. (2007). «We fall down and Get up»: State Failure, Democracy and Development in Sierra Leone, Center for Global Development, Retrieved from <http://www.cgdev.org>.

Ministry of Agriculture and Rural Development (MoARD) (2010). «Ethiopia's Agricultural Sector Policy and Investment Framework (PIF) 2010-2020», Federal Democratic Republic of Ethiopia. Retrieved from <http://www.caadp.net/pdf/EthiopiaPost-CompactInvestmentPlan.pdf>.

Ministry of Finance and Economic Affairs (MoFEA) (2009). «The status of Economic growth and Poverty Reduction in Tanzania», Poverty and Human Development Report (PHDR). Retrieved from http://www.repoa.or.tz/documents/brief_1_lr.pdf.

MORRISON, A., D. RAJU and N. SINHA. (2007). «Gender Equality, Poverty and Economic growth». Policy Research Working Paper 4349. Washington, D.C.: World Bank.

NANGALE, G. (2012). «Role of the State in Economic Development: Employment Challenges in Eastern Africa – The Case of Tanzania», Friedrich Ebert Stiftung (FES) Eastern African Conference on Employment Policies, Kenya, September 2012. Retrieved from <http://www.fes-kenya.org/media/publications/EmploymentChallenges-Tanzania.pdf>.

PINKOVSKIY, M. and X. SALA-I-MARTIN (2009). «Parametric Estimations of the World Distribution of Income.» NBER Working Paper #15433.

QUAH, D. (2002), «One third of the world's growth and inequality», CEP discussion paper; CEPDP0535, 535. London, UK.

RAVALLION, M. (1997), «Can High Inequality Developing Countries Escape Absolute Poverty?» *Economics Letters*, 56, pp. 51-57.

RAVALLION, M. (2001), «Growth, Inequality and Poverty: Looking Beyond Averages», *World Development*, 29(11), 1803-1815.

RAVALLION, M. (2012), «Why Don't We See Poverty Convergence?» *American Economic Review*, 102(1): 504-23.

RAVALLION, M., S. CHEN and P. SANGRAULA (2009), «Dollar a Day Revisited», *World Bank Economic Review*, 23 (2): 163-184.

Royal Government of Bhutan (2000). «Eighth Five Year Plan: Mid-Term Review Report July 1997-December 1999», Retrieved from <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan005246.pdf>.

Royal Government of Bhutan (2011). «Keeping Promises: A Report on the Status of Implementation of the Brussels Programme of Action in Bhutan for the Decade [2001-2010]», Retrieved from www.un.org/en/conf/ldc/pdf/bhutan.pdf.

Royal Government of Bhutan (2013). «Eleventh Five Year Plan 2013-2018: Self-reliance and Inclusive Green Socio-economic Development», Volume 1: Main Document. Retrieved from <http://www.gnhc.gov.bt/wp-content/uploads/2013/11/Eleventh-Five-Year-Plan.pdf>.

SOCHETH, H. (2012). «Foreign Investment in Agriculture in Cambodia:

A Survey of Recent Trends», TKN Report, International Institute for Sustainable Development (IISD).

SUM, M. (2008), «Infrastructure Development in Cambodia», in KUMAR, N. (ed.), *International Infrastructure Development in East Asia – Towards Balanced Regional*.

Development and Integration, ERIA Research Project Report 2007-2, Chiba: IDE-JETRO, pp. 32-84.

THORBECKE, E. (2013). «The Interrelationship Linking Growth, Inequality and Poverty in Sub-Saharan Africa», *Journal of African Economies*, 22, Supplement 1, pp. i15-i48.

THORBECKE, E., and C. CHARUMILIND (2002), «Economic Inequality and Its Socioeconomic Impact», *World Development*, 30(9): 1477-95.

TSHERING, S. and B. TAMANG (2004). «Hydropower: Key to Sustainable, Socio Economic Development in Bhutan», United Nations Symposium on Hydropower and Sustainable Development (Oct. 2004). Retrieved from http://www.un.org/esa/sustdev/sdissues/energy/op/hydro_tsheringbhutan.pdf.

United Nations, UN (2011), «Fourth United Nations Conference on Least Developed Countries», 219/3, Retrieved from <http://www.ipu.org/splz-e/ldciv/action.pdf>.

United Nations, UN (2014). «Economic Growth. United Nations in Tanzania.» Online at <http://tz.one.un.org/index.php/what-we-do/economic-growth>.

UNCSD (2012a), «The Cambodian Government's Achievements and Future Direction in Sustainable Development», National Report for Rio+20. Retrieved from <http://sustainabledevelopment.un.org/content/documents/1022cambodia.pdf>.

UNCSD (2012b). «Sustainable Development in Timor-Leste», National Report, Ministry of Economy and Development. Retrieved from <https://sustainabledevelopment.un.org/%20content/documents/978timor.pdf>

USAID (2006). «Reconstruction for Development in Burundi: Guiding Criteria and Selected Key Issues», Nathan Associates Inc. Retrieved from pdf.usaid.gov/pdf_docs/PNADG060.pdf.

World Bank (2011). «Poverty Trends in Uganda: Who gained and who was left behind?». Inclusive Growth Policy Note 1. Retrieved from <http://siteresources.worldbank.org/INTUGANDA/Resources/uganda-poverty-and-inequality-trends-full-policy-note.pdf>.

World Bank (2014a), POVCALNET 2014.

World Bank (2014b), World Development Indicators Online, 2014.

World Bank (2015), POVCALNET 2015.

World Bank (2016), POVCALNET 2016.

Worldmark Encyclopaedia of Nations (2007), «Bhutan», online at: <http://www.encyclopedia.com/topic/Bhutan.aspx>.

APPENDIX

**Table A1: Global Poverty Rates, by Developing Country
(latest available year)**

| Country | Year | Region | Latest Poverty Level | | | Decile Rank | | |
|----------------------|------|--------|------------------------------|------------------|----------------------|----------------------|----------|--------------|
| | | | Head-count Pov. Rate, \$1.90 | Pov. Gap, \$1.90 | Sq. Pov. Gap, \$1.90 | Head-count Pov. Rate | Pov. Gap | Sq. Pov. Gap |
| Albania | 2012 | ECA | 1.06 | 0.22 | 0.07 | 3 | 3 | 2 |
| Angola* | 2009 | SSA | 30.13 | 9.64 | 4.39 | 8 | 8 | 8 |
| Argentina-Urban | 2013 | LAC | 1.75 | 0.95 | 0.76 | 3 | 5 | 5 |
| Armenia | 2013 | ECA | 2.44 | 0.56 | 0.19 | 4 | 3 | 3 |
| Azerbaijan | 2005 | ECA | 0.00 | 0.00 | 0.00 | 1 | 1 | 1 |
| Belarus | 2012 | ECA | 0.00 | 0.00 | 0.00 | 1 | 1 | 1 |
| Belize | 1999 | LAC | 13.92 | 6.16 | 3.85 | 6 | 7 | 7 |
| Benin* | 2011 | SSA | 53.11 | 18.98 | 8.87 | 9 | 9 | 9 |
| Bhutan* | 2012 | SA | 2.20 | 0.42 | 0.12 | 4 | 3 | 3 |
| Bolivia | 2013 | LAC | 7.70 | 3.80 | 2.51 | 5 | 6 | 7 |
| Bosnia & Herzegovina | 2007 | ECA | 0.06 | 0.02 | 0.01 | 1 | 2 | 2 |
| Botswana | 2009 | SSA | 18.24 | 5.78 | 2.67 | 7 | 7 | 7 |
| Brazil | 2013 | LAC | 4.87 | 2.77 | 2.14 | 5 | 6 | 6 |
| Bulgaria | 2012 | ECA | 2.03 | 0.77 | 0.44 | 4 | 4 | 5 |
| Burkina Faso* | 2009 | SSA | 55.29 | 19.94 | 9.41 | 10 | 9 | 9 |
| Burundi* | 2006 | SSA | 77.65 | 32.88 | 16.48 | 10 | 10 | 10 |
| Cameroon | 2007 | SSA | 29.27 | 8.32 | 3.16 | 8 | 7 | 7 |

| | | | Latest Poverty Level | | | Decile Rank | | |
|--------------------|------|--------|------------------------------|------------------|----------------------|----------------------|----------|--------------|
| Country | Year | Region | Head-count Pov. Rate, \$1.90 | Pov. Gap, \$1.90 | Sq. Pov. Gap, \$1.90 | Head-count Pov. Rate | Pov. Gap | Sq. Pov. Gap |
| CAR* | 2008 | SSA | 66.27 | 33.08 | 20.61 | 10 | 10 | 10 |
| Chad* | 2011 | SSA | 38.43 | 15.29 | 8.14 | 8 | 9 | 9 |
| China-Rural | 2012 | EAP | 12.98 | 2.72 | 0.86 | 6 | 5 | 5 |
| China-Urban | 2012 | EAP | 0.42 | 0.13 | 0.08 | 2 | 2 | 3 |
| Colombia | 2013 | LAC | 6.12 | 2.48 | 1.53 | 5 | 5 | 6 |
| Comoros* | 2004 | SSA | 13.47 | 3.66 | 1.45 | 6 | 6 | 6 |
| Congo, Dem. Rep.* | 2012 | SSA | 77.18 | 39.25 | 24.02 | 10 | 10 | 10 |
| Congo, Rep. | 2011 | SSA | 28.71 | 9.58 | 4.38 | 7 | 8 | 7 |
| Costa Rica | 2013 | LAC | 1.68 | 0.60 | 0.35 | 3 | 4 | 4 |
| Cote d'Ivoire | 2008 | SSA | 29.02 | 10.30 | 5.18 | 7 | 8 | 8 |
| Croatia | 2011 | ECA | 0.85 | 0.51 | 0.80 | 3 | 3 | 5 |
| Czech Republic | 2012 | ECA | 0.06 | 0.08 | 0.12 | 1 | 2 | 3 |
| Djibouti* | 2012 | MENA | 18.32 | 7.85 | 4.74 | 7 | 7 | 8 |
| Dominican Republic | 2013 | LAC | 2.32 | 0.56 | 0.21 | 4 | 3 | 3 |
| Ecuador | 2013 | LAC | 4.43 | 1.72 | 1.05 | 5 | 5 | 5 |
| El Salvador | 2013 | LAC | 3.25 | 0.74 | 0.27 | 4 | 4 | 4 |
| Estonia | 2012 | ECA | 0.99 | 1.21 | 8.05 | 3 | 5 | 9 |
| Ethiopia* | 2011 | SSA | 33.54 | 9.04 | 3.68 | 8 | 7 | 7 |
| Fiji | 2009 | EAP | 3.60 | 0.72 | 0.21 | 5 | 4 | 3 |
| Gabon | 2005 | SSA | 7.97 | 1.85 | 0.68 | 5 | 5 | 5 |
| Gambia* | 2003 | SSA | 45.29 | 17.72 | 9.12 | 9 | 9 | 9 |
| Georgia | 2013 | ECA | 11.49 | 3.36 | 1.46 | 6 | 6 | 6 |
| Ghana | 2006 | SSA | 25.15 | 8.41 | 4.03 | 7 | 7 | 7 |
| Guatemala | 2011 | LAC | 11.53 | 4.00 | 2.09 | 6 | 6 | 6 |
| Guinea* | 2012 | SSA | 35.27 | 10.34 | 4.35 | 8 | 8 | 7 |
| Guinea-Bissau* | 2010 | SSA | 67.08 | 30.53 | 17.58 | 10 | 10 | 10 |
| Guyana | 1998 | LAC | 14.00 | 4.98 | 2.42 | 6 | 7 | 7 |
| Haiti* | 2012 | LAC | 53.91 | 28.90 | 19.42 | 9 | 10 | 10 |

| | | | Latest Poverty Level | | | Decile Rank | | |
|--------------------|------|--------|------------------------------|------------------|----------------------|----------------------|----------|--------------|
| Country | Year | Region | Head-count Pov. Rate, \$1.90 | Pov. Gap, \$1.90 | Sq. Pov. Gap, \$1.90 | Head-count Pov. Rate | Pov. Gap | Sq. Pov. Gap |
| Honduras | 2013 | LAC | 18.93 | 7.66 | 4.39 | 7 | 7 | 8 |
| Hungary | 2012 | ECA | 0.26 | 0.21 | 0.44 | 2 | 3 | 5 |
| India-Rural | 2012 | SA | 24.83 | 5.00 | 1.51 | 7 | 7 | 6 |
| India-Urban | 2012 | SA | 13.39 | 2.68 | 0.78 | 6 | 5 | 5 |
| Indonesia-Rural | 2013 | EAP | 10.82 | 1.63 | 0.40 | 6 | 5 | 4 |
| Indonesia-Urban | 2013 | EAP | 8.93 | 1.37 | 0.34 | 5 | 5 | 4 |
| Iran, Islamic Rep. | 2013 | MENA | 0.08 | 0.03 | 0.02 | 2 | 2 | 2 |
| Jamaica | 2004 | LAC | 1.70 | 0.37 | 0.12 | 3 | 3 | 3 |
| Kazakhstan | 2013 | ECA | 0.04 | 0.01 | 0.00 | 1 | 1 | 1 |
| Kenya | 2005 | SSA | 33.60 | 11.70 | 5.77 | 8 | 8 | 8 |
| Kiribati* | 2006 | EAP | 14.14 | 4.55 | 2.09 | 6 | 6 | 6 |
| Kosovo | 2013 | ECA | 0.02 | 0.00 | 0.00 | 1 | 1 | 1 |
| Kyrgyz Republic | 2012 | ECA | 2.91 | 0.74 | 0.30 | 4 | 4 | 4 |
| Latvia | 2012 | ECA | 1.38 | 0.97 | 1.34 | 3 | 5 | 6 |
| Lesotho* | 2010 | SSA | 59.65 | 31.83 | 20.96 | 10 | 10 | 10 |
| Liberia* | 2007 | SSA | 68.64 | 28.14 | 15.15 | 10 | 10 | 10 |
| Lithuania | 2012 | ECA | 1.03 | 0.75 | 0.71 | 3 | 4 | 5 |
| Macedonia | 2008 | ECA | 1.33 | 0.36 | 0.17 | 3 | 3 | 3 |
| Madagascar* | 2010 | SSA | 81.76 | 40.32 | 23.62 | 10 | 10 | 10 |
| Malawi* | 2010 | SSA | 70.91 | 33.29 | 19.07 | 10 | 10 | 10 |
| Malaysia | 2009 | EAP | 0.28 | 0.04 | 0.01 | 2 | 2 | 2 |
| Maldives | 2010 | SA | 5.59 | 1.07 | 0.32 | 5 | 5 | 4 |
| Mali* | 2010 | SSA | 49.25 | 15.19 | 6.40 | 9 | 9 | 8 |
| Mauritania* | 2008 | SSA | 10.91 | 2.92 | 1.22 | 6 | 6 | 5 |
| Mauritius | 2012 | SSA | 0.53 | 0.11 | 0.03 | 2 | 2 | 2 |
| Mexico | 2012 | LAC | 2.68 | 0.67 | 0.25 | 4 | 4 | 4 |

| | | | Latest Poverty Level | | | Decile Rank | | |
|----------------------|------|--------|------------------------------|------------------|----------------------|----------------------|----------|--------------|
| Country | Year | Region | Head-count Pov. Rate, \$1.90 | Pov. Gap, \$1.90 | Sq. Pov. Gap, \$1.90 | Head-count Pov. Rate | Pov. Gap | Sq. Pov. Gap |
| Micronesia-Urban | 2000 | EAP | 50.37 | 28.48 | 19.97 | 9 | 10 | 10 |
| Moldova | 2013 | ECA | 0.08 | 0.01 | 0.00 | 2 | 1 | 1 |
| Mongolia | 2012 | EAP | 0.38 | 0.06 | 0.02 | 2 | 2 | 2 |
| Montenegro | 2013 | ECA | 1.69 | 0.38 | 0.09 | 3 | 3 | 3 |
| Morocco | 2007 | MENA | 3.12 | 0.61 | 0.19 | 4 | 4 | 3 |
| Mozambique* | 2009 | SSA | 68.74 | 31.41 | 18.02 | 10 | 10 | 10 |
| Namibia | 2010 | SSA | 22.60 | 6.65 | 2.82 | 7 | 7 | 7 |
| Nepal* | 2010 | SA | 14.95 | 3.04 | 0.98 | 7 | 6 | 5 |
| Nicaragua | 2009 | LAC | 10.83 | 3.62 | 1.76 | 6 | 6 | 6 |
| Niger* | 2011 | SSA | 50.34 | 13.91 | 5.27 | 9 | 8 | 8 |
| Nigeria | 2010 | SSA | 53.47 | 21.76 | 11.58 | 9 | 9 | 9 |
| Pakistan | 2011 | SA | 8.30 | 1.18 | 0.28 | 5 | 5 | 4 |
| Panama | 2013 | LAC | 2.86 | 0.80 | 0.35 | 4 | 4 | 4 |
| Papua New Guinea | 2010 | EAP | 39.31 | 15.92 | 8.57 | 8 | 9 | 9 |
| Paraguay | 2013 | LAC | 2.19 | 0.87 | 0.52 | 4 | 4 | 5 |
| Peru | 2013 | LAC | 3.70 | 0.94 | 0.37 | 5 | 5 | 4 |
| Philippines | 2012 | EAP | 13.11 | 2.74 | 0.86 | 6 | 6 | 5 |
| Poland | 2012 | ECA | 0.02 | 0.00 | 0.00 | 1 | 1 | 1 |
| Romania | 2012 | ECA | 0.00 | 0.00 | 0.00 | 1 | 1 | 1 |
| Russian Federation | 2012 | ECA | 0.04 | 0.01 | 0.00 | 1 | 1 | 1 |
| Rwanda* | 2011 | SSA | 60.25 | 23.70 | 11.93 | 10 | 9 | 9 |
| Samoa | 2008 | EAP | 0.83 | 0.11 | 0.02 | 3 | 2 | 2 |
| Sao Tome & Principe* | 2010 | SSA | 33.89 | 9.12 | 3.46 | 8 | 7 | 7 |
| Senegal* | 2011 | SSA | 37.98 | 12.79 | 5.97 | 8 | 8 | 8 |
| Serbia | 2010 | ECA | 0.10 | 0.01 | 0.00 | 2 | 1 | 1 |
| Seychelles | 2006 | SSA | 0.37 | 0.05 | 0.01 | 2 | 2 | 2 |
| Sierra Leone* | 2011 | SSA | 52.33 | 16.70 | 7.17 | 9 | 9 | 9 |

| | | | Latest Poverty Level | | | Decile Rank | | |
|-------------------|------|--------|------------------------------|------------------|----------------------|----------------------|----------|--------------|
| Country | Year | Region | Head-count Pov. Rate, \$1.90 | Pov. Gap, \$1.90 | Sq. Pov. Gap, \$1.90 | Head-count Pov. Rate | Pov. Gap | Sq. Pov. Gap |
| Slovak Republic | 2012 | ECA | 0.24 | 0.12 | 0.08 | 2 | 2 | 3 |
| Slovenia | 2012 | ECA | 0.03 | 0.00 | 0.00 | 1 | 1 | 1 |
| Solomon Islands* | 2005 | EAP | 45.60 | 17.38 | 8.89 | 9 | 9 | 9 |
| South Africa | 2011 | SSA | 16.56 | 4.90 | 2.10 | 7 | 7 | 6 |
| Sri Lanka | 2013 | SA | 1.69 | 0.26 | 0.07 | 3 | 3 | 2 |
| St. Lucia | 1995 | LAC | 35.83 | 13.24 | 6.56 | 8 | 8 | 8 |
| Sudan* | 2009 | SSA | 14.92 | 3.98 | 1.63 | 7 | 6 | 6 |
| Suriname | 1999 | LAC | 23.38 | 16.52 | 14.55 | 7 | 9 | 10 |
| Swaziland | 2009 | SSA | 42.03 | 16.64 | 8.69 | 8 | 9 | 9 |
| Tajikistan | 2009 | ECA | 4.74 | 0.90 | 0.26 | 5 | 4 | 4 |
| Tanzania* | 2012 | SSA | 46.60 | 14.35 | 5.96 | 9 | 8 | 8 |
| Thailand | 2012 | EAP | 0.06 | 0.01 | 0.00 | 1 | 1 | 1 |
| Timor-Leste* | 2007 | EAP | 46.76 | 12.09 | 4.33 | 9 | 8 | 7 |
| Togo* | 2011 | SSA | 54.18 | 23.21 | 12.69 | 9 | 9 | 9 |
| Tonga | 2009 | EAP | 1.09 | 0.23 | 0.07 | 3 | 3 | 2 |
| Trinidad & Tobago | 1992 | LAC | 3.41 | 0.86 | 0.38 | 5 | 4 | 4 |
| Tunisia | 2010 | MENA | 1.99 | 0.40 | 0.12 | 4 | 3 | 3 |
| Turkey | 2012 | ECA | 0.26 | 0.01 | 0.00 | 2 | 1 | 1 |
| Turkmenistan | 1998 | ECA | 42.26 | 14.54 | 6.58 | 9 | 8 | 8 |
| Uganda* | 2012 | SSA | 33.24 | 10.13 | 4.37 | 8 | 8 | 7 |
| Ukraine | 2013 | ECA | 0.00 | 0.00 | 0.00 | 1 | 1 | 1 |
| Uruguay | 2013 | LAC | 0.34 | 0.11 | 0.06 | 2 | 2 | 2 |
| Uzbekistan | 2003 | ECA | 66.79 | 25.32 | 12.46 | 10 | 10 | 9 |
| Vanuatu* | 2010 | EAP | 15.36 | 3.73 | 1.37 | 7 | 6 | 6 |
| Venezuela | 2006 | LAC | 9.24 | 6.80 | 6.14 | 5 | 7 | 8 |
| Vietnam | 2012 | EAP | 3.23 | 0.58 | 0.16 | 4 | 3 | 3 |
| West Bank & Gaza | 2009 | MENA | 0.30 | 0.07 | 0.02 | 2 | 2 | 2 |

| | | | Latest Poverty Level | | | Decile Rank | | |
|-------------------------------------|------|--------|------------------------------|------------------|----------------------|----------------------|----------|--------------|
| Country | Year | Region | Head-count Pov. Rate, \$1.90 | Pov. Gap, \$1.90 | Sq. Pov. Gap, \$1.90 | Head-count Pov. Rate | Pov. Gap | Sq. Pov. Gap |
| Zambia* | 2010 | SSA | 64.38 | 31.59 | 18.79 | 10 | 10 | 10 |
| Mean | | | 19.87 | 7.66 | 4.16 | | | |
| Median | | | 10.03 | 2.73 | 1.28 | | | |
| Std. Dev. | | | 23.10 | 10.26 | 6.01 | | | |
| Max | | | 81.76 | 40.32 | 24.02 | | | |
| Min | | | 0.00 | 0.00 | 0.00 | | | |
| East Asia and Pacific (EAP) | | | | | | | | |
| Mean | | | 14.85 | 5.14 | 2.68 | | | |
| Median | | | 9.88 | 1.50 | 0.37 | | | |
| Europe and Central Asia (ECA) | | | | | | | | |
| Mean | | | 4.74 | 1.70 | 1.12 | | | |
| Median | | | 0.26 | 0.17 | 0.09 | | | |
| Latin America and Caribbean (LAC) | | | | | | | | |
| Mean | | | 10.02 | 4.59 | 3.00 | | | |
| Median | | | 4.65 | 2.10 | 1.29 | | | |
| Middle East and North Africa (MENA) | | | | | | | | |
| Mean | | | 4.76 | 1.79 | 1.02 | | | |
| Median | | | 1.99 | 0.40 | 0.12 | | | |
| South Asia (SA) | | | | | | | | |
| Mean | | | 10.14 | 1.95 | 0.58 | | | |
| Median | | | 8.30 | 1.18 | 0.32 | | | |
| Sub-Saharan Africa (SSA) | | | | | | | | |
| Mean | | | 41.86 | 16.40 | 8.59 | | | |
| Median | | | 40.23 | 14.13 | 5.97 | | | |
| Least Developed Countries (LDCs) | | | | | | | | |
| Mean | | | 44.92 | 17.86 | 9.51 | | | |
| Median | | | 46.76 | 15.29 | 7.17 | | | |

Notes: The data source is POVCALNET (World Bank, 2016). The poverty line «\$1.90» is a daily poverty line in 2011 PPP \$. All high income or developed countries are excluded from this analysis, since almost all the countries, with the

exception of Greece, have a headcount poverty rate close to 1% (with an average poverty rate of 0.6%). The table provides information on 123 developing countries. For China, India and Indonesia, the poverty rates for rural and urban areas are provided while, In the case of Argentina, the data is available for urban areas only.

*Least Developed Countries (LDCs) for which data are available. There are no data for the other LDCs, namely, Afghanistan, Bangladesh, Cambodia, Equatorial Guinea, Eritrea, Lao People's Democratic Republic, Myanmar, Somalia, South Sudan, Tuvalu and Yemen. However, several of these missing countries had data for an assessment based on 1.25 2005 PPP \$ data, which we shall subsequently use for analyzing the LDCs, 29 countries of which receive in-depth analysis because they have more than one year of data for assessing progress on poverty from the 1990s.

Table A2: Poverty Measures, Income and Inequality (Gini index) for Least Developed Countries (LDCs)

| Country | Year | Head-count (%) | Pov. Gap (%) | Squared pov. gap | Mean Income | Gini index |
|--------------|------|----------------|--------------|------------------|-------------|------------|
| Angola | 2000 | 54.31 | 29.94 | 20.52 | 62.92 | 58.64 |
| Angola | 2009 | 43.37 | 16.45 | 8.16 | 59.84 | 42.66 |
| Bangladesh | 1984 | 60.57 | 17.91 | 7.31 | 38.16 | 25.88 |
| Bangladesh | 1986 | 55.27 | 14.92 | 5.44 | 41.79 | 26.92 |
| Bangladesh | 1989 | 66.69 | 21.56 | 9.09 | 36.99 | 28.85 |
| Bangladesh | 1992 | 70.22 | 23.82 | 10.45 | 34.49 | 27.60 |
| Bangladesh | 1996 | 60.55 | 19.27 | 8.00 | 41.88 | 32.98 |
| Bangladesh | 2000 | 58.59 | 18.61 | 7.59 | 43.27 | 33.46 |
| Bangladesh | 2005 | 50.47 | 14.17 | 5.20 | 48.27 | 33.22 |
| Bangladesh | 2010 | 43.25 | 11.17 | 3.84 | 51.67 | 32.12 |
| Bhutan | 2003 | 26.23 | 6.98 | 2.44 | 95.26 | 46.83 |
| Bhutan | 2007 | 10.22 | 1.81 | 0.46 | 113.49 | 38.06 |
| Bhutan | 2012 | 1.66 | 0.26 | 0.08 | 165.09 | 38.73 |
| Burkina Faso | 1994 | 71.17 | 34.72 | 20.23 | 40.80 | 50.71 |
| Burkina Faso | 1998 | 70.03 | 30.18 | 16.09 | 41.70 | 46.85 |
| Burkina Faso | 2003 | 56.54 | 20.27 | 9.38 | 46.85 | 39.60 |
| Burkina Faso | 2009 | 44.60 | 14.66 | 6.47 | 56.16 | 39.79 |
| Burundi | 1992 | 84.24 | 40.20 | 22.78 | 26.05 | 33.33 |
| Burundi | 1998 | 86.43 | 47.28 | 30.56 | 24.32 | 42.39 |

| Country | Year | Head-count (%) | Pov. Gap (%) | Squared pov. gap | Mean Income | Gini index |
|---------------|------|----------------|--------------|------------------|-------------|------------|
| Burundi | 2006 | 81.32 | 36.39 | 19.10 | 28.96 | 33.27 |
| Cambodia | 1994 | 44.50 | 11.95 | 4.29 | 56.54 | 38.28 |
| Cambodia | 2004 | 37.69 | 10.20 | 3.60 | 67.06 | 41.85 |
| Cambodia | 2007 | 32.23 | 7.68 | 2.38 | 78.13 | 44.37 |
| Cambodia | 2008 | 22.75 | 4.87 | 1.48 | 78.11 | 37.85 |
| Cambodia | 2009 | 18.60 | 3.51 | 0.96 | 80.48 | 36.03 |
| CAR | 1992 | 83.15 | 57.41 | 44.64 | 24.76 | 61.33 |
| CAR | 2003 | 62.43 | 28.30 | 16.14 | 41.78 | 43.57 |
| CAR | 2008 | 62.83 | 31.26 | 19.36 | 51.28 | 56.30 |
| Ethiopia | 1982 | 66.22 | 22.39 | 9.87 | 38.50 | 32.42 |
| Ethiopia | 1995 | 60.52 | 21.23 | 9.74 | 45.35 | 39.96 |
| Ethiopia | 2000 | 55.58 | 16.21 | 6.48 | 42.71 | 30.00 |
| Ethiopia | 2005 | 38.96 | 9.60 | 3.28 | 51.40 | 29.83 |
| Ethiopia | 2011 | 30.65 | 8.19 | 3.05 | 60.68 | 33.60 |
| Gambia | 1998 | 65.61 | 33.81 | 21.15 | 42.08 | 50.23 |
| Gambia | 2003 | 33.63 | 11.69 | 5.33 | 81.89 | 47.28 |
| Guinea | 1991 | 92.55 | 63.34 | 48.51 | 14.93 | 46.84 |
| Guinea | 1994 | 63.81 | 29.67 | 17.01 | 41.72 | 44.87 |
| Guinea | 2003 | 56.32 | 21.28 | 10.56 | 46.37 | 40.30 |
| Guinea | 2007 | 43.34 | 14.96 | 6.79 | 56.81 | 39.35 |
| Guinea-Bissau | 1991 | 41.31 | 21.70 | 14.78 | 81.58 | – |
| Guinea-Bissau | 1993 | 52.11 | 20.55 | 10.49 | 56.07 | 47.84 |
| Guinea-Bissau | 2002 | 48.90 | 16.55 | 7.57 | 48.38 | 35.52 |
| Lao PDR | 1992 | 55.68 | 16.24 | 6.22 | 43.30 | 30.43 |
| Lao PDR | 1997 | 49.32 | 14.85 | 6.07 | 49.06 | 34.91 |
| Lao PDR | 2002 | 43.96 | 12.11 | 4.55 | 51.08 | 32.63 |
| Lao PDR | 2008 | 33.88 | 8.95 | 3.33 | 62.93 | 36.74 |
| Lesotho | 1987 | 44.35 | 20.90 | 12.52 | 79.28 | 56.02 |
| Lesotho | 1993 | 56.43 | 30.15 | 19.50 | 62.35 | 57.94 |
| Lesotho | 1994 | 46.15 | 25.64 | 17.55 | 98.43 | 63.16 |
| Lesotho | 2003 | 43.41 | 20.76 | 12.81 | 72.38 | 52.50 |
| Madagascar | 1980 | 85.89 | 50.52 | 34.15 | 24.05 | 46.85 |
| Madagascar | 1993 | 72.49 | 34.80 | 20.53 | 36.31 | 46.12 |

| Country | Year | Head-count (%) | Pov. Gap (%) | Squared pov. gap | Mean Income | Gini index |
|------------|------|----------------|--------------|------------------|-------------|------------|
| Madagascar | 1997 | 72.04 | 32.80 | 18.70 | 33.53 | 39.16 |
| Madagascar | 1999 | 82.32 | 44.25 | 27.96 | 26.31 | 41.81 |
| Madagascar | 2001 | 76.34 | 41.37 | 26.41 | 31.63 | 47.47 |
| Madagascar | 2005 | 67.83 | 26.52 | 13.23 | 44.82 | 47.24 |
| Madagascar | 2010 | 81.29 | 43.26 | 27.28 | 28.02 | 44.11 |
| Malawi | 1998 | 83.07 | 45.96 | 29.62 | 29.51 | 50.31 |
| Malawi | 2004 | 73.86 | 32.31 | 17.39 | 34.12 | 39.02 |
| Malawi | 2010 | 61.64 | 26.18 | 14.08 | 44.07 | 43.91 |
| Mali | 1994 | 86.08 | 53.09 | 37.07 | 23.90 | 50.56 |
| Mali | 2001 | 61.18 | 25.78 | 13.72 | 41.60 | 40.01 |
| Mali | 2006 | 51.43 | 18.79 | 8.98 | 49.13 | 38.99 |
| Mali | 2010 | 50.43 | 16.36 | 6.97 | 46.44 | 33.02 |
| Mauritania | 1987 | 41.32 | 17.99 | 10.49 | 60.98 | 43.94 |
| Mauritania | 1993 | 42.79 | 14.44 | 6.66 | 70.86 | 50.05 |
| Mauritania | 1996 | 23.40 | 7.06 | 3.10 | 78.65 | 37.29 |
| Mauritania | 2000 | 21.16 | 5.66 | 2.03 | 88.33 | 39.04 |
| Mauritania | 2004 | 25.41 | 6.95 | 2.75 | 80.45 | 41.26 |
| Mauritania | 2008 | 23.43 | 6.79 | 2.83 | 84.37 | 40.46 |
| Mozambique | 1996 | 80.59 | 41.16 | 25.05 | 30.00 | 44.49 |
| Mozambique | 2003 | 74.69 | 35.40 | 20.48 | 36.58 | 47.11 |
| Mozambique | 2008 | 59.58 | 25.13 | 13.69 | 46.53 | 45.66 |
| Nepal | 1985 | 78.15 | 31.14 | 15.23 | 30.71 | 30.06 |
| Nepal | 1996 | 67.97 | 25.56 | 12.24 | 37.53 | 35.23 |
| Nepal | 2003 | 53.13 | 18.39 | 8.10 | 53.96 | 43.83 |
| Nepal | 2010 | 24.82 | 5.55 | 1.76 | 68.06 | 32.82 |
| Niger | 1992 | 72.79 | 29.66 | 15.26 | 34.45 | 36.10 |
| Niger | 1994 | 78.17 | 38.57 | 22.95 | 30.38 | 41.53 |
| Niger | 2005 | 65.88 | 28.08 | 15.12 | 41.46 | 43.89 |
| Niger | 2008 | 43.62 | 12.42 | 4.71 | 52.78 | 34.55 |
| Rwanda | 1985 | 63.33 | 19.71 | 7.87 | 38.88 | 28.90 |
| Rwanda | 2000 | 74.56 | 36.85 | 22.00 | 38.64 | 51.51 |
| Rwanda | 2006 | 72.10 | 34.82 | 20.47 | 42.28 | 53.09 |
| Rwanda | 2011 | 63.17 | 26.64 | 14.04 | 50.15 | 50.82 |

CHAPTER 4: GOAL 1. GOAL I OF THE SUSTAINABLE DEVELOPMENT GOALS (SDG1)

| Country | Year | Head-count (%) | Pov. Gap (%) | Squared pov. gap | Mean Income | Gini index |
|--------------|------|----------------|--------------|------------------|-------------|------------|
| Senegal | 1991 | 65.81 | 34.32 | 21.83 | 44.92 | 54.14 |
| Senegal | 1994 | 53.64 | 19.21 | 9.09 | 50.09 | 41.44 |
| Senegal | 2001 | 44.19 | 14.34 | 6.18 | 58.55 | 41.25 |
| Senegal | 2005 | 33.50 | 10.80 | 4.67 | 66.86 | 39.19 |
| Senegal | 2011 | 29.61 | 9.13 | 3.77 | 74.36 | 40.30 |
| Sierra Leone | 1990 | 62.79 | 44.81 | 37.38 | 44.53 | – |
| Sierra Leone | 2003 | 53.37 | 20.30 | 9.82 | 51.20 | 42.52 |
| Sierra Leone | 2011 | 51.71 | 16.64 | 7.02 | 47.64 | 35.35 |
| Tanzania | 1992 | 72.59 | 29.68 | 15.49 | 33.08 | 33.83 |
| Tanzania | 2000 | 84.57 | 41.63 | 24.38 | 25.44 | 34.62 |
| Tanzania | 2007 | 67.87 | 28.10 | 14.78 | 36.79 | 37.58 |
| Timor-Leste | 2001 | 52.94 | 19.13 | 8.90 | 49.18 | 39.52 |
| Timor-Leste | 2007 | 37.44 | 8.88 | 2.91 | 55.41 | 31.93 |
| Togo | 2006 | 38.68 | 11.37 | 4.48 | 56.21 | 34.41 |
| Togo | 2011 | 28.22 | 8.81 | 3.68 | 75.78 | 39.29 |
| Uganda | 1989 | 68.65 | 33.18 | 19.93 | 36.78 | 44.36 |
| Uganda | 1992 | 70.01 | 30.33 | 16.56 | 37.88 | 42.62 |
| Uganda | 1996 | 64.39 | 24.80 | 12.12 | 39.80 | 37.13 |
| Uganda | 1999 | 60.49 | 24.52 | 12.78 | 44.95 | 43.07 |
| Uganda | 2002 | 57.37 | 22.67 | 11.51 | 50.20 | 45.77 |
| Uganda | 2006 | 51.53 | 19.11 | 9.13 | 52.68 | 42.62 |
| Uganda | 2009 | 38.01 | 12.21 | 5.37 | 68.31 | 44.30 |
| Yemen, Rep. | 1998 | 12.88 | 3.00 | 1.11 | 90.34 | 33.44 |
| Yemen, Rep. | 2005 | 17.53 | 4.18 | 1.61 | 84.02 | 37.69 |
| Zambia | 1991 | 61.05 | 39.96 | 31.63 | 46.55 | – |
| Zambia | 1993 | 65.27 | 35.56 | 23.72 | 42.06 | 52.61 |
| Zambia | 1996 | 62.07 | 29.49 | 17.59 | 46.07 | 49.79 |
| Zambia | 1998 | 55.67 | 26.94 | 16.54 | 55.50 | 53.44 |
| Zambia | 2003 | 64.60 | 27.13 | 14.45 | 41.07 | 42.08 |
| Zambia | 2004 | 64.29 | 32.76 | 20.76 | 43.11 | 50.74 |
| Zambia | 2006 | 68.51 | 37.02 | 23.92 | 42.40 | 54.63 |
| Zambia | 2010 | 74.45 | 41.91 | 27.71 | 38.80 | 57.49 |

Data source: World Bank, 2014a

Table A3: Latest Headcount Poverty Ratio, Average Income, Initial Gini Index and latest Gini Index for LDCs

| Country | Headcount (Latest year) | Average income (Period) | Initial Gini (year) | Latest Gini (year) |
|---------------|----------------------------|----------------------------|------------------------|-----------------------|
| Angola | 43.37 (2009) | 61.38 (2000-2009) | 58.64 (2000) | 42.66 (2009) |
| Bangladesh | 43.25 (2010) | 42.07 (1992-2010) | 25.88 (1984) | 32.12 (2010) |
| Bhutan | 1.66 (2012) | 124.61 (2003-2012) | 46.83 (2003) | 38.73 (2012) |
| Burkina Faso | 44.6 (2009) | 46.38 (1994-2009) | 50.71(1994) | 39.79 (2009) |
| Burundi | 81.32 (2006) | 26.44 (1992-2006) | 33.33 (1992) | 33.27 (2006) |
| Cambodia | 18.6 (2009) | 72.06 (1994-2009) | 38.28 (1994) | 36.03 (2009) |
| CAR | 62.83 (2008) | 39.27 (1992-2008) | 61.33 (1992) | 56.30 (2008) |
| Ethiopia | 30.65 (2011) | 47.73 (1982-2011) | 32.42 (1982) | 33.60 (2011) |
| Gambia, The | 33.63 (2003) | 61.99 (1998-2003) | 50.23 (1998) | 47.28 (2003) |
| Guinea | 43.34 (2007) | 39.96 (1991-2007) | 46.84 (1991) | 39.35 (2007) |
| Guinea-Bissau | 48.9 (2002) | 62.01 (1991-2002) | 47.84 (1993) | 35.52 (2002) |
| Lao PDR | 33.88 (2008) | 51.59 (1992-2008) | 30.43 (1992) | 36.74 (2008) |
| Lesotho | 43.41 (2003) | 78.11 (1987-2003) | 56.02 (1987) | 52.50 (2003) |
| Madagascar | 81.29 (2010) | 32.10 (1980-2010) | 46.85 (1980) | 44.11 (2011) |
| Malawi | 61.64 (2010) | 35.90 (1998-2010) | 50.31 (1998) | 43.91 (2010) |
| Mali | 50.43 (2010) | 40.27 (1994-2010) | 50.56 (1994) | 33.02 (2010) |
| Mauritania | 23.43 (2008) | 77.27 (1987-2008) | 43.94 (1987) | 40.46 (2008) |
| Mozambique | 59.58 (2008) | 37.70 (1996-2008) | 44.49 (1996) | 45.66 (2008) |
| Nepal | 24.82 (2010) | 47.57 (1985-2010) | 30.06 (1985) | 32.82 (2010) |
| Niger | 43.62 (2008) | 39.77 (1992-2008) | 36.1 (1992) | 34.55 (2008) |
| Rwanda | 63.17 (2011) | 42.49 (1985-2011) | 28.9 (1985) | 50.82 (2011) |
| Senegal | 29.61 (2011) | 58.90 (1991-2011) | 54.14 (1991) | 40.30 (2011) |
| Sierra Leone | 51.71 (2011) | 47.79 (1990-2011) | 44.81 (1990) | 35.35 (2011) |
| Tanzania | 67.87 (2007) | 31.77 (1992-2007) | 33.83 (1992) | 37.58 (2007) |
| Timor-Leste | 37.44 (2007) | 52.30 (2001-2007) | 39.52 (2001) | 31.93 (2007) |
| Togo | 28.22 (2011) | 66.00 (2006-2011) | 34.41 (2006) | 39.29 (2011) |
| Uganda | 38.01 (2009) | 47.23 (1989-2009) | 44.36 (1989) | 44.30 (2009) |
| Yemen, Rep. | 17.53 (2005) | 87.18 (1998-2005) | 33.44 (1998) | 37.69 (2005) |

| Country | Headcount (Latest year) | Average income (Period) | Initial Gini (year) | Latest Gini (year) |
|------------------|----------------------------|----------------------------|------------------------|-----------------------|
| Zambia | 74.45 (2010) | 44.45 (1991-2010) | 52.61 (1993) | 57.49 (2010) |
| | | | | |
| Mean | 44.22 | 53.18 | 42.92 | 40.45 |
| Median | 43.37 (Angola) | 47.57 (Nepal) | 44.36 (Uganda) | 39.29 (Togo) |
| Std. Dev. | 19.40 | 20.35 | 9.67 | 7.09 |

Notes: This table is derived from table A2

**Table A4: LDCs vs. Developing World (DW):
Poverty Rates, Ratios and Growth Rates**

| | | Headcount Pov. Rate (%) | Pov. Gap (%) | Squared Pov. Gap |
|--|----------------|----------------------------|--------------|---------------------|
| 1993 | LDCs | 64.67 | 27.86 | 15.54 |
| | DW | 40.98 | 13.80 | 6.42 |
| | LDCs/DW | 1.58 | 2.02 | 2.42 |
| 2010 | LDCs | 46.89 | 19.06 | 10.43 |
| | DW | 20.78 | 6.35 | 2.95 |
| | LDCs/DW | 2.26 | 3.00 | 3.54 |
| Growth rate (%) (1993-2010) | LDCs | - 27.49 | - 31.59 | - 32.88 |
| | DW | - 49.29 | - 53.99 | - 54.05 |

Notes: Growth rate is computed as the difference in the latest-year and the beginning-year values, divided by beginning-year value, x 100 percent. LDCs/ DW values are in units (computed using data from World Bank, 2014a).

**Table A5: Per Capita GDP of LDCs (1990-2012)
(Data source: World Bank, 2014b)**

| Country | Per Capita GDP (Constant 2005 US\$) | | | | | |
|------------|-------------------------------------|------|------|------|------|------|
| | 1990 | 1995 | 2000 | 2005 | 2010 | 2012 |
| Angola | 1547 | 1045 | 1238 | 1707 | 2577 | 2686 |
| Bangladesh | 270 | 299 | 350 | 421 | 539 | 597 |
| Bhutan | 643 | 808 | 992 | 1259 | 1795 | 2061 |

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| Country | Per Capita GDP (Constant 2005 US\$) | | | | | |
|---------------|-------------------------------------|------|------|------|------|------|
| | 1990 | 1995 | 2000 | 2005 | 2010 | 2012 |
| Burkina Faso | 269 | 285 | 343 | 407 | 457 | 495 |
| Burundi | 218 | 174 | 150 | 144 | 151 | 153 |
| Cambodia | – | 263 | 329 | 471 | 605 | 672 |
| CAR | 377 | 352 | 339 | 341 | 436 | 472 |
| Ethiopia | 141 | 125 | 135 | 160 | 229 | 253 |
| Gambia, The | 425 | 405 | 438 | 434 | 467 | 444 |
| Guinea | 286 | 266 | 289 | 307 | 300 | 308 |
| Guinea-Bissau | 497 | 519 | 416 | 403 | 426 | 397 |
| Lao PDR | 262 | 308 | 375 | 472 | 629 | 707 |
| Lesotho | 511 | 576 | 640 | 711 | 879 | 929 |
| Madagascar | 328 | 277 | 286 | 275 | 275 | 273 |
| Malawi | 189 | 208 | 221 | 213 | 219 | 220 |
| Mali | 330 | 337 | 380 | 444 | 498 | 476 |
| Mauritania | 647 | 656 | 643 | 694 | 785 | 835 |
| Mozambique | 187 | 188 | 236 | 313 | 381 | 417 |
| Nepal | 233 | 264 | 297 | 321 | 376 | 399 |
| Niger | 303 | 266 | 255 | 258 | 276 | 290 |
| Rwanda | 236 | 192 | 211 | 274 | 352 | 390 |
| Senegal | 681 | 651 | 703 | 773 | 800 | 797 |
| Sierra Leone | 366 | 286 | 276 | 318 | 370 | 435 |
| Tanzania | 301 | 280 | 304 | 375 | 452 | 483 |
| Timor-Leste | – | – | 494 | 487 | 641 | 682 |
| Togo | 426 | 378 | 411 | 382 | 393 | 413 |
| Uganda | 198 | 234 | 268 | 314 | 393 | 405 |
| Yemen, Rep. | 666 | 706 | 778 | 832 | 910 | 778 |
| Zambia | 677 | 559 | 562 | 626 | 741 | 798 |
| | | | | | | |
| Mean | 415 | 390 | 426 | 487 | 598 | 630 |
| Median | 328 | 293 | 343 | 403 | 452 | 472 |

Table A6: Income and Inequality Elasticities

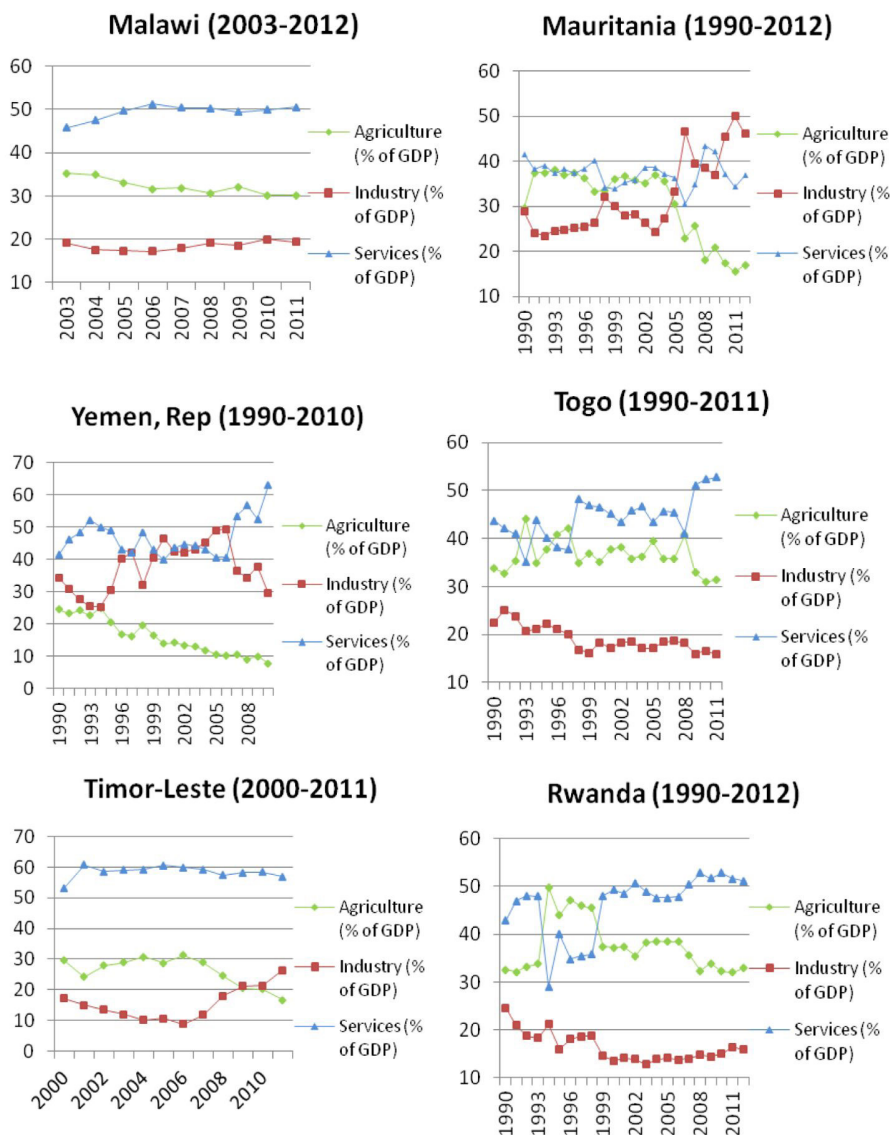
| Country | Income elasticity (EY) | Inequality elasticity (EG) |
|---------------|------------------------|----------------------------|
| Angola | – 0.99 | 0.85 |
| Bangladesh | – 2.38 | 2.79 |
| Bhutan | – 2.45 | 3.62 |
| Burkina Faso | – 0.96 | 0.61 |
| Burundi | – 1.18 | 0.59 |
| Cambodia | – 2.19 | 2.85 |
| CAR | – 0.30 | – 0.54* |
| Ethiopia | – 2.03 | 2.32 |
| Gambia, The | – 1.36 | 1.44 |
| Guinea | – 0.94 | 0.49 |
| Guinea-Bissau | – 0.88 | 0.57 |
| Lao PDR | – 2.28 | 2.76 |
| Lesotho | – 1.42 | 1.68 |
| Madagascar | – 0.65 | – 0.12* |
| Malawi | – 0.63 | – 0.07* |
| Mali | – 0.77 | 0.23 |
| Mauritania | – 1.97 | 2.53 |
| Mozambique | – 0.98 | 0.52 |
| Nepal | – 2.20 | 2.59 |
| Niger | – 1.54 | 1.43 |
| Rwanda | – 2.14 | 2.42 |
| Senegal | – 1.12 | 1.03 |
| Sierra Leone | – 1.40 | 1.33 |
| Tanzania | – 1.39 | 1.14 |
| Timor-Leste | – 1.69 | 1.85 |
| Togo | – 2.32 | 2.99 |
| Uganda | – 1.29 | 1.15 |
| Yemen, Rep. | – 2.76 | 3.86 |
| Zambia | – 1.32 | 1.15 |

Notes: The elasticities are calculated using the following equations:

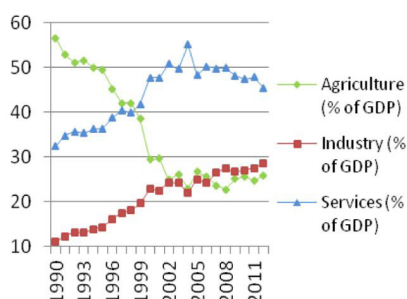
$E_y = -9.76 + 2.31 G^I + 1.33 Z/Y$ and $E_g = 14.39 - 3.65 G^I - 2.75 Z/Y$, where G^I is the initial Gini coefficient, Z/Y is the ratio of the poverty line Z to income

Y , where the coefficients are estimated based on GMM regression analysis (for details see Fosu, 2011). Values marked * are perverse and generally result from cases where the poverty line exceeds the mean income, but are admissible (see Fosu, 2011, 2015).

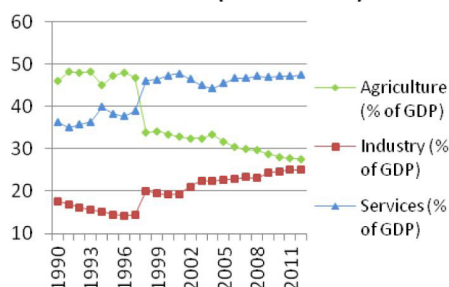
Figure A1: Contributions to GDP by Sectors
(Data Source: World Bank, 2014b)



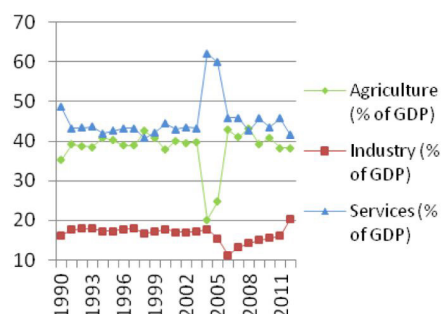
Uganda (1990-2012)



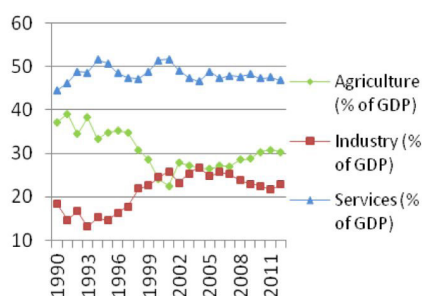
Tanzania (1990-2012)



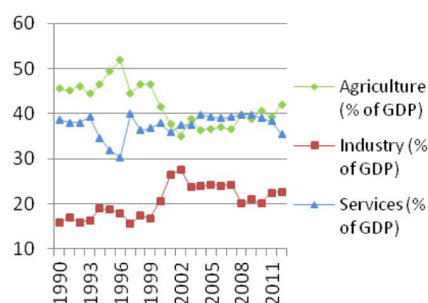
Niger (1990-2012)



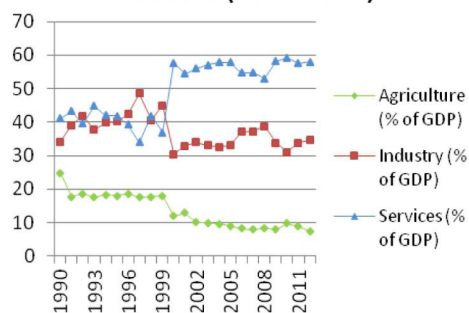
Mozambique (1990-2012)

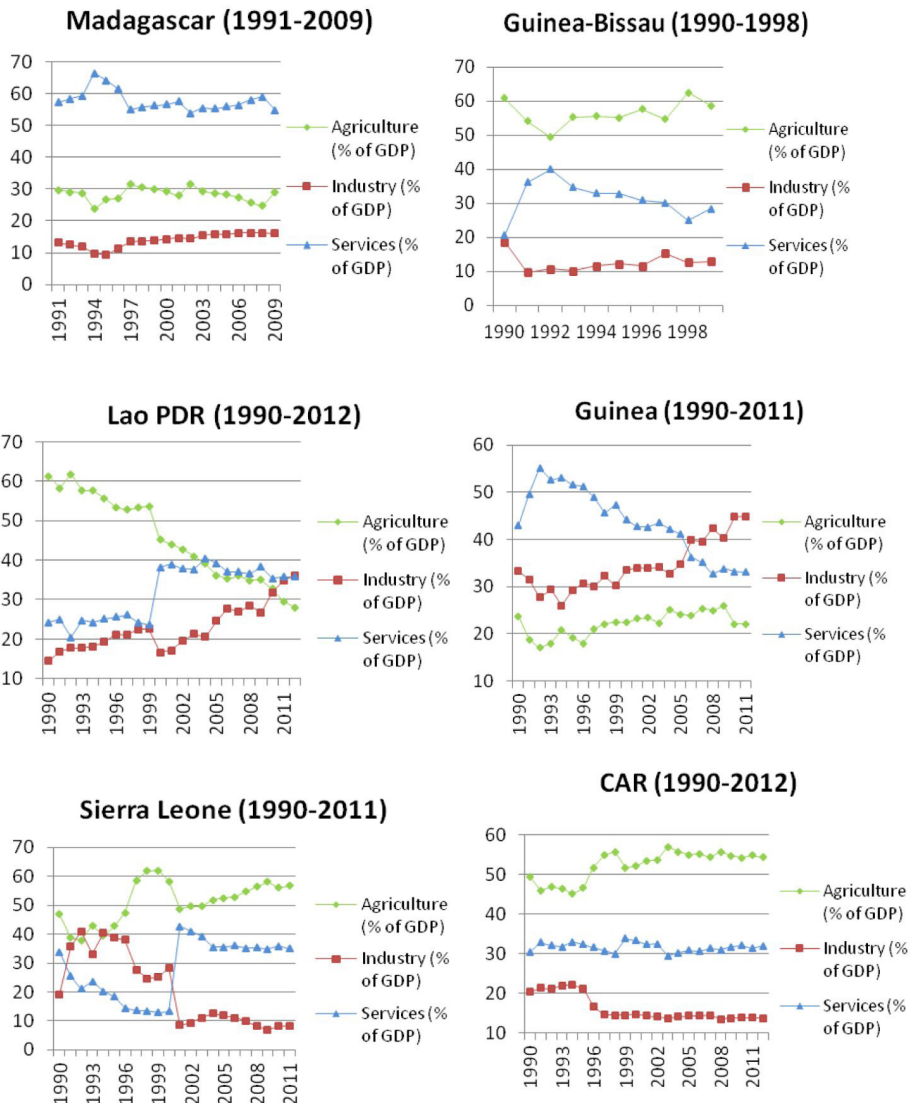


Mali (1990-2012)

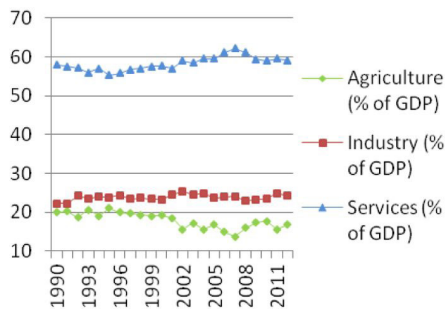


Lesotho (1990-2012)

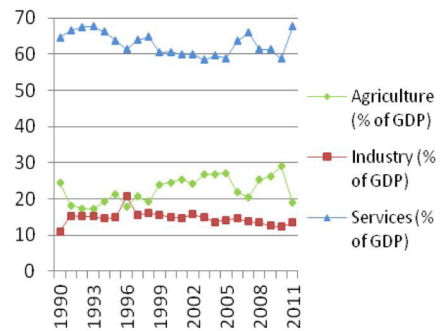




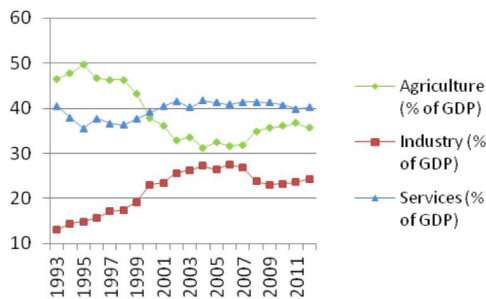
Senegal (1990-2012)



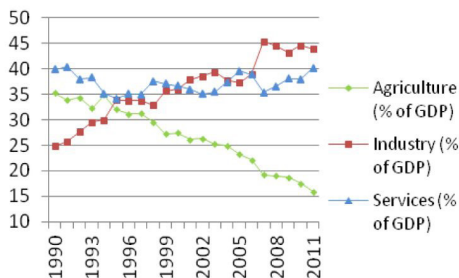
Gambia (1990-2011)



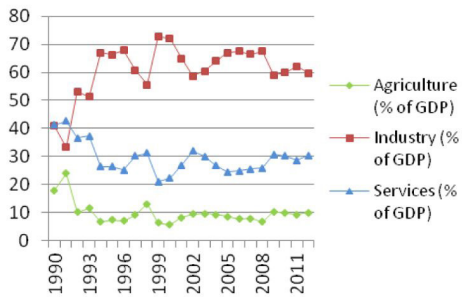
Cambodia (1993-2012)



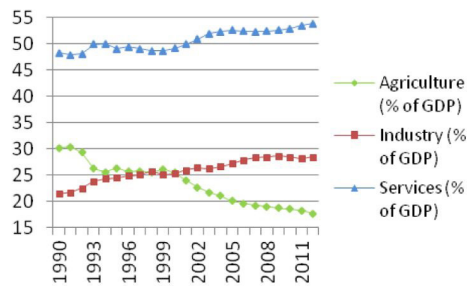
Bhutan (1990-2011)



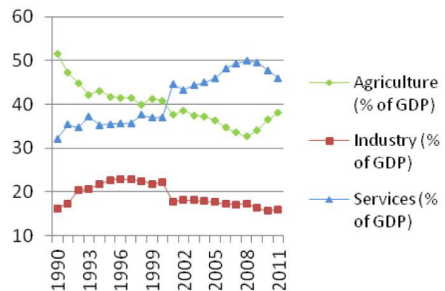
Angola (1990-2012)



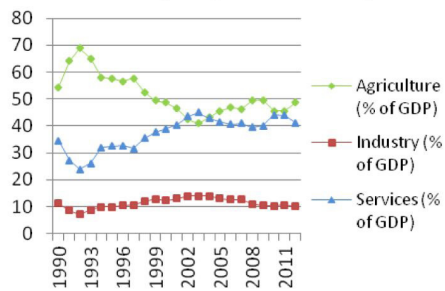
Bangladesh (1990-2012)

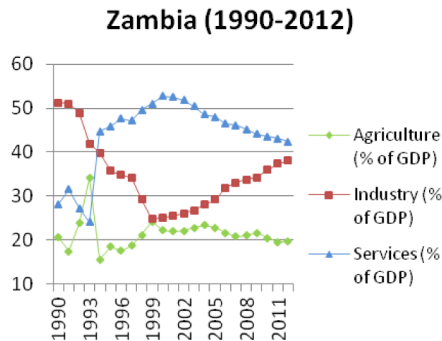
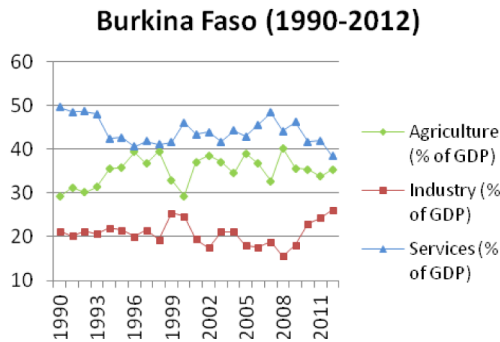
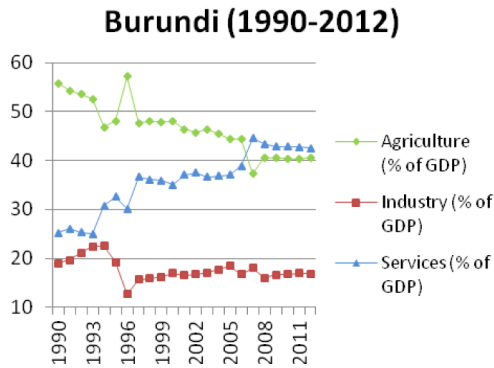


Nepal (1990-2011)



Ethiopia (1990-2012)





Chapter 5: goal 2

Getting to zero hunger: learning form the MDGs for the SDGs¹

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SUMMARY: 1. INTRODUCTION. 2. GLOBAL TRENDS IN PROGRESS TOWARD REDUCING HUNGER AND MALNUTRITION 1990-2015. 3. SUSTAINABLE DEVELOPMENT GOALS–NEW TARGETS AND CHALLENGES. 4. A FOOD SYSTEMS APPROACH TOWARDS ACHIEVING THE SDGS. 5. SMALL PRODUCER PRODUCTIVITY IN FOOD SYSTEMS. 6. POLICY OPTIONS BY STAGE OF STRUCTURAL TRANSFORMATION. 7. LOW PRODUCTIVE AGRICULTURAL SYSTEMS. 8. MODERNIZING AGRICULTURAL SYSTEMS. 9. COMPLEMENTARY POLICIES TO

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PROMOTE SUSTAINABLE FOOD SYSTEMS. 10. CONCLUSION.
REFERENCES.

ABSTRACT:

The first systematic global attempts to monitor progress toward hunger reduction were benchmarked by the World Food Summit (WFS) goals and the Millennium Development Goals (MDGs) frameworks. While the WFS pledged to halve the «absolute number» of undernourished, the MDGs aimed to halve the «prevalence» of undernourished by 2015. The MDG targets were largely met, but the WFS goal of halving absolute numbers of hungry missed its target. These two initiatives, however played a crucial role in shaping global thinking and action around poverty and hunger paving the way for a bolder and comprehensive Sustainable Development Goals (SDGs). In this chapter we argue that the major challenges for achieving SDG– Goal 2 of ending hunger globally is tackling regional disparity in development and also tackling issues of hidden hunger in the form of micro nutrient deficiencies. We state that a more holistic food systems approach is needed, focused on small producer agricultural development and a departure from a cereal based system to a more diversified food system, which promotes traditional staples. We also highlight the need for interventions such as bio-fortification and promotion of kitchen gardens along with behavior change, water and sanitation and gender empowerment to complement agriculture growth centered pathway to better nutritional status.

1. INTRODUCTION

The green revolution in the 1960s was a major technological advancement that significantly enhanced global food supply despite increasing population and decreasing availability of arable. Despite ushering in agricultural development and increasing food grain production, the issue of malnutrition and hunger persisted across developing and under developed countries (P. Pingali, Ricketts, & Sahn, 2015). The first systematic global push to address the issues of extreme hunger and poverty began from the 1990s, first with the World Food Summit (WFS) goals of 1996 and then the Millennium Development Goals (MDGs) in 2001. The targets set by these two initiatives were different. The WFS goals aimed to halve the «number» of undernourished people globally by 2015, while the MDGs targeted to halve the «percentage» of hungry people by the same year. Now, having reached the end date of these two initiatives, the global community convinced of the need for multilateral joint efforts have launched the Sustainable Development

Goals (SDGs) with the aim to «end poverty, protect the planet, and ensure prosperity for all»². The second goal of the 17 SDGs is to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture, taking up where the WFS and MDGs left off.

In this chapter, we try to assess the performance of the WFS and MDGs in tackling the issue of global hunger and poverty, identify the remaining challenges the SDGs would have to target in this fight and evaluate the important lessons from previous experiences that will inform measures to achieve the SDGs. Understanding the experiences of these previous initiatives can help inform and guide approaches towards achieving the SDGs. In the three parts of this chapter, the first part looks at the performance the WFS and MDG, whether they have achieved their goals and what it means. In the second part, we look at the specific characteristics of the second goal of the SDGs and what the relevant lessons from the MDGs and WFS are in our attempt to fight hunger and poverty. In the concluding part, we discuss the importance of taking up a «food systems approach» to tackling hunger and poverty, where agricultural growth and nutrition targets need to be achieved through context specific policy interventions.

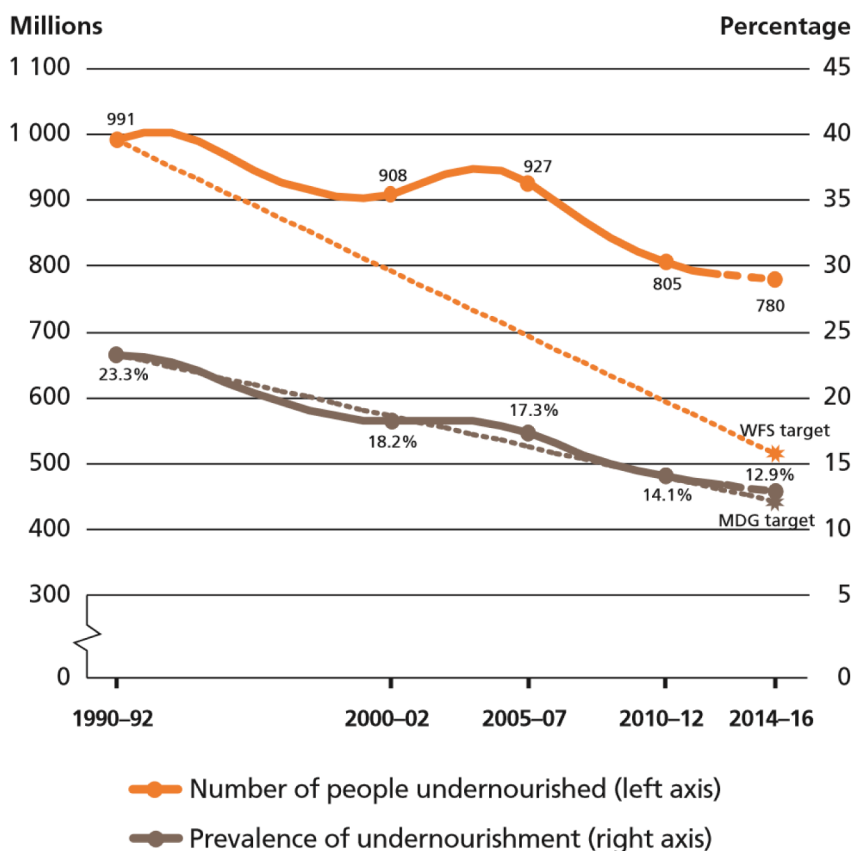
2. GLOBAL TRENDS IN PROGRESS TOWARD REDUCING HUNGER AND MALNUTRITION 1990-2015

The first systematic global attempts to monitor progress toward hunger reduction through two internationally agreed benchmarks came about with the World Food Summit (WFS) goals and the Millennium Development Goals (MDGs) framework. The World Food Summit took place in Rome in 1996 with representatives from 182 nations pledging, «to eradicate hunger in all countries, with an immediate view to reducing the absolute number of undernourished people to half their present level no later than 2015». The number of undernourished are those who fall below the minimum level of dietary consumption for a given country and year. Five years later in 2001, the United Nations (UN) as part of its Millennium Development Goals (MDGs) framework established a second benchmark, by representatives of 189 nations to fight extreme poverty in its many dimensions. Under this declaration, countries pledged «to halve, by the year 2015, the proportion of the world's people whose income is less than one dollar a day and the proportion of people who suffer from hunger». This became the first of the eight MDGs and central to this goal

2. <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

was the target of halving the prevalence of undernourished (PoU), or the proportion of people below the minimum level of dietary consumption, between 1990 and 2015 (MDG 1c).

As the timeframe for achieving the international benchmarks ended in 2015, we look at three pertinent issues to evaluate the performance of the WFS goals and the MDGs in achieving their targets. First, the issue of metrics with regards to reduction in terms of prevalence and absolute numbers of the hungry. Second the issue of uneven progress, where inter country and intra country inequalities are considered and third the issue of micro-nutrient security along with calorific security. Prevalence and absolute numbers as a measure of achievement can show two different pictures. A reduction in prevalence is an important measure to show progress toward hunger reduction, but at a global level runs the risk of overstating the achievements of individual countries with higher population growth (P. Pingali, 2016). FAO reported that 795 million people in the world remain undernourished, which means that one in nine people on average suffer from insufficient calorie intake. Of this total, 780 million people (98 percent) live in developing regions. However, developing regions as a whole came extremely close to reaching the MDG 1c hunger target. The prevalence of undernourished people in developing countries dropped from 23.3 percent in 1990-1992 to 12.9 percent in 2014-2016, missing MDG 1c by less than one percentage point (figure 1). The WFS goal of halving the absolute numbers, on the other hand, has been missed by a much larger margin. In 1990-92, a little less than one billion people in developing countries were undernourished. Reducing this number by half would have required bringing it down to 515 million, about 265 million fewer people than the current estimate of 780 million. Thus, absolute progress toward hunger reduction was much lower than relative progress achieved. This is not surprising given the rapid population growth observed in developing regions during the 25-year reference period.

Figure 1: Targets and achievements of the MDGs and WFS goals

Note: Data for 2014–16 refer to provisional estimates.

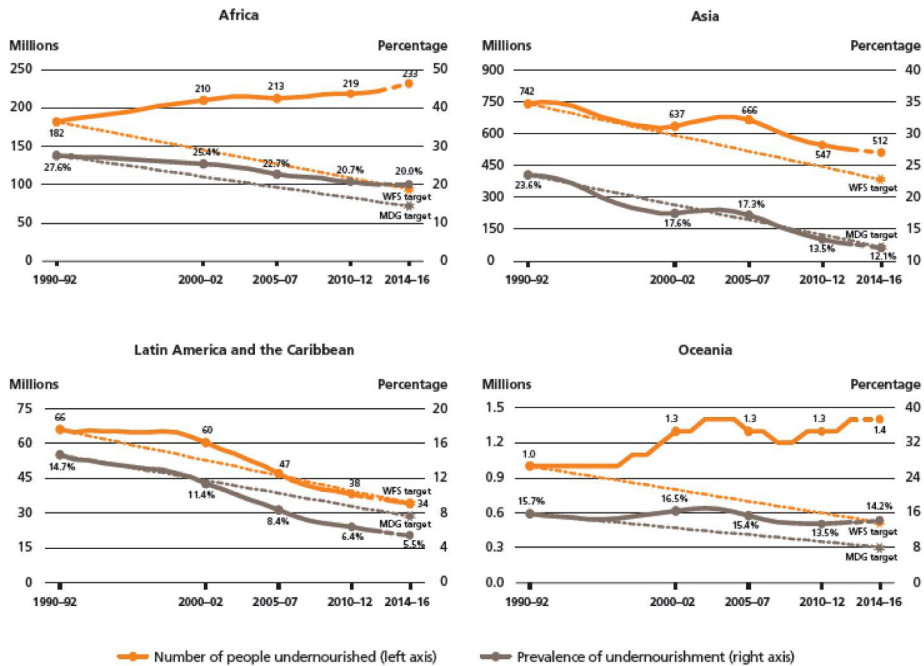
Source: The State of Food Insecurity in the World 2015– FAO

<http://www.fao.org/3/a-i4646e.pdf>

Progress toward hunger reduction has been uneven both between and within regions. Figure 2 show the progress of various regions in achieving the MDGs and WFS goals. Africa as a whole, but particularly sub-Saharan Africa, fell short of achieving MDG 1c. Northern Africa, however, was able to meet the MDG 1c target by maintaining an overall PoU below five percent since 1990. While the overall hunger rate in Africa declined over the reference period, albeit slowly, the total number of undernourished people increased by about 51 million people, nearly 28 percent, due to the

region's high population growth rate. Consequently, the more ambitious WFS goal remained well out of reach for Africa and all its sub-regions.

Figure 2: Progress of selected regions in achieving MDG and WFS goals– 1990-2000



Note: Data for 2014-16 refer to provisional estimates.

Source: The State of Food Insecurity in the World 2015– FAO

<http://www.fao.org/3/a-i4646e.pdf>

Asia as a region has achieved MDG 1c, but missed the WFS goal by a shortfall of 140 million undernourished people. Most of this progress was achieved in three sub-regions – Caucasus and Central Asia, South-Eastern Asia and Eastern Asia³ – primarily due to rapid economic growth over the past two decades. Southern Asia also achieved progress, but the pace has been too slow to meet both international benchmarks. Western Asia

3. According to the UN, «China alone accounts for almost two thirds of the total reduction in the number of undernourished people in the developing regions since 1990.»

is the only sub-region that experienced an increase in the PoU, despite a relatively low number of undernourished people. Political instability, civil unrest and the growing number of refugees in this particular sub-region contributed to an increase in the number of undernourished, from 8 million to 19 million people, and a 32 percent rise in the PoU, from 6.4 to 8.4 percent, over the reference period (FAO, IFAD, & WFP, 2015).

When considered together, Latin America and the Caribbean met both international benchmarks. Much of this success was driven by Latin America, which achieved remarkable progress over the reference period, reducing the number of undernourished from 58 million to fewer than 27 million people and the PoU from 13.9 to less than 5 percent. However, progress was disproportionate between sub-regions of Latin America, with Central America lagging far behind South America and failing to meet both benchmarks. Like Central America, the Caribbean also fell short of reaching both MDG 1c and the WFS goal, though the total remaining hunger burden is far lower and therefore more manageable.

The pace of hunger reduction in Oceania was too slow to achieve both MDG 1c and the WFS goal. Similar to Africa, the hunger rate in Oceania dropped slightly, but the total number of undernourished increased by 4 million people, more than 50 percent, over the reference period. Apart from rapid population growth, this trend is primarily due to a heavy reliance on food imports by the small islands that comprise most of the region. Furthermore, natural and human-caused disasters in this region often result in volatile prices and erratic changes in the availability of food staples, which hamper food security.

Significant shifts in the global distribution of hunger have occurred since 1990 as a result of the varied rates of progress in hunger reduction across regions. Southern Asia and sub-Saharan Africa now account for the first and second largest share of global undernourishment, at 35.4 percent and 27.7 percent, respectively. Eastern Asia accounts for the third largest share of global undernourishment, even though its share decreased from 29.2 percent in 1990-1992 to 18.3 percent in 2014-2016. Sixty five percent of the world's undernourished people live in only six countries – India, China, Pakistan, Ethiopia, Bangladesh and Indonesia – nearly all of which fall within the three regions where the hunger burden is greatest (FAO et al., 2015).

The MDG and WFS goals on hunger reduction have focused on caloric security and not proportionally enough on micro nutrient deficiencies that manifests as hidden hunger. The biggest impact of this has been on child and maternal nutrition in developing countries. According the World

Health Organization (WHO), 50% of pregnant women in developing countries are anemic and contributes to 20% of all maternal deaths. With regard to child health, although there has been a reduction in prevalence of stunting (child too short for his/her age) globally from 39.6% to 23.8%, the absolute numbers have not shown a quick enough decrease. Between 1990 and 2014, although the number of stunted children declined from 225 million to 159 million globally, Africa and Oceania saw a 23% and 67% increase in the number of stunted children respectively during the same period. Therefore, the regional disparity also ranges with reference to hidden hunger.

Although sometimes the achievements of the MDGs in the reduction of hunger are overstated, there is evidence to show that there has been a reduction in the number of hungry the world over. However, the major challenges have been about regional disparity and micro nutrient deficiency. One of the crucial contributions of MDGs as an initiative is that it has helped shape global thinking and action around poverty and hunger. Therefore, the relevance of global initiatives and commitment are still high. The SDGs in this regard is a good opportunity to taken on the task of addressing global hunger and poverty where the MDGs left of. In the next section, we look at the key features of SDG with special reference to the second goal hunger, nutrition and sustainable agriculture.

3. SUSTAINABLE DEVELOPMENT GOALS– NEW TARGETS AND CHALLENGES

In 2015, member states of the United Nations approved the 2030 Agenda for Sustainable Development that were to be achieved through 17 Sustainable Development Goals (SDGs). These goals aim «to build on the work of the MDGs and complete what they did not achieve»⁴. The 17 goals of the SDG have 169 targets, which has been designed to take a holistic approach to address the social, economic and environmental aspects of sustainable development. Goal 2 of the SDGs aims to end hunger, end all forms of malnutrition, double agricultural productivity and incomes of small-scale farmers and ensure an environmentally sustainable food production system and main genetic diversity of seeds and cultivated plants. It is explicit in its aim of tackling malnutrition, which was absent in the framing of the MDGs. It also gives an added

4. United Nations (2015) *Transforming Our World: The 2030 Agenda for Sustainable Development*. Resolution adopted by the General Assembly on 25 September 2015 (A/RES/70/1) (United Nations General Assembly, New York).

emphasis on sustainable food systems focusing on environmental issues and genetic diversity.

Goal 2: Zero Hunger

End hunger, achieve food security and improve nutrition and promote sustainable agriculture

TARGETS

2.1

By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

2.2

By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

2.3

By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

2.4

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

2.5

By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the

utilization of genetic resources and associated traditional knowledge, as internationally agreed

2.a

Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

2.b

Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round

2.c

Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

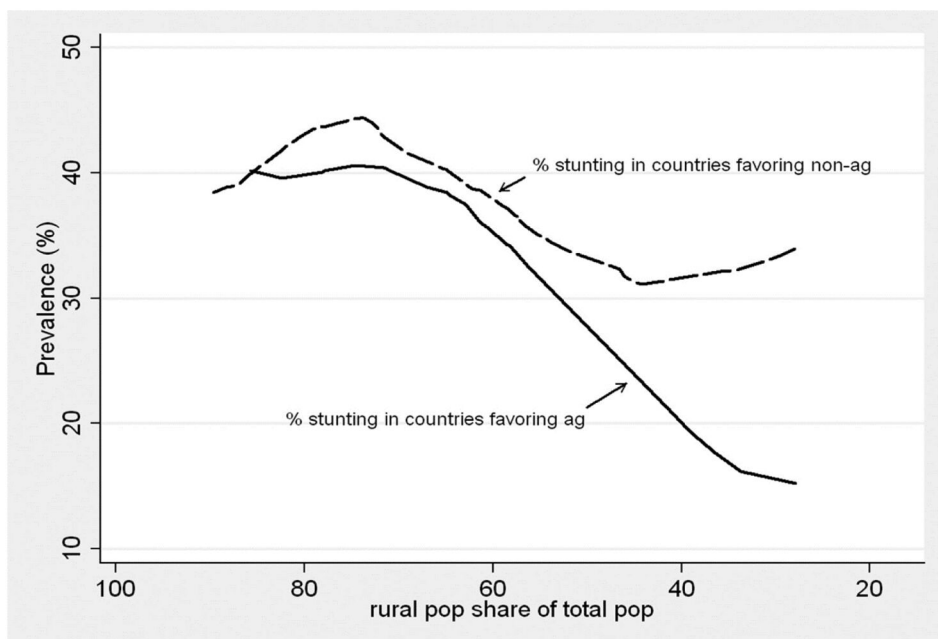
Source: Sustainable Development Knowledge Platform

<https://sustainabledevelopment.un.org/sdg2>

Having set comprehensive goals to tackle hunger and malnutrition through the SDGs, the approaches to achieving these goals by the 2030 becomes important to spell out. Although there has been great strides towards hunger reduction in the past 25 years due to production increases of the green revolution and MDG focused drives, malnutrition remains, as discussed above micro nutrient deficiencies are stubbornly high and inter and intra-regional inequalities in reducing hunger and poverty persist. Therefore, the challenges in the way of achieving the SDGs remain high. What is acknowledged in the SDG approach is that promoting growth and development in the agricultural sector is crucial to improving food security and nutritional status in developing countries. Agricultural policy with a smallholder focus to promote agricultural growth becomes central to achieving the SDG hunger goals. There is ample evidence to show that agricultural policy and nutritional outcomes are inextricably linked. Webb and Block (2012)

show that countries that proactively support agricultural development witness a substantial drop in the incidence in child stunting as opposed to countries that choose not to follow an agriculture lead growth strategy (figure 3).

Figure 3: Effect of policy support for agriculture versus non-agriculture on the prevalence of child stunting



Source: Webb & Block, 2012

Evidence of investments in agriculture and its impact on poverty reduction and improved nutrition outcomes is strong. A study by IFPRI shows that if investments in public agricultural research doubled from US\$5 to US\$10 billion from 2008 to 2013, agricultural output would increase significantly and millions of people would emerge from poverty. If these R&D investments are targeted at the poor regions of the world – Sub-Saharan Africa and South Asia – overall agricultural output growth would increase by 1.1 percentage points a year and lift about 282 million people out of poverty by 2020.

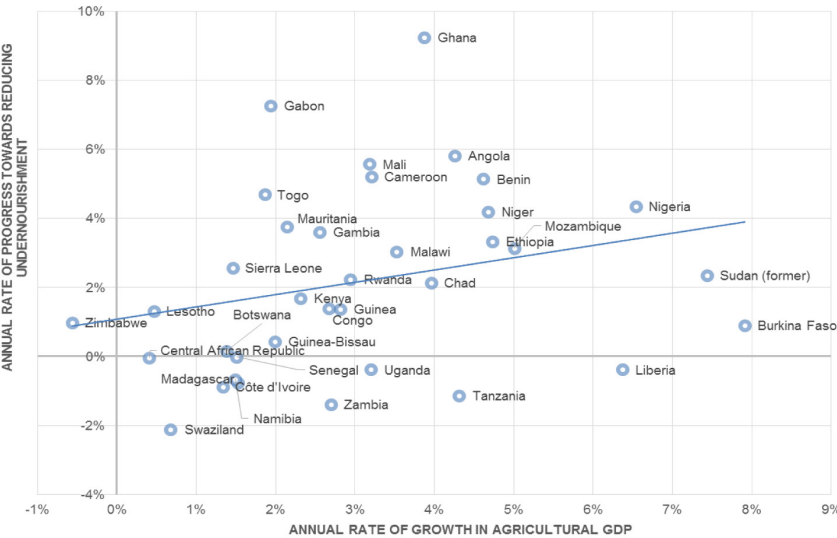
Table 1: Agricultural Investment and poverty reduction

| | R&D allocation (millions of 2005 US\$) | | Agricultural output growth (% points) | Change in number of poor (millions) |
|----------------------------|---|--------------|---|---|
| Region | 2008 | 2013 | 2008-2020 | 2008-2020 |
| sub-Saharan Africa | 608 | 2,913 | 2.75 | – 143.8 |
| South Asia | 908 | 3,111 | 2.40 | – 124.6 |
| Southeast/ East Asia | 1,956 | 2,323 | 0.69 | – 13.4 |
| West Asia and North Africa | 546 | 614 | 0.23 | – 0.2 |
| Latin America | 957 | 990 | 0.07 | – 0.2 |
| Total | 4,975 | 9,951 | 1.11 | – 282.1 |

Source: von Braun et al., 2008

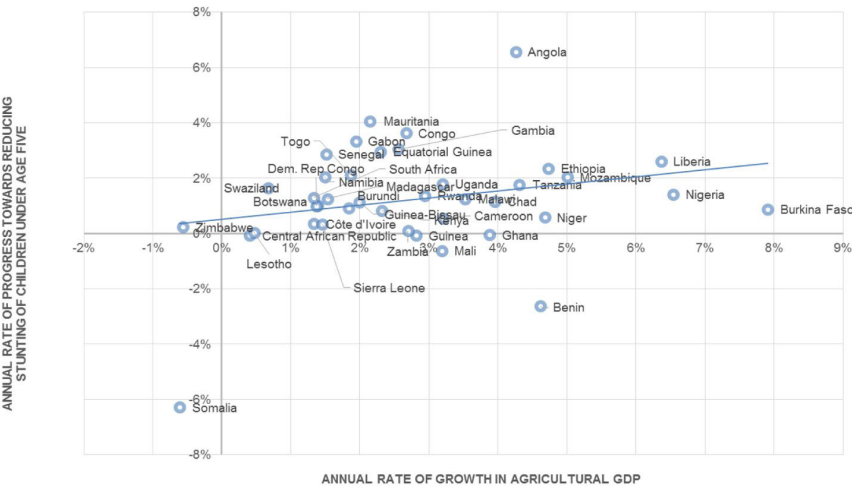
The Food and Agricultural Organization (FAO) data also shows a strong connection between agriculture output increases on malnutrition (figure 4), micronutrient deficiency reflected in reduced instances of stunting (figure 5) and overall reduction in child mortality (figure 6) in Sub Saharan Africa (SSA). In other regions too, when there is support for sustaining agricultural development through small producer targeted policies, food affordability has led to decline in stunting and wasting (Webb & Block, 2012).

Figure 4 Agricultural Growth and the reduction in hunger prevalence in Sub-Saharan Africa



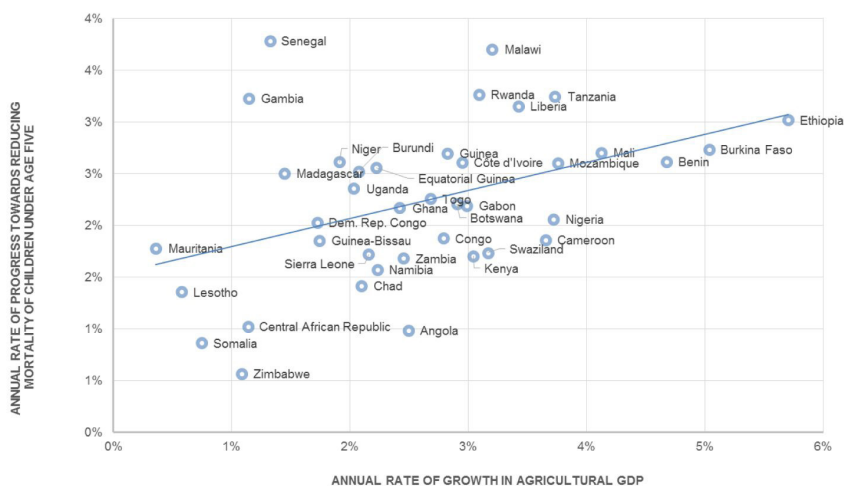
Source: Authors' analysis using FAO data

Figure 5: Agricultural Growth and the reduction in prevalence of child stunting in Sub-Saharan Africa



Source: Authors' analysis using FAO data

Figure 6: Agricultural Growth and the reduction in prevalence of child mortality in Sub-Saharan Africa



Source: Authors' analysis using FAO data

From figures 4-6 we see a strong relation between agricultural productivity and undernourishment, stunting and child mortality. Countries with low agricultural productivity have consistently performed poorly in all three indicators, while countries that invested in agricultural growth have performed better. Achieving the SDGs is mammoth task that requires interventions at multiple levels of policy, aid and implementation as malnutrition, micronutrient deficiency incidences and inter regional inequalities are large. Inclusive growth with a focus of agricultural development is the obvious way to go forward as agricultural development outcomes on nutrition are strikingly relevant. In order to understand how we need to approach agricultural development to have an impact on hunger and poverty, the next section looks at policy options and approaches may help transform food systems towards achieving these goals.

4. A FOOD SYSTEMS APPROACH TOWARDS ACHIEVING THE SDGS

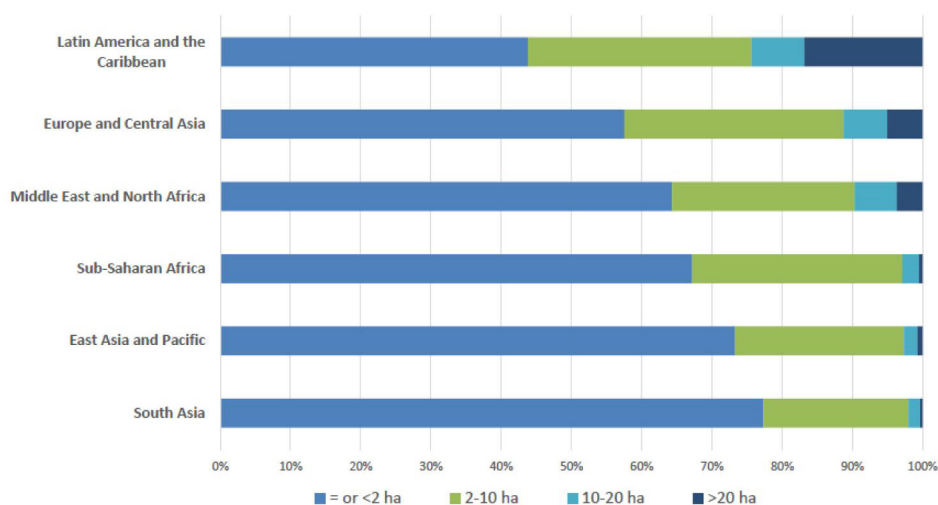
Taking the cue from the limitations of the MDGs, the framing of the SDGs have been more comprehensive in its approach towards hunger and poverty. Therefore measures to address the goals of eradicating

malnutrition including micro nutrient deficiencies and improving agricultural productivity while ensuring environmentally sustainable agriculture and seed diversity requires a holistic food systems approach. Central to this food systems approach is the development of the agricultural sector to enable improved access to nutritious food through the income pathway and through the promotion of nutritious food cultivation at the farm level. As different regions are at various stages of agricultural development the food systems approach need to consider regional challenges in order to be inclusive and to close the disparity gap discussed in the previous sections. The three crucial components to the food systems approach are: a) boosting small producer agricultural production to improve incomes; b) designing policy strategies for regions at different stages of agricultural transformation to close the disparity gap; and c) addressing complimentary issues of water and sanitation, access to diet diversity, quality and safety.

5. SMALL PRODUCER PRODUCTIVITY IN FOOD SYSTEMS

A majority of the world's agricultural production takes place on small and marginal farms and presently, there are over 500 million small farms (less than 2 hectares in size) cultivated by two billion of the world's poor (Hazell, Poulton, Wiggins, & Dorward, 2010). Despite recurring predictions that small farms will soon disappear, they have persisted and in many cases, have increased in number (ibid). Small farms face numerous challenges in production, especially in terms of access to essential factors of production such as credit, inputs (seeds, fertilizers, pesticides), information and production technologies in addition to poor access to output markets (P. Pingali, 2012; Poulton, Dorward, & Kydd, 2010). Addressing these challenges is crucial for agricultural development, which is a precondition for any country to make a transition out of poverty (Timmer, 2005).

Figure 7: Average share of agricultural holdings by land size and region



Source: Authors' analysis using FAO data

The green revolution is a testimony of how a combination of high rate of investment in crop research, policy support, market development and infrastructure has led to extraordinary growth in food crop productivity. Although it had positive impacts on poverty reduction and malnutrition, it had limited impact in adoption in marginal production areas prone to droughts and women and the poor who had limited access to these technologies (P. Pingali, 2012). As these technologies were limited to cereals, the issue of micro nutrient deficiencies remained. As we prepare to tackle the challenges in hunger and poverty through the SDG, there is a need to redress these challenges as well. Interventions at both the production side and the markets are crucial to bring about these changes.

Investment in infrastructure, both in the form of irrigation as well as credit, can also directly improve productivity by increasing access to resources and inputs. Infrastructure investments in Asia from the 1960's to the 1980's, namely in irrigation, played a key role in facilitating adoption of the productivity enhancing technologies of the green revolution. Productivity gains in traditional staples such as cassava, millets, barley and sorghum, that were not the focus of the green revolution, now need to be focused on to improve diversity of diets and essential micro nutrient availability (Evenson & Gollin, 2003). Research into crop breeding and genetics, with a targeted focus on varieties, which will thrive within a

specific agroclimatic zone, can substantially influence the productivity of a smallholder and maximize yields. Strong returns have been demonstrated for programs focused on productivity gains for cassava cultivation in sub-Saharan Africa (Binswanger-Mkhize & McCalla., 2010).

In many developing countries, supply chains are undergoing a transformation due to a profound change in demand for agricultural goods. Population increase, rise in per capita incomes and urbanization are reasons for expanding demand, especially for higher value agricultural products such as fruits and vegetables, dairy and meat and value added processed foods (Barrett et al., 2012; Hazell et al., 2010; Poulton et al., 2010). The change in food systems have raised the costs of exchange for both staples and high value crops and these transactions costs are significant factors that inhibit small farmer entry into markets (P. Pingali, Khwaja, & Madelon, 2005). Institutional arrangements to improve market access and reduce transactions costs are crucial to incentivize production and link small producers to the markets. Encouraging public-private partnership in cold chains, increased private participation in vertical coordination such as contract farming, promotion of farmers organizations to benefit from economies of scale advantage are crucial intervention to improve small farmer participation in the markets.

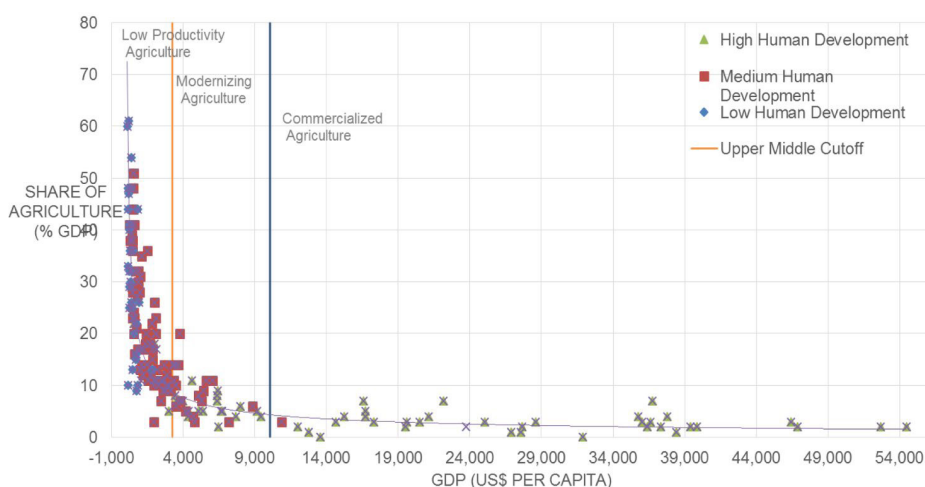
The measures stated above contribute to the conditions needed to reduce hunger by improving the availability and affordability of calories, proteins and micronutrients specifically by improving the efficiency of the smallholder for production activities. The creation of conditions to improve small-scale production need to be structured through policy. The policy approaches and tools for small farms in low productive agricultural systems and modernizing agricultural systems differ, but the «net effect» is increased productivity for producers in order to meaningfully contribute to outcomes of economic growth, agricultural development and, most importantly, food and nutrition security.

6. POLICY OPTIONS BY STAGE OF STRUCTURAL TRANSFORMATION

The progress a country has made in poverty reduction and agricultural development depends on the stage of structural transformation the agricultural sector is at. The stages are determined as low production agricultural systems, modernizing agricultural systems and commercialized agricultural systems (P. Pingali et al., 2015). Low-productive systems correspond to those countries, which have yet to attain the benefits of the GR and are most prevalent in sub-Saharan Africa.

These systems are characterized by low incomes, very low positions within the UNDP's Human Development Index (HDI), as well as by having a major share of GDP dependent on agriculture. Modernizing systems represent those Asian and Latin American countries, which were successful in implementing the gains of the GR, thereby driving economic growth through gains in agricultural productivity. They have medium HDI. Commercialized systems are found in the developed world and are characterized by their own dietary health and nutrition challenges, particularly related to obesity and food safety issues. Smallholders in commercialized agricultural systems face challenges related to competitiveness and high transactions costs relative to larger farm operations. We will however not be addressing the challenges of commercialized agriculture in this paper.

Figure 8: Structural transformation, human development and agricultural performance



Source: Pingali et al., 2015

7. LOW PRODUCTIVE AGRICULTURAL SYSTEMS

Low-productive countries have a high prevalence of childhood stunting, wasting and micronutrient deficiency. Despite large input of land and labor, these agricultural systems are beset by poor productivity and require significant turnaround in order to address goals for hunger and poverty (Pingali et al. 2015). The main reason for poor performance in these agricultural systems include a large proportion of land resources

under constraining agro-climatic conditions (drought and flood prone), poor provision of public goods (e.g. R&D), lack of appropriate institutional support, problematic governance, and low or inelastic demand for agricultural products (Pingali 2010). A smallholder productivity focused approach would first require investment in infrastructure such as irrigation, watershed management programs, roads and marketing facilities and services such as credit and extension. Such investments in public goods and services would incentivize technology and other farm level investments by producers to get agriculture moving.

Development for these countries also requires sustainable means of implementing crop and livestock intensification, which account for, rather than bypass, the food needs of the poor (Pingali et al. 2015). Focusing investments and resources into productivity for staple crops, is a proven mechanism to reduce widespread hunger and malnutrition. This mechanism functions through the levers of increased incomes and expanded availability of food supply, resulting in lower real prices for staple grains and greater overall access to calories. Promotion of crop diversification into micro-nutrient dense legumes, pulses, vegetables and fruit is also needed to build a resilient food system that can simultaneously address the issues of micronutrient deficiencies.

One way in which policy may provide immediate, short-term assistance to counter the lack of dietary diversity would be to promote home garden cultivation and backyard livestock programs. Such practices provide smallholders with access to micronutrients and protein. The net effect is a likely improvement in the food supply pathway as well as the intra-household access pathway towards improved nutrition, as women and children most likely would be involved in tending to such resources (P. Pingali et al., 2015). Identification and promotion of indigenous varieties of non-staples, which are adapted and well-suited for relatively rapid cultivation with minimal inputs in less-favorable areas of a smallholder's land, can deliver strong impact on nutrition, particularly when targeted to women in the household (Faber & van Jaarsveld, 2007). Demonstrations of such programs in South Africa were successful in generating enthusiasm among villages (Faber, Jogessar, & Benadé, 2001).

Bio-fortification of staple and non-staple food can be an inexpensive and sustainable means to reducing immediate concerns of micronutrient deficiency (Bouis, Hotz, McClafferty, Meenakshi, & Pfeiffer, 2011). Essential micronutrients such as iron, zinc and Vitamin A can be accessed through bio-fortified foods and in a cost efficient way (Asare-Marfo et al., 2013). Vitamin A bio-fortified maize and iron bio-fortified pearl

millets have been successfully adopted in Zambia and Benin respectively (Cercamondi et al., 2013). Bio-fortification has also been successfully carried out in non-staples that can be easily grown and accessed in remote regions where there is limited access to commercially available fortified foods (Bouis et al., 2011). Vitamin A bio-fortified cassava in Nigeria and Democratic Republic of Congo, Vitamin A bio-fortified orange flesh sweet potato in Uganda (Hotz et al., 2012) and Mozambique (Low et al., 2007) are examples of this. These measures may be an effective approach to remedy deficiencies until such time as production of non-staple micronutrient-rich crops becomes more established. Development and trials of varieties with higher nutrient content can be rolled into research programs, which are simultaneously developing productivity-enhanced and environmentally-resilient inputs.

Promoting productivity increase and labor savings especially for rural women is also a crucial step in transforming low productive agriculture systems. Women heads of household experience all of the same challenges faced by male smallholders, yet must cope with the additional complications of social prescriptions and stigma associated with gender. Previous studies have shown that women are confronted with barriers to obtaining access to credit, collateral, contracts, land, water, equipment and information as well as to suppliers of improved inputs (Gladwin, 2002; Quisumbing & Pandolfelli, 2010). Therefore, we emphasize the importance of promoting policy with emphasis on smallholder productivity as viewed through a gender lens, whereby women, in their dual roles as agricultural laborers and as caregivers to children, are particularly targeted. Developing policy agenda with a focus on improving the labor efficiency and productivity of the woman smallholder delivers multigenerational benefits to the nutrition of the household by supporting equitable distribution of calories and micronutrients within the household.

Therefore, in low productive agricultural systems, a smallholder productivity growth focused approach needs to be in place. A cereal based system to ensure national level calorific security along with measures to enable food diversity by promoting traditional staples is crucial. In the near term, promoting kitchen gardens and backyard livestock systems along with measures of bio fortification and food fortification are needed to address issues of immediate micronutrient security. Promotion of labor saving technology, particularly for women is important for productivity gains and nutritional gains at the household level. These measures are crucial to build hunger resilient food systems and enable structural transformation in now low productive agricultural systems.

8. MODERNIZING AGRICULTURAL SYSTEMS

In modernizing food systems, the policy focus should be on diversifying staple grain systems and effectively linking small farms to urban food value chains. This requires investments in rural infrastructure by both public and private entities to enhance supply of perishable food products. Production systems also need to be supported by institutions such as producer organizations to mitigate economies of scale disadvantages, food safety standards to ensure health and systems to reduce information asymmetry in the marketing and consumption of goods. As there can be variations in development within modernizing food systems, intensification of smallholder agriculture in lagging regions also need to be prioritized.

Diversifying away from staple cereals is essential for modernizing agricultural systems to achieve improved nutritional outcomes, as well as the rising market demand for food diversity. Such systems, having successfully implemented techniques for cereal intensification under the green revolution, must now stimulate the development of robust, sustainable and market-oriented production of diverse crops, which are rich in micronutrients. Non-staple crops require a more intricate and interlinked network of infrastructure and support resources in order for smallholders to participate in production. Therefore, policy emphasis must encourage the development of value chains that link small farms and higher-value markets while simultaneously promoting expanded market demand for non-staples. Food safety standards that are accessible and understandable to both smallholder and consumer alike need to be promoted, enacted and supported. Implementable standards improves food safety conformity among producers that will modify purchasing behavior of consumers. Therefore, investment for implementing and monitoring food safety standards is important in modernizing agricultural systems.

In modernizing agricultural systems, significant inter-regional differences in levels of poverty and food security are big challenges. Eastern India, Western China, and Northeast Brazil are some examples of countries making rapid economic progress, but have high levels of inequality (Pingali, 2010). The regional challenges they face in achieving agricultural development are due to geographical constraint such as poor market connectivity and low agro-climatic potential due to weather related stress like droughts. These marginal production environments in land scarce countries like India, require interventions and investments in water-saving technologies, micro-irrigation systems, roads to increase

connectivity to markets and introduction of drought tolerant varieties of crops to mitigate geographical disadvantages and improve production (ibid). In land abundant areas, conversion of agricultural land to forests for carbon sequestration, watershed protection and bio diversity conservation is crucial to prevent environmental externalities such as soil erosion, depleting ground water and deforestation (Lipper, Pingali, & Zurek, 2006). Tackling the production challenges through investments in infrastructure and conservation programs in marginal production environment is crucial to tackle the stubbornly persisting regional inequalities in hunger and poverty reduction.

The first priority of a policy agenda for modernizing systems must be to connect smallholders to the higher-value markets with demand for a diversity of non-staple foods. Such links, which may extend to the new domestic, export or modern retail markets, can expand the incomes of the farmers and reinforce on-farm diversification of food supply. Whereas our previous discussion of low-productive systems relied on a smallholder orientation for examining multiple and various facets of policy related to productivity increases, we now consider smallholder integration into new markets as the unifying aim of each policy activity within the modernizing system.

Investments in enabling environment conducive to integration of the smallholder into new high-value markets is also important. Investments toward developing infrastructure such as cold chains, establishing appropriate institutions such as farmer organizations for small producer aggregation, and improving transfer of market information between and among producers to enable contracts are examples. Physical infrastructure, including paved roads, warehouses, inspection depots and any other stops from farm to table, is necessary to transport crops to market. The extent to which infrastructure connects and intersects to form a physical link between markets and smallholders determines who may participate in higher-value markets. Therefore, policy performs the essential function of offering equal participation to a broader base of farmers by expanding and extending infrastructure.

Another critical means of deploying policy to link farmers to new markets is to support actors along the value chain, including processors, wholesalers and traders. For example, providing financial markets to support intermediaries is essential to developing and supporting links to various market opportunities for producers. The net result is that smallholders have avenues through which they may sell non-staple crops, which has been shown to reinforce movement toward greater on-farm

diversification (Coulter & Shepherd, 1995; Dalberg, 2012; World Bank, 2007). Value chain development is a particularly good fit for public-private partnerships to attract investment into strengthening links between farmers and markets. Cold chains to enhance the supply of perishable products is an example of this.

Public programs can also play a significant role in disseminating market information, addressing prices, best practices, as well as location and volume of demand. This function serves to improve efficiency in the food value chain, as producers and traders coordinate to match food supply with demand and aligning marketing efforts. The effective spread of such information ultimately elevates the entire food system to higher standards, as quality, productivity and availability of services become commonplace and widespread (Aker & Fafchamps, 2010; de Silva & Ratnadiwakara, 2008; Ricketts, Gómez, & Mueller, 2013). This effect has been demonstrated in Tanzania, as policy focused on facilitating awareness and knowledge transfer among local producers led to significant improvement of market linkages (Ricketts et al., 2013). Expansion and development of communication networks also plays a significant role in the rapid exchange of market infrastructure. Policy, which encourages private investment and improves access to telecommunication services, will further advance the establishment of strong connections between smallholders and markets.

We have stressed the importance of market access for smallholders to demonstrate how policy may be applied toward improvement along the income and food supply pathways to increase access to non-staple foods for rural households. When smallholders engage in direct participation on the supply side in high value markets, they generate spillover effects within rural areas, whereby their gains in income and productivity are extended to those who live nearby are not directly supplying the new markets (Bernard & Spielman, 2009). Therefore, as policymakers consider how to set an agenda, which will produce the broadest possible gains in nutrition outcomes, identifying and addressing the routes to an enabling environment for market linkages will create meaningful avenues to progress toward food and nutrition security goals.

9. COMPLEMENTARY POLICIES TO PROMOTE SUSTAINABLE FOOD SYSTEMS

Along with policies to enable productivity growth and linkages to markets, complementary policies that support nutrition behavior change, women's empowerment and education are crucial in supporting the

attainment of the SDGs. Access to improved sanitation and hygiene are also important components to ensure public health and have positive nutrition outcomes (Bhagowalia, Headey, & Kadiyala., 2012; Pruss, Kay, Fewtrell, & Bartram, 2002). A healthy environment determines the ability of the body to absorb essential micronutrients and plays an important role in improving maternal and child health in developing and under developed countries (Pingali & Ricketts, 2014). Investments in improved household access to clean drinking water, and toilets are in this regard crucial. Sanitation awareness drives along with the construction of toilets is required to inform and nudge behavior change.

Targeting the barriers faced by women in agriculture production and nutritional access, would result in rapid improvements in their productivity, income generation and nutritional access. Mechanisms such as promotion of women-centered extension services, farm mechanization to reduce women's drudgery, investment in peer-to-peer networks for accessing inputs, credit and information can connect women to new high-value markets and support adequate intensification of their land. Women have tended to have greater difficulties in accessing information and extension services and when access has been made available, significant gains in income and productivity were realized by households (Davis et al., 2012). Asymmetric intra-household access to food also influences the nutritional status of women and children. Cultural norms, beliefs and socioeconomic behavior condition this status and they vary greatly across geographies and cultures (Pingali & Ricketts, 2014). Institutions to improve social networks, education and awareness, ownership of assets and control of household finances can influence these conditioning factors and play an important role in improving nutritional outcomes. Drives to promote mechanization also greatly influences the reduction of women's drudgery in agriculture and may have positive outcomes on nutrition through labor savings.

Therefore, along with policy change to improve production and access to markets, behavior and environmental change are important components that needs attention to influence nutritional outcomes. Policy focus build infrastructure to improve access to clean drinking water, toilets, institutional support to promote Self Help Groups to enable peer-to peer network, improve control of household level finances and support and outreach programs to inform behavior change becomes crucial.

10. CONCLUSION

In this chapter, we assessed the performance of WFS and MDGs in

tackling global hunger and poverty to contextualize the challenges and expectations the SDGs. The MDGs that set a target of halving the prevalence of hunger, was able to meet its target while the WFS goal of halving absolute numbers of hungry missed its target. That said, WFS goals and the MDGs did play a crucial role in shaping global thinking and action around poverty and hunger paving the way for a bolder and comprehensive SDGs. The major challenges for the SDGs is the issue of tackling regional disparity in development and also tackling issues of hidden hunger in the form of micro nutrient deficiencies. Therefore a more holistic, yet context specific approach needs to be taken to achieve them. With small producer agricultural development at the center, we highlighted the need to take a food systems approach conditioned on the stage of agricultural development a country is in. In low productive agricultural systems, the focus should be on production growth of traditional staples and staples, infrastructure development, gender focused labor saving technology coupled with interventions like bio-fortification and kitchen gardens are crucial to improve nutrition. In modernizing food systems, we propose a departure from a cereal focused production system to a more diversified production system along with better linkages to markets and value chains to improve incomes and nutritional access. The role of supporting policies that enable behavior change through women's empowerment and environmental change through better access to water and sanitation in both production systems is needed to complement agriculture growth centered pathway to better nutritional status.

REFERENCES

AKER, J. C., & FAFCHAMPS, M. (2010). *How Does Mobile Phone Coverage Affect Farm-Gate Prices? Evidence from West Africa*. Unpublished Draft, University of California, Berkeley.

ASARE-MARFO, D., BIROL, E., GONZÁLEZ, C., MOURSI, M., PEREZ, S., SCHWARZ, J., & ZELLER, M. (2013). «*Prioritizing Countries for Biofortification Interventions Using Country-Level Data* (No. 11). Washington D.C.

BARRETT, C. B., BACHKE, M. E., BELLEMARE, M. F., MICHELSON, H. C., NARAYANAN, S., & WALKER, T. F. (2012). Smallholder Participation in Contract Farming: Comparative Evidence from Five Countries. *World Development*, 40(4), 715-730.

BERNARD, T., & SPIELMAN, D. J. (2009). Reaching the rural poor

through rural producer organizations? A study of agricultural marketing cooperatives in Ethiopia. *Food Policy*, 34(1), 60-69.

BHAGOWALIA, P., HEADEY, D., & KADIYALA, S. (2012). *Agriculture, income, and nutrition linkages in India: insights from a nationally representative survey*. Washington D.C. Retrieved from <http://www.ifpri.org/sites/default/files/publications/ifpridp01195.pdf>.

BINSWANGER-MKHIZE, H., & MCCALLA, A. F. (2010). The Changing Context and Prospects for Agricultural and Rural Development in Africa. In P. L. PINGALI & R. E. EVENSON (Eds.), *Handbook of Agricultural Economics Vol. 4* (4th ed., pp. 3571-3712). Oxford: Wlsevier B.V.

BOUIS, H. E., HOTZ, C., MCCLAFFERTY, B., MEENAKSHI, J. V., & PFEIFFER, W. H. (2011). Biofortification: A new tool to reduce micronutrient malnutrition. *FOod and Nutrition Bulletin*, 32(1), S31-S40.

CERCAMONDI, C. I., EGLI, I. M., MITCHIKPE, E., TOSSOU, F., ZEDER, C., HOUNHOUIGAN, J. D., & HURRELL, R. F. (2013). Total iron absorption by young women from iron-biofortified pearl millet composite meals is double that from regular millet meals but less than that from post-harvest iron-fortified millet meals. *The Journal of Nutrition*, 143(9), 1376-1382.

COULTER, J., & SHEPHERD, A. W. (1995). *Inventory Credit: An Approach to Developing Agricultural Markets* (No. 120). Rome, Italy.

Dalberg (2012). *Catalyzing Smallholder Agricultural Finance*. Retrieved from http://www.dalberg.com/documents/Catalyzing_

DAVIS, K., NKONYA, E., KATO, E., MEKONNEN, D. A., ODENDO, M., MIIRO, R., & NKUBA, J. (2012). Impact of Farmer Field Schools on Agricultural Productivity and Poverty in East Africa. *World Development*, 40(2), 402-413.

DE SILVA, H., & RATNADIWAKARA, D. (2008). *Using ICT to Reduce Transaction Costs in Agriculture through Better Communication: A Case-Study from Sri Lanka*. Colombo, Sri Lanka.

EVENSON, R. E., & GOLLIN, D. (2003). Assessing the Impact of the Green Revolution, 1960 to 2000. *Science*, 300(5620), 758-762.

FABER, M., JOGESSAR, V. B., & BENADÉ, A. (2001). Nutritional status and dietary intakes of children aged 2-5 years and their caregivers in a rural South African community. *International Journal of Food Sciences and Nutrition*, 52(5), 401-411.

FABER, M., & VAN JAARSVELD, P. J. (2007). The production of provitamin A-rich vegetables in home-gardens as a means of addressing vitamin A

deficiency in rural African communities. *Journal of the Science of Food and Agriculture*, 87(3), 366-377.

FAO, IFAD, & WFP. (2015). *The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress*. Rome, Italy.

GLADWIN, C. H. (2002). Gender and soil fertility in Africa: Introduction. *African Studies Quarterly*, 6(1&2).

HAZELL, P., POULTON, C., WIGGINS, S., & DORWARD, A. (2010). The Future of Small Farms: Trajectories and Policy Priorities. *World Development*, 38(10), 1349-1361.

HOTZ, C., LOECHL, C., LUBOWA, A., TUMWINE, J. K., NDEEZI, G., MASAWI, A. N.,...GILLIGAN, D. O. (2012). Introduction of β -Carotene-Rich Orange Sweet Potato in Rural Uganda Resulted in Increased Vitamin A Intakes among Children and Women and Improved Vitamin A Status among Children. *Journal of Nutrition*, 142(10), 1871-1880.

LIPPER, L., PINGALI, P., & ZUREK, M. (2006). Less-favoured areas: looking beyond agriculture towards ecosystem services. In R. RUBEN, J. PENDER, & A. KUYVENHOVEN (Eds.), *Sustainable Poverty Reduction in Less-Favoured Areas: Problems, Options and Strategies* (pp. 442-460). Wallingford, UK: CABI.

LOW, J. W., ARIMOND, M., OSMAN, N., CUNGUARA, B., ZANO, F., & TSCHIRLEY, D. (2007). A Food-Based Approach Introducing Orange-Fleshed Sweet Potatoes Increased Vitamin A Intake and Serum Retinol Concentrations in Young Children in Rural Mozambique. *The Journal of Nutrition*, 137(5), 1320-1327.

PINGALI, P. (2010). Chapter 74 Agriculture Renaissance: Making «Agriculture for Development» Work in the 21st Century. In B. T.-H. of A. Economics (Ed.), (Vol. Volume 4, pp. 3867-3894). Elsevier.

PINGALI, P. (2012). Green Revolution: Impacts, limits, and the path ahead. *Proceedings of the National Academy of Sciences*, 109(31), 12302-12308.

PINGALI, P. (2016). The hunger metric mirage: There's been less progress on hunger reduction than it appears. *Proceedings of the National Academy of Sciences of the United States of America*, 113(18).

PINGALI, P., KHWAJA, Y., & MADELON, M. (2005). Commercializing Small Farms: Reducing transaction Cost. *ESA Working Paper {No}, 05-08*.

PINGALI, P., & RICKETTS, K. D. (2014). Mainstreaming nutrition metrics

in household surveys—toward a multidisciplinary convergence of data systems. *Annals of the New York Academy of Sciences*, 1331(1), 249-257.

PINGALI, P., RICKETTS, K., & SAHN, D. E. (2015). The Fight Against Hunger and Malnutrition: The Role of Food, Agriculture, and Targeted Policies. In D. E. SAHN (Ed.), *Agriculture for Nutrition*. Oxford, UK: Oxford University Press.

POULTON, C., DORWARD, A., & KYDD, J. (2010). The Future of Small Farms: New Directions for Services, Institutions, and Intermediation. *World Development*, 38(10), 1413-1428.

PRUSS, A., KAY, D., FEWTRELL, L., & BARTRAM, J. (2002). Estimating the burden of disease from water, sanitation, and hygiene at a global level. *Environmental Health Perspectives*, 110(5), 537-542.

QUISUMBING, A. R., & PANDOLFELLI, L. (2010). Promising Approaches to Address the Needs of Poor Female Farmers: Resources, Constraints, and Interventions. *World Development*, 38(4), 581-592.

RICKETTS, K., GOMEZ, M., & MUELLER, B. (2013). *Privately-led Extension Models: Reviewing Current Approaches for Reaching Smallholders in the Coffee and Cocoa Sectors*. Ithaca, NY.

TIMMER, P. C. (2005). *Agriculture and Pro-Growth: An Asian perspective*. Washington DC: Center for Global Development.

WEBB, P., & BLOCK, S. (2012). Support for agriculture during economic transformation: Impacts on poverty and undernutrition. *Proceedings of the National Academy of Sciences*, 109(31), 12309-12314.

World Bank. (2007). *World Development Report 2008: Agriculture for Development*. Washington D.C.

Chapter 6: goal 3

Good health and well-being. Ensure healthy lives and promote well-being for all at all ages¹

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SUMMARY: 1. GOOD HEALTH: FROM MDGS TO SDGS. 2. TARGETS AND INDICATORS OF SDG 3 – OVERVIEW AND CHALLENGES. a. *Targets for Goal 3.* i. Overarching objective. ii. Specific targets. b. *Indicators for Goal 3.* 3. THE ROLE OF THE WORLD HEALTH ORGANIZATION AS THE LEAD AGENCY IN SDG 3. 4. SDGS AND HUMAN RIGHTS – A RIGHT TO GOOD HEALTH AND WELL-BEING?. a. *Human Rights and SDG 3.* b. *Good Health and Well-Being for All Through a Human Rights Lens – Overview of Normative Content and Examples of Implementation.* c. *Measuring the Right to Health in the SDGs.* 5. CONCLUSIONS.

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ABSTRACT:

The goal of good health and well-being constitutes one of the centre pieces of the overall objective of sustainable development. At the international level, the protection of the right to health has been a core objective in a number of international instruments. Yet, the objective had not been reached by the turn of the century, thus playing a central role among the MDGs. The SDGs continue this work in a more comprehensive manner, and now aim at «good health and well-being for all». Still, the lack of use of a rights-based language raises questions as to the enforceability of the selected targets and standards, and puts the link between policy objectives and human rights entitlements to the test.

1. GOOD HEALTH: FROM MDGS TO SDGS

The goal of good health and well-being constitutes one of the centre pieces of the overall objective of sustainable development². At the international level, the protection of the right to health – actually «a right to the highest attainable standard of health»³ – has been a core objective since its articulation in the 1946 Constitution of the World Health Organization (WHO)⁴ and the adoption of the Universal Declaration of Human Rights (UDHR) which in its Article 25 contained the interlinked rights to health and to an adequate standard of living⁵.

The right to health is moreover firmly anchored in a number of binding international and regional human rights instruments – particularly the International Covenant on Economic, Social and Cultural Rights

2. SACHS, J., *The Age of Sustainable Development*, 2015, New York *et al.*, 543 pp., p. 275.
3. EIDE, A., «Adequate Standard of Living», in MOECKLI, D., SHAH, S., and SIVAKUMARAN, S. (eds.), *International Human Rights Law*, Oxford, 2014, pp. 195-216, p. 205; see also CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.
4. The WHO Constitution defined health in its preamble as: «a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.» Constitution of the World Health Organization, 22 July 1946, 14 UNTS 185.
5. UNGA Res. 217 (III), International Bill of Human Rights, A. Universal Declaration of Human Rights, 3 UN GAOR, p. 71, 10 December 1948, UN Doc. A/810: Article 25
 1. Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.
 2. Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

(ICESCR, Article 12)⁶ –, international soft law instruments⁷, and more than 115 domestic constitutions⁸. Owing to the interlinkage of the right to health with several other human rights, it is also implicitly protected by a number of civil and political rights such as the right to life or the right to privacy⁹.

Despite these instruments, the objective of achieving good health had not been reached by the international community by the turn of the century. It thus is not surprising that it constituted a central topic of the Millennium Development Goals (MDGs), with three of eight MDGs directly having been concerned with health issues (Goal 4: reduction of child mortality; Goal 5: improvement of maternal health; and Goal 6: combatting of HIV / AIDS, malaria and other diseases). Additionally, health-related aspects also played a role in a number of the remaining goals, partly as outcome determinants, and partly in the formulation of objectives (particularly Goal 1: eradication of extreme poverty and hunger¹⁰; Goal 2: achieving universal primary education¹¹; Goal 3: promotion of gender equality and empowerment of women¹²; and Goal 7: ensuring environmental sustainability¹³)¹⁴.

While the health-related targets have seen significant success rates throughout the past 15 years¹⁵ and have profited from the tripling of

6. International Covenant on Economic, Social and Cultural Rights, 16 December 1966, 993 UNTS 3.
7. *Inter alia* in the 1978 Alma Ata Declaration adopted by the International Conference on Primary Health Care; and the Vienna Declaration and Programme of Action, adopted at World Conference on Human Rights, 25 June 1993, UN Doc. A/CONF.157/23.
8. OHCHR/WHO, The Right to Health – Fact Sheet No. 31, Geneva 2008, p. 10.
9. BINDER, C., HOFBAUER, J.A., PIOVESAN, F., STEINER, A., and STEINER, E., eds., *Social Rights in the Case Law of Regional Human Rights Monitoring Institutions*, Antwerp et al. 2016, pp. 531, pp. 22, 91, 33, 453. See also below Section 4.b.
10. Target 1.C. Halve, between 1990 and 2015, the proportion of people who suffer from hunger.
11. Target 2.A. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.
12. Target 3.A. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.
13. Target 7.C. Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation.
14. SACHS, J., *The Age of Sustainable Development*, 2015, New York et al., 543 pp., p. 277.
15. As highlighted in United Nations, The Millennium Development Goals Report, 2015, pp. 5-6, the global under-five mortality rate has declined by more than half (Goal 4), the maternal mortality ratio has declined by 45 per cent worldwide (Goal 5), new HIV infections have fallen by approximately 40 per cent, while the antiretroviral treatment has increased from 800 000 to 13.6 million people, and malaria and tuberculosis deaths have dropped significantly (Goal 6).

global health assistance¹⁶, major points of criticism related to the MDGs' focus on certain subpopulations (e.g. women, children) or particular health outcome targets rather than on overcoming systemic deficiencies, i.e. improving the health care system in general¹⁷. In response to this, the Sustainable Development Goals (SDGs) define the overall objective of health in the following (more comprehensive) manner:

«26. To promote physical and mental health and well-being, and to extend life expectancy for all, we must achieve universal health coverage and access to quality health care. No one must be left behind. We commit to accelerating the progress made to date in reducing newborn, child and maternal mortality by ending all such preventable deaths before 2030. We are committed to ensuring universal access to sexual and reproductive health-care services, including for family planning, information and education. We will equally accelerate the pace of progress made in fighting malaria, HIV/AIDS, tuberculosis, hepatitis, Ebola and other communicable diseases and epidemics, including by addressing growing anti-microbial resistance and the problem of unattended diseases affecting developing countries. We are committed to the prevention and treatment of non-communicable diseases, including behavioural, developmental and neurological disorders, which constitute a major challenge for sustainable development¹⁸.»

The more comprehensive approach is further evident in Goal 3, specifically designated «Good health and well-being. Ensure healthy lives and promote well-being for all at all ages». Thus, in contrast to the MDGs, Goal 3 is now aimed at achieving overall health of the general population («for all»). This is also in line with the universalist approach towards sustainable development opted for in the SDGs¹⁹.

The importance of the health objective furthermore becomes clear through its overarching nature and relevance for the achievement

16. INSTITUTE FOR HEALTH METRICS AND EVALUATION, *Financing Global Health 2014: Shifts in Funding as the MDG Era Closes*, Washington 2015, p. 17.

17. FEHLING, M., NELSON, B.D., and VENKATAPURAM, S., «Limitations of the Millennium Development Goals», 2013 *Global Public Health*, vol. 8, no. 10, pp. 1109-1122, pp. 1115-1116, with further references; WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 7.

18. UNGA Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1, para. 26.

19. See also LANGFORD, M., «Lost in Transformation? The Politics of the Sustainable Development Goals», 2016 PluriCourts Research Paper No. 16-03, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2723340 (last visited 20 May 2016).

of other SDGs. For example, SDG 1 (end poverty in all its forms everywhere) calls for the implementation of social protection systems and measures, which includes health care²⁰. Moreover, as health is crucial in order to be able to get educated, health is closely tied to SDG 4 (ensure inclusive and equitable quality education). SDG 4's targets therefore stipulate *inter alia* that all girls and boys should have access to quality early childhood development, care and pre-primary education to be ready for primary education²¹. Safe drinking water (SDG 6, Target 6.1.), safe work environments (SDG 8, Target 8.8.), reduction of pollution (e.g. SDG 14, Target 14.1.) or the promotion of peaceful and inclusive societies (SDG 16) (and many more) all play a role in achieving good health and well-being. All in all, there are more than a dozen targets in other SDGs which are health-related²².

Nevertheless, some concerns have been voiced regarding the new approach towards the objective of good health chosen by the drafters of the SDGs. Its position as one of 17 goals has led to some critics fearing that the importance it had carried among the MDGs (with three of eight MDGs directly linked thereto) has been lost and consequently –due to less political attention–, potential funding might decrease²³. Moreover, the multiplication of targets within SDG 3 might overwhelm governments in their choices to prioritize and implement²⁴. However, it has also been pointed out that even though the SDGs now are reflective of a far wider range of economic, social and environmental concerns, they are to be viewed in an interlinked and interconnected manner²⁵. In this sense, health is linked to «all three dimensions of sustainable

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20. Target 1.3., UNGA Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1.
 21. Target 4.2., UNGA Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1.
 22. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 9.
 23. MURRAY, C.J.L., «Shifting to Sustainable Development Goals – Implications for Global Health», 2015 New England Journal of Medicine, vol. 373, pp. 1390-1393, pp. 1390-1391; FREY, A., «Introduction: Positioning Universal Health Coverage in the Post-2015 Development Agenda», 2015 Washington International Law Journal, vol. 24, no. 3, pp. 419-435, p. 423.
 24. SACHS, J.D., «Goal-Based Development and the SDGs: Implications for Development Finance», 2015 Oxford Review of Economic Policy, vol. 31, nos. 3-4, pp. 268-278, p. 274; BUSE, K., and HAWKES, S., «Health in the Sustainable Development Goals: Ready for a Paradigm Shift?», 2015 Globalization and Health, vol. 11, no. 13, pp. 1-8, p. 5.
 25. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 195.

development»²⁶ and therefore both contributes to the fulfilment of other goals and benefits from the reaching of their targets.

Moreover, there are concerns that the lack of quantitative thresholds in a number of the health-related targets²⁷ may result in the fact that political actors might not invest equally consistent attention to achieving these goals as was the case with the health-related MDGs which had given clear targets^{28,29}. And despite the comprehensive approach, there have still been some health sectors which have pointed out that there still are some gaps among the targets contained in Goal 3, *e.g.*, regarding cross-cutting issues such as antimicrobial resistance³⁰. Other scholars have also noted that the overall objective of Goal 3 to achieve good health and well-being *for all* remains aspirational and vague and that the shift from percentage-decline targets to absolute thresholds (*e.g.* to bring the child mortality rate below 25 deaths per 1000 children) disregards differences between states³¹. And finally, as with many other goals, the fact that SDG 3 is not formulated in a rights-based manner poses difficulties for the legal enforceability of the therein contained standards as well as for identifying accountable actors³². This will also be addressed in more detail in Section 4.

The following will begin by providing an overview over SDG 3's targets and indicators, focusing on the evolvement of the health-related

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26. UNGA Res. 66/288, The future we want, 11 September 2012, UN Doc. A/RES/66/288, para. 138.
 27. For example, Target 3.5. calls for «strengthening the prevention and treatment» of substance abuse, Target 3.9. calls for «substantially reducing» the number of deaths and illnesses from hazardous chemicals and pollution.
 28. For example, Target 5.A. called for «reducing by three quarters», between 1990 and 2015, the maternal mortality ratio, Target 4.A. called for «reducing by two thirds», between 1990 and 2015, the under-five mortality rate, and Target 6.A. called for «having halted» by 2015 the spread of HIV/AIDS.
 29. MURRAY, C.J.L., «Shifting to Sustainable Development Goals – Implications for Global Health», 2015 *New England Journal of Medicine*, vol. 373, pp. 1390-1393, p. 1392.
 30. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 195.
 31. MURRAY, C.J.L., «Shifting to Sustainable Development Goals – Implications for Global Health», 2015 *New England Journal of Medicine*, vol. 373, pp. 1390-1393, p. 1392; RUSHTON, S., «Health Rights and Realization – Comments on “Rights Language in the Sustainable Development Agenda: Has Right to Health Discourse and Norms Shaped Health Goals?”», 2016 *International Journal of Health Policy Management*, vol. 5, no. 5, pp. 341-344, p. 343.
 32. See, *e.g.*, BUSE, K., and HAWKES, S., «Health in the Sustainable Development Goals: Ready for a Paradigm Shift?», 2015 *Globalization and Health*, vol. 11, no. 13, pp. 1-8, p. 6.

issues in comparison to the MDGs and on some of the (newly) emerging challenges such as the remaining methodological gaps regarding the selected indicators. Section 3 highlights the role of the WHO as the lead agency with regard to SDG 3. This can be seen both with regard to the focus of SDG 3 on UHC, a primary policy objective of the WHO since the end of the 1970s, and in relation to the monitoring process. The policy focus of SDG 3 is then assessed in light of entitlements stemming from the right to health (Section 4). Despite the Office of the High Commissioner (OHCHR) having pointed out that the SDGs strive to reflect the content of corresponding human rights norms, at first glance there is no explicit linkage between the described targets and indicators and the right to health. However, recognizing legally enforceable rights for individuals in this context is essential for effectively transferring development policy commitments into practice. Thus, after describing the normative content of the right to health (Section 4.b.), Section 4.c. assesses to what extent this normative content can be traced within the targets and indicators of SDG 3. Finally, Section 5 concludes and points to still remaining challenges for the effective fulfilment of SDG 3.

2. TARGETS AND INDICATORS OF SDG 3 – OVERVIEW AND CHALLENGES

As with the MDGs, implementation of the SDGs will be the key to success. This *inter alia* entails not only the securing of new funding, but particularly defining targets (*i.e.* the operational objectives) and indicators (*i.e.* the variables to monitor progress) which need to be reached. In this sense, the SDGs have adopted nine targets and four suggestions for means of implementation within SDG 3 (Section 2.a.). Of the 230 indicators adopted by the United Nations Statistical Commission's Interagency and Expert Group on SDG Indicators (IAEG-SDGs), 26 are directly linked to SDG 3 (Section 2.b.).

a. TARGETS FOR GOAL 3

Considering the strong emphasis of the MDGs on health-related goals, SDG 3 consists both of targets which already existed in the MDGs and new targets. The order in which the targets are listed follows no obvious systematic structure. As suggested by the WHO³³, it is however possible to divide the targets into one overarching objective (Target

33. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 196.

3.8. Universal health coverage) and three pillars: Pillar 1 consisting of targets which were already contained in the MDGs (Targets 3.1.–3.3., Target 3.7.); Pillar 2 consisting of new targets (Targets 3.4.–3.6., 3.9.); and Pillar 3 consisting of the suggested means of implementation (Targets 3.a.–3.d.). Figure 1 displays this systematization accordingly:

SDG 3: ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

Target 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services, and access to safe, effective, quality and affordable essential medicines and vaccines for all

| MDG 'unfinished business' targets | new SDG targets | means of implementation targets |
|--|--|--|
| 3.1. reduce maternal mortality 3.2. reduce child mortality 3.3. end epidemics of infectious diseases (AIDS, malaria, tuberculosis, tropical diseases..) and combat communicable diseases 3.7. ensure universal access to sexual and reproductive health-care services | 3.4. reduce mortality from non-communicable diseases and promote mental health 3.5. strengthen prevention and treatment of substance abuse 3.6. halve number of deaths/injuries from road traffic accidents 3.9. reduce deaths/illnesses from hazardous chemicals and air, water and soil pollution and contamination | 3.a. strengthen implementation of WHO framework convention on tobacco control 3.b. support R&D of vaccines and medicines for all, provide access 3.c. increase health financing and health workforce in developing countries 3.d. strengthen capacity of all for early warning, risk reduction and management of national and global health risks |

Adapted from WHO, *Health in 2015 – From MDGs to SDGs*, 2015, p. 196.

Hence, with regard to Goal 3, two levels of targets can be distinguished, the overarching objective of achieving good health for all as transformed most specifically in Target 3.8. (Section 2.a. *i.*), and specific targets (Section 2.a. *ii.*). Additionally, owed to the cross-cutting nature of health, health-related targets stemming from further SDGs and SDG 17 («Revitalize the global partnership for sustainable development») regarding implementation must be considered as well.

i. Overarching Objective

Target 3.8. («Universal health coverage (UHC) *for all*») functions as the overarching objective of SDG 3³⁴. This complements the vertical approach

34. UNGA Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1, para. 26: «To promote

chosen in the MDGs which focused on specific diseases, and aims at directing efforts towards a system-wide reform, perceived as a more sustainable approach³⁵. As addressed below, both the WHO and the World Bank (WB), key actors in translating SDG 3 into practice, have promoted UHC as the key to success in achieving global health³⁶. The financial protection offered by UHC is also understood to be core to realizing the overarching objectives of the SDGs «to end extreme poverty» and «to ensure that every person achieves a basic standard of wellbeing»³⁷.

Moreover, understanding the overarching objective as achieving UHC strives to avoid the vague and broad terminology of achieving «well-being for all», an aspect which the WHO has previously been criticized for³⁸. In particular, UHC has been approximated closest to the entitlements arising from the right to health, *i.e.* a right to a system of health protection providing equality of opportunity for everyone to enjoy the highest attainable level of physical and mental health³⁹.

ii. Specific Targets

In addition to the overall objective of achieving UHC, SDG 3 contains four targets which were «inherited» from the MDGs, four new targets, and four means of implementation.

With regard to the inherited targets from the MDGs⁴⁰, generally significant progress has already been made over the past 15 years.

physical and mental health and well-being, and to extend life expectancy for all, we must achieve universal health coverage and access to quality health care.»

35. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 41; FREY, A., «Introduction: Positioning Universal Health Coverage in the Post-2015 Development Agenda», 2015 Washington International Law Journal, vol. 24, no. 3, pp. 419-435, p. 419.

36. See Section 3.

37. See, *e.g.*, WAGSTAFF, A., and KUTZIN, J., «Health and the SDGs: Out of the doldrums, heading for the rapids», 23 March 2016, available at <http://blogs.worldbank.org/developmenttalk/health-and-sdgs-out-doldrums-heading-rapids>.

38. See, *e.g.*, SSENIONJO, M., *Economic, Social and Cultural Rights in International Law*, Oxford *et al.* 2009, pp. 536, p. 317.

39. See, *e.g.*, FORMAN, L., OOMS, G., and BROLAN, C.E., «Rights Language in the Sustainable Development Agenda: Has Right to Health Discourse and Norms Shaped Health Goals?», 2015 International Journal of Health Policy Management, vol. 4, no. 12, pp. 799-804, p. 802; FREY, A., «Introduction: Positioning Universal Health Coverage in the Post-2015 Development Agenda», 2015 Washington International Law Journal, vol. 24, no. 3, pp. 419-435, p. 422.

40. 3.1. By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births;

3.2. By 2030, end preventable deaths of newborns and children under 5 years of age,

Nevertheless, the MDG Report 2015 noted that the most vulnerable segments of society have been left behind, including the poorest and those disadvantaged due to their sex, age, disability, ethnicity or geographic location⁴¹. In light of this, the efforts will be continued also beyond 2015⁴².

The four new targets⁴³ extend the health goal beyond its MDG content. The new targets are owed to the broadening of the scope of attention to other health-related issues such as non-communicable diseases which are estimated to be the cause of approximately 52% of all deaths under age 70⁴⁴ and particularly now also include responses to adolescents⁴⁵ as a vulnerable population. In this regard, focus on road traffic incidents, prevention and treatment of substance abuse and mental health are key elements.

Finally, four means of implementation are listed in SDG 3. These suggestions for structural reform include calls for increased health financing and more research and development to address the major health priorities and challenges of our time⁴⁶.

with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births;

3.3. By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases;

3.7. By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

41. United Nations, *The Millennium Development Goals Report 2015*, New York 2015, p. 8.

42. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, pp. 72-73.

43. 3.4. By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being;

3.5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol;

3.6. By 2020, halve the number of global deaths and injuries from road traffic accidents;

3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

44. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 143.

45. See also the new Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health focusing on adolescents, 4 April 2016, UN Doc. A/HRC/32/32.

46. 3.10. Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate;

3.11. Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance

Overall, these targets amount to one of the most specific goals of the SDGs, particularly also due the strong roots stemming from the MDGs' focus on health. What remains left out is, *e.g.*, how to firmly incorporate health outcomes in non-health-related sectors, as would be necessary for targets on the reduction of traffic accidents or pollution⁴⁷. Additionally, the focus of some targets on global reduction goals – *e.g.* Targets 3.1. (reduce the global maternal mortality ratio to less than 70 per 100,000 live births), 3.4. (reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being), 3.6. (halve the number of global deaths and injuries from road traffic accidents) – disregards differences among states⁴⁸ and will need considerable adaptation at the national level⁴⁹.

b. INDICATORS FOR GOAL 3

The SDG indicators were adopted on 11 March 2016 by the IAEG-SDGs. Among the 230 indicators agreed on, 26 relate to SDG 3⁵⁰. Moreover, due to the interconnectedness of SDG 3 with other SDGs, a number of additional indicators are of relevance as well. While there is no official list in this regard, this includes approximately another 20 indicators contained in SDG 1 (such as social protection systems, number of disaster-related deaths), SDG 2 (such as prevalence of undernourishment, prevalence of stunting, prevalence of malnutrition), SDG 4, SDG 5 (such as proportion of women subjected to sexual violence,

with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all;

3.12. Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States;

3.13. Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

47. BUSES, K., and HAWKES, S., «Health in the Sustainable Development Goals: Ready for a Paradigm Shift?», 2015 *Globalization and Health*, vol. 11/13, pp. 1-8, p. 5.

48. STEPPING, K., and RIPPIN, N., «Goal 3: Ensure Healthy Lives and Promote Well-Being for All at All Ages», in GERMAN DEVELOPMENT INSTITUTE / DEUTSCHES INSTITUT FÜR ENTWICKLUNGSPOLITIK (DIE), *The Sustainable Development Goals of the Post-2015 Agenda: Comments on the OWG and SDSN Proposals*, Bonn 2015, p. 21.

49. SCOTT, A., and LUCCI, P., «Universality and Ambition in the Post-2015 Development Agenda: A Comparison of Global and National Targets», 2015 *Journal of International Development*, vol. 27, pp. 752-775, p. 753.

50. ECOSOC, Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, 19 February 2016, UN Doc. E/CN.3/2016/2/Rev.1, Annex IV, p. 39f.

proportion of girls and women who have undergone female genital mutilation), SDG 6 (such as proportion using safely managed drinking water services), SDG 11 (such as proportion of urban population living in slums, informal settlements or inadequate housing), and SDG 16 (such as conflict-related deaths).

The selected indicators have the purpose to monitor progress in the implementation of the SDG's targets. In theory, they are designed to function as management tools for states to develop policies in the respective areas and highlight where more efforts are still needed. However, already the selection of indicators was subject to a heated discussion. Originally more than 80 indicator candidates had been proposed to monitor the health-related targets⁵¹. Though this was narrowed down, their suitability has been partly contested⁵². Moreover, at present, a number of the selected health-related indicators are still not functional as they lack sound methodology and significant country coverage. Overall, only half of the proposed indicators in SDG 3 are based on a fully established methodology and sufficient data⁵³.

This leaves some targets of SDG 3 currently without any functioning indicators. For example, with regard to Target 3.8. (UHC), the two indicators proposed⁵⁴ either have an untested or no methodology or lack sufficient data sets. Similarly, also Target 3.4.'s indicators⁵⁵ – aiming at the reduction of mortality with regard to non-communicable diseases and the promotion of mental health – lack sufficient data for regions outside of

51. Leadership Council of the Sustainable Development Solutions Network, «Indicators and a Monitoring Framework for the Sustainable Development Goals – Launching a Data Revolution for the SDGs» (Draft March 2015).

52. See, for example, the letter sent by more than 300 organisations regarding the change of one of the UHC indicators from «Fraction of the population protected against catastrophic/impoverishing out-of-pocket health expenditure» to «Number of people covered by health insurance or a public health system per 1000 population», pointing out that the link of this indicator with «health insurance coverage» casts doubts on collected data due to no universal definition of health insurance and what it covers or not. See KAMAL-YANNI, M., and MARRIOTT, A., «Last minute change to the UHC indicators for the SDGs is raising alarm bells!», 7 March 2016, available at <http://www.globalhealthcheck.org/?p=1854>.

53. This is based on a document compiled by the Secretariat regarding the classification of the SDG indicators into three tiers, available at <http://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-03/Provisional-Proposed-Tiers-for-SDG-Indicators-24-03-16.pdf>.

54. 3.8.1. «Coverage of essential health services»; 3.8.2. «Number of people covered by health insurance or a public health system per 1,000 population».

55. 3.4.1. «Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease»; 3.4.2. «Suicide mortality rate».

Europe⁵⁶. Furthermore, as discussed below in Section 4.c., the suitability of some indicators to function simultaneously as human rights indicators is strongly contested⁵⁷.

The indicators will primarily be monitored by the WHO, which serves as the lead agency in SDG 3 (see also next Section).

3. THE ROLE OF THE WORLD HEALTH ORGANIZATION AS THE LEAD AGENCY IN SDG 3

The WHO has proved essential in forming the new health and health-related targets of the SDGs⁵⁸. On the one hand, the WHO played an important role in formulating the new SDG targets related to health. This is particularly evident with regard to UHC (Target 3.8.) which has been on its agenda since 1978⁵⁹. Though international focus for UHC for a long time remained modest, the World Health Assembly (WHA) of the WHO remained dedicated to embedding it within international development policy. By 2005, a resolution was adopted calling upon member states to «plan the transition to universal coverage of their citizens so as to contribute to meeting the needs of the population for health care and improving its quality, to reducing poverty, and to attaining international agreed development goals.»⁶⁰ This managed to bring all important development actors, particularly the WB, on board⁶¹, and contributed to the shift to incorporate UHC as an overarching objective in the SDGs⁶².

56. Provisional Proposed Tiers for Global SDG Indicators (24 March 2016), available at <http://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-03/Provisional-Proposed-Tiers-for-SDG-Indicators-24-03-16.pdf>.

57. See particularly FN 125 *et seq.*

58. See generally also MCINERNEY-LANKFORD, S., «International Development Actors and Human Rights», in LANGFORD, M., SUMNER, A., and YAMIN, A.E. (eds.), *The Millennium Development Goals and Human Rights – Past, Present and Future*, New York, 2013, pp. 160-207, p. 175.

59. FREY, A., «Introduction: Positioning Universal Health Coverage in the Post-2015 Development Agenda», 2015 Washington International Law Journal, vol. 24, no. 3, pp. 419-435, p. 428.

60. World Health Assembly, *Sustainable Health Financing, Universal Coverage and Social Health Insurance*, WHA 58/2005/REC/1, 25 May 2005.

61. FREY, A., «Introduction: Positioning Universal Health Coverage in the Post-2015 Development Agenda», 2015 Washington International Law Journal, vol. 24, no. 3, pp. 419-435, p. 428; World Bank Group President Jim Yong Kim's Speech at World Health Assembly, «Poverty, Health and the Human Future», 21 May 2013; WHO/World Bank, «Tracking Universal Health Coverage – First Global Monitoring Report», 2015.

62. As formulated by the Director-General of the WHO, Dr. Margaret Chan, in 2012: «UHC is the single most powerful concept that public health has to offer ...the

Moreover, in the drafting phase, the WHO also put focus on the fact that greater emphasis was needed on framing the health objective from the perspective of «means», and thereby *inter alia* understanding health as a human right⁶³ and as a result of equity⁶⁴. As discussed in Section 4.c. in more detail, where this concerned its primary objective of achieving UCH this was partly met with success.

Additionally, the WHO has been a key actor of the monitoring process of the health-related MDGs since 2008⁶⁵. With regard to the SDGs, the importance of monitoring has received new attention. It is thus not surprising that the WHO has remained a central corner stone to this process and assumed the lead agency position in this regard. Furthermore, for reporting on SDG progress, the WHO depends on close collaboration with other agencies, including UNICEF, the United Nations Populations Fund (UNFPA), the United Nations Office on Drugs and Crime (UNODC), UNAIDS, and the WB⁶⁶.

Finally, also with regard to monitoring SDG 3 «at the goal level» – *i.e.* ensuring healthy lives and promoting well-being for all at all ages – the WHO assumes a particular role. In this regard, an indicator of «healthy life expectancy» has been suggested, though still met with challenges concerning the availability of data⁶⁷. With regard to the state of «well-being», a reliable monitoring methodology is still under development⁶⁸.

In light of the dominating role the WHO has had during the drafting

umbrella concept that demands solutions to the biggest problems facing health systems ... the anchor for WHO.»

63. Note that the WHO's preamble already recognizes the right to health as a «fundamental right» which shall be ensured on a non-discriminatory basis: «The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social conditions.», Constitution of the World Health Organization, 22 July 1946, 14 UNTS 185.
64. WHO Discussion Paper, Positioning Health in the Post-2015 Development Agenda, October 2012.
65. World Health Assembly, Resolution WHA61.18: Monitoring of the achievement of the health-related Millennium Development Goals, 24 May 2008.
66. This can also be seen in the Secretariat's document on who will survey data regarding SDG 3's indicators, available at <http://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-03/Provisional-Proposed-Tiers-for-SDG-Indicators-24-03-16.pdf>.
67. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 10.
68. WHO, *Health in 2015 – From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals*, Geneva 2015, p. 11, explaining that self-reported well-being still poses many problems for reliable data gathering, particularly in light of often diverging understandings of «well-being» and its relation to health.

process, and will continue to have during the monitoring process, its role in contributing to a rights-based understanding of SDG 3 can therefore not be underestimated. As discussed below in Section 4.c., it has so far not been shy to vocally criticize flawed indicators. In this sense, its role in monitoring the selected indicators is indispensable for identifying underlying issues which raise human rights concerns.

4. SDGS AND HUMAN RIGHTS – A RIGHT TO GOOD HEALTH AND WELL-BEING?

The failure of the MDGs to factor in legal standards pertaining to economic and social rights was pointed out as one of their shortcomings⁶⁹. However, at latest since the 2010 Summit on the Millennium Development Goals, human rights have been realized as mutually reinforcing and essential for achieving (sustainable) development⁷⁰. The link between development goals and human rights is important as it transfers policy commitments by the international community into a legally enforceable set of rights for individuals⁷¹. In contrast, where the link is not made, there is a risk of overlooking the meaning of «human rights entitlements» in the context of development⁷². In light of this recognition, the 2030 Agenda for Sustainable Development and the SDGs have been firmly «grounded in the Universal Declaration of Human Rights [...] [and] international human rights treaties»⁷³. Thus, the Agenda is to be implemented «in a

69. OHCHR, Claiming the Millennium Development Goals: A Human Rights Approach, 2008, UN Doc. HR/PUB/07/3, p. 4; DARROW, M., «The Millennium Development Goals: Milestones or Millstones? Human Rights Priorities for the Post-2015 Development Agenda», 2012 Yale Human Rights and Development Journal, vol. 15, issue 1, pp. 55-127, p. 60.

70. UNGA Res. 65/1, Keeping the promise: united to achieve the Millennium Development Goals, 19 October 2010, UN Doc. A/RES/65/1, *inter alia* paras. 13, 23, 53, 55.

71. See similarly DARROW, M., «The Millennium Development Goals: Milestones or Millstones? Human Rights Priorities for the Post-2015 Development Agenda», 2012 Yale Human Rights and Development Journal, vol. 15, issue 1, pp. 55-127, p. 57, arguing that global summit commitments alone are insufficient.

72. See also WILLIAMS, C., BLAIKLOCK, A., «Human Rights Discourse in the Sustainable Development Agenda Avoids Obligations and Entitlements – Comment on “Rights Language in the Sustainable Development Agenda: Has Rights to Health Discourse and Norms Shaped Health Goals?”», 2016 International Journal of Health Policy Management, vol. 5, no. 6, pp. 387-390, p. 388, pointing to the trend of current neoliberal political agendas to encourage the private business sector to play a large role in achieving the SDGs, while at the same time attempting to weaken their obligations by avoiding the proper recognition of human rights obligations.

73. UNGA Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1, para. 10.

manner that is consistent with the rights and obligations of States under international law» and in recognition of the «responsibilities of all States [...] to respect, protect and promote human rights and fundamental freedoms for all, without distinction of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, disability or other status.»⁷⁴

In order to assess to which extent this programmatic formulation is met, the following will first assess to which extent the human right to health can be traced within SDG 3 (Section 4.a.). Owed to lack of explicit mentioning of the right to health, Section 4.b. will detail the normative content of the human rights standard, based on selected examples of implementation, in order to provide a basis for measuring to which extent this content is matched with the policy standards contained in SDG 3 (Section 4.c.).

a. HUMAN RIGHTS AND SDG 3

As pointed out above, the overwhelming majority⁷⁵ of SDG targets are not explicitly framed in human rights terms. However, the OHCHR has pointed out that most targets nevertheless reflect the content of corresponding human rights standards⁷⁶. Also with regard to Goal 3 there is no specific mention of the right to health. Notably, Goal 5 (gender and equality) contains the only specific health rights reference in Target 5.6. («sexual and reproductive health and reproductive rights»)⁷⁷. This has been pointed out as a huge success and is owed to the continuous efforts of its advocates⁷⁸.

74. UNGA Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1, paras. 18-19.

75. As some of the exceptions, the preamble mentions the right to safe drinking water (para. 7), and the right to development (para. 35). Goal 5 (gender equality) emphasizes reproductive rights and to give women equal rights to economic resources. UNGA Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1.

76. OHCHR Position Paper, Transforming Our World: Human Rights in the 2030 Agenda for Sustainable Development, available at <http://www.ohchr.org/Documents/Issues/MDGs/Post2015/HRAndPost2015.pdf>.

77. UNGA Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1, Goal 5, Target 5.6.

78. See *inter alia* RUSHTON, S., «Health Rights and Realization – Comments on ‘Rights Language in the Sustainable Development Agenda: Has Right to Health Discourse and Norms Shaped Health Goals?’», 2016 International Journal of Health Policy Management, vol. 5, no. 5, pp. 341-344, p. 343.

The long recognized human rights-based approach to health-related policies⁷⁹ has been realized through particular linkages of the SDG targets with the right to life (*inter alia* Article 6 ICCPR), the right to health (*inter alia* Article 12 ICESCR), the special protection for mothers and children (*inter alia* Article 10 ICESCR, but also in part in the Convention on the Rights of the Child (CRC) and the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW)), and the right to enjoy the benefits of scientific progress and its application (*inter alia* Article 15 ICESCR). This is also in line with the approach by the Committee on Economic, Social and Cultural Rights (CESCR) in General Comment 14 on the Right to the Highest Attainable Standard of Health, emphasizing the interlinkage of the right to health with several other human rights:

«The right to health is closely related to and dependent upon the realization of other human rights, as contained in the International Bill of Rights, including the rights to food, housing, work, education, human dignity, life, non-discrimination, equality, the prohibition against torture, privacy, access to information, and the freedoms of association, assembly and movement. These and other rights and freedoms address integral components of the right to health.»⁸⁰

Still, in light of the absence of the explicit mentioning of the right to health and difficulties associated with the implementation of the right to health as a social right⁸¹, the question how far the policy standards of good health and the human rights standard diverge arises. In order to apply a human rights lens to SDG 3, the following sketches out the core content of the right to health, particularly as confirmed in application by regional human rights monitoring bodies, *i.e.* the European Court of Human Rights (ECtHR), the African Commission on Human and Peoples' Rights and the Inter-American system. This provides insight into which legal entitlements have been recognized, and thereby constitutes the underlying framework to measure whether and how the policy standards transpose these justiciable elements.

79. See, *e.g.*, FORMAN, L., OOMS, G., and BROLAN, C.E., «Rights Language in the Sustainable Development Agenda: Has Right to Health Discourse and Norms Shaped Health Goals?», 2015 International Journal of Health Policy Management, vol. 4, no. 12, pp. 799-804, p. 799.

80. Para. 3, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

81. See also BINDER, C., HOFBAUER, J.A., PIOVESAN, F., STEINER, A., and STEINER, E., eds., *Social Rights in the Case Law of Regional Human Rights Monitoring Institutions*, Antwerp *et al.* 2016, pp. 531.

b. GOOD HEALTH AND WELL-BEING FOR ALL THROUGH
A HUMAN RIGHTS LENS – OVERVIEW OF NORMATIVE
CONTENT AND EXAMPLES OF IMPLEMENTATION

The right to health is protected in a number of international and regional human rights instruments, particularly the ICESCR (Article 12)⁸². With regard to rights contained in the ICESCR, Article 2 on the nature of obligations of state parties is particularly relevant. In this sense, state parties are

«(...) to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of [...] available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.»⁸³

Aside from minimum core obligations inherent in each of the rights, rights contained in the ICESCR are therefore subject to «progressive realization» (see also below under 4.c. in more detail)⁸⁴.

The legal enforceability and justiciability of economic, social and

82. International Covenant on Economic, Social and Cultural Rights, 16 December 1966, 993 UNTS 3:
Article 12

1. The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.

2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for:

(a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child;

(b) The improvement of all aspects of environmental and industrial hygiene;

(c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases;

(d) The creation of conditions which would assure to all medical service and medical attention in the event of sickness.

The right to health is also contained explicitly in Article 5(e)(iv) of the International Convention on the Elimination of All Forms of Racial Discrimination (1965); Article 24 of the Convention on the Rights of the Child (1989); Article 25 of the Convention on the Rights of Persons with Disabilities (2007); Article 12 of the Convention on the Elimination of All Forms of Discrimination Against Women (1979); Article 16 of the African Charter on Human and Peoples' Rights (1981); Article 10 of the Protocol of San Salvador to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (1988); and Article 11 of the European Social Charter (1996).

83. Art. 2 International Covenant on Economic, Social and Cultural Rights, 16 December 1966, 993 UNTS 3.

84. Paras. 1-10, CESCR General Comment 3: The Nature of States Parties' Obligations (Art. 2, Para. 1, of the Covenant), 14 December 1990, UN Doc. E/1991/23.

cultural (ESC) rights has increasingly been recognized. This also encompasses the right to health, which is realized both through the exercise of civil and political rights and ESC rights⁸⁵. Though there have so far been no individual communications on the right to health decided by the CESCR⁸⁶, there is some jurisprudence by regional human rights monitoring institutions available. Some of the underlying currents which can be discerned therefrom reflect the core obligations of the right to health as identified also by the CESCR in its most detailed interpretation on the substance of the legally enforceable right to health in General Comment 14 (2000)⁸⁷.

In this vein, the «right to health contains both freedoms and entitlements», namely –as regards the freedoms– «the right to control one’s health and body, including sexual and reproductive freedom, and the right to be free from interference, such as the right to be free from torture, non-consensual medical treatment and experimentation». In contrast, «the entitlements include the right to a system of health protection which provides equality of opportunity for people to enjoy the highest attainable level of health.»⁸⁸

While the right to freedom (e.g. of choice) guarantees individuals the right to be free from any sort of external influence and thus requires the least action by states, basic health entitlements oblige states to take certain steps necessary⁸⁹. Both aspects – freedoms and entitlements – have been confirmed in the case law of human rights monitoring bodies. For example, the ECtHR found that inadequate detention conditions as a

85. BINDER, C., HOFBAUER, J.A., PIOVESAN, F., STEINER, A., STEINER, E., eds., *Social Rights in the Case Law of Regional Human Rights Monitoring Institutions*, Antwerp et al. 2016, pp. 531, pp. 22, 91, 33, 453.

86. The Optional Protocol of the ICESCR foreseeing individual complaints only came into force on 5 May 2013. So far, four complaints have been decided, three of them concerning social security rights. Currently, one case (No. 4/2014) concerned with Art. 12(1)(2.d) ICESCR (on non-consensual medical treatment and lack of appropriate and timely medical care) and one case (No. 7/2015) concerned with Arts. 2, 6, 7 and 12 ICESCR (on access to complementary compensation established by collective bargaining agreement) are pending.

87. CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

88. Para. 8, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

89. MOSISSA, G.A. «Ensuring the Realization of the Right to Health Through the African Union (AU) System: A Review of Its Normative, Policy and Institutional Frameworks», in TOEBES, B., FERGUSON, R., MARKOVIC, M.M., and NNAMUCHI, O., eds., *The Right to Health – A Multi-Country Study of Law, Policy and Practice*, The Hague, 2014, pp. 43-96, pp. 59-60.

systemic issue within a state could raise health concerns in connection with Article 3 European Convention on Human Rights (ECHR) (prohibition of torture)⁹⁰. Also medical treatments without the informed consent of the person were found to raise an issue under Article 3 and Article 8 ECHR (right to privacy)⁹¹.

With regard to the entitlements, and owed *inter alia* to the varying predispositions of individuals and preconditions of a state's available resources, jurisprudence focuses particularly on the fact that the right to health must be understood as a «right to the enjoyment of a variety of facilities, goods, services and conditions necessary for the realization of the highest attainable standard of health.»⁹² This is considered under the cross-cutting principle of non-discrimination and equal treatment, which includes emphasis on eliminating inequalities by taking measures to promote the health of women, children and adolescents, older persons, persons with disabilities, and indigenous peoples⁹³. In line with this, it has been pointed out that while there is no obligation for states to set up a particular health care system or to grant certain types of social security benefits, once such a system has been established it has to comply with certain standards, particularly the principle of non-discrimination. Hence, as confirmed in *Cyprus v Turkey* by the ECtHR, where health care has been made available to the general population but has been denied to particular groups or persons, this can amount to a violation of Article 2 ECHR (right to life)⁹⁴. The African Commission on Human and Peoples' Rights emphasized in this regard that the obligation of states— though dependent on the state's available resources —is under even stricter specifications of non-discrimination with regard to persons with special needs or vulnerable groups⁹⁵. Moreover, as pointed out by the Inter-American Court of Human Rights, this generally entails a positive obligation of states to «create an appropriate legal framework to establish the standards of treatment and hospitalization to be complied

90. See, e.g., *Ananyev and Others v Russia*, ECtHR, App. Nos. 42525/07 and 60800/08, Judgment of 10 January 2012.

91. See, e.g., *V.C. v Slovakia*, ECtHR, App. No. 18968/07, Judgment of 8 November 2011.

92. Para. 9, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

93. Paras. 18-27, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

94. *Cyprus v Turkey*, ECtHR (GC), App. No. 25781/94, Judgment of 10 May 2001, para. 219. See also, e.g., *Gaygusuz v Austria*, ECtHR, App. No. 17371/90, Judgment of 16 September 1996.

95. *Purohit and Moore v The Gambia*, AfCHPR, Comm. No. 241/2001, 29 May 2003, para. 84.

with by health care institutions.»⁹⁶ In this sense, it also follows that it has been confirmed that when a state bears direct responsibility for the health problem⁹⁷ or when persons are under the direct control and responsibility of a state⁹⁸, e.g., as detainees, states are obliged to provide for adequate medical care⁹⁹.

In order for states to comply with their obligations regarding the right to health, Article 12(2) ICESCR non-exhaustively lists examples where state action should be taken. In accordance with General Comment 14¹⁰⁰, these can be understood as the following specifications of the right to health:

- The right to maternal, child and reproductive health;¹⁰¹
- The right to healthy natural and workplace environments;¹⁰²
- The right to prevention, treatment and control of diseases;¹⁰³
- The right to health facilities, goods and services¹⁰⁴.

96. *Ximenes-Lopes v Brasil*, IACtHR, Judgment on Merits, Reparations and Costs, 4 July 2006, para. 98.

97. See, e.g., *Burdov v Russia*, ECtHR, App. No. 59498/00, Judgment of 7 May 2002; *Oyal v Turkey*, ECtHR, App. No. 4864/05, Judgment of 23 March 2010.

98. See, e.g., *Mouisel v France*, ECtHR, App. No. 67263/01, Judgment of 14 November 2002; *Khudobin v Russia*, ECtHR, App. No. 59696/00, Judgment of 26 October 2006; *Media Rights Agenda & Others v Nigeria*, AfCHPR, Comm. Nos. 105/93, 128/94, 130/94, 152/96, 31 October 1998.

99. See for further reference concerning the ECtHR, e.g., BINDER, C., and SCHOBESBERGER, T., «The European Court of Human Rights and Social Rights – Emerging Trends in Jurisprudence», 2015 Hungarian Yearbook of International and European Law, pp. 51-70.

100. Paras. 14-17, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

101. For example, in *Artavia Murillo et al. («in vitro fertilization») v Costa Rica*, IACtHR, Judgment on Preliminary Objections, Merits, Reparations and Costs, 28 November 2012, para. 146, the IACtHR recognized that the right to private life encompassed reproductive autonomy and access to reproductive health services, including access to the necessary technology to exercise such rights.

102. For example, in *Budayeva and Others v Russia*, it was found by the ECtHR that it was part of the authorities' obligations to inform the public about, e.g., inherent risks stemming from the surroundings/environment to ensure the effective protection of the citizens concerned. *Budayeva and Others v Russia*, ECtHR, App. Nos. 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, Judgment of 20 March 2008, para. 152. On risks related to workplace environments see also, e.g., *Vilnes and Others v Norway*, ECtHR, App. Nos. 52806/09 and 22703/10, Judgment of 5 December 2013; *The Social and Economic Rights Action Centre & the Centre for Economic and Social Rights (SERAC) v Nigeria*, AfCHPR, Comm. No. 155/96, 27 October 2001.

103. See, e.g., *Khudobin v Russia*, ECtHR, App. No. 59696/00, Judgment of 26 October 2006.

104. See, e.g., *Purohit and Moore v The Gambia*, AfCHPR, Comm. No. 241/2001, 29 May 2003.

Finally, there are three levels of state obligations with regard to the right to health: the obligations to *respect*, *protect* and *fulfil*¹⁰⁵. The extent to which these obligations must be met is dependent on the availability of resources and on what is understood to constitute core obligations of the right to health. In line with jurisprudence and General Comment 14¹⁰⁶, the core obligations encompass *inter alia* for states:

- to ensure the right of access to health facilities, goods and services on a non-discriminatory basis, especially for vulnerable or marginalized groups;¹⁰⁷
- to ensure access to the minimum essential food;¹⁰⁸
- to ensure access to basic shelter;¹⁰⁹
- to provide essential drugs;¹¹⁰
- to ensure reproductive, maternal and child health care;¹¹¹
- and to provide immunization against the major infectious diseases¹¹².

In this regard, it is therefore evident that the core obligations of the

105. As summarized in General Comment 14: «The obligation to respect requires States to refrain from interfering directly or indirectly with the enjoyment of the right to health. The obligation to protect requires States to take measures that prevent third parties from interfering with article 12 guarantees. Finally, the obligation to fulfil requires States to adopt appropriate legislative, administrative, budgetary, judicial, promotional and other measures towards the full realization of the right to health.» Para. 33, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

106. Paras. 43-45, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

107. See, e.g., *Mehmet Şentürk and Bekir Şentürk v Turkey*, ECtHR, App. No. 13423/09, Judgment of 9 April 2013; *Ximenes-Lopes v Brasil*, IACtHR, Judgment on Merits, Reparations and Costs, 4 July 2006.

108. *Malawi African Association & Others v Mauritania*, AfCHPR, Comm. Nos. 54/91, 61/91, 98/93, 164-196/97, 210/98, 11 May 2000.

109. See, e.g., *The Social and Economic Rights Action Centre & the Centre for Economic and Social Rights (SERAC) v Nigeria*, AfCHPR, Comm. No. 155/96, 27 October 2001; *Sudan Human Rights Organisation & Centre of Housing Evictions and Human Rights (COHRE) v Sudan*, AfCHPR, Comm. Nos. 279/03-296/05, 27 May 2009.

110. Note, however, that «essential» drugs do not include experimental drugs, see *Hristozov and Others v Bulgaria*, ECtHR, App. Nos. 47039/11 and 358/12, Judgment of 13 November 2012. On the other hand, that the shortage of medicine can constitute a violation of the right to health was found in *Free Legal Assistance Group & Others v Zaire*, AfCHPR, Comm. Nos. 25/89, 47/90, 56/91, 100/93, 4 April 1996, para. 47.

111. See above FN 101.

112. Paras. 43-44, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

right to health are strongly intertwined with other human rights and that in many regards the right to health can even be seen as a «prerequisite to all other human rights»¹¹³. As demonstrated in Section 1, the interlinkage of health with other areas is also evident in the SDGs, and the health objective thus has strong ties, *e.g.*, with SDG 6 on safe drinking water. Still, as explained in the next Section, the question how to operationalize this from a rights-based perspective is still partly unanswered.

c. MEASURING THE RIGHT TO HEALTH IN THE SDGS

As illustrated above, there is significant agreement among international and regional human rights bodies on the core normative content of the right to health. Even though the health goal of the SDGs refrains from using explicit human rights language, there are indications that the right to health correlates to a certain extent with the standards put forth by the SDG targets. As pointed out above, explicitly this is only the case with regard to Target 5.6. and the therein contained sexual and reproductive health and reproductive rights.

Implicitly, it has been argued that this is particularly the case with regard to UHC (Target 3.8.) and its focus on the right to access healthcare services¹¹⁴. In detail, the target reads: «achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all». In terms of language, it therefore uses similarly concrete specifications as General Comment No. 14 by the CESCR in describing the content of UHC¹¹⁵. Furthermore, as explained above, among the entitlements of the right to health, the (non-discriminatory) access to health facilities, goods, and services is one of the core obligations of the right to health. While UHC is not in an official priority-position among SDG 3's targets, it is understood as the overarching objective as

113. *Egyptian Initiative for Personal Rights and INTERIGHTS v Egypt*, AfCHPR, Comm. No. 323/06, 16 December 2011, para. 261.

114. CHAPMAN, A.R., «The Problems with the Proposed Indicators for Monitoring Universal Health Coverage in the Sustainable Development Goals», *Health and Human Rights Journal* (Blog, 17 March 2016); BROLAN, C.E., HILL, P.S., and OOMS, G., «“Everywhere but not specifically somewhere”: a qualitative study on why the right to health is not explicit in the post-2015 negotiations», 2015 *BMC International Health and Human Rights*. Vol. 15, pp. 22-32, p. 29.

115. Para. 12, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4, listing as essential elements the (a) availability, (b) accessibility, (c) acceptability, and (d) quality of health facilities, goods and services.

it corresponds on a rights-based level with the focus of health litigation cases on ensuring equitable treatment in health matters¹¹⁶. Moreover, as it is clear that there is no obligation for states to have a particular health care system in place, the objective of UHC reinforces the long-term process of progressive realization by placing emphasis on the continuing obligation of states to move towards the full realization of the right to health through increasing the proportion of the population that enjoys access to health services¹¹⁷.

However, the right to health is wider than merely relating to access to health facilities, goods, and services. Thus, as pointed out elsewhere¹¹⁸, a major drawback of the SDGs in relation to how they incorporate health-related issues stems from their failure to specify what the *right to health* entails in detail, particularly with regard the underlying economic and social determinants. In particular, the lack of providing for how to inter-connect the right to health with other sectors constitutes a significant obstacle to transforming the policy objective of ensuring healthy lives and promoting well-being for all at all ages into human rights entitlements. While this is already noted above on a policy-level¹¹⁹, also from a rights-perspective the failure to ascribe any rights-based interest in a healthy environment or to access to minimum essential food or safe drinking water risks narrowing down SDG 3 in comparison to the normative content assigned to the right to health in jurisprudence in this regard¹²⁰. Thus, both the ECtHR and African Commission on Human and Peoples' Rights have linked the right to health with other rights, such as the right to be free from torture or the right to life¹²¹, and particularly drawn attention to the

116. See, *e.g.*, the cases cited above in FNs 94-96, 107.

117. CHAPMAN, A.R., «Evaluating Universal Health Coverage as a Sustainable Development Goal», Health and Human Rights Journal (Blog, 2 September 2015); para. 31, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

118. RUSHTON, S., «Health Rights and Realization – Comments on “Rights Language in the Sustainable Development Agenda: Has Right to Health Discourse and Norms Shaped Health Goals?”», 2016 International Journal of Health Policy Management, vol. 5, no. 5, pp. 341-344, p. 343.

119. See above FN 47.

120. Cf. RUSHTON, S., «Health Rights and Realization – Comments on “Rights Language in the Sustainable Development Agenda: Has Right to Health Discourse and Norms Shaped Health Goals?”», 2016 International Journal of Health Policy Management, vol. 5, no. 5, pp. 341-344, p. 343; OOMS, G., *et al.*, «Universal Health Coverage Anchored in the Right to Health», 2013 Bulletin of the World Health Organization, 91:2-2A.

121. See, *e.g.*, above-cited cases *Ananyev and Others v Russia*, ECtHR, App. Nos. 42525/07 and 60800/08, Judgment of 10 January 2012 regarding Article 3 ECHR; *Cyprus v*

link between the right to health and the right to be protected against severe cases of environmental pollution¹²².

Aside from UHC, also the other targets contained in SDG 3 show some correlation to the normative content of the right to health and give some quantitative guidance on how far states must go to comply with their obligations. Thus, the focus on maternal, child and reproductive health, or on the combatting of communicable diseases –with global reduction targets– will only be achievable through the parallel reduction of inequity among parts of the population¹²³. However, in terms of steps to take to reach these targets, the lack of use of rights-based language leaves the question of legal entitlements and accountability –particularly from a human rights perspective– unanswered¹²⁴.

Another point may be made with regard to the chosen indicators in SDG 3. Previously, there have been attempts to define human rights indicators to measure the progressive realization of the right to health¹²⁵. It has been argued that such indicators supplement the picture on how the right to health is enjoyed in a particular national context and monitor how certain benchmarks/dimensions of the right are met over time¹²⁶. This is particularly the case where, firstly, «they correspond, with some precision, to a right to health norm.»¹²⁷ Secondly, the respective indicators

Turkey, ECHR (GC), App. No. 25781/94, Judgment of 10 May 2001 regarding Article 2 ECHR.

122. See, e.g., *López Ostra v Spain*, ECtHR, App. No. 16798/90, Judgment of 9 December 1994; *Guerra and Others v Italy*, ECtHR (GC), App. No. 14967/89, Judgment of 19 February 1998; *Tătar v Romania*, ECtHR, App. No. 67021/01, Judgment of 27 January 2009; *The Social and Economic Rights Action Centre & the Centre for Economic and Social Rights (SERAC) v Nigeria*, AfCHPR, Comm. No. 155/96, 27 October 2001.

123. With a focus on children's rights, see, e.g., RASANATHAN, J.K., MASON MEIER, B., and RASANATHAN, K., «Opportunities for Realizing the Child's Right to Health Under the SDGs», *Health and Human Rights Journal* (Blog, 22 September 2015).

124. WILLIAMS, C., and BLAIKLOCK, A., «Human Rights Discourse in the Sustainable Development Agenda Avoids Obligations and Entitlements – Comment on “Rights Language in the Sustainable Development Agenda: Has Rights to Health Discourse and Norms Shaped Health Goals?”», 2016 *International Journal of Health Policy Management*, vol. 5, no. 6, pp. 387-390, p. 388; WILLIAMS, C., «SDGs, Accountability, and the Right to Health: A New Series», *Health and Human Rights Journal* (Blog, 26 January 2016).

125. HUNT, P., and MACNAUGHTON, G., «A Human Rights-Based Approach to Health Indicators», in BADERIN, M., and MCCORQUODALE, R., eds., *Economic, Social and Cultural Rights in Action*, Oxford, 2007, pp. 303-336.

126. HUNT, P., and MACNAUGHTON, G., «A Human Rights-Based Approach to Health Indicators», in BADERIN, M., and MCCORQUODALE, R., eds., *Economic, Social and Cultural Rights in Action*, Oxford, 2007, pp. 303-336, pp. 307-308.

127. ECOSOC, Report of the Special Rapporteur on the right of everyone to the enjoyment

must be «disaggregated by at least sex, race, ethnicity, rural/urban and socio-economic status»¹²⁸. And thirdly, «they are supplemented by additional indicators that monitor five essential and interrelated features of the right to health»¹²⁹, namely a national health strategy plan, the participation of individuals and groups in the formulation of health policies and programmes, access to health information as well as confidentiality of personal health data, international assistance and cooperation of donors and accessible and effective monitoring and accountability mechanisms. Hence, overall, the function of such human rights indicators is to «enhance the practice of accountability for health-related rights issues.»¹³⁰ One example of such a human rights indicator given by the former Special Rapporteur on Health is the proportion of births attended by skilled health personnel which was found to show a reasonably precise correspondence with the rights to health of mother and child as contained in Article 24(2)(a) («diminish infant and child mortality») and (d) («ensure appropriate pre-natal and post-natal health care for mothers») of the CRC¹³¹.

Similar may be stated with regard to how SDG 3's indicators translate human rights criteria into (monitoring) practice. When comparing these with the human rights-based indicators suggested by the former Special Rapporteur in 2006¹³², certain process and outcome indicators have been included which are based on a similar human rights-based methodology. For example, with regard to Targets 3.1. and 3.2. (reduce global maternal mortality and child mortality), identical process and

of the highest attainable standard of physical and mental health, Paul Hunt, 3 March 2006, UN Doc. E/CN.4/2006/48, para. 49(a).

128. ECOSOC, Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Paul Hunt, 3 March 2006, UN Doc. E/CN.4/2006/48, para. 49(b); See also para. 57, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

129. ECOSOC, Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Paul Hunt, 3 March 2006, UN Doc. E/CN.4/2006/48, para. 49(c), (i-v).

130. GRUSKIN, S., and FERGUSON, L., «Using Indicators to Determine the Contribution of Human Rights to Public Health Efforts», 2009 Bulletin of the World Health Organization, vol. 87, pp. 714-719, at p. 716.

131. ECOSOC, Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Paul Hunt, 3 March 2006, UN Doc. E/CN.4/2006/48, paras. 39ff.

132. ECOSOC, Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Paul Hunt, 3 March 2006, UN Doc. E/CN.4/2006/48.

outcome indicators to the Special Rapporteur's report have been adopted (mortality rates, proportional of birth attended by skilled health personnel)¹³³.

However, despite the use of a similar terminological methodology, known definitional differences between the proposed human rights indicators and the adopted health indicators have so far not been clearly addressed¹³⁴. Additionally, the link is not given with regard to all indicators, and particularly indicator 3.8.2. relating to the UHC target has been severely criticized by the WHO and more than 300 other organisations. As stated by the WHO, the indicator «Number of people covered by health insurance or a public health system per 1000 population» relates primarily to the «mere existence of affiliation to a health insurance scheme» but does not capture to which extent «people are protected against the financial consequences of paying for health services.»¹³⁵ It has been warned that this indicator fails to capture widening inequalities and can not be disaggregated by, e.g., income status¹³⁶. Finally, there is a notable absence of any so-called structural indicators –in terms of the human rights indicators proposed by the former Special Rapporteur this refers to indicators measuring the existence of laws, regulations and policies implementing the respective targets– to measure how the selected policy objectives transform on a systemic level.

In conclusion, it can therefore be seen that SDG 3 in part correlates with the normative content of the right to health. This is particularly the case with regard to the UHC parameters which largely correspond with the standards developed in health litigation cases. In other aspects, however, the right to health is not reflected as clearly among SDG 3's targets. Hence, especially the question how to implement the underlying economic and social determinants into legal entitlements remains unanswered. Concerns also arise regarding the adopted indicators as they in part are not suitable to function also as human rights indicators.

133. Indicators 3.1.1., 3.1.2, 3.2.1, 3.2.2, ECOSOC, Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, 19 February 2016, UN Doc. E/CN.3/2016/2/Rev.1, Annex IV.

134. GRUSKIN, S., and FERGUSON, L., «Using Indicators to Determine the Contribution of Human Rights to Public Health Efforts», 2009 Bulletin of the World Health Organization, vol. 87, pp. 714-719, at p. 717.

135. Provisional Proposed Tiers for Global SDG Indicators (24 March 2016), available at <http://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-03/Provisional-Proposed-Tiers-for-SDG-Indicators-24-03-16.pdf>.

136. KAMAL-YANNI, M., and MARRIOTT, A., «Last minute change to the UHC indicators for the SDGs is raising alarm bells!», 7 March 2016, available at <http://www.globalhealthcheck.org/?p=1854>.

5. CONCLUSIONS

The evolvement and concentration of health-related issues from three MDGs into one SDG – SDG 3 – has been met with both praise and criticism. SDG 3 is more comprehensive and more universal than the health-related targets contained in the MDGs. It encompasses new objectives, and most importantly, is conceptualized under the overarching objective of achieving UHC for all. Still, there are some gaps in SDG 3, particularly with regard to how to incorporate health outcomes in non-health-related sectors, *i.e.* how to approach the SDG objectives in an integrated manner, or how to equally invest in and work towards the implementation of all health-related targets and objectives. Thus, the narrowing down of health to one goal of 17 in comparison to its previous dominating role in the MDGs might result in scattered attention to singular targets and to a loss of focus. Still, it must not be forgotten that health constitutes an underlying determinant of all three pillars of sustainable development and thus plays an additional role in a number of further SDGs, particularly SDG 5 (gender and equality) and SDG 6 (clean water and sanitation).

A further drawback is the lack of use of rights-based language – aside from the mentioning of reproductive rights in Target 5.6. – and failure of SDG 3 to include explicit ties to the human right to health. While this applies to a number of SDG targets, in the context of the right to health it is particularly worrisome as the chosen approach with implicit linkages risks narrowing down the substantive content of the right to health to ensuring access to health facilities, goods and services in a non-discriminatory way (similar to the UHC target) and overlooks a number of further entitlements. In light of the debate on the justiciability of social rights, the vague and broad content ascribed in part to SDG 3 is owed to formulations which are neither specific in that they identify obligations of a state nor are they aligned with human rights entitlements. From a human rights perspective, this results in an accountability gap and threatens the access to effective judicial or other appropriate remedies at the national and international level for individuals (as also called for in General Comment 14 by the CESCR¹³⁷).

Finally, concerns arise with regard to the selected indicators and their suitability to function as human rights indicators to monitor the right to health through the fulfilment of SDG 3's policy objectives. The manner in which human rights are integrated into health policy is decisive for understanding how individuals can exercise their abovementioned

137. Para. 59, CESCR General Comment 14: The Right to the Highest Attainable Standard of Health (Article 12), 11 August 2000, UN Doc. E/C.12/2000/4.

legal entitlements with regard to the right to health. For the purpose of monitoring, it is therefore essential to not only monitor the level of policy compliance with the set objectives or the effectiveness of an implemented program but also to resort to appropriate indicators which are capable of tracking the realization of the right to health. As suggested by the former Special Rapporteur on Health, this necessarily should also include structural indicators capturing to which extent states have adopted laws, regulations and policies in accordance with their obligations arising from international and regional human rights instruments containing the right to health. Without the addition of such indicators, the link between the SDG's policy objectives and the sought human rights entitlements is at risk of remaining programmatic at best.

THOMSON REUTERS

Chapter 7: goal 4

SDG 4: Lifelong, inclusive and equitable education¹

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SUMMARY: 1. INTRODUCTION. 2. EDUCATION AS A BASIC SOCIAL INSTITUTION. 3. THE FORMAL EDUCATION TRADITION. 4. EMERGING NEW PERSPECTIVES. 5. THE CHALLENGES FACED BY THE SDGS. 6. THE GENDER FACTOR. 7. THE RESOURCE FACTOR. 8. CONTENT AND QUALITY FACTORS. 9. CONCLUSION: IMMEDIATE PRIORITIES AND LONG-TERM GOALS.

ABSTRACT:

In responding to SDG#4's call for inclusive, quality education for all, this chapter argues that greater attention needs to be paid to the points of delivery, especially the myriad of class-rooms in poorer communities where teachers, textbooks and facilities are rudimentary or even non-existent. The cost of meeting all the goals and standards called for in SDG#4 will be astronomical. Priorities have to be set. This chapter argues that the focus should be on (a) the quality and quantity of pre- and in-service teacher training, (b) the remuneration of teachers, (c) the use of low-cost, rural-accessible technologies (d) the mobilization of local communities in support of their schools and (e) government policies and financing that support these initiatives.

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1. INTRODUCTION

The normative focus of this chapter is defined in the following official SDG text. In order to focus readers, keywords have been highlighted in bold by this author.

Goal #4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. (That means to)

1. ensure that *all girls and boys complete free, equitable and quality primary and secondary education* leading to relevant and effective learning outcomes
2. ensure that all girls and boys have access to *quality early childhood development*, care and pre-primary education so that they are ready for primary education
3. ensure *equal access for all women and men to affordable quality technical, vocational and tertiary education*, including university
4. increase by x% the number of youth and adults who have relevant *skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship*
5. *eliminate gender disparities* in education and ensure equal access to all levels of education and vocational training for the vulnerable, *including persons with disabilities, indigenous peoples, and children in vulnerable situations*
6. ensure that all youth and at least x% of adults, both men and women, *achieve literacy and numeracy*
7. ensure all learners acquire *knowledge and skills needed to promote sustainable development*, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development
8. *build and upgrade education facilities* that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all
9. *expand by x% globally the number of scholarships for developing countries* in particular LDCs, SIDS and African countries to enrol in higher education, including vocational training, ICT, technical, engineering and scientific programmes in developed countries and other developing countries.

This goal and its nine associated objectives establish a comprehensive but daunting agenda calling for a massive additional commitment of human and material resources over the next fourteen years. On one hand the strength of the goal and of its specific objectives is that they are integrated into the comprehensive view of human development spelled out in the whole Agenda. On the other hand, at both the national and international levels, the huge human, fiscal and material investment needed to achieve SDG #4 must compete with many other political and financial priorities, most notably modern concepts of national and international security as well as the other priorities called for in the SDGs. The case for SDG #4 is reinforced, however, by the degree to which education is also integral to achieving many of the other goals and priorities enunciated in the SDGs. Contextual factors such as economic conditions, violent conflicts and environmental pressures are also extremely relevant factors influencing the implementation of SDG #4 as a strategy to prepare today for tomorrow's world. However, this chapter will not attempt to address the wider context of the global forces and the many other demands competing with education for limited resources. It will also not address the related much debated question of the global distribution of wealth across richer and poorer countries. Both topics involve too many complex ethical and geopolitical questions. This chapter will also not examine institutional implications such as those related to the fact that UNESCO and UNICEF are the focal points and lead agencies for the implementation of SDG #4. The reason is that these processes are just getting under way. The focus here is simply to examine the prospects and to define priorities for a feasible 2030 agenda for SDG #4 by identifying some strategies and markers that need to be in place in order to promote and track this major educational challenge.

This chapter is written with the following perspective in mind, namely the fact that, numerically, the majority of the world's formal education delivery points are the unknown numbers of rural and urban schools that suffer from one, and typically many, of the following deficiencies: (a) no, absent, poorly-paid or ill-trained teachers; (b) non-existent, rudimentary, crumbling or ill-repaired physical, especially sanitation, facilities; and (c) no, poor or antiquated textbooks². These conditions do not appear in international statistics, but are very visible on the ground at the proposed

2. See for example on education in India, PRITCHETT, Lant at al., *Capability Traps, The Mechanisms of Persistent Implementation Failure*, (Washington DC, Center for Global Development, Working paper #234, 2010 p.6 ff. Found at <http://www.cgdev.org/publication/capability-traps-mechanisms-persistent-implementation-failure-working-paper-234>.

points of delivery for the goal of the «lifelong, inclusive and equitable education» called for by SDG #4.

This chapter conceives education in the context of rights-based development. This means that education is both a human right in itself and an indispensable means of realizing other human rights. As an empowerment right, education is the primary vehicle by which economically and socially marginalized adults and children can lift themselves out of poverty and obtain the means to participate fully in their communities. Education also has a vital role in empowering women, safeguarding children from exploitative and hazardous labour and sexual exploitation, promoting human rights and democracy, protecting the environment, and controlling population growth. Increasingly, education is recognized as one of the best financial investments states can make. But the importance of education is not just practical: a well-educated, enlightened and active mind, able to wander freely and widely, is one of the joys and rewards of human existence³. Lastly the planning and process of education are and must always be directed to tomorrow's world⁴.

2. EDUCATION AS A BASIC SOCIAL INSTITUTION

In every society education is a complex of society-wide activities and institutions. No society has been known to neglect the education of its new members, even if the form and content of that formation might in the eyes of others be highly questionable as «good» education. This universal process, basic to every society, is also a highly diversified phenomenon. Every educational activity is characterized by its particular goals, formats and objectives, as well as by its access to the necessary resources and the effectiveness of its agents. It is a uniquely intentional exercise, in that the human beings involved, the agents, want sustained change to take place on the part of their target audience, be it the baby learning to drink from the breast or the nation wishing to establish free primary education. On the other hand much of human learning is also informal, in the sense that we acquire much of our knowledge, skills, behaviours and attitudes outside formal educational structures. This chapter, however, focuses on those formal structures that, whether private or public, are designed specifically

3. Right to education: scope and implementation: general comment 13 on the right to education (Art. 13 of the International Covenant on Economic, Social and Cultural Rights).

4. See for example; https://www.brookings.edu/wp-content/uploads/2016/05/Brookings_Skills-for-a-Changing-World_Advancing-Quality-Learning-for-Vibrant-Societies-3.pdf.

to educate or to train a target population. Their intentionality is implied in the word «designed» and involves some form of institutionalization.

All educational activities are a diversified composition of intended goals and objectives, implementation strategies, underlying values, physical and human resources as well as particular educational philosophies, not to mention powerful influential forces outside a system's control such as national histories and religious heritages, cultures, geographies and political priorities that are all equally complex and often hard to assess or to direct. It is therefore important to recognize that what happens within every education system is a sort of black box impacted by all these forces, both recognized and unknown that combine to produce particular outcomes. Thus, while social scientists might be able to show that in general increased funding improves the quality of education, simply increasing the funding does not assure a desired effect. There are many other forces at work. There is no guarantee that any particular new input will improve as planned or produce the desired end product. However, although SDG #4 addresses complex, highly diverse and evolving situations on the ground, the problems it faces and the goals and strategies it will turn to are largely not new. Most of them have already been and are still being tried in one form or another. Thus the implementation of SDG #4 can and must draw on extensive past wisdom.

Structurally all formal education involves actors and target populations. This implies a hierarchy. An agent, one who knows more, brings to the table or draws out something new on the part of the other, the target population, whether or not either the latter is a single person or a complex of persons. This hierarchy always implies some form of asymmetry. This asymmetry is a complex issue and is at the heart of any educational process. Ostensibly it is just a question of the agent knowing more than the prospective learner or target population. In practice the asymmetry is a more complex relationship of power and resources. This is especially challenging in the fields of international and cross-cultural education where the asymmetries are not only power and resources. They extend to cultural, economic, political and financial hierarchies. In most cases when such partnerships materialize, the needs and opportunities are rarely evenly correlated. Typically, in development activities, one of the partners is in need and the other has the resources to meet that need⁵. In some cases the need can be truly desperate or there can be other

5. See «Are we asking the right questions?» Catholic Agency For Overseas Development, Public Private Partnerships (PPPs) in International Development, March 2013. Also «Strategies and Capacity Building for Global Education» North-South Centre–European Centre for Global Interdependence and Solidarity.

incentives or considerations on the table. The bottom line is simply that these partnerships need to be scrutinized to ensure the needs of the weaker party are being met and are sustainable. Studies of such partnerships point to high transaction costs, long-term consequences, ambiguous liabilities, conflicts of interest, limited transparency and accountability, as well as limited technology and skills transfer. In the case of educational partnerships, this typically adds up to minimal sustainability or institutionalization of the intended benefits on the part of the intended beneficiaries. This problem of asymmetry is endemic to education aid.

One of the challenges facing all formal education is measuring its effectiveness. This is first a problem of choice of indicators. In the field of education the challenge is the need to measure achievement over the course of time, not just at the end of a given course or program. Basic to achieving SDG #4 is the need to measure access and equality for each of the indicators. Such measurements are required by SDG #4 not only in terms of, for example, gender, but also for «persons with disabilities, indigenous peoples and children in vulnerable situations». According to SDG #4.6 the assessment of achievement is to be measured in terms of reaching «the literacy and numeracy sufficient to participate in society». This basic requirement is further spelled out in SDG #4.7 in terms of acquiring the «knowledge and skills necessary to promote sustainable development.... human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development». This is obviously a huge agenda in itself, even for the most well-endowed primary and secondary schools in rich countries. One has only to sit in secondary schools in rural areas in most countries in the world to see how unrealistic such a teaching agenda would be, let alone trying to assess its effectiveness. To begin with each education system would need to re-conceptualize and scale achievement markers to correspond to the evolution of its education system over the next now only fourteen years. This calls for each system formulating what is feasible within that period by setting specific targets which include assessment and accountability mechanisms. This process of assessment is intrinsic to achieving each of the nine SDG #4 objectives outlined at the beginning of this chapter.

3. THE FORMAL EDUCATION TRADITION

Modern national systems have adopted a three tier, interdependent system of primary, secondary and tertiary education. Each level feeds students to the one above and relies on the one above to produce the

teachers it needs. Modern national systems share many characteristics and their commonalities permit students to move from one system to another, albeit governed by various rules and regulations. Literacy and numeracy are universal goals and denominators common to all national systems. Content is identified in terms of prescribed knowledge, skills, attitudes and behaviours and is distributed across curricula. Virtually all national systems use content to emphasize their unique national cultures and histories. Most educational systems are also directed towards the integration of youth into the social, political and economic life of the nation. This means that the implementation of SDG #4 can and must take into account, but also benefit from, these commonalities and the idiosyncrasies. One size, one process, one design does not fit all! This upgrading will be a special challenge when agents and intended beneficiaries come from different countries and cultures.

As illustrated above, education is an intentional process, one that prescribes means to an end. Traditionally education is seen as conveying the skills, knowledge, attitudes and behaviours necessary to participate in and give life to a given society. As also noted above education varies by society. In the context of the SDGs, SDG #4 is predicated on the need to eradicate global problems such as poverty and hunger. This calls for an appropriate series of common and localized goal-setting and strategies. This chapter argues that such goal-setting and strategies need to be determined in terms of the challenges faced at the delivery points in communities most in need. However such future planning needs to draw on the lessons of past development, calling for a sophisticated knowledge of the educational, strategies that have successfully enabled communities to escape poverty as well as those that have not aided or actually impoverished such communities⁶.

One characteristic of modern education, which is also called for in SDG #4, is cross-borders or international education. Individual scholars have long met with colleagues from other countries, facilitated by empires like Rome and Persia as well as across civilizations such as between Christianity and Islam. The conquest of one country by another was also usually followed by educational activities designed to change the newly subordinated societies. These processes known today as international education are now extensive, even between countries without shared political goals. Explicit in the whole SDG enterprise is

6. See KRISHNA, Anirudh; KRISTJANSON, Patti; RADENY, Maren; NINDO WILSON, «Escaping Poverty and Becoming Poor in 20 Kenyan Villages.» *Journal of Human Development*, 5, 2 July 2004.

the importance of global cooperation and partnerships between those with the needed resources and those without. Fortunately there is an abundance of research on past international education to guide the future endeavours. However, it cannot be just more of the same. The last sixty years of international education offer an ambiguous legacy without a clear bottom line. Educational partnerships have taken many forms and the asymmetries have often been a problem⁷. Too often partners in poorer countries feel that most benefits have gone to their partners in the richer countries. There are thus many lessons to be studied and profited from in order to ensure that the implementation of SDG #4 makes the best use of the international and domestic partnerships recommended frequently by the SDG agenda.

4. EMERGING NEW PERSPECTIVES

The most obvious new and highly significant characteristic incorporated into SDG #4 is the fact that education is seen as part of a truly comprehensive plan for global economic and political development not just for education alone. The SDG agenda is premised on the fact the modern society is changing and thus education needs to be geared to meeting the emerging needs and challenges. The SDGs are a major global agenda for a globalizing world, a world which increasingly realizes that whether it is disease, climate change, poverty or access to the internet, the effects have a global impact. Ebola and Zika are not just problems for developing countries. Economic and environmental migrants may not be refugees as such, but they cannot be ignored. All are affected and education systems have to respond. However, the cautionary tale is the fact that much of the thinking in the SDGs calling for global responses to modern problems was already mapped out in 2005 Report of the UN Secretary General, Kofi Annan, entitled *In larger freedom, towards development, security and human rights for all*⁸. The caution is of course the ongoing likelihood that the SDGs remain a top-down exercise that runs out of energy and impact before it reaches all but a handful of the delivery points, namely the world's neediest schools and the communities it is supposed to serve⁹.

7. *Paris Declaration on Aid Effectiveness, High Level Forum, Paris, March 2, 2005*, based on discussions among government ministers from developed and developing countries examines themes of ownership, partnerships, harmonization, alignment, results and mutual accountability.

8. UNGA, A/159/2005.

9. An excellent forward looking critique of the Millennium Development Goals, entitled *The Post-2015 Development Agenda* (henceforth AIV) was produced in 2011 by the

Other important forces creating new global perspectives are all the forms of modern communications. These technologies, messages and images have penetrated across the world, including into the world's education systems, albeit with vastly different degrees of access and impact. Given the incredible penetration of social media and other commercial products like Coca-Cola into the remotest regions of the world, educators need to ask how these and other emerging technologies can be used to improve education in those same regions of the world where access to the basics of education is so limited.

In practice, while the overall situation of so many urban and rural schools is that of being without the resources they need to function, there are also in many countries individual education projects that are finding sustainable success with relatively modest resources. Typically they have been able to combine fundraising in richer countries with technology and money transfers to enable poor but entrepreneurial local communities to set up schools, train teachers and supply them with the necessary equipment. These enterprises can energize the students who go on to perform better than their peers in other parts of the region. Unfortunately these are typically small enterprises. However, some like Bangladesh's BRAC have created sizeable education-plus systems that combine successfully primary, secondary and tertiary institutions of education¹⁰. How will their ideas and practices influence SDG #4?

While no longer new as such, human rights perspectives that emphasize self-help, economic and political emancipation are being incorporated into development planning. This framework defines basic education as a human right, namely that access to education is the right of all human beings and that this right embodies a legal obligation on governments to assure it to all those living within its borders. This obligation is formulated in the words of article #2 of the 1966 *UN Covenant on Economic, Social and Cultural Rights* now ratified by the vast majority of the world's states: «Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and cooperation, especially economic and technical, to maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.» The implications for education are spelled out

Dutch Advisory Council on International Affairs (AIV) which can be found at www.aiv.advice.nl Although it does not address education specifically, its general comments guided the conclusions of this chapter.

10. BRAC is a development organization founded in 1972, based in Bangladesh and committed to the empowerment of the poor. See <http://www.brac.net/>.

in other UN treaties and declarations, notably the *Universal Declaration for Human Rights*, Article #13 in the *Economic, Social and Cultural Rights Covenant* itself, as well as in the other major conventions such as those on the *Rights of the Child*, *Discrimination against Women*, and on the *Rights of Persons with Disabilities*. Moreover, the education prescribed is not just an empty formula that can be fulfilled routinely. SDG #4 sums up the required education as «inclusive and equitable quality education with lifelong learning opportunities for all». The rights-based approach calls for the participation in the planning and implementation of the intended beneficiaries both as measures of achievement and sustainability, and also as actors participating in the decisions and activities¹¹ that guide and promote their economic and political development.

Influenced by Amartya Sen and others the meaning of development as a whole has been refined to include basic freedoms and the capacity to participate in, notably, political freedoms and civil rights, economic emancipation, opportunities and fair labour markets, government transparency, personal security and social security. There is also a growing consciousness of the importance of global public goods, namely those goods that ought to be available to everyone, notably the climate, water and sanitation systems, disease control, international trade and financing, power grids, pollution controls, as well as peace and security. Some level of education is necessary to participate in those processes that affect a person's personal and family life. Typically this would be exercised through communities. The literature on the topic emphasizes the need to reach missing target groups, notably indigenous populations and persons with functional impairments who «make up 20% of the world's poor.»¹²

In the context of SDG #4, all of the above underlines the need for educational content at all levels that is commensurate with the needs, that is «the best interests,» of the children in the classroom. This is not an abstract or easily defined task. Both content and method need to prepare each child to participate in the society in which he or she is living. Thus in addition to literacy and numeracy, children need to be equipped with the social and civic knowledge as well as the skills necessary for their economic and political empowerment in their evolving societies. This is no small task but one of the essential building blocks for the type of peaceful communities that the SDGs envisage.

11. This was mapped out in 2006 by UN High Commissioner for Human Rights in the Document «Frequently asked questions on a Human Rights-Based to Development Cooperation.»

12. See AIV, 2011, p. 31.

5. THE CHALLENGES FACED BY THE SDGS

Among the major challenges faced by SDG #4 is what has been called the youth bulge, namely the fact that the current world youth population (ages 10-24) is estimated by the UNFPA to be 1.8 billion and rising. Nine out of ten of these youths live in developing countries, notably in sub-Saharan Africa where fertility is declining more slowly than elsewhere¹³. In other words the some 120 million young people reach working age every year come with few employment skills and find limited employment opportunities. In the neediest countries few are the education systems that can cope with these numbers, and few are the economies can absorb the youth in ways that enable them to find the resources needed to establish and support a family. Their ability to contribute to their respective economic and political communities is largely dependent on their educational achievement.

The case for the SDG Goal #4 is also based on basic education's inherent values to the individual and society, as well as on its being necessary for achieving many of the other goals. The challenge for the international aid community is to make sure that this is not, or seen to be, a utopian ideal, that is one that everyone might want but which will be unattainable in practice. Achieving lifelong, inclusive and equitable education for all persons on the planet can only be realized through new and very different geopolitical priorities and much more effective international partnerships. More of the same will not achieve the goals, as the very existence of the 2030 UN Agenda implies. However the solution is not just a question of politics and resources. Equally relevant are the ideas and principles that will define and drive the required education, and which will guide the aid and underlie the geopolitics. Among them are the ideas and principles that underpin in theory and in practice international aid for development and for education in particular. These principles are still awaiting the Copernican revolution that moves in practice the point of analysis from the international actors, their ideas, their plans and principles and their resources, to the local delivery points, their needs and their resources. This proposed change in perspective is not to argue that such a change is not already part of the current rhetoric, but to say that this rhetoric is still largely rhetoric when one looks at the structure of most major education aid projects from the perspective of the delivery points the projects were designed to serve and the assessment data available. Too many schools in needy regions suffer from one and typically many of the deficiencies listed earlier, namely (a) no, absent, poorly-paid or ill-trained teachers; (b)

13. See, for example, UNFPA Report found at <http://www.unfpa.org/swop>.

non-existent, rudimentary, crumbling or ill-repaired physical, especially sanitation, facilities; and (c) no, poor or antiquated textbooks. As yet we have no statistics to bring this information to the surface. This reality, especially in rural areas, is not reflected in the aggregated data collected and disseminated by public and private international agencies. Change here is crucial if the delivery point perspective and analysis are seen as vital to the assessment of SDGs #4. This also requires longitudinal studies of existing exceptions such as the successful rural schools built, managed and staffed by local communities¹⁴. Typically they illustrate the possibility and benefits of the local leadership and the buy-in required for such a Copernican revolution. They show different ways in which the necessary components can be brought together to assure a successful sustainable, community-accountable and responsible schools. They also illustrate alternative funding mechanisms where decisions on the use of funds are made on the ground not by the donors. However enabling current domestic and international structures and budgets that support education in the needy communities targeted by SDG #4 to adopt new models presents many challenges.

As indicated above, the output of most education activities depends on many inputs. Most importantly, an otherwise good system of inputs fails if the points of delivery are weak. One useful analogy is that of building a house. A house must be designed and built to fit a particular situation and budget. On the ground SDG #4 has therefore to be scaled down to specific physical locations, climates, cultures, building materials, available personnel, community engagement and buy-in, student aspirations and prospects, financial resources, government support etc. This is no easy task. They are all necessary inputs but anyone of them malfunctioning can undermine the sustainability of the end product, namely enabling the students to acquire, for example, the «relevant knowledge and skills for employment, decent work and entrepreneurship» (SDG #4.4).

The 2030 goals call for «sustainable» development. In general, today, sustainability emphasizes environmental sustainability. Equally important is institutional sustainability. This is utterly crucial for formal education. Its future growth depends on an economy and stable institutions that can support it. However the need for international resources is also crucial. Over the last sixty years much international education has been carried out through short term grants and partnerships, even as short as a year. Those who have worked within this system know the challenges. Grant-recipients have to come up with

14. For example Nyaka schools in S.W. Uganda see <https://www.nyakaschool.org/about.php>.

short-term results to obtain successive grants. Beneficiaries must seek funds within parameters set in a Brussels, a London or a Washington. When funds run out the external inputs in the form of personnel and other resources dry up and the project has to struggle on its own. Increasingly such projects are now being conceived in terms of sustainability, namely their capacity to flourish after the external inputs are withdrawn. This is not easy to achieve and depends on a project's initial design and its prospects for incorporation into existing local institutions and ongoing support from local sources such as community contributions and state subsidies. Such sustainability has been achieved in different countries and thus can be replicated if it is planned from the beginning and not left to chance. Either way the sustainability of an education system requires steady local resources, not just international remittances. In turn local resources call for an expanding local economy.

Another major challenge which was somewhat finessed by both the MDGs and the SDGs is that of accountability, namely who takes responsibility for achieving the goals¹⁵. Where does the buck stop? Responsibility and accountability are diffused across different institutions, typically domestic and international, public and private. The primary actors are national governments that are the duty bearers in the language of both the SDGs and the relevant human rights treaties. In particular they fund and administer national education systems. To respond to SDG #4, governments in the needy countries must find ways to adjust their budgets to allocate more money to education. Failing that they must turn to international sources¹⁶. Today most aid organizations, including UNICEF, UNDP and UNESCO have only limited funds to distribute, and are thus unable to change their consultant modus operandi in any significant way.

6. THE GENDER FACTOR

The 2030 World SDG agenda is replete with references to gender, notably by always spelling out girls and boys, as well as men and women. It also calls for equal access at all levels and to quality technical,

15. See MARTIN, J. PAUL, «The MDGs: How to Achieve Accountability,» *Cooperation South*, 2005, pp. 12-21. It argued that «The South needs to build its own network of dedicated development evaluators.»

16. See TOSTENSEN, Arne, «The Bretton Woods Institutions: Human Rights and the PRSPs,» Chapter 9 in SALOMON, Margot E. TOSTENSEN, Arne, VANDENHOLE, Wouter, Eds., *Casting the Net Wider: Human Rights and New Duty-Bearers.*, Intersentia, Antwerp-Oxford, 2007.

vocational and tertiary education (4.3). It calls for the elimination of all gender-disparities by 2030, «including persons with disabilities, indigenous peoples and children in vulnerable situations. Spelling out the role of gender is thus integral to the implementation of SDG #4. Thus it calls for equitable education (4.5) and notes that the education of girls and women differs from that for boys and men. One of the givens in education is the fact that culture plays a big role de facto, as, in addition to nature's physical gender-based distinctions, most societies» educational practices are typically deeply defined by each society's particular concept of gender roles. However, today, these roles are being re-defined by many forces ranging from the increasing numbers of women engaged in paid economic work and national political processes to the new ideas and images being disseminated through social and other media. If one sees education at all levels as needing to prepare women for a world that will inevitably be different from the one we know today, the education of women is a moving target. Equally important for SDG #4 is the fact that in most societies women are the main primary and secondary education deliverers.

7. THE RESOURCE FACTOR

Access to the planet's physical and human resources is unquestionably conditioned by the society in which one lives, even within the same country. Redressing this overall imbalance is beyond the scope of formal education. On the other hand, each system of education bears the marks of its access to the human and physical resources that it needs to do its job, namely to assure universal free, equitable and quality primary and secondary education for all boys and girls (SDG #4.1). This situation raises the question of distribution of wealth. The distribution of resources to the education of its citizens is primarily the obligation of government. Inevitably education must compete with other national priorities and the quality of the government institutions involved. At the moment the flow of wealth from rich to poor communities, whether or not it is across state boundaries, reflects good will rather than any sense of obligation. Inter-governmental development aid is still a matter of political choice, not legal obligation. Even family remittances reflect the goodwill of relatives in rich countries helping their relatives in poor countries. The UN Declaration on the Right to Development encourages international collaboration but there is no attempt to call such aid obligatory.

If one tries to look at the future human and physical requirements for free inclusive, universal primary and secondary education as well as the

access to scholarships called for by SDG #4, it is obvious that a major redistribution of wealth is needed. At the moment there are no designated duty-bearers for such aid, only potential humanitarian initiatives, some of which are successful but whose scale is far from what is needed. As it is extremely unlikely that rich countries will acknowledge any obligation to help poor countries, one must look at the potential of grassroots communities and how they can become effective political and economic actors. As noted above, there are a significant number of small education projects that enjoy strong grassroots support and have also been able to raise and use carefully additional funds and other resources from outside their community. The crucial indicators here are proven local initiative and competence. These initiatives are not recognized or measured in aggregated education data.

8. CONTENT AND QUALITY FACTORS

In addition to the appeals for quality education in SDG #4.4, 4.6, 4.7, multiple studies of education systems have identified how shortcomings in terms of physical facilities, teaching materials, pedagogy and teacher attitudes easily undermine the end product, namely the attainments of the students. Other studies underline the disconnect between classroom learning and the life of students outside the classroom. This is also true with respect to values and education which seeks to promote, for example, democracy in a society still organized on authoritarian principles. These sorts of quality and content disconnects are not easily measured. The SDGs, however, recognize clear required goals and thus indicators are needed to measure ongoing educational achievement.

Throughout the literature on education are data that show that the training and abilities of individual teachers is central to the assurance of quality and the improvement of schools. This has been very apparent in recent efforts to improve the quality of human rights teaching in schools «at the very margins of Indian society»¹⁷. In her study, Monisha Bajaj underlines the need for teaching training «that is appropriate, contextualised and engaging, incentivises participation and legitimizes both the message and messengers of human rights» as well as the more generic benefits with respect to the teachers' own perceptions of themselves and the out-of-classroom benefits to the surrounding community. As mentioned earlier, in both rural and urban areas in many parts of the

17. BAJAJ, Monisha, «Teaching to transform, transforming to teach: exploring the role of teachers in human rights education in India,» *Educational Research*, vol. 53,2, June 2011 pp. 207-221.

world, teacher absenteeism is a major problem. On the other hand in some rural communities, in the absence of other professionals, the local teacher often plays additional roles in the community, notably those of political adviser, ombudsman, adult educator and financial advisor, if not also of agricultural extension agent¹⁸. Such teachers set an example for the local implementation of the SDGs. Improved teacher training, however, is not likely to be achieved without major changes in both domestic and international budget priorities. In other words, the level of the various forms of buy-in by non-delivery point agents, from government, inter-governmental and non-governmental agencies, as well as commercial actors, will be an early way to measure the likely impact of SGD#4 and its associated targets.

9. CONCLUSION: IMMEDIATE PRIORITIES AND LONG-TERM GOALS

Like the car, at its delivery points successful education depends on the cumulative quality and effectiveness of *all* parts of the system, notably the teachers, the facilities and the resources available to them, as well as the organizational and administrative support systems. The analysis in this chapter leads to one basic question, namely: how are the delivery points to receive the priority they need?

While the answers depend on local political and financial realities, it is possible to argue for and to set some priorities. Rather than inventing new processes, priority needs to be given to existing domestic private and public education systems that work, to refining international development aid partnerships, to effective national and local government action to create economic incentives and opportunities for graduates at all levels, to gender equality at all levels, to rights-based approaches, and to the skills needed to assure for peaceful multicultural and multi-religious communities.

More specifically a strategy to achieve SDG #4 by 2030 requires:

- a) The policy and *programmatic integration* of the delivery points of SDG #4 around poverty reduction and ending hunger in communities where these are needed.
- b) The mobilization, adaptation and popularization of low-cost *visual*,

18. Such a rural teacher in time of famine is brilliantly illustrated in Satyajit Ray's 1973 film «Distant Thunder.» This «teaching-plus» is model often also true of schools run by international NGOs and religious organizations. (See, for example, <http://www.lasalleinternational.org/index.html>).

audio, radio, data and other technologies that provide teachers and their students in poor urban and rural schools with curriculum content, teaching methods and materials¹⁹.

- c) A new emphasis and priority on the *quality and quantity of pre- and in-service teacher training*. This is based on the rationale that teachers in high school are key multipliers. Competent teachers not only prepare students for the next level²⁰, their graduating students are typically those who enter directly into key local professions such as policing and criminal justice, the many needed forms of hands-on home and business technology and skilled fields such as electricity, water, sanitation and machinery of all sorts, not to mention agriculture and teaching itself. Monitoring a country's teacher training institutions is also a more focused and less costly way to monitor a whole education system as teacher training underpins it.
- d) Immediate action by each local education system to define precise, *feasible 2030 and intervening targets*(blueprints not just goals), *modes of assessment and accountability*,as well as the mobilization and allocation of the necessary funds.
- e) SDG #4 programs that *empower and monitor local communities*, especially vulnerable groups,and encourage local inputs to meet their educational and economic needs and opportunities (healthcare, water, sanitation etc.).
- f) *International aid programs more geared to points of delivery* and the empowerment of local communities than to top-down approaches.

Thus the overall foci for the new inputs and assessment are: teachers and their training, teaching materials and physical facilities. Given the limited physical resources likely to be available, achieving the SDG #4 goal will depend on mobilizing under-utilized human capital, notably through (a) better trained and remunerated teachers and (b) the economic and political mobilization of local communities in support of their schools. All of which calls for substantial commitments on the part of the world's states.

19. For an example of the use of electronics in primary schools see <http://www.worldreader.org/blog/10000-e-books-aids-orphans-uganda/>.

20. A common criticism by professors in universities in Africa is the lack of preparedness for advanced studies on the part of students resulting in the former dictating their university-level classes. This practice does not appear in aggregated educational data.

THOMSON REUTERS

Chapter 8: goal 5

Gender equality. Achieve gender equality and empower all women and girls¹

PALOMA DURÁN Y LALAGUNA

UN Sustainable Development Goals Fund

SUMMARY: 1. INTRODUCTION. 2. SUSTAINABLE DEVELOPMENT GOAL 5: DEBATE AND CONSENSUS. a. *Gender equality and women's empowerment as a stand-alone goal*. i. Freedom from violence against women and girls. ii. Equality in human capabilities, access to opportunities and resources. iii. Equality in agency, voice and participation across the full range of decision-making arenas. b. *Gender equality and women's empowerment as a crosscutting issue in Agenda 2030*. 3. PROGRESS AND CURRENT SITUATION RELATED TO WOMEN AND GIRLS. *Where Women Stand. The role of national governments and their policies. Health. Education. Labour and Income*. 4. IMPLEMENTING AND MONITORING GOAL 5. THE EXPERIENCE OF THE UN SUSTAINABLE DEVELOPMENT GOALS FUND SDG FUND. 5. CONCLUSIONS.

ABSTRACT:

The idea of achieving gender equality and empowering all women and girls, as enshrined in goal 5 of the Sustainable Development Goals (SDGs), is yet a distant reality. This chapter reviews the negotiation and consultation process that led to the adoption of gender equality both as a stand-alone goal and a transversal crosscutting priority along with other goals. Using the experience of the SDG Fund, a inter-agency and

1. Director UN-SDG Fund and former Professor, Law School, Complutense University, Spain. The views of this paper don't necessarily reflect the official position of the UN or the SDG-Fund. The author wanted to especially thank Samant Veer Kakkar for his work done since he prepared a first outline of this paper.

multi-donor mechanism established at the UN, the author provides some examples of how gender equality is becoming embedded in all its development work.

1. INTRODUCTION

While they are said to *hold up half the sky*, the idea of achieving gender equality and empowering all women and girls, as enshrined in goal 5 of the Sustainable Development Goals (SDGs), is yet a distant reality.

On the international stage the idea is not a new one. It was acknowledged at the very inception of the UN, with the preamble of the UN Charter² calling to, «Reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women...» Soon after, the Economic and Social Council's (ECOSOC), Commission on the Status of Women (CSW), committed to the promotion of gender equality and the empowerment of women, was established on 21 June 1946³.

Over the years significant milestones in gender equality and women's empowerment, such as adoption of the Convention on the Elimination of all forms of Discrimination against Women (CEDAW), in 1979 by the UN General Assembly; the Beijing Declaration and Platform for Action⁴ adopted at the Fourth World Conference on Women in 1995; goal 3 of the Millennium Development Goals (MDGs) to promote gender equality and empower women; the creation of the United Nations Entity for Equality and Empowerment of Women (UN Women) in 2010 and the renewed commitment to the principles of the Beijing Declaration in the form of the Beijing +20 in 2015 have all been precursors to goal 5 of the SDGs: the most ambitious agenda around gender equality to date.

During the two year multi-stakeholder consultations preceding the adoption of the SDG Outcome Document⁵ negotiations around goal 5 probably proved to be the most complex and left many of the parties including member states divided. While everyone acknowledged the

2. UN Charter, accessed on 27 July 2016 at: <https://treaties.un.org/doc/publication/ctc/uncharter.pdf>.

3. Council Resolution 11 (II), accessed on 27 July 2016 at: http://www.un.org/womenwatch/daw/csw/pdf/CSW_founding_resolution_1946.pdf.

4. Beijing Declaration, Accessed on 27 July 2016 at: <http://www.un.org/womenwatch/daw/beijing/pdf/Beijing%20full%20report%20E.pdf>.

5. Transforming Our World: The 2030 Agenda For Sustainable Development [A/RES/70/1] accessed on 27 July 2016 at www.sustainabledevelopment.un.org.

vital importance of the goal, it was complicated to get consensus on the right approach for integrating it into the SDGs.

Reflecting the diverse histories and approaches to gender issues of member states, it became a point of contention whether to address gender as a standalone goal or integrate it as a cross-cutting theme in the other goals. As we now know the demand to have a standalone goal on gender was very strong and given the integrated nature of the SDGs, both approaches were eventually taken on board. It was recognised that ignoring gender inequalities across goals was detrimental to the Agenda 2030 for as a whole.

The remainder of this Chapter delves deeper into the negotiation process that gave us goal 5 and the associated targets and indicators we have today; the situation of women and girls and the challenges we will face over the next decade and half and the vital importance of monitoring the implementation of not just goal 5 but also the cross-cutting elements of gender equality that pervade the SDGs. I'll use some examples from the SDG Fund which is the first mechanism created in the UN for the implementation of 2030 Agenda for Sustainable Development (Agenda 2030).

2. SUSTAINABLE DEVELOPMENT GOAL 5: DEBATE AND CONSENSUS

a. GENDER EQUALITY AND WOMEN'S EMPOWERMENT AS A STAND-ALONE GOAL

In addition to the pioneering work done towards achieving gender equality and women's empowerment through the instruments and conventions referenced in the introduction to this chapter, it was at the United Nations Conference on Sustainable Development (Rio+20), held in Rio de Janeiro in June 2012, that the Member States agreed to launch a process to develop the SDGs. This vision, articulated in the outcome document– The Future We Want⁶ set out the course that the present goal 5 of the SDGs would take.

The Future We Want recognized gender equality, women's empowerment and equal opportunity as an integral part of human rights and essential for sustainable development. It made specific references to the different aspects of gender equality and women's empowerment

6. A/RES/66/288, accessed on 29 July 2016 at http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E.

which would then go on to become the targets of goal 5. Paragraph 31 spoke about the «commitments to ensure women's equal rights, access and opportunities for participation and leadership in the economy, society and political decision-making». Paragraph 45 expanded on this idea by adding a commitment to «promote gender equality and women's empowerment and to ensure their full and effective participation in sustainable development policies, programmes and decision-making at all levels».

The document envisaged the inclusion of gender as a cross-cutting issue in access to energy, health, poverty eradication, disaster risk reduction and education. Perhaps more significantly, it recognized that, «gender equality and the effective participation of women are important for effective action on all aspects of sustainable development»⁷, while conceding that there existed social, economic and political barriers that prevented women from engaging with sustainable development as leaders, participants and beneficiaries. These were significant statements as the Rio+20 conference was never intended to set the Agenda for the next 15 years to lay the foundation and the guiding principles for the negotiation process that was to follow.

Rio+20 called for the establishment of an Open Working Group (OWG) of the UN General Assembly to prepare a proposal for the SDGs. The OWG was established in January 2013⁸ and was mandated to decide on its methods of work, while ensuring the process included various stakeholders such as UN member states, civil society, academia and the private sector to take account of a multitude of perspectives.

The eighth session of the OWG heard deliberations on «Promoting equality, including social equity, gender equality and women's empowerment» between member states, major groups and other relevant stakeholders from 3 to 7 February 2014 at the UN headquarters in New York. It was here that the Technical Support Team (TST) on Gender Equality and Women's Empowerment⁹ placed on record its opinion that besides including gender based targets and indicators in all proposed

7. A/RES/66/288, para. 242, accessed on 29 July 2016 at http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E.

8. A/67/L.48/rev.1 UN General Assembly Draft Decision accessed on 29 July 2016 at: <https://documents-dds-ny.un.org/doc/UNDOC/LTD/N13/206/31/PDF/N1320631.pdf?OpenElement>.

9. The TST comprised UN Women, UNDP and UNFPA, with contributions from DSPD/DESA, FAO, IFAD, ITU, OHCHR, PBSO, UNAIDS, UNESCO, UNICEF, World Bank, WFP and WMO, accessed on 29 July 2016 at: https://sustainabledevelopment.un.org/content/documents/2396TST%20Issues%20Brief%20GEWE_FINAL.pdf.

SDG's «a stand-alone goal on gender equality, women's rights and women's empowerment must be included». The TST acknowledged that «many groups including the High-Level Panel of Eminent Persons, have proposed a stand-alone gender equality goal in the future framework to galvanize resources and political will, and to serve as an accountability mechanism to monitor progress and address the remaining gaps in implementation». The TST recommended the following three priority areas to be included in the stand-alone goal:

i. Freedom from violence against women and girls

The most prevalent, yet fitfully spoken about, human rights abuse in the world today is violence against women and girls. While it is the most elementary form of gender-based discrimination perpetuated on women, it is also loaded with nuanced complexities.

High-risk women, like those that are part of migrant and refugee groups, older women, indigenous women and women with disabilities, are more susceptible to this abuse. But, it is also true that atrocities against women and girls see a sharp rise in the aftermath of crises and in times of instability. An example of that could be during and after periods of turmoil and displacement following conflict, natural disasters, economic instability and social uncertainty.

While gender discrimination and abuse is an iniquity by itself, it becomes even more delinquent when it perpetuates itself as an obstacle to basic rights of an individual – in this case repressing the rights of a woman to access education, healthcare, resources and even training and work in the labour market.

Other systems that promulgate inequities towards women and girls are societies that have a high level of crime. The inequities may be manifested in the form of increased levels of violence against females and a rise in the rates of female foeticide. Armed conflict is also a situation conducive to systematically and pervasively suppressing women and their rights; and unleashing misplaced might on women.

ii. Equality in human capabilities, access to opportunities and resources

Social, economic and cultural inequalities are structured such, that they restrict women and girls from fully accessing the resources and opportunities available that match their competencies and ability.

Women are by default put in a position of disadvantage, which leads

to them being subdued and suppressed, when they do not have access to vital resources like quality healthcare, control over their sexual and reproductive health, good education, childcare, wholesome food and nutrition and other measures of social protection.

The denial of other common vital resources such as land, assets, credit and time to women –sometimes because of misplaced beliefs, outdated traditions, misinterpreted culture, patriarchy, power wielding tactics, gender politics and many such factors– force them to fall behind and impede their ability to utilize themselves to their maximum capabilities.

There must be opportunities created for women where they can do decent work and earn equal pay, an important step towards building the economic and social security of women and girls. It is also important that this is done in a gender-sensitive manner that focuses on gender-specific impediments like female sexual and reproductive health and not just through the narrow lens of general constraints – that which affect both men and women.

Acknowledging the huge contribution that women make in the field of unpaid work and building institutions and formulating policies to distribute this burden more equally are essential to ensuring that women have equal access to opportunities and resources.

The immense capability of women is an important reason why they are more resilient to social, economic and environmental volatilities; and harnessing these capabilities by providing them equal opportunities and access can only be beneficial to society and the world.

iii. Equality in agency, voice and participation across the full range of decision-making arenas

Participation in civil society and every person having a voice may not seem like a far-fetched ideal in the 21st Century. The truth however is that many women across the world are still struggling to be acknowledged. Every person, man or woman, has the right to contribute and partake in decision-making across structures in their life –be it their homes, their families, their communities, their schools and colleges, their work places, their cities, their countries, their public institutions, their countries or their world– but far too many women are being left out of this process.

The value of supporting women's participation in civil society and the world cannot be stressed upon enough. It is essential for women to have a say in the political processes and decisions that determine their lives. It

leads to more confident, empowered women, upholding their dignity and agency and to a more egalitarian and better society.

Women's contribution to decision-making will only positively influence public policies and spending patterns. It will also ensure that imperative attention is paid to essential services that enable their physical integrity and reproductive rights, even while improving access to education and healthcare.

During the OWG's eight session the discussion centered around the unfinished work of the MDG era and the reality that without ensuring equal rights and opportunities for 50% of the world's population the promise of sustainable development would be a hollow one. Recognising inequalities between countries and also within them was vital if the post-2015 agenda were to address gender equality, perhaps the most prevalent form of inequality in, at a global level. There already emerged some consensus amongst member states for a stand-alone goal on gender equality, even as some member states were opposed to the scope of such a goal for ethno-cultural and religious reasons. The meeting called for special measures to support those women for whom inequality was amplified by their poverty (especially in Least Developed Countries –LDCs), status as a religious or ethnic minority, disability or age. The delegation agreed that ending violence against women would form the fulcrum of the stand-alone goal on gender equality. These deliberations took the form of the proposed goal 5 and its associated targets.

The OWG noted in its Progress Report¹⁰ that among the most significant issues to be addressed to ensure women's economic empowerment were increasing women's role in decision-making at the household, community as well as political levels. In addition to this guaranteeing land rights; ensuring compensation for unpaid work where the gap between men and women was still vast and ensuring sexual and reproductive rights required the most effort.

These elements made it to the text of the Report of the OWG¹¹ and constituted the targets of goal 5: Achieve gender equality and empower all women and girls.

The language used is as follows:

10. Progress report of the Open Working Group of the General Assembly on Sustainable Development Goals, para 195-196, accessed on 31 July, 2016 at: <https://sustainabledevelopment.un.org/content/documents/3238summaryallogw.pdf>.
11. Report A/68/970, submitted to the 68th session of the UN General Assembly in 2014, accessed on 31 July 2016 at: http://www.un.org/ga/search/view_doc.asp?symbol=A/68/970.

«5.1 End all forms of discrimination against all women and girls everywhere

5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation

5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences

5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws

5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels»

While there was broad consensus on including goal 5 as a stand-alone goal along with its constituent parts, subsequent to the submission of the OWG Report a debate raged on target 5.6. On the one hand a joint statement¹², expressed its support for target 5.6 by calling for the language,

12. Delivered by the representative of South Africa on behalf of Albania, Argentina, Australia, Austria, Belgium, Bolivia (Plurinational State of), Bosnia and Herzegovina, Brazil, Bulgaria, Cape Verde, Chile, Colombia, the Cook Islands, Costa Rica, Croatia, the Czech Republic, Denmark, the Dominican Republic, El Salvador, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Kiribati, Latvia, Liechtenstein, Lithuania, Luxembourg, Mexico, Monaco, Montenegro,

«Ensure the respect, promotion and protection of sexual and reproductive health and rights for all», to form an integral part of the SDGs. This statement was supported by that of the delegation of the United States¹³ welcoming the recognition of women's sexual and reproductive health and supported the retention of target 5.6 as is.

On the other hand, the delegation of Afghanistan introduced a conditionality to its support for the proposed target 5.6: by saying it would support it as long as it was in conformity with Islamic sharia law and was not in conflict with article 3 of the Afghanistan constitution. A few other delegations¹⁴ such as those from Cameroon, Chad, Ghana, Honduras, Libya, Mauritania, Nigeria, Saudi Arabia, Senegal and Yemen also registered their opposition to target 5.6, especially underlining that it should in no way be construed to support the right to abortion, citing national laws and religious tradition.

Despite the opposition, the text of goal 5 made it as is to the final text of the SDGs and was unanimously adopted by 193 UN member states at the 70th session of the UN General Assembly in September 2015.

b. GENDER EQUALITY AND WOMEN'S EMPOWERMENT AS A CROSSCUTTING ISSUE IN THE 2030 AGENDA

Retaining and adopting the text of goal 5 proposed by the OWG while a noteworthy development, was only one piece of the puzzle. The inherent interdependent nature of the SDGs, emphasized at every step of the negotiation process, made it imperative that elements of gender equality reflect across goals throughout Agenda 2030. And there was indeed a strong consensus on the incorporation of gender related targets to be included across all SDGs. This section details the rationale behind incorporating gender issues in the SDGs besides goal 5 and draws attention to the gender aspects of the other goals.

Goal 1: End poverty in all its forms everywhere

the Netherlands, Norway, Palau, Panama, Papua New Guinea, the Philippines, Portugal, Romania, Samoa, Serbia, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Ukraine, the United Kingdom of Great Britain and Northern Ireland, Uruguay and Vanuatu. Report *A/68/970/Add.1*, accessed on 31 July 2016 at: http://www.un.org/ga/search/view_doc.asp?symbol=A/68/970/Add.1.

13. *A/68/970/Add.2*, accessed on 31 July 2016 at: http://www.un.org/ga/search/view_doc.asp?symbol=A/68/970/Add.2&Lang=E.

14. *A/68/970/Add.1*, accessed on 31 July 2016 at: http://www.un.org/ga/search/view_doc.asp?symbol=A/68/970/Add.1.

Ending gender discrimination is an intrinsic part of this goal. Implementing this goal entails not only enhancing women's wages but also ensuring equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Women play an important role in agriculture and an overwhelmingly large role in food preparation within the household, yet are more susceptible to being undernourished than men. Adequate nutrition is not just essential for women's health and that of their children but also in enhancing their productive capacity to reduce food insecurity.

Goal 3: Ensure healthy lives and promote well-being for all at all ages

The goal on health incorporates reducing the global maternal mortality ratio to less than 70 per 100,000 live births and ensuring universal access to sexual and reproductive health care services, including for family planning, information and education as its targets.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

While the accomplishments of MDG 2 in achieving primary school enrolment for all children, including girls were significant, the education goal explicitly envisages free, equitable and quality primary and secondary education for all. The focus on quality education especially for girls is important as the gap between enrolments widens between boys and girls as they progress through the education system.

Goal 6: Ensure availability and sustainable management of water and sanitation for all

This goal holds special significance for women in developing countries who devote a substantial portion of their time to collecting water at the cost of pursuits like education and employment. The goal calls for achieving access to adequate and equitable sanitation and hygiene for all and to end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Much like in the case of water, millions of women spends hours

gathering firewood for cooking and then suffer the debilitating health effects of breathing the toxic fumes produced by a wood burning oven. Access to clean energy is an imperative in ensuring universal progress towards the SDGs.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

This goal takes cognizance of the unequal access women have to the labour market as well as the lower wages they are paid compared to men the world over. It demands decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Goal 10: Reduce inequality within and among countries

The world has made progress in reducing poverty since the launch of the MDGs in the year 2000. While income inequality between nations is on the wane, it is rising within them. Marginalized populations and especially women bear the brunt of rising inequality. Goal 10 emphasizes empowering and promoting the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Over half the population of the world lives in urban areas today, this number will rise to more than two-thirds by 2050. Urbanization poses new challenges for recent migrants, especially women. Issues such as lack of safety, sexual abuse and a dearth of sanitation facilities are everyday realities in the world's burgeoning urban pockets. This goal specifically calls for access to safe, affordable, accessible and sustainable transport systems for all and for providing universal access to safe, inclusive and accessible, green and public spaces with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities.

Goal 13: Take urgent action to combat climate change and its impacts

Women are disproportionately affected by natural disasters caused by climate change and find it harder to recover from them owing to their already marginalized status. The burden of collecting water and fuel—essential for existence increases as these resources become more obscure with a changing climate. Goal 13 recognizes this reality and asks to promote mechanisms for raising capacity for effective climate change-related planning and management

in least developed countries and Small Island Developing States, including focusing on women, youth and local and marginalized communities.

Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all

While it doesn't explicitly –and rather glaringly– emphasize the role of women in peacebuilding, goal 16 does call for responsive, inclusive, participatory and representative decision-making at all levels. This recognizes an important need. As the Inter-Parliamentary Union (IPU) notes, there are only 22.7 percent women parliamentarians in the world¹⁵ and unless this number rises it will jeopardize the overall achievement of the SDGs.

Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

Throughout the deliberation process of the OWG on gender equality, there were numerous calls for «disaggregating indicators by sex, age, disability, and other dominant inequalities»¹⁶. It is evident that without accurate and reliable gender statistics and collection, analysis, and use of data relevant for monitoring progress on gender equality, women's rights, and women's empowerment, the SDGs as a whole will be almost impossible to implement.

3. PROGRESS AND CURRENT SITUATION RELATED TO WOMEN AND GIRLS

While there has been some progress in the situation of women, there is much more to be achieved in gender equality and in abolishing gender discrimination. Towards this ideal, we would do well to take stock of the current situation of women and girls to understand the challenges that lie ahead; and use this knowledge to improve the lot of women in our world.

Where Women Stand

The MDGs enabled the world to progress towards better gender equality and more women's empowerment (with goals of equal access

15. <http://www.ipu.org/wmn-e/world.htm> accessed on 1 August 2016.

16. Summary of General Assembly Open Working Group on Sustainable Development Goals, Eighth Session, accessed on 1 August 2016 at: <https://sustainabledevelopment.un.org/content/documents/3417OWG8%20Summary.pdf>.

to primary education for girls and boys alike), but to say that women and girls around the world no longer face discrimination or are no more victims of gender violence is far from accurate.

While countries have committed to universal access to sexual and reproductive health care services, gender based discrimination still undercuts women's rights to health. Maternal mortality rates in developing regions are 14 times higher than in developed ones, but only half of the pregnant women receive standard antenatal care.

Many developing regions of the world have almost achieved equal enrolment of boys and girls in primary school, a huge achievement even though far from complete and the adult literacy rate has risen from 76 per cent in 1990 to 85 per cent. Yet, 60 per cent of the world's illiterate are women¹⁷.

Gaping gender disparities still exist in areas of the economy and polity. Globally, women still earn 24 per cent less than men¹⁸, much of which is due to the under representation of women at higher levels of pay and in higher paid occupations. However, even when doing similar work, women often earn less – with the gap being greatest for handsomely paying professions.

As mentioned above, as of 1 June 2016, only 22.7 per cent of all national parliamentarians were female¹⁹, a slow rise from 12 per cent in 1995.

While many countries have made laudable progress in other areas, violence against women is still a pandemic affecting them. Worldwide, 35 per cent of women have experienced either physical and/or sexual violence by an intimate partner or non-partner sexual violence²⁰.

Even 23 years after the UN General Assembly Declaration on the Elimination of Violence Against Women provided a framework for action on this pandemic, 1 in 3 women still face physical or sexual violence by an intimate partner.

17. UN Women; Women and Sustainable Development Goals, Page 8, accessed on 2 August 2016 at: <https://docs.google.com/gview?url=http://sustainabledevelopment.un.org/content/documents/2322UN%20Women%20Analysis%20on%20Women%20and%20SDGs.pdf&embedded=true>.
18. UNDP; Human Development Report 2015; Chapter 4 Imbalances in Paid and Unpaid Work, Page 109, accessed on 2 August 2016 at: <http://hdr.undp.org/sites/default/files/chapter4.pdf>.
19. Inter-Parliamentary Union, «Women in national parliaments, as of 1 June 2016», accessed on 2 August 2016 at: <http://www.ipu.org/wmn-e/world.htm>.
20. WHO Fact sheet N°239, accessed on 2 August 2016 at: <http://www.who.int/mediacentre/factsheets/fs239/en/>.

Despite the progress, 26 of 143 countries have statutory laws that differentiate between the genders resulting in increased vulnerability to food insecurity, limited or no access to resources and credit, and dependency on men for livelihood.

While there have been some progress in women's empowerment –like the proportion of women aged 20 to 24 who reported that they were married before their eighteenth birthdays, dropped from 32 per cent around 1990 to 26 per cent around 2015²¹– we still have a long way to go.

Over a third of girls aged between 15 and 19 residing in 30 countries that still practice female genital mutilation, have undergone the procedure²². A survey conducted in 59 countries between 2000 and 2004 also showed while men spent 8 per cent of their time on unpaid labour each day, women spent 19 per cent of their time on unpaid labour.

Goal 5 of the SDGs aims for gender quality, empowering women and girls to reach their full potential and eliminating all forms of discrimination and violence against them; and it is in our interest and the interest of the world to continue working towards the emancipation of women, equal opportunity for their sexual and reproductive health and rights, recognition for their unpaid work, access to resources and a level field for them in political, economic and public life.

The Role of National Governments and their Policies

By now it is clear that women have a critical role to play in the achievement of the SDGs – both as a solution and as an objective. This role needs to be facilitated and fostered by governments, as much of it needs to be implemented at the national level through national policies.

It is the duty of national governments to aid the implementation and success of goal 5 by formulating and ensuring the implementation of robust policies that enable gender equality, stringent laws that deter discrimination and violence against women and girls; and build important infrastructure and systems to allow the access of resources to women.

21. The Sustainable Development Goals Report 2016; Page 20, accessed on 2 August 2016 at: <http://unstats.un.org/sdgs/report/2016/#sdg-goals>.

22. The Sustainable Development Goals Report 2016; Page 21, accessed on 2 August 2016 at: <http://unstats.un.org/sdgs/report/2016/#sdg-goals>.

Health

Governments must build high quality and comprehensive health systems that are readily and fully accessible to women and girls.

Governments must not just improve the provision of health services for women and girls, but also collaborate with partners and non-governmental organizations to end any and all practices that endanger the health and well-being of women and girls, such as child marriage, gender violence, child marriage, female genital mutilation, dietary restrictions on females and others such.

Education

Governments must provide high-quality, inclusive education to all, education that makes an active effort to end gender stereotypes and mindsets that limit schooling for women or keep them away from areas of study or work that is «not acceptable». It is also important that the government in association with partners conduct awareness campaigns to end superstitious, discriminatory cultural traditions and mindsets that lead women to be left behind.

It is also imperative for an evolved and egalitarian society, that all men and women have access to education throughout their lifetimes, right from pre-primary education (which helps establish a solid foundation for all later learning) to continuing education for adults, which provides them more choice for a productive and fulfilling life.

Labour and Income

Women essay many roles and take up several jobs. They make significant contributions – whether it is bringing an income to her household as a wage earner or creating jobs as an entrepreneur or taking care of their family and elders. Many of these jobs can be unpaid.

National governments must support and aid women's role in food security by providing women training, access to information technology and awareness programmes so that they can achieve maximum productivity.

On average women comprise 43 per cent of the agricultural labour force in developing countries, and over 50 per cent in parts of Asia and Africa. Despite this, their contribution to food security remains constrained by unequal access to land and other productive assets.

A woman farmer, for instance, doesn't have the same access –be it to seeds or credit or technology and extension services. She is also very unlikely to own her land– only 20% of landowners globally are women²³.

Female farmers in 97 countries receive only 5 percent of all agricultural extension services. Only 10 percent of total aid for agriculture, forestry and fishing goes to women.

If a woman hopes to someday inherit family property, the law may deprive her of an equal share, or social convention may simply favour her male relatives. In 26 on 143 countries statutory inheritance laws differentiate between men and women, making women vulnerable to poverty, food insecurity and dependency on men to secure a livelihood.

An overhaul of many legislations and framing of new laws are needed to ensure women's rights around the world. While a record 143 countries guaranteed equality between men and women in their Constitutions by 2014, another 52 had not taken this step²⁴. In many nations, gender discrimination is still woven through legal and social norms.

The government along with its partners must build support among rural women and decision makers for the need for legal changes towards an equitable distribution of assets, such as land and credit.

As per the Women and Sustainable Goals report, more than 1.3 billion women do not have an account at a bank, cooperative, credit union, post office, microfinance institution or any formal financial institution; regardless of the fact that 90 per cent of meals in households around the world are prepared by women they are the first ones to eat less; and households headed by women may not eat enough simply because women earn lower wages which makes them helpless in times of sudden crisis.

Providing women and girls with equal access to education, health care, decent work, and representation in political and economic decision-making processes will fuel sustainable economies and benefit societies and humanity at large.

The spirit of the SDGs demands that women be the resolution and

23. UN Women; Facts and Figures: Economic Empowerment, accessed on 2 August 2016 at: http://www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures#_ednref29.

24. UN Women; Women and Sustainable Development Goals, Page 12 accessed on 2 August 2016 at: <https://docs.google.com/gview?url=http://sustainabledevelopment.un.org/content/documents/2322UN%20Women%20Analysis%20on%20Women%20and%20SDGs.pdf&embedded=true>.

the objective. And if our objective is to build a prosperous, peaceful and sustainable world, it is essential that women be its cornerstone. Equal rights and the right against discrimination is not just a women's right issue, it is an issue of fundamental rights.

4. IMPLEMENTING AND MONITORING GOAL 5. THE EXPERIENCE OF THE UN SUSTAINABLE DEVELOPMENT GOALS FUND (SDGF)

With the SDGs in place and the targets for the next decade and a half defined the onus for achieving the goals rests largely with member states based on their individual national priorities. In March 2016, the UN Statistical Commission's Inter-Agency and Expert Group on Sustainable Development Goal Indicators (Expert Group) submitted its report²⁵ to the Economic and Social Council outlining a global indicator framework for the global follow-up and review of the 2030 Agenda for Sustainable Development. The 14 indicators corresponding with the targets of Goal 5 are as follows:

«5.1 End all forms of discrimination against all women and girls everywhere

5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex

5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner, in the last 12 months, by form of violence and by age group

5.2.2. Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner, in the last 12 months, by age group and place of occurrence

5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation

5.3.1 Percentage of women aged 20-24 who were married or in a union before age 15 and before age 18

25. E/CN.3/2016/2/Rev.1, accessed on 3 August 2016 at: <http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-SDGs-Rev1-E.pdf>.

5.3.2 Percentage of girls and women aged 15-49 who have undergone female genital mutilation/cutting, by age group

5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate

5.4.1 Percentage of time spent on unpaid domestic and care work, by sex, age group and location

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

5.5.1 Proportion of seats held by women in national parliaments and local governments

5.5.2. Proportion of women in managerial positions

5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences

5.6.1 Proportion of women aged 15-49 who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care

5.6.2 Number of countries with laws and regulations that guarantee women aged 15 – 49 access to sexual and reproductive health care, information and education

5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws

5.a.1 (a) Percentage of people with ownership or secure rights over agricultural land (out of total agricultural population), by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure

5.a.2 Percentage of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control

5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

5.b.1 Proportion of individuals who own a mobile telephone, by sex

5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

5.c.1 Percentage of countries with systems to track and make public allocations for gender equality and women's empowerment».

While the Indicators framework will monitor the progress of the SGDs at the global level the fundamental work being done to achieve them rests with individual member states. The quality of data being collected and specifically sex-disaggregated data is crucial, especially in measuring the achievement of goal 5.

Given the current situation with regard to data availability and collection capabilities, implementation will prove to be a challenge for most countries, especially countries of the Global South. The key to successful implementation lies in enhancing the capacities of national statistical agencies. The UN Statistical Commission is working with countries to provide technical support to enhance their data handling capacities, in addition to this it is vital to creatively explore other sources of data such as civil society and the private sector which in some cases have a natural interface with target populations.

On implementing actual programmes in the field, while there is no set recipe to creating programmes that will solve gender inequality; perhaps it would be good if there was one single universally applicable and empirically proven method for achieving gender equality in every country around the world. A multi-dimensional issue such as gender equality is deeply rooted in economic and cultural structures of society and it requires comprehensive approaches.

Furthermore, one needs to explore the issue in the specific context of the country in question to effectively improve the quality of life for women and girls everywhere.

The SDG Fund²⁶ has placed gender equality and women's empowerment at the heart of its efforts to accelerate progress towards

26. The SDGF was created in 2014 by UNDP on behalf of the UN system. Is a multi-donor and multi-agency mechanism for the implementation of the new agenda 2030. Since its creation the Fund is working in 22 countries, with 16 agencies of the UN system. With an initial contribution of the Government of Spain, the Fund has now

the SDGs. By directly empowering women and by bringing a gender perspective to all development work it contributes to building a more equitable, sustainable future for all.

The SDG Fund has adopted a dual strategy for advancing gender equality to support both gender-targeted programmes while simultaneously mainstreaming gender as a cross-cutting priority²⁷. Gender mainstreaming entails transforming existing policy agendas by integrating a gender perspective into all policies and programming. Many of the Fund's programmes have conducted gender gap analyses as part of their baseline studies to understand the needs, contributions, gaps and/or challenges to women's empowerment in the sectors targeted. The gender gaps study in Peru for example documents women's contribution to the quinoa value chain and how capacity development can be better adjusted to support women and their families achieve greater added value, while the gender study in Mozambique focuses on the low participation of women in the extractives sector and how it could be improved.

Apart from programmes like those in Bangladesh, Ethiopia and the occupied Palestinian territories which specifically target women as their main beneficiaries and/or gender mainstreaming into national policy, all the programmes have targets for participation by women and all programmes are reporting sex-disaggregated on beneficiaries in this regard.

The programme in Honduras for instance, is promoting culture and tourism for local development in the Ruta Lenca region. It supports the generation of income through the revitalization of the Lenca culture and the development of sustainable tourism micro businesses in the area, led by youth and women through training, business articulation, tourism promotion and international investment in one of the most culturally and naturally vibrant regions of the country. Through the programme, women's networks and Indigenous women's organizations are following the implementation of municipal agendas on issues related with women and tourism; women have also participated in international and national spaces to promote women participation in the political agenda, including in the Indigenous Women of the Americas and the Indigenous Women confederation of Lenca; and a proposal for strengthening local capacities

22 countries contributing to the programs and is implementing around \$70M. More information can be found in the webpage: www.sdgfund.org.

27. The dual strategy as well as other products prepared in the Fund are accessible on the webpage mentioned in the preceding footnote.

for prevention of gender-based violence and construction of a culture of peace was presented by the Intibucana Organization of Women.

The SDG Fund's programme in the occupied Palestinian territory improves the livelihood of the Palestinian women, through expanding women owned/run MSMEs and cooperatives, preserving cultural and agricultural products, and turning them into marketable and exportable products along with the creation of a regulatory environment for the protection of local production and the establishment of incentives for women's cooperatives. The programme strengthens the capacity of a one-stop-shop/business development hub which provides technical, vocational and marketing services in addition to two business-shops in the North and South of the West Bank for assembling, testing, packaging and selling, in addition to addressing the issues identified in the Palestinian National Export Strategy and institutionalizing, standardizing, and marketing food and nonfood products produced by the women MSMEs, including cooperatives, in Palestine.

The programme has facilitated different workshops on entrepreneurship training, food processing, food safety and quality control, packaging and labeling as well as marketing, with the participation of 90 per cent women. Two private sector women-run companies received financial assistance to run the start-up impacting 769 people, through the possibility of selling their products.

These examples clearly demonstrate that gender equality is a multi-dimensional issue which needs to be addressed by a range of solutions addressing its different facets.

5. CONCLUSIONS

While the adoption of the SDGs with the inclusion of goal 5 as a stand-alone goal and many of the goals incorporating gender equality was a momentous occasion, women are still facing unequal access to economic and environmental resources. They face numerous barriers linked to clear discrimination as well as bear the burden of low wages or unpaid work, and are susceptible to gender-based violence. Unless women and girls are able to fully realize their rights in all facets of society, human development will not be advanced.

The achievement of gender equality and sustainable development also depends on the means of implementation²⁸, including financing,

28. TST Issues Brief: Means of Implementation; Global Partnership for achieving

investment, trade, technology transfer, capacity development, and international development cooperation. The work being done on education and advocacy shows that lack of equality between men and women is a problem for society as a whole and not only for women.

Agenda 2030 is a universal idea with high hopes to «leave no one behind,» but to make this a reality; we must keep pressure on governments and all stakeholders to follow through on their commitments. Gender equality is often seen as the key to addressing the unfinished business of the MDGs and to accelerating global development beyond 2015. There is strong evidence that closing gender gaps accelerates progress towards other development goals. Poverty, education, health, livelihoods, food security, environmental and energy sustainability will not be solved without addressing gender inequality.

Urgent action is needed to empower women and girls, ensuring that they have equal opportunities to benefit from development and removing the barriers that prevent them from being full participants in all spheres of society. In the words of UN Women's Executive Director, «equality for women is progress for all».

sustainable development accessed on 3 August 2016 at: https://sustainabledevelopment.un.org/content/documents/2079Issues%20Brief%20Means%20of%20Implementation%20Final_TST_141013.pdf.

Chapter 9: goal 6

Ensuring universal access to safe and affordable drinking water by 2030

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Expert in Sustainable Development

SUMMARY: 1. INTRODUCTION. 2. THE SDG 6. A HISTORICAL REVIEW FROM RIO 92 TO THE SDGS AGENDA. 3. THE SDG 6. PROGRESS AND KEY CHALLENGES. 3.1. *Access to safe Drinking Water*. 3.2. *Access to Sanitation*. 3.3. *Water Quality*. 3.4. *Water Use Efficiency*. 3.5. *Integrated Resources Management*. 3.6. *Protection of Water-related Ecosystems*. 3.7. *Capacity Building and Technology Transfer*. 3.8. *Community Participation*. 4. CHALLENGES OF METRICS AND ACCOUNTABILITY FOR THE SDG 6. 5. CONCLUSIONS. REFERENCES.

ABSTRACT:

On September 25, 2015, the world leaders adopted the 2030 Agenda for Sustainable Development, including the 17 Sustainable Development Goals (SDGs). Safe drinking water, sanitation, and hygiene (WASH) lies at the core of this agenda in the SDG-6 and its six targets that cover the entire water cycle, as fundamental to an improved standard of living. This century brings additional new challenges, such as climate change, continued urbanization, population growth and migration flows. In this context, the achievement of the SDGs will require transnational cooperation to build resilience at the national, community and household level, to adapt and absorb the impacts of the shocks caused by these phenomena, and to provide the tools for transformative change. The SDG-6 brings also the novelty of an inequalities and human rights approach to water and sanitation access that materializes in the objective of achieving universal coverage and the emphasis in the creation of an enabling environment that allows participation and increases accountability of

duty bearers. Finally this agenda will only be possible to be enforced, as long as Governments measure and report their progress. This requires a bigger effort in gathering more data and evidences, especially for the new aspects included in the agenda, such as service levels, institutional performance, or hygiene and behavioral change issues.

1. INTRODUCTION

Access to safe drinking water, sanitation, and hygiene (WASH) are fundamental to an improved standard of living, including the protection of health and the environment, improved educational outcomes, greater convenience, dignity and gender equality. This is the reason why it was adopted in 2010 as a Human Right by the UN Assembly. The ability of States to protect this human right depends highly on the availability of healthy natural ecosystems able to provide environmental services such as water storage, reliability, quantity and quality. Despite the global recognition of the crucial role that water and sanitation has for human wellbeing, the tensions between nature protection and human consumption priorities (food production, industry, urbanization, etc.), affected the capacity of the States to adequately integrate policies, plans and projects to ensure nature protection and access to WASH services. Climate change has aggravated these tensions, by changing patterns in water availability and increasing the frequency of water-related disasters. Since the original Rio Earth Summit in 1992 floods, droughts and storms have affected 4.2 billion people and impacted on essential issues such as security, food security, energy or industrial development.

Technology and knowledge generation has provided many solutions to effectively manage fresh-water ecosystems improve water resources efficiency use and reduce water pollution. However this progress is not enough, especially in developing countries where the technology either it is not available, or applicable. There is a need to develop an institutional culture that strives towards greener and more resilient development model.

In this chapter we will review the role of water and sanitation in international law and the evolution of its approach since Rio 92 Earth Conference, through the MDGs to the SDGs agenda. We will also analyze the progress made so far in dealing with the water and sanitation challenges stated in SDG-6: 1) universal access to safe drinking water, 2) universal access to safe sanitation services, 3) efficiency of water use, 4) implementation of the integrated approach to water management, 5) reduction of pollution, 6) protection of water-related ecosystems, and 7) capacity building, technology transfer and communities participation

in decision-making process. We will conclude the chapter with a brief analysis of the main challenges that the accountability system for the SDG 6 has, in terms of metrics, access to information and harmonization of concepts and data.

2. THE SDG 6. A HISTORICAL REVIEW FROM RIO 92 TO THE SDGS AGENDA

Water and sanitation have been at the centre of the international agenda throughout the last 40 years. Starting at the first UN Conference in 1972 on Human Environment in Stockholm, followed by the «The Earth Summit» in Rio 1992 and the UN Millennium Declaration in 2000, and recently included in 2015 as a core element of the Sustainable Goals Agenda. The outcome document from Rio 92 Earth Summit, the Agenda 21, established in its chapter 18 the foundation for nearly all the work done since then by international organizations on water and development. The chapter provided a set of targets, activities, and means of implementation to achieve specific targets on: 1) Integrated water resources development and management; 2) Water resources assessment; 3) Protection of water resources, water quality and aquatic ecosystems; 4) Drinking-water supply and sanitation; 5) Water and sustainable urban development; 6) Water for sustainable food production and rural development; and 7) Impacts of climate change on water resources.

In 2000, the Millennium Development Goals Agenda (MDGs) agenda was adopted by the UN following the «Millennium Summit». Water appears under Goal 7, to ensure environmental sustainability, as Target 7C («halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation»); and is included as a dimension of Target 7A («Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources») (2014, UN-WATER). In 2010, after an intense work of advocacy, access to water and sanitation was recognized as a human right by the UN General Assembly (Human Rights Council resolution¹ 64/292, 2010).

In 2012, the UN hosted a Conference on Sustainable Development, Rio+20, which primary result was the nonbinding document, «The Future We Want,» that assessed progress towards the goals set forth in Agenda

1. The right obliges States to provide for its progressive realization and entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for essential personal and domestic uses.

21, renewed the political commitment to the promotion of a sustainable future and set the global environmental agenda for the next 20 years (UN Water 2014). Member States also decided in this Conference to develop a set of Sustainable Development Goals (SDGs).

Previously in 2011, had started a process of analysis of the progress made on the MDGs which materialized in two main documents: 1) a report the of High Level Panel of Experts of the UN System Task Team (UNTT) to the Secretary-General in 2013 on recommendations on the global development framework beyond 2015,2) «the World we Want» report, produced by the United Nations Development Group (UNDG) which gathered the contributions multiple stakeholders to the global consultation on the most pressing issues for the post 2015 development agenda. Both reports highlighted the need to keep working despite the progress made so far to tackle the unfinished business of water and sanitation, represented by the 2.5 billion people still lacking improved sanitation, and 1.1 billion defecating in the open (UNDG, 2013).

In September 2015 a new global agenda with seventeen «Sustainable Development Goals» was adopted by world leaders at the United Nations General Assembly comprising the most pressing issues identified at Rio +20 and the Post-2015 development agenda. Water and Sanitation gained relevance, versus the MDGs, by acquiring its own stand-alone Goal, The SDG 6: «Ensuring universal access to safe and affordable drinking water by 2030», which establishes more ambitious targets than its predecessor the MDG-7 (UN-WATER, 2014).

Over the last 20 years a succession of other high-level political declarations and Intergovernmental agreements highlighted the ambition of UN Member States to improve the development and use of their water resources such as the Convention on Biological Diversity (1993), the UN Framework Convention on Climate Change (1994/2015) and the UN Convention to Combat desertification (1994). Table 2 in Annex I, summarizes all relevant High-level declarations and how their link to water and sanitation.

3. THE SDG 6. PROGRESS AND KEY CHALLENGES

The High-Level Panel on the Post-2015 Development Agenda highlighted that despite significant progress during the last two decades in improving access to clean water, there were still unsolved challenges, and estimated in two billion the number of people without access to safe water. The number whose right to water is not satisfied is even greater,

perhaps as much as 3.5 billion (Onda et al. 2012; WWAP 2014), specially in the rural areas where half of the rural poor who have gained access to improved water and sanitation are still using unregulated sources having no guarantee of safety (GLAAS 2014). Equality has been identified as the biggest blind spots of the MDGs due to their focus on average attainments (it aimed to halve the population without access to water and sanitation without distinction on the level of vulnerability).

The *SDG 6*, is divided into six targets and two sub targets (table 1) addressing many of the shortcomings of the MDGs for water, sanitation and hygiene issues (WASH), such as the inclusion of safety and affordability criteria and a human rights perspective. The *SDG-6* also articulates other important pressing issues such as climate change, recurrent conflicts, massive immigration and the globalization of solutions through technology. The *SDGs* agenda goes beyond the challenges of developing countries and covers also the most urgent needs of industrialized countries such as the protection and restoration of water-related ecosystems, the reduction of pollution and improvement of water quality and the efficiency of the use of water and the implementation of integrated water resources (JMP 2011 and 2012²; Osborn D. et al., 2015). The nature and balance of each of the targets of the *SDG-6* will be different in each implementation context, requiring a case by case analysis of the specific transformational challenges to find the most effective solutions to each context (Stakeholders Forum, 2016).

2. <http://www.wssinfo.org/post-2015-monitoring/overview/>.

Table 1. SDG-6 Definition and Targets

| SDG 6 «Ensuring universal access to safe and affordable drinking water by 2030» Sustainable Development Goal indicators should be disaggregated, where relevant, by income, sex, age, race, ethnicity, migratory status, disability and geographic location, or other characteristics, in accordance with the Fundamental Principles of Official Statistics (General Assembly resolution 68/261). | | |
|---|--|--|
| Target | Focus | Measurement Indicators |
| Target 6.1. By 2030, achieve universal and equitable access to safe and affordable drinking water for all | Drinking Water Access | 6.1.1. Percentage of population using safely managed drinking water services |
| Target 6.2. By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations | Sanitation Access | 6.2.1. Percentage of population using safely managed sanitation services, including a handwashing facility with soap and water |
| Target 6.3. By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally | Water Pollution | 6.3.1. Percentage of wastewater safely treated 6.3.2. Percentage of bodies of water with good ambient water quality |
| Target 6.4. By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity | Water efficiency | 6.4.1. Change in water-use efficiency over time 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources |
| Target 6.5. By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate | Integrated Water Resources Management | 6.5.1. Degree of integrated water resources management implementation (0-100). 6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation |
| Target 6.6. By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes | Protection of Water-related Ecosystems | 6.6.1. Percentage of change in the extent of water-related ecosystems over time |

| SDG 6 «Ensuring universal access to safe and affordable drinking water by 2030» Sustainable Development Goal indicators should be disaggregated, where relevant, by income, sex, age, race, ethnicity, migratory status, disability and geographic location, or other characteristics, in accordance with the Fundamental Principles of Official Statistics (General Assembly resolution 68/261). | | |
|--|---|---|
| Target | Focus | Measurement Indicators |
| Target 6.6.a. By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies | Capacity building/ Technology Transfer | 6.a.1. Amount of water- and sanitation-related official development assistance that is part of a government coordinated spending plan |
| Target 6.6.b. Support and strengthen the participation of local communities in improving water and sanitation management | Local Participation | 6.b.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management |

Source: Final list of proposed Sustainable Development Goal indicators in the framework agreed to at the 47th session of the United Nations Statistical Commission in March 2016, (General Assembly resolution 68/261). Data as of as of July 2016.

3.1. ACCESS TO SAFE DRINKING WATER

Target 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

Target 7c of the MDGs calls for «reducing by half the portion of people without sustainable access to safe drinking water» (UN 2000). The Joint Monitoring Programme for WASH developed by UNICEF and WHO, established as a proxy indicator for this target: «proportion of the global population using access to improved drinking water source». Between 1990 and 2015, this proportion has increased from 76 per cent to 91 per cent (2.6 billion people [58 per cent of the global population]), surpassing the MDG target, which was met in 2010. However, it is estimated that in 2015 still 663 million people worldwide used unimproved drinking water

sources. In addition to this, UN statistics record whether households have drinking water sources piped on premises, but this does not necessarily mean the water is safe to drink or that there is a regular, reliable supply (2012, Thomas F. Clasen; 2016, David Satterthwaite). Based on this facts, WHO estimates in up to 1.8 billion people without access to safe water (Onda K. et al., 2012).

In terms of regions, Eastern Asia, Latin America and the Caribbean, Southern Asia and Western Asia have achieved the objective. Sub-Saharan Africa fell short of the MDG target with 44% of rural dwellers continue to use an unimproved water supply despite the 20 percentage point increase in the use of improved sources of drinking water (UNDG, 2015).

Progressive elimination of inequalities in access and service levels will continue to be an important challenge for the post-2015 agenda. The lack of strong evidenced based knowledge on the effectiveness of technologies, practices and service delivery models makes it difficult for policy makers to choose the most efficient measures to their context to change risky behaviors, and ensure sustainability of health outcomes. Building an effective «enabling environment», meaning having an efficient policy framework, planning, coordination and financing mechanisms to stimulate the market for WASH services, will be also critical in ensuring progress towards the SDG-6 (Hutton Guy, 2016).

3.2. ACCESS TO SANITATION

Target 6.2. By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

Every year 1.8 million people die from diarrhoeal disease attributable to unsafe water or poor sanitation and hygiene. More than 1.5 million of these are children under five, who are more at risks from diarrhea than from malaria, human immunodeficiency virus (HIV) or even all types of fatal injuries combined (JMP, 2010).

The world has missed the MDG sanitation target, which called for halving the proportion of the population without sustainable access to basic sanitation between 1990 and 2015. Only a 68% of the population has currently access to improved sanitation versus the expected 77%. This means 2.1 billion people gained access to, but still the target was missed

by 700 million (JMP, 2015); especially in the least developed countries where only 27 per cent of their current population has gained access to improved sanitation (JMP, 2014). Open defecation is still an important problem, despite the decrease from 24% in 1990 to 13%, almost 950 million people still practised open defecation in 2015. The data reveal pronounced disparities, with the poorest and those living in rural areas least likely to use an improved sanitation facility. Developing regions to meet the sanitation target were the Caucasus and Central Asia, Eastern Asia, Northern Africa and Western Asia. Questions also remain though about the full sanitation chain (containment, emptying, transport and treatment) and whether excreta are safely reused or returned to the environment (JMP, 2015).

The SDG-6 introduces important improvements addressing the gaps of the MDGs on sanitation by introducing hygiene and open defecation in the targets, and expanding the coverage of sanitation services beyond households to public spaces such as schools and health centres and paying special attention to the needs of women and girls and those in vulnerable situations. It also focuses in the safe management of sanitation services, recognizing the problem and health risks that it can mean to promote increasing access to improved sanitation, with no safe waste management system and the unintended negative impact of delivering more untreated wastewater to water bodies, further degrading downstream water quality (Biswas and Tortajada 2011).

Target 6.2 is ambitious especially for hygiene especially which is not currently monitored and there is no standards for hand washing and menstrual hygiene management facilities. Epidemiological studies have typically used the presence of a place for handwashing with soap and water present as a proxy for handwashing practice; however this has been shown to be only loosely correlated with observed handwashing behavior (Biran A. et al., 2008). Household water treatment and storage (HWTS) has also been the subject of behavior change campaigns. Beliefs and social norms, will limit the use of technologies and slow down the process of behavioural change, which also requires important efforts to be maintained. Public Private Partnerships for Handwashing (PPPHWs) that combine the marketing expertise of the soap industry with government support and enabling environment have proved to be effective in triggering behavior change (Hutton G., 2016).

3.3. WATER QUALITY

Target 6.3. By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

Water quality management has so far been a neglected topic in global debates. Continuing population growth and urbanization, rapid industrialization, and the expansion and intensification of food production are all putting pressure on water resources and increasing the discharge of polluted water within and beyond national borders. Approximately 80% of wastewater is discharged to the natural environment without any form of treatment (2010, UNEP & UN-HABITAT; 2013, UN-WATER). Some of the current most pressing issues are: 1) salinization of overexploited aquifers, 2) increase of nitrate concentrations and eutrophication, and 3) high levels of arsenic contamination in water, naturally occurring or mobilized by human activities (Outlook 5 Report). These problems are especially acute in coastal areas and rapid urbanizing areas where there is inadequate sanitation and/or heavy agricultural fertilizer (Schwarzenbach et al. 2010; Brunt et al. 2004).

Water quality is the most relevant Target of the SDG-6 to industrialized countries. It is a persistent problem that requires transformative impact both at the domestic level in developed countries, and in terms of the impact or footprint of developed countries on the rest of the world. Specially challenging is to deal with non conventional toxic pollutants such as pharmaceuticals and personal care products, and bioaccumulative toxic chemicals which leave a legacy of sediment contamination and are found in 90 per cent of water bodies (trace metals cadmium, lead and mercury, pesticides, industrial chemicals and combustion by-products) (UN-WATER, 2014). In contrast, microbial pathogens coming from human and animal faeces are often the most pressing water quality issue in developing countries due to the lack of basic sanitation. Using domestic sewage collection and treatment as a proxy, microbial contamination has decreased over past decades in most developed countries (UN-WATER, 2014).

There has been increased sewage treatment in many areas, but much less progress has been made in reducing nutrient loads from non-point sources, including agricultural and urban run-off and atmospheric deposition to

freshwater and marine systems. The most affected regions are South East Asia, Europe, and eastern North America (Outlook 5 Report). Another important challenge related to water quality is the increase in the frequency of floods, droughts and windstorms that count for almost 90% of the 1,000 most disastrous events since 1990. The number of people affected and stated damages from water-related disasters continue to increase (Adikari et al., 2009). This requires focusing on actions to build resilience in order to reduce losses of human life and economic damage including natural hazards, as well as anthropogenic hazards such as releases of hazardous materials and other forms of serious water pollution.

In general terms there are four fundamental strategies that can help to combat water quality problems: 1) prevention of pollution through the reduction or elimination of waste at the source, 2) treatment of polluted water before discharging in cases where contaminants result from domestic, industrial or agricultural activities, wastewater, 3) safe use of wastewater for example in agriculture to reduce the pressure exerted by human activities on existing freshwater resources and augment water supply in water-scarce and semi-arid zones and in rapidly growing peri-urban settings (Choukr-Allah et al., 2013), and 4) protection and restoration of healthy ecosystems to provide water quality benefits in form of water purification. Technology and knowledge transference to address these solutions and the development of appropriate governance measures, such as regulation and enforcement of agreed standards will be key to adapt to the new reality and ensure the achievement of the targets set for water quality in the SDG 6.

3.4. WATER USE EFFICIENCY

Target 6.4. By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

Water-related risks (such as scarcity, floods, access, and resource degradation) are growing, as population growth and economic growth put greater pressure on water resources. Scarcity can be physical (lack of water of sufficient quality in average or high variability causing frequent harmful deficits), economic (lack of adequate infrastructure, due to financial, technical or other constraints) or institutional (lack of

institutions for a reliable, secure and equitable supply of water). Climate change is also affecting water availability since it becomes less predictable as extreme weather events become more common (Sadoff, C.W., et al., 2015). Global water withdrawals of approximately 4,000 km³ annually are shared between agricultural (70%), domestic (10%) and industrial (20%) uses (WB, 2016)³. This distribution however varies depending of the economical development situation of the country. For example in low income agriculture is the main water consumer with a 90% of the total withdrawal, while the industry and domestic sector only mean 3% and 7% respectively.

Identifying the range of effects water scarcity and security may have on economic growth – in a rigorous manner – is a challenge (Sadoff, C.W., et al., 2015). However there is global consensus on the impacts that water insecurity has for people: 1) reduced crop yields, hydropower plant output, and thermal power plant cooling, which can subsequently push up food and energy prices, 2) floods damage homes and other floodplain assets, harm people, and disrupt businesses and supply chains, 3) inadequate water supply and sanitation increases mortality and morbidity, reduces labour productivity, and increases healthcare costs, 4) increase of pollution and degradation inhibit ecosystems' capacity to deliver ecosystem services.

Rio 92 Conference outcome document, Agenda 21, established commitments for major groups and farmers to address water shortages and food security issues, as well as it gave important emphasis to the development of water resources assessments. Despite the efforts to promote more efficiency in the use of water, global water withdrawals continue to rise by approximately 10% every 10 years (UNEP, 2008). 30% of the present water consumption is supplied from an overused water source, or from non renewable groundwater resources and water scarcity affects more than 40 per cent of people around the world, and it is projected to increase (UNDG, 2015).

While hunger and poverty prevail, both water and food security will be high on the political agenda and innovative ways of achieving growth will be needed (GWP, 2012). Agriculture (70%) and Industry (20%) sectors contribute the most part of water consumption, and require special attention to bring water withdrawals into line with limited renewable levels of ground and surface water. Most rich countries enjoy relatively manageable water endowments (i.e., «simple hydrologies» providing

3. <http://data.worldbank.org/indicator/ER.H2O.FWIN.ZS?end=2014&start=2014&view=chart>.

relatively reliable, plentiful water resources), and have made the investments needed to manage these hydrologies. Many poor countries face «difficult hydrologies», and hence require greater investment to achieve water security. These countries are often the least able to afford such investments (Sadoff, C.W., et al., 2015).

Policies and infrastructure investments are needed to enhance water security; to allocate water between alternative uses; to deliver water at specific times, places, and prices; to ensure water quality; and to protect people and assets from water-related hazards. This, in turn, can have a profound impact on economic growth, inclusiveness, and the structure of economies (Sadoff, C.W., et al., 2015). Globalization can also help mitigate local water-related challenges through food trade, financial risk management tools, foreign direct investment, and cooperative disaster warning and response mechanisms. Yet, the negative impacts of these risks can also be propagated through the global economy, and through social disruptions, population displacement, disease, and species and habitat losses.

Agriculture and industry presents several opportunities for improvement that can be applied especially in main hotspots locations where there is high use-to-availability ration for water. The combination of measures will depend on the context and existing resources of the country. Some of the possibilities are: 1) efficiency gains through technology and innovation, water quantity restrictions, and land planning and management, 2) improving patterns and habits of inefficient and unsustainable production and consumption in food production chains, and manufacturing practices, 3) importing water-inter basin transfers and enhancement of trade in agricultural commodities (2016, Jing Liu1et al.), 4) information and knowledge management to build the adaptive capacities and skills required for the adoption of better water management practices, and 5) better regulatory frameworks focused on adapting, and providing with proper incentives to voluntary agreements.

3.5. INTEGRATED RESOURCES MANAGEMENT

Target 6.5. By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

Traditionally water and sanitation management has been a very fragmented sector, where policy makers and institutions have focused on

their specific areas of interest from a silo approach, with little attention to the interdependencies with other areas. Integrated Water Resource Management (IWRM) is the most prominent of concept that stresses the importance of integrated and participatory management processes and reform of water governance systems (Medema et al. 2008). It offers a set of principles, rules and operational tools to break the fractional water development and management systems and emphasize more coordinated decision making across sectors, networks and scales (Global Water Partnership, 2012; cf., Pahl-Wostl, 2009, Rogers P et al., 2003). It helps to balance available resources with demands from a multitude of often conflicting water users as well as ensuring critical ecosystems continue to maintain the resource base.

The complexity of approach of IWRM, and lack of more rigorous, evidence-based, reporting system makes it difficult to analyse global trends on the level of progress on its implementation since 1992. Some analysis claim that application of integrated approaches is less than 30% and in most cases is significantly lower if not completely non-existent (2012, Felix Dodds et al.), while other ones, present a more optimistic scenario where most countries have developed some level of IWRM plans and around half are in advanced stage of implementation for basins or subbasins since 1992 (80% of countries surveyed by the UN WATER Status Report of 2012⁴). There is consensus in that even if there has been legislative and policy changes, water competition has increased in the last 20 years, and IWRM theories and methods are still in the developmental phase and more research is needed to identify effective approaches for coordination and operationalization of IWRM models (cf., Galaz 2007; Medema et al. 2013).

Measures for solving existing water problems can only be sustainable and effective, if the knowledge generated about possible solutions is deeply rooted within the originating region (M. Leidel, 2011). This is due to the fact that the effective implementation of IWRM depends greatly on a human and behavioral component of water management and governance that determines prevailing paradigms and institutions (J. Halbe et al., 2013). Capacity development for developing countries on IWRM planning methodologies such as paradigms assessment and situation analysis, stakeholders mapping and other tools will be essential for communities to identify tailor-made measures to effectively realize the concept of IWRM (Galaz 2007).

The transition from a predominantly fragmented water management

4. Analysis based on a survey to 130 countries.

approach to an integrated and sustainable approach will require a strong transformational path that needs to include: 1) policy instruments that promote complementarities (economic, social, environmental) and leverage change, 2) fiscal instruments that give a price to environmental goods, and 3) strengthened institutional arrangements that function within increasing complexity, cutting across sectoral silos and sovereign boundaries (GWP, 2012).

3.6. PROTECTION OF WATER-RELATED ECOSYSTEMS

Target 6.6. By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

Both the Agenda 21 and the MDGs included deforestation reduction and biodiversity protection as part of their objectives. Two main instruments were considered to address these issues the creation of protected areas and the introduction of sustainability criteria and patterns in the management of natural resources. In recent years, the net loss of forest area has slowed, due to slight decrease in deforestation and an increase in afforestation, as well as the natural expansion of forests in some countries and regions. Net loss in forest area declined from 8.3 million hectares annually in the 1990s to an estimated 5.2 million hectares (an area about the size of Costa Rica) each year from 2000 to 2010. In spite of this improvement, deforestation remains alarmingly high in many countries and it continues to jeopardize species and the livelihoods of millions of people.

Freshwater ecosystems have been the most degraded ecosystem this affecting the most to the world's poor, as they often depend directly on water and other ecosystem services provided by rivers, lakes and wetlands for their livelihoods (UNEP, 2008; Millennium Ecosystems Assessment 2005). South America and Africa experienced the largest net losses of forest area in the first decade of the new millennium. Oceania also reported a net loss, largely due to severe drought and forest fires in Australia. Asia, on the other hand, registered a net gain mostly due to large-scale afforestation programmes in China, offsets continued high rates of net loss in many countries in Southern and South-Eastern Asia (2015, UNDG).

Regarding the status of protected areas, in 2014, 15.2 per cent of terrestrial and inland water areas and 8.4 per cent of coastal marine areas (up to 200 nautical miles from shore) were protected. In Latin America and the Caribbean, coverage of terrestrial protected areas rose from 8.8

per cent to 23.4 per cent between 1990 and 2014. In Western Asia, the terrestrial area under protection has more than quadrupled, from 3.7 per cent in 1990 to 15.4 per cent in 2014 (2015, UNDG). However only 0.25 per cent of marine areas beyond national jurisdiction (extending beyond 200 nautical miles) were protected, what has left the proportion of fully exploited fish stocks at 50%, the same percentage as the 1970s, the proportion of marine fish stocks within safe biological limits fell from 90 per cent in 1974 to 71 per cent. This highlights the urgent need for action in this area (2015, UNDG).

Main challenge of the protection of water-related ecosystems is the need for coordinated action between different policy sectors to agree in the approach to conflicting priorities (e.g. agriculture, hydropower, manufacturing, urban development). Integrated Water Resources Management is a good tool to facilitate the process of decision-making and policy development, but it can be ineffective in the absence of accurate information, monitoring and community participation systems to ensure relevance and acceptance of solutions in the decision-making process.

When water systems, including watersheds are adversely impacted by poor water quality, strategies to remediate pollution and restore systemic health and functions are important. The SDG-6 puts an especial emphasis in ecosystem restoration, which is now globally recognized as a key component in conservation programs and essential to the quest for the long-term sustainability. It requires important amounts for soft (know how) and hard technology (machinery) and the involvement of both of public and private institutions through specific policies to ensure that the results will be sustainable and well planned. Environmental laws and policies will be key to ensure sharing and allocating risks and costs between public sector and private sector entities. A challenge here is the need for a global valuation of ecosystems for the private sector to incorporate restoration activities into their decision-making (Montanarella, 2016).

3.7. CAPACITY BUILDING AND TECHNOLOGY TRANSFER

Target 6.6.a. By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

As a concept, Knowledge and Capacity Development (KCD) appeared in the international development assistance domain in the late 1980s and aimed at re-assessing the notion of technical cooperation and emphasizing the need for ownership, leadership and bringing human resources development to the fore (Lusthaus et al., 1999 as cited in Mvulirwenande S. et al., 2014). The experiences gained during the International Drinking Water Supply and Sanitation Decade (1981-1990) demonstrated that just infrastructure was not the solution to water and sanitation problems in developing countries, and that they require a multi-dimensional approach that takes into account the need to build an enabling environment (Mvulirwenande S. et al., 2014). Thus, KCD is widely recognized as an important tool for water development. Transfer of technology (soft and hard) is also essential to support developing countries to overcome the big gaps of accessibility to existing solutions. However, technology transfer to be effective needs to be flexible, participatory and demand driven. This has not always been taken into account, resulting into big unsustainable investments in technology transfer that were not adapted to the cultural and social context, technical capacities to manage them and financial resources to maintain them (UN-WATER, 2012).

KCD helps to make visible the structural conditions that affect the success or failure of interventions, and to compare abilities of different countries as well of the degree of their development (Janike M., 2013). It includes the following components: 1) *knowledge management*: set of tools used to put in place objectives and administrative procedures that create a climate in which people are encouraged to learn about their field and share their knowledge, 2) *education, training research and innovation*, which relies on the strengthening of individual capacity through training and learning, 3) *institutional capacity building and organisational improvement*, which involves establishing adequate policies, laws, regulations, administrative rules, norms and tradition to create an enabling environment that will allow organizations to assimilate modern approaches in science, technology and management (Alaerts G. et al., 2009), 4) *awareness creation and understanding* of water use and value and sanitation, by communities and civil society, development of national and supra-national networks, etc (Mvulirwenande S. et al., 2014).

There is quite a lot uncertainty that KCD and technology transfer as applied in the last 20 years, had an impact in to transferring knowledge – or at least it didn't happen in the catalytic way that might ignite a positive chain reaction throughout developing societies (Mvulirwenande S. et al., 2014). Is the knowledge and technology acquired used and their application results in improved business results? Systems thinking theory

(complex adaptative systems approach) attributes the weak impact seen in this sector to the fact that cause-effect are often separated in time, and that the relationship between outputs (training, technology, etc.) and impacts (cognition, change in attitudes, etc.) is not linear. On the contrary, this theory remarks, that outcomes can be better understand in terms of probabilities and assumes randomness of institutional challenges of achieving the impact expected (Mvulirwenande S. et al., 2014).

Transnational Public Private Partnerships (PPPs) are being developed in the recent years as means to provide services and facilitate knowledge transfer. A recent study carried out in 2012, analysed the performance of six PPPs on water and energy, and concluded that effectiveness in the sample was related to good process management, since the tasks of knowledge PPPs usually involve the organization of complex networks (Sabine C., 2014). Some examples of tripartite PPP on WASH are the Building Partnership for Development in Water and Sanitation (BPD)⁵, the Global Water Partnership (GWP⁶), Water and Sanitation for the Urban Poor (WSUP⁷). New trends in PPPs are also opening the way for new regional and local players and industries to emerge to meet these challenges such as Build-Operate-Transfer (BOT) and Design-Build-Operate (DBO) modalities, particularly in desalination and wastewater treatment plants, that has become a solid business line in many emerging countries (especially in the Middle East, China, Mexico and Brazil) and Performance-Based Contracts (PBCs) significantly implemented in the Middle East and North Africa (Algeria, Saudi Arabia, Oman), Latin America (Tegucigalpa in Honduras, Colon in Panama) and Africa (Congo DRC).

Formal and informal Networks of Knowledge have also grown in importance as part of KDC, since they help to break the barriers for communication and exchange of knowledge and play an important role facilitating dialogue stakeholders and experts to identify pressing issues in the sector and foster consensus in the action to be taken (UNESCO-IHE, 2009). Many initiatives have been created in the last years to connect practitioners, communities, NGOs, agencies, researchers, governments, private sector donors and others involved or interested in the WASH sector. Some examples of this are the Community-Led Total Sanitation (CLTS), Cap-Net, the Gender and Water Alliance (GWA), the Rural Water

5. BPD aims at promoting multi-sector partnerships in water and sanitation services in developing countries.
6. GWP encourages learning to promote and integrated approach to water resource management.
7. WSUP provides large-scale access to water and sanitation in urban slums.

Supply Network (RWSN), the World Water Council (WWC), or the Global Water Initiative (GWI).

3.8. COMMUNITY PARTICIPATION

Target 6.6.b. Support and strengthen the participation of local communities in improving water and sanitation management

The MDG 7C focused on numbers or percentages of people with access to improved sources of water and sanitation, what led in some cases to ignoring problems of inequality and of the need to protect the most vulnerable, against the desire to improve indicator data (national averages). This happened, because decisions were made top down, and because of the lack of empowerment of poor communities. The SDG-6 wants to address this shortcoming by promoting empowerment and inclusion of local communities in the planning and decision-making of WASH projects and contributing to improve transparency and accountability of public services and close the divisions that create inequalities of opportunity and capacities (Millennium Ecosystem Assessment, 2005).

Empowerment of communities can happen in many ways, on the one hand by improving transparency and access to information to communities, on the other hand by creating the capacities to interpret, understand and use that information. The use of participatory methodologies for planning and decision-making on WASH projects and the creation of local governance structures able to manage, maintain and scale up WASH services, will be crucial factors to the success and sustainability of WASH projects. There is a diversity of evidence, responses and approaches at the local level demonstrating this. Yet the linkages between global, regional, national and local action are not always made and capacities at the local level often remain a constraint (Millennium Ecosystem Assessment, 2005). Often, local participation is seen merely as a means of improving a project's efficiency and/or effectiveness rather than as a long-term process of social transformation and empowerment. It is crucial to create long-term transparent local governance systems to establish appropriate measures to avoid the use of water and sanitation for political, economic and/or power ends, setting up objective processes and criteria for taking and implementing decisions of the population's real needs with cultural relevance and social and economic sustainability, and through the establishment of mutual accountability systems.

The bottom up approach in sanitation and hygiene has been essential in the work done to reduce open defecation. Community Led Total Sanitation (CLTS) approach is an innovative methodology for mobilizing communities to completely eliminate open defecation (OD) by focusing on the behavioural change needed to ensure real and sustainable improvements – investing in community mobilisation instead of hardware, and shifting the focus from toilet construction for individual households to the creation of open defecation-free villages. It is based in the recognition that merely providing toilets does not guarantee their use, nor result in improved sanitation and hygiene. Earlier approaches to sanitation prescribed high initial standards and offered subsidies as an incentive. But this often led to uneven adoption, problems with long-term sustainability and only partial use. It also created a culture of dependence on subsidies. In CLTS Communities are facilitated to conduct their own appraisal and analysis of open defecation (OD) and take their own action to become ODF (open defecation free).

4. CHALLENGES OF METRICS AND ACCOUNTABILITY FOR THE SDG 6

The MDGs indicators, made an important contribution to develop capacities to monitor global trends and the progress towards the commitments set in the global agenda by the States. However, even if data were available the quality, scale, scope, and methodologies differed vastly from country to country and case-to-case (2016, Janet G. Hering et al.). The Joint Programme Monitoring by UNICEF and WHO, based on country level household surveys and other nationally collected data, is currently the only WASH data base with global coverage. It provides with biennial information on the status and trends of water supply and sanitation, and has annual updates. This report doesn't cover though all SDG-6 targets and indicators such as hygiene, integrated water management, water ecosystems protection and institutional WASH. This system has been a great progress, but it requires some enhancements related to issues such as the improvement of the comparability and accuracy of data acquired through surveys, the need for differentiated definitions and standards for urban and rural areas, and the lack of data related to sustainability of services and quality and safety of water. Data related to safe management of excreta, and hygiene are currently not being systematically monitored and are less widely available in developing countries, especially in urban areas (Satterthwaite D., 2016).

There are two other key reports on water and sanitation issues prepared

by various UN agencies and partners that provide different global analysis on water issues and that have different periodicity, scope and approaches. The new SDGs progress report will require more coordination in the production of UN global reports to avoid duplications. These are: 1) *the Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS)* by WHO, which has a strategic outlook at water supply and sanitation and is biennial since 2008; 2) *the World Development Report (WDR)* by UN WATER, which has outlook to state, uses and management of water resources and is annual since 2014.

There is global consensus that it should be avoided to establish new and ad hoc monitoring mechanisms for the SDGs, but focus should be put in supporting national data collection linked to national data collection systems. This means that effective global monitoring will depend therefore, on strengthening national regulatory and administrative reporting systems, the harmonization of information generation and the commitment of Governments, scientists and corporations to long-term funding for the collection of data and that monitoring and assessment systems will be required to ensure (2013, UNU, UNOSD & SEI; Yonglong, 2015).

Regarding the inclusion of the inequalities approach in the monitoring process of distribution of WASH services, the current definition by JMP system of «improved» access to water and sanitation does not make it possible to measure equitable access as they contain so many different options (a household with a pit latrine and a slab is treated as equal to a household with its own WC with a sewer connection; a household with water piped on premises is treated as equal to one with access to a standpipe) (Satterthwaite D., 2016). A finer analysis of these metrics will be needed, including segregated data on the disparities between population subgroups (populations, ethnic groups, women, elderly, and persons who are physically impaired) and localities in order to guide policy and investment and allow for inequalities sensitive approaches to decision-making. However, currently there is limited access to this set of data and as the sample size and sampling methodology in nationally representative surveys generally do not enable sufficiently robust comparisons (Satterthwaite D., 2016; Hutton G. and Chase C., 2016).

In relation to Institutional WASH, global reporting has not yet been standardized, and efforts are now underway to cover WASH in schools and health facilities for SDG monitoring: 1) the Demographic and Health Survey (DHS) Service Provision Assessment (SPA) collects data on WASH in health facilities, 2) WASH coverage in both primary schools and front-

line health facilities is monitored and reported under the Service Delivery Indicators, currently for Sub-Saharan Africa, 3) UNICEF operated Education Management Information System, includes WASH in schools indicators, 4) WHO operated Health Management Information System, 5) Office of the United Nations High Commissioner for Refugees (UNHCR) refugee camps information system. Data on WASH in schools and health facilities is currently available for less than 100 countries but UNICEF/ UNESCO and WHO have established norms and standards and have begun aggregating data at global level:

On the status of Integrated Water Management and ecosystems protection, there is not a systematic and periodically rigorous global monitoring system. However there is some efforts done to produce thematic analysis such as the Depth Status Report on Global Efforts to Improve Water Management (WRM) (by UN – WATER in 2012), and UNEP's Global Environment Outlook (GEO) 5 on the Ecosystem Millennium Assessment on the situation of the protection of ecosystems (by UNEP in 2012). More efforts will be needed to address the needs of information of the SDG-6 Target in this area, to produce credible data to underpin sector advocacy, stimulate political commitment, inform decision making and trigger well-placed investment towards optimum health, environment and economic gains.

5. CONCLUSIONS

The SDG-6 through its six targets covers the entire water cycle, and means a great progress in unifying the historically separated human and environmental agendas on water and sanitation. The integrated approach to water resources management brings them both together, and allows for better planning to take place to satisfy the needs of all stakeholders. Targets 6.1 and 6.2 build on the MDG targets on drinking water and basic sanitation, providing continuity while expanding their scope and refining the definitions of safe access to water and sanitation. Targets 6.3 to 6.6 address a broader water context of the use of water resources that was not explicitly included in the MDG framework as stated in Rio 92 Agenda 21. Targets 6.a and 6.b acknowledge the importance of an enabling environment, addressing the means of implementation and aiming for international cooperation, capacity-building and the participation of local communities in water and sanitation management.

Another big gain of the SDG-6 versus previous agendas is the inclusion of the human rights approach to access to water and sanitation, where universal access is set as a target. A, special emphasis is also put

in gathering segregated data that would allow for tailored solutions to address the needs of the most vulnerable groups and to ensure the protection of the human right to access to water and sanitation. For example women, for whom inadequate water supplies pose additional burdens, and that require governments to craft policies and programmes that respond to women's needs and underpin sustainable services, such as gender-responsive budgeting.

Despite the progress made so far in the development of global data sets on WASH issues and the collection of evidences on many aspects of WASH which can be utilized in designing and implementing improved policies and programmes, more efforts are needed to analyse the performance of service levels and, institutional management, as well as the progress on in hygiene and behavioural change issues.

This century brings also additional challenges to the SDG-6 achievement, such as climate change, continued urbanization and population growth, migration flows, recurrent conflicts and globalization through the use of technologies. Context based solutions and transnational cooperation to build resilience at the national, community and household level, will be crucial to adapt and absorb the impacts of the shocks caused by these phenomena, and to provide the tools for transformative change.

Water, energy and food are inextricably linked and require major changes in policy and management, across the entire agricultural production chain to ensure best use of available water resources in meeting growing demands for food and other agricultural products. Adaptation to climate change will pose additional challenges, and requires the introduction of new water management practices have the potential to create resilience to climate change and to enhance water security. The growing urban population (projected to increase by 2.9 billion, from 3.4 billion in 2009 to 6.3 billion total in 2050), is contributing to increase the stress on water resources through pollution, especially in many fast-growing cities where wastewater infrastructure is non-existent, inadequate or inexistent.

Water, conflicts and migration are also closely intertwined. Existing conflicts such as the ones in the Middle East and Africa are causing the displacement and migration of big masses of people (over 500,000 people migrated into Europe in 2015 in the worst migration crisis since World War II), setting additional stress on the use of water resources and opening new humanitarian. On the other hand, it is also very well-documented the connection between water scarcity to food insecurity, social instability and potentially violent conflict. As climate change amplifies scarcity

worries, more secure water supplies could help the lives of millions in conflict zones⁸).

The SDGs agenda contains challenging goals. They will require a transformation of societies that is far deeper and faster than in the past. Existing technologies can help some of them, but they will also require new innovative services and improved reach of technological and governance solutions, that change the way we do business as usual. The involvement of developed and developing countries working together and cooperating across borders will be crucial factors that will affect the success or failure of the world in achieving the SDGs. The application of information and communication technology can offer opportunities for deep transformation of the world economy and societies more broadly and can contribute to fast track the achievement of the SDGs, especially for developing countries that can profit from a new level of global connectivity, and opportunities for scaling up solutions.

REFERENCES

BIRAN, A.; RABIE, T.; SCHMIDT, W.; JUVEKAR, S.; HIRVE, S.; CURTIS, V, 2008. Comparing the performance of indicators of hand-washing practices in rural Indian households. *Trop. Med. Int. Health*, 13, 278-285.

CAMPE SABINE, 2014. Partnerships for Water and Energy –Special Focus: Knowledge Transfer 87-107 pg. *Transnational Partnerships– Effectively providing for Sustainable Development?* Edited by Marianne Beisheim and Andrea Liese. Palgrave Mcmillan.

CHOUKR-ALLAH, R., 2013. Wastewater Recycling and Resuse as a potential resource for water saving in the Mediterranean Region. Agadair, Morocco, 2004. Daniel Thevenot. 13th edition of the World Wide Workshop for Young Environmental Scientists (WWW-YES-2013).

DAVID SATTERTHWAITE, 2016. Missing the Millennium Development Goal targets for water and sanitation in urban areas. International Institute for Environment and Development (IIED).

DREXHAGE J. and MURPHY, 2010. From Brundtland to Rio 2012. International Institute for Sustainable Development (IISD) Sustainable Development. Background Prepared for consideration by the High Level Panel on Global Sustainability at its first meeting, 19 September 2010.

8. Source: Beyond Conflict, Water Stress Contributed to Europe's Migration Crisis. Kitty van der Heijden, Betsy Otto and Andrew Maddocks – November 03, 2015. WRI Blog.

Felix DODDS et al., 2012. Review of implementation of Agenda 21 and the Rio Principles. Sustainable Development in the 21st century (SD21). UNDESA. Study prepared by: Stakeholder Forum for a Sustainable Future.

GALAZ, V., 2007. Water governance, resilience and global environmental change – a reassessment of integrated water resources management (IWRM). Water Science and Technology.

GWP, 2012. Water in the Green Economy. GWP Perspectives Papers.

HUTTON GUY and CHASE CLAIRE, 2016. The Knowledge Base for Achieving the Sustainable Development Goal Targets on Water Supply, Sanitation and Hygiene. Environmental Research and Public Health.

IAEG-SDGs, 2015. Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators. Submitted for consideration by the Statistical Commission at its forty-seventh session in March 2016.

J. HALBE, C. PAHL-WOSTL, J. SENDZIMIR, J. ADAMOWSKI, 2013. Towards adaptive and integrated management paradigms to meet the challenges of water governance. Water, Science and Technology Journal.

JANIKE M., 2013. The Political System's capacity for environmental policy: the framework for comparison 1-16 pg. Capacity building in national environmental policy: A comparative study of 17 countries. Springer.

JING LIU¹ et al., 2016. Achieving Sustainable Irrigation Water Withdrawals: Global Impacts on Food Production and Land Use.

JMP (WHO; UNICEF), 2015. Progress on Drinking Water and Sanitation: 2015 Update and MDG Assessment; WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation.

JMP, 2010. Progress on Sanitation and Drinking Water: 2010 Update. UNICEF and WHO.

JMP, 2014. Progress on Drinking Water and Sanitation Report. Update 2014. UNICEF and WHO.

JMP, UNICEF and WHO, 2015. Progress on sanitation and drinking water – 2015 update and MDG assessment.

MEDEMA, W., MCINTOSH, B. S. & JEFFREY, P. J., 2013. From premise to practice: A critical assessment of integrated water resources management and adaptive management approaches in the water sector. Ecology and Society 13 (2), 29.

Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC.

MONTNARELLA LUCA, 2016. The importance of Land Restoration for Achieving a Land Degradation-Neutral World 249-259 pg. Land Restoration: Reclaiming Landscapes for a Sustainable Future.

MVULIRWENANDE ILAS, UTA WEHN and GUY ALAERTS, 2014. Evaluating Capacity Development in the Water Sector: Challenges and Progress. Working paper. 37th WEDC International Conference, Hanoi, Vietnam. Sustainable Water and Sanitation Services for all in a fast changing world.

ONDA, K.; LOBUGLIO, J.; BARTRAM, 2012. J. Global access to safe water: Accounting for water quality and the resulting impact on MDG progress. Int. J. ENVIRON. Res. Public Health 9, 880-894.

OSBORN DEREK, CUTTER AMY and ULLAH FAROOQ, 2015. Universal Sustainable Development Goals. Understanding the Transformational Challenge for Developed Countries. Stakeholder Forum.

PAHL-WOSTL, C., 2009. A conceptual framework for analyzing adaptive capacity and multi-level learning processes in resource governance regimes. Global Environmental Change.

ROGERS P and A W HALL., 2003. Effective Water Governance, TEC Background Paper 7, GWP, Stockholm.

SACHS J., 2012. From Millennium Development Goals to Sustainable Development Goals. Lancet; 379: 2206-11.

SADOFF, C.W., et al. (2015). Securing Water, Sustaining Growth: Report of the GWP/OECD Task Force on Water Security and Sustainable Growth. University of Oxford, UK, 180 pp.

SCHMIDT, W.-P.; CAIRNCROSS, S, 2009. Household water treatment in poor populations: Is there enough evidence for scaling up now? Environ. Sci. Technol., 43, 986-992.

THOMAS F. Clasen, 2012. Millennium Development Goals water target claim exaggerates achievement. Tropical Medicine and International Health. volume 17 no. 10 pp. 1178-1180 october 2012.

UN-DESA, 2016. Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators. Statistical Commission Forty-seventh session 8-11 March 2016.

UNDG, 2013. Report: A Million Voices: The World We Want | A Sustainable Future with Dignity for All.

UNDG, 2015. The Millennium Development Goals Report 2015

UNEP & UN-Habitat, 2010. Sick Water: The Central Role of Wastewater Management in Sustainable Development.

UNEP, 2008. Vital Water Graphics: An Overview of the State of the World's Fresh and Marine Water Resources, 2nd Edition, UNEP, Nairobi.

UNEP, 2010. Technology Transfer and Cooperation under the Convention on Biological Diversity. Towards more effective implementation.

UNEP, 2012. Outlook Report 5.

UNEP, 2013. Breaking Down the Silos: Integrating Environmental Sustainability in the Post-2015 Agenda Final Report of the Thematic Consultation on Environmental Sustainability in the Post-2015 Agenda.

UNESCO-IHE, 2009. Progress and Challenges in Knowledge and Capacity Development 3-31 pg. Capacity development for Water Management. Edited by M. Hare.

UNICEF, 2013. A Post-2015 Global Goal for Water: Synthesis of key findings and recommendations from UN-WATER.

UNTT, 2013. A new Global Partnership: Eradicate poverty and transform economies through sustainable development. The Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda.

UNU, UNOSD & SEI, 2013. Catalizing water for sustainable growth. Framing Water within the Post-2015 Development Agenda. United Nations University.

UN-WATER Task Force on Wastewater Management, 2013. Wastewater Management and Water Quality: Input Paper for UN-Water SDG Working Group, Internal working document.

UN-WATER, 2011. Water Policy Brief.

UN-WATER, 2012. A Water toolbox or best practice guide of actions.

UN-WATER, 2012. Status Report on the Application of Integrated Approaches to Water Resources Management. Summary of key facts and recommendations Rio 20.

UN-WATER, 2014. A Post-2015 Global Goal for Water: Synthesis of key findings and recommendations from UN-Water.

ANNEX:

Table 2. Summary of main High-level political declarations and their contributions to address water and sanitation challenges.

| Year | Multilateral Agreement | Main Results | Role of Water |
|------|--|---|---|
| 1972 | UN Conference on the Human Environment, Stockholm | First major international gathering to discuss sustainability at the global scale. | It recognized the need to safeguard natural resources, water. |
| 1987 | World Commission on Environment and Development | Presentation of the Brundtland report « Our Common Future ». Established the «classic» definition of sustainable development: «development which meets the needs of the present without compromising the ability of future generations to meet their own needs» | Highlighted the unprecedented unprecedented pressures on the planet's lands and waters and urged States to act to protect natural resources. |
| 1992 | United Nations Conference on Environment and Development in Rio de Janeiro Brazil/Agenda 21 | It laid the foundations for the global institutionalization of sustainable development. Three main instruments were approved: 1) Convention on Climate Change and the Convention on Biological Diversity, 2) endorsed the Rio Declaration on Environment and Development and the Forest Principles, and 3) adopted Agenda 21, a plan for achieving sustainable development in the 21st century. | Agenda 21 included a chapter on protection of the quality and supply of freshwater resources, and the application of integrated approaches to the development, management and use of water resources. |
| 1994 | Convention on Biological Biodiversity | It represents a dramatic step forward in the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources. | It includes a target to restore, safeguard and take into account ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being (Aichi Biodiversity Targets, Target 14). |

| Year | Multilateral Agreement | Main Results | Role of Water |
|------|--|---|--|
| 1994 | UN Convention to Combat Desertification | The Convention is the sole legally binding international agreement linking environment and development to sustainable land management and addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands. | The UNCCD secretariat facilitates cooperation between developed and developing countries, particularly around knowledge and technology transfer for sustainable land management. |
| 1994 | Framework Convention on Climate Change | An intergovernmental treaty developed to address the problem of climate change. In the Framework Convention on Climate Change countries committed to with the ultimate aim of preventing «dangerous» human interference with the climate system. | The Convention recognizes that water is a key element of the climate system, and includes a set of actions and programmes to manage water resources and tackle water-related disasters. |
| 1997 | UN Watercourses Convention | It is a flexible and overarching global legal framework that establishes basic standards and rules for cooperation between watercourse states on the use, management, and protection of international watercourses. | The UN Watercourses Convention requires states to use international watercourses in an equitable and reasonable manner consistent with their protection. |
| 2000 | United Nations Millennium Declaration | The World leaders committed their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets – with a deadline of 2015. The MDGs was the first global agenda that established common development objectives, with clear targets and specific indicators, making accountable for its achievement to both developing and developed countries. | The Millennium Development Goals (MDGs), Agreed in 2000, aimed to halve the proportion of people without sustainable access to safe drinking water and basic sanitation between 1990 and 2015. |

INTERNATIONAL SOCIETY AND SUSTAINABLE DEVELOPMENT GOALS

| Year | Multilateral Agreement | Main Results | Role of Water |
|------|---|---|--|
| 2002 | World Summit on Sustainable Development (WSSD) in Johannesburg | Shows a shift in the perception of sustainable development leaning more towards social and economic development rather than environmental issues, in great part driven by the needs of the developing countries and strongly influenced by the Millennium Development Goals. | There was a major parallel side-event on water, called the «Water Dome – No Water No Future». This event was also the first time that water was recognized as central to sustainable development and to reducing poverty. |
| 2010 | UN Resolution A/RES/64/292 | It recognizes access to safe water and sanitation as a human right. | It establishes that priority should be given to the bottom billion who live without access to drinking water, and especially those who are deprived of their right to food, health and energy. |
| 2012 | Rio +20, United Nations Conference on Sustainable Development | This Conference renewed the commitment of the world community to completing the unfinished sustainable development agenda. Member States also decided to launch a process to develop a set of Sustainable Development Goals (SDGs), which would build upon the Millennium Development Goals and converge with the post 2015 development agenda. | Governments recognized that achieving the development objectives of ending poverty, overcoming inequalities, realizing human rights for all and boosting and sustaining economic development is reliant upon healthy freshwater systems. |

| Year | Multilateral Agreement | Main Results | Role of Water |
|------|---|---|--|
| 2013 | Global Thematic Consultations on Water for the Post 2015 Development Agenda and SDGs | This consultation led by the United Nations Development Group included the perspectives from people in 185 Member States, the African Ministers» Council on Water regional consultations held in Monrovia and Tunis in early 2013, and a series of 22 national stakeholder consultations facilitated by the Global Water Partnership bringing together over 1,000 representatives of government, private sector, academia and civil society | A resulting report was submitted to the UN Assembly including a proposal for a wider water development agenda that embraces water resources and wastewater management, and water quality improvements. |
| 2013 | High Level Panel on the Post-2015 Development Agenda at the UN Assembly | The UN Task Team (UNTT) established a High Level Panel of Experts to produce a report to submit to the General Assembly with a proposal to shape the new Post 2015 Development Agenda: «A new Global Partnership: Eradicate poverty and transform economies through sustainable development». | The report puts water and sanitation access for all at the core of: 1) inclusive social development; 2) inclusive economic development; 3) environmental sustainability; and 4) peace and security; and proposes the inclusion of a standalone objective for the new Post 2015 Development Agenda. |
| 2015 | The 2030 Agenda for Sustainable Development | A new global agenda with seventeen « Sustainable Development Goals » was adopted by world leaders. The two roads of the sustainability and poverty eradication converge and blend in one. A set of 17 Goals are established, each goal has specific targets to be achieved by 2030, there are 169 in all. | Universal access to drinking water and sanitation services is established as a major goal. |

| Year | Multilateral Agreement | Main Results | Role of Water |
|-------------|---|---|---|
| 2015 | Paris Agreements on Climate Change | It marks the latest step in the evolution of the UN climate change regime and builds on the work undertaken under the Convention. The Paris Agreement charts a new course in the global effort to combat climate change | Highlighted the need for enhancement of adaptive capacities and the strengthening of climate change resilience a global goal. It puts an emphasis in gearing water policy towards addressing the rise in extreme weather events, the scarcity of resources and the deteriorating quality of water resources as a result of climate change |

Table 3

Source: Own elaboration using a combination of online accessible data and reports

Chapter 10: goal 7

Ensure access to affordable, reliable, sustainable and modern energy for all¹

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SUMMARY: 1. INTRODUCTION. 2. ENERGY ACCESS AND HUMAN DEVELOPMENT. 3. ENERGY ACCESS AND A CLEANER ENVIRONMENT. 4. SPECIFIC TARGETS. 5. TRACKING PROGRESS. 6. CONCLUSION. REFERENCES.

ABSTRACT:

The new global Sustainable Development Goals (SDGs) were adopted in September 2015 as a natural extension of the Millennium Development Goals (MDGs). A significant novelty of the new SDGs is that, for the first time, the issue of energy is tackled as an important element of human development. In fact, energy is at the core of the development process in every country and it is seen as a necessary condition to promote prosperity. Currently, over one billion people remain without access to electricity and a total of 2.9 billion people do not have access to clean cooking and heating facilities.

The SDG 7 calls for ensuring affordable and clean energy for everyone as a vehicle to promote prosperity and a cleaner environment for the next generations. It includes three specific targets related to ensuring universal access to energy, increasing the share of renewable energy in the global energy mix and promoting further energy efficiency gains.

1. DISCLAIMER: The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the OPEC Secretariat or of its Member Countries.

Across these three dimensions of the SDG 7 the rate of progress during the last few years falls substantially short of the rate that would be needed to ensure that the three objectives are met by 2030. However, it has to be highlighted the fact that significant progress has been observed in recent years compared to what was observed in the last decades. Further governmental support and stronger commitment of the international community is needed to ensure that the objectives are achieved together with technology transfer and access to investment and financing.

1. INTRODUCTION

On September 25th 2015 the Heads of State and Government and High Representatives met at the United Nations Headquarters in New York, United States adopted the Post-2015 Development Agenda including the new global Sustainable Development Goals (SDGs). The adopted 17 SDGs are seen as a natural extension of the Millennium Development Goals (MDGs) which were adopted by the international community in September 2000. Despite the fact that the MDGs had many deficiencies, they were rather successful. The proportion of people living in extreme poverty was reduced from 47% in 1990 to 22% in 2010. The proportion of hungry people went down from 19% to 12% and the primary school completion rate increased from 82% to 91% during the same period. It was also remarkable that the ratio of girls to boys attending school increased from 0.88 to 0.97 in 20 years. Mortality rates also decreased significantly and since 1990, it is estimated that 2.5 billion people have gained access to clean water.

However, the United Nations agreed that «the MDGs fell short by not integrating the economic, social, and environmental aspects of sustainable development as envisaged in the Millennium Declaration, and by not addressing the need to promote sustainable patterns of consumption and production. The result was that environment and development were never properly brought together. People were working hard –but often separately– on interlinked problems»².

A significant novelty of the new SDGs is that, for the first time, the issue of energy is tackled. In the past, the MDGs completely omitted the topic of energy and its important links to human development. Thankfully, energy is now seen as a fundamental pillar for prosperity and it is at the core of the sustainable development agenda. Clearly, development and

2. United Nations (2013): A new Global Partnership: eradicate poverty and transform economies through Sustainable Development.

energy go hand in hand. Without energy, healthcare cannot be delivered, water supply cannot be guaranteed, education cannot be assured and climate change may not be mitigated. And what is more, history tells us that no country has developed and prospered without energy.

In fact, energy is very much related to the other aspects of the SDGs agenda. As highlighted by the International Council for Sciences and the International Social Science Council «the related science underlines that while energy is not needed per se, it is a vital “resource” that is required to meet other SD goals: primarily health (SDG 3), poverty eradication (SDG 1), climate change (SDG 13), but also end of hunger/nutrition (SDG 2), education (SDG 4), gender equality (SDG 5), clean water and sanitation (SDG 6), productive opportunities (SDG 8), cities (SDG 11), infrastructure/industrialization (SDG 11) and sustainable consumption (SDG 12). Without meeting the SDG 7, it is impossible to meet these other goals»³.

The SDG 7 calls for ensuring affordable and clean energy for everyone as a vehicle to promote prosperity and a cleaner environment for the next generations. In particular, it reads «Ensure access to affordable, reliable, sustainable and modern energy for all». Moreover, the goal sets five specific targets to be achieved:

– 7.1 *By 2030, ensure universal access to affordable, reliable and modern energy services;*

– 7.2 *By 2030, increase substantially the share of renewable energy in the global energy mix;*

– 7.3 *By 2030, double the global rate of improvement in energy efficiency;*

– 7.a *By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology;*

– 7.b *By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, and small island developing States.*

Below, the main aspects related to the SDG 7 are examined including its relation to human development and a sustainable environment.

3. ICSU, ISSC (2015): Review of the Sustainable Development Goals: The Science Perspective. Paris: International Council for Science (ICSU).

Moreover, the specific targets are analyzed and progress made so far is scrutinized.

2. ENERGY ACCESS AND HUMAN DEVELOPMENT

It is important to highlight that there was an urgent need to include energy access as part of the 2030 development agenda. As highlighted by the Organization of the Petroleum Exporting Countries (OPEC) «although globally the share of the population with access to electricity has increased from 83% in 2010 to 85% in 2012, alleviating energy poverty remains a crucial global challenge. Over one billion people remain without access to electricity. The vast majority of people with no access to electricity are found in Sub-Saharan African and South Asian countries. Although there are more people with no access to electricity in Asia owing to the overall size of the population, in Sub-Saharan African countries the growth rate in those having access to electricity has been lower than actual population growth»⁴. As a matter of fact, despite the improvements seen in the last two years, 17% of the world population lacks access to electricity.

Moreover, it is estimated that more than 2.9 billion people are without clean cooking and heating facilities. That is 41% of the world population who rely on solid fuels such as wood, charcoal, dung, crop residues and coal as the primary cooking fuel. And what complicates even further the problem is that most of the people without access to electricity or clean cooking and heating are located in rural areas in developing countries where lack of infrastructure together with geographical and economic barriers constraint progress.

The still long way to go in terms of energy access is clearly seen in statistics about energy use per capita in the world. As mentioned by OPEC «Another important factor to better understand global energy demand is per capita energy consumption, a measure of the energy consumed per person. With finite energy resources and a world population that is expected to increase 25% by 2040, it is vital to have robust knowledge about energy used per capita in order to better understand future energy demand trends. Energy consumption per capita can also be used as an indicator of living standards. This is especially the case in countries with low levels of development, where increased infrastructure expansion, improved access to healthcare and education are associated with increased energy use. Moreover, as countries develop and incomes grow,

4. Organization of the Petroleum Exporting Countries (2015): World Oil Outlook.

the demand for personal transportation services, larger homes, improved healthcare and other energy intensive goods and services also advances»⁵.

Back in 1970 on average each person consumed 10 barrels of oil equivalent (boe). However, massive disparities are hidden behind this number. The energy consumption per capita in the OECD region was 28 boe, while that in developing countries was only 4 boe. In the following years energy use per capita has increased so that the world average reached 13 boe in the year 2000. The new millennium has seen a rapid increase in the energy use in developing countries on the back of accelerating economic development, increasing urbanization and the adoption of policies tackling energy poverty. Latest figures show that the energy use per capita in developing countries reached 8.5 boe in 2013, up from 5.2 boe in 2000. However, it is particularly interesting that the gap between energy use in the OECD region and developing countries is still very wide and no significant progress has been done in narrowing it. The gap was 24 boe in 1970 and now is 23 boe. Looking into the future, it is estimated that if no strong commitment to reduce energy poverty is taken at a global level, the energy use gap between the developed and the developing world will narrow marginally. By 2040, it will be reduced to 17 boe. That means that energy poverty will remain to be a crucial challenge even in the long-term.

As mentioned above, no country has developed without access to energy. In fact, energy is at the core of the development process in every country and it is seen as a necessary condition to promote prosperity. There are several aspects that relate both concepts.

To start with, data drawn from the World Bank and the United Nations show that there is a strong correlation between the Human Development Index (HDI) of a country and its annual per capita electricity use. Clearly, countries with low levels of HDI as a result of low life expectancy, poor educational system and lack of infrastructure consume less energy per capita. The question is whether lower development levels are a result of lower energy consumption or lower energy consumption is a result of lower development levels. Economic theory suggests both. At a global level energy consumption and economic growth are linked in a feedback loop: increase energy access promotes economic growth and economic growth tends to increase energy access.

Furthermore, the World Bank has shown that countries with underperforming energy systems may lose up to 1-2 per cent of growth

5. Ibid.

potential annually as a result of electric power outages, over-investment in backup electricity generators, energy subsidies and losses, and inefficient use of scarce energy resources⁶.

For low- and middle-income countries, affordable and reliable energy is a fundamental condition to start developing an industrial base. Entrepreneurs in these countries often find electric power outages as the main reason for closure of business. The agricultural sector, whose weight is significant in developing countries and is an important source of employment, is also dependent on energy. Energy is needed to treat and transport water; and both water and energy are needed to produce food and to transport and distribute it.

In fact, the energy-water nexus is a well-established link. According to the UN⁷ currently, around 2.8 billion people live in «water stress» regions. Moreover, by 2030, almost half of the world's population is likely to live in areas of high water stress. Additionally, data drawn from the World Bank shows that people who lack access to clean water are also likely to lack access to electricity and to rely on solid fuels for cooking.

Another important aspect related to energy access and economic development is the health risks that using traditional fuels for cooking and heating involve. This produces indoor air pollution, exposure to which causes chronic illness and premature death. In fact, the World Health Organization (WHO) estimates that 4.3 million people a year die prematurely from illness attributable to the household air pollution caused by the inefficient use of solid fuels for cooking. Among these deaths 12% are due to pneumonia, 34% from stroke, 26% from ischemic heart disease, 22% from chronic obstructive pulmonary disease (COPD), and 6% from lung cancer. What is even more worrying is that more than 50% of premature deaths due to pneumonia among children under 5 are caused by the particulate matter (soot) inhaled from household air pollution. Most of these cases are poor women and children people living in rural areas of low- and middle-income countries.

Lack of energy access also has important implications on economic development in terms of productivity. Relying on traditional fuels such as wood for cooking normally imply that time needs to be spent in collecting these fuels and this task is normally performed by women. A recent study⁸

6. World Bank (2009): Africa's infrastructure, a time for transformation. World Bank Africa Infrastructure Country Diagnostic.

7. United Nations (2012): UN World Water Development Report.

8. Global alliance for clean cookstoves (2015): Gender and Livelihoods Impacts of Clean Cookstoves in South Asia.

shows that on average, women spend approximately 374 hours every year collecting firewood in India. Women with improved cookstoves save 70 hours per year. Additionally, the same study shows that women spend 4 hours every day cooking when using traditional stoves while they could save 1 hour and 10 minutes when using a clean cookstove. Furthermore, exposure to the risk of gender-based violence during collection is rather common. For example, in 2014 in Uganda's Nakivale refugee camp, 41% of households reported incidences of violence during firewood collection in the past six months.

Similarly, UN reports points towards a rather important aspect that further complicates the task of collecting firewood. Increasing deforestation implies that more time and effort is needed to be invested in order to ensure enough traditional fuel. «In Uganda, as a result of deforestation, the average distance to collect firewood –travelled usually by women and children– increased between 1992 and 2000 from 0.06 km to 0.9 km at the country level. In some villages in India, women used to spend one to two hours per trip to gather firewood in the early 1990s prior to forest protection policies being put in place, but about three to five hours afterwards»⁹. Access to a reliable and affordable source of energy could provide the opportunity to use that time to engage in income-generating activities or to invest in education.

Energy access and human progress are also interrelated through health care services. Hospitals and health care centers rely on electricity for basic lighting, communications, medical devices and small appliances or laboratory equipment to provide medical services to patients. The lack of reliable electricity is a fundamental problem. The WHO mentions that unreliable electricity access leads to vaccine spoilage, interruptions in the use of essential medical and diagnostic devices, and lack of even the most basic lighting and communications for maternal delivery and emergency procedures. Unreliable electricity access is rather common in poor countries. In fact, a recent interesting study shows that of 11 major sub-Saharan African countries roughly 1 in 4 health facilities had no access to electricity, and only about one-third of hospitals had reliable electricity access¹⁰.

Lack of energy access also limits the number of hours that clinical services can be provided and, therefore, the number of patients that can

9. United Nations (2010): The World's Women reports: Trends and Statistics.

10. ADAIR-ROHANI et al. (2013): Limited electricity access in health facilities of sub-Saharan Africa: a systematic review of data on electricity access, sources, and reliability.

be treated each day. What is even more important, proper lighting is essential for operations and examinations. Laboratory equipment such as ultrasound and X-ray machines cannot be used and medicines cannot be stored properly. All this harms human development.

Another important aspect is the role that energy access has on promoting better education, particularly in rural areas of poor countries. Electricity could provide heating, cooling and lighting at schools. Additionally, electricity increases the number of hours a school could be opened and, therefore, the number of potential students attending it. The use of modern information and communication technology such as televisions, computers, printers, internet and projectors improves the quality of the educational system. This can only be done through a reliable and affordable source of electricity.

A recent report by the UN¹¹ shows that about 90 percent of children in Sub-Saharan Africa go to primary schools that lack electricity, 27 percent of village schools in India lack electricity access, and fewer than half of Peruvian schools are electrified. Furthermore, the study estimates that globally 188 million children attend schools not connected to any type of electricity supply. Other reports suggest that this number might be even higher. Practical Action estimates that lack of access to electricity affects more than 291 million children worldwide¹².

3. ENERGY ACCESS AND A CLEANER ENVIRONMENT

It has to be highlighted that the SDG 7 intends to tackle the issue of energy access to promote human development. However, it is only one part of the story. The other aspect of it is the promoting of the use of sustainable and modern energy to limit the impact on the environment. It is a well-known fact that energy related activities account for a significant part of the Greenhouse Gas (GHG) emissions. In particular, it is estimated that around 60 per cent of total global greenhouse gas emissions are linked to the energy system which includes supply, transformation, delivery and use of energy. Moreover, it is estimated that almost all sulfur dioxide and nitrogen oxides emissions to the atmosphere are energy-related. Therefore, in order to ensure a sustainable environmental landscape, it is fundamental to point towards a greener energy sector promoting the use

11. United Nations Department of Economic and Social Affairs (2014): Electricity and education: The benefits, barriers, and recommendations for achieving the electrification of primary and secondary schools.

12. Practical Action (2013): Poor people's energy outlook.

of renewable energy. This can only be done reducing the carbon intensity of the energy system. That means, reducing the amount of carbon emitted for every unit of energy consumed.

Data from British Petroleum (BP)¹³ shows that carbon intensity has indeed declined in the past particularly up to 1990. In 1965 it was 3.02 kg per kg of oil equivalent energy use and in 1990 it totaled 2.65 kg per kg of oil equivalent energy use. This corresponded to an average decline in carbon intensity of 0.6% p.a. However, since 1990 the trend in carbon intensity changed. As developing countries started to grow at healthy growth rates and their energy needs increased, the energy system became depend more on fossil fuels. To start with, its decline decelerated significantly up to 2002 with an average decline rate of only 0.3% p.a. Since the year 2002 carbon intensity even increased up to 2.62 kg per kg of oil equivalent energy use in 2007. Recent efforts at a global level have reversed the trend and in 2015 carbon intensity has declined to 2.55 kg per kg of oil equivalent energy use. The goal is to continue in this direction.

The challenge is therefore twofold. On the one hand, the SDG 7 aims to ensure that energy access is granted strengthening the opportunities for the poorest few billion people on the planet to escape energy poverty and promoting human development. On the other hand, how this energy is granted is also important. The SDG 7 advocates for clean and modern energy such as renewables as the best solution to reduce carbon emissions and promote a greener future for the next generations.

4. SPECIFIC TARGETS

As mentioned above, the SDG 7 aims to ensure access to affordable, reliable, sustainable and modern energy for all. This is to be achieved by 2030 with the help of three specific targets and two enablers. Below, a description of each of them is presented.

The first specific target looks at the demand side of the market as it relates to access to energy. Concretely, by 2030 universal access to affordable, reliable, and modern energy services should be ensured. As mentioned above, over one billion people remain without access to electricity. Not surprisingly, the problem is much more concentrated in rural areas of poor countries. While electrification in the OECD region is 100%, both in rural and urban areas, in developing countries electrification is 78% with only 67% in rural areas. Data from the IEA shows that in Sub-Saharan Africa

13. British Petroleum (2016): BP Energy Outlook. 2016 edition.

one out of every three people, that is 634 million people, do not have access to electricity. Moreover, only one out of every six people living in rural areas of this region benefit from electricity. In India there are still 237 million people without electricity.

Similarly, out of the total 2.9 billion people without clean cooking and heating facilities almost all of them live in the developing world. Data from the IEA also shows that in Sub-Saharan Africa 753 million people, which correspond to 80% of the population, still rely on traditional use of biomass. In India two out of every three people do not have access to non-solid fuels for cooking. In China one out of every three people suffers the same problem. In Bangladesh and Myanmar only 10% of the population has access to non-solid fuels.

Ensuring modern energy access to people whom currently lack of it would not be an easy task though. There are many barriers that would need to be overcome. As emphasized by the UN¹⁴ «to start with, countries would need to build institutional capacity and governance required to produce, deliver, manage, operate and maintain the policies in place to alleviate energy poverty». Political interference, corruption and lack of transparency could harm the process.

An even more important obstacle to ensure that the target of universal access is ensured is financial. As highlighted by the OPEC Fund for International Development (OFID)¹⁵ alleviating energy poverty is impossible to achieve without adequate access to investment and finance. OFID estimates that at the global level, estimates of the investment needed for universal energy access range from \$12bn to \$279bn per annum from 2010 to 2030, indicating a significant degree of uncertainty. The amount of required investment is highly dependent on the assumption of technical solutions, financing methods, and subsidies, among other country-specific attributes.

What is true is that achieving universal energy access is a task that is relevant for everyone and where all countries are to play a role. Rich countries could contribute by providing technical assistance and ensuring affordable technology transfer. Furthermore, these countries could promote investment in this area. Developing countries can also promote investment but can also share their experiences overcoming the energy poverty issue both from the policy formulation point of view but also

14. United Nations (2010): Energy for a Sustainable Future.

15. OFID (2016): The 2030 development agenda: Energy access a keystone.

from the financial perspective. Finally, countries where energy poverty is a problem can promote the right institutional framework and governance.

The second specific target looks at the supply side of the energy system. In particular, at the role of renewables satisfying the energy needs of people. The target aims for a substantial increase in the share of renewable energy in the global energy mix by 2030. Specifically, the International Renewable Energy Agency (IRENA) aims to renewables doubling their share in total final energy consumption by 2030 compared to 2010 levels.

The term renewable energy refers to all forms of energy that is produced from renewable sources in a sustainable manner. They include: bioenergy, geothermal energy, hydropower, ocean energy, solar energy and wind energy. It is important to mention that bioenergy includes commercial biomass such as biofuels but also traditional solid fuels such as wood, charcoal, dung and crop residues. It is precisely the use of traditional biomass that should be reduced to comply with the first target.

In 2010 renewables accounted for 17.8% of the total final energy consumption totaling 28.2 mboe/d. Bioenergy is by far the fuel with the highest share within renewables energy. Moreover, traditional biomass represented half of the renewable energy consumed in 2010 and modern biomass accounted for almost a quarter. Hydro is also an important element with a relative weight of around 20%. The contribution of solar, wind, ocean and geothermal energy was rather limited. Overall, modern renewable energy, that is traditional biomass, represented 9% of the total final energy consumption.

According to the IRENA¹⁶ doubling the share of renewables by 2030 would imply that the use of modern renewable energy would need to expand drastically. In fact, it would be necessary that modern renewables replace traditional use of biomass almost entirely. As a result, the share of modern renewables would need to more than triple from 9% in 2010 to 30% or more by 2030.

In order to expand modern renewable energy, solar energy and wind energy are called to play a bigger role. In fact, these renewable energy sources have experienced impressive growth in the last few years, with investment going from \$45bn in 2004 to almost \$270bn in 2014. Moreover, in 2015 solar photovoltaics (PV) and wind capacity additions hit the all-time record high despite the lower oil price environment. This is because renewables technologies are today among the most cost-competitive options for power generation.

16. IRENA (2014), REmap 2030: A Renewable Energy Roadmap, June 2014.

But doubling the share of renewables in the energy mix while replacing traditional non-fossil fuels is a major task. It would mean accelerating the deployment of current technologies but also investing heavily in research and development. As mentioned above, the penetration of renewables in the power generation sector is not seen as a major obstacle due to declining costs and improving technological reliance. However, the outlook for the use of renewables in the transportation sector seems gloomier. Electric vehicles are still not seen by consumers as a reliable competitor for internal combustion cars. Poor performance under extreme weather conditions together with a low driving range are seen as the main drawbacks for drivers. Additionally, the price premium to be paid is still too high to compete in a level playing field.

In order to enable the scale-up of renewables and comply with the SDG 7 target IRENA has identified key action areas that must be addressed. To start with, market imperfections need to be corrected so that renewables can compete on equal basis with the other fuel types. Issues such as externalities and the use of carbon taxes are essential. Secondly, due to the fact that renewables are variable, by their nature, integrating energy systems would be of help. Finally, the use of renewables in the industry and transport sector needs to be further promoted by policymakers. These instruments should encourage further promoting the use of modern renewables in the world.

The third target deals with the specific use of energy. It aims for a better use of the energy resources and claims for doubling the global rate of improvement in energy efficiency by 2030. Energy consumption has increased significantly in the last few decades. In 1970 the world consumed 104 mboe/d. By 2013 this figure had increased by 157% reaching 268 mboe/d. However, growth was not even among regions. While energy demand in the OECD region increased only by 68% during the period, growth in developing countries was spectacular. It increased by almost 500% going from 22 mboe/d to 134 mboe/d between 1970 and 2013. This energy demand growth has been on the back of rapid economic growth, raising income levels, increasing urbanization of the population, high population growth rates and increasing industrialization.

Economic growth is one of the most important determinants of energy demand. Therefore, the future energy demand outlook is clearly driven by the economic growth landscape expected in the years ahead. Economists agree that in the future global growth will tend to decelerate as a result of decelerating population growth and diminishing marginal returns of capital and labour but will remain at healthy rates. Thus, in the future,

energy demand is expected to continue showing strong growth. How fast will energy demand grow will depend on how well the planet manages the use of its resources, how energy efficient the planet is. If the planet is more energy efficient economic growth will imply lower energy demand growth. Contrary, if the planet does not use its resources in an efficient manner, economic growth will be translated into higher energy demand growth.

The most commonly used measure of energy efficiency is the energy-gross domestic product (GDP) ratio, or energy intensity. Higher energy intensity means that more energy is consumed to produce the same level of output, hence is inefficient. However, energy intensity is not a perfect measure of efficiency. As highlighted by Al-Rashed and León (2015) there are numerous drawbacks to the use of energy intensity. First, developing nations that use biomass and waste as energy inputs often lack of reliable consumption data, and conversion efficiencies mean that aggregating them with conventional energy sources is problematic, skewing their energy intensity calculations towards underestimation and masking the effects of rapid commercial energy consumption growth. Second, GDP is a monetary indicator; hence, fluctuations in the dollar exchange rate can distort the data used for cross-country comparisons. The use of purchasing power parity (PPP) can partially alleviate the distortions, but has been shown to introduce other distortions, such as artificially lowering the energy intensity of less efficient developing countries. Finally, the role of structural changes in the economy in aggregate energy intensity shifts. While the high level of aggregation offered by traditional energy intensities is useful when comparing across nations, it still masks any endogenous changes within the sectors that comprise a certain national economy. Nevertheless, energy intensity still provides useful information about the efficiency in the use of our energy resources.

Between 1990 and 2010 energy intensity improved at an average rate of 1.3% p.a. going from 1.37 boe/\$1,000 (2011 PPP) to 1.05 boe/\$1,000 (2011 PPP). In order to reach the target of doubling the efficiency improvements energy intensity should improve at an average rate of 2.6% p.a. between 2010 and 2030. This would imply that energy intensity reaches 0.62 boe/\$1,000 (2011 PPP) in 2030 meaning that the same output should be produced with 60% of the energy that would be needed in 2010. Clearly this is a major challenge and an ambitious goal.

Energy efficiency is commonly known as the invisible fuel. There is no cheaper and more readily available energy than the one that is not wasted.

The International Energy Agency (IEA) highlights in a recent report¹⁷ that consumers in countries belonging to the IEA have saved USD 5.7 trillion over the last 25 years as a result of energy efficiency investments that have avoided almost 115 mboe/d of energy consumption. Furthermore, in 2014 alone, energy efficiency investments in IEA countries since 1990 avoided 10.4 mboe/d of energy consumption. This is larger than the annual consumption of Japan and Korea combined. Additionally, energy efficiency improvements in IEA countries since 1990 have avoided a cumulative 10.2 billion tonnes of CO₂ emissions.

It seems to be evident that energy efficiency improvements are a key source of potential energy and emissions reductions. However, energy efficiency investments that are believed to be economic are not taking place at a faster rate. This is because they face a number of market and behavioral failures. Incentives, information failure and access to capital can jeopardize the promotion and adoption of energy efficiency measures. In particular, for poor countries the fact that the costs of energy-efficiency are typically mostly front-loaded, with the benefits accruing over time acts as a barrier. Government support should go in that direction.

In fact, the issue of investment and finance is crucial. According to the UN¹⁸ in order to reach the target of doubling the global rate of improvement in energy efficiency by 2030, between \$30bn and \$35bn of capital is required for low-income countries and between \$140bn and \$170bn for middle-income countries annually until 2030 above the business as usual scenario. SE4A estimates that globally \$560bn are needed to reach the target.

The SDG 7 also includes two specific enabling measures to promote access to affordable, reliable, sustainable and modern energy for all. The first enabler encourages international cooperation to facilitate access to clean energy research and technology and to promote investment in energy infrastructure and clean energy technology. The second enabler promotes the expansion of the infrastructure and upgrade technology for supplying modern and sustainable energy services, particularly in least developed countries and small island developing States.

The issue of technology access and international cooperation is vital to ensure that SDG 7 is achieved. Therefore, trade in technologies relevant to sustainable energy should be promoted whether it is directly related to renewable energy (for example, solar photovoltaic, wind and hydro

17. International Energy Agency (2015): Energy efficiency market report 2015.

18. United Nations (2010): Energy for a Sustainable Future.

turbines or biofuels), to energy efficiency (for example, heat pumps, insulation equipment, electric vehicles) or to energy access (such as portable electric lamps).

However, as emphasized by IRENA, access to clean technologies remains constrained by import taxes and other non-tariff barriers. For instance, 50-70% of low and lower middle income countries apply import taxes to small hydropower turbines, as against 20% of high income countries. Developing countries are also constrained by the technical and commercial capacity of institutions and companies, as well as by a shortage of relevant skills among workers. Lifting these barriers would foster faster transfer and adoption of the relevant technology.

Finally, the role of governments cannot be overemphasized as a catalyst in achieving the specific targets of the SDG 7. Governments are essential to build a reliable institutional framework that promotes a cleaner energy landscape and ensures energy access. Additionally, solving for market imperfections that prevents investments in energy efficiency or fails to attract international expertise in the field is needed.

5. TRACKING PROGRESS

Despite the fact that the clear targets set by the SDG 7 are meant to be met only in 2030, it is important to monitor regularly the progress made so far. As the UN Secretary General's Special Representative for Sustainable Energy for All, Kandeh Yumkella mentioned, «as inspiring as the ambitious targets are, the action needed to reach them can easily lose both momentum and direction if there is no clear way to gauge progress. It is important to see what is or isn't working, what to celebrate, and where there is a need to push harder. In fact, targets alone are meaningless without a credible and broadly accepted way of measuring whether they are actually being met»¹⁹.

The recent study published by Sustainable Energy for all (SE4A) shows that overall, across all dimensions of sustainable energy for all –whether access, efficiency, or renewables– the rate of progress during the 2010-12 tracking period falls substantially short of the rate that would be needed to ensure that the three objectives are met by 2030²⁰. However, it has to be highlighted the fact that significant progress has been observed in recent years compared to what was observed in the last decades.

19. Sustainable Energy for all (2015): Progress towards sustainable energy 2015. Global tracking framework.

20. Ibid.

Regarding modern energy services, the SDG 7 aims for ensuring universal access by 2030. Between 2010 and 2012 the electrification rate has increased globally from 83% to 85% so that 222 million people gained access to electricity for the first time. More importantly, progress has been made in rural areas where the lack of energy access is more pronounced, going from 70% to 72% during the same period. Country wise, India with 55 million, Nigeria with 18 million and China with 14 million are the top 3 countries adding people connected to the electricity grid between 2010 and 2012. Interestingly, the electrification rate has growth at 0.6% p.a. during this period. This corresponds to a much higher rate than that seen in the past. For example, between 2000 and 2010 this growth rate was less than 0.2% p.a. Clearly, progress in this area is on track and reaching universal electrification by 2030 seems like a plausible objective.

Modern cooking is also an important element related to universal energy access. As mentioned above, currently 2.9 billion people rely on solid fuels such as wood, charcoal, dung, crop residues and coal as the primary cooking fuel. However, in 2010 a total of 2.8 billion people were in this situation meaning that access to non-solid fuels have actually deteriorated between 2010 and 2012. It is true that during this period an estimated 123 million people gained access to non-solid fuel, particularly in China, India and Indonesia. However, the world population increased by 138 million people during the same period. Further efforts are urgently needed to ensure that by 2030 access to non-solid fuels is assured.

The SDG 7 also aims for doubling the global rate of improvement in energy efficiency by 2030. Energy intensity has actually decreased from 1.04 boe/\$1,000 (2011 PPP) in 2010 to 0.97 boe/\$1,000 (2011 PPP) in 2014. Without efficiency improvements between 2010 and 2014 energy demand would have been 292.4 mboe/d by 2014. Instead, energy demand increased to only 271.7 mboe/d in 2014. That implies that total of energy use has declined by 7% as a result of increasing efficiency.

While world energy efficiency has increased by 1.8% p.a. between 2010 and 2014, most of the increase was focused on developing countries with an average increase of 2.1% p.a. In the developed world energy efficiency has been a priority for policymakers since many years ago. As such, the scope for further reductions in energy intensity is more limited. Contrary, there is significant room in developing countries to improve efficiency. Looking into the future, SE4A estimates that an average decline rate of 2.6% p.a. between 2010 and 2030 is needed to comply with the target of doubling the global rate of improvement in energy efficiency. Data drawn from the main energy institutions show that reaching this target

would be challenging. OPEC's World Oil Outlook 2015 estimates that energy intensity will decline at 2.0% p.a. between 2010 and 2030. BP's Energy Outlook 2016 shows that global energy intensity is projected to decline by 2.1% p.a. in the long-run. Similarly, the US Energy Information Administration (EIA) International Energy Outlook 2016 estimates a 1.9% p.a. decline up to 2030. Undoubtedly, further efforts by policymakers and the international community are needed.

Finally, the SDG 7 aims to increase substantially the share of renewable energy in the global energy mix by 2030. In the last few years progress has been achieved in this area. In 2010 the share of renewables in total final consumption was 17.8%. In 2012 it had reached 18.1%. However, as highlighted by SE4A growth is still lagging behind: «the average annual increase in the share of renewable energy over 2010-12 compares favorably with the previous 20 years. It was equivalent to 0.17 percentage points, up from 0.04 percentage points in the previous decade. But this still falls short of the average annual change of 0.89 percent required to meet the SE4All objective of doubling the renewable energy share from 2010 to 2030²¹». During the 2010-2012 period the use of renewable energy, including traditional use, increased by an average rate of 2.4% p.a. and the use of modern renewable energy at 4% p.a. These growth rates are behind the estimated growth of 3.8% p.a. and 7.5% p.a., respectively, to meet the target of doubling the share of renewables by 2030.

In the years ahead the main energy institutions doubt that this target could be achieved. In the IRENA's Reference Case, which takes into account current policies, the share of renewables increases only up to 21% by 2030. Furthermore, the share of modern renewables reaches 14% by 2030 from 9% in 2010. The IEA in its World Energy Outlook 2015 suggests that by 2030 the share of renewables will increase to 23% in its New Policies scenario and only to 21% in its Current Policies scenario. BP's Energy Outlook 2016 assumes that non-fossil fuels will increase their share in total energy consumption up to 21% in 2030. Finally, OPEC's World Oil Outlook estimates that this share will be 20% by 2030. Undoubtedly, reaching the target of doubling the share of renewables in the energy mix, while replacing traditional fuels, seems a very ambitious and challenging objective.

Overall, in the last few years progress has been made in order to achieve the three targets specified in the SDG 7. However, progress is not yet on track. If the same pace of progress is assumed, universal electrification and

21. Sustainable Energy for all (2015): Progress towards sustainable energy 2015. Global tracking framework.

access to non-solid fuels for cooking will not be achieved by 2030. Instead, one out of every ten people in the world will still not have electricity and one out of every 7 people will still rely on traditional fuels for cooking. Similarly, energy efficiency will not be doubled and only a quarter of the energy consumed will come from renewable sources by 2030.

According to SE4A a partial explanation for slow progress on sustainable energy objectives is the shortfall in investment. While a total of \$1.0-1.2 trillion are needed every year to meet the three targets, in the last few years a much lower figure has been seen. In 2012 a total of \$400 bn was investment. Clearly, further governmental support and stronger commitment of the international community is needed.

6. CONCLUSION

The new development agenda for 2030 has rightly included energy as a fundamental pillar for prosperity. Clearly, human development and energy go hand in hand. Currently, over one billion people remain without access to electricity and almost 2.9 billion people lack of clean cooking and heating facilities. The SDG 7 calls for ensuring affordable and clean energy for everyone as a vehicle to promote prosperity and a cleaner environment for the next generations. It includes three specific targets related to ensuring universal access to energy, increasing the share of renewable energy in the global energy mix and promoting further energy efficiency gains.

While progress has been made in order to achieve the ambitious targets, there is still a long way to go and progress needs to be accelerated. Promoting information sharing, professional expertise and technology transfer is a fundamental aspect. Moreover, adequate access to investment and finance is needed. Finally, further governmental support and stronger commitment of the international community is necessary.

REFERENCES

ADAIR-ROHANI, Zukora, BONJOURA, Wilburna, KUESELA, Hebertb, FLETCHER (2013): Limited electricity access in health facilities of sub-Saharan Africa: a systematic review of data on electricity access, sources, and reliability. *Global Health: Science and Practice*. August 1, 2013 vol. 1 no. 2 p. 249-261.

Al-Rashed and León (2015): Energy efficiency in OPEC member

countries: analysis of historical trends through the energy coefficient approach. OPEC Energy Review, Vol. 39, Issue 1, pp. 77-102, 2015.

British Petroleum (2016): BP Energy Outlook. 2016 edition.

Global alliance for clean cookstoves (2015): Gender and Livelihoods Impacts of Clean Cookstoves in South Asia.

Intergovernmental Panel on Climate Change (2014). Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

International Council for Sciences and the International Social Science Council (2015): Review of the Sustainable Development Goals: The Science Perspective.

International Energy Agency (2015): Energy efficiency market report 2015.

International Energy Agency (2016): Energy and Air Pollution. World Energy Outlook Special Report.

International Renewable Energy Agency (2014), REmap 2030: A Renewable Energy Roadmap, June 2014.

OPEC Fund for International Development (2016): The 2030 development agenda: Energy access a keystone.

Organization of the Petroleum Exporting Countries (2015): World Oil Outlook 2015.

Practical Action (2013): Poor people's energy outlook.

Sustainable Energy for all (2012): Pathways for Concerted Action toward Sustainable Energy for All.

Sustainable Energy for all (2015): Progress towards sustainable energy 2015. Global tracking framework.

United Nations (2010): Energy for a Sustainable Future.

United Nations (2010): The World's Women reports: Trends and Statistics.

United Nations (2012): UN World Water Development Report.

United Nations (2013): A new Global Partnership: Eradicate poverty and transform economies through Sustainable Development.

United Nations Department of Economic and Social Affairs (2014): Electricity and education: The benefits, barriers, and recommendations for achieving the electrification of primary and secondary schools.

World Bank (2009): Africa's infrastructure, a time for transformation. World Bank Africa Infrastructure Country Diagnostic.

Chapter 11: goal 8

Implementing the human right to decent work through the UN Sustainable Development Goals («SDGs»)

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«The sustainable development goals are a mixed bag, should Ban Ki Moon keep
them that way?» (Andrew Norton and Elizabeth Stuart)*

SUMMARY: 1. INTRODUCTION. 2. THE EMERGENCE OF WORKING RIGHTS AS HUMAN RIGHTS. 3. THE NOTION OF «DECENT WORK». 4. THE ILO'S STRATEGY ON DECENT WORK. 5. THE UN SUSTAINABLE DEVELOPMENT GOALS (SDGS): AN OVERVIEW. 6. MINDING THE GAP: THE LIMITED SCOPE OF THE PROTECTION OF DECENT WORK AND EMPLOYMENT UNDER THE SDGS. 7. FILLING THE GAP: ALIGNING THE INTERPRETATION OF THE SDGS GOAL NO. 8 TO THE ILO'S STRATEGY ON THE RIGHT TO DECENT WORK.

ABSTRACT:

This paper argues that neither the so called «International Labor Organization's Strategy on Decent Work» («ILO's Strategy») nor the UN Sustainable Goals («SDGs») per se would automatically guarantee a recognition and enforcement of the human right to decent work at the international level.

In order to reach this end, this paper supports the thesis of a combined approach between the above-mentioned international instruments, namely an ILO's Strategy's oriented approach in the interpretation and enforcement of the SDGs in general and of the SDGs No. 8 on decent work and economic growth in particular.

Having this in mind, the paper proceeds as follows. After defining the emergence of working right as human right as well as the concept of «decent work» in general terms in Paragraph 2, Paragraphs 3 and 4 discuss, respectively, the main features and contents of the ILO's Strategy on the right to decent work and employment and of the SDGs (including also the relation of the SDGs with the UN Millennium Development Goals («MDGs»)). Thereafter, the impact (and limited utility) of the SDGs in relation to the protection of the human right of decent work is considered. The paper concludes in Paragraph 5 along with the proposal of an ILO's Strategy and of a CESCR's General Comment No. 18 on the right to work's oriented interpretation and application of the SDGs No. 8.

1. INTRODUCTION

This paper argues that neither the so-called «Strategy on Decent Work» (ILO Strategy) nor the UN Sustainable Goals (SDGs) per se would automatically guarantee a recognition and enforcement of the human right to decent work at the international level. To guarantee the right would require a combined approach between the above-mentioned international instruments, namely an ILO Strategy oriented approach in the interpretation and enforcement of the SDGs in general and of SDG No. 8 on decent work and economic growth in particular.

Paragraph 2 of this paper defines the emergence of working rights as human rights and the concept of «decent work» in general terms, while paragraph 3 analyses the main features and contents of the ILO Strategy on the right to decent work and employment. Paragraph 4 likewise examines these aspects for the SDGs, including the relationship of the SDGs with the UN Millennium Development Goals (MDGs), and goes on to consider SDG impact (and limited utility) on the protection of the human right to decent work. The fifth, concluding paragraph proposes an ILO Strategy and discusses CESCR General Comment No. 18 on the right to work oriented interpretation and application of SDG No. 8.

2. THE EMERGENCE OF WORKING RIGHTS AS HUMAN RIGHTS

Work is intrinsically valuable, as a «vital ingredient of well-being.»¹ This is mainly because it gives people their identities and dignity and

1. See also Hugh Collins, *Discrimination, Equality and Social Inclusion*, Modern Law Review, 2003, p. 29.

also connect them to other subjects.² This is true though several jobs are dangerous, demoralizing, demeaning or just plain boring, and consequently, may do little to enhance individual, family or community well-being. «Work is also a necessity, part of the meaning of life on this earth, a path to growth, human development and personal fulfilment». These last words from Pope Francis' enlightening second encyclical «*Laudato Si*» perhaps better than anything else help to understand why the deprivation of a decent work violates a person's fundamental rights³ and why work rights are key to eradicating poverty.⁴ But can we claim that there is an international normative principle, an international law, prohibiting denial of the right of decent work?

If one considers the plethora of international statements and legal tools dealing with the fundamental right to work (or the right to work in dignity), it seems evident that international bodies and the sovereign states they represent have at least indirectly identified the «decent work deficit» as a global human rights concern⁵. This is clearly stated in the Universal Declaration of Human Rights («UNDHR»), adopted in 1948 by the UN General Assembly, that dedicates an entire and long article (Article 23) to

2. Ibidem, p. 25.
3. See Pope Francis, «*Laudato Si: On Care for Our Common Home (Laudato Si)*», available at: <http://www.usccb.org/about/leadership/holy-see/francis/pope-francis-encyclical-laudato-si-on-environment.cfm>.
4. Amplius International Labour Organization (ILO), *Poverty Reduction and Decent Work in a Globalizing World*, GB.280/WP/SDG/1, at ¶ 32 (2001) [hereinafter *Poverty Reduction and Decent Work*]. See also Bedgood, MARGARET ANN and FREY, Diane F., *Work Rights: A Human Rights-Based Response to Poverty* (April 24, 2009), available at SSRN: <http://ssrn.com/abstract=1394410>; JAMES GROSS, *A Shameful Business. The Case for Human Rights in the American Workplace* (Ithaca: ILR Press/Cornell University Press, 2010), who also stresses that unemployment «is intimately associated with human misery of all sorts: suicides and homicides, imprisonment, alcoholism and drug addiction, family breakups, child abuse, emotional breakdowns, and a wide range of physical maladies.»; DIANE F. FREY, Gillian MacNaughton, *A Human Rights Lens on Full Employment and Decent Work in the 2030 Sustainable Development Agenda*, available at: <http://sgo.sagepub.com/content/6/2/2158244016649580>.
5. On the «decent work deficit» see e.g. I Ahmed, *Decent Work and Human Development*, *Int'l Lab. Rev.*, 2003, p. 263; RICHARD ANKER, I. CHERNYSHEY, P. EGGER, F. MEHRAN, J. A. RITTER, *Measuring decent work with statistical indicators*, *International Labour Review*, 2003, pp. 147-78; GS Fields, «Decent work and development policies», *Int'l Lab. Rev.*, 2003, p. 239 (also recalling that: «According to recent ILO estimates, more than half of the world's 3 billion labour force is either unemployed or live on less than \$2 a day. Youth unemployment is around 80 million, almost 40 per cent of the total unemployed. Women in most parts of the world still remain an underpaid and overworked human resource and constitute 60 per cent of the working poor — a ratio that is unfortunately showing an increasing trend.»). See also 240. ILO, *Global Employment Trends*, 5 (2009), http://www.ilo.org/wcmsp5/groups/public/-ed_emp/-emp_elm/-trends/documents/publication/wcms_114102.pdf. 241. Id.

the right to work⁶. It is even clearer in the powerful ILO Declaration on Social Justice for Fair Globalization, the third major statement of principles and policies since the 1919 Constitution, adopted by the International Labour Conference at its Ninety-seventh Session in 10 June 2008, that significantly recommends the establishment of appropriate indicators to supervise and assess the progress made in the enforcement of the ILO Decent Work Agenda.⁷ Again, it is also evident in the ILO Declaration on Fundamental Principles and Rights at Work of 1998 that establishes four universally accepted Core Labour Standards («CLS») drawn from eight different ILO Conventions.⁸ Moreover, it clearly emerges in the Declaration of the High-level Dialogue on International Migration and Development of 2013⁹ that applies a human rights based approach to work and employment. Most significantly, it is equally clear when a classical approach to the creation and development of international law is adopted, e.g. whether international legally binding instruments and sources are examined in general, or in particular, such as the Covenant on Civil and Political Rights («ICCPR») of 1966,¹⁰ the Convention on the Rights of the Child («CCR») of 1989¹¹ and the International Covenant on Economic, Social and Cultural Rights («ICESCR») of 1966 in particular¹². Amongst the working rights listed in the ICCPR is a set that protects fundamental freedoms: the right to be free from slavery, forced labour and servitude (Article 8), the right of peaceful assembly (Article 21), the right to freedom of association including the right to form and the right of

6. UN General Assembly, Universal Declaration of Human Rights, 10 December 1948, 217 A (III), available at: <http://www.refworld.org/docid/3ae6b3712c.html> [accessed 21 June 2016].
7. The English text of the *ILO Declaration on Social Justice for a Fair Globalization* is also available at: http://www.ilo.org/wcmsp5/groups/public/—dgreports/—cabinet/documents/genericdocument/wcms_371208.pdf.
8. The English text of the *ILO Declaration on Fundamental Principles and Rights at Work and its Follow Up* is also available at: http://www.ilo.org/declaration/info/publications/WCMS_467653/lang-en/index.htm.
9. The English text of the *Declaration of the High-level Dialogue on International Migration and Development* is also available at: http://www.ilo.org/global/topics/labour-migration/news-statements/WCMS_226556/lang-en/index.htm.
10. UN General Assembly, International Covenant on Civil and Political Rights, 16 December 1966, United Nations, Treaty Series, vol. 999, p. 171, available at: <http://www.refworld.org/docid/3ae6b3aa0.html> [accessed 21 June 2016].
11. UN General Assembly, Convention on the Rights of the Child, 20 November 1989, United Nations, Treaty Series, vol. 1577, p. 3, available at: <http://www.refworld.org/docid/3ae6b38f0.html> [accessed 27 June 2016].
12. UN General Assembly, International Covenant on Economic, Social and Cultural Rights, 16 December 1966, United Nations, Treaty Series, vol. 993, p. 3, available at: <http://www.refworld.org/docid/3ae6b36c0.html> [accessed 20 June 2016].

peaceful assembly the right to freedom of association including the right to form and join trade unions (Article 22).

The ICESCR explicitly encompasses a wide array of work rights (the right to freely chosen work, the right to full employment, the right to fair wages, the right to an adequate standard of living, the right to safe and healthy working conditions, the right to rest and leisure, the right to form and join trade unions, the right to strike, and the right to social security) that have to be interpreted as interdependent according to the United Nations Committee on Economic, Social and Cultural Rights (CESCR), the supervisory monitoring body of the ICESCR¹³.

Art. 6, para. 1 of the ICESCR provides special evidence to support this conclusion. Yet, this is the conclusion that arises from its text that reads as follows: «The States Parties to the present Covenant recognize the right to work, which includes the right of everyone to the opportunity to gain his living by work which the freely chooses or accepts, and will take appropriate steps to safeguard this right»¹⁴. An additional evidence is found in the fact that Art. 6, para. 2 requires that: «the full realization of this right shall include technical and vocational guidance and training programmes.» As even a simple reading suggests, both Art. 6, paras. 1 and 2 of the ICESCR are provisions that, figuratively speaking, open the door to the concept of «decent work» as well as to the configuration of the «decent work deficit» as a global human rights concern. This is since they encompass a broad and evolutive concept of work that is more than what the market normally considers work or employment to be. Especially illuminating in this respect is Art. 6, par. 2 of the ICESCR in the part that indicates that: «The steps to be taken by a State Party to the present Covenant to achieve the full realization of this right shall include technical and vocational guidance and training programmes, policies and techniques to achieve steady economic, social and cultural development and full and productive employment under conditions safeguarding fundamental political and economic freedoms of the individual».

But that is not all. Exemplary is CESCR's General Comment No. 18

13. See e.g. See e.g. Marco Odello, Francesco Seatzu, *The United Nations Committee on Economic, Social and Cultural Rights: Law, Practice and Procedure* (London: Routledge, 2012); Matthew Craven, *The International Covenant on Economic, Social and Cultural Rights – A Perspective on its Development* (Oxford: Clarendon Press, 1995), p. 144; Nsongurua J. Udombana, Social Rights Are Human Rights: Actualizing the Rights to Work and Social Security in Africa, *Cornell International Law Journal*, 2006, pp. 181, 196; F. Seatzu, Out of Darkness into Light?: Introducing CESCR General Comment no 18 on the Right to Work, in *Annuaire international des droits de l'homme*, 2011, pp. 507-522.

14. See also Hugh Collins, above n. 3, pp. 16, 29; Phillip Harvey, Human Rights and Economic Policy Discourse: Taking Social and Economic Rights Seriously, *Columbia Human Rights Law Review*, 2002, pp. 374-375.

on the interpretation of the right to work and employment, a landmark in international human rights law. General Comment No.18 maintains that the right to work is inherent to human dignity and essential for realizing other rights.¹⁵ The General Comment also stresses the dual role of the right to work with regard to the protection of survival and human dignity.¹⁶ Moreover, it upholds the conviction that the human right to work under the ICESCR cannot be restricted only to «wage labour»¹⁷. The reason behind this is clear and straightforward: such a narrow approach would be in conflict with the necessity to define work and the human right to work in the light of all the standards included in the ICESCR, which is not in isolation.¹⁸ Again, paras.7 and 31 of General Comment No. 18 indicate that the right to work extends, *inter alia*, to the activities of self-employed persons because employment has to be understood both in terms of wage employment and self-employment, as well as the economic activities of indigenous people. And even more significantly than that, General Comment No. 18 encompasses the idea that «dignity» concerns are likewise part and parcel of the right to work. Par. 6 indicates that the right to work is not satisfied by participation in just any type of economic activity. In fact it includes: «the right of everyone to the opportunity to gain his living by work which he freely chooses or accepts». The right to work therefore signifies not merely that work is distributed in a way which permits the participation of everyone, but also that a person's preference in how to earn his or her living is a human rights guarantee as well. In addition to the right to earn one's living, para. 6 of General Comment No. 18 establishes a human right to freely chosen or accepted work. Though this has not been specified in the Comment it appears that the term «accepted work» refers to wage employment whereas «chosen work» can be considered as self-employment¹⁹. Furthermore, and equally significantly here, this Comment also specifically provides that: «the right to work include respect for the physical and mental integrity of the worker in the exercise of employment»²⁰.

Incidentally, a similar line of reasoning is in the ILO's vision emerging from «the premise that universal, lasting peace can be established only if it is based upon decent treatment of working people».²¹ Moreover, a

15. General Comment No. 18, *supra* note, para. 1.

16. *Ibidem*.

17. *Amplius* F. SEATZU, above n. 9.

18. *Ibidem*.

19. *Ibid.*

20. General Comment No. 18, *supra* note, para. 1.

21. References are in Joyce Apsel, «The Right to Work in Dignity: Human Rights and Economic Rights», available at: <http://www.nyu.edu/projects/mediamosaic/thepriceoffashion/pdf/apsel-joyce.pdf>; JOSÉ LUIS GIL Y GIL, The Protection of

similar line of reasoning is further found in several ILO conventions. Here it is sufficient to cite the ILO Convention No. 122 concerning Employment Policy,²² which provides the most detailed description of the obligation to ensure full and productive employment, and ILO Convention No. 158 concerning Termination of Employment at the Initiative of the Employer²³. The former convention obligates Contracting States to: «create conditions for full employment», while the latter convention introduces valid and lawful grounds for dismissal from employment and worker rights to legal redress in cases of unjustified dismissal.

3. THE NOTION OF «DECENT WORK»

What is «decent work»? To answer this question is one of the motivations behind the Report of the Director-General to the International Labour Conference meeting in its 87th Session («the Report of the ILO's Director-General on decent work»)²⁴.

The Report anchors the notion of «decent work» to the enduring and long-established concerns of the ILO, namely to the ILO's vision according to which no enduring peace can be established without the decent treatment of workers²⁵ and to the Preamble to the ILO Constitution recognizing that labor conditions involving unjust hardship and privation for large numbers of people produce unrest that threatens peace and harmony in

Fundamental Rights at Work: the ILO Decent Work Approach, in *Essays on human rights: a celebration of the life of Dr Janusz Kochanowski* (Warsaw: Ius et Lex Foundation, 2014), pp. 192-230 (also stressing that the Declaration of Fundamental Principles and Rights at Work established a subset of four labor standards drawn from eight treaties as the generally accepted «Core Labor Standards»); Irene Ayala Cadiñanos, Condiciones de trabajo justas y equitativas, in *La Carta de los Derechos Fundamentales de la Unión Europea: materiales de innovación docente* (Cizur Menor (Navarra): Aranzadi, Thomson Reuters, 2012), pp. 307-314.

22. Convention concerning Employment Policy, ILO Convention No. 122 Employment Policy Convention (adopted 9 July 1964, entered into force 15 July 1966), available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312267.
23. Convention concerning Termination of Employment at the Initiative of the Employer, ILO Convention No. 158 Termination of Employment Convention (adopted 22 June 1982, entered into force 23 November 1985), available at: http://blue.lim.ilo.org/cariblex/conventions_8.shtml.
24. ILO 1999 *Report of the Director-General: Decent work. International Labour Conference*, 87th Session, Geneva, available at: www.ilo.org/public/english/standards/relm/ilc/ilc87/rep-i.htm [«the ILO Decent Work Report»] (defining «decent work» as «productive work in which rights are protected, which generates an adequate income, with adequate social protection.»).
25. Ibidem.

the world²⁶. Perfectly in coherence with this overall approach, the Report articulates the existence of four components of the notion of decent work. These components are the following: social protection, employment, social dialogue and workers' rights. Employment has both qualitative and quantitative dimensions and encompasses work of any type. Therefore, decent work applies not only to workers in the formal economy but also to the self-employed, home workers and to unregulated wage workers. It also regards adequate opportunities for work, remuneration (in cash and in kind), and embraces healthy working conditions and safety at work.²⁷ Social security and income security are also envisaged as fundamental ingredients of the notion of «decent work» to be defined according to each society's degree of development, as indicated in the same Report. The remaining two components stresses the social relations of employers: the fundamental freedoms and rights of workers (freedom of association, non-discrimination at work, and the absence of forced labour and child labour); and social dialogue, in which workers exercise their right to express their opinions, defend their interests and engage in discussions to negotiate work-related issues with public authorities and employers.

The Report is completed with an illustration of the indicators to be used to measure the extent to which a specified objective or outcome has been achieved. The rationale behind this is clear and understandable: the multifaceted nature of work – combining rights at work with social protection and the enhancement of social dialogue – makes its measurement a difficult task. The same rationale also explains why, later in September 2008, the ILO returned to the issue of the measurement indicators and convened an International Tripartite Meeting of Experts («TME») on the Measurement of Decent Work. The final outcome of this meeting was the adoption of normative and statistical Decent Work Indicators, normative and statistic, that was endorsed by the 18th International Conference of Labour Statisticians²⁸.

Briefly speaking, the ILO Framework Work Indicators cover ten key elements corresponding to the four strategic pillars of the so-called

26. International Labour Organization (ILO), Constitution of the International Labour Organisation (ILO), 1 April 1919, available at: <http://www.refworld.org/docid/3ddb5391a.html> [accessed 22 June 2016].

27. Ibidem.

28. ILO Tripartite Meeting of Experts on Working Time Arrangements, available at: http://www.ilo.org/travail/whatwedo/eventsandmeetings/WCMS_161422/lang-en/index.htm See also ILO International Labour Conference, Strengthening the ILO's Capacity to Assist its Members' Efforts to Reach Its Objectives in the Context of Globalization, at vi (2007), <http://www.ilo.org/public/english/standards/relm/ilc/ilc96/pdf/rep-v.pdf> (stressing that the Decent Work Agenda was intended to make globalization more inclusive and equitable of workers, to contrast poverty, and to enhance sustainable development).

«Decent Work Agenda» (full and productive employment, rights at work, social protection and the promotion of social dialogue), as following: a) employment opportunities; b) adequate earnings and productive work; c) decent working time; d) combining work, family and personal life; e) work that should be abolished; f) stability and security of work; g) equal opportunity and treatment in employment; h) safe work environment; i) social security; l) social dialogue, employers» and workers» representation²⁹.

4. THE ILO'S STRATEGY ON DECENT WORK

The starting point here is that since its foundation at the end of the First World War («WW I») the ILO, which is the UN specialized agency that focuses on work and poverty,³⁰ has been at the forefront of the defense of the workers» fundamental rights and freedoms³¹ mainly through the elaboration of «its unique corpus of social justice»³².

Of special interest here is that the disruption of the world economy as result of its accelerated globalization in the 1990s³³ and of the changed

29. For The ILO's Decent Work Agenda see the ILO's official website at: <http://www.ilo.org/global/topics/decent-work/lang-en/index.htm> On the ILO's Decent Work Agenda, see e.g. Guy Mundlak, *The Right to Work – The Value of Work*, in *Exploring Social Rights: Between Theory and Practice*, pp. 349-350 (referring to the ILO's Decent Work Agenda as promotional and soft).

30. *Origins and History*, available at: <http://www.ilo.org/global/about-the-ilo/history/lang-en/index.htm>.

31. See e.g. Nicolas Valticos, *International Labour Standards and Human Rights: Approaching the Year 2000*, 137 *Int'l Lab. Rev.* 135 (1998); F. Wolf, «ILO Experience in the Implementation of Human Rights», *J. Int'l L. & Econ.*, p. 599; HECTOR G. BARTOLOMEI DE LA CRUZ, Geraldo von Potobsky and, LEE SWEPSTON, *The International Labor Organization: The International Standards System and Basic Human Rights* (Boulder, CO. Westview Press, 1996) pp. 33-34.; C. DI TURRI, *Globalizzazione dell'economia e diritti umani fondamentali in materia di lavoro: il ruolo dell'OIL e dell'OMC*, Milano, 2007; ID., *Globalizzazione dell'economia e diritti fondamentali in materia di lavoro*, *Rivista di diritto internazionale*, 2000, pp. 113-131. See also Virginia Mantouvalou, «Are Labour Rights Human Rights?», *European Journal of Labour Law*, 2012, available at: <http://ssrn.com/abstract=2007535>; JORDI BONET PÉREZ, *The International Labour Organisation (ILO) as a Actor of Global Governance: Sufficiently Involved to Help Overcome the Latest Financial and Economic Crisis?*, *Anuario de Acción Humanitaria y Derechos Humanos = Yearbook on Humanitarian Action and Human Rights*, 2013, pp. 109-139.

32. For this expression, see Wilfred Jenks, «Human Rights, Social Justice and Peace: The Broader Significance of the ILO Experience», in Asbjorn Eide, August Schou (eds.), *International Protection of Human Rights: Proceedings of the Seventh Nobel Symposium, Oslo, September 1997* (1971) 234).

33. Amplius DAVID HULME, *The Making of the Millennium Development Goals: Human*

character of the employer/employee relationship in several western and non-western countries³⁴ led the ILO, in 1999, to readjust its mission for the new Millennium as achieving decent work for people everywhere³⁵. This was done in line with the most recent developments in science that considers full and productive employment and decent work for all as keys to economic inclusiveness³⁶. According to the Report of the ILO's Director-General on decent work that was issued in June 1999, ensuring decent and productive work for women and men everywhere cannot be exploited with the creation of jobs, but with the creation of jobs of acceptable quality. The same Report further elaborates on this and proclaims that the essential elements of ensuring decent work revolve around the following four strategies: establishing better employment chances for all workers, essential workplace rights, providing for social protection, and creating social dialogue³⁷.

In more general terms, the Report affirms that employment encompasses work of any type. Again, it holds that employment has to be conceived as having both qualitative and quantitative dimensions. This means, in particular, that decent work shall be guaranteed not only to workers in the formal economy but also to unregulated wage workers, home workers and the self-employed. Moreover, and equally importantly, the Report provides that employment also has to be interpreted as referring to remuneration, adequate opportunities for work, and embraces healthy working conditions and safety at work. In so stating, the Report implicitly

Development Meets Results-based Management in an Imperfect World 15, Brooks World Poverty Institute, Working Paper No. 16, (2007), pp. 3-5.

34. See SRIYAN DE SILVA, The Changing Focus of Industrial Relations and Human Resource Management, available at: <http://www.ilo.org/public/english/dialogue/actemp/downloads/publications/srsirhrm.pdf>.
35. See e.g. JANICE R. BELLACE, Who Defines the Meaning of Human Rights at Work? The UN Global Compact and the ILO Declaration of Fundamental Rights, available at: [ilera-europe2013.eu](http://www.ilo.org/public/english/compa/2013eu)
36. See SIDDIQUR R. OSMANI, The Role of Employment in Promoting the Millennium Development Goals, Discussion Paper No. 18, Issues in Employment and Poverty, Paper prepared under the Joint ILO-UNDP Programme on Promoting Employment for Poverty Reduction (2005); Trade Union Congress (TUC), Ending Poverty and Strengthening the UN, Global Unions submission to the MDG Review U.N. Summit (Sept. 14-16, 2005).
37. AMPLIUS PHILIP ALSTON, Core Labour Standards and the Transformation of the International Labour Rights Regime, 15(3) *European Journal of International Law*, 457, 458 (2004).; H LUTZ, «Domestic Labour» (2007) 14 *European Journal of Women's Studies* 187 at 189; VA Leary, «The Paradox of Workers' Rights as Human Rights», in Compa and Diamond (eds.), *Human Rights, Labor Rights and International Trade*, University of Pennsylvania Press, 1996, p 22 at 40; Jeopardize Equality Gains at Work and at Home, ILO Ref. ILO/09/15 (Mar. 5, 2009).

rejects a common idea of employment as a purely economic transaction and of workers as simply inputs into a production process³⁸. Income security and social security are also envisaged as core strategies in the ILO's Report, and they are to be defined according to each society's level of development and capacity. The two other strategies (i.e., social protection and social dialogue) stress the social relations of workers: the fundamental rights and freedoms of workers (non-discrimination at work, freedom of association and collective bargaining, and the elimination of forced and child labour); and social dialogue, in which workers exercise their fundamental freedom to express their opinions, defend their interests and engage in discussions to negotiate work-related issues with authorities and employers.

Nearly ten years after the ILO's Report on decent work, the ILO Declaration on Social Justice for a Fair Globalization referred again to the above-named four ILO-driven strategies for decent work and lucidly clarifies that they shall be conceived as multi-pronged, «...inseparable, interrelated and mutually supportive».³⁹ This has noteworthy consequences. In particular, as it leads the authors to conclude that: «the failure to promote any one of them would harm progress towards the others»⁴⁰.

More recently, the ILO Convention concerning decent work for domestic workers (Domestic Workers Convention, No. 189), a landmark in international labour law, together with its accompanying Recommendation 201,⁴¹ applies the same pro-active and human rights approach to decent work in relation specifically to domestic workers (i.e. any person performing domestic work in an employment relationship according to Article 1).⁴² Traces of evidence of this are in several Articles

38. See also JOHN W. BUDD, «Achieving Decent Work By Giving Employment a Human Face», available at: <http://www.legacy-irc.csom.umn.edu/faculty/jbudd/research/ifp7.pdf> (stressing that: «Conceptualizing employment with a human face rather than as a purely economic transaction elevates the importance of ethics and human rights in employment scholarship».)

39. ILO, Working with the ILO – Decent Work and System Wide Coherence, available at: http://rconline.undg.org/wp-content/uploads/2011/11/RC_brochure_Final_WEB_Feb11.pdf.

40. Ibidem.

41. AMPLIUS EINAT ALBIN, «The ILO Convention on Domestic Workers: From the Shadows to the Light» *Ind LAW J.*, 2012, pp. 67-78 (also recalling that the Recommendation incorporates provisions that touch upon aspects of the Convention, setting the particularities to fulfil the rights it adopts. These involve, for instance, the regulation of working time, pay, health testing, accommodation and food, and dismissal of live-in domestic workers).

42. International Labour Organization (ILO), Convention Concerning Decent Work for

of the Convention, including Article 6 and Art 10, para. 1 of the Convention. Article 6 states clearly that Members shall take measures to ensure that domestic workers, like workers generally, enjoy fair terms of employment as well as decent working conditions. Art. 10, para. 1 expressly provides that: «Each Member shall take measures towards ensuring equal treatment between domestic workers and workers generally in relation to normal hours of work, overtime compensation, periods of daily and weekly rest and paid annual leave in accordance with national laws, regulations or collective agreements, taking into account the special characteristics of domestic work». Moreover, Article 6 also provides that domestic workers should enjoy effective protection against all forms of abuse, harassment and violence.

5. THE UN SUSTAINABLE DEVELOPMENT GOALS (SDGS): AN OVERVIEW

Our starting point here is that the UN Sustainable Development Goals (SDGs), (officially known as Transforming our world: the 2030 Agenda for Sustainable Development) were formally adopted by UN member states at the United Nations Summit in New York, in September 2015, within the broader framework of the 2030 Agenda for Sustainable Development, a plan of action for people, planet and prosperity,⁴³ at the end of the perhaps the greatest global consultation in the history of the world.⁴⁴ The main aim of the SDGs that are implemented via a large number (169) of specific targets, together with indicators to monitor their progress,⁴⁵ was to replace the expiring MDGs that had guided international development from 2000

Domestic Workers, 16 June 2011, PRNo.15A, available at: <http://www.refworld.org/docid/4e0d784e2.html> [accessed 20 June 2016].

See also GILLIAN MACNAUGHTON, above n. 6 (stressing that ILO Conventions read like a prescription for decent work and poverty eradication.)

43. SUSTAINABLE DEVELOPMENT KNOWLEDGE PLATFORM, 'Transforming our world: the 2030 Agenda for Sustainable Development', available at: <https://sustainabledevelopment.un.org/post2015/transformingourworld>; The Secretary-General, Road Map Towards the Implementation of the United Nations Millennium Declaration, Report of the Secretary-General, ¶ 1, U.N. GAOR, 56th Sess., Follow-up to the outcome of the Millennium Summit, U.N. Doc. A/56/326, (Sept. 6, 2001) [hereinafter Millennium Declaration Road Map].
44. See GILLIAN MACNAUGHTON, Diane F. FREY, Decent Work, Human Rights and the Sustainable Development Goals, *Georgetown Journal of International Law*, 2016, p. 662.
45. For more informations, see *Rep. of the Leadership Council of the U.N. Sustainable Solutions Network to the Secretary-General, Indicators and a Monitoring Framework for the Sustainable Development Goals*, 2 (June 12, 2015), available at: <http://unsdsn.org/wp-content/uploads/2015/05/150612-FINAL-SDSN-Indicator-Report1.pdf> [Indicators and a Monitoring Framework for the Sustainable Development Goals] (recommending 100 Global Monitoring Indicators to measure progress toward the SDGs and targets).

to 2015 and which had encountered constant criticism.⁴⁶ Some of these criticisms were: the technocratic and bureaucratic genesis of the MDGs; the lack of universality and accountability for donor countries reflected in the absence of indicators and targets for some MDGs, such as Goal 8;⁴⁷ the fact that the selection process of the MDGs was not encompassing wide participation from the people who were to be the direct beneficiaries of the goals;⁴⁸ the failure to address equality and nondiscrimination; the lack of transparency (i.e. the failure to measure progress toward their targets); the failure to address poverty issues in high- and middle-income countries;⁴⁹ the fact that the Millennium Declaration, approved by leaders of 189 nations at the Millennium Summit, included both development and human rights goals, but only the development goals were transformed into a framework with indicators and targets and a global plan for enforcement;⁵⁰ the fact that MDGs targets provide, for instance, no deadline for achieving decent work for all; the erroneous assumption on which several MDGs are based, etc.⁵¹

Focussing, now, specifically on the general features of the SDGs framework, it is worthy recalling the following observation from research

46. See Watkins, 2014, KENNY and SUMNER, 2011, Lancet Commission, 2010, reference at: <https://www.odh.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9295.pdf>; See Philip Alston, *Ships Passing in the Night: The Current State of the Human Rights and Development Debate Seen Through the Lens of the Millennium Development Goals*, 27 HUM. RTS. Q. 755, 762-766 (2005) (summarizing human rights critiques of MDGs, targets and indicators).
47. AMPLIUS CHRISTOPHER J. L. MURRAY, «Towards Good Practice for Health Statistics: Lessons from the Millennium Development Goal Health Indicators». *The Lancet*, 2007, pp. 369: 862.
48. See Philip Alston, above n. 45, p. 765.
49. Amplus Malcolm Langford, *A Poverty of Rights: Six Ways to Fix the MDGs*, 41 IDS BULLETIN, 2010, p. 87 ff («The Targets are problematic in being largely unfocused on the poorest of the poor or reducing inequality.»).
50. UN General Assembly, United Nations Millennium Declaration, Resolution Adopted by the General Assembly, 18 September 2000, A/RES/55/2, available at: <http://www.refworld.org/docid/3b00f4ea3.html> [accessed 27 June 2016], paras. 24-25. See also Joint Statement from 332 Civil Society Organizations, Human Rights for All Post-2015 (Dec. 10, 2013), <https://sustainabledevelopment.un.org/content/documents/5123jointstatement.dec10.pdf>; U.N. Office for the High Commissioner on Human Rights, *Claiming the Millennium Development Goals: A Human Rights Approach*, at VII, U.N. Doc. HR/PUB/08/3 (2008) [hereinafter OHCHR *Claiming the MDGs*] («A number of MDG targets are not consistent with human rights and potentially diminish gains enshrined in international human rights treaties.»).
51. See also SAKIKO FUKUDA-PARR & David Hume, *International Norm Dynamics and «the End of Poverty»: Understanding the Millennium Development Goals (MDGs)*, (Brooks World Poverty Inst., Working Paper No. 96, 2009) (also stressing that MDGs have been successful for many reasons).

consultant May Miller-Dawkins' observation that: «the high ambition and non-binding nature of the SDGs could increase rather than diminish their overall long-term impact»⁵². The main argument behind this statement is that: «in human rights and other treaties, high ambition has allowed domestic groups to use international norms and frameworks for leverage to generate change»⁵³.

Prima facie, at least, this is a noteworthy (and rather original) approach to the topic of the SDGs, since it naturally leads to a bouleversement of the normal thinking that considers in general terms international soft law instruments as less legal (and thus, at least implicitly, also as less efficacious) than international hard law instruments. But despite some oddities and fallacies, this approach to the SDGs contains also some significant truths that are worth raising here.

One corroborating, though indirect, piece of evidence of our latter statement arises from the IMF's recent initiatives to enhance support for its member countries in the ways as they pursue the SDGs. Further evidence is that SDGs, separately and as a whole, are specific, measurable, attainable, relevant, and time-based⁵⁴.

Likewise, unlike MDGs the SDGs were conceived to be understood by the average citizen, not only by high-flying theorists and academics. This is particularly evident in the language used to describe the 17 Sustainable Development Goals and 169 targets. The reference is, in particular, to the SDGs that are of special relevance to nutrition and public health (Goals 1, 2, 3 and 6). In other words, the United Nations and the world's leaders made the transition from the MDGs to the SDGs in the hope that the latter would inspire action with a set of SDGs that would be «action-oriented, concise and easy to communicate, limited in number,» as the United Nations General Assembly specifically indicated in its 2012 outcome document, «The Future We Want.»⁵⁵ However, a different conclusion

52. See May MILLER-DAWKINS, «Global goals and international agreements. Lessons for the design of the Sustainable Development Goals», available at: <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9295.pdf> (also stressing that: «the ILO changed its position in the early 2000s and began a campaign for a ninth MDG on decent work for all.»)

53. Ibidem.

54. Amplius MAY MILLER-DAWKINS, above n. 46 (stressing inter alia that the «practicality» of achieving goals should not stand in the way of high levels of ambition for the SDGs as this level of ambition and articulation of principle, may be used more forcefully in domestic contexts and have more effect than the direct impact of the goals themselves.)

55. Rio 20, 'The Future We Want', available at: <http://www.uncsd2012.org/thefuturewewant.html> See also U.N. Secretary-General, High Level Panel of

could be derived from the long length of the SDGs (that is functional to promote sustainable development), at least if compared to the MDGs⁵⁶.

That said, it is hard to believe that the SDGs could function satisfactorily as they currently lack a global reporting mechanism for countries to voluntarily submit data to track progress in light of the SDGs indicators. As Dr. Jerome Amir Singh Singh has rightly pointed out: «in the absence of legally binding compliance and accountability mechanisms, realizing the SDGs will require a difficult mindset shift on the part of authorities – from empty political rhetoric that has generally characterized the realization of other soft-law international instruments, to a problem-solving mindset based on adherence to explicit ethical benchmarks»⁵⁷.

6. MINDING THE GAP: THE LIMITED SCOPE OF THE PROTECTION OF DECENT WORK AND EMPLOYMENT UNDER THE SDGS

The starting point is that we are witnessing a slow process of economic

Eminent Persons on the Post-2015 Development Agenda, A New Global Partnership: Eradicate Poverty and Transform Economies Through Sustainable Development, Exec. Summary (May 30, 2013), <http://www.post2015hlp.org/wp-content/uploads/2013/05/UN-Report.pdf> [hereinafter Report of the High-Level Panel]; U.N. Office of the High Commissioner for Human Rights, Statement by 17 Special Procedures Mandate-holders of the Human Rights Council on the Post-2015 Development Agenda (May 21, 2013) [hereinafter Statement by 17 Special Procedures Mandate-holders], <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID13341&LangID=E>; U.N. Office of the High Commissioner for Human Rights, Joint Statement by the Chairpersons of the U.N. Human Rights Treaty Bodies on the Post-2015 Development Agenda (May 2013) [hereinafter Joint Statement by the Chairpersons of the U.N. Human Rights Treaty Bodies], <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID+15505&LangID+E>; The Vienna+20 CSO Declaration (June 26, 2013), <http://viennaplus20.files.wordpress.com/2013/07/vienna-20-cso-declaration-final-post2.pdf> (adopted at the Vienna 20 CSO Conference held on June 25 and 26, 2013, bringing more than 140 persons from various CSOs around the world to Vienna on the occasion of the twentieth anniversary of the 1993 World Conference on Human Rights and its Vienna Declaration and Programme of Action, issued on June 25, 1993).

56. See DAVID HULME, Lessons from the making of the MDGs: human development meets results-based management in an unfair world, *IDS Bulletin*, 2010, pp. 15-25 (stressing that eradicating poverty was the overall objective of MDGs). Accordingly, see also KENNY, CHARLES and ANDY SUMNER, «More Money or More Development: What Have the MDGs Achieved?» 2010 *Working Paper, No. 2*, Center for Global Development (indicating that the MDGs placed «broad-based poverty reduction at the centre of the development agenda at least in international discussions and policy discourse»).
57. See JEROME AMIR SINGH, The Sustainable Development Goals. The role of ethics, available at: http://www.sightandlife.org/fileadmin/data/Magazine/2015/29_2_2015/11_The_sustainable_development_goals_the_role_of_ethics.pdf.

growth in most regions and areas of the world. This is so if we identify economic growth as growth in Gross Domestic Product («GDP»), a metric often used by both economists and sociologists as a proxy for a country's material living standards (also referred to as «economic welfare»)⁵⁸. This is also true if we consider that the number of workers/employees living in extreme poverty situations has fallen drastically, as confirmed by that the middle class currently makes up more than 34 percent of total employment in developing countries (a number that has almost tripled from the early 1990s to the present).⁵⁹

With all this in mind, the drafters of the SDGs recognized the need to achieve full and productive employment, and decent work as well as an array of other work rights. These included the eradication of the worst forms of child labor and the enhancement of secure and safe work environments⁶⁰ for all women and men by 2030, and for young people and persons with disabilities. This recognition is reflected in particular in Goal 8, which is significantly titled: «Decent work and economic growth».

The title of Goal 8 indicates that the SDGs raise the profile of decent work and full employment to the level of a Goal, so to the level of a complex aggregate of distinct development issues, unlike the MDGs that consider decent work exclusively a target. Goal 8 of the SDGs is also complemented by twelve targets.⁶¹ The most fundamental target is Target 8.5 that significantly proposes to: «By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.» Another target that is equally worth mentioning is Target

58. See MARTHA ALTER CHEN, JOANN VANEK, MARILYN CARR, *Mainstreaming informal employment and gender in poverty reduction: a handbook for policy-makers and other stakeholders* (IDRC, 2004), p. 1 ff.

59. U.N. Committee on Economic, Social and Cultural Rights, *Statement on Poverty and the International Covenant on Economic, Social and Cultural Rights*, at ¶ 7, U.N. Doc. E/C.12/2001/10, (May 10, 2001) [hereinafter CESCR Statement on Poverty]. U.N. Office of the High Commissioner for Human Rights, *Human Rights and Poverty Reduction: A Conceptual Framework*, at 10, U.N. Doc. HR/PUB/04/1, (2004). See also THOMAS POGGE & MITU SENGUPTA, *Rethinking the Post 2015 Development Agenda: Eight Ways to End Poverty Now*, 7 *GLOBAL JUST.: THEORY PRAC. RHETORIC*, 2014, pp. 5-6.

60. G.A.Res.70/1, *Transforming Our World: The 2030 Agenda for Sustainable Development*, paras. 2-3 (Sept. 25, 2015) [hereinafter *The 2030 Agenda for Sustainable Development*] at 19-20 (targets 8.5, 8.6, 8.7 and 8.8).

61. See GILLIAN MACNAUGHTON, Diane F. FREY, above n. 45, p. 656 (also stating that: «Following the Secretary-General's report in December 2014, the Leadership Council of the Sustainable Development Solutions Net-work (Network) issued a report on June 12, 2015, sharing ideas for indicators for each goal»).

8.6 6 which brings: «youth employment back onto the main stage of the international development agenda after it was dropped in 2007 at the time the new decent work target was adopted into the MDG framework,» as Gillian MacNaughton and Diane Frey Frey have duly observed⁶². Indeed Target 8.6 provides for: «By 2020, a substantial reduction of the proportion of youth not in employment, education or training.» Moreover, Target 8.7 prescribes: «...immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms.» Lastly, it is also worth mentioning Target 8.10 that strengthens the capacity of internal financial organizations to boost and enlarge access to banking, insurance and financial services for all.

Both the title and language of Goal 8 show that the objective of decent work shall be reconciled with concurrent and possibly conflicting aims, namely the promotion of sustainable economic growth and the promotion of full and productive employment⁶³.

Far from being surprising, this feature can be easily justified by the overall «philosophy» behind the SDGs which is the idea that the international law of sustainable development is, *per se*, insufficient for ensuring human and planetary well-being in the short or long term, and therefore it is in need to be supported by other more operative sources⁶⁴.

Corroborating evidence for this statement may be found in several circumstances and factors. Firstly, and most clearly promoting economic policies that encourage entrepreneurship and job creation are key to encouraging sustained economic growth, as are effective measures to eradicate slavery, forced labour, and human trafficking⁶⁵. Secondly, there is the operative character of the SDGs. This emerges from the fact that these international instruments of soft law continue the trend of the eight Millennium Development Goals («MDGs») toward more concrete and measurable outcomes like, for instance, the reduction of the proportion

62. See GILLIAN MACNAUGHTON, Diane F. FREY, above n. 45, p. 654 ff.

63. See also GILLIAN MACNAUGHTON, Diane F. FREY, note 45, p. 658 (stating that: «In view of the importance of full employment and decent work to poverty eradication, the SDGs should have included a single stand-alone goal, Promote Full and Productive Employment and Decent Work for All, decoupled from economic growth).

64. See e.g. VIRGINIE BARRAL, *Sustainable Development in International Law: Nature and Operation of an Evolutive Legal Norm*, *EJIL*, 2012, pp. 377-400.

65. See HUGH T. PATRICK, *Financial Development and Economic Growth in Underdeveloped Countries*, *Economic Development and Cultural Change*, 1996, pp. 174-89.

of youth not in employment, education or training and the promotion of safe and secure working environments for all workers, including migrant workers⁶⁶. With an endpoint of 2030, the SDGs present 17 goals, assessed through 169 targets that, in turn, are shaped by more than 300 indicators.⁶⁷ Incidentally, this operative character of the SDGs can hardly be contested, nor can the evidence it indicates, even though it is not entirely clear what purpose the SDGs serve notwithstanding the far from insignificant differences that exist between MDGs and SDGs. For instance, unlike the MDGs the SDGs tackle global public goods problems as well as national obstacles. The SDGs also apply universally – to all countries rich and poor.

Thirdly, additional evidence is provided by the enduring uncertainty of the international legal status of sustainable development. As Professor Virginie Barral has duly observed: «because of the evasive and flexible content of what has been termed by the ICJ a concept in the *Gabcikovo-Nagymaros* case, and more recently an objective in the *Pulp Mills* case, academic commentary has often struggled to ascertain sustainable development's legal nature, which has proved a notion defying legal classification»⁶⁸. Fourthly, further evidence is also given by that, as a principle, sustainable development recognizes both the right to development and the right to environmental protection as equally established rights under general international law. Because they are equal, the «right [to development] does not exist in the absolute sense, but is relative always to its tolerance by the environment».⁶⁹ In other words, development cannot be pursued to such a point as to result in significant or irreversible damage to the environment within which it is to occur. Therefore, «development can only be prosecuted in harmony with the reasonable demands of environmental protection»⁷⁰. Although

66. See also PHILIP ALSTON, *Ships Passing in the Night: The Current State of the Human Rights and Development Debate Seen Through the Lens of the Millennium Development Goals*, 27 *Human Rights Quarterly* pp. 755, 762-766 (2005) (summarizing human rights critiques of MDGs, targets and indicators).

67. See United Nations Millennium Declaration, G.A. Res. 55/2, at 4, U.N. GAOR, 55th Sess., Supp. No. 49, U.N. Doc. A/55/49 (Sept. 8, 2000) [hereinafter U.N. Millennium Declaration]; The Secretary-General, Road Map Towards the Implementation of the United Nations Millennium Declaration, Report of the Secretary-General, ¶ 1, U.N. GAOR, 56th Sess., Follow-up to the outcome of the Millennium Summit, U.N. Doc. A/56/326, (Sept. 6, 2001) [hereinafter «Millennium Declaration Road Map»].

68. See VIRGINIE BARRAL, *Sustainable Development in International Law: Nature and Operation of an Evolutive Legal Norm*, *EJIL*, 2012, pp. 377-400.

69. AMPLIUS RAKHYUN E. KIM, *SDGs and the Principle of Sustainable Development in International Law*, available at: <http://sdg.earthsystemgovernance.org/sdg/news/2014-03-13/sdgs-and-principle-sustainable-development-international-law>.

70. *Ibidem*.

the principle does not confer automatic priority to the pursuit of purely environmental values, it signifies that, in sustainable development, «sustainable» conditions «development», not vice versa.

Fifth, while the legal obligation to develop sustainably does not impose ecocentric reasoning, anthropocentric reasoning suffices.⁷¹ As Judge Weeramantry maintained, the protection of the environment is «a sine qua non for numerous human rights such as the right to health and the right to life itself»⁷². Lastly, supporting evidence for this statement is also provided by the circumstance that sustainable development has been gaining legal currency as a *de facto* «principle of reconciliation» in general international law, so an international legal principle aimed at reconciling «economic development with protection of the environment»⁷³.

7. FILLING THE GAP: ALIGNING THE INTERPRETATION OF THE SDGS GOAL NO. 8 TO THE ILO'S STRATEGY ON THE RIGHT TO DECENT WORK

This paper argues that there is a necessity to align the interpretation of the SDGs to international legal norms, including and in particular to international human rights provisions, international labour rules and principles and to *erga omnes* obligations in the fields of environmental and fundamental rights. However, as the SDGs are not a negotiated agreement, this duty is clearly not legally binding⁷⁴.

The main reasons supporting this opinion are clear and straightforward: a) the SDGs are grounded in human rights norms;⁷⁵ b) the effective implementation of the SDGs depends on a mutually supportive relationship between the SDGs and general international law. This is indirectly confirmed by considerable evidence such as the lack of firm accountability mechanisms and enforcement tools in the SDGs⁷⁶ as

71. *Ibid.*

72. References are found in LAURA WESTRA, *Environmental Justice and the Rights of Unborn and Future Generations* (Earthscan, 2006), p. 10 ff.

73. See A. DAN TARLOCK, John C. DERNBACH, *Environmental Laws and Their Enforcement* (Eolss Publishers, 2009), p. 278 ff.

74. See MAY MILLER-DAWKINS, above n. 46 (stressing that they are not a negotiated treaty and therefore are, at best, a form of soft law.)

75. See MAY MILLER-DAWKINS, above n. 46 (stressing that we shall look at the SDGs as closer analogues to international human rights and environmental agreements than international programmes or, even, than their predecessors, the Millennium Development Goals.).

76. AMPLIUS NORTON, ANDREW, ANDREW SCOTT, PAULA LUCCI and WILLIAM AVIS, «Taking the Sustainable Development Goals from “main basis” to effective vision –

well as by the circumstance that SDGs reinforce existing international provisions and may strengthen their existing monitoring platforms;⁷⁷ c) unlike the MDGs the SDGs are part of an international legal landscape characterized by the presence of a body of international legal rules in the field of sustainable development;⁷⁸ d) SDGs sit within the United Nations General Assembly and general interaction of states and accredited NGOs within the United Nations;⁷⁹ e) like the ILO and CESC the SDGs link full employment and decent work to poverty eradication;⁸⁰ f) an effective implementation of the SDGs cannot be realized without the numerous ILO conventions that deal with decent work and employment, as evidenced by the fact that there are SDGs targets that encompass, though only partially, the *Core Labor Standards* and ILO's social protection pillars⁸¹. Yet this can hardly be contested as invalid notwithstanding several components of the

what's the roadmap?», (2014) Working Paper 402, Overseas Development Institute; GILLIAN MACNAUGHTON, Diane F. FREY, above n. 59, pp. 607-663. See also RAKHYUN E. Kim, above n. 59 (reporting that Griffith Law School's Dr Rak Kim has emphasised that the creation of a «mutually supportive relationship between the SDGs and international law will be critical for effective implementation of the post-2015 development agenda.»).

77. See MAY MILLER-DAWKINS, above n. 46 (also indicating that beyond an SDG platform for measurement, the SDGs could be used to strengthen the monitoring, verification, and reporting processes in human rights and environmental regimes).
78. Accordingly, RAKHYUN E. KIM, above n. 59 (also emphasizing that: «SDGs will not enter into a normative vacuum, but a body of «international law in the field of sustainable development», which has arguably existed from the time of the Rio Declaration.»). See also GILLIAN MACNAUGHTON, Diane Frey, above n. 67, p. 611 (stressing that many of the targets ignored specific international human rights obligations); U.N. Office for the High Commissioner on Human Rights, *Claiming the Millennium Development Goals: A Human Rights Approach*, at VII, U.N. Doc. HR/PUB/08/3 (2008) (stressing that: «A number of MDG targets are not consistent with human rights and potentially diminish gains enshrined in international human rights treaties.»).
79. See MAY MILLER-DAWKINS, above n. 46. See also MATTHEW CRAVEN, above n. 14, p. 140 (indicating that «[a]ny such right to employment was to be viewed in relation to the State obligation to secure full employment in a progressive manner, which in itself was conditional upon the economic development of the country concerned.»).
80. Amplius ILO International Labour Conference, Report of the Director-General: *Working out of Poverty* (2003), <http://www.ilo.org/public/english/standards/relm/ilc/ilc91/pdf/rep-i-a.pdf> [Working out of Poverty Report] (stressing inter alia that: «the Decent Work Agenda would be «the heart of successful policies to reduce poverty.»).
81. On the CLSs, see e.g. See, e.g., PHILIP ALSTON, *Core Labour Standards and the Transformation of the International Labour Rights Regime*, *EJIL*, 2004, p. 457 ff. See also Brian Langille, *Core Labour Rights-The True Story* (Reply to Alston), *EJIL*, 2005, p. 409 ff.; Francis Maupain, *Revitalization Not Retreat: The Real Potential of the 1998 ILO Declaration for the Universal Protection of Workers' Rights*, *EJIL*, 2005, p. 439 ff.

ILO's social protection pillars could easily be achieved also without any economic growth at all⁸².

Most importantly and generally, this opinion can be maintained and defended even though only three international treaties are explicitly indicated in the SDGs and regardless of the circumstance that none of the 31 targets of the «justice» and «implementation» goals (SDGs Goals No. 16 and 17) contain any reference to international law.⁸³ Further and decisive evidence in favor of the above-named conclusion is found in the language of the SDGs Agenda (otherwise also called the «2030 Agenda for Sustainable Development») – a plan of action for people, planet and prosperity – that significantly refers to «full respect for» and «commitment to» international law.⁸⁴ Moreover, and perhaps more importantly here, further evidence can be found in the legal principle of sustainable development, a well established concept in general international law,⁸⁵ that has to be referred to in the interpretation and implementation of the SDGs as it can be useful to reduce or end the otherwise inherently ambiguous meaning of the concept of sustainable development.

82. Further references are found in Bob Deacon, *Global social policy in the making* (Chicago: University of Chicago Press, 2013), p. 115 ff.

83. SDGs Goal No. 16 sets out to: «[p]romote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.»

84. Transforming our World: The 2030 Agenda for Sustainable Development, available at: <https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>

85. See e.g. NICO SCHRIJVER, *International law and sustainable development: principles and practice* (Leiden [etc.]: Nijhoff, 2004); ALAN BOYLE, *International Law and Sustainable Development: Past Achievements and Future Challenges* (Oxford [etc.]: Oxford University Press, 1999); Rakhyun E. KIM, above n. 59. See also Michelle Lim, *Can Sustainable Development Goals or International Law lead us to sustainability?*, available at: <https://app.secure.griffith.edu.au/news/2015/08/27/can-sustainable-development-goals-or-international-law-lead-us-to-sustainability/> (also stressing that sustainable development law concepts, however, do hold much potential for guiding implementation of the SDGs.)

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Chapter 12: goal 9

Fostering industrial development in the frame of the UN Agenda 2030 – Understanding the Sustainable Development Goal 9

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SUMMARY: 1. INTRODUCTION. THE ROLE OF INDUSTRY IN SUSTAINABLE DEVELOPMENT. 2. INDUSTRIAL POLICY AS A KEY DRIVER OF INDUSTRIAL DEVELOPMENT. 3. GLOBAL INDUSTRIAL GOALS AND ITS SHAPING IN UN FORA. 4. INDUSTRIAL DEVELOPMENT WITHIN THE AGENDA 2030. MAJOR POTENTIALS AND CHALLENGES FOR INDUSTRIAL POLICIES. 4.1. *The SDG 9 in the frame of the Agenda 2030.* 4.2. *Potentials of the SDG 9 with the Agenda 2030.* 4.3. *Major challenges and trade-offs of SDG 9 within the Agenda 2030.* 5. CONCLUDING REMARKS. REFERENCES.

ABSTRACT:

The development of industrial sectors is a powerful tool to end poverty and create job opportunities. Against this background, this contribution enlightens the main determinants and implications of industrial growth aiming to stimulate the debate on the use and elaboration of industrialization strategies to foster sustainable development within the Agenda 2030. It illustrates the most significant milestones in the last decades in international fora and committees to define global industrial development, goals, and strategies. This contribution analyses the SDG 9 from a theoretical perspective, examining its place and interrelations with other SDGs within the Agenda 2030 by remarking its most significant potentials and challenges with a focus on developing countries.

1. INTRODUCTION. THE ROLE OF INDUSTRY IN SUSTAINABLE DEVELOPMENT

The adoption of the Agenda 2030 and its Sustainable Development Objectives (SDGs) by the United Nations' (UN) General Assembly in September 2015 has integrated new objectives and innovative concepts into the approach to global development of UN agencies and member states. The concept of the Agenda 2030 is one of a holistic and integrated approach to sustainable development, which inherently recognizes the interwoven nature of its 17 goals and 169 targets, their trade-offs and synergies. In comparison to previous sets of global goals or international treaties to promote sustainable development the Agenda 2030 has broken new ground by integrating a strong economic dimension into the UN global sustainable development strategies with a focus on industrial development.

In the last decades, important global progress has been achieved in the frame of the UN Millennium Development Goals (MDG), the SDGs predecessors. Among others, the proportion of the population in the developing world living on less than \$1.25 a day that dropped from 47% in 1990 to 14% in 2015, child mortality has been almost halved within this period and now over 90% of children in developing countries attend primary school education (UN 2015). However, a number of critical global targets set in the MDGs, such as reducing maternal and child mortality in developing countries by three quarters have not been achieved yet and, above all, an uneven development can be observed across and within several countries, localities and population groups. Regarding the global achievements mentioned above, the poorest regions and most vulnerable people are being left behind, especially in Sub-Saharan Africa. Against this background, it is often argued that the MDGs failed to focus on economic and production-oriented dimensions in order to achieve sustainable development.¹ As a consequence, while industrial development was not integrated into the MDG framework, these dimensions feature strongly in the post-2015 global development discourse and in the Agenda 2030. Sustainable development requires structural economic and productive transformations in developing countries from low to high productivity sectors, i.e. from extensive agriculture sectors or low-technological manufacturing to an efficiency-driven industrial economy. Therefore, SGD 9

1. In the MDG progress report «Keeping the Promise» the UN's Secretary General underlined the importance of economic growth for the achievement of the targets: «Sustained and equitable growth based on dynamic structural economic change is necessary for making substantial progress in reducing poverty. It also enables faster progress towards the other Millennium Development Goals» (UN 2010).

of the Agenda 2030 calls UN member states to «build resilient infrastructure, promote sustainable industrialization and foster innovation».

The development of industrial sectors is a powerful tool to end poverty and create job opportunities. Manufacturing and its related service sectors can absorb large numbers of workers, provide them with high salaries and increase the prosperity in their communities. Recent United Nations Industrial Development Organization (UNIDO) research provides empirical evidence of the direct correlation between industrial development and economic and social progress in developing regions: a 1% increase in Manufacturing Value Added (MVA) per capita translates into an almost 2% decrease in the poverty head count (Upadhyaya and Kepplinger 2014). The global poverty reduction observed in the last 25 years is hence due to the strong global economic growth observed in China and India, which was mainly driven by industrial development. In the path towards poverty eradication in developing countries, employment figures for the industrial sector of the International Labour Organization's (ILO) statistics have grown dramatically in recent years, from 1 billion to 1.4 billion people between 2000 and 2014 (WWPA 2016). This growth has occurred across all regions with the exception of countries with developed economies.

Economic history shows that the development of modern societies in prosperous countries is based on industrial growth, which has proven to foster long-term economic and social wealth. The early industrial development in Europe, the United States, and Japan are the clearest examples of such development. In the second half of the 20th century, other examples confirm this fact, as poverty rates have dramatically declined along with accelerated industrial-driven economic growth in South and East Asian countries, whose economies are now rapidly converging with those of major developed countries.

Globally, industrialization processes may be seen as embedded within heterogeneous technological-institutional structures of production that constitute physical and social settings within which economic activity as a whole is accomplished (Scott 1993). This implies that the impact of industrial growth on poverty eradication, environmental sustainability or food security depends ultimately on the pattern of industrialization a country chose or chooses to follow. Since each country has specific conditions and needs, requiring specific industrial policies in specific periods, a «one-size-fits-all» approach will not be workable to promote industrialization within the Agenda 2030. Against this background, this contribution enlightens the main determinants and implications of industrial growth aiming to stimulate the debate on the use and elaboration

of industrialization strategies to foster sustainable development within the Agenda 2030. It illustrates the most significant milestones in the last decades in international fora and committees to define global industrial development, goals, and strategies, and analyses the SDG 9 from a theoretical perspective, examining its place and interrelations with other SDGs within the Agenda 2030 by remarking its most significant potentials and challenges with a focus on developing countries.

2. INDUSTRIAL POLICY AS A KEY DRIVER OF INDUSTRIAL DEVELOPMENT

The success of industrialization processes and industrial growth depends on very diverse factors and presents a series of economic requirements. These include, among others, availability of labor force, access to raw materials and markets for finished production, access to investment from the private sector, the public sector, or from abroad, access to technology and disposal or transfer of technological capacities. Accessibility to these factors is yet very heterogeneous across countries and, even if these are given, the lack of organizational structures to seize industrial potentials can constitute a critical bottleneck in developing countries. Hence, especially at early stages of industrialization, systemic local, state or international directed policy measures play a central role to find a balance between these economic conditions and to steer resources into industrial productive processes. Industrial policies comprise many complex and closely interwoven aspects, such as trade, science and technology policies, public procurement legislation, policies related to foreign direct investments (FDI), intellectual property rights or the allocation of financial resources (Cimoli, Dosi, and Stiglitz 2009). Although there is no generally accepted definition of industrial policy, the one used by the OECD can be frequently found in the literature: «Any type of intervention or government policy that attempts to improve the business environment or to alter the structure of economic activity towards sectors, technologies or tasks that are expected to offer better prospects for economic growth or societal welfare than would occur in the absence of such intervention» (Warwick 2013).

Conventional theory conceives industrialization as a single unitary process in which companies and markets are the primary mechanisms shaping the development of the industrial sector. However, the organizationally and governmentally dimension of industrialization constitutes a key determinant for industrial growth (Herrigel 2000). Economic and industrial development in developed countries along the

second half of the 20th century has been marked by integrated policy frameworks to foster industrialization and manufacturing, predominantly at the local level. Export information programs to reduce the costs to businesses of acquiring information on markets in foreign countries, entrepreneurial training programs to reduce the costs to potential entrepreneurs of developing a business and a financing plan or applied research grants to reduce the costs to high technology of companies are some of the most common support strategies carried out by national and international institutions and organizations to support the development of the industrial sector and increase the added value of industrial chains. These policies can only be effective through the establishment of efficient and effective state or local market institutions, market mechanisms and rules under which industrial actors operate. This is, in fact, a key organizational challenge for developing industrial policies. Scholars frequently underline the crucial role of these institutions and policy strategies on industrial development in the complex present-day global (Rodrik 2014). The role of industrial policies and institution-building in accumulating both technological and entrepreneur-organizational knowledge² as well as human capital is a key success-factor which strongly contributes to the transformation from underdeveloped rural economies to economies driven by efficiency-driven industrial activities (Cimoli, Dosi, and Stiglitz 2008). However, the establishment and update of such a set of institutional actors might be costly and challenging and requires extensive know-how and public resources which are often not available in developing countries (OECD 2004).

It has been since the late 70's, during the global productivity slowdown caused by the energy crises, that local public institutions and politics in the United States started assuming responsibility for economic growth and industrial development, since federal action to deal with these economic problems was constrained by budget deficits and a conservative political philosophy (Bartik 1991). These local policy actions were primarily targeted at small or existing businesses and contributed strongly to industrial and economic growth in metropolitan areas, encouraging various forms of innovation, such as applied research, industrial modernization, entrepreneurship or business expansion into export markets. This policy

2. The obstacles in the transfer of knowledge, i.e. the mastering of certain codified information, are some of the key reasons why catching-up is still challenging for developing countries. The generation, imitation or adaptation of technological knowledge requires a rich variety of complementary actors in the private and public sector, such as public training and research institutions. Institutions and policies addressing technological learning require the construction of national systems of education and innovation in production (Cimoli, Dosi, Nelson and Stiglitz 2006).

did not primarily consist on financial aid or subsidies, but on services to businesses to help them determine their best market or technological strategies (Ibid.). Analogous to the US's industrial development in the second half of the 20th century, the industrial growth in Europe after the WWII was marked by the implementation of economic policies to foster industrial production (Grabas and Nützenadel 2013). For instance, the West German successful industrial growth since the 50's is often attributed to the implementation of industry-friendly policies in regional economies and the capacity to exploit large amounts of foreign aid (Herrigel 2000). Together with the ability of industrial companies to coordinate tight inter-corporate linkages with banks, institutional support of local and regional governments and institutions has been a key determinant shaping the global significance of Germany's manufacturing sector. Regional and local public actors established a complex institutional infrastructure providing services which helped a broad spectrum of companies respond to pressure from international competitors, labor constraints and the scarcity of financial and technology resources needed to pursue quality-competitive strategies (Vitols 1997). In a nutshell, industrial patterns in the major developed countries during the 20th century clearly confirm that industrial policies are an intrinsic fundamental ingredient of economic and social development processes.³

Recent examples of effective industrial action plans with the support of international organizations can be found in several developing countries where comprehensive industrial policies were carried out with determination and the capability for building consensus on a long-term national project of industrial transformation (Altenburg 2011). For instance, Côte d'Ivoire adopted the National Development Plan in cooperation with both the World Bank and the United Nations Industrial Development Organization. This plan identifies potential strategic sectors in both the agro-processing and manufacturing areas compromising several policy action plans to focus on economic and political comparative advantages. Côte d'Ivoire's economy has expanded over the past four years with a robust GDP growth, which in turn has resulted in a substantial decline in poverty (World Bank 2015). In the last decades, other African countries, such as Tunisia and Ethiopia, have also made an important progress towards industrial growth and poverty reduction by implementing and upgrading national industry-related national agendas and establishing a

3. In this regard, the commonly analysed industrialization patterns in South and East Asian countries, like Korea, Taipei, China and Singapore, are also worth mentioning. Starting in the 50's, these industrialization processes were heavily supported by effective and successful industrial policy interventions (Weiss 2005).

range of sector-specific meso-institutions, enabling strong investments in industry and increases in competitiveness (Altenburg 2011, Gebreyesus 2013).

3. GLOBAL INDUSTRIAL GOALS AND ITS SHAPING IN UN FORA

In the light of the global diverging industrial development, which is one of the most evident trends since the first Industrial Revolution and one of the basic causes of the growing disparities in global income and social well-being, industrial growth is perceived as the only feasible development pattern developing countries can undertake to catch-up with developed economies. By the end of the first Industrial Revolution in the first half of the 18th century, the gap between the richest and poorest countries of the world's economy measured in GDP per capita presented a ratio of about 2:1. In the first decade of the 21st, that economic gap rose to over 80:1 (Rodrik 2013). This global divergence process, labelled as «divergence, big time» in the literature (Pritchett 1997), has been a consequence of the industrialization patterns and the colonial economic models in Western Europe, the United States, Japan, and a few other countries whilst a very slow growth in other least industrialized countries can be observed. Given the UN's commitment to achieving global sustainable development and poverty eradication, industrial development and industrialization processes in developing countries have been gaining importance in the political agenda of UN international fora and committees in the last decades.

Since the first United Nations Conference on Environment and Development (UNCED) in 1992, the UN has been expanding its vision of global sustainable development into a multidimensional one that includes industrial development. The Agenda 21, an outcome document of the UNCED adopted by all participating nations at the summit, formulated an international blueprint for sustainable development, primarily aiming to reverse environmental degradation. Agenda 21 constituted a global action plan focusing on industrial and economic development, consumption and production patterns as well as social development and environmental protection. It presented a practical approach to applying sustainable development policies at the local and national level, enabling the first discussions on industrial development between high representatives of UN member states. In its chapter 30, Agenda 21 acknowledges the potential of industrial growth for creating prosperity and called UN Member States to foster an environmentally

responsible industrial growth. However, little emphasis was put on industrialization processes in developing countries, and the means of its implementation remained unclear. Although it broke new ground integrating different dimensions into the UN approach to sustainable development, the document presented a clear lack of indicators in its key policy recommendations and goals.

Ten years after the UN member states' agreement on Agenda 21, the World Summit on Sustainable Development (WSSD) took place in Johannesburg. A major objective of the WSSD was to set out strategies for greater and more effective implementation of Agenda 21. Its core outcome document, the Johannesburg Plan of Implementation (JPOI), encompassed a large list of recommendations for accelerating the implementation of Agenda 21. Chapter 2 of the JPOI stressed the high correlation between social and industrial development and the potential of industrialization for reducing poverty, calling UN Member States to strengthen industrial growth. One of the main features of the WSSD was the embedding of all kinds of different actors involved in the pursuit of environmental and sustainable development issues at local, national, regional and global levels, such as industrial businesses or scientists (Hens and Nath 2003). In some paragraphs, the JPOI even refers to high expectations regarding the potential and contributions of public-private partnerships (PPP) to global and industrial development goals.

Although the PPP is a relatively old concept⁴, encouraging the building of PPPs to promote industrial and sustainable development was conceived as a turning point within the UN approach to sustainable development. Despite the tacit ambiguity of the term, a PPP is a form of privatization. A PPP is defined as an arrangement in which a government and a private entity, either for-profit or non-profit, jointly perform or undertake a traditionally public activity, such as the provision of services of general interest or the building of large, capital-intensive, public infrastructure, such as highways, airports, or water systems (Savas 2005, Pessoa 2008). PPPs and privatization are complex concepts within the public economy and are commonly surrounded by heated debates loaded by tensions

4. New concepts and models of public procurement arose in the wake of the global macroeconomic dislocation and the concerns about the level of public debt of the 1970s and 1980s. The majority of the PPP were negotiated individually as one-off deals in the early 1990s. The first systematic programme to promote PPP was introduced in the UK by the government of JOHN MAJOR (Tharun Shastry 2014). At the UN level, the Agenda 21, adopted in 1992, already stated: «[...] funding of this activity [technology assessment in support of the management of environmentally sound technology] through public-private partnerships should also be explored».

coming from ideological confrontations (Savas 2005, Starr 1989). In the light of the sharp political reactions that the use and promotion of PPPs evoke, UN output documents should attempt to define this kind of hybrid operations granting public sector accountability and the contract-based (not regulator-based) nature of its practice. Furthermore, in the UN approach to global development, the sharing of risks, profits and transactional costs among PPP actors remains unclear.

The benefits of PPPs for a country's population ultimately depend on the situation of domestic public finances. In developing countries, where domestic public finances have limited or no access to large amounts of capital to build resilient infrastructure, PPPs can be an effective instrument. While PPPs in developed countries represent just one of the numerous options available to public management, PPPs are often one of very few possibilities to build infrastructure and provide basic services for developing countries, since the capability of their public finances to carry out public investment is very limited. In developing countries, public investment rates are very volatile and held at low levels. These peaked at over 8% of GDP in the early 1980s, declined to around 4 to 5% of GDP in the mid-2000s, and currently remain at about 6 to 7% of GDP (IMF 2015). Furthermore, bilateral Official Development Assistance (ODA), i.e. flows of official financing for development promotion, do not represent a feasible option to fully finance the building and maintenance of infrastructure in developing countries. For instance, although total ODA to Africa increased from USD 10.3 billion in 2000 to USD 28 billion in 2009, the proportion of aid allocated to electricity, transport, telecommunications, and water systems infrastructure, has remained at around 10 per cent of all aid, while it is estimated that Africa –mainly Sub-Saharan Africa– needs around USD 60 billion annually in capital expenditure for infrastructure and an additional USD 30 billion for operations and maintenance in order to guarantee long-term economic development (Addison and Bhayankara 2012).⁵ However, the capacity of PPPs to promote inclusive global development and build basic infrastructure in the developing world is limited, since PPPs typically concentrate on small groups of developing countries with relatively large, rich or fast-growing markets, while no such incentives are given for private investors in less developed countries.

The WSSD outcome documents were followed by the UN position

5. At present, African domestic resources provide up to USD 30 billion for infrastructure. There remains a significant gap between what is needed and what conventional resources provide and private flows of capital to Africa already exceed the amounts received in aid from traditional donors and from development banks (Addison and Bhayankara 2012).

document of the third UNCEO international summit in 2012 «The Future We Want» which again underlined the role of industry businesses to promote prosperity. In paragraph 46 it called to actively engage both the public and private sectors and to promote the active participation of the private sector in ensuring sustainable development: «We [Heads of State and Government and high-level representatives] recognize that the active participation of the private sector can contribute to the achievement of sustainable development, including through the important tool of public-private partnerships [PPP]. We support national regulatory and policy frameworks that enable business and industry to advance sustainable development initiatives [...]». However, like the JPOI, this outcome document fails to consolidate a clear definition of PPPs.

In 1975, the city of Lima hosted the second UNIDO General Conference which passed the outcome document «Lima Declaration on Industrial Development and Cooperation». Building on this declaration, the most recent major step towards the integration of an industry-oriented perspective into the global development approach of the UN was made in 2013, when UNIDO member states adopted the «Lima Declaration: Towards inclusive and sustainable industrial development». The Lima Declaration 2013 states that poverty eradication remains the central imperative goal of industrial development and acknowledges the importance of social inclusion and environmental protection within industrial growth, giving UNIDO the mandate to encourage the so-called Inclusive and Sustainable Industrial Development (ISID). This concept is supposed to shape future industrial policies in both developing and developed countries, featuring strongly in the post-2015 global development discourse and crystallized in the SDG 9 of Agenda 2030 «build resilient infrastructure, promote sustainable industrialization and foster innovation». However, the extent to which the SDGs will be successfully implemented depends on the application and implementation of the latest UN draft on a global framework for financing development post-2015, the Addis Ababa Action Agenda (AAAA). The AAAA attempts to reinforce national and international investment regimes geared towards sustainable development and acknowledges the role of economic and industrial growth and a strong private sector in developing countries as a crucial condition for the financing of the ambitious scope of UN post-2015 global development goals. This proposal will be defined and worked out in the years ahead.

4. INDUSTRIAL DEVELOPMENT WITHIN THE AGENDA 2030. MAJOR POTENTIALS AND CHALLENGES FOR INDUSTRIAL POLICIES

The SDG 9 targets emanate from UNIDO's concept of ISID which not only focuses on industrial growth and income generation but also stresses several other challenges, such as social inclusion and environmental sustainability. According to the most commonly used definition of sustainable development, i.e. development which meets the needs of the present without compromising the ability of future generations to meet their own needs, coined in the famous report of «Our Common Future» in 1987, it is commonly accepted that sustainable development should focus on the following three dimensions with a long-term perspective: Satisfying social, environmental and economic needs and goals (WCED 1987). Taking these dimensions into account, UNIDO identifies three main pillars for national and international policy makers to work towards ISID: First, increasing economic competitiveness, industrial growth, international trade, and technological progress, second, creating shared prosperity through inclusive growth with equal opportunities for all people by enabling partnerships with all relevant stakeholders and, third, safeguarding the environment granting environmentally sustainable growth with cleaner industrial technologies and production methods (UNIDO 2013). Although in recent decades UNIDO has been losing relevance at the international level, this UN Agency has a central role to play in the post-2015 Agenda, supporting and advising on industrial policies, providing technical cooperation and analytical research services as well as facilitating partnerships for knowledge transfer, networking, and industrial cooperation.

Encompassed within the ISID approach, the eight targets of the SDG 9 set the focus on the following fields: to expand resilient transport infrastructure (target 9.1), to increase the share and value added of manufacturing sectors within economies (target 9.2), to increase the access of small-scale industries to financial services and markets (target 9.3), to increase the resource-use efficiency of industrial production and the adoption of clean and environmentally sound technologies and industrial processes (target 9.4), to foster scientific research and development for upgrading the technological capabilities of industrial sectors (target 9.5), to facilitate sustainable and resilient infrastructure development in developing countries through financial, technological and technical support (target 9.a), to support domestic technology development, research and innovation in developing countries (target 9.b) and to

increase access to information and communications technology in least developed countries (target 9.c).⁶

The formulation of these targets is not entirely as precise as it should, and hence the assessment and evaluation of future SDG 9 industrial policies could be problematic. It rather gives an orientation on the major challenges in promoting industrial development within the Agenda 2030. For instance, the term «sustainable infrastructure» contained in the targets 9.1 and 9.a remains unclear. This key concept needs further defining because it will determine the long-term impact of future industrial policies and development: investment in non-sustainable infrastructure may cause technological and environmental lock-in for decades, with private investors defending its use in order to recover investments (ICSU, ISSC 2015). In regard to further quantification and evaluation of SDG 9 processes in the coming years, solid definitions, indicators and staggered target dates should be developed. This will be challenging since SDG 9 targets include very broad definitions and will require sophisticated indicators that are beyond the data compilation capacity of many developing countries.

Moreover, as in UN industry-related policy recommendations and goals, the SDG 9 fails to clearly define the boundaries between the industrial development priorities of developing and those of developed countries. For instance, the upgrade of existing industrial infrastructure to increased resource efficiency (target 9.4) may not be a priority in developing countries interested in promoting industrial growth. Besides this, the universal character of the SDG 9 makes its pursuit through industrial policies in developing and low-income economies a very challenging task, since the achievement of the main SDG 9 targets in those countries are subject to exogenous factors, such as foreign financial support or international transfer of technological knowledge.

4.1. THE SDG 9 IN THE FRAME OF THE AGENDA 2030

The main feature of the 17 SDGs set in the Agenda 2030 lies on its multidimensionality, i.e. the capacity of the Agenda to integrate different fields and perspectives to achieve global sustainable development. Although SDGs have very heterogeneous functions, there is a clear correlation between them, as they stress different challenges in the frame

6. For a detailed overview of the formulations of the single targets see the resolution adopted by the UN General Assembly on 25 September 2015 «Transforming our world: the 2030 Agenda for Sustainable Development».

of sustainable development. SDGs can be classified according to their focus on environmental, social, and economic impact. Although the eight targets of the SDG 9 have intrinsic elements of all three dimensions of sustainable development, these are primarily oriented towards the achievement of economic prosperity at the expense of the other two dimensions. Thus, in its interplay with other SDGs, the SDG 9 creates has a greater impact on economic-oriented SDGs, such as the SDG 1 on poverty or the SDG 8 on decent work and economic growth, while industrial growth, especially in developing countries with less advanced technological infrastructures, can lead to trade-offs with environmental goals, such as the SDG 13 on climate action.⁷ The contribution of the SDG 9 to achieving social goals, such as women's empowerment or inequality reductions depends ultimately on the capacity of policy makers to implement inclusive industrial policies.

The following table displays the expected interrelations of the SDG 9 other goals of the Agenda 2030. It is important to take into consideration that the analysis of resulting synergies, trade-offs and correlated aspects of the SDG 9 with other SDGs highlighted in Table 1 will ultimately depend on the final indicators and their related targeted levels. For instance, the extent to which target 9.4 will substantially contribute to protect the environment depends on the levels of carbon emission per unit of value added. Another crucial factor in determining these interrelations is the development level of the country where these targets are supposed to be applied. For instance, the technological progress encouraged in target 9.5, typically observed in developed economies, allows the shift from labor-intensive to capital/technological-intensive industries with economies-of-scale that will potentially increase unemployment. On the other hand, the capacity to absorb technological knowledge is one of the most determinant factors in creating competitive industries, and thus generate new jobs in developing countries (target 9.5).

7. However, this is fully legitimate according to the Lima Declaration 2013 which states that the primary challenges of industrial development policies and consequently the SDG 9 are poverty eradication, income generation and the grating of social wealth in developing countries.

Table 1: Interrelations of the SDG 9 and its targets within the Agenda 2030

| SDG 9 | Proposed Indicators by IAEG-SDGS | Main interrelation to other SDG |
|-------------------|--|--|
| Target 9.1 | Increase the share of the rural population who live within 2 km of an all-season road Increase passenger and freight volumes, by mode of transport (developing countries) | SDG 6 Clean water and Sanitation SDG 8 Decent Work and Economic Growth SDG 11 Sustainable Cities and Communities SDG 13 Climate Action SDG 7 Affordable and Clean Energy |
| Target 9.2 | Increase the manufacturing value added as a percentage of GDP and per capita Increase the manufacturing employment as a percentage of total employment | SDG 1 Poverty Alleviation SDG 8 Decent Work and Economic Growth |
| Target 9.3 | Increase the percentage share of small-scale industries in total industry value added Increase the percentage of small-scale industries with a loan or line of credit | SDG 13 Climate Action SDG 12 Responsible Consumption and Production |
| Target 9.4 | Decrease carbon emission per unit of value added | SDG 7 Affordable and Clean Energy SDG 13 Climate Action |
| Target 9.5 | Increase the research and development expenditure as a percentage of GDP Increase the number of researchers (in full-time equivalent) per million inhabitants | SDG 4 Quality Education SDG 8 Decent Work and Economic Growth |
| Target 9.a | Increase the total official international support (official development assistance plus other official flows) to infrastructure | SDG 6 Clean water and Sanitation SDG 8 Decent Work and Economic Growth SDG 11 Sustainable Cities and Communities SDG 13 Climate Action SDG 7 Affordable and Clean Energy |

| SDG 9 | Proposed Indicators by IAEG-SDGS | Main interrelation to other SDG |
|-------------------|---|--|
| Target 9.b | Increase the percentage of medium and high-tech industry value added in total value added | SDG 4 Quality Education SDG 8 Decent Work and Economic Growth |
| Target 9.c | Increase the percentage of population covered by a mobile network, by technology | SDG 4 Quality Education SDG 8 Decent Work and Economic Growth |

Source: Author and proposed indicator framework by the Inter-Agency Expert Group on SDG-Indicators (IAEG-SDGS) (UN 2015)

4.2. POTENTIALS OF THE SDG 9 WITH THE AGENDA 2030.

Enhancing educational systems to achieve better technological knowledge capabilities

One of the most important determinants for developing economies to catch-up with the developed ones lies in their ability to absorb technological knowledge. This depends to a high extent on the allocation of human capital in high-value profitable sectors and the availability and use of resources to undertake Research and Development (R&D).

Hence, target 9.5 encourages policy makers to foster scientific R&D for upgrading the technological capabilities of the industrial sector. However, in emerging and developing countries little progress on this matter can be observed. According to UNESCO data analysis and estimations, the worldwide expenditure on R&D as a percentage of GDP in 2013 is around 1.7% and has remained constant since 2007. In this period Asia has been the region with the greatest increase in the R&D expenditure, mainly driven by China, whose R&D expenditure grew from 1.4% in 2007 to 2.0% in 2013.⁸ In the rest of the BRICS states, this indicator has remained constant for this five years period, with the exception of South Africa, in which it dropped from 0.9% to 0.7% (UNESCO 2015). In low-income economies, there is still a manifest lack of science, technology, and innovation (STI) data and policies. Since 2003 the UN's Economic Commission for Latin America and the Caribbean (ECLAC) has complained about the persistent paucity of STI data and its negative impact on policy development. According to ECLAC, the collection and analysis of STI performance

8. Furthermore, China has gained six positions between 2004 and 2012 in the world's ranking of countries with the most universities in the world's top 500, from place 8 to place 2 (OECD 2013).

indicators still remains challenging. In African countries, UNESCO has been carrying out several assessment projects on STI policies within the African Science, Technology and Innovation Policy Initiative (ASTIPI). These aim to support countries in developing or revising their national STI policies and data collection. However, these processes remain at early stages and require further cooperation in the years ahead.

Upgrading global value chains and achieving innovation require STI and industrial policies focused on investments in human capital, the alignment of the education systems with labour markets and improvements in the school-to-work transition. Industrial policies in less industrialized countries should aim to profit from technology transfers fostering their knowledge-absorbing capabilities rather than building new technology themselves (UNIDO 2015). In the development and implementation of industrial policies aimed at building human capital, the coordination and participation of key stakeholders in the skills-market is a condition of success (Warwick 2013). These practices, encouraged in target 9.5, present a high correlation with the SDG 4 «Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all». Industrial growth can profit from other policies aimed at upgrading the educational system, supporting the development of entrepreneurial culture and skills, enhancing people's technical and learning capabilities and aligning the educational system with the labor market and vice versa.

Building infrastructure to meet basic needs

SDG 9 is expected to have a great impact on SDG 2 «End hunger, achieve food security and improved nutrition and promote sustainable agriculture» and on SDG 6 «Ensure availability and sustainable management of water and sanitation for all». The building of transport infrastructure in rural regions can increase agricultural productivity and profitability, and improvements in a country's industrial technological capabilities will lead to the enhancement of water provision systems and to efficiency gains in agro-industrial value-chains, thus contributing to secure food and water provision in developing countries.

Implications of industrial development for poverty reduction

The greatest impact of SDG 9 is expected on SDG 1: Any progress in industrial development will directly lead to poverty reduction –the main objective of industrial development– as a 1% increase in MVA per capita translates into an almost 2% decrease in the poverty head count of developing countries (Upadhyaya and Kepplinger 2014). Industrial policies to promote efficiency gains in the industrial sector will be one of the most significant drivers of poverty eradication. In the wake of

the emerging service sector in developed countries –whose economies accounts for about half of the world’s GDP– the evolution of the MVA as a share of the GDP showed an important decrease of about three percentage points between 1997 and 2013 from 19% to 16%, with notable divergences between emerging countries and developed or developing countries. In the developed regions of Europe and North America, there have been important decreases over this period, respectively from 21% to 15% and 17% to 12%. Over this period, this share has remained constant at 17% in South Asia and at 12% in the Middle East and North Africa. In East Asia and Pacific, it declined from 27% to 22%. The lowest shares can be found in Sub-Saharan Africa, Latin America and the Caribbean and Central Asia which dropped respectively from 15% to 11%, 21% to 15% and 21% to 15% (World Bank Statistics). Considering the impact of MVA on poverty reduction in developing and emerging countries, this data explains why the global poverty reduction has been mainly driven by the continuous industrial growth in the population-rich countries of China and India, while in other regions, especially in Sub-Saharan Africa, poverty eradication remains a persistent challenge (Kniivilä 2007).

4.3. MAJOR CHALLENGES AND TRADE-OFFS OF SDG 9 WITHIN THE AGENDA 2030.

Impact on the environment

From a holistic perspective on sustainable development, industrial growth raises many concerns regarding climate change, since it usually implies an increase in the use of inputs and in natural and energy resource depletion, with a negative impact on pollution, hence obstructing the development paths encouraged in other Agenda 2030 environmental goals. Although industrial growth contributes to alleviate poverty in most developing countries, contaminating industrial sectors have a long-term negative impact on poverty reduction in several parts of the world. Global warming leading to natural disasters or epidemics will have devastating implications for countries threatened by desertification, by rising sea levels or by ocean acidification. Besides that, climate change may have a direct impact on agricultural productivity in developing countries, leading to severe poverty problems in Sub-Saharan regions struggling to cope with water scarcity.

Some of the SDG 9 targets, such as building infrastructure for transport of persons in developing countries or promoting the global division of labour (increasing the transport of intermediate and finished goods over long distances), will clearly lead to environmental degradation and

climate change, leaving little room for manoeuvre in industrial policies. Yet industrial development based on modernizing industrial sectors and enhancing technological capabilities, as encouraged in other SDG 9 targets, may alleviate the pressure on environmental degradation. In this regard, Altenburg (2011) argues that modern, highly technological, centralised production with economies of scale may lead to new forms of value creation which are less directly linked to resource consumption; to greater efficiency within national economies, freeing up human and financial resources for investment in more environmentally friendly technologies and to global value chains in which future high international environmental standards will determine the environmental impact of production processes.

Tackling the impact of industrial activity on environmental degradation requires thus international action plans and binding international agreements. International commitment is a main determinant to avoid global industrial competition at the expense of environmental costs, and thus ensure environmental protection at the national level. Two months after the adoption of the Agenda 2030, the UN Convention on Climate Change (UNFCCC) adopted the Paris Agreement, a new legally-binding framework which further increased international pressure to reduce emissions. The policy response many developed and emerging countries undertake to meet the standards of such international agreements are basically based on fiscal sanctions on emissions (Rodrik 2014). In the frame of international competition, developing countries can profit from these policies in developed or emerging countries. Investors may have incentives to produce in or import from developing countries exempted from emission sanctions because of low emission per head ratios. However, it may be argued that, in the light of future international protective environmental regimes, developing countries will have to shift to resource-efficient environmental-friendly production systems sooner or later, and may incur in high mitigation and adaptation costs if they now undertake long-term investments on non-efficient productive infrastructures.

Industrial development vs. social inclusiveness – Policies and interventionism to cushion inequalities

It is widely recognized that industrial development reduces global inequality, i.e. it contributes to reducing the economic gap between developing and developed countries (see Section 3). However, the impact of industrial development on equality and income distribution within a country depends on multiple factors. In this regard, empirical

observations can be often ambiguous, and so is the impact of SDG 9 on SDG 10 «to reduce inequality within and among countries». The impact of industrial growth on income equality East Asian countries is one of the most cited examples in the literature, since the region's fast industrial development in the second half of the 20th century led to different country-specific social situations. While countries such as Taiwan and Korea managed to achieve economic growth with equity, in others, such as Malaysia and Thailand, inequality still remains high. Scholars of East Asia's industrial development attribute the inequality in the latter countries to a lack of state-directed interventionism (Jomo 2003, Kniivilä 2007). Industrial development generates its greatest income disparities between industrialized and rural regions. Policies aimed at increasing agricultural development and productivity in Taiwan and Korea played a crucial role reducing poverty at the outset of economic development (Kniivilä 2007). Technological progress can also lead to a widening of the wage distribution between highly skilled and unskilled labor force in terms of (UNIDO 2015). This can be indeed an important driver of inequalities in developing countries, since high technology sectors require skilled workers prepared to use increasingly complex productive capital, and exclude other segments of the labor force. A great disparity in the wage distribution of workers has been observed in Mexico, for instance, where the growth of the manufacturing sector in the late 1980s and early 1990s benefited skilled workers to a greater extent than unskilled ones. Against this background, Taiwan's state interventionism showed that redistributive policies and public investment in human capital can be a useful tool to work against income disparities in the labor force (Kniivilä 2007).

5. CONCLUDING REMARKS

In the last decades, the scope of the UN approach to sustainable development has been redefined to take account of the wide range of economic factors impacting on poverty alleviation. Although poverty is a very complex set of multidimensional problems, evidence in numerous countries confirms the multiplier effect of industrial development on economic growth and poverty reduction, the ultimate goal towards global sustainable development. The economic shift from low-productivity sectors to high-productivity industrial sectors leads to higher wages in numerous emerging and developing countries, pulling large segments of the population out of poverty. In a nutshell, the rising of income per capita in developing countries, the *sine qua non* condition for economic development, comes primarily from industry. However, industrial

development may generate numerous negative externalities within the social and environmental dimensions of sustainable development and developing countries face serious financial, technological and organizational bottlenecks. Against this background, this chapter highlighted three important aspects to be considered in order to understand the contribution of the SDG 9 and its targets to sustainable development within the Agenda 2030 in the years ahead.

First, industrial development is oriented towards the achievement of economic prosperity and this may occur at the expense of income equality, employment generation and environmental protection, as observed in some newly industrialized countries. Although fostering industrial development and competitiveness in the developing world clearly reduces global inequalities, it can lead to uneven income or employment levels within population groups and trigger environmental degradation. On the other hand, the impact of infrastructure building and the enhancement of technological capabilities, as key components of industrial development, can respectively contribute to secure food and water supplies and complement upgrades in the education systems of developing countries. These and other complex and interwoven secondary effects of industrial development ultimately depend on a country's specific situation and on the industrialization pattern it chooses to follow.

Second, seizing the synergies and potentials of the SDG 9 with other goals in the pursuit of sustainable development in developing countries will ultimately depend on the capability and determination of both international and national policy-makers to implement holistic industrial policies and to establish a range of sector-specific meso-institutional actors to support industrial growth. Although country-specific contexts and needs differ widely and there are no feasible industrial policy blueprints which developing countries can readily implement, the fact that industrial policies had a positive impact on fostering industrial development and reducing its negative externalities in numerous newly industrialized countries provides a solid rationale for the adoption of comparable policies in developing countries. Thus, the process of upgrading the industrial structure and expanding industrial sectors to a higher level considering national factor endowments cannot rely solely on the market mechanism. The development and implementation of industrial policies also requires the cooperation of governmental, market, civil society and international stakeholder and organizations. The latter play an especially crucial role in providing technical and analytical assistance on national policies and in facilitating partnerships for knowledge transfer, networking, and industrial cooperation.

Third, UN fora have set the foundations for industrial development and cooperation at the international level. Since the UN approach to sustainable development has evolved to an ever wider scope, the role of private actors as key stakeholder to finance industrial development has been gaining importance over the last decades. In the frame of the ambitious Agenda 2030, UN institutions have continuously underlined the relevance of PPPs to achieve industrial development goals. Since PPPs are often the only possible option to access large amounts of capital in developing countries, UN institutions should clearly define the role of private stakeholders, granting the accountability of the public sector, the contract-based (not regulator-based) nature of its practice and equitable models to share risks, profits and transactional costs in operations between public and private actors.

The SDG 9 was conceived to shape the trend of international cooperation and both national and international policies to promote industrial development, especially in developing countries. In the present-day global context, growth via industrial development seems the most feasible and reliable option for developing countries to catch up with developed economies. At the same time, it is crucial that the Agenda 2030 and the UN member states carry responsibility for ensuring that international industrial competition relies on the basis of social and environmental standards, as this will be the one way towards global sustainable development.

REFERENCES

ADDISON, T. and BHAYANKARA, P. (2012): «Aid and Infrastructure Financing: Emerging Challenges with a Focus on Africa» WIDER Working Paper 2012/056, Helsinki: UNU-WIDER; available at: <https://www.wider.unu.edu/sites/default/files/wp2012-056.pdf> [accessed 19 July 2016].

ALTENBURG, T. (2011): «Industrial Policy in Developing Countries Overview and lessons from seven country cases» German Development Institute, Discussion Paper, 4/2011; accessible at: https://www.die-gdi.de/uploads/media/DP_4.2011.pdf [accessed 19 July 2016].

BARTIK, T. J. (1991): «Boon or Boondoggle? The Debate Over State and Local Economic Development Policies» In: Who Benefits from State and Local Economic Development Policies?, Kalamazoo: W.E. Upjohn Institute for Employment Research, pp. 1-16; available at: <http://dx.doi.org/10.17848/9780585223940> [accessed 19 July 2016].

CIMOLI, M., DOSI, G. and STIGLITZ, J.E. (2008): «The political economy of capabilities accumulation: The past and future of policies for industrial development» LEM Working Papers Series 2008/15, Pisa: Laboratory of Economics and Management Sant'Anna School of Advanced Studies; available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.299.9800&rep=rep1&type=pdf> [accessed 19 July 2016].

CIMOLI, M., DOSI, G., NELSON, R. and STIGLITZ, J. E. (2006): «Institutions and policies shaping industrial development: an introductory note» LEM Working Papers Series 2006/02, Pisa: Laboratory of Economics and Management Sant'Anna School of Advanced Studies; available at: <https://core.ac.uk/download/files/153/6964387.pdf> [accessed 19 July 2016].

European Commission (2014): «European Competitiveness Report 2014. Helping Firms Grow», Commission Staff Working Document SWD (2014) 277 final, Brussels: European Union; available at: http://ec.europa.eu/growth/industry/competitiveness/reports/eu-competitiveness-report_en [accessed 19 July 2016].

GBEEREYESUS, M. (2013): «Industrial Policy and Development in Ethiopia: Evolution and Present Experimentation» WIDER Working Paper, 2013/125. Helsinki: UNU-WIDER; accessible at: <https://www.wider.unu.edu/publication/industrial-policy-and-development-ethiopia> [accessed 19 July 2016].

GRABAS, C. and NÜTZENADEL, A. (2013): «Industrial Policies in Europe in Historical Perspective», WWWforEurope Working Paper No. 15; available at: http://www.foreurope.eu/fileadmin/documents/pdf/Workingpapers/WWWforEurope_WPS_no015_MS66.pdf [accessed 19 July 2016].

HENS, L. and NATH, B. (2003): «The Johannesburg Conference»; In: *Environment, Development and Sustainability*, 2003, Volume 5, Number 1-2; available at: <http://link.springer.com/article/10.1023/A:1025303511864> [accessed 19 July 2016].

HERRIGEL, G. (2000): *Industrial constructions: The sources of German industrial power*. Cambridge: University Press.

ICSU, ISSC (2015): *Review of the Sustainable Development Goals: The Science Perspective*. Paris: International Council for Science (ICSU); available at: <http://www.icsu.org/publications/reports-and-reviews/review-of-targets-for-the-sustainable-development-goals-the-science-perspective-2015/SDG-Report.pdf> [accessed 19 July 2016].

IMF (2015): «Making public investment more efficient» Staff Report, Washington D.C.: International Monetary Fund; accessible at: <http://www.imf.org/external/pp/ppindex.aspx> [accessed 19 July 2016].

JOMO, K. S. (2003): «Growth with equity in East Asia? Southeast Asian Paper Tigers?» Working PaperNo. 33. United Nations Department of Economic and Social Affairs (DESA); available at: http://www.un.org/esa/desa/papers/2006/wp33_2006.pdf [accessed 19 July 2016].

KNIIVILÄ, M. (2007): «Industrial development and economic growth: Implications for poverty reduction and income inequality.» In: Industrial Development for the 21st Century: Sustainable Development Perspectives. United Nations Department of Economic and Social Affairs (DESA), pp. 295-333; available at: https://sustainabledevelopment.un.org/content/documents/full_report.pdf [accessed 19 July 2016].

OECD (2004): «Promoting entrepreneurship and innovative SMEs in a global economy: towards a more responsible and inclusive globalisation» Executive Summary of the Background Reports; Istanbul: Second OECD Conference of Ministers responsible for Small and Medium-sized Enterprises (SMEs); available at: <https://www.oecd.org/cfe/smes/31919590.pdf> [accessed 19 July 2016].

OECD (2013): «Perspectives on Global Development 2013 Industrial Policies in a Changing World», OECD Publishing Paris: OECD.

PESSOA, A. (2008): «Public-private partnerships in developing countries: are infrastructures responding to the new ODA strategy?» In: Journal of International Development Volume 20, Issue 3, pp. 311-325; accessible at: <http://onlinelibrary.wiley.com/doi/10.1002/jid.1416/abstract> [last downloaded 2016-19-07].

PRITCHETT, L. (1997): «Divergence, big time» In: The Journal of Economic Perspectives, Vol. 11, No. 3 (Summer, 1997), American Economic Association, pp. 3-17; available at: <http://www.econ.nyu.edu/user/debraj/Courses/Readings/Pritchett.pdf?seq=14> [accessed 19 July 2016].

RODRIK, D. (2013): «The past, present, and future of economic growth» Global Citizen Foundation, Working Paper 1; available at: https://www.sss.ias.edu/files/pdfs/Rodrik/Research/GCF_Rodrik-working-paper-1_-6-24-13.pdf [accessed 19 July 2016].

RODRIK, D. (2014): «Green industrial policy», In: Oxford Review of Economic Policy, Volume 30, Number 3, 2014, pp. 469-491; available at: http://drodrik.scholar.harvard.edu/files/dani-rodrik/files/green_industrial_policy.pdf [accessed 19 July 2016].

SAVAS, E. S. (2005): «Privatization in the City: Successes, Failures, Lessons»; Washington, DC: CQ Press.

SCOTT, A. J. (1993): «Technopolis: high-technology industry and regional development in Southern California» Berkeley: University of California Press.

STARR, P. (1988) «The Meaning of Privatization,» Yale Law & Policy Review: Vol. 6: Iss. 1, Article 3; pp. 6-41; available at: <http://digitalcommons.law.yale.edu/ylpr/vol6/iss1/3> [last downloaded 2016-19-07].

THARUN SHASTRY, L. (2014): «A Study on Public-Private Partnerships with Reference to Indian Infrastructural Projects International Journal of Business and Management» In: International Journal of Business and Management Invention, Volume 3, Issue 10, pp. 56-62; available at: [http://www.ijbmi.org/papers/Vol\(3\)10/Version-1/H03101056062.pdf](http://www.ijbmi.org/papers/Vol(3)10/Version-1/H03101056062.pdf) [accessed 19 July 2016].

UN (2015): «The Millennium Development Goals Report 2015»; available at: [https://sustainabledevelopment.un.org/content/documents/2036MDG%202015%20rev%20\(July%201\).pdf](https://sustainabledevelopment.un.org/content/documents/2036MDG%202015%20rev%20(July%201).pdf) [accessed 19 July 2016].

UN (2015): Indicators report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators E/CN.3/2016/2 Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators E/CN.3/2016/2; accessible at: <http://unstats.un.org/sdgs/files/Metadata%20Compilation%20for%20SDG%20Indicators%2023%20October%202015%20Update.pdf> [accessed 19 July 2016].

UNESCO (2010): «Measuring R&D: Challenges Faced by Developing Countries» UNESCO Institute for Statistics, Technical Paper, No. 5, Paris: UNESCO; available at: <http://www.uis.unesco.org/Library/Documents/tech%205-eng.pdf> [accessed 19 July 2016].

UNIDO (2013): «Informal working group on the future, including programmes and resources» Industrial Development Board Forty-first session Vienna, June 2013 Item 7 of the provisional agenda, of UNIDO Distr., General 12 June 2013, pp. 24-27; available at: https://www.unido.org/fileadmin/user_media/PMO/IDB/IDB41/idb41_24e.pdf [accessed 19 July 2016].

UNIDO (2015): «Industrial Development Report 2016. The Role of Technology and Innovation in Inclusive and Sustainable Industrial Development» Vienna: UNIDO; available at: <https://www.unido.org/>

fileadmin/user_media_upgrade/Resources/Publications/EBOOK_IDR2016_FULLREPORT.pdf [accessed 19 July 2016].

United Nations Educational, Scientific and Cultural Organization (2015): UNESCO Science Report: Towards 2030, Paris: UNESCO Publishing.

UPADHYAYA, S. and KEPPLINGER, D. (2014): «How industrial development matters to the well-being of the population. Some statistical evidence», Statistics Unit Research, Statistics and Industrial Policy Branch, Working Paper2014/4, Vienna, UNIDO; available at: http://www.unido.org/fileadmin/user_media/Services/PSD/WP4_2014_Industrialization_and_social_well-being.pdf [accessed 19 July 2016].

VITOLS, S. (1997): «German industrial policy: an overview». In: Industry and Innovation, Volume 4, Issue 1, pp. 15-36.

WARWICK, K. (2013): «Beyond Industrial Policy. Emerging Issues and New Trends», OECD Science, Technology and Industry Policy Papers, No. 2, Paris: OECD Publishing; available at: <http://dx.doi.org/10.1787/5k4869clw0xp-en> [accessed 19 July 2016].

WCED (1987): «Our Common Future», The Report of the World Commission on Environment and Development; Oxford: Oxford University Press.

WEISS, J. (2005): «Export Growth and Industrial Policy: Lessons from the East Asian Miracle experience» ADB Institute Discussion Paper, No. 26; available at: http://siteresources.worldbank.org/EXTEXPCOMNET/Resources/2463593-1213975515123/17_Weiss.pdf [accessed 19 July 2016].

World Bank (2015): *La force de l'éléphant: pour que sa croissance génère plus d'emplois de qualité*. Washington D.C.: World Bank Group; available at: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/12/16/090224b083c5e0b1/1_0/Rendered/PDF/La0force0de0l00d0emplois0de0qualit0.pdf [accessed 19 July 2016].

World Bank Statistics (various years): «Manufacturing, value added (% of GDP)» Washington D.C.: World Bank; available at: <http://data.worldbank.org/indicator/NV.IND.MANF.ZS> [accessed 19 July 2016].

WWAP (2016): «The United Nations World Water Development Report 2016: Water and Jobs» Paris: UNESCO; available at: <http://unesdoc.unesco.org/images/0024/002439/243938e.pdf> [accessed 19 July 2016].

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Chapter 13: goal 10

Sustainable Development Goal 10: Reduced inequalities reduce inequality within and among countries

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SUMMARY: 1. INTRODUCTION. 2. AN ENHANCED FRAMEWORK OF GLOBAL FINANCIAL MARKETS. 3. A GREATER ATTENTION TOWARDS DEVELOPING COUNTRIES. a. *Enhanced representation for developing countries in decision-making in global international economic and financial institutions.* b. *Special and differential treatment for developing countries.* c. *Encouragement of official development assistance and financial flows, including foreign direct investment.* 4. IMPROVING MIGRATION POLICIES.

ABSTRACT:

SDG 10 aims at reducing inequalities within and among countries. While the implementation of the first target of Goal 10 mainly involves domestic policies, the second one rests upon the international cooperation of all concerned actors. In this regard, reducing inequalities among countries implies various actions: first, to improve the international regulation of global financial markets; second, to enhance the attention towards the specific needs of developing countries; and third, to improve migration policies. Despite a common will regarding the substance of Goal 10, its implementation may however raise practical difficulties because of the diverging views of the States regarding the concrete actions to be taken.

1. INTRODUCTION

The objective of reducing inequality, which did not exist as such in the Millennium Development Goals,¹ introduces the idea of relativity: inequality is necessarily conceived in relation to something else. It therefore implies a comparison between two situations; the difference resulting from this comparison would found the inequality. The most immediate issue, when it comes to inequality, is to determine the appropriate evaluation method. In other words, what makes that a situation is not equal to another one and, if so, how to establish the magnitude of the difference? The most commonly used method in this regard is the Gini-coefficient of inequality, «which ranges from zero in cases of perfect equality (a theoretical country in which everyone earns the same income) to one in cases of perfect inequality (a state in which a single individual earns all the income and everyone else gets nothing)»². Other methods have been suggested to correct the alleged inadequacy of the Gini-coefficient³. In any event, and regardless of the method used, the existence of inequalities between individuals or groups of people constitutes, aside from being a form of injustice, a threat to the social cohesion of the group as a whole, as well as an economic cost⁴. The more the inequality grows, the more its adverse effects correspondingly increase. Now, recent years have seen an unprecedented rise in inequality⁵. In this sense, reducing inequality has become a major political issue.

1. The Millennium Development Goals are as follows: «Eradicate Extreme Poverty & Hunger» (Goal 1), «Achieve Universal Primary Education» (Goal 2), «Promote Gender Equality and Empower Women» (Goal 3), «Reduce Child Mortality» (Goal 4), «Improve Maternal Health» (Goal 5), «Combat HIV/AIDS, Malaria and Other Diseases» (Goal 6), «Ensure Environmental Sustainability» (Goal 7), «Develop a Global Partnership for Development» (Goal 8). For further information on the Millennium Development Goals, see <http://www.un.org/millenniumgoals>.
2. BOURGUIGNON, F., «Inequality and Globalization: How the Rich Get Richer as the Poor Catch Up», *Foreign Affairs*, vol. 95, n.° 1 (January/February 2016), pp. 11-15, p. 11.
3. For an overview of the existing methods measuring inequality, see ADLER, M. D., «Equity by the Numbers: Measuring Poverty, Inequality, and Injustice», *Alabama Law Review*, 2015, vol. 66, n.° 3, pp. 551-608.
4. See OECD, *In It Together: Why Less Inequality Benefits All*, OECD Publishing, Paris, 2015, 332 p., p. 22: «beyond its serious impact on social cohesion, high and often growing inequality raises major economic concerns, not just for the low earners themselves but for the wider health and sustainability of our economies. Put simply: rising inequality is bad for long-term growth».
5. See for instance OECD, *Divided We Stand: Why Inequality Keeps Rising*, OECD Publishing, Paris, 2011, 386 p.; STIGLITZ, J., *The Price of Inequality: How Today's Future Divided Society Endangers Our Future*, W.W. Norton New York, 2012, 560 p.; PIKETTY, T., *Capital in the Twenty-First Century*, Harvard University Press, Cambridge, 2014, 696 p.

Goal 10, when addressing the reduction of inequalities, draws a distinction between two types of comparisons, according to the elements included therein: one rests upon the relative situation of individuals, while the other one takes into account the relative situation of States. Actually, this distinction corresponds with the one performed by the subtitle of Goal 10 between inequality within countries and inequality among countries. Inequality *within* countries needs to be primarily addressed by the very same countries where such inequality could be observed. By contrast, inequality *among* countries can only be addressed in an efficient way through the coordinated and concerted action of all actors – not only States, but also international organisations and, to some extent, private actors.

Regarding inequality within countries, Goal 10 specifically targets four areas in which States action must focus. The first objective is, by 2030, to «progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average». The aim is therefore to bridge the income gap; in other words, this is the *economic* inequality that is specifically targeted⁶. This economic component is undoubtedly the most visible element of inequality. But inequality also manifests itself in other areas. For this reason, Goal 10 intends to grasp inequality as a whole and, consequently, to provide a comprehensive framework for action. It then aspires, by 2030, to «empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status». The idea is, through the adoption of adequate policies, to enable all individuals making up the social group to be fully involved in it. More precisely, there is a need to «[e]nsure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard». The emphasis is here on an individual extent, namely the discrimination between individuals. This objective is, at least partially, in accordance with the observation made by the OECD regarding the existing inequalities between men and women, *i.e.* inequalities based on a gender factor⁷. Finally, in a more material perspective, Goal 10 requires to «[a]dopt policies, especially fiscal, wage and social protection policies,

6. The economic inequality rests upon the income, which can be defined as «household disposable income in a particular year. It consists of earnings, self-employment and capital income and public cash transfers; income taxes and social security contributions paid by households are deducted». OECD (2016), Income inequality (indicator), <https://data.oecd.org/inequality/income-inequality.htm>.

7. See OECD, *In It Together: Why Less Inequality Benefits All*, *supra* note 4, pp. 210-226.

and progressively achieve greater equality». Redistribution must be thus used as an instrument for reducing inequalities. This means that the State must not simply implement regulations satisfying the conditions for individuals to reduce inequalities; it must also intervene directly and positively in the distribution of wealth.

In a globalized world, the fight against inequality cannot however be limited to individuals. It also involves an international dimension, that is to say by reducing inequalities *between* countries. In this regard, the classification of States between developed and developing countries is meaningful. In the immediate post-war period, the world was rather homogeneous, as States had relatively similar levels of development, so that no categorization was then necessary. The decolonization contributed to make the world more heterogeneous. Thus, development became a distinguishing criterion for classifying States into various categories. Actually, developing countries are essentially negatively defined, as *not* belonging to the category of developed countries. According to the United Nations Development Programme, countries with a «very high human development» are those whose human development index is equal to or greater than 0.8⁸. While it is mostly a statistical tool, this classification between developed and developing countries can nevertheless be used to identify special needs and trigger special rules. The international dimension of Goal 10 is based on two series of objectives. On one hand, some refer to an international economic action. Indeed, the economic questions support a longstanding and almost natural relationship with development, which in turn is often perceived as a key concept regarding the allocation of resources and wealth, and, *in fine*, as a tool to fight against inequality among countries. Traditionally, development is mainly considered in its economic aspect, *i.e.* as the increase of domestic production, which, as a result of a better allocation of factors of production, generates a surplus. The latter, rather than being spent on direct consumption, is then used as a means to further increase production⁹. Under this approach, the development is therefore a function of capital accumulation, which leads to the enrichment of the State and to the increase of the overall standard of living of its population¹⁰. But the development is not unequivocal, so that this classic and economic definition has been adjusted by the adjunction of other elements – education, health, nutrition, environment, to name a few.

8. UNDP, *Human Development Report 2015 – Work for Human Development*, 272 p., p. 208, available at <http://report.hdr.undp.org/>.

9. MONEBHURRUN, N., *La fonction du développement dans le droit international des investissements*, Thesis Paris Panthéon-Sorbonne, 2013, p. 4.

10. *Id.*

In any event, it is only logical that international economic law is mobilized to support an approach to reduce inequalities. In this perspective, Goal 10 targets the regulation of global financial markets (1) and, more generally, the need for a greater attention towards developing countries (2). On the other hand, some other objectives of Goal 10 deal with migration (3), aiming for the safe mobility of people and the lowering of the transaction costs of migrant remittances.

2. AN ENHANCED FRAMEWORK OF GLOBAL FINANCIAL MARKETS

Regarding the international economic action, the only sub-goal targeting indistinctly all countries is the one devoted to action on global financial markets. On this point, developed and developing countries therefore share a common interest. It is true that the deregulation of the international financial system potentially affects all States, particularly because of a systemic risk¹¹. But if the consequences of this deregulation may affect all countries and all economies, it remains that they will be more or less serious depending on the fragility or, conversely, the strength of the affected economies. In short, they can contribute to increase inequality between countries by putting the most fragile of them in dire situations. The efforts should thus be conducted first, to the improvement of «the regulation and monitoring of global financial markets and institutions», and second, to the strengthening of «the implementation of such regulations». This is actually the whole issue of the international financial system: on the one hand, it lacks adequate rules; on the other hand, even when such rules exist, their effectiveness remains low¹². One reason for this situation certainly lies in the absence, on the international scale, of

11. Despite the absence of a universally accepted definition, «[a] common factor in the various definitions of systemic risk is that a trigger event, such as an economic shock or institutional failure, causes a chain of bad economic consequences-sometimes referred to as a domino effect. These consequences could include (a chain of) financial institution and/or market failures. Less dramatically, these consequences might include (a chain of) significant losses to financial institutions or substantial financial-market price volatility. In either case, the consequences impact financial institutions, markets, or both». See SCHWARCZ, S. L., «Systemic Risk», *Georgetown Law Journal*, 2008-2009, vol. 97, n.° 1, pp. 193-250, p. 198.
12. The need and relevance of international rules in global financial matters is not beyond questioning. See for example LUPO-PASINI, F., BUCKLEY, R. P. «Global Systemic Risk and International Regulatory Coordination: Squaring Sovereignty and Financial Stability», *American University International Law Review*, 2015, vol. 30, n.° 4, pp. 665-742, pp. 731-740. See also WEBER, R. H., ARNER, D. W., GIBSON, E. C., BAUMANN, S., «Addressing Systemic Risk: Financial Regulatory Design», *Texas International Law Journal*, 2014, vol. 49, n.° 2, pp. 149-200.

an appropriate forum for the enactment and enforcement of these rules. There are, of course, international economic organizations dedicated to specific economic aspects – the most prominent being the WTO, the IMF and the World Bank. The problem is the intrinsic limitation of these institutions: as international organizations, they mainly, if not exclusively in some cases, intend to regulate relations between States. In other words, their activities fall within a macroeconomic dimension. Then, how to grasp very essentially private and fundamentally cross-border, if not stateless, behaviors? The inability of States and international institutions to anticipate volatile and harmful markets' behaviors places them very often in one position of reaction, as well-illustrated by the function of the international lender of last resort. Traditionally, the function of the lender of last resort could be defined as the injection of liquidity in loans when, following a worry in the markets, there is a risk of drying up of liquidity. The purpose of the intervention of the lender of last resort is then to stabilize financial markets by reassuring them. This role is generally assumed, in a domestic perspective, by central banks, meaning that their action is necessarily geographically limited. In the case of a wider crisis, overflowing the borders of a State and involving several markets, there is currently no centralized international lender of last resort, a lacuna that falls within a practical impossibility: no international institution has the capacity to assume this role¹³. The solution now lies in the only participatory model; in other words, the joint action of various stakeholders – private institutions, central banks, IMF, States. The modalities of this cooperation vary significantly from one crisis to another, which justifies the idea of casuistry and responsiveness as opposed to anticipation.

This does not mean that there is neither international body, nor rules at all on the matter. First, some international institutions actually work to improve the regulation of international financial markets. This is for example the case of the Basel Committee within the Bank for International Settlements. The Basel Committee was established in 1974 and is responsible for enhancing the solidity of the global financial system and the quality of prudential supervision and cooperation between banking regulators.¹⁴ It is a form of response to the development of the private

13. The only international institution that could possibly take on this role is the IMF. In reality, however, the action of the latter is largely limited, mainly because of two factors: first, the IMF's cash resources are limited; second, the IMF cannot use the constructive ambiguity, which is the counterpart of an intervention of a lender of last resort.

14. A general presentation of the Basel Committee is available at <https://www.bis.org/bcbs/history.htm>. For a critique of the positive impact of the Basel regulations on the systemic risk, see ROMANO, R., «For Diversity in the International Regulation of Financial Institutions: Critiquing and Recalibrating the Basel Architecture», *Yale*

financial system and it has made in this perspective recommendations (Basel I, Basel II and Basel III).¹⁵ The Basel I thus established the Cooke ratio in 1988: it was for banks to hold at least 8% in capital of their total risk-adjusted assets¹⁶. Despite them being only recommendations, *i.e.* lacking any binding force, they have been largely taken into account and adopted by national systems¹⁷. More generally, the initiatives to create a comprehensive framework dedicated to improving the international financial system have strengthened – such as the creation in 1999 of the Financial Stability Forum, replaced in 2009 by the Financial Stability Board (FSB). The latter «promotes global financial stability by coordinating the development of regulatory, supervisory and other financial sector policies and conducts outreach to non-member countries»¹⁸. Various entities comprise the FSB, including the Basel Committee on Banking Supervision.

Other forms of regulation, issued by private sources, furthermore exist. They are the result of a possibility and of a necessity: a possibility, because of the vacuum left by the lack of States' intervention; a necessity because they meet the specific needs of economic operators. This is particularly the case of accounting standards. These indeed occupy a very significant place in the life of a company. In a way, they allow to appreciate whether a company is in good financial shape and, consequently, to inspire market confidence¹⁹. It was the whole issue of the Enron scandal

Journal on Regulation, 2014, vol. 31, n.° 1, pp. 1-76. It is stated, p. 5, that «the current state of economic knowledge does not permit us to predict with confidence what the optimal capital requirements or other regulatory policies are to reduce systemic risk, the objective of global harmonization efforts».

15. On the need for an inclusive framework to comprehend the behavior of financial operators, such as the one set forth by the Basel Committee, see DELIMATIS, P., «Financial Innovation and Prudential Regulation: The New Basel III Rules», *Journal of World Trade*, 2012, vol. 46, n.° 6, pp. 1309-1342.
16. For a more precise definition, see «Capital Standards for Banks: The Evolving Basel Accord», *Federal Reserve Bulletin*, 2003, vol. 89, n.° 9, pp. 395-405, p. 396: «the Basel Capital Accord requires that a bank have available as “regulatory capital” (through combinations of equity, loan-loss reserves, subordinated debt, and other accepted instruments) at least 8 percent of the value of its risk-weighted assets (loans and securities, for example) and asset-equivalent off-balance-sheet exposures (such as loan commitments, standby letters of credit, and obligations on derivatives contracts).
17. See, in general, Basel Committee on Banking Supervision, *Ninth progress report on adoption of the Basel regulatory framework*, October 2015, available at <https://www.bis.org/bcbs/publ/d338.htm>. See also, regarding the difficulties of the implementation of the Basel regulations, LYNGEN, N., «Basel III: Dynamics of State Implementation», *Harvard International Law Journal*, 2012, vol. 53, n.° 2, pp. 519-536.
18. As for the history and origins of the FSB, see <http://www.fsb.org/about/history>.
19. See for instance AGOSTINO, M., DRAGO, D., SILIPO, D. B., «The value relevance of IFRS in the European banking industry», *Review of Quantitative Finance and Accounting*,

which was largely the result of inadequate and ineffective accounting standards.²⁰ These international accounting standards are first issued by a private organization, the International Accounting Standards Board,²¹ which brings together national associations of accountants, before being integrated into national systems, as it has been the case for the European Union in 2002.²² Despite public and private initiatives and the consensus about the need for appropriate regulations, the global financial system is still characterized by «significant failures in prudential regulation and supervision»,²³ so that the objective is to pursue the continuation and improvement of the efforts.

3. A GREATER ATTENTION TOWARDS DEVELOPING COUNTRIES

In the years following decolonization, developing countries have challenged the rules governing international economic relations, particularly because they led to asymmetric relations. Developing countries also contested the application to them of rules – especially customary rules and general principles of law – that they did not contribute to create²⁴. In other words, they sought the formation and implementation of rules taking greater account of their specific needs, leading ultimately to the establishment of fair economic relations. This awareness gave rise to

2011, vol. 36, pp. 437-457; BROWN, Ph., «Some observations on research on the benefits to nations of adopting IFRS», *The Japanese Accounting Review*, 2013, vol. 3, pp. 1-19.

20. See, among an extensive literature, LUPPINO, A. J., «Stopping the Enron End-Runs and Other Trick Plays: The Book-Tax Accounting Conformity Defense», *Columbia Business Law Review*, 2003, vol. 2003, n.º 1, pp. 35-190.
21. For further information on the IASB, see <http://www.ifrs.org/About-us/IASB/Pages/Home.aspx>.
22. See Regulation (EC) No. 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards, OJ L 243, 11.9.2002. The European Commission issued on 18 June 2015 a report on the evaluation of this Regulation. See Report from the Commission to the European Parliament and the Council – Evaluation of regulation (EC) No. 1606/2002 of 19 July 2002 on the application of international accounting standards, COM(2015) 301 Final). The Commission notably stated p. 4 that «the IAS Regulation has increased the transparency of financial statements through improved accounting quality and disclosure and greater value-relevance of reporting, leading to more accurate market expectations including analysts' forecasts. It also led to greater comparability between financial statements within and across industries and countries although some differences persist».
23. DELIMATIS, P., «Financial Innovation and Prudential Regulation: The New Basel III Rules», *supra* note 15, p. 1309.
24. See for example SORNARAJAH, M., *The international law on foreign investment*, 2nd ed., Cambridge, Cambridge University Press, 2004, p. 22.

various initiatives within international organizations. When they achieved independence, the former colonized countries quickly sat, for example, in the UN plenary bodies, starting with the General Assembly. They then realized that if they did not enjoy an economic power comparable to the one of the developed countries, they however enjoyed a powerful instrument: their number. Gathered together in the General Assembly,²⁵ developing countries used the resolution as the implement of their claims. It is in this context that were notably adopted the «Declaration on the Establishment of a New International Economic Order»²⁶ and the «Charter of Economic Rights and Duties of States»²⁷. Although this process has failed to create general binding rules, the dynamics of the inclusion of the needs of developing countries has meanwhile persisted in the view of a search for more just international economic relations. The particular attention paid to developing countries unfolds in three directions for the purposes of Goal 10: the enhanced representation for developing countries in decision-making in global international economic and financial institutions (a), the special and differential treatment for developing countries (b), and the encouragement of official development assistance and financial flows, including foreign direct investment (c).

a. ENHANCED REPRESENTATION FOR DEVELOPING COUNTRIES IN DECISION-MAKING IN GLOBAL INTERNATIONAL ECONOMIC AND FINANCIAL INSTITUTIONS

Goal 10 targets an objective to «ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions». In general, international

25. They formed the so-called «Group of 77». For more information about the Group of 77, see UN, «The 50th Anniversary of the Group of 77 at the UN», *UN Chronicle*, 2014, vol. 51, n.° 1, available at <http://unchronicle.un.org/issue/50th-anniversary-group-77-un/>.
26. United Nations, Resolution of the General Assembly A/RES/S-6/3201, 1 May 1974. As for the group dynamics and the adoption of the Declaration for a NIEO, see EL-BAGHDADI, M., «The Developing Countries and Their Endeavours to Establish the New International Economic Order», *World Competition*, 1997-1998, vol. 21, n.° 3, pp. 91-108, esp. pp. 101-103. For a presentation of the goals of NIEO, see HORN, N., «Normative Problems of a New International Economic Order», *Journal of World Trade Law*, 1982, vol. 16, n.° 4, pp. 338-351, pp. 339-346.
27. United Nations, Resolution of the General Assembly A/RES/29/3281, 12 December 1974. On the logical relationship between these different texts, see HAIGHT, G. W., «The New International Economic Order and the Charter of Economic Rights and Duties of States», *International Lawyer (ABA)*, 1975, vol. 9, n.° 4, pp. 591-604.

law, including therefore the law of international organizations, is based on the principle of sovereign equality of States. In this sense, every State party is endowed with one vote, regardless of any economic, geographical, demographic or any other criteria. This is, of course, the situation prevailing at the United Nations²⁸. However, the principle is altered in some international economic organizations, either directly on a legal basis, or indirectly on a factual, or political, basis. Firstly, the constitutive act of some international economic organizations expressly provides for the inequality of their parties in the decision-making. The Articles of Agreement of the IMF thus states, in Article III, Section 1, that «Each member shall be assigned a quota expressed in special drawing rights. The quotas of the members represented at the United Nations Monetary and Financial Conference which accept membership before December 31, 1945 shall be those set forth in Schedule A. The quotas of other members shall be determined by the Board of Governors. The subscription of each member shall be equal to its quota and shall be paid in full to the Fund at the appropriate depository»²⁹.

The IMF should be indeed understood as a kind of mutual fund whose capital would be shared between member States: each member, at the time of its accession, subscribes a number of «shares» of the capital³⁰. This number is determined by a quota formula, *i.e.* a calculation method, undertaking a weighted average of GDP (50%), degree of openness of the economy (30%), economic variability (15%) and international reserves (5%).³¹ In other words, this economic calculation is an indicator of the relative economic power of each country. It is fundamental to understand this system, as it determines the number of votes granted to each State, but also the financial support that they can receive. In the respect of the voting process, Article XII, Section 5 (a) of the Articles of Agreement states that «[t]he total votes of each member shall be equal to the sum of its basic votes and its quota-based votes». It is specified at paragraph (ii) that «[t]

28. See Article 2§1 of the United Nations Charter: «The Organization is based on the principle of the sovereign equality of all its Members». Regarding specifically the voting terms, Article 18§1 provides that «[e]ach member of the General Assembly shall have one vote».

29. IMF, Articles of Agreement, Article III, Section 1, *Quotas and Payment of Subscriptions*, available at <https://www.imf.org/external/pubs/ft/aa>.

30. On the IMF quotas and voting system, see GIANARIS, W. N., «Weighted Voting in the International Monetary Fund and the World Bank», *Fordham International Law Journal*, 1990-1991, vol. 14, n.° 4, pp. 910-945, pp. 918-927.

31. This method has been decided on March 28, 2008. See *Reform of Quota and Voice in the International Monetary Fund – Report of the Executive Board to the Board of Governors*, available at <http://www.imf.org/external/pp/longres.aspx?id=4235>.

he quota-based votes of each member shall be the number of votes that results from the allocation of one vote for each part of its quota equivalent to one hundred thousand special drawing rights». Therefore, the voting rights of each Member State are weighted by the volume of its quotas, which are themselves determined by its relative economic power. In such a system, the decision-making process is necessarily and inevitably distributed on an unequal basis between countries, to the detriment of developing ones. This circumstance has largely crystallized criticism of the Fund, sometimes regarded as the instrument of the sole developed countries³². This is partly to answer this assessment that reforms of the system were initiated in 2010, to achieve a rebalancing in favor of emerging countries³³. Following the entry into force on January 26, 2016, the reforms allow an increase of the total capital of the IMF (from SDR 238.5 billion to SDR 477 billion) and an increase of the quotas for states that have consented to it.³⁴ In this last regard,

«More than 6 percent of quota shares will shift to dynamic emerging market and developing countries and also from over-represented to under-represented IMF members. As a consequence, four emerging market countries (Brazil, China, India, and Russia) will be among the 10 largest members of the IMF. Other top 10 members include the United States, Japan, and the four largest European countries (France, Germany, Italy, and the United Kingdom)».³⁵

Yet, despite this effort towards developing countries, the system remains unequal *per se*. The United States are still granted for example 16.61% of the total votes, when Vanuatu has 0.03% of these same total votes³⁶. If the effort must be pursued, the IMF system is subject to an irreducible constraint: that of economic reality. The largest contributors shall wish, regardless of their goodwill, to retain a significant scrutiny and control on the Fund's financing policies, since these are partly fueled by their contributions³⁷. As for the World Bank, the other Bretton Woods

32. See for example WEBER, G., «The IMF: Neocolonialism in Action», *World Bulletin: Bulletin of the International Studies of the Philippines*, 1985, vol. 1, n.º 2, pp. 51-56.

33. For a summary of the reforms, see <http://www.imf.org/external/np/sec/pr/2010/pr10418.htm>.

34. As of May 16, 2016, 179 members, on 189 having 99.555 percent of total quota had consented.

35. IMF Survey Magazine, «Historic Reforms Double Quota Resources and Enhance Voice of Emerging and Developing Economies», January 27, 2016, available at <http://www.imf.org/external/pubs/ft/survey/so/2016/POL012716B.htm>.

36. See <https://www.imf.org/external/np/sec/memdir/members.aspx#1>.

37. The U.S. were for example quite reluctant to adopt the proposed 2010 reforms. See *The Economist*, «Getting around Uncle Sam», 31 January 2015, available at <http://>

institution, it works, as to the allocation of voting rights, on an essentially identical basis as that of the IMF: each Member State subscribes shares in the capital of the Bank, the amount of these shares being decided according to the State's relative weight in the world economy. In fact, the shares allocated by the IMF are used to determine the number of shares allocated to each new Member State of the Bank. The link with the IMF is then extremely noticeable. The votes at the World Bank are therefore also weighted: each new Member State of the Bank is granted with 250 votes plus one additional vote for each share held in the share capital of the Bank.

Secondly, the constitutive act of the international economic organization may ensure equality in law among Member States, through the application of the «one State, one vote» principle. This is particularly the case of the WTO, as expressly provided in Article IX:1 (*Decision-Making*) of the Marrakesh Agreement establishing the WTO:

...Except as otherwise provided, where a decision cannot be arrived at by consensus, the matter at issue shall be decided by voting. At meetings of the Ministerial Conference and the General Council, each Member of the WTO shall have one vote...

From a formal point of view, Member States are placed in the same situation as for decision-making. However, this equality in law has proved insufficient to ensure consideration of the interests of developing countries at major trade negotiations. In other words, political equality among States does not necessarily stem from equality in law. For this reason, some developing countries sharing common interests have organized themselves into groups in order to increase their bargaining power.³⁸ They have then formed «coalitions» in the WTO, among which

www.economist.com/news/finance-and-economics/21641260-how-reform-imf-without-congress-help-getting-around-uncle-sam. The U.S. congressional approval was eventually given on December 2015. See IMF, «IMF Managing Director Christine Lagarde Welcomes U.S. Congressional Approval of the 2010 Quota and Governance Reforms», Press Release No. 15/573, 18 December 2015, available at <https://www.imf.org/external/np/sec/pr/2015/pr15573.htm>.

38. Some of these coalitions are not formed exclusively by developing countries, but by countries sharing common interests on particular topics of negotiations. This is for example the case of the Cairns group, which is a coalition of agricultural exporting nations lobbying for agricultural trade liberalization and which includes Argentina, Australia, Brazil, Canada, Chile, Colombia, Costa Rica, Guatemala, Indonesia, Malaysia, New Zealand, Pakistan, Paraguay, Peru, Philippines, South Africa, Thailand, Uruguay, Viet Nam. This is also the case of the Friends of fish group, which gathers Argentina, Australia, Chile, Colombia, Ecuador, Iceland, New Zealand, Norway, Pakistan, Peru, and the United States.

the ACP group,³⁹ the African group,⁴⁰ the Asian developing members group,⁴¹ the G-90,⁴² the Least developed countries (LDCs) group,⁴³ and the Small, vulnerable economies group⁴⁴. The diversity and composition of these groups call for several remarks. First, the coalitions sometimes go beyond the mere framework of the WTO and therefore exist even outside this particular forum,⁴⁵ which shows the capacity of States parties to get along in general. Second, in a more negative aspect, these groups are numerous,⁴⁶ which might undermine the effectiveness of negotiations. This is a common issue when it comes to international organizations on

39. This group includes the African, Caribbean and Pacific countries with preferences in the EU and brings together 61 WTO members.
40. The African group consists of all African WTO members (43), namely Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Rep., Chad, Congo, Congo (Democratic Republic of.), Côte d'Ivoire, Djibouti, Egypt, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, South Africa, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe.
41. This group is composed of Asian developing WTO members (31), namely Bahrain, Bangladesh, Brunei Darussalam, Cambodia, China, Hong Kong China, India, Indonesia, Jordan, Republic of Korea, Kuwait, Kyrgyz Rep., Laos, Macao China, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Oman, Pakistan, Philippines, Qatar, Saudi Arabia, Singapore, Sri Lanka, Chinese Taipei, Thailand, Turkey, United Arab Emirates, Viet Nam.
42. The G-90 is a very broad coalition, as it comprises altogether the African group, the ACP group and the least developed countries. 70 WTO members are part of it.
43. This group includes the least developed countries as listed by the United Nations and gathers 35 WTO members: Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Rep., Chad, Congo (Democratic Rep.), Djibouti, Gambia, Guinea, Guinea Bissau, Haiti, Laos, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Senegal, Sierra Leone, Solomon Islands, Tanzania, Togo, Uganda, Vanuatu, Yemen, Zambia.
44. This group is the one of «developing countries seeking flexibilities and enhanced special and differential treatment for small, vulnerable economies in the negotiations». It includes 26 WTO members (Antigua & Barbuda, Barbados, Belize, Bolivia, Cuba, Dominica, Dominican Rep., El Salvador, Ecuador, Fiji, Grenada, Guatemala, Honduras, Jamaica, Mauritius, Nicaragua, Panama, Papua New Guinea, St Kitts & Nevis, St Lucia, St Vincent & the Grenadines, Samoa, Seychelles, Sri Lanka, Tonga, Trinidad & Tobago).
45. This is the case for the ACP group (11 non WTO members), the G-90 (12 non WTO members) and the Least developed countries group (6 non WTO members).
46. Besides the groups already listed, there are the APEC group, the ASEAN group, the Mercosur group, the Article XII Members group, the Low-income economies in transition group, the Tropical products group, the G-10, the G-20, the G-33, the Cotton-4 group, the NAMA 11 group, the «Paragraph 6» countries group, the Friends of Ambition (NAMA) group, the Friends of Anti-Dumping Negotiations (FANs) group, the 'W52' sponsors group.

decision making: the more negotiators there are, the more difficult it is to reach a consensus. Finally, States can be simultaneously members of several groups, which, again, may undermine the effectiveness of the negotiations, as a State may prefer to participate in one group or another, depending on the specific topic of the negotiations.

b. SPECIAL AND DIFFERENTIAL TREATMENT FOR DEVELOPING COUNTRIES

If States are equal in law, it remains that the development allows their categorization in terms of economic power, according to the distinction between developed and developing countries. It is therefore a confirmation of their *de facto* inequality. In this perspective, development is sometimes used as a corrective: the uniform application of the law to States that are not placed in identical situations would lead to discrimination and, ultimately, to a form of injustice. It is in this sense that, historically, the development law intended to carry out a differentiated application of international economic rules. This issue has been largely understood by the WTO through the creation of a special and differential treatment in favor of developing countries.⁴⁷ The will to specifically take into account the interests of developing countries in international trade is expressly formulated in the Preamble of the Marrakech Agreement:

Recognizing further that there is need for positive efforts designed to ensure that developing countries, and especially the least developed among them, secure a share in the growth in international trade commensurate with the needs of their economic development.

This is the reason why the achievement of Goal 10 goes through the implementation of «the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements».

The special and differential treatment entails granting preferences on the basis of the economic situation of States. The terms therefore include all WTO provisions granting special rights to developing and least developed countries. Among these provisions, some allow developed countries to provide a more favorable treatment to developing countries than the one accorded to other WTO members; others allow the developing and least developed countries to avoid the most demanding disciplines of the WTO

47. There is no objective definition of «developed» and «developing» countries in the WTO, so that the system rests upon a mechanism of self-declaration. However, the decision can be challenged by other WTO Members.

agreements. One of the most important mechanisms of this scheme is the Enabling Clause, which is an exception to Article I of the GATT dedicated to the most favored nation treatment. This clause is grounded in the decision of the Contracting Parties to the GATT of November 28, 1979 and entitled «Differential and more favorable treatment reciprocity and fuller participation of developing countries». The text provides for two types of actions in favor of developing countries. On the one hand, it enables the implementation of the generalized system of preferences (GSP):

1. Notwithstanding the provisions of Article I of the General Agreement, contracting parties may accord differential and more favourable treatment to developing countries, without according such treatment to other contracting parties.

2. The provisions of paragraph 1 apply to the following:

a) Preferential tariff treatment accorded by developed contracting parties to products originating in developing countries in accordance with the Generalized System of Preferences⁴⁸.

Under this system, the developed countries afford a non-reciprocal preferential treatment to products from developing countries⁴⁹. The GSP aims to promote exports of the latter in order to stimulate their economic growth. It usually includes a substantial reduction or elimination of tariffs for a large number of products interesting the developing countries, and a more favorable application of non-tariff measures in the territory of industrialized countries. The GSP also often establishes a progressive reduction mechanism of preferences based on the increased competitiveness of products from developing countries. Unlike other principles of international trade law, it is not based on reciprocity for the parties granting them. The GSP finally characterizes by freedom of choice of industrialized countries as to eligible countries and products. This last point has not been without some criticism, as illustrated by

48. Decision of 28 November 1979 (L/4903), *Differential and more favourable treatment reciprocity and fuller participation of developing countries* [Enabling Clause]. A note was added to article 2(a), stating that «[a]s described in the Decision of the CONTRACTING PARTIES of 25 June 1971, relating to the establishment of «generalized, non-reciprocal and non discriminatory preferences beneficial to the developing countries».

49. On the GSP in general, see DOS SANTOS, N. B., FARIAS, R., CUNHA, R., «Generalized System of Preferences in General Agreement on Tariffs and Trade/World Trade Organization: History and Current Issues», *Journal of World Trade*, 2005, vol. 39, n.º 4, pp. 637-670; SHAFFER, G., APEA, Y., «Institutional Choice in the Generalized System of Preferences Case: Who Decides the Conditions for Trade Preferences? The Law and Politics of Rights», *Journal of World Trade*, 2005, vol. 39, n.º 6, pp. 977-1008.

the dispute that opposed India to the European Communities⁵⁰. In this case, India contested the European GSP, mainly as being discriminatory, and subsequently as contravening the provisions of the GATT and the Enabling Clause. Although the Appellate Body accepted that a differentiated treatment did not necessarily amount to discrimination, it nevertheless considered that the European GSP was arbitrary, as the eligibility of developing countries was left to the sole discretion of the European authorities⁵¹. The most immediate and concrete consequence of this case was the modification of the European GSP, so that from now on, the beneficiary countries could be clearly identifiable⁵².

On the other hand, the Enabling Clause also provides the legal basis for preferential trade arrangements between developing countries:

Regional or global arrangements entered into amongst less-developed contracting parties for the mutual reduction or elimination of tariffs and ...for the mutual reduction or elimination of non-tariff measures, on products imported from one another⁵³.

These preferential trade arrangements should not, in principle, comply with the strict requirements of Article XXIV of the GATT devoted to customs unions and free-trade areas. As for the substantive requirements applicable to the preferential trade arrangements between developing countries, they «shall be designed to facilitate and promote the trade of developing countries and not to raise barriers to or create undue difficulties for the trade of any other contracting parties»⁵⁴. Moreover, they «shall not constitute an impediment to the reduction or elimination of tariffs and

50. *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries*, WT/DS246/AB/R, 2004.

51. *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries*, *supra* note 50, Report of the Appellate Body, § 188. On this case, see HARRISON, J. «Incentives for Development: the EC's Generalized System of Preferences, India's WTO Challenge and Reform», *Common Market Law Review*, 2005, vol. 42, n.° 6, pp. 1663-1689.

52. A first reform of the EU's GSP was made in 2008. See Regulation (EC) No. 732/2008 of the Council of 22 July 2008, applying a scheme of generalised tariff preferences for the period from 1 January 2009 to 31 December 2011 and amending Regulations (EC) No 552/97, (EC) No 1933/2006 and Commission Regulations (EC) No 1100/2006 and (EC) No 964/2007. A further reform was decided in 2012. See Regulation (EU) No. 978/2012 of the European Parliament and of the Council of 25 October 2012, applying a scheme of generalised tariff preferences and repealing Council Regulation (EC) No 732/2008.

53. Enabling Clause, Article 2(c).

54. Enabling Clause, Article 3(a).

other restrictions to trade on a most-favoured-nation basis»⁵⁵. Regarding the formal conditions, preferential arrangements have to be notified to the Committee on Trade and Development, which guides any consultation among Members and may notify to the Committee on Regional Trade Agreements the task of examining the compatibility of the notified agreements with the provisions of the Enabling Clause. This process may lead to a decision of the Committee on Trade and Development prescribing additional criteria and conditions.

If the Enabling Clause is perfectly illustrative of the special and differential treatment, the latter actually includes many other provisions. Generally, it comprises «longer time periods for implementing Agreements and commitments», «measures to increase trading opportunities for developing countries», «provisions requiring all WTO members to safeguard the trade interests of developing countries», and «support to help developing countries build the capacity to carry out WTO work, handle disputes, and implement technical standards».⁵⁶

More particularly, each main multilateral agreement provides for provisions specifically dedicated to developing countries. For the GATT, specific provisions are mainly enshrined in Article XVIII and Part IV. Article XVIII –*Governmental Assistance to Economic Development*– «gives developing countries the right to restrict imports, if doing so would promote the establishment or maintenance of a particular industry, or assist in cases of balance-of-payments difficulties»⁵⁷. Part IV –*Trade and Development*– was added to the GATT 47 by a protocol of amendment dated February 8, 1965 that came into force on June 27, 1966. It addresses the need for a rapid and sustained increase in export earnings of the less-developed countries, as «[t]here is need for positive efforts designed to ensure that less-developed contracting parties secure a share in the growth in international trade commensurate with the needs of their economic development»⁵⁸. WTO Members are then encouraged to take measures to grant opportunities for primary and processed products from developing countries and to help the diversification of their economies.⁵⁹ To this end, Article XXXVII of the GATT 47 details the various actions that the developed countries shall undertake «to the fullest extent possible».⁶⁰

55. Enabling Clause, Article 3(b).

56. WTO, Special and differential treatment provisions, https://www.wto.org/english/tratop_e/devel_e/dev_special_differential_provisions_e.htm.

57. *Id.*

58. GATT, Article XXXVI: 3.

59. GATT, Article XXXVI: 5.

60. GATT, Article XXXVII: 1.

As for the GATS, Article IV, devoted to the *Increasing Participation of Developing Countries*, provides for the «strengthening of their domestic services capacity and its efficiency and competitiveness, *inter alia* through access to technology on a commercial basis»;⁶¹ «the improvement of their access to distribution channels and information networks»;⁶² and «the liberalization of market access in sectors and modes of supply of export interest to them»⁶³. Article XII recognizes that «particular pressures on the balance of payments of a Member in the process of economic development or economic transition may necessitate the use of restrictions to ensure, *inter alia*, the maintenance of a level of financial reserves adequate for the implementation of its programme of economic development or economic transition».⁶⁴

Finally, the TRIPS Agreement states that «developed country Members shall provide, on request and on mutually agreed terms and conditions, technical and financial cooperation in favour of developing and least-developed country Members»⁶⁵. Besides the special and differential treatment available for all developing countries, the least developed countries receive an extra attention within WTO. Those are the ones listed by the United Nations.⁶⁶ All WTO agreements recognize that these countries must benefit from the greatest possible flexibility. Since the conclusion of the agreements of the Uruguay Round in 1994, WTO Member States have regularly made decisions in favour of the least developed countries. The last Ministerial Conference in Nairobi resulted in the adoption of the «Nairobi Package», which is a series of Ministerial Decisions on various topics, including «issues related to least-developed countries»⁶⁷. In this regard, a decision on Preferential rules of origin for least developed countries was adopted, aiming to facilitate the export of goods from LDCs to other WTO members – both developed and developing countries⁶⁸.

61. GATS, Article IV: 1 (a).

62. GATS, Article IV: 1 (b).

63. GATS, Article IV: 1 (c).

64. GATS, Article XII: 1.

65. TRIPS Agreement, Article 67. Article 66 of the TRIPS Agreement also grants a longer period for the implementation of all provisions of the Agreement, but only to least-developed countries.

66. The United Nations (Committee for Development Policy) use three criteria to establish the list of LDCs: per capita income, human assets and economic vulnerability. Among the 48 countries listed as such, 34 have become WTO members.

67. On the «Nairobi Package», see https://www.wto.org/english/thewto_e/minist_e/mc10_e/nairobipackage_e.htm.

68. See Ministerial Decision of 19 November 2015, WT/MIN(15)/47 – WT/L/917/Add.1.

The WTO ultimately adopted a very determined attitude towards developing countries. However, despite all the mechanisms created by the Organization, they remain inadequate in some respects. Indeed, many of them are not based on binding obligations, but on incentives addressed to developed countries. In other words, the latter retain a large decisional power. The efforts towards an ever more effective participation of developing countries in international trade must be therefore lasted.

c. ENCOURAGEMENT OF OFFICIAL DEVELOPMENT ASSISTANCE AND FINANCIAL FLOWS, INCLUDING FOREIGN DIRECT INVESTMENT

The links between investment and development are considered to be particularly close⁶⁹. The first, by its occurrence, would allow to access and maintain the second⁷⁰. This causality rests upon several elements, mainly the injection of capital flows in the domestic economy and the transfer of skills. On the one hand, capital flows fuel the domestic economic activities. On the other hand, transfer of skills constitutes one of the most prominent justifications of FDI in terms of development⁷¹. Nonetheless, investment flows are globally distributed very unequally: it thus appears that they primarily benefit the developed countries⁷². While some developing countries have managed to attract a large part of FDI,⁷³ others, however, receive only very little. This precisely is the case of some categories of countries, among which are the least developed countries

69. See for example the statement of the former UN Secretary General KOFI ANNAN: «With its enormous potential to create jobs, raise productivity, enhance exports and transfer technology, foreign direct investment is a vital factor in the long-term economic development of the world's developing countries», UNCTAD, *World Investment Report 2003*, p. III.

70. See for example SEIFU, G., «“Regulatory Space” in the treatment of foreign investment in Ethiopian investment laws», *The journal of world investment & trade*, 2008, vol. 9, n.° 5, pp. 405-426, p. 405.

71. See for instance OECD, *Foreign Direct Investment for Development – Maximising Benefits, Minimising Costs*, 2002, p. 12, available at <https://www.oecd.org/investment/investmentfordevelopment/1959815.pdf>: «Economic literature identifies technology transfers as perhaps the most important channel through which foreign corporate presence may produce positive externalities in the host developing economy».

72. As for the year 2015, FDI flows to developed countries reached \$962 billion out of a total of \$1,762 billion. See UNCTAD, *World Investment Report 2016 – Investor Nationality: Policy Challenges*, p. 4, available at <http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=1555>.

73. For example, China received \$135,610 million, Brazil \$64,648 million, and India \$44,208 million. See UNCTAD, *World Investment Report 2016 – Investor Nationality: Policy Challenges*, *supra* note 72, p. 197-198.

and African countries⁷⁴. It is in this perspective only logical that Goal 10 aims to «[e]ncourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes».

However, various reasons oppose the systematic nature of the beneficial result of FDI on development. From a strictly economic point of view, foreign direct investment does not guarantee the economic development of a country: it can contribute to it, without there being any form of automaticity.⁷⁵ As regards the capital injection, it may indeed be a powerful driving force of the national economy, provided that the capital is reinjected in productive activities – either in structural type activities (the creation of infrastructure, hospitals, schools in particular) or in actions to support local businesses. Now, these capital flows are sometimes subject to predation by individuals or groups of individuals, so they do not benefit the population as a whole but a tiny portion of it⁷⁶. As for the transfer of skills, it certainly plays an important role in the development of a country, *since it does occur*. But it is not always the case. Indeed, a company can use two forms of investments depending on the conditions of market entry and the goals pursued by the said company: vertical investments and horizontal investments⁷⁷. The first assume the segmentation of the various development and production activities and their implementation in different places, depending on a cost / benefit ratio; the latter, in turn, imply that all activities will be held at the same location. Therefore, in the case of a vertical investment, there may not be any transfer of skills for certain activities –e.g. those requiring cheap, unskilled and plentiful labour. This possibility is reinforced by the attitude of some investors

74. As a whole, Africa only received \$58,300 million in 2015. See UNCTAD, *World Investment Report 2016 – Investor Nationality: Policy Challenges*, *supra* note 72, p. 196.

75. See SMARZYNSKA, B., «Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages», *The American Economic Review*, 2004, vol. 94, n.° 3, pp. 605-627.

76. As for the specific issue of corruption, it «depletes national wealth. Corrupt politicians invest scarce public resources in projects that will line their pockets rather than benefit communities, and prioritise high-profile projects such as dams, power plants, pipelines and refineries over less spectacular but more urgent infrastructure projects such as schools, hospitals and roads. Corruption also hinders the development of fair market structures and distorts competition, which in turn deters investment». See <http://www.transparency.org/what-is-corruption/#costs-of-corruption>.

77. KUBNY, J., MÖLDERS, F., NUNNENKAMP, P., «Regional integration and FDI in emerging markets», Kiel Institute for the World Economy, *Kiel working papers*, n.° 1418, April 2008, 36 p.

that carry on site their own machines and qualified personnel. In a more legal perspective, the encouragement of foreign direct investments, in international law, gets through the conclusion of treaties– often bilateral but also regional or plurilateral. However, these instruments have a very uncertain impact on a company's decision to invest or not⁷⁸.

4. IMPROVING MIGRATION POLICIES

Although migration issues are often considered, at least in political discourse, as falling under a logic of internal security, positive linkages between migration and development do exist⁷⁹. On the one hand, international migration «holds very significant potential for the development of livelihood strategies for under-resourced communities and can directly contribute through remittance transfers to poverty reduction at the individual level».⁸⁰ On the other hand, migrants contribute to the economic growth of the receiving country, whether by providing vacancies or establishing «businesses which generate wealth and create jobs».⁸¹ Now the next question, regarding Goal 10, is how the way the migration question is dealt with could specifically lead to inequality among countries? Freedom of movement, allowing people to travel easily from one country to another, leads, from a macroeconomic perspective, to a form of homogenization of societies and, in turn, reduces the inequalities between them. In a negative aspect, this means that if not, inequalities between countries will be maintained and even strengthened. In practice, there is indeed an asymmetry between countries receiving migration. In the most serious cases, there are entire populations that are literally blocked on the territory of a State – creating kinds of migratory

78. See for example GALLAGHER, K. P., BIRCH, M., «Do Investment Agreements Attract Investment – Evidence from Latin America», *Journal of World Investment & Trade*, 2006, vol. 7, n.° 6, pp. 961-974, pp. 963-968.

79. The relationship between migration and development is at the heart of the work and discussions of various international organizations. See in particular the «Declaration of the High-level Dialogue on International Migration and Development», A/RES/68/4, Resolution adopted by the General Assembly on 3 October 2013; LACZKO, F., LÖNNBACK, L. J. (eds.), *Migration and the United Nations Post-2015 Development Agenda*, International Organization for Migration, Geneva, 2013, 137 p.

80. IOM, UNDESA, «Migration and human mobility, Thematic Think Piece», UN System Task Team on the Post-2015 UN Development Agenda, May 2012, available at <http://www.iom.int/un-high-level-dialogue-international-migration-and-development-2013>, p. 5.

81. IOM, UNDESA, «Migration and human mobility, Thematic Think Piece», *supra* note 80, p. 5. Migration is also an important tool for bridging the demographic deficit affecting some States because of population aging.

«plugs». Not to mention the dramatic consequences that these situations generate in respect of the populations, they put the host country under a heavy economic and social pressure – as it is the case of Lebanon for example, one of the most severely affected countries⁸². It is then required to «facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies». Certainly, such policies could relieve the burden on countries massively receiving migration flows formed of people fleeing humanitarian crises, *i.e.* «situations in which there is a widespread threat to life, physical safety, health, or basic subsistence that is beyond the coping capacity of individuals and the communities in which they reside»⁸³. In other words, these policies would provide a collective response through the association of States.

However, it is difficult to imagine such kind of policy at a global level in this day and age. Despite a high degree of homogeneity among its Member States, the European Union has been unable to face the abrupt influx of migrants caused by national contexts of war, conflict and insecurity – mainly in Syria, Iraq, and Afghanistan⁸⁴. After months of political tensions between Member States, crystallised by the decision of several countries to close their borders,⁸⁵ which put the European cohesion

82. Indeed, «Lebanon is the neighbouring country hardest hit by the Syria crisis, hosting more than 1.1 million Syrian refugees. With other refugee communities also living there, Lebanon has the world's largest number of refugees per capita». See European Commission, ECHO Factsheet, «Lebanon: Syria crisis», May 2016, p. 1, available at http://ec.europa.eu/echo/factsheets_en. See also the information gathered by the UNCHR, at <http://data.unhcr.org/syrianrefugees/country.php?id=122>.

83. MARTIN, S., WEERASINGHE, S., TAYLOR, A., «Crisis Migration», *Brown Journal of World Affairs*, 2013, vol. 20, n.º 1, pp. 123-137, p. 123.

84. «Most measures taken by the European Union in responding to the refugee crisis present nothing more than *ad hoc* solutions to the problems already raging on its territory or at its borders». SELANEC, N. B., «Critique of EU Refugee Crisis Management: On Law, Policy and Decentralization», *Croatian Yearbook of European Law and Policy*, 2015, vol. 11, pp. 73-114, p. 74. For an overview of the various measures taken by the European Union, see pp. 75-90.

85. Faced with the refugee crisis, EU has largely given way to individual decisions of its Member States, leading to their «polarisation»: «[t]he first fraction of the Member States, , took over the responsibility of international refugee protection from the European Union»; the second fraction of EU Member States was the one of «those who oppose accepting refugees and who challenge the quotas for relocations (for quite marginal numbers as compared to the overall EU acceptance rates); those soliciting the closing of European borders; those who build fences and surround the Union's external and internal borders with barbed wire; those who invoke Schengen exceptions to the point where a "Union without internal borders" makes no practical sense whatsoever». SELANEC, N. B., «Critique of EU Refugee Crisis Management: On Law, Policy and Decentralization», *supra* note 84, pp. 107-108.

at risk, the answer found by the European Union has taken the form of an agreement with Turkey, providing for the latter to accept the repatriation on its territory of any person who gained the European soil illegally⁸⁶. The said agreement thus states that «[a]ll new irregular migrants crossing from Turkey into Greek islands will be returned to Turkey», adding that «[i]t will be a temporary and extraordinary measure which is necessary to end the human suffering and restore public order»⁸⁷. In exchange, «[f]or every Syrian being returned to Turkey from Greek islands, another Syrian will be resettled from Turkey to the EU taking into account the UN Vulnerability Criteria».⁸⁸ More generally, international law is singularly silent on the issue of migration caused by humanitarian crises, «except those pertaining to refugees»⁸⁹. In short, «[t]he absence of effective policy tools is troubling because these crises have implications well beyond immigration, touching on basic humanitarian and human rights interests».⁹⁰ The truth is that the migration issue exceeds that only humanitarian crises – even if they are, in essence, the most dramatic. But even on «economic migration», States seem unable to find common ground⁹¹.

Regarding migration, the comprehensive efforts of the countries must also move towards the migrant remittances, which have been regarded for a few years as a tool for the promotion of development.⁹² Indeed, migrants often maintain close ties with their country of origin and those of their relatives who stayed behind, particularly in the very concrete form of sending money – the remittances. In this regard, remittances, as major capital flows, play a significant role in the financing of developing countries,⁹³ even

86. See the EU-Turkey Statement, 18 March 2016, available at <http://www.consilium.europa.eu/en/press/press-releases/2016/03/18-eu-turkey-statement/>.

87. EU-Turkey Statement, 18 March 2016, Point 1.

88. EU-Turkey Statement, 18 March 2016, Point 2.

89. MARTIN, S., WEERASINGHE, S., TAYLOR, A., «Crisis Migration», *supra* note 83, p. 132.

90. MARTIN, S., WEERASINGHE, S., TAYLOR, A., «Crisis Migration», *supra* note 83, p. 135.

91. On this point and a proposed solution, see BRADFORD, A., «Sharing the Risks and Rewards of Economic Migration», *University of Chicago Law Review*, 2013, vol. 80, n.° 1, pp. 29-58.

92. See for example NORRIS, L. L., «The Revolving Door of Emigration: The Economic Influences of Remittances in Developing Countries», *Northwestern Journal of International Law & Business*, 2011, vol. 31, n.° 2, pp. 479-498; ORRENIUS, P. M., ZAVODNY, M., CANAS, J., CORONADO, R., «Do Remittances Boost Economic Development – Evidence from Mexican States», *Law and Business Review of the Americas*, 2010, vol. 16, n.° 4, pp. 803-822, p. 804; BARRY, Ch., OVERLAND, G., «Why Remittances to Poor Countries Should Not Be Taxed», *New York University Journal of International Law and Politics*, 2010, vol. 42, n.° 4, pp. 1181-1208, pp. 1183-1185.

93. See ROSSER, E., «Immigrant Remittances», *Connecticut Law Review*, 2008, vol. 41, n.° 1, pp. 1-62, pp. 6-28.

if critics about their presumed positive effect have been expressed⁹⁴. In 2015, migrants have sent «earnings back to their families in developing countries at levels above US\$441 billion, a figure three times the volume of official aid flows»;⁹⁵ «[t]hese inflows of cash constitute more than 10 percent of GDP in some 25 developing countries and lead to increased investments in health, education, and small businesses in various communities»⁹⁶. However, these remittances have a transaction cost. Although they have declined in recent years, due to the increased competition on the remittance market, itself generated by the increase in remittances flows,⁹⁷ transaction costs of migrant remittances are sometimes high and thus burden the amount of remittances, while slowing their development. According to the World Bank, «[c]utting prices by at least 5 percentage points can save up to \$16 billion a year»⁹⁸. For that reason, one of the recommendations of Goal 10 is, by 2030, to «reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent». As for now, the global average of the cost of remittance services represents 7.6% of the amount sent,⁹⁹ far from the objective¹⁰⁰. Nevertheless, this objective may be reached regarding official corridors through market regulation. But the fact is that migrant remittances often borrow informal channels, which, by definition, lie beyond the States' control.

Reducing inequality is of paramount importance, not only in the perspective of building a more just world, but also, more prosaically, because they engender a very heavy economic and social cost. Such reduction starts with the individual will of each State. It also requires the concerted action of all. It is therefore a collective and global effort that must be led, through the improvement and creation of appropriate instruments and policies.

94. Indeed, «[r]emittances can distort the pricing of even the most basic goods and can lead to inefficient remittance-driven, rather than growth-driven, use of resources». ROSSER, E., «Immigrant Remittances», *supra* note 93, p. 20. See also ORRENIUS, P. M., ZAVODNY, M., CANAS, J., CORONADO, R., «Do Remittances Boost Economic Development – Evidence from Mexican States», *supra* note 92, p. 804.

95. World Bank, *Migration and Remittances, Factbook 2016*, p. iv, available at <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,contentMDK:21352016~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html>.

96. World Bank, *Migration and Remittances, Factbook 2016*, *supra* note 95, p. iv.

97. See ROSSER, E., «Immigrant Remittances», *supra* note 93, pp. 29-32.

98. See <https://remittanceprices.worldbank.org/en>.

99. World Bank, *Remittance Prices Worldwide*, n.º 18, June 2016, p. 1, available at <https://remittanceprices.worldbank.org/en>.

100. For an evaluation of the costs by country corridors and firms providing money transfer, see <https://remittanceprices.worldbank.org/en/countrycorridors>.

Chapter 14: goal 11

Sustainable cities and communities. Make cities inclusive, safe, resilient and sustainable

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SUMMARY: 1. INTRODUCTION. 2. GLOBAL URBAN POLICY – A NETWORK OF DOCUMENTS AND INITIATIVES. 3. THE URBAN DIMENSION OF THE SUSTAINABLE DEVELOPMENT GOALS. 3.1. *Comment on the goals.* 4. IMPLEMENTATION AND GOVERNANCE OF A GLOBAL URBAN AGENDA. 4.1. *National Urban Policies.* 4.2. *Excursus: implementation of the EU Urban Agenda.* 4.3. *Decentralization.* 4.4. *Cities in city regions: metropolitan governance.* 4.5. *Local Governance.* 5. CONCLUSION. REFERENCES.

ABSTRACT:

The problems of urban areas attract much attention in recent years. Numerous policy documents dealing with megacities, smart cities, urban poverty, environmental risks and climate change, global suburbanism, social innovation and economic recovery have been published. The chapter will discuss the notion of «global urban policy» against the background of SDG no. 11 and Habitat III. Although urban policy is a domain of national governments, the New Urban Agenda has found recognition on different levels of government as well as in different societal spheres. It seems that a global coalition of urban initiatives successfully brought urban issues onto the agenda. However, the implementation of the goals of global urban policy as defined in SDG no. 11 and Habitat III remains vague.

1. INTRODUCTION

We live in a period where urban areas find increasing attention in the international and national political sphere. 2016 in particular is a

year where many events and conferences have been held and numerous policy documents dealing with urban issues such as megacities, smart cities, urban poverty, environmental risks and climate change, global suburbanism, social innovation and economic recovery have been published. The UN Habitat III conference, to be held in October 2016 in Quito, where the New Urban Agenda of the UN for the next decades will be agreed upon, for sure is the event with highest international recognition in this regard. There are, however, further documents that support Habitat III or at least point into the same direction. The new Urban Agenda of the European Union, called Pact of Amsterdam, has been published in May 2016 under the Dutch presidency and refers directly to Habitat III. Also in other continents such as Africa (Parnell 2016, p. 539) and countries, urban agendas and policies are under discussion. In Germany, the Advisory Council on Global Change, an interdisciplinary group of experts giving policy advice to the federal government, published a 500 pages report entitled «Humanity on the move: Unlocking the transformative power of cities» (WBGU 2016). This report is explicitly seen as a contribution to the Habitat III process and offers a wealth of knowledge on how to tackle global urban problems. Many other national governments and international organizations (such as the OECD) contributed in a similar way to the international debate. Last not least the UN Agenda on Sustainable Development (Transforming our World: the 2030 Agenda for Sustainable Development, UN 2015) explicitly has an urban dimension: «The countries adopted a set of 17 goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years»¹. Goal 11 of the Sustainable Development Goals (SDGs) explicitly refers to sustainable cities and communities.

2. GLOBAL URBAN POLICY – A NETWORK OF DOCUMENTS AND INITIATIVES

The notion «global urban policy» is provocative and vague at the same time. Urban policy is an unquestionable domain of national governments. The UN is an inter-governmental organization and local governments have only limited access through an advisory body called United Nations Advisory Committee of Local Authorities (UNACLA), established in 1999.

In 2016, however, the optimistic impression might come up that a global

1. <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

urban agenda has found recognition on different levels of government as well as in different societal spheres (economy, civil society). One reason for this is that the United Nations Conference on Housing and Sustainable Urban Development (Habitat III), taking place from 17 to 20 October 2016 in Quito, will adopt a new Urban Agenda. The fact, that the SDGs include an explicit urban goal contributed to this optimism as well. 2016 was a year with a high frequency of global and regional events and meetings of the UN preparatory committee (PrepCom).² It seems that the global coalition of urban initiatives such as United Cities and Local Governments (UCLG), ICLEI – Local Governments for Sustainability, Cities Alliance, foundations, hybrid initiatives such as Mistra Urban Futures and some national governments, that successfully lobbied in 2015 for the inclusion of goal no. 11 in the SDGs, is still effective in creating synergies and joining forces for Habitat III (Cityscope 2016; Hambleton 2015, p. 52; Parnell 2016).

The Habitat III Conference and the New Urban Agenda is expected to contribute significantly to the implementation of SDG no. 11 and will give an even more comprehensive frame for a global urban policy and more visibility to urban issues worldwide. Susan Parnell, a thoughtful and attentive observer of the Habitat III process, states that: «Habitat III will need to articulate much more precisely the sustainable development function of cities and city management in the global system» (Parnell 2016, p. 532). The Draft Urban Agenda (July 2016) confirms this:

«This New Urban Agenda reaffirms our global commitment to sustainable urban development as a critical step for realizing sustainable development in an integrated and coordinated manner at global, regional, national, sub-national and local levels. The implementation of the New Urban Agenda will contribute to the implementation of the 2030 Agenda for Sustainable Development, in an integrated manner, and the achievement of the Sustainable Development Goals (SDGs) and its targets, in particular SDG 11 of making cities and human settlements inclusive, safe, resilient and sustainable». (UN Habitat 2016b, p. 1).

The New Urban Agenda is of course more detailed and comprehensive with regard to the urban dimension of sustainable and inclusive global development. Still, coherence with regard to other programmes and initiatives and a clear structure for implementation remain a desideratum. This is why I see a global urban policy as a dense network of documents and initiatives without clear hierarchies. The list of UN documents and declarations mentioned in the Draft Agenda is long. It includes: The Addis

2. Many organization and web platforms give coverage of the Habitat III process. Among them is citiscopes.org.

Ababa Action Agenda of the Third International Conference on Financing for Development, the Paris Agreement under the United Nations Framework Convention on Climate Change, the Sendai Framework for Disaster Risk Reduction 2015-2030, the Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway, the Istanbul Programme of Action for the Least Developed Countries for the Decade 2011-2020, and the Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014-2024. In addition the New Urban Agenda is grounded in the Universal Declaration of Human Rights, international human rights treaties, the Millennium Declaration and the 2005 World Summit Outcome (UN Habitat 2016b).

This long list of policy documents illustrates that the process of implementation SDG no 11 should not simply be viewed from a top-down perspective, but also as a process that can take bottom-up and networked forms. Moreover, we should consider it as taking place at different spatial and governmental scales that interact in unpredictable ways. The implementation process may also vary across policy domains (sustainable mobility, water and sanitation, settlement development, etc.).

EU Urban Agenda – Pact of Amsterdam

One political document that is supportive of the New Urban Agenda and SDG no. 11 and needs special attention, is the Urban Agenda of the European Union (Pact of Amsterdam) that has been published under the Dutch Presidency in May 2016 (Dutch Presidency 2016).

The debate on European Urban policies started in the early 1990s and until today is very controversial as member states see urban policy as a their sovereign task (Atkinson and Zimmermann 2016). Since the early 1990s the European Commission has launched several urban initiatives that were considered to be part of cohesion policy. Initiatives such as URBAN I + II are widely accepted as successful urban programmes that helped cities to cope with challenges such as social exclusion and regeneration of deprived areas. National governments and subnational authorities of member states find support of the European Commission when tackling urban problems. Still, the urban dimension in EU policy has somewhat become blurred.

I would contend that despite recent developments the role of cities in European Cohesion policy is ambivalent. Today many cities in the member states are potential beneficiaries of Cohesion policy; the ERDF regulation (2014-2020) directly refers to integrated urban development and supports the use of new instruments, such as Community Led Local Development (CLLD) and Integrated Territorial Investment (ITI).

But we can also conclude that European «urban policy» or the «urban dimension» of Cohesion policy is a somewhat slippery notion and it remains difficult to pin down how it will be implemented in the member states and what it means in practice. In addition to cohesion policy other EU policies such as the European environmental policy (air pollution control, noise reduction) and the European transport policy supporting «Sustainable Urban Mobility Plans» (SUMP) have considerable impact on local governments and cities. In strict formal terms there is no role for a European urban policy in the Treaty of Lisbon but a process of «Europeanization of urban policies» across Europe clearly has taken place during the last two decades. In particular through the structural funds and cohesion policy more resources have been channelled for sustainable urban policies and expectations are high that the new Urban Agenda of the European Union will accelerate this process.

The EU Urban Agenda refers to goal 11 of the SDGs on p. 6, 8 and 11. Under the Heading «Objectives and Scope», ministers affirm that «The Urban Agenda for the EU will contribute to the implementation of the UN 2030 Agenda for Sustainable Development, notably Goal 11 “Make cities inclusive, safe, resilient and sustainable” and the global “New Urban Agenda” as part of the Habitat III process.» (Dutch Presidency 2016).

On page 11, where the –«International dimension» is discussed, it is stated, that for the implementation links «with the New Urban Agenda (Habitat III) of the UN (to be agreed upon), the Sustainable Development Goals (SDGs, 2030 Agenda on Sustainable Development) of the UN and the Paris Agreement on climate change of December 2015 should be strengthened and contradictions avoided».

To conclude this section, we can say that, though hardly comparably with regard to implementation policies, the EU Urban Agenda and the New Urban Agenda have a lot in common. Also, both documents and the relevant policy coalitions behind them, support each other in bringing urban issues on the agenda.

3. THE URBAN DIMENSION OF THE SUSTAINABLE DEVELOPMENT GOALS

The SDGs followed the Millennium Development Goals (MDGs) from 2000. In the zero draft of the Urban Agenda from June 2016 a sentence, that later has been deleted, clearly expressed the continuation and expected improvements of the New Urban Agenda:

«Building on the unfinished business of the Millennium Development

Goals and the Habitat Agenda of 1996, and fully linking with and building upon the 2030 Agenda for Sustainable Development, this New Urban Agenda shall reinvigorate the global commitment to sustainable urbanization, which is now more critical than ever as populations, economic activities, social interactions and environmental impacts, are increasingly concentrated in cities.» (UN Habitat 2016a, p. 1).

Compared to the MDGs, the explicit mentioning of the urban dimension of global sustainable development in Goal 11 is for sure a step forward. In the MDGs only one goal referred to the urban dimension (Hambleton 2015, p. 42). Goal 7 on environmental sustainability mentioned slums and the urban poor and defined in Target 11 to achieve by 2020 a significant improvement in the lives of at least 100 million slum dwellers. The proposed indicator was the proportion of households with access to secure tenure (with reference to the work of UN-Habitat). In the 2030 Agenda for Sustainable Development, cities are explicitly mentioned (using the term settlements) on p. 9:

«We recognize that sustainable urban development and management are crucial to the quality of life of our people. We will work with local authorities and communities to renew and plan our cities and human settlements so as to foster community cohesion and personal security and to stimulate innovation and employment. We will reduce the negative impacts of urban activities and of chemicals which are hazardous for human health and the environment, including through the environmentally sound management and safe use of chemicals, the reduction and recycling of waste and the more efficient use of water and energy. And we will work to minimize the impact of cities on the global climate system. We will also take account of population trends and projections in our national rural and urban development strategies and policies. We look forward to the upcoming United Nations Conference on Housing and Sustainable Urban Development to be held in Quito». (UN 2015).

This part of the agenda indicates a broader concern with urban areas and becomes more concrete in Goal 11 «Sustainable cities and communities. Make cities inclusive, safe, resilient and sustainable». The targets include what is widely considered major urban challenges and risks. In particular environmental challenges such as pollution, air quality, climate change, environmental justice, risk and disasters are now mentioned. Further aspects are housing and integrated settlement development, affordable and safe transport, protection of heritage, green spaces, and rural – urban partnerships. The following list of targets shows, however, no clear hierarchy.

Table 1 Sustainable Development Goal No. 11, Targets

| |
|---|
| 11.1 Making Cities and Human settlements inclusive, safe, resilient and sustainable By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums |
| 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons |
| 11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries |
| 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage |
| 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations |
| 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management |
| 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities |
| |
| 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning |
| 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels |
| 11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials |

3.1. COMMENT ON THE GOALS

Whilst SDG no. 11 gives the urban dimension a much higher visibility and serves as a comprehensive agenda for policy makers on international, national and local levels, we need to ask what is missing or could be added. One point of criticism with regard to the MDGs, was that cities are seen as problematic places where inadequate housing and environmental risks are at stake. Against this background I want to make two comments:

1) The legacy of the MDGs in SDG no. 11 is somehow observable. Goal 11 refers to cities as non-actors and places where an accumulation of problems is dominant. Given the situation of vulnerable communities in most of the megacities in the global south and the weak capacities to act at least of some local governments, there is nothing to euphemize. However, what might be added is a perspective that sees cities as engines for economic development, social and cultural innovation (Hambleton 2015). This holds true in particular for informal settlements and economies (Appadurai 2001). There is nothing wrong about a claim for socially cohesive, safe and sustainable cities, and there is no doubt that megacities in the global south pose some of the biggest challenge we are facing. However, cities have also the potential to provide for the solutions of our problems. It's somehow misleading to consider the local level as passive recipient of external help and locus of deficits. Urban scholars published a bulk of work to illustrate the potential and self-organizing capacity of urban communities for the co-creation of solutions to problems (Hambleton 2015; Hall 2013; Dijk 2006; Jacobs 1961). The Draft New Urban Agenda in part acknowledges this and gives cities a more active role as drivers and catalysts for transformation (UN Habitat 2016b; see also WBGU 2016).

2) At the same time the urban dimension is somehow isolated and not considered by the other goals. Urban challenges are interdisciplinary and require collaborative approaches (cross-departmental). A territorial or place-based approach has found much recognition in the scholarly debate in Europe (Hambleton 2015; Barca 2009). Applying the place-based approach means using existing local resources and bundling of departmental programmes in order to create synergies (Barca 2009). Lack of coordination and isolation of problems as sectoral concern is a well documented weakness of the public sector (Hambleton 2015, p. 9-10). The SDGs reproduce this isolationist approach, as they don't provide for a territorial integrated approach. A few examples may illustrate this observation.

Goal 1b on poverty calls for «sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions» (UN 2015, p. 19). Given the high relevance that the Habitat programme gives to the urban poor the fact that the local level or the urban dimension is not mentioned here is surprising.

The same applies for Goal 9 «Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation». Urban

areas clearly are affected and can contribute to the implementation of this goal.

Others goals with a clear urban dimension are goal no. 6. «Ensure availability and sustainable management of water and sanitation for all». This includes the following targets:

«6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all.

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.»

Also goal no 13. «Take urgent action to combat climate change and its impacts» has an urban dimension that is not mentioned. According the widespread literature on cities and climate change and socio-technical transition it is surprising that cities as catalysts for change are not explicitly considered. I see a clear relationship with target 11. B on adaptation to climate change and resilience to disasters (see above). The Habitat programme gives much more attention to urban resilience, climate change and vulnerability of communities so that hopefully the New Urban Agenda will secure the implementation of integrated approaches.

In a similar vein, successful implementation of target 11.6 «By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management» requires synergies with goal 12 «sustainable production and consumption patterns».

To sum this up: A clear urban or territorial dimension in all goals, better coordination of policies following a place-based (or territorial) approach is missing (Barca 2009). Territorialisation of space-blind policies and facilitation of debates of relevant actors remains an unfulfilled task also within the UN context.

4. IMPLEMENTATION AND GOVERNANCE OF A GLOBAL URBAN AGENDA

Without doubt the efforts to tackle urban problems and to bring urban issues onto the political agenda have reached a new quality and level. Starting with goals no. 11 some consensus has been reached on global urban challenges. Although a certain degree of diversity remains at least the following developments are accepted:

- 1) Habitat III see cities – in line with global city research (Taylor 2004) –

as nodes or elements of a global urban system. Therefore, cities are not an object or a location of poverty but a «vector of change» in global policies (environmental) (Parnell 2016: p. 535).

«It is not just that the UN policy has become more sensitive to the urban imperative (...) but that the UN is acknowledging what scholars and urban representatives have long argued, which is that cities are now catalysts of almost every aspect of the global systems» (Parnell 2016, p. 538).

2) Migration and Growth of Urban Populations worldwide, but in particular in Africa, Asia and Latin America constitute a major challenge (ungovernable megacities and informal settlements).

3) A global urban condition emerged in recent years (Brenner 2014, Keil and Addie 2016).

4) Global urbanisation is responsible for some of the most unsustainable developments.

5) There is a strong urban – rural divide that results in strong socio-economic imbalances.

However, how are the different initiatives and documents connected in terms of content and governance? Where are the synergies in terms of implementation and change? The outlook for the implementation of a global urban policy agenda is vague and depends on many variables. Commitment of many agencies on the international, national and local level and collaboration seems to be the condition for success. The Habitat of the UN is in a leading and facilitating role. The Habitat unit in the complex UN system is, however, probably not strong enough to enable the mentioned integrated approach. In addition, the frequency of Habitat conferences is quite low (1976, 1996, 2016, 2036). Although smaller events such as the World Urban Forum are hosted more frequently, it is doubtful whether the United Nations Human Settlements Programme together with the support of relevant initiatives can facilitate an ongoing agenda setting process.

Against this background we need to ask if Habitat III will be successful in defining some global urban development principles and standards that are supportive for actions for implementation?

The Habitat programme finds support by city to city networks such as ICLEI, UCLG, C 40, Cities Alliance, to name only a few (see Annex in Hambleton 2015 for an extended list; Cityscope 2016). For Europe we may add METREX, EUROCITIES or the Covenant of Mayors. Also international

academic networks such as the European Urban Research Association (EURA), the Association of European Schools of Planning (AESOP), Urban Affairs Association (UAA) or the Global Planning Association Network (GPEAN) and international educational programmes for urban managers can contribute. Whether this group of initiatives and networks constitute a strong global alliance for cities or a more volatile and loose network, remains to be seen.

The wider recognition of the urban dimension of the SDGs, that are more coherent and comprehensive in the draft New Urban Agenda, will depend on principles and standards of global urban policy. Some suggestions for principles of global urban policy that are repeatedly discussed in the above mentioned networks and initiatives and are also considered in preparatory documents of the Habitat process include a) the role and importance of national urban policies, b) decentralization (and multi-level governance), c) governance of city regions and d) strengthening of local governance capacities (local self government).

4.1. NATIONAL URBAN POLICIES

The Draft New Urban Agenda states:

«We [the Heads of State and Government, Ministers and High Representatives] commit to an urban paradigm shift for a New Urban Agenda that will recognize the leading role of national governments in the implementation of inclusive and effective urban policies and legislation for sustainable urban development, and the equally-important contributions of local governments as well as civil society and other stakeholders, in a transparent and accountable manner» (UN Habitat 2016b, p. 3).

The potential of local communities for self-organization and social innovation as well as the creativity of local government officials is enormous (see, for instance, the city makers movement, <https://citiesintransition.eu>). However, without the help of national governments, cities will hardly be able to tackle the problems of urban development and realize the potentials mentioned in the New Urban Agenda. In addition, UN is an intergovernmental association of national governments. Hence the role of national urban policies is crucial. In a narrow understanding national urban policies include financial state aid (programmes) for urban regeneration, mobility policies, infrastructures, and housing. Not all national governments implement these kind of urban policies in a comprehensive and reliable manner. Those who did offer urban policy programmes in the past in part reduced expenditures due to the global

financial crisis, which had an impact on public budgets. But it would be wrong to reduce national urban policies to financial aid programmes. In a wider definition national urban policies provide for systems of financing of local government tasks (or a tax system that guarantees appropriate financing of local government), multi-level governance, juridical frameworks, planning laws and, if appropriate, a clear commitment to the autonomy of local self-government (Turok and Parnell 2009; see also Cole and Payre 2016).

In the European Union national urban policies find support by the urban dimension of cohesion policy (Atkinson and Zimmermann 2016). The New Urban Agenda of the EU gives a good impression on the different dimensions of urban policies and now also provides for a mechanism for the implementation that may serve as an inspiration for UN Habitat.

4.2. EXCURSUS: IMPLEMENTATION OF THE EU URBAN AGENDA

Compared to precedent policy documents, the Pact of Amsterdam has a better outlook with regard to implementation. With regard to the role of the European Commission three goals are mentioned on the platform:

- Improve regulation (improve European legislation and remove unnecessary regulations).
- Create more workable financial instruments. (Cities wish that more attention is given to the implementation of financial EU programs (and the additional regulatory burden) and the way they are set up).
- Create a European platform for urban imagination and knowledge.³

Furthermore the EU Urban Agenda will be implemented by the principle of partnerships that include actors from the European commission, cities, academia and urban initiatives. Four pilot partnerships have been created so far. They are supposed to work on – and find policy solutions for – the following topics:

- Air Quality (coordinated by the Netherlands).
- Housing (coordinated by Slovakia).
- Inclusion of Migrants and Refugees (coordinated by the city of Amsterdam and the European Commission [DG Home])
- Urban Poverty (coordinated by Belgium and France).

3. <http://urbanagendaforthe.eu/urban-agenda/> (23.07.2016).

The Urban Agenda announced more partnerships on topics like the circular economy, jobs and skills in the local economy, climate adaptation (including green infrastructure solutions), energy transition, sustainable use of land and nature-based solutions, urban mobility, digital transition and innovative and responsible public procurement (Dutch Presidency 2016). I do not claim that a European Urban Policy has fully evolved (see concerns above) and it remains to be seen if the partnerships, that just started to work, will be capable of organizing dialogues between practitioners from different levels, scientists and urban protagonists. All that can be said for the moment is, that the agenda process found strong resonance and that the partnership principle is a promising mechanism for the generation of knowledge. However, stable channels and mechanisms for feeding in this knowledge into the policy process need to be established.

4.3. DECENTRALIZATION

Capacity building and decentralization will be one of the core measures to implement goal no. 11 as well as the goals and targets of the New Urban Agenda. Scholars and international organizations observe a world-wide trend towards decentralization but also agree that decentralization takes different forms (UCLG 2007; Treisman 2007; UN Habitat 2007; Pollit 2005). Usually, the virtues of decentralization are highlighted:

«It promises to bring the state closer to citizen, to enhance efficiency and effectiveness in the provision of public services and also to promote accountability and participation» (Kuhlmann and Wayenberg 2016, p. 3).

However, Kuhlmann and Wayenberg (2016) state that the results of decentralization are far from being clear and definite. We have only limited empirical evidence and comparative research on the political and fiscal effects of decentralization (ibid.). The empirical studies we have, point out that there is always a danger of overload of local government. Decentralization is janus-faced: giving more functions to local government may have adverse effects if national governments don't provide for appropriate financing. The consequence will be budget problems and overload, stress in the administration, and in consequence, bad policy and problems of legitimacy.

Decentralization has three dimensions and all three have to be taken into account:

- administrative capacity (staff and resources as capacities for local self-government)

- financial capacity (adequate supply resources, access to own sources of financing such as levies, fees or local taxes) and
- political autonomy (opportunity to elect the mayor and a council; leeway for local decision making).

Decentralization usually goes hand in hand with territorial and functional re-organization of the (regional and local) state and needs careful institutional design (multi-level governance).

The three dimensions have to be in a balanced relation: political autonomy without administrative and financial capacity will probably create a high dependency on external resources. Higher levels of government may ask for loyalty or even use the distribution of funding for strategic political purposes. Delegated tasks without political autonomy may provoke resistance or lagged implementation (Kuhlmann and Wayenberg 2016).

Recent Habitat III documents are largely in line with this three-dimensional approach (UN Habitat 2015) but the Draft New Urban Agenda from July 2016 is surprisingly vague with regard to decentralization and refers to an older guideline on decentralization (UN Habitat 2016b; UN Habitat 2007).

4.4. CITIES IN CITY REGIONS: METROPOLITAN GOVERNANCE

Urban growth in particular in the global south resulted in megacities, urbanized corridors, poly-nucleated city regions or mega regions that challenge existing patterns of governance (Scott 2001; Sellers and Hoffmann-Martinot 2007; Harrison and Hoyler 2014). The growth of metropolitan areas usually causes a mismatch of factual interdependencies between municipalities and existing institutional arrangements for coordinating policies such as public transport, infrastructure, waste management, land use planning, and housing (Sellers and Hoffmann-Martinot 2007; Hall and Pain 2006). In their seminal book on «Struggling Giants», Paul Kantor et al. (2012) describe in detail how the effective implementation of city region governance is hampered in the megacity regions of London, New York, Paris and Tokyo. The same applies for city regions in the global south. Usually a mix of institutional misfits and uneven socio-economic developments constitutes the problem of failed political and administrative coordination (Harrison and Hoyler 2014). A lack of metropolitan governance has several implications. For example, in waste management, difficulties in finding sites for waste dumps occur or the joint use of waste incinerators is blocked because of a lack of

cooperation. Dense functional interdependencies and urban sprawl result in a high number of commuters paying taxes in their suburban hometown. The effective planning and management of transport infrastructure and services is considered a key challenge in metropolitan regions. Fiscally overstrained core cities alone cannot provide for an appropriate transport infrastructure but can collaborate with the neighboring cities and counties (sharing of costs). Competition of municipalities for firms and richer strata of the population, and lack of regional planning and infrastructure planning in metropolitan areas results in space consumption for business development, housing and infrastructure such as airports. This collides with protection of regional parks and green areas. These are only but a few of the negative externalities that speak in favor of metropolitan governance. However, creating appropriate governance solutions for solving the mentioned issues has faced many problems in the past. In some politico-administrative systems, metropolitan regions as institutions do not even exist or are a rather weak level of policy-making. However, in some of the European states we observe renewed national initiatives to support the creation of metropolitan governance arrangements.

The Draft New Urban Agenda addresses metropolitan regions on several occasions without specifying governance structures, questions of scale or different types of metropolitan regions.

The strongest commitment is probably made on p. 10 of the Draft Agenda:

«We will strengthen the capacity of sub-national and local governments to implement effective local and metropolitan multilevel governance, beyond administrative borders and based on functional territories, ensuring the involvement of sub-national and local governments in decision making, providing them with necessary authority and resources to manage critical urban and metropolitan concerns. We will promote metropolitan governance that is inclusive and encompasses legal frameworks, and reliable financing mechanisms, including sustainable debt management» (UN Habitat 2016b, p. 10).

Here, multilevel governance and functional territories beyond administrative borders are highlighted as an appropriate approach to tackle urban growth. In fact a re-scaling of administrative and socio-economic functions is taking place in most of the metropolitan areas worldwide as a simultaneous process (Harrison and Hoyler 2014) but we have to notice that a contested politics of re-scaling leads to various outcomes (including failures). Assuming that it is possible to govern modern societies to a certain extent, the relevance of formal hierarchical political-territorial structures

is questioned and growing emphasis is given to horizontal networks of governance with flexible political geographies. Furthermore, an old comment by Dahl and Tufte (on the issue of size and democracy) remains relevant: «Different problems require political units of different size» (Dahl and Tufte 1973, p. 135). This leads to the conceptualization of a system of vertically layered territorial political units reaching from the local to the global level which is complemented by functionally determined (sectoral) political entities overlapping vertically and also breaking through single territorial levels. In such a flexible political geometry problems are taken up and addressed by different spatially related political units depending on specific and usually spatially determined challenges as well as the means to tackle them.

Although the issue of metropolitan governance as well as urban – rural linkages found recognition in the Draft New Urban Agenda and in many preparatory documents, a stronger commitment and more institutional guidance would be desirable. Sellers and Hoffmann-Martinot (2007, p. 257) rightly state that metropolitan regions and respective challenges (institutional fragmentation, social and territorial diversity, strong and weak states) in Africa, Latin America, Pacifica Asia, North America and Europe differ. Nevertheless, the scholarly debate offers a wide range of possible solution such as the re-organization of jurisdictional boundaries, two tier administrative systems with shared and separated tasks for regional and municipal bodies, regional funds for development, inter-municipal associations and cooperation. In any case, the establishment of metropolitan governance arrangements also poses question for democratic local self-government, as the creation of metropolitan tiers of policy-making needs accountability and legitimacy (Young 2000; Zimmermann 2013; Sellers and Hoffmann-Martinot 2013).

4.5. LOCAL GOVERNANCE

Besides the mentioned layers of policy making (global, national, regional or metropolitan) it will be in the end local governments that implement the idea of socially cohesive, secure and sustainable cities. Local self-government is largely understood as a set of rules and regulations that secure and enable the capacity of a local community to govern its problems in a way that is accepted as legitimate (Sharpe 1970). Also Habitat III documents share this definition:

«Local self-government – Capacity of local governments to manage public affairs in the interests of the local population, and within the limits of the law as recognized by national legislation. These rights and

responsibilities may be political (capacity to elect their own government bodies, make policies, take decisions and exercise their function independently from other government spheres on matters related to their competencies), financial (capacity to access adequate resources to carry out their responsibilities and to use them freely) or administrative (capacity for self-organization)» (UN Habitat 2015, p. 1).

The SDGs are not very strong in this regard. Target 3 of goal no. 11. says: «By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.»

The Draft New Urban Agenda is clearer on this matter:

«We [the Heads of State and Government, Ministers and High Representatives] commit to promote institutional, political, legal, and financial mechanisms in cities and human settlements to broaden inclusive democratic platforms that allow meaningful participation in decision-making, planning, and follow-up processes for all» (Habitat 2016b, p. 5).

In the following, I would like to add some thoughts and ideas on local governance, inclusive leadership and the roles and types of stakeholders.

Government, governance and forms of legitimacy

Effective urban governance is not just a question of legal frameworks and financial capacities of local government. There is widespread consensus that the above mentioned idea of local self-government goes beyond the formal regulations of government but includes the involvement of communities. Therefore, we need to point out the difference of representative and participatory democracy (Heinelt 2010). While representative democracy is based on free election of the mayor and the council and on an administration that is responsive to the needs of the citizens, participatory governance includes more forms of legitimacy and more channels of interest mediation. The term governance has captured this in the recent decade and most of the dynamism in this debate came in because of government and market failure (Jessop 2002). The failure of government in this regard has been described in extension by numerous scholars (Hambleton 2015; Pierre 2011; Jessop 2002). Summing up the debate, we can say that causes for government failure are observable in two different dimensions. With regard to the question of legitimacy government failure is part of the deficits of the institutions of representative democracy and decision-making (the elected mayor and the local council), leading to lacks of legitimacy, accountability and effectiveness. Whereas lack of legitimacy is usually related to a loss of trust

in the problem solving capacity of the representative institutions, lack of effectiveness is usually seen as the actual inability of these institutions to implement decisions taken by the council and the mayor. Corruption and bribery are among the worst things to happen in this regard. The second dimension refers to the inability of local governments or administration of coping with social complexity of urban realities.

In many nation states the market was expected to deliver better solutions (Hambleton 2015). As described by Haus and Heinelt (2005) in the following quote, also the market solutions produced failures which in turn resulted in calls for bringing the state back in.

«The problem of government failure goes deeper: It affects the relationship of public institutions and their social environment as such. To cut a long story short, one can summarise that in former times there was (and still is in some parts of the political scene) a strong believe of replacing the co-ordination of societal interaction by “the hidden hand” of the market through intentional guidance and control of the state – or more precisely: of government based on democratic representation and a professionalized administration as its allegedly neutral instrument». (Haus and Heinelt 2005, p. 46).

However, Jessop (2002) and others pointed out that the hope to solve market failure by the state will again reproduce state or government failure. In political science, authors like Lindblom in his seminal book on the «The Intelligence of Democracy» (1965) argued that effective governance of public affairs requires participation and polycentric coordination of relevant stakeholders. In fact, a wide spread reaction to government and market failure was experimental governance (networks, new public-private agencies, community involvement, participation of civil society).

The democratic quality of governance arrangements is under discussion since the emergence of the governance approach in the scholarly debate in the 1990s (Papadopoulos and Warin 2007; Young 2000). The turn to governance implied that traditional institutions of representative democracy are less relevant and are supplemented with more or less formalized public private partnerships, agencies and networks bringing together public and private actors. These forms of governance are not necessarily weak with regard to democratic legitimacy per se but need new criteria for the assessment of the democratic quality that are not completely oriented at the model of representative democracy. In the following, three mechanisms suggested by Vivien Schmidt for an assessment of the

democratic quality of the policy will be suggested Schmidt 2013; see also Papadopoulos and Warin 2007; Heinelt 2010, p. 66-67):⁴

– *Input legitimacy and authentic participation by the people*: this refers not only to the participatory (or representative) character of the political process resulting in binding decisions but also to the responsiveness of the political institutions to the needs of the citizens. This dimension is usually related to electoral acts and majoritarian ways of decision-making in parliaments but we can also think of complementary mechanisms of participation. Following Scharpf (1997) input legitimacy refers to the quality of the participatory process leading to binding political decisions. Traditionally the majority principle in combination with the representation of citizens through elections form the basic mechanism of input legitimacy. However, more recently some scholars also considered the representation of interest groups and networks in the participation process as an element of input legitimacy (Schmidt 2013, p. 5).

– *Effectiveness and output legitimacy*: the performance or problem-solving capacity of local government is the second source of legitimacy. Policy failures or incapacity to solve problems considered to be pressing (such as environmental damage, bad services) may weaken the acceptance of a government or the political system as a whole. However, what is considered to be an effective solution to a problem is debatable. At least «output legitimacy requires to work effectively while resonating with citizen's values, and identities» (Schmidt 2013, p. 7). Against this background output legitimacy also refers to the delivery of public goods.

– The last dimension highlighted by Schmidt is *throughput legitimacy*. Schmidt sees throughput legitimacy as a process-oriented mechanism that is based on interaction of all actors involved in governance (ibid., p. 5). The main attributes of processes contributing to throughput legitimacy are efficacy of the process, accountability, transparency, inclusiveness, and openness to interest intermediation (ibid., p. 6). Process efficacy refers to the «*quality of the interaction among actors engaged in the EU decision-making process*» (Schmidt 2013, p. 5). Process efficacy is jeopardised when many actors with veto-positions may cause insurmountable blockades.

Usually accountability is given when decision makers can be held responsible for decisions they made or the policies that result from these decisions. Responsiveness to the demands of citizens is also considered to be a dimension of accountability. In contrast accountability is not given when citizens cannot track who was involved in a decision procedure. This

4. This is a slightly reworked section included in Zimmermann 2013.

may be the case when lobbying takes place in an intransparent manner in opaque networks. Therefore transparency adds to accountability though constituting a category of its own. Transparency «*is generally taken to mean that citizens have access to information about the processes*» (Schmidt 2013, p. 6). This includes transparency guaranteed through media coverage.

Inclusive Leadership

In his book on inclusive cities and place-based innovation, Robin Hambleton makes a strong claim for what he calls New Civic Leadership (Hambleton 2015). He defines leadership not as an activity or capacity of a singular person (the elected leader) but in a much broader way:

«Key elements in New Civic Leadership are an understanding that government can't do it alone, that loyalty and a local sense of identity are invaluable resources, and that co-creation of public services can generate radical, new solutions» (Hambleton 2015, p. 75).

Leadership and community involvement in a place is complementary. Leaders may be directly elected mayors, political leaders, senior staff of the administration, civic leaders, urban activists or social entrepreneurs in networks and associations (Hambleton 2015, p. 5). New civic leadership facilitates collective action that would otherwise not happen. It is place-based as local identity and the attachment to place are seen as a valuable resource for mobilizing people. In his words, collaborative and public leadership is key for bringing people together that otherwise would not meet. In this regard, Hambleton refers to the mentioned shift from government to governance and argues (against New Public Management ideas) that, through working with communities, place-based and inclusive leadership contributes to the inclusive city as it enables co-production of public services.

Roles and types of stakeholders

Participatory governance as well as place-based and inclusive leadership are based on the inclusion of stakeholders. I want to introduce reflections of Philippe Schmitter on the different roles and types of stakeholders. He suggests to go beyond the common understanding of the stakeholder as interest holder and starts from the observation, that answers to the question «Who should get the right to participate?» that are based on formal citizenship (i.e. people with the legal right to vote) seem to be insufficient in a society where governing and the sphere of governance extend far beyond a state-centred vision of policy-making. He introduces the concept of multiple «holders». Holder are «persons (or collective actors such as community associations) that possess some quality or resource (Schmitter 2002, p. 62) that are relevant «according to the substance of

the problem that has to be solved or the conflict that has to be resolved» (Schmitter 2002, p. 63). Based on such particular «qualities or resources» he identifies a number of types of holders (Schmitter 2002, p. 62-63). Besides the citizen as the traditional stake-holder (Schmitter uses the term right-holder, i.e. a person that has legal rights and obligations to act as a citizen) and «stake-holders» and «interest holders» that are well known in the discussion on stakeholder democracy, he suggest other types. «Spatial holders», for instance, are place-based residents of a city (not necessarily citizens with a legal status). «Share-holders» are owners of property or territory and therefore holders of relevant resources (business community in particular). «Knowledge-holders» bring in local knowledge and / or expertise about the subject at stake. «Status-holders» are actors «that have been recognized by the authorities ultimately responsible for decisions and formally accorded the right to represent a designated social, economic or political category» (Schmitter 2002, p. 62– 63). This includes giving special status to women, children, migrants, etc. It can be argued (see Heinelt 2010, p. 29-32) that «status-holders» have been «recognized» and formally accorded a specific right in the shadow of (potential) political conflicts or because without such recognition a particular policy (for example aiming at achieving social cohesion in an urban area) runs the risk of losing or never acquiring legitimacy, or political and societal acceptance. In this respect, the «granting» of a status addresses the effectiveness of a policy, but not in a mere economic or technical sense, rather in an essentially political way, i.e. by addressing the issue of legitimacy.

5. CONCLUSION

In this chapter, I've argued that the successful implementation of SDG no. 11 relies largely on the Habitat III process and the New Urban Agenda. It's hard to evaluate if goal no. 11 found strong resonance in other national or local political contexts (but see the EU Urban Agenda). Expectations among experts and urban activists are high that the Habitat III conference in Quito, the adoption of the New Urban Agenda and subsequent actions to be taken by the UN, the European Union and national governments worldwide, will give urban issues much more visibility and relevance. Against this background, I've also argued that higher visibility and a more effective implementation of the New Urban Agenda goes not at the expense of the other SDGs. On the contrary, territorial integration of policies and initiatives and the place-based approach produce synergies and mobilize local resources. This goes hand in hand with a change of mindset to see cities as catalysts for transformation. This makes the implementation of all SDGs even more effective. At the same time this conclusion is more

a snapshot of what happened in 2016. In 2016, we definitely observed a worldwide concern with urban issues and hopefully UN Habitat will, with the help of other actors and initiatives, make an agenda for global urban policies a permanent concern.

REFERENCES

APPADURAI, A. (2001) Deepen democracy. Urban governmentality and the horizon of politics, *Environment & Urbanization*, Vol. 13, No. 2, 23-44.

ATKINSON, R.; ZIMMERMANN, K. (2016) Cohesion Policy and Cities: an ambivalent relationship? In: PIATTONI, S. and POLVERARI, L. (eds.) *Handbook on cohesion policy in the EU*. Edward Elgar (in print).

BARCA, F. (2009) *An Agenda for a Reformed Cohesion Policy, A place-based approach to meeting European Union challenges and expectations* (Independent Report prepared at the request of Danuta Hübner, Commissioner for Regional Policy: Brussels).

BRENNER, N. (ed.) (2014) *Implosions/Explosions. Towards a Study of planetary urbanism*. Berlin: Jovis.

Cityscope (2016) Who are the Habitat III major players? <http://www.cityscope.org/habitatIII/explainer/2015/06/who-are-habitat-iii-major-players> (accessed 22.07.2016).

COLE, A.; PAYRE, R. (2016) (eds.) *Cities as political objects*. Edward Elgar (in print).

DAHL, R. A.; TUFTE, E. R. (1973). *Size and Democracy*, Stanford.

DIJK, M. P. (2006) *Managing cities in developing countries: the theory and practice of urban management*. Cheltenham: Edward Elgar.

Dutch Presidency (2016) *Urban Agenda for the EU «Pact of Amsterdam»*. Agreed at the Informal Meeting of EU Ministers Responsible for Urban Matters on 30 May 2016 in Amsterdam, The Netherlands.

HALL, P.; PAIN, K. (2006) *The Polycentric Metropolis. Learning from Mega-City Regions in Europe*. London: Earthscan.

HALL, P. (2013) *Good cities, better lives: how Europe discovered the lost art of urbanism*. Abingdon: Routledge.

HAMBLETON, R. (2015) *Leading the inclusive city. Place-based innovation for a bounded planet*. Policy Press: Bristol.

HAMBLETON, R.; GROSS, J.-S. (2007) *Governing cities in a global era*.

Innovation, competition and democratic reform. Basingstoke and New York: Palgrave.

HARRISON, J.; HOYLER, M. (2014) Governing the new metropolis, *Urban Studies*, Vol. 5 (11) 2249-2266.

HAUS, M.; HEINELT, H. (2005) How to Achieve Governability at the Local Level? Theoretical and Conceptual Considerations on a Complementarity of Urban Leadership and Community Involvement. In Michael Haus, Hubert Heinelt and Murray Stewart (eds.). *Urban Governance and Democracy: Leadership and Community Involvement*. London/New York: Routledge. 12-39.

HEINELT, H. (2010) *Governing modern societies*. Baden-Baden: Nomos.

JACOBS, J. (1961) *The death and life of great American cities*. New York: Vintage.

JESSOP, B. (2002) *The Future of the Capitalist State*. Oxford: Oxford University Press.

KEIL, R.; ADDIE, J.-P. (2016). It's not going to be suburban, it's going to be al urban, in: *International Journal of Urban and Regional Research*.

KUHLMANN, S.; WAYENBERG, E. (2016) Institutional impact assessment in multi-level systems: conceptualizing decentralization effects from a comparative perspective, in: *International review of administrative sciences*, Vol. 82 (2) 233-254.

PAPADOPOULOS, Y.; WARIN, P. (2007) Are Innovative, Participatory and Deliberative Procedures in Policy making Democratic and Effective? *European Journal of Political Research*, 46(4), 445-473.

PARNELL, S. (2016) Defining a Global Urban Development Agenda, *World Development*, Vol. 78, 529-540.

POLLIT, C. (2005) Decentralization: a central concept in contemporary public management. In: FERLIE, E.; LYNN, L; POLLIT, C. (eds.) *The Oxford handbook of public management*. Oxford University Press: Oxford, 371-397.

PIERRE, J. (2011) *The politics of urban governance*. Basingstoke: Palgrave.

SCHARPF, F. W. (1997) *Games Real Actors Play. Actor-centered Institutionalism in Policy Research*. Boulder: Westview Press.

SCHMIDT, V. (2013) Democracy and Legitimacy in the European Union Revisited: Input, Output and «Throughput». *Political Studies*, 61(19), 2-22.

SCHMITTER, P. C. (2002) Participation in government arrangements. In JÜRGEN R. Grotte and Bernard Gbikpi (eds.). *Participatory governance: political and societal implications*, Opladen: Leske+Budrich. 51-70.

SCOTT, A. J. (ed.) (2001) *Global City-Regions: Trends, Theory, Policy*. Oxford: Oxford University Press.

SHARPE, L. J. (1970) Theories and Values of Local Government, *Political Studies*, vol. 18, no. 2, 153-174.

SELLERS, J.; HOFFMANN-MARTINOT, V. (2007) Metropolitan Governance, in: *United Cities and Local Governments (ed.) World Report on Decentralization and Local Democracy*, Barcelona: United Cities and Local Governments. 255-279.

SWOPE, C. (2014) The «urban SDG»: an explainer. <http://www.citiscopes.org/story/2014/urban-sdg-explainer> (accessed 22.07.2016).

TAYLOR, P. J. (2004) *World city network: a global urban analysis*. Psychology Press.

TREISMAN, D. (2007) *The architecture of government. Rethinking political decentralization*. Cambridge: Cambridge University Press.

TUOK, I.; PARNELL, S. (2009) Reshaping Cities, Rebuilding Nations: The Role of National Urban Policies, in: *Urban Forum*, Vol. 20, 157-174.

United Nations (2015) *Transforming our World: the 2030 Agenda for Sustainable Development*. A/RES/70/1. New York.

United Nations (2000) *Millennium Declaration*. A/RES/55/2. New York.

UN Habitat (2015) *Urban Governance. Habitat III Issue Papers 6*. New York (31 May, not edited version).

UN Habitat (2016a) *HABITAT III. REVISED ZERO DRAFT OF THE NEW URBAN AGENDA* (18 June 2016).

UN Habitat (2016b) *HABITAT III. DRAFT NEW URBAN AGENDA* (18 July 2016).

UN Habitat (2007) *International Guidelines on Decentralization and Access to Basic Services for all*, adopted by the Governing Council of UN-Habitat in 2007.

UCLG / United Cities and Local Governments (2007) *World Report on Decentralization and Local Democracy*. Barcelona: United Cities and Local Governments.

WBGU (2016a) (German Advisory Council on Global Change) Humanity on the move: Unlocking the transformative power of cities – Summary. Berlin.

WBGU (2016b) (German Advisory Council on Global Change) Der Umzug der Menschheit: Die transformative Kraft der Städte. Berlin. (full report in German).

YOUNG, I.M. (2000) Inclusion and Democracy. Oxford.

ZIMMERMANN, K. (2014): Democratic Metropolitan Governance: Experiences in five German Metropolitan Regions. In: Urban Research & Practice, Vol. 7, 2, 182-199.

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Chapter 15: goal 12

Responsible consumption and production. Ensure sustainable consumption and production patterns

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SUMMARY: 1. INTRODUCTION. 2. THE INTERNATIONAL EFFORTS TO FOSTER RESPONSIBLE CONSUMPTION AND PRODUCTION. 2.1. *Agenda 21 and sustainable consumption and production.* 2.2. *The «10-year framework of programmes on sustainable consumption and production».* 2.3. *The lack of binding obligations on sustainable consumption and production.* 3. ADDRESSING RESPONSIBLE CONSUMPTION AND PRODUCTION AS A GLOBAL ISSUE. 3.1. *Responsible consumption and production for both developed and developing countries.* 3.2. *Responsible consumption and production and «environmental governance».* 4. CONCLUSION.

ABSTRACT:

The Sustainable Development Goal 12 (SDG12) establishes the objective to «Ensure sustainable consumption and production patterns». Sustainable consumption and production is a broad concept designed to foster a better conciliation of environmental protection and economic development. It aims at promoting resource and energy efficiency, sustainable infrastructure, access to basic goods and services and decent work conditions, while following an integrated and global approach to develop a «life-cycle thinking» of goods and services. The Chapter addresses the core elements of the Responsible consumption and production concept, in light of the previous efforts done at the UN level, and the need for a multifaceted strategy to significantly reduce the impact of mankind on the environment. Indeed, it is still necessary to

overcome a great number of obstacles, among which are discrepancies between developed and developing countries and between consumers and producers. It appears ultimately that Responsible consumption and production can only be attained by progressively changing the «consumer culture» of citizens and governments, which cannot be solved by adopting simplistic solutions.

1. INTRODUCTION

Sustainable development¹, which «entails the obligation to meet environmental, as well as social and economic needs of humanity in a sustainable and equitable manner»² is twofold. It comprises, on the one hand, the balancing of economic inequalities between States and populations and, on the other hand, environmental sustainability³. In this respect, principle 8 of the Rio Declaration on Environment and Development adopted in June 1992 acknowledges that: «To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies»⁴, since «fundamental changes in the way societies produce and consume are indispensable for achieving global sustainable development»⁵. Hence, the concept of sustainable consumption⁶ and production⁷ (SCP), reflected in

1. See NANDA V. P., «Sustainable Development, International Trade and the Doha Agenda for Development», *Chapman Law Review*, 2005, vol. 8, pp. 53-75; OSOFSKY H. M., «Defining Sustainable Development After Earth Summit 2002», *Loyola of Los Angeles International & Comparative Law Review*, 2003, vol. 26, n° 1, pp. 111-125.
2. International Union for the Conservation of Nature and Natural Resources, *Draft International Covenant on Environment and Development*, 4th ed., 2014, at: <https://portals.iucn.org/library/efiles/edocs/EPLP-031-rev3.pdf> (last accessed: 20 July 2016), art. 10.
3. VARAYUDEJ S., «Two-pronged right to development and climate change– Reciprocal implications», in QUIRICO, O., BOUMGHAR M. (eds.), *Climate change and Human rights – An international and comparative law perspective*, Routledge, Abingdon, 2016, 408 pp., pp. 118-132; FABRICK L., «Sustainable Development: A Call to Arms», *The Urban Lawyer*, 2006, vol. 38, n.° 3, pp. 555-560.
4. Report of the United Nations Conference on Environment and Development, 12 August 1992, UN Doc. A/CONF.151/26 (vol. I).
5. Johannesburg Plan of Implementation of the World Summit on Sustainable Development, 4 September 2002, at: http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf (last accessed: 20 July 2016), para. 14.
6. SALZMAN J., «Sustainable consumption and the Law», *Environmental Law*, 1992, vol. 27, pp. 1243-1293, p. 1253: «Sustainable consumption garners much less attention. It addresses fundamentally what we consume. This includes both how well we consume (patterns of consumption) and how much we consume (levels of consumption)».
7. *Ibid.*: «Sustainable production encompasses how we produce goods and services. It addresses

Goal 12 of the 2030 Agenda for Sustainable Development⁸ is crucial to sustainable development⁹, since it aims at protecting the environment without hindering economic growth and development prospects.

Defined after the Oslo Symposium on Sustainable Consumption as «*the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life-cycle, so as not to jeopardise the needs of future generations*»¹⁰, sustainable consumption and production is a broad concept reflecting the shift in the approach towards environmental law and policy since the 1990's. While the early initiatives, such as the Stockholm Declaration¹¹, focused more on the protection of the environment, the Brundtland report of August 1987 paved the way for a better conciliation of environmental protection and economic development. It focused on «*consumption standards that are within the bounds of the ecological possible and to which all can reasonably aspire*»¹², and insisted on the fact that «*ecology and economy are becoming ever more interwoven locally, regionally, nationally, and globally into a seamless net of causes and effects*»¹³. Hence, SCP aims at promoting resource and energy efficiency, sustainable infrastructure, access to basic goods and services and decent work conditions¹⁴, following

traditional images of pollution, such as belching smoke-stacks, pipes pouring out toxic effluents, and barrels of industrial waste».

8. UN General Assembly, Resolution 70/1, Transforming our World: The 2030 Agenda for Sustainable Development, 25 September 2015, UN Doc. A/RES/70/1.
9. UN General Assembly, Resolution 66/288, The Future We Want, 27 July 2012, UN Doc. A/RES/66/288, para. 4.
10. Oslo Roundtable on Sustainable Production and Consumption, 1994; OECD, *Towards sustainable household consumption – Trends and policies in OECD Member States*, OECD, Paris, 2002, 12 pp., pp. 2-3: «*This definition remains open to different interpretations. This is appropriate because the assessment of what is sustainable is site – and problem – specific, and depends on social and political decisions of acceptable levels of risk and substitution between natural capital and man-made, human and social capital. Sustainable consumption is also defined as a function of the time within which environmental pressures must be evaluated, which can be a question of a few years or many decades. As a result, sustainable consumption is a dynamic concept that indicates the direction of change desired or required; it can evolve as new information is gathered and political preferences are established. Where ecological limits can be established, sustainable consumption can be linked to specific targets (e.g. for CO2 emissions, water consumption)*».
11. Declaration of the United Nations Conference on the Human Environment, 16 June 1972, UN doc. A/CONF.48/14/Rev. 1, pp. 3-5.
12. Report of the World Commission on Environment and Development: Our Common Future, 4 August 1987, UN Doc. A/42/427, Annex, p. 27, para. 5.
13. *Ibid.*, p. 9, para. 15.
14. UNEP, The ABC of SCP – Clarifying Concepts on Sustainable Consumption and Production, 2010, at: http://www.unep.org/resourceefficiency/Portals/24147/scp/go/pdf/ABC_ENGLISH.pdf (last accessed: 20 July 2016), p. 12.

an integrated and global approach to develop a «lifecycle thinking» of goods and services¹⁵. The final aim is «to «decouple» economic growth and environmental degradation»¹⁶.

It is worth noting that «more goods and services have been consumed since 1950 than by all previous generations combined»¹⁷. Hence, the continuing growth of consumption – in the food, transport and energy sectors most notably – is a major obstacle to achieving satisfactory results in terms of environmental protection, since the pollution and emissions are still growing in spite of the improvement of the environmental standards. The aviation sector provides a topical example: the aircraft engines are more efficient nowadays than they were in the 1950's», and the more polluting ones have been progressively banned as a result of the efforts made by the International Civil Aviation Organisation (ICAO). Yet, the contribution of aviation to global warming is still increasing, because it is intrinsically connected to the continuing growth of the traffic at global level. In other words, the efficient protection of the environment requires not only to control and limit the pollution per unit of production or per source of emission, but also to reconsider, overall, the consumption and production patterns, to reduce the use of resources, and thus limit the environmental impact. In fact, «despite all kinds of gains in technology, in efficiency, and awareness, these are all offset by increasing production/consumption patterns»¹⁸.

At the heart of SCP lies concerns of intra and inter-generational equity because «consumer sovereignty in the sense of an unlimited satisfaction of one's individual needs can have problematic consequences which are not accounted for in the market, but which will still be borne by other people. Often, these people live in other regions or parts of the world or belong to future generations»¹⁹. It is then not surprising that the, non-binding, «Declaration of Humankind Rights» insists on the fact that «Humanity has the right to a responsible, equitable, inclusive and sustainable development»²⁰. On the long term, developing countries must not follow the industrialised countries' example and «the

15. *Ibid.*, p. 13

16. *Ibid.*, p. 12.

17. SALZMAN J., «Sustainable consumption and the Law», *supra* at 6, p. 1245.

18. See BARBER J. in DESAI N. and al., «Symposium: The Road from Johannesburg», *Georgetown International Environmental Law Review*, 2003, vol. 15, pp. 809-829, p. 826.

19. U. HANSE, U. SCHRADER, «A Modern Model of Consumption for a Sustainable Society», *Journal of Consumer Policy*, 1997, vol. 20, pp. 443-468, p. 453.

20. Declaration of Humankind Rights, at: <http://droitshumanite.fr/DU/?lang=en> (last accessed: 20 July 2016).

*developed world must consume less, consume better, or both*²¹. Thus, against the backdrop of the continuing increase of unsustainable use of resources, Goal 12 of the 2030 Agenda for Sustainable Development draws on the previous efforts done at the UN level. It aims at better framing the actions conducted at the international level in order to foster responsible consumption and production (2). It, furthermore, confirms that SCP must be construed as a global issue that can only be tackled using a multifaceted strategy and the superposition of several actions (3).

2. THE INTERNATIONAL EFFORTS TO FOSTER RESPONSIBLE CONSUMPTION AND PRODUCTION

As G. H. BRUNDTLAND rightly pointed out: *«it is simply impossible for the world as a whole to sustain a Western level of consumption for all»* since *«we would need ten worlds, not one, to satisfy all our needs»*²². For the European Union alone, it is estimated that it consumes resources equivalent to two and a half planets annually²³. To tackle this huge problem, SCP has been addressed starting in 1992 by «Agenda 21» (2.1), and is now developed under the umbrella of a *«10-year framework of programmes on sustainable consumption and production»* (2.2). Yet, the lack of binding obligations on sustainable consumption and production is a major shortcoming, but it may be unrealistic to call for a multilateral agreement in this respect in the near future (2.3).

2.1. AGENDA 21 AND SUSTAINABLE CONSUMPTION AND PRODUCTION

Along with the Rio Declaration, the «Agenda 21» programme²⁴, run under the auspices of the Division for Sustainable Development of the United Nations' Department of Economic and Social Affairs (UNDESA),

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21. SALZMAN J., «Sustainable consumption and the Law», *supra* at 6, p. 1246.
 22. BRUNDTLAND G. H., «The Challenge of Sustainable Production and Consumption Patterns», *The Brown Journal of World Affairs*, 1994, vol. 1, n.º 2, pp. 23-32, p. 23.
 23. LORZ B., «EU policies for Sustainable Consumption and Production – the Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy», *Journal for European Environmental & Planning Law*, 2009, vol. 6, n.º 3, pp. 277-300, p. 278.
 24. Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26, Annex II (hereinafter «agenda 21»); see, for instance, FEHR R., BUSSE M., GABLER W., KOBUSCH A.-B., MOEBUS S., ROHR M., SERWE H.-J., «„Agenda 21» of the Rio Conference – from Public Health and Environmental Sciences Perspective», *Zeitschrift für Gesundheitswissenschaften*, 1996, vol. 4, n.º 2, pp. 184-188.

constitutes the first milestone for addressing responsible consumption and production at international level. In spite of the little attention given to this specific aspects by academics at the time²⁵, it is worth noting that its Chapter 4 stresses the importance of changing consumption patterns, emphasizing the fact that *«the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances»*²⁶. To achieve this goal, industrialised countries should *«take the lead in achieving sustainable consumption patterns»*²⁷, and respect the comprehensive plan of action to be taken at global, national, regional and local²⁸ levels. The Rio Earth Summit was indeed the first time that developed countries have acknowledged their responsibility for SCP²⁹, and *«has made the concept of sustainable development a consensus of the whole human society, and almost all the countries have made active responses to Agenda 21»*³⁰. These responses are consisting most notably in setting up special commissions on sustainable development and establishing national, regional and local Agenda 21 plans³¹, even if progress has been uneven³².

25. HARSCH B. A., «Consumerism and Environmental Policy: Moving Past Consumer Culture», *Ecology Law Quarterly*, 1999, vol. 26, n.º 3, pp. 543-610, p. 545.

26. Agenda 21, *supra* at 24, para. 4.3.

27. *Ibid.*, para. 4.8, b).

28. See, International Council for Local Environmental Initiatives, International Development Research Centre (Canada), *The Local Agenda 21 Planning Guide: An Introduction to Sustainable Development Planning*, Ottawa, 1996, 212 pp.; see, for instance, LLAMAS-SÁNCHEZ R., MUÑOZ-FERNÁNDEZ A., MARAVER-TARIFA G., «The local agenda 21 in Andalusia, Spain: A model for sustainable innovation», *African Journal of Business Management*, 2011, vol. 5, n.º 32, pp. 12653-12663; ROTHEROE N., KEENLYSIDE M., COATES L., «Local agenda 21; articulating the meaning of sustainable development at the level of the individual enterprise», *Journal of Cleaner Production*, 2003, vol. 11, n.º 5, pp. 537-548; BARRETT B., USUI M., «Local Agenda 21 in Japan: Transforming local environmental governance», *Local Environment: The International Journal of Justice and Sustainability*, 2002, vol. 7, n.º 1, pp. 49-67; MEHTA P., «Local agenda 21: Practical experiences and emerging issues from the South», *Environmental Impact Assessment Review*, 1996, vol. 16, n.º 4-6, pp. 309-320; MERCER D., JOTKOWITZ B., «Local Agenda 21 and Barriers to Sustainability at the Local Government Level in Victoria, Australia», *Australian Geographer*, 2000, vol. 31, n.º 2, pp. 163-181.

29. SALZMAN J., «Sustainable consumption and the Law», *supra* at 6, p. 1251.

30. RISHENG G., «Global Major Progress and Trends in the Implementation of Agenda 21», *Chinese Journal of Population Resources and Environment*, 2012, vol. 10, n.º 2, pp. 3-11, p. 4.

31. See for instance, MCMANUS R., «Agenda 21 and Sustainable Development: The Approaches of Iowa, Virginia and Minnesota», *Eco-notes. Environmental Law & Policy*, 1996, vol. 1, n.º 2, pp. 34-39.

32. See, for instance, UN Economic and Social Council, Commission on Sustainable

According to Chapter 4 of Agenda 21, the objectives to be met to ensure responsible consumption are the following: greater efficiency in the use of energy and resources; minimising the generation of wastes; assisting individuals and households to make environmentally sound purchasing decisions; exercising leadership through government purchasing; moving towards environmentally sound pricing and, finally, reinforcing values that support sustainable consumption. The material scope of SCP is broad and covers potentially all goods and services: beyond its specific Chapter 4, Agenda 21 covers responsible consumption and production in the relevant paragraphs dealing with energy, transportation, wastes, economic instruments and transfer of technologies³³. Goal 12 of the 2030 Agenda for Sustainable Development reflects this approach by insisting, among other objectives, on sustainable management and efficient use of natural resources; responsible food consumption; better management and recycling of chemicals and wastes throughout their life cycle and the rationalization of inefficient fossil-fuel subsidies.

This approach is, without a doubt, a major step to move from incantatory *formulae* to pragmatism, since it takes into account the reality of the structure of the world economy, in several sectors of uttermost significance for the environment. In fact, Agenda 21 established the basic conceptual philosophy of sustainable consumption and production: the aim is to establish reasonable consumption patterns, remaining within the scope of economic and ecological possible solutions, to reconcile economic growth and environmental protection. Accordingly, the United Nations guidelines for consumer protection were expanded in 1999 to include a specific section dedicated to sustainable consumption³⁴, focusing on the fact that «*Responsibility for sustainable consumption is shared by all members and organizations of society, with informed consumers, Government, business, labour organizations, and consumer and environmental organizations playing particularly important roles*»³⁵.

The signature of the Johannesburg Plan of Implementation, at the World

Development, Sixteenth session, 5-16 May 2008, E/CN.17/2008/2; The Stakeholder Forum for a Sustainable Future, «Review of implementation of Agenda 21 – Detailed review of implementation of Agenda 21», January 2012, at: [http://www.stakeholderforum.org/fileadmin/files/SD21%20Agenda21%20\(2\).pdf](http://www.stakeholderforum.org/fileadmin/files/SD21%20Agenda21%20(2).pdf) (last accessed: 20 July 2016).

33. Agenda 21, *supra* at 24, para. 4.2.

34. United Nations Guidelines for Consumer Protection (as expanded in 1999), 2003, at: http://www.un.org/esa/sustdev/publications/consumption_en.pdf (last accessed: 20 July 2016).

35. *Ibid.*

Summit on Sustainable Development (WSSD)³⁶, marked a new step of the progressive development of the SCP concept, since its Chapter 3 was specifically dealing with «*Changing Unsustainable Patterns of Consumption and Production*». Shortly after, the «Marrakech Process» was set up as a collaborative effort between UN Environment Programme (UNEP)³⁷ and UNDESA, national governments and civil society, working together through several task forces on specific issues. In spite of the fact that some consider that «*it is difficult to find any significant successes of this process or any tangible outcomes to date*»³⁸, it nevertheless succeeded in supporting the elaboration of a «*10-year framework of programmes on sustainable consumption and production patterns*» (10YFP), which was finally agreed on in June 2012 at the Rio+20 Summit³⁹, covering the period 2012-2022. It is a direct response to the assessment of the little progress made since 1992: «*Despite a number of initiatives and increasing levels of awareness and discussion surrounding sustainable consumption and production (SCP), the world has seen extremely little if any progress, in regard to reaching the objectives outlined in Chapter 4. The Ecological Footprint of the global population has increased by over a third since the production of Agenda 21*»⁴⁰. It is worth noting that the UN itself recognised «*the failure over the last two decades to make progress on more sustainable consumption patterns*»⁴¹.

2.2. THE «10-YEAR FRAMEWORK OF PROGRAMMES ON SUSTAINABLE CONSUMPTION AND PRODUCTION»

The 10-year framework of programmes on sustainable consumption and production patterns aims at fostering changes in the way societies

36. Johannesburg Plan of Implementation of the World Summit on Sustainable Development, *supra* at 5; see DESAI N. and al., «Symposium: The Road from Johannesburg», *supra* at 18; OSOFSKY H. M., «Defining Sustainable Development After Earth Summit 2002», *supra* at 1.

37. See, MAHMOUDI S., «The United Nations Environment Programme (UNEP) – An Assessment», Asian Yearbook of International Law, 1997, vol. 5, pp. 175-198.

38. The Stakeholder Forum for a Sustainable Future, «Review of implementation of Agenda 21 – Detailed review of implementation of Agenda 21», *supra* at 32, p. 22.

39. Annex to the letter dated 18 June 2012 from the Permanent Representative of Brazil to the United Nations addressed to the Secretary-General of the United Nations Conference on Sustainable Development – A 10-year framework of programmes on sustainable consumption and production patterns, 19 June 2012, UN Doc. A/CONF.216/5 (hereinafter «10YFP»).

40. The Stakeholder Forum for a Sustainable Future, «Review of implementation of Agenda 21 – Synthesis», January 2012, https://sustainabledevelopment.un.org/content/documents/641Synthesis_report_Web.pdf, (last accessed: 20 July 2016), p. 7.

41. The Stakeholder Forum for a Sustainable Future, «Review of implementation of Agenda 21 – Detailed review of implementation of Agenda 21», *supra* at 32, p. 24.

produce and consume, by enhancing international cooperation among governments, international organisations and private actors. UNEP is in charge of the secretariat of this framework of programmes, and is in charge of the creation and administration of a trust fund for sustainable consumption and production⁴². It shares the philosophy of common but differentiated responsibilities (CBDR) and subsidiarity, since it encourages in the first place industrialised countries to make all due efforts to implement this concept, and to adopt regional and national initiatives to fulfil this objective. Hence, voluntary «*sustainable consumption and production programmes*» (SCPP) can be established and the 10YFP insists on flexibility «*to respect different levels of development and capacities and national ownership of each country's development strategies, priorities and policies, and to enable the inclusion of new and emerging issues, with developed countries taking the lead in implementing measures to achieve more sustainable patterns of consumption and production*»⁴³. It nevertheless takes into account the need to avoid using environmental considerations to introduce disguised discrimination or restriction on international trade⁴⁴, in accordance with WTO law.

Among the declared «functions» of this framework of programmes, the promotion and education of both governments, enterprises and consumers is central⁴⁵, along with the sharing of information and best practices⁴⁶. The scientific and technological aspect is also duly addressed: responsible consumption and production requires innovation⁴⁷ and the strengthening of technological capacities⁴⁸, including by means of transfer of technologies⁴⁹. Given the focus on sharing of information, the «Global SCP Clearinghouse» was set up⁵⁰, in order to give information on SCP strategies implemented worldwide, to share and browse call for cooperation and project as well as funding opportunities, through an internet database. The list of the ongoing SCP initiatives reflects the variety of actions susceptible to be carried out, such as the promotion of

42. 10YFP, *supra* at 39, para. 6, b).

43. *Ibid.*, para. 2, a).

44. *Ibid.*, para. 2, e).

45. *Ibid.*, para. 3, a) and e).

46. *Ibid.*, para. 3, b), c) f), j) and m); see for instance, HILLGRÉN A., BRÖCKL M., HALONEN M., «Nordic best practices – Relevant for UNEP 10YFP of sustainable consumption and production», Nordic Council of Ministers, 2016, at: <http://norden.diva-portal.org/smash/get/diva2:905930/FULLTEXT02.pdf> (last accessed: 20 July 2016).

47. 10YFP, *supra* at 39, para. 3, j).

48. *Ibid.*, para. 3, h).

49. *Ibid.*, para. 3, m).

50. <http://www.scpclearinghouse.org> (last accessed: 20 July 2016).

efficient cities, education for sustainable consumption, awareness-raising actions and capacity building, etc.

The 10YFP is, as a consequence, a new layer added to a «*multiscale, multiactor policies, frameworks, programmes, and interventions*»⁵¹. Since the 10YFP is an extension of the rather unsuccessful Marrakech process, «*some are pessimistic about its capacity to contribute significantly to addressing global resource-use levels*»⁵². Yet, the assessment of the success, or failure, of the 10YFP will only be possible in the future, since such a framework of programmes cannot, obviously, solve all the problems in a short period of time. Some will most certainly regret its flexibility, its focus on voluntary commitments, the lack of a clear definition of goals and obligations and, more generally, the absence of binding legal obligations regarding SCP.

2.3. THE LACK OF BINDING OBLIGATIONS ON SUSTAINABLE CONSUMPTION AND PRODUCTION

Despite the international efforts described above, «*a binding international legal framework concerning SCP does not seem to exist. Most of the norms related to sustainable use and conservation of natural resources remain as soft declaratory law*»⁵³. It is indeed about time to adopt stringent rules to address efficiently the question of the sustainable use of resources. However, a more ambitious approach seems difficult to achieve. It suffices to recall that the recent Paris Agreement⁵⁴ does not address this issue, and limits itself to merely reiterate in its preamble that «*sustainable lifestyles and sustainable patterns of consumption and production, with developed country Parties taking the lead, play an important role in addressing climate change*»⁵⁵.

The reason of the absence of more stringent obligations regarding responsible consumption and production appears to be rather straightforward: feasibility constraints. It is undisputed that the protection of climate change is a moral and ethical obligation, towards nature as

51. HOBSON K., «“Weak” or “strong” sustainable consumption? Efficiency, degrowth, and the 10 Year Framework of Programmes», *Environment and Planning C: Government and Policy*, 2013, vol. 31, pp. 1082-1098, p. 1082.

52. *Ibid.*, p. 1085.

53. CALLE M.-A., «Private Standards Based on Sustainable Production Methods: A View from Global Environmental Governance», *University College Dublin Law Review*, 2014, vol. 14, pp. 100-127, pp. 113-114.

54. UNFCCC, Conference of the Parties, Twenty-first session Paris, 30 November to 11 December 2015, Adoption of the Paris Agreement, 12 December 2015, FCCC/CP/2015/L.9/Rev. 1.

55. *Ibid.*

well as actual and future generations. However, international law and international relations are not primarily driven by ethical principles, unfortunately, but rather by the self-interests of States. It doesn't imply that the States do not take ethics into account at all, but such considerations will be competing with, *inter alia*, economic growth, cultural attitudes and traditions⁵⁶, internal political stability, power, etc. It doesn't mean either that international organisations, and the UN most particularly, will not support ethically appealing solutions but, ultimately, they cannot impose their will on the States. The sovereignty of the States conveys that they must accept beforehand to be bound by any international set of rules, for them to produce legal obligations. Thus, even if we agree on the fact that Nations are not going to sufficiently address responsible production and consumption without «*some form of hard law to encourage, if not force, them to do so*»⁵⁷, only the strong conviction that such rules can benefit to a majority of States can compel them to accept to be subject to «hard», binding rules. This is a new example demonstrating that «*the focus on ethics alone has resulted in numerous proposals that have little chance of being accepted. Pursuit of these proposals has resulted in little progress in reducing emissions. The world would be better served, and a more ethical outcome achieved, if the focus were instead on feasible treaties that actually reduce emissions*»⁵⁸.

In fact, as the UNEP acknowledged in its 2012 SCP report, despite the lack of a multilateral binding treaty on SCP, some international agreements indirectly impact products' life cycle, such as the Convention on Biological Diversity⁵⁹ or the Stockholm Convention on Persistent Organic Pollutants⁶⁰. In other words, binding rules can be adopted punctually in multilateral treaties of limited scope, either *ratione materiae* or regarding their ambitions, but one would be over optimistic to actually expect a «big-bang» regarding SCP in the near future. The States have still diverging interests and, in the absence of consensus, there is no chance to agree on a multilateral treaty and even less to see it ratified, which would mean the lack of *pacta sunt servanda* effect.

56. See LANDY T. M., «The 1993 National Conference on Sustainable Solutions – Population, Consumption and Culture», Boston College Environmental Affairs Law Review, 1994, vol. 21, n.° 2, pp. 277-289.

57. PENDERGRASS J., in DESAI N. and al., «Symposium: The Road from Johannesburg», *supra* at 18, p. 824.

58. POSNER E. A., WEISBACH D., «International Paretianism: A Defense», Chicago Journal of International Law, 2013, vol. 13, n.° 2, pp. 347-358, p. 348.

59. Convention on Biological Diversity, signed at Rio de Janeiro on 5 June 1992, UNTS, vol. 1760, p. 79.

60. Stockholm Convention on Persistent Organic Pollutants, signed at Stockholm on 22 May 2001, UNTS vol. 2256, p. 119.

Otherwise stated, the Rio Declaration, Agenda 21 and 10YFP *may* be not ambitious enough to actually reduce unsustainable consumption, but they are part of a general process which major aim is to convince all the relevant actors of the need to change the patterns of consumptions, since more ambitious approaches would more likely be rejected by the States. As a consequence, it demonstrates that the UN actions aim primarily at raising the awareness about SCP, which would, hopefully, put an increased pressure on States to abide by more stringent rules⁶¹. Agenda 21 and 10YFP *may* thus appear «weak»⁶² but they are, if not the catalyst, at least the *sine qua non* condition for better results in the future. Put differently, this soft, voluntary and flexible approach appears to be an «enabler» since it aims at raising the awareness of governments, enterprises and consumers on sustainable consumption and production, being clear that all these different actors must recognise that there is a problem, before accepting to commit to legally binding rules to tackle it.

Unfortunately, at least until 2012, «*business as usual has prevailed and unsustainable patterns of consumption and production persist*»⁶³, which means that a lot still needs to be done to make all the stakeholders, producers and consumers agree on the need for change. In this respect, the added value of 10YFP, Agenda 21 and the 2030 Agenda for Sustainable Development is, at least, programmatic since it reflects the agreement of the international community on what would be *desirable* and which elements are to be progressively included in other instruments, declaration, programmes or guidelines. For instance, the United Nations Guidelines for Consumer Protection declares that «*Governments should promote the development and implementation of policies for sustainable consumption and the integration of those policies with other public policies*»⁶⁴. The same document also addresses the role of businesses⁶⁵ and consumers, insisting on the fact that «*informed consumers have an essential role in promoting consumption that is environmentally, economically and socially sustainable, including through the effects of their choices on producers*»⁶⁶. Likewise, the Resolution «The future

61. OSOFSKY H. M., «Defining Sustainable Development After Earth Summit 2002», *supra* at 1, p. 25.

62. HOBSON K., «“Weak” or “strong” sustainable consumption? Efficiency, degrowth, and the 10 Year Framework of Programmes», *supra* at 51, p. 1083.

63. The Stakeholder Forum for a Sustainable Future, «Review of implementation of Agenda 21 – Synthesis», *supra* at 40, p. 15.

64. United Nations Guidelines for Consumer Protection (as expanded in 1999), 2003, *supra* at 34, para. 43.

65. *Ibid.*: «*Business has a responsibility for promoting sustainable consumption through the design, production and distribution of goods and services*».

66. *Ibid.*

we want» recalls the importance of SCP⁶⁷ and Goal 12 of the 2030 Agenda for Sustainable Development is dedicated to sustainable consumption and production patterns⁶⁸ and, even if it is merely a reiteration of Agenda 21 and 10YFP objectives, it sets as an objective to «by 2030, achieve the sustainable management and efficient use of natural resources»⁶⁹. The integration of SCP considerations in other documents and policies is indeed most needed, since it is a global issue which must be construed broadly, because «the fundamental goal must be to displace «growth» as the *raison d'être* of modernity via political, institutional, and ontological changes across numerous facets of societies»⁷⁰.

3. ADDRESSING RESPONSIBLE CONSUMPTION AND PRODUCTION AS A GLOBAL ISSUE

The objective of responsible consumption and production is to adopt «eco-efficiency as the business norm for the 21st century»⁷¹, eco-efficiency being the ability to produce more useful goods and services while continuously reducing the consumption of resources and the subsequent pollution⁷². As such, SCP could be acceptable from both an environmental and a business perspectives, thus complying with the feasibility constraint identified previously. The «acceptability» of this concept is crucial since SCP can only be successful if it is recognised by all the relevant actors, from developed to developing countries (3.1), and from governments to businesses and consumers, participating to the modern «environmental governance»⁷³ (3.2).

67. UN Doc. A/RES/66/288, *supra* at 9, para. 61: «We recognize that urgent action on unsustainable patterns of production and consumption where they occur remains fundamental in addressing environmental sustainability and promoting conservation and sustainable use of biodiversity and ecosystems, regeneration of natural resources and the promotion of sustained, inclusive and equitable global growth».

68. NANDA V. P., «Sustainable Development, International Trade and the Doha Agenda for Development», *supra* at 1, p. 58; UN Doc. A/RES/66/288, *supra* at 9, para. 4: «We recognize that poverty eradication, changing unsustainable and promoting sustainable patterns of consumption and production and protecting and managing the natural resource base of economic and social development are the overarching objectives of and essential requirements for sustainable development».

69. UN Doc. A/RES/66/288, *supra* at 9, para. 12.2.

70. HOBSON K., «“Weak” or “strong” sustainable consumption? Efficiency, degrowth, and the 10 Year Framework of Programmes», *supra* at 51, p. 1083.

71. STIGSON B., «Eco-efficiency as the Business Norm for the 21st Century: The Challenge to Industry and Government», *The Brown Journal of World Affairs*, 1996, vol. III, n.º 2, pp. 289-297, p. 289.

72. *Ibid.*, p. 290.

73. See WITTE J. M., STRECK C., BENNER T., «The Road from Johannesburg: What Future for Partnerships in Global Environmental Governance?», in WITTE J. M., STRECK C.,

3.1. RESPONSIBLE CONSUMPTION AND PRODUCTION FOR BOTH DEVELOPED AND DEVELOPING COUNTRIES

Responsible consumption and production is primarily aiming at changing the economic orientation, and maybe the socio-political philosophy, of developed countries. After having heavily relied on carbon and fossil fuels to support their economic growth, they are now required to transform their economies into green, or at least greener, ones. Meanwhile, industrialised countries blame developing countries for their allegedly irresponsible use of finite natural resources, thus jeopardising the environment in the medium or long term. At the heart of the discrepancies between industrialized and developing countries lays the question of the right to development and intra-generational justice: developing countries do not want to give up on their right to growth, and insist on the fact that industrialised countries are responsible, both historically and actually, of global warming and pollution, because of the ever increasing consumption. Put differently, responsible consumption «represents the broader environmental conflict between the countries of the Northern and Southern hemispheres [...]: the North blaming the South for overpopulation and the South blaming the North for overconsumption»⁷⁴.

This reciprocal blaming should not hide the real situation, *i.e.* that it is necessary to address consumption and production issues from both industrialised and developing countries⁷⁵. Indeed, «developed countries have relatively stable populations, but high rates of per capita consumption. In contrast, developing countries have low per capita consumption, but rapidly expanding populations»⁷⁶. Hence, SCP is of uttermost importance for the developing countries in order to reduce poverty and guide them through a carbon-free development path, which explains why target 12.a of Goal 12 of the 2030 Agenda for Sustainable Development insists on the need to «Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production». Meanwhile, due attention must be paid to the fact that a great number of goods consumed in the Northern hemisphere are being produced in developing countries. As a consequence, responsible consumption and production are intertwined and can only be apprehended globally, since

BENNER T. (eds.), *Progress or Peril? Partnerships and Networks in Global Environmental Governance. The Post-Johannesburg Agenda*, at: <http://www.gppi.net/publications/energy-security/article/progress-or-peril/> (last accessed: 20 July 2016), pp. 59-84.

74. SALZMAN J., «Sustainable consumption and the Law», *supra* at p. 1252.

75. *Ibid.*

76. OSOFSKY H. M., «Defining Sustainable Development After Earth Summit 2002», *supra* at 1, p. 115.

the increasing demand of consumers in developed countries has a direct impact on the production side. And yet, *«those regions then suffer pressure from production on their own environments and populations»*⁷⁷. SCP is, as previously stated, construed in a way echoing the CBDR principle, by asking the developed countries to show the way to other countries. At the same time, SCP could be a mean of reducing the unbalances between Northern and Southern countries and of reducing poverty, ensuring a better distribution of goods and services. Para. 4.5 of Agenda 21 subsequently stresses that: *«Changing consumption patterns will require a multipronged strategy focusing on demand, meeting the basic needs of the poor, and reducing wastage and the use of finite resources in the production process»*⁷⁸.

Indirectly, SCP could furthermore be a way to mitigate the effects of globalisation, both on the environment and on the economic disparities, since the progressive dismantling of trade barriers conveys significant harm to the environment⁷⁹. Indeed, companies are relocating to less-developed countries *«to take advantage of the lower costs of labor, taxes, and compliance with environmental standards»*⁸⁰, fostering a *«race to the bottom»*⁸¹ on, among other things, environmental standards. While competition between countries to attract foreign capital and enterprises will probably continue in the forthcoming decades, because of its economic benefits for the enterprises and the developing countries, SCP could be a way of limiting relocations which would, at least, not be based on environmental *«lowest bidder»*. For the time being, unfortunately, *«because free trade encourages countries to specialize, some will inevitably specialize in pollution-intensive goods»*⁸². It must be added however that more environmentally sound productions can create new markets, and the relevant economic

77. LORZ B., «EU policies for Sustainable Consumption and Production – the Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy», *supra* at 23, p. 278.

78. Agenda 21, *supra* at 24, para. 4.5.

79. See for instance, STENZEL P. L., «Why and how the World Trade Organization must promote environmental protection», Duke Environmental Law & Policy Forum, 2002, vol. 13, n.º 1, p.1-53; JEFFERY M., «Environmental Imperatives in a Globalised World: The Ecological Impact of Liberalising Trade», Macquarie Law Journal, 2007, vol. 7, pp. 25-51.

80. EDWARDS T., «The Relocation of Production and Effects on the Global Community», Colorado Journal of International Environmental Law and Policy, 2002, vol. 13, n.º 1, pp. 183-209, p. 187; JEFFERY M., «Environmental Imperatives in a Globalised World: The Ecological Impact of Liberalising Trade», *supra* at 79, p. 31.

81. EDWARDS T., «The Relocation of Production and Effects on the Global Community», *supra* at 80, p. 190.

82. *Ibid.*, p. 207.

benefits, for less-developed countries. For instance, Brazil⁸³ and China are, along with the USA, the largest producers of biofuels⁸⁴, even if such new productions can paradoxically entail adverse effects for the environment⁸⁵ and food prices⁸⁶.

From a legal perspective, responsible production is *prima facie* easier to ensure, by means of norms or market-based measures⁸⁷, either international, regional or national⁸⁸, addressing the pollutants and by setting long term objectives. Furthermore, norms and policies aiming at protecting developed countries' populations from environmental dangers caused by wastes, pesticides and chemicals *«has led many developed countries to devise a variety of regulatory schemes to control the export of these materials»*⁸⁹. In turn, regarding sustainable consumption *«there is neither a common understanding of the problem nor of the solution. If our current practices represent overconsumption, then what level of consumption is sustainable? [...] Unlike sustainable production's straightforward goal of minimizing pollution, sustainable consumption's ultimate objective remains indistinct, blurred by disagreement over appropriate measures, issues of international and intergenerational equity, and, most important, implications on individual lifestyles»*⁹⁰. This reveals, once again, the limits of the international environmental law when it comes to SCP: States are still mainly driven by short-term, self-interest considerations and individual behaviours cannot be easily transformed, in spite of the increasing public awareness about environmental issues. Responsible consumption

83. See CALFUCOY P., «The Brazilian Experience in Building a Sustainable and Competitive Biofuel Industry», *Wisconsin International Law Journal*, 2012, vol. 30, n.º 3, pp. 558-594.

84. DE VERA E. R., «The WTO and Biofuels: The Possibility of Unilateral Sustainability Requirements», *Chicago Journal of International Law*, 2008, vol. 8, n.º 2, pp. 661-679, p. 665.

85. *Ibid.*, pp. 667-668; OTTINGER R. L., MILLER S. E., «Bioenergy in Developing Countries: Potential and Risks», *Renewable Energy Law and Policy Review*, 2010, n.º 1, pp. 23-32.

86. See HARRISON J. A., VON MALTITZ G. P., HAYWOOD L., SUGRUE A., DÍAZ-CHÁVEZ R. A., AMEZAGA J. M., «Mechanisms for Driving Sustainability of Biofuels in Developing Countries», *Renewable Energy Law and Policy Review*, 2010, n.º 2, pp. 197-211.

87. See, for instance, HARSCH B. A., «Consumerism and Environmental Policy: Moving Past Consumer Culture», *supra* at 25, p. 553-554.

88. Including extraterritorially, JEFFERY M., «Environmental Imperatives in a Globalised World: The Ecological Impact of Liberalising Trade», *supra* at 79, pp. 47-48.

89. NANDA V. P., «International Environmental Protection and Developing Countries' Interests: The Role of International Law», *Texas International Law Journal*, 1991, vol. 26, n.º 3, pp. 497-519, p. 518.

90. SALZMAN J., «Sustainable consumption and the Law», *supra* at 6, p. 1255.

is, then, more difficult to address and implement, since it is difficult to change State and consumers' habits through international law. However, even if governments and consumers are part of the problem, along with producers, they can contribute to the solution as well.

3.2. RESPONSIBLE CONSUMPTION AND PRODUCTION AND «ENVIRONMENTAL GOVERNANCE»

The underlying philosophy of sustainable development is expressed by G. H. Brundtland when she outlined: *«Economic policy must be reconciled with the laws and limitations of nature. We should institute a comprehensive revision of economic models so that sustainable development becomes both the goal and the driving force. The concept of growth must be widened to include use of renewable and non-renewable resources. We must use administrative and economic instruments to promote-sustainable consumption patterns»*⁹¹. According to this inclusive approach, it is indeed necessary to reconsider the notion of «growth»⁹² by decoupling growth from pressures on natural resources⁹³, to rethink taxation instruments and to foster technological breakthroughs, but it is also necessary to change the «consumer culture» of the population. Governments and consumers are thus the primary targets and actors of SCP, hoping that their conjunctive actions will compel the producers to adopt more environmental-friendly behaviours. If it were successful it would turn capitalism into a mean to enforce environmental protection. As a consequence, SCP, and more generally sustainable development, are at the crossroads of law, sociology, political science, economics and ecology, the lawyers being *«the perfect intermediaries between scientist, policymakers and corporations [since they] have already learned to speak each of these languages»*⁹⁴.

As such, responsible consumption and production is a perfect example of the *«shift from the stiff formal waltz of traditional diplomacy to the jazzier dance of improvisational solution-oriented partnerships that may include non-government organizations, willing governments and other stakeholders»*⁹⁵.

91. BRUNDTLAND G. H., «The Challenge of Sustainable Production and Consumption Patterns», *supra* at 22, p. 30.

92. *Ibid.*, p. 24; FARBER D. A., «Sustainable Consumption, Energy Policy, and Individual Well-Being», *Vanderbilt Law Review*, 2012, vol. 65, n.° 6, pp. 1479-1525, pp. 1498-1501.

93. FABRICK L., «Sustainable Development: A Call to Arms», *supra* at 3, p. 556.

94. *Ibid.*

95. World Resources Institute News Release, quoted in WITTE J. M., STRECK C., BENNER T., «The Road from Johannesburg: What Future for Partnerships in Global Environmental Governance?», *supra* at 73, p. 59.

In other words, if the international framework for SCP is flexible, multi-layered and stratified, it is because the global environmental governance⁹⁶ is no longer limited to States, and no longer following a top-down approach. On the contrary, *«in order to be effective, efficient, and legitimate, governments and international organizations need to work with partners from all other sectors – business as well as civil society – at a variety of levels – local, national, regional and global»*⁹⁷. Hence, global environmental governance requires new approaches and mechanisms for international cooperation⁹⁸, to address efficiently SCP and sustainable development.

However, since States are still the primary subjects and actors of international law and international relations, they remain the first addressees of the soft-law adopted at the UN level. Hence, para. 4.8 of Agenda 21 urges all countries to promote sustainable consumption patterns, while developed countries must take the lead and the developing ones may seek to *«achieve sustainable consumption patterns in their development process, guaranteeing the provision of basic needs for the poor, while avoiding those unsustainable patterns, particularly in industrialized countries, generally recognized as unduly hazardous to the environment, inefficient and wasteful, in their development processes»*⁹⁹. To reduce the technological, economic and ecological unbalances, developed countries are requested to provide for assistance to developing ones¹⁰⁰, transfer technologies¹⁰¹ and comply, more generally, with the cooperation principle¹⁰². Governments are furthermore asked to develop domestic policies encouraging more sustainable patterns of consumption and production¹⁰³, within the more general

96. See NAJAM A., PAPA M., TAIYAB N., *Gobla Environmental Governance – A reform Agenda*, IISD, Ministry of Foreign Affairs, Government of Denmark, 2006, at: <https://www.iisd.org/pdf/2006/geg.pdf> (last accessed: 20 July 2016), p. 9: «GEG[Global Environmental Governance] refers to the sum of organizations, policy instruments, financing mechanisms, rules, procedures and norms that regulate global environmental protection. Within the context of the evolution of global environmental politics and policy, the end goal of global environmental governance is to improve the state of the environment and to eventually lead to the broader goal of sustainable development»; CALLE M.-A., «Private Standards Based on Sustainable Production Methods: A View from Global Environmental Governance», *supra* at 53, pp. 103-108.

97. WITTE J. M., STRECK C., BENNER T., «The Road from Johannesburg: What Future for Partnerships in Global Environmental Governance?», *supra* at 73, p. 61.

98. CALLE M.-A., «Private Standards Based on Sustainable Production Methods: A View from Global Environmental Governance», *supra* at 53, p. 105.

99. Agenda 21, *supra* at 24, para. 4.8, c).

100. *Ibid.*

101. *Ibid.*, para. 4.17, c).

102. *Ibid.*, para. 4.12 and 4.13.

103. *Ibid.*, para. 4. 17, b).

ambit of green economy policies¹⁰⁴. As previously stated, Agenda 21 and Goal 12 of the 2030 Agenda for Sustainable Development set some goals aiming at minimizing the generation of wastes, by encouraging recycling, reducing wasteful packaging of products¹⁰⁵ and encouraging more environmentally sound products¹⁰⁶. States are also asked to promote eco-labelling¹⁰⁷ and to include SCP considerations in government purchasing¹⁰⁸ and, more generally, public procurement¹⁰⁹. Goal 12 of the 2030 Agenda for Sustainable Development sets the target of promoting sustainable public procurement practices. In this respect, the World Bank and other multilateral development banks established, with several UN Agencies, the «*Environmentally and Socially Responsible Procurement Working Group*». Other networks at national or local levels, such as «*Procura+*» or «*Local Environmental Management Systems and Procurement*», contribute to the global objective of reshaping public procurement policies and introduce SCP through public procurement. These initiatives contributed to the adoption of guidelines¹¹⁰ and, in order to share best practices, the creation of on-line services. Furthermore, the Marrakech task force on Sustainable Public Procurement led by Switzerland launched in 2009 a project entitled «*Capacity building for Sustainable Public Procurement in developing countries*», consisting in trainings and assistance to governments, with some Countries, such as Colombia, Lebanon or Uruguay, developing pilot projects¹¹¹. At the European level, the OECD invited its members to elaborate adequate policy frameworks¹¹² but the most important step was taken by the EU in its procurement directives, since it constitute binding law for its Member States. While EU Directive 2004/18 already

104. UN Doc. A/RES/66/288, *supra* at 9, para. 58, o).

105. See for instance, ALSOP D., «Consumerism and Packaging: Environmental Evils and the New Zealand Response», *Waikato Law Review*, 1996, vol. 4, n.° 2, pp. 141-153.

106. Agenda 21, *supra* at 24, para. 4. 19.

107. *Ibid.*, para. 4. 21; See OST F., «La responsabilité, fil d'Ariane du droit de l'environnement», *Droit et société*, 1995, n.° 30-31, pp. 281-322, pp. 295-296.

108. Agenda 21, *supra* at 24, para. 4.23.

109. *Ibid.*

110. UNEP, Sustainable Public Procurement Implementation Guidelines – Introducing UNEP's Approach, 2012, at: <http://www.unep.fr/scp/procurement/docsres/ProjectInfo/UNEPImplementationGuidelines.pdf> (last accessed: 20 July 2016).

111. See <http://www.unep.fr/scp/procurement/pilotcountries/> (last accessed: 20 July 2016).

112. OECD, «Recommendation of the Council on Improving the Environmental Performance of Public Procurement», 2002, at: <http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=46&InstrumentPID=43&Lang=en&Book=False> (last accessed: 20 July 2016).

acknowledged the importance of sustainable development in its recitals¹¹³, the new Directives 2014/24¹¹⁴ and 2014/25¹¹⁵ insist on this aspect, in accordance with the EU Commission strategy for smart, sustainable and inclusive growth¹¹⁶. Article 76 of EU Directive 2014/24 even provides that: *«Member States may also provide that the choice of the service provider shall be made on the basis of the tender presenting the best price-quality ratio, taking into account quality and sustainability criteria for social services»*.

Governments are furthermore invited to promote the integration of environmental externalities in the prices of products and services, to develop environmental charges and taxes¹¹⁷ and to ensure the promotion of environmentally sound products and technologies¹¹⁸. Not surprisingly, the United Nations Guidelines for Consumer Protection echoes these objectives by stating that *«Governments should consider a range of economic instruments, such as fiscal instruments and internalization of environmental costs, to promote sustainable consumption, taking into account social needs, the need for disincentives for unsustainable practices and incentives for more sustainable practices, while avoiding potential negative effects for market access, in particular for developing countries»*¹¹⁹. Hence, as identified by J. Salzman, governments are acting, simultaneously but with different intensity, as «gatekeepers» controlling the products and services, «source of information» towards consumers, and «price-controllers» to integrate externalities through price or taxes¹²⁰. However, governmental interventions are only succeeding in addressing patterns of consumption but not the levels of consumption¹²¹, which makes it necessary to involve other actors into SCP.

113. Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, OJ L 134, 30 April 2004, pp. 114-240.

114. Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC, OJ L 94, 28 March 2014, pp. 65-242.

115. Directive 2014/25/EU of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC, OJ L 94, 28 March 2014, pp. 243-374.

116. Communication from the Commission, EUROPE 2020 A strategy for smart, sustainable and inclusive growth, COM/2010/2020 final.

117. Agenda 21, *supra* at 24, para. 4. 25.

118. *Ibid.*, para. 4. 26.

119. United Nations Guidelines for Consumer Protection (as expanded in 1999), 2003, *supra* at 34, para. 52.

120. SALZMAN J., «Sustainable consumption and the Law», *supra* at 6, p. 1259.

121. *Ibid.*, p. 1267.

Indeed, apart from States and the relevant UN Institutions, Agencies and Programs, other international organisations, such as the World Bank or WTO, can also contribute to SCP, since they also take into account sustainable development and environmental protection. Moreover, global environmental governance on SCP is aimed at the civil society to change the consumers' habits, to make them collaborate to the objective of reducing the environmental harms caused by consumption. This action requires also the collaboration of Non-Governmental Organisations (NGOs), to spread changes among the society, particularly in terms of awareness-raising, education, training and networking¹²². NGOs such as WWF¹²³, the Northern Alliance for Sustainability, the International Coalition for Sustainable Production and Consumption¹²⁴ or Greenpeace can indeed contribute to the global objective of implementing SCP, may it be by stressing the actual *lacunae*. Greenpeace, for instance, insisted on the fact that: «agreeing on aspirational long-term SDGs by 2015 to be achieved by 2030 simply won't deliver sustainability; it's too little, too late»¹²⁵.

Consumers are, in turn, addressees of International, Governmental and NGOs actions, on education to Sustainable Development¹²⁶ which «concerns the role of education, public awareness and training as key instruments in attaining sustainable development»¹²⁷ and global social justice¹²⁸. The aim is to develop some sort of «consumer responsibility»¹²⁹, at least at the moral and ethical levels, since their consumption choices influence directly the production side. In other words, the consumers can become actors of environmental protection¹³⁰, because they share a part of environmental responsibility, even if «the literature on altering consumption shares a basic

122. CALLE M.-A., «Private Standards Based on Sustainable Production Methods: A View from Global Environmental Governance», *supra* at 53, p. 116.

123. See <http://www.worldwildlife.org/initiatives/food> (last accessed: 20 July 2016).

124. See <http://www.icspac.net/> (last accessed: 20 July 2016).

125. Greenpeace, Sustainable Development Goals New global goals to be agreed at Rio+20, 2012, at: <http://www.greenpeace.org/international/Global/international/publications/RioPlus20/Sustainable-Development-Goals.pdf> (last accessed: 20 July 2016).

126. See REST A., «From “Environmental Education” to “Education for Sustainable Development” – The Shift of a Paradigm», *Environmental Policy and Law*, 2002, vol. 32, n.º 2, pp. 79-85.

127. *Ibid.*, p. 80.

128. See MICHELETTI M., STOLLE D., «Mobilizing Consumers to Take Responsibility for Global Social Justice», *The Annals of the American Academy of Political and Social Science*, 2007, vol. 611, pp. 157-175.

129. U. HANSE, U. SCHRADER, «A Modern Model of Consumption for a Sustainable Society», *supra* at 19, p. 444.

130. BINNINGER A.-S., ROBERT I., «Consommation et développement durable – Vers une

*flaw with other environmental protection strategies employed or suggested up to this time, namely, an overemphasis on technical solutions and a neglect of cultural ones»*¹³¹. Indeed, the shift in consumption patterns can be carried out at different levels: abstention from consumption, reduction of consumption, use of ecologically sound substitutes or variants¹³².

All these actions require nevertheless an adequate level of information, provided by Governments and independent organisations¹³³, along with consumer education¹³⁴ and consumer protection. These are the prerequisites to force in-depth changes in the production side, since they can empower the consumers with a real decision-making power throughout their purchasing decisions. It is nevertheless necessary to change the consumer culture since the combination of both the «reification of images»¹³⁵ and the belief that the market is the primary means of satisfying desires¹³⁶ is the major obstacle to a new pattern of consumption. Education is thus the key of sustainable development, to turn the citizen into a «political consumer»¹³⁷ defending, among other things, «green consumerism»¹³⁸. However, the *«average consumer is more likely to act in accordance with her beliefs in the context of boycotts or fair trade movements organized by social or political movements than when making individual decisions to purchase products»*¹³⁹. Another challenge to responsible consumption is without a doubt the price of the environmental sound products and services, since *«notwithstanding*

segmentation des sensibilités et des comportements», La Revue des Sciences de Gestion, 2008, vol. 1, n.° 229, pp. 51-59.

131. HARSCH B. A., «Consumerism and Environmental Policy: Moving Past Consumer Culture», *supra* at 25, p. 545.

132. U. HANSE, U. SCHRADER, «A Modern Model of Consumption for a Sustainable Society», *supra* at 19, p. 459-460; FARBER D. A., «Sustainable Consumption, Energy Policy, and Individual Well-Being», *supra* at 92, pp. 1502-1503.

133. U. HANSE, U. SCHRADER, «A Modern Model of Consumption for a Sustainable Society», *supra* at 19, p. 462.

134. HARSCH B. A., «Consumerism and Environmental Policy: Moving Past Consumer Culture», *supra* at 25, p. 608-610.

135. *Ibid.*, p. 559.

136. *Ibid.*, p. 562.

137. See CRANE D., «Environmental Change And The Future Of Consumption: Implications For Consumer Identity», Anuario Filosófico, 2010, vol. XLIII, n.° 2, pp. 353-379, pp. 358-361; STOLLE D., HOOGE M., MICHELETTI M., *Politics in the supermarket: political consumerism as a form of participation*, International Political Science Review, 2005, vol. 26, n.° 3, pp. 245-269.

138. CRANE D., «Environmental Change And The Future Of Consumption: Implications For Consumer Identity», *supra* at 137, pp. 369-375.

139. *Ibid.*, p. 376.

*all other constraints, consumers are only sovereign within the limits of their financial means»*¹⁴⁰. In other words, the fundamental problem is money: rich populations consume more but are also able to shift to greener and more expensive products, while the poor populations will usually go to the less environmental friendly products, because they are cheaper since they do not internalize the environmental costs.

Finally, in order to have a significant impact on emissions and pollution levels, SCP should ideally be at the centre of the preoccupations of the producers of goods and services, to consider the full life-cycle impacts of products¹⁴¹. Target 12.6 of Goal 12 of the 2030 Agenda for Sustainable Development is indeed to «*encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle*». It is worth noting that, despite the rather predictable reluctance of some businesses and shareholders, some progress has been made since companies are progressively implementing the SCP concept, yet most of the time on a voluntary and limited basis. Among the different actions, extended producer responsibility¹⁴² – as in the electrical appliance and electronics sector for instance¹⁴³ – or corporate social responsibility¹⁴⁴ can pave the way for new business methods more respectful of the environment. Meanwhile, private standards and certification processes, such as the ISO 14000 on environmental management standards, or voluntary reporting schemes, like the «Global Reporting Initiative»¹⁴⁵, are slowly accompanying businesses through a greener path. The road is still long, though, but there is room for hope if both governments and consumers provide sufficient incentives to avoid a mere «green washing» process.

140. U. HANSE, U. SCHRADER, «A Modern Model of Consumption for a Sustainable Society», *supra* at 19, p. 450.

141. United Nations Guidelines for Consumer Protection (as expanded in 1999), 2003, *supra* at 34, para. 45.

142. See SALZMAN J., «Sustainable consumption and the Law», *supra* at 6, p. 1289-1292.

143. MANOMAIVIBOOL P., VASSANADUMRONGDEE S., «Extended producer responsibility in Thailand: Prospects for policies on waste electrical and electronic equipment», *Journal of Industrial Ecology*, 2011, vol. 15, n.° 2, pp. 185-205; MANOMAIVIBOOL P., «Extended producer responsibility in a non-OECD context: The management of waste electrical and electronic equipment in India», *Resources, Conservation & Recycling*, 2009, vol. 53, n.° 3, pp. 136-144.

144. See for instance, LAMBOUY T., «Corporate social responsibility: sustainable water use», *Journal of Cleaner Production*, 2011, vol. 19, n.° 8, pp. 852-866.

145. See <https://www.globalreporting.org/Pages/default.aspx> (last accessed: 20 July 2016).

4. CONCLUSION

The concept of sustainable consumption and production is progressively being accepted and implemented by governments, businesses and consumers thanks to the combined effect of Agenda 21, the 10YFP and the 2030 Agenda for Sustainable Development. The lack of binding obligations at the international level is nevertheless problematic, since the issue of responsible consumption requires clear and effective rules. It would however be too optimistic to call for a multilateral agreement on SCP as long as all the relevant actors do not accept to tackle this problem. Calling for a reconsideration of the concepts of growth and development is unfortunately easier said than done, when traditional approaches of growth are still seen as means to overcome poverty or to keep on satisfying national demand. As such, SCP represents one of the biggest challenges of environmental law and policy in the future. Even if the promises of this approach are undisputed when it comes to significantly reduce the impact of mankind on the environment, the motives of discrepancy are still too numerous between developed and developing countries and between consumers and producers. As long as the mentality of governments, producers and consumers remains as it stands by now, SCP will keep on being difficult to implement through proper binding legal obligations, thus affecting its effectivity.

All the efforts carried out since 1992 are nevertheless more than welcome, since they address progressively the «consumer culture» of citizens and governments, which would not be possible *via* an international agreement. Being a complex issue, SCP cannot be solved by adopting simplistic solutions. Hence, the superposition of programmes, actions, frameworks, voluntary commitments, etc. is maybe the only way forward given the lack of consensus at the international level. It is unfortunately not sufficient in light of the urgency of the situation. Hopefully, further actions will contribute in the future to change the mind-sets since only «if sustainable consumption can become the overriding principle against which the advances of our societies will be measured, there is hope for us and for future generations»¹⁴⁶.

146. BRUNDTLAND G. H., «The Challenge of Sustainable Production and Consumption Patterns», *supra* at 22, p. 32.

Chapter 16: goal 13

Climate Action. Take urgent action to combat climate change and its impacts

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ABSTRACT:

Goal 13 of the United Nations Sustainable Development Goals to transform our World is dedicated to the aim of combating climate change and its impacts. Exploring the international architecture on climate change, and more particularly the regime set up by the United Nations Framework Convention on Climate Change (UNFCCC) and the 2015 Paris Agreement, this chapter supports the view that international instruments specially dedicated to climate change are insufficient to curb it. The analysis suggests that it is also necessary to adapt international economic law regime – WTO law and international investment treaties – to support the achievement of Goal 13.

1. INTRODUCTION

Climate change is one of the greatest and most complex challenges that the international community is dealing with. The phenomena of greenhouse gases and its potential dangers are known since the middle of the nineteenth century but men realize their devastating effects only in the past few years. Extreme weather events¹, natural catastrophes, dramatic geographic changes² or extinction of vegetable and animal species were necessary so that men would open their eyes and understand that there is danger in waiting. All the more so as this danger is multifaceted: first linked to the preservation of the environment and human and animal health, climate change is now considered as an obstacle to development and a threat to the global security³.

To address this complex and far-reaching threat, the answer must also be comprehensive. In order to curb climate change, it is necessary to deal with economic tools, agricultural models, human rights, military strategy, health problematic or even migratory policies. The United Nations *Sustainable Development Goals to transform our World* (hereinafter SDG) could be the right vehicle to impulse the deep and drastic change that is needed. The Goal 13 – Climate action – is dedicated to the aim of combating climate change and its impacts. The mere fact that this aim has been enshrined into the United Nations action agenda for the next fifteen years as a specific goal is a major step, when we remember that the *Millennium Development Goals* (2000-2015), that the SDG replace, did not mention the climate change challenge as such⁴. More importantly, the seventeen goals of this universal program have been developed in an interrelation perspective. As the UN General Assembly underlines in its resolution launching the program, «[t]he interlinkages and integrated

1. More stronger and more intense hurricanes; increase on temperatures; changes in precipitation patterns.
2. For example, rising of the sea level of Arctic Ocean, which becomes essentially ice free in summer.
3. The Security Council of United Nations has been engaged with this question several times. In 2011, it failed to qualify climate change as threat to international peace and security while the General Secretary, Ban Ki Moon, did it (see Secretary-General's Remarks to the Security Council on the Impact of Climate Change on International Peace and Security, New York, 20 July 2011, available at [<http://www.un.org/sg/STATEMENTS/index.asp?nid=5424>]). However, the Security Council recognized that «the possible adverse effects of climate change could, in the long-run, aggravate certain existing threats to international peace and security and that the loss of territory in some States due to sea-level rise, particularly in small low-lying island States, could have possible security implications» [<http://www.un.org/press/en/2011/sc10332.doc.htm>].
4. Climate change was encompassed into the Goal 7 on environmental sustainability.

nature of the Sustainable Development Goals are of crucial importance in ensuring that the purpose of the new Agenda is realized»⁵. This is certainly the core strength of the SDG agenda: all the goals programmed by the United Nations are considered as indivisible components of sustainable development.

Goal 13 takes a special position in the UN program. This special position is, first, linked to its relationship with sustainable development in general. Climate change leaves States and people in insecure position. For example, in its more dramatic effects, climate change directly threatens the territorial integrity of certain States⁶. The ability of other to face the indirect consequences of climate change, as migratory flow for example⁷, is undermined. This insecurity diverts efforts from searching effective vehicles to promote sustainable development: as long as a major climatic hazard weighs on destiny of states and people, it is impossible to design long-term effective and positive sustainable politics. In the same way, the fight against climate change absorbs huge financial resources that could not be injected in other priorities. Thus, climate change is a negative component of sustainable development as «its adverse impacts undermine the ability of all countries to achieve sustainable development»⁸. That is why the SDG call for an «urgent action». Second, Goal 13 occupies specific place in its relationship with other goals. Actions for climate change are deeply interconnected with Goal 7 – Affordable and clean energy–, Goal 8 – Decent work and economic growth – Goal 9 – Industry, innovation, infrastructure – or even Goal 12 – Responsible consumption, production. Goal 13 could be considered as an umbrella goal with a general and crosscutting scope but with very specific implications, especially in economic sectors. In other words, the conceptualization of strategies for climate change could not be fashioned *in vacuum*. They must be integrated into economic, environmental, agricultural or even cultural and educational programs. This chapter, in order to discuss the feasibility and ambitious of Goal 13, will more particularly focus on the strong interlinking between climate change and economic law supports.

5. Resolution adopted by the General Assembly on 25 September 2015, *Transforming our World: the 2030 Agenda for Sustainable Development*, A/RES/70/1, Preamble.
6. The Kiribati Islands are the symbol of the disaster of climate change. The government is considering building artificial islands to save the population. More generally, see GROTE STOUTENBURG J., *Disappearing Island States in International Law*, Brill, Nijhoff, 2015, 486 p.
7. See ATAPATTU S., «Climate Change: Disappearing States Migration and Challenges for International Law», *Washington Journal of Environmental Law and Policy*, 2014, pp. 1-35.
8. Resolution A/RES/70/1 above n 5, § 14.

This requires reminding the main targets pursued through Goal 13:

«13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning».

Two more specific targets are as follows:

«13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible.

13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities».

This second set of targets focuses on the aid that can be given to the developing States as actions for climate change largely relies on cooperation, solidarity and shared responsibilities. However, this chapter will pay more attention to the first set of targets, and more specifically to the target 13.2: *integrate climate change measures into national policies, strategies and planning*. This choice is motivated by the purpose of this study, which is to analyze the current positive law and look if international law is sufficient to support and encourage the adoption of measures necessary to mitigate climate change.

SDG Agenda is not a call for a new international order. It has been conceived as a program using the best legal existing opportunities in international law. Thus, when deciding the SDG, States have «reaffirm[ed] [their] commitment to international law and emphasiz[ed] that the Agenda is to be implemented in a manner that is consistent with [their] rights and obligations [...] under international law»⁹. It means that climate change actions must be based on international law and cannot drastically disturb

9. *Ibid.*, § 18.

the international normative architecture we know. This aspect of continuity is well highlighted concerning Goal 13: it is enshrined in the United Nations Framework Convention on Climate Change (UNFCCC). The General Assembly quotes it as the «primary international, intergovernmental forum for negotiating the global response to climate change»¹⁰. Since the UNFCCC regime has just been revitalized with the adoption, in December 2015, of the Paris Agreement, it is clear that this framework would be the heart of the program. But this chapter supports the view that it is not enough.

Taking into account the conclusions and recommendations of the Intergovernmental Panel on Climate Change (IPCC), which was created by the United Nations Environment Program (UNEP) in collaboration with the World Meteorological Organization (WMO), most efforts are concentrated on the limitation of the increase in global warming and more particularly on the reduction of emissions of greenhouse gases (carbon dioxide, methane, hydro fluorocarbons and nitrogen oxide as mains known greenhouse gases)¹¹. Thus the UNFCCC, despite a generic title, is entirely devoted to this aim as it can be deduced from its article 2:

«The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system».

Since 2009 and the Conference of Parties of the UNFCCC in Copenhagen (COP 15), States are determined to keep global warming to 2°C compared to the preindustrial era. This target is, according to the research of the IPCC, the necessary threshold to limit serious and irreversible consequences. To reach this target, global greenhouse gas emissions need to be reduced by 40-70% by 2050 and carbon neutrality needs to be reached by the end of the twenty-first Century at the latest. So, national measures that must be adopted by States to mitigate climate change have to contribute to the decarbonisation of all human activities (energy, transport, agriculture, industry...). Consequently, what is required is a progressive but strong and structural transformation of economic models and way of consumption.

Saying that, the interconnection with international economic law is obvious. Climate change actions such as cuts in domestic carbon-intensive

10. *Ibid.*, § 23.

11. See IPCC, Synthesis Report of the Fifth Assessment Report, *Climate Change 2014*, available at [https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf].

energy use or aids to climate-friendly technologies¹² could interfere with States rights and obligations according to international agreement in trade, investment and finance. This interference could be positive since international economic law and climate change challenge could be mutually supportiveness with, for example, the creation of new green economic opportunities. Yet, in the design of SDG, international economic order and the seventeen goals are supposed to be supportiveness. As the General Assembly underlines in the Resolution 70/1, «national development efforts need to be supported by an enabling international economic environment, including coherent and mutually supporting world trade, monetary and financial systems, and strengthened and enhanced global economic governance»¹³ and States affirm that they «will continue to promote a universal, rules-based, open, transparent, predictable, inclusive, non-discriminatory and equitable multilateral trading system under the World Trade Organization, as well as meaningful trade liberalization»¹⁴. However, it is less clear how international economic law tools could be articulated with UNFCCC. This is an important issue since the interconnection between both could also be negative as normative or operational conflicts may arise with, for example, the adoption of trade restrictive measures.

The chosen perspective leads to question whether Goal 13 is designed in a sufficiently integrative and crosscutting way to achieve its targets. In order to answer this question, section 1 of the chapter outlines key elements of the architecture settled by the UNFCCC and Paris Agreement on climate change. Section 2 suggests that, far from being only based on the UNFCCC, Goal 13 needs, on one hand, to mobilize mechanisms offered by international economic law and, on the other hand, to refashion such mechanisms in a climate-friendly way.

2. THE INTERNATIONAL ARCHITECTURE ON CLIMATE CHANGE: THE UNFCC IS INSUFFICIENT TO SUPPORT GOAL 13

The UNFCCC, adopted in 1992 and entered into force in 1994, is a complex system of several legal instruments, with a dynamic and

12. MILES K., «International Investment Law and Climate Change: Issues in the Transition to a Low Carbon World», Society of International Economic Law, Inaugural Conference, 2008, Working Paper n.º 27/28, p. 4, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1154588].

13. Resolution A/RES/70/1, above n 5, § 63.

14. *Ibid.*, § 68.

evolutionary process. Being near universal, with 197 Parties¹⁵, it is not surprising that it is considered as the cornerstone of Goal 13. However, it is far from being a self-sufficient governance regime. This can be seen more specifically through an overview of the main characteristics of the 2015 Paris Agreement: welcomed as a great diplomatic success, it is part of the consolidation of new climate change architecture; but it remains evasive concerning crucial aspects.

2.1. THE CLIMATE CHANGE ARCHITECTURE BEFORE THE 2015 PARIS AGREEMENT

The UNFCCC establishes a very general framework. The Convention does not define specific commitment for State parties. But it sets crucially important conditions that are both the strengths and the weaknesses of the regime. One of these fundamental conditions is the principle of common but differentiated responsibilities and respective capabilities. On the basis of that principle, it is well known that the UNFCCC distinguishes between industrialized countries, countries in economic transition and developing countries¹⁶. Most commitments in the Convention are placed on the first, while the others benefit from a specific treatment or are free from all obligations. For example, developed countries and countries in economic transition¹⁷ «shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs»¹⁸. But developing countries parties are not bound by this commitment. An moreover, developed countries, to the exclusion of countries in economic transition, «shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations [...]»¹⁹ with the understanding that

«[t]he extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and

15. 196 States and one regional economic integration organization (European Union).

16. See Annex I and Annex II of the Convention. States listed on the Annex II are those who support the most obligations.

17. States listed in Annex I.

18. Article 4 § 2.

19. Article 4 § 3.

social development and poverty eradication are the first and overriding priorities of the developing country Parties»²⁰.

This strategy of differentiated treatment has been double edged. It is supposed to be fair. But it is not perfectly realistic. For example, China or India are considered as developing countries while their industries produce important amount of greenhouse gases²¹. Consequently, the UNFCCC establishes a variable-geometry solidarity system and interferes with economic competition conditions between States, thus creating frustration and reluctance in more involved States.

The Kyoto Protocol adopted in 1997 and entered into force in 2005 is a key piece to complete and develop this framework. The Protocol is extremely complex. It is impossible to explain all its implications in this chapter. What is essential here is to quote two of its main aspects that are two faces of the same coin. In its first aspect, the Protocol continues the UNFCCC (des)equilibrium by imposing only to industrialized States new and specific commitments to reduce greenhouse gases emissions. For example, article 3 § 1 states that

«The Parties included in Annex I [of the UNFCCC, that is industrialized States] shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012».

For their part, developing States bear no commitment of reduction. To this must be added the fact that being precisely defined at the international level, with a specific timetable²², each State's commitment could be seen as a strong interference with its sovereignty.

In its second aspect, the Kyoto Protocol focuses on specific methods to pursue its objectives. Three market mechanisms are at the heart of the

20. Article 4 § 7.

21. China and India are among the 10 States with highest amount of greenhouse gases emissions. On the relativity of distinction between developed countries and developing countries in general see ABOVE GILLES-YEUM A., «Sustainable Development Goal 10: Reduced Inequalities».

22. See Annex B of the Protocol.

Protocol: the emission trading²³, the clean development mechanism²⁴ and the joint implementation²⁵. This approach is a deep innovation for the climate change regime. Economic tools serve the climate change challenge and private parties, especially investors, are associated to States' efforts for climate change²⁶. In this sense, Kyoto Protocol is more an economic agreement than an environmental agreement²⁷.

This strategy proves its worth but only in part. The reduction of greenhouse gases in industrialized countries exceeds targets fixed by the Protocol. The efforts realized by the European Union and its member States are, for example, particularly significant²⁸. But this result is also due to economic difficulties that have led to a decrease of industrial activities. Moreover, the emissions in developing countries have dramatically exploded. Emissions by the United States, which never ratified the Protocol, and by Canada, which has withdrawn from the Protocol in 2011, have also increased.

The follow-up of the negotiations into the UNFCCC shows that the system elaborated with the Kyoto Protocol – emission reduction commitments defined at the international level and variable solidarity – does not satisfy States. The Kyoto Protocol was supposed to run until 2012, date by which a new agreement should have been adopted. However, it is well-known that the 2011 Copenhagen Agreement is void of substance. States Parties only agreed on the fact that it is urgent to combat climate change and to stabilize the increase in global temperature to 2 degrees Celsius. This is all the same a significant politic statement but the COP refused to approve the agreement. Moreover, the discussions crystallized tensions between developed and developing countries concerning their

23. Article 17.

24. Article 12.

25. Article 6.

26. BOISSON DE CHAZOURNES L., «A propos de la régulation juridique de stratégies économiques dans le domaine de l'environnement», in MALJEAN-DUBOIS S. (dir.), *L'outil économique en droit international et européen de l'environnement*, Paris, La documentation française, 2002, pp. 227-256, pp. 234-240.

27. See BRADNEE CHAMBERS W., *Inter-Linkages: the Kyoto Protocol and the International Trade and Investment Regimes*, Tokyo, United Nations University Press, 2001, 281 p.; VAN ASSELT H., GUPTA J. and BIERMANN F., «Advancing the Climate Agenda: Exploiting Material and Institutional Linkages to Develop a Menu of Policy Options», *RECIEL*, 2005, pp. 255-264, p. 261.

28. The European Union has adopted an efficient system of exchanging greenhouse gas emission quotas. See Directive 2003/87/EC of the European Parliament and the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

respective involvement into the process of action for climate changes. The unsuccessfully negotiations reveal the need of a completely new global architecture. That is why the Paris Agreement breaks up the regime that had previously been established.

2.2. THE NEW CLIMATE CHANGE ARCHITECTURE SETTLED BY THE PARIS AGREEMENT

What is Paris Regime? Before examining the content of the Paris Agreement, it is necessary to clarify what we call «Paris Agreement» or «Paris regime». The question arises first at the formal perspective. Indeed, the Agreement cannot be isolated from the decision of the COP 21, adopted on 12th December 2015. This decision links the Paris Agreement with the UNFCCC and contains many substantial commitments (especially concerning the funding of actions in developing States). On the other hand, the Paris Agreement is inseparable from States' intended nationally determined contributions, which are the true heart of the new architecture²⁹. Consequently, the Paris Agreement, entered into force on 4 November 2016³⁰, is far from being self-sufficient. As the UNFCCC, it is a framework agreement, quite more specific than the first, but needing supplementary tools to be effective.

The question «what is Paris Agreement» also arises from the substantive viewpoint. We know that before the COP 21 took place, States disagreed on the legal effect that should be given to the 2015 agreement³¹. Even if the «Copenhagen Agreement» was unanimously regarded as a failure, States did not want strong and heavy commitments that would limit too restrictively their margin of action to conciliate climate change goals with other policies. The result of the Paris negotiations is a carefully balance between international obligations and States freedom. The Paris Agreement is a true international treaty with legal binding effect. But most of its provisions are drafted in a flexible manner in order to preserve State sovereignty. Mixing soft drafting and obligations of conduct rather than obligations of result, the Paris Agreement is minimally invasive in

29. See *infra*.

30. It is significant to point out that China and United States have ratified the treaty.

31. The Ad Hoc Working Group on the Durban Platform for Enhanced Action was charged to develop «a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties». See UNFCCC, Decision 1/CP.17 Establishment of an Ad Hoc Working Group on a Durban Platform for Enhanced Action, 2001, 15th March 2021, FCCC/CP/2011/9/Add.1, pt. 2.

States policies³². To understand it, the analysis will focus on the two main ways to settle this «new paradigm»³³. The first concerns the place given to the nationally determined contributions. The second is a new reading of the principle of common but differentiated responsibilities.

The nationally determined contributions: the heart of the new climate change architecture. Article 4 § 2 of the Paris Agreement states that «[e]ach Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions». It means that specific reduction commitments of each State are defined by the State itself in its domestic order. They are not negotiated, as in the Protocol Kyoto, at the international level. The determination of nationally determined contributions should be guided by the general goal of stabilizing global warming to 2 degrees Celsius. But each State keeps control over its specific targets and actions. In other words, the Paris regime establishes a «bottom-up architecture» which is less rigid than the previous system as it is not superimposed from above³⁴. However, the determination of national contributions is mandatory. Moreover, the contributions have to be progressively consolidated³⁵. Thus, the aim of the agreement is to build a solid mechanism of reduction of greenhouses gases on voluntarily measured commitments of States but in a constructive and irreversible movement. The risk, of course, is that States parties never adopt nationally determined contributions or do not respect it. There is no enforcement mechanism in the agreement. But the universality of the agreement is its major asset. As explained by S. Maljean-Dubois, nothing could be done against a State that does not take any national contribution or that does not ratify the agreement. But there is now a strong political pressure to States that decide not to act

32. BODANSKY D., «The Paris Climate Change Agreement: a New Hope?», forthcoming in the *AJIL*, 2016, available at [<https://conferences.asucollegeoflaw.com/workshoponparis/files/2012/08/AJIL-Paris-Agreement-Draft-2016-03-26.pdf>] (last consultation on 13 July 2016); RAJAMANI L., «Ambition and Differentiation in the 2015 Paris Agreement: Interpretative Possibilities and Underlying Politics», *International and Comparative Law Quarterly*, 2016, pp. 493-514, pp. 497-498.
33. BODANSKY D., «The Paris Climate Change Agreement: a New Hope?», above n 32.
34. *Idem*. In another article, D. BODANSKY explains that this bottom-up approach was first established with the Copenhagen agreement. See «The Copenhagen Climate Change Conference – a Postmortem», *AJIL*, 2010, pp. 230-240, p. 230.
35. Article 4 § 3 specifies that «[e]ach Party's successive nationally determined contribution will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances».

for climate change³⁶. The climate-friendly reputation of States is at stake, all the more so as the Paris Agreement contains several mechanisms to ensure the transparency –and so the publicity– of each parties' actions³⁷.

The new reading of the principle of common but differentiated responsibilities. Equally significant is the fact that *all States parties* are required to adopt nationally determined contribution. The Paris Agreement follows the line of the UNFCCC, being based of the principles of the Convention «including the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances»³⁸. But the Paris Agreement introduces a dynamic version of that principle. It takes into account the fact that national circumstances continuously evolve and that developing States have to actively participate to the global effort to mitigate climate change³⁹. Consequently, the core obligation quoted in article 4 § 2 applies to both developed and developing States. For certain aspects, developed States continue to assume more heavily commitments. This is the case concerning the financing of the mitigation and adaptation national measures⁴⁰. But the Paris regime tries to find a more subtle balance between differentiation and global solidarity.

The Paris Agreement cannot be limited to this both aspects – the bottom-up approach and the revisited common but differentiated responsibilities principle. But for the purpose of this analysis, these two pillars are sufficient to show the deep mutation of the architecture: much latitude is given to States, which are expected to actively act for climate change, as there are now involved in a real global regime. The latitude of States is intensified by the fact that each party is free to develop the legal mechanisms of its choice to achieve its national reduction commitment. In

36. Interview of. S. MALJEAN-DUBOIS mentioned in LAVILLE B., «Contraindre les Etats et les éléments?: le pari de l'Accord de Paris», *Energie – Environnement – Infrastructure*, February 2016, n.° 2, study 2.

37. For example, Parties are invited to communicate, by 2020, to the secretariat mid-century, long-term low greenhouse gas emission development strategies in accordance with Article 4, paragraph 19, of the Agreement, and the secretariat is requested to publish on the UNFCCC website Parties' low greenhouse gas emission development strategies as communicated (pt. 36 of the COP 21 decision).

38. Preamble.

39. RAJAMANI L., «Ambition and Differentiation in the 2015 Paris Agreement: Interpretative Possibilities and Underlying Politics», above n 32, p. 508.

40. See pt. 54 of the COP21 Decision: «developed countries intend to continue their existing collective mobilization goal through 2025 in the context of meaningful mitigation actions and transparency on implementation; prior to 2025 the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall set a new collective quantified goal from a floor of USD 100 billion per year, taking into account the needs and priorities of developing countries».

the line of the Kyoto Protocol, the Paris Agreement mentions, in another formula, the emissions trading mechanism and establishes a new market mechanism in its article 6 § 4. But the parties are free to participate, or not, to these mechanisms. Consequently, it does not impact their margin of action.

The low normative level of the Agreement was a *sine qua non* condition for its universality⁴¹. But the importance given to the national discretion is such that the Paris Agreement is a very evasive instrument. For example, nothing is said about subsidies, taxes or energy transition⁴². The vagueness of the instrument is aggravated by the fact that it has been negotiated and drafted in isolation. No interaction with other international agreement is considered. For example, no reference to the World Trade Organization (WTO) is made, whereas international commercial disciplines could obviously interfere with the possibilities for States to enact national climate mitigation and adaptation measures. In the same way, while transfers of technology is a crucial condition for the active participation of developing States, nothing is provided for supporting these transfers, in conjunction with international investment agreements or with international agreements on the protection of intellectual property rights. The same could be said about private sources of financial support to developing States. It is supposed to complete public sources. But nothing is said about international investment promotion tools or international mechanisms for sustainable finance, especially with international financial institutions actions such as the World Bank⁴³.

The isolation of the Paris agreement –and more generally isolation of the climate change global architecture– contrasts with the approach adopted by Goal 13 of the UN sustainable development program for 2030. As emphasized above, importance is given to international economic law tools. They are at the heart of the sustainable development paradigm. Resolution 70/1 of the General Assembly recognizes, for example, that «[p]rivate business activity, investment and innovation are major drivers of productivity, inclusive economic growth and job creation», that «[i]nternational trade is an engine for inclusive economic growth and poverty reduction, and contributes to the promotion of sustainable

41. The soft drafting of the Paris Agreement can be largely explained by the necessity to adopt an instrument that could be signed and ratified by the United States, as an executive agreement, without the vote of the Senate.

42. The Kyoto Protocol is a more precise guide. Its article 2 details, for example, a list of actions that could be implemented at the national level.

43. See MILES K., *The Origins of International Investment Law. Empire, Environment and the Safeguarding of Capital*, Cambridge, Cambridge University Press, 2013, pp. 272-287.

development» and that it is necessary to «continue to promote a universal, rules-based, open, transparent, predictable, inclusive, non-discriminatory and equitable multilateral trading system under the World Trade Organization, as well as meaningful trade liberalization»⁴⁴. Consequently, if the international climate change regime is considered as the main framework to negotiate the global response to climate change, it is far from being sufficient. It may even be said that the negotiation of the Paris Agreement was a missed opportunity to create a more integrated and comprehensive regime linked to economic international mechanisms that necessarily interfere, in positive or negative way, with climate change actions. It is then argued that Goal 13 could not be achieved without a conversion of international economic law to climate change challenge.

3. THE ADAPTATION OF INTERNATIONAL ECONOMIC LAW REGIME AS A NECESSITY TO COMPLETE AND SUPPORT THE INTERNATIONAL CLIMATE CHANGE REGIME

Goal 13 and more generally the SDG Program do not stress the radical change of international economic model. But they involve that international economic tools support sustainable development in a more equitable and balanced perspective⁴⁵. Consequently, trade agreements –especially WTO agreements–, investment agreements and international financial mechanisms need to adapt to the sustainable development goals. However, it is surprising that, whereas it is a key moment to build more integrated international economic order, major international trade and investment negotiations are silent on the climate change challenge. For example, just after the Paris COP 21, was held the Tenth WTO Ministerial Conference in Nairobi⁴⁶. But its agenda was silent on climate concern. In the ongoing negotiations of the transatlantic trade and investment partnership (TTIP) between European Union and United States, the energy chapter is crucial. But nothing is provided concerning energy transition. More generally, international economic law has not yet incorporated the climate change challenge into its tools and mechanisms. This analysis argues that efforts to achieve Goal 13 should concentrate on the adaptation of international economic order.

44. Resolution A/RES/70/1, above n 5, § 67, § 68.

45. See for example § 17.10 of Resolution A/RES/70/1: «Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organizations...».

46. From 15 to 19 December 2015.

3.1. THE DOUBLE-EDGED RELATIONSHIP BETWEEN INTERNATIONAL ECONOMIC LAW AND CLIMATE CHANGE CHALLENGE

Free-trade agreements or international investment agreements could encourage climate change actions and protect green trade and investment. However, as the main objective of these agreements is to maintain free competition, they also could have a chilling impact on public policies and they could undermine the possibility of States to enact climate change mitigation and adaptation measures.

International economic law as a tool of promotion for climate change actions. On the one side, international economic law could be a useful vehicle to support States' climate change actions. The goals of WTO agreements are simple: liberalize international trade, reduce barriers to trade and eradicate anticompetitive practices. These general disciplines are of benefit to green goods and services. In the context of the Doha Round, the mandate of negotiations stipulates «the reduction, or as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services»⁴⁷. Consequently, the trade of green technologies such as wind and hydropower turbines or photovoltaic cells, to ensure energy transition, would be facilitated and developed through the reduction of tariff and non-tariff barriers. A comparable dynamic can be observed concerning international investment agreements. The objectives of these agreements – most of them being bilateral investment treaties (BIT) – are to encourage foreign investors to invest abroad and to protect their investment against discrimination, arbitrary, unfair or inequitable treatment or against direct or indirect expropriation by the host State. Since foreign investments are ideal vector to promote and facilitate climate change actions in developing and economic transition countries⁴⁸, international investment agreements are crucial to the UNFCCC goals⁴⁹. They secure foreign investments in low carbon projects. Moreover, through their substantial standards of protection – especially national treatment, most-favored-nation treatment,

47. Doha Ministerial Declaration, 20 November 2001, WT/MIN(01)/DE.1, § 31 (iii).

48. See UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT, 2010 *World Investment Report on Investing in a Low-Carbon Economy*.

49. See SUSSMAN E., «The Energy Charter Treaty's Investor Protection Provisions: Potential to Foster Solutions to Global Warming and Promote Sustainable Development», *ILSA Journal of International & Comparative Law*, vol. 14, Spring 2008, pp. 513-532, pp. 515 *et seq.*; GENTRY B. S. and J.J. RONK, *International Investment Agreements and Investments in Renewable Energy*, Yale School of forestry and environmental studies, 87 p., available at [http://environment.yale.edu/publication-series/documents/downloads/0-9/11-03-Gentry_Ronk.pdf]; BOUTE A., «Combating Climate Change through Investment Arbitration», *Fordham International Law Journal*, 2012, pp. 613-664, pp. 625-631.

fair and equitable treatment and protection against indirect expropriation – they could play as a ratchet mechanism toward climate change policies. In the *Nykomb v. Latvia* case for example, the State's refusal to pay a clean energy double-tariff to the investor, whereas the latter had received the assurance that he would benefit from it, was considered contrary to the Energy Charter Treaty⁵⁰. This case shows how international investment agreements could be a useful complement to the consolidation obligation contained in the Paris Agreement.

International economic law as an obstacle to climate change actions. On the other side, international economic law can obstruct the adoption of national measures to mitigate or to adapt to climate change. Moreover States' international economic obligations could have a chilling effect on their actions⁵¹. Indeed, several disputes, pending or already settled, show that domestic regulations encouraging low-carbon industry could be challenged on the ground of rights protected by trade agreements or investments agreements. In the WTO, the restrictive effects of climate change actions or their interference with the free rules market may be problematic⁵². Thus, six cases concerning members' actions in favor of green and renewable energies have been recently initiated⁵³. In May 2013, Canada was condemned for its feed-in tariff program that ensured that solar energy produced was paid at a fixed minimum price to support the viability of the market⁵⁴. In February 2016, a comparable Indian program

50. Arbitration Institute of the Stockholm Chamber of Commerce, *Nykomb Synergetics Technology Holding AB, STOCKHOLM v. The Republic of Latvia*, Award, 16 December 2003, pt. 4.3.2.

51. BAETENS F., «Foreign Investment Law and Climate Change: Legal Conflicts arising from Implementation the Kyoto Protocol through Private Investment», *The Center for international sustainable development law and the International development law Organization*, December 2010, p. 11-12, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117950]; GRAY K.R., «Foreign Direct Investment and Environmental Impacts – is the Debate Over?», *RECIEL*, 2002, pp. 306-313, p. 310; MILES K., «International Investment Law and Climate Change: Issues in the Transition to a Low Carbon World», above n 12; WERKSMAN J., BAUMERT K.A. and DUBASH N., «Will International Investment Rules Obstruct Climate Protection Policies? An Examination of the Clean Development Mechanism», *International Environmental Agreements: Politics, Law and Economics*, 2003, pp. 59 *et seq.*; UNCTAD, *Investor-State Dispute Settlement and Impact on Investment Rulemaking*, New York, United Nations, 2007, p. 75.

52. See CONDON B., «Climate Change and Unresolved Issues in WTO Law», *Journal of International Economic Law*, 2009, pp. 895-926.

53. See ASMELASH H.B., «Energy Subsidies and WTO Dispute Settlement: Why Only Renewable Energy Subsidies are Challenged», *Journal of International Economic Law*, 2015, 261-285, pp. 275-278.

54. Appellate Body Report, *Canada – Certain measures affecting the renewable energy sector*,

has also been said to be in breach with WTO agreements⁵⁵. Actions are in progress against similar European Union member States' renewable energy programs⁵⁶ whereas measures concerning wind power equipment adopted by China have been challenged by the United States in 2010⁵⁷. Such claims are founded on several grounds. When subsidies are at stake, as it is often the case since renewable energy market is hardly viable without State's aid, they may be contested on the ground of the Agreement on subsidies and countervailing measures, which prohibits subsidies conferring a benefit⁵⁸. When regulatory requirements are concerned, requiring, for example, electricity providers to obtain a percentage of their power from a range of renewable sources, they are within the scope of the Agreement on trade-related investment measures, which seeks to eradicate those measures that cause trade-restrictive and market distorting effects. As regards feed-in tariff programs, depending of their conception, they could be challenged on the ground of the national treatment prescribed by the General agreement on tariffs and trade (GATT) or be considered as tantamount to subsidies⁵⁹.

In the field of international investment law, many claims concerning climate change States' policies have also been brought to international arbitral tribunal. It is not necessary here to study the potential many interactions between international standards of protection of investment and restrictive measures that could be adopted by States in order to achieve their goals towards climate change, since many scholars have ever study the question⁶⁰. This chapter will limit to few illustrations. The

WT/DS412/AB/R, 6 May 2013 and Appellate Body Report, *Canada – Measures relating to the feed-in tariff program*, WT/DS426/AB/R and WT/DS412/AB/R, 6 May 2013.

55. Panel Report, *India — Certain Measures Relating to Solar Cells and Solar Modules*, WT/DS456/1/Add.1, 24 February 2016.
56. *European Union and Certain Member States – Certain Measures Affecting the Renewable Energy Sector*, WT/DS452/1; *European Union and Certain Member States – Certain Measures on the Importation and Marketing of Biodiesel and Measures Supporting the Biodiesel Industry*, WT/DS459/1.
57. *China – Measures Concerning Wind Power Equipment*, WT/DS419/1.
58. ASMEASH H. B., «Energy Subsidies and WTO Dispute Settlement: Why Only Renewable Energy Subsidies are Challenged», above n 54, pp. 261-285; MEYER TH., «Energy Subsidies and the World Trade Organization», *Insights*, vol. 17, issue 22, available at [<http://www.asil.org>]; UNCTAD, *World Trade Law and Renewable Energy: the Case of Non-Tariff Barriers*, New York, United Nations, 2009, pp. 11-14.
59. On tax measures, see also UNCTAD, *World Trade Law and Renewable Energy: the Case of Non-Tariff Barriers*, above n 59, pp. 1-4.
60. See for example SCHILL S., «Do Investment Treaties Chill Unilateral State Regulation to Mitigate Climate Change?», *Journal of International Arbitration*, 2007, pp. 469-477.

first is quite similar to WTO cases that have just been mentioned below. In July 2011, a United States company filed a claim, on the ground of the Chapter 11 of the North American Free Trade Agreement (NAFTA), against Canada concerning its feed-in tariffs program. The claimant argued that this program was discriminatory, applied in an unfair and inequitable treatment and contrary to NAFTA article 1106, which prohibits performance requirements⁶¹. The second example is more complicate. It concerns Spain, which is involved in twenty-six cases concerning its renewable energies regime including incentives and a feed-in tariff program for photovoltaic electricity, in line with European Union objectives to promote electricity from energy sources. Here, what is at stake is not the enactment of the program in itself, but the fact that, due to economic crisis, Spain introduced changes: it rolled back subsidies and reduced the guaranteed tariff for photovoltaic energy. Foreign investors, most of them invoking the 1994 Energy Charter Treaty, argue that this change amounts to an indirect expropriation and frustrates their legitimate expectations, contrary to the fair and equitable treatment. They more particularly claim that Spain, after having attracted their investment in the photovoltaic sector, has illegally modified the special regime that regulates that industry. Several investors have also filed arbitration claims against Czech Republic, which, for the same reasons than Spain, ended its feed-in tariff support and imposed a retroactive tax on certain solar plants⁶². Other European States are threatened to similar claims⁶³.

This kind of proceedings could dissuade States to act in favor of climate change mitigation, as much as WTO proceedings mentioned above. Even if they not systematically result in the finding of the violation, by the State, of its international economic obligations, they undermine its sovereign margin to enact climate change regulation. Consequently, they jeopardize the way States could perform their international obligations pursuant to the UNFCCC regime and could achieve Goal 13 of the UN sustainable

61. The case *Mesa Power Group v Canada* has been recently decided. See *infra*.

62. See International Institute for Sustainable Development, «Trends in Investor Claims Over Feed-in Tariffs for Renewable Energy», *Investment Treaty News*, 19 July 2012, available at [<https://www.iisd.org/itn/2012/07/19/trends-in-investor-claims-over-feed-in-tariffs-for-renewable-energy/>].

63. See also the European emissions trading scheme that has generated many court actions in 2004 before the Court of Justice of the European Union and before the member States' tribunals. See, *inter alia*, the *Arcelor* case. Judgment of the Court (Grand Chamber) of 16 December 2008, Case C-127/07, *Société Arcelor Atlantique et Lorraine and Others v Premier ministre, Ministre de l'Écologie et du Développement durable and Ministre de l'Économie, des Finances et de l'Industrie*; Judgment of the General Court (Third Chamber) of 2 March 2010, Case T-16/04, *Arcelor SA v European Parliament and Council of the European Union*.

development Program for 2030. This uncertainty is mainly due to the fact that international economic law has little regard for climate change challenge.

International economic law and climate change challenge, two allies that ignore each other. It is significant that there are no WTO rules specific to climate change. For example, there are no specific rules for energy subsidies whereas the Agreement on agriculture sets up a special regime for agricultural aid. There is no express mechanism to distinguish between carbon energies and renewable energies when considering the scope of non-discrimination rules or the prohibition of performance requirements. The same could be said about international investment agreements. However, this does not mean that international economic law and climate change challenge are in a systematic conflicted relationship. Rather, international economic law tools are sufficiently flexible to conciliate environmental and social policies with free trade objectives. But, there are strong safeguards to prevent States to introduce unjustifiable discrimination or arbitrary restriction under the pretext of collective preference.

In the WTO *Canada – renewable energy sector and feed-in tariff program cases* for example, the Canadian measures were invalidated since they were applied in a discriminatory way. The energy renewable regime contains a domestic content requirement that supposed that, to benefit of the feed-in tariffs program, it was necessary to use technologies produced by domestic operators. Canada failed to prove that this specific requirement was necessary to implement its environmental policies. The Indian program was said contrary to the GATT and to the Agreement on trade-related investment measures for the same reasons⁶⁴. However, more significantly, in the Canadian cases, the Appellate Body has tried to manage specific regime for renewable energy. Japan argued that the feed-in tariffs program was tantamount to a prohibited subsidy. But the Appellate body rejected this interpretation. After having distinguished between the general energy market and the renewable energy market, it has considered that the State program aimed to create the second market and was not tantamount to a benefit for renewable energy suppliers. In other words, it introduced a new criterion for the appreciation of subsidies, which is specific to renewable energy⁶⁵.

64. Panel Report, *India – Certain Measures Relating to Solar Cells and Solar Modules*, WT/DS456/R, 24 February 2016.

65. See HERVE A., EL BOUDOUHI S. and ROBERT-CUENDET S., «Les rapports des groupes spéciaux et de l'organe d'appel de l'OMC (2013)», *Annuaire français de droit international*, 2013, pp. 487-507, pp. 505-507.

In the scope of international investment law, the same trend can be observed⁶⁶. Contrary to what is often said, arbitral tribunals are more and more deferent to sovereign States' choices and non-economic concerns such as protection of the environment or protection of health. The jurisprudence is quite well-balanced and States are not systematically prevented to adopt measures that cause damage, even serious, to foreign investors. For example, it is well-established that State is not liable for economic injury, which is a consequence of bona fide regulation within the accepted police power of States⁶⁷. Tribunals often take into account human rights, social and environmental considerations when applying non-discrimination standards⁶⁸. This could be crucial to determine if a different treatment addressed to foreign investors is contrary to the national treatment or to the most-favored national treatment. Arbitral tribunals are also more and more demanding in the appreciation of the investor's legitimate expectations. They cannot be founded on the ground of a general legal framework that, by nature, is evolving, especially towards environmental concerns⁶⁹. For example, the fact that the host State is party to the UNFCCC and has ratified the Paris Agreement should be taken into account to consider that investors would have anticipated measures restricting intensive carbon activities or encouraging renewable

66. See SCHILL S., «Do Investment Treaties Chill Unilateral State Regulation to Mitigate Climate Change?», above n 61, pp. 469-477.

67. See *inter alia* Permanent Court of Arbitration (UNCITRAL), *Saluka Investments BV v Czech Republic*, Award, 17 March 2006, § 255; ICSID, *Mamidoil Jetoil Greek Petroleum Products Societe S.A. v Albanie*, Case No ARB/11/24, Award, 30 March 2015, §§ 574, 577-578. Awards available at [<http://www.italaw.com>].

68. In the *Parkerings* case for instance, the tribunal stated that because of its potential negative impact on the historic value of the old city of Vilnius, the car park project of the foreign investor was not in «similar circumstances» than another similar project but in another district of Vilnius. ICSID, *Parkerings Compagniet AS v. Republic of Lithuania*, Case No ARB/05/8, Award, 11 September 2007, § 392, available at [<http://www.italaw.com>]. In another case, the tribunal has considered that public policy is a possible justification for discriminating against two companies. NAFTA/UNCITRAL, *Pope & Talbot Inc v. Canada*, Award, 10 April 2001, § 78, available at [<http://www.italaw.com>].

69. See *Methanex Corporation v. United States of America*, UNCITRAL, Final Award on Jurisdiction and Merits, 3 August 2005, Part IV, Chapter D, violation of NAFTA article 1110, § 9: «[...] Methanex entered a political economy in which it was widely known, if not notorious, that governmental environmental and health protection institutions at the federal and state level, operating under the vigilant eyes of the media, interested corporations, non-governmental organizations and a politically active electorate, continuously monitored the use and impact of chemical compounds and commonly prohibited or restricted the use of some of those compounds for environmental and/or health reasons. Indeed, the very market for M.T.B.E. in the United States was the result of precisely this regulatory process» (available at [<http://www.italaw.com>]).

energy sector. The decisions rendered in the field with which we are concerned confirm this trend. In the *Mesa Power Group* case concerning the action against the Canadian feed-in tariffs program for renewable energy, all submissions of the claimant have been rejected. Under article 1105 of NAFTA (fair and equitable treatment) arbitrators have underlined that they «must be in mind the deference which NAFTA Chapter 11 tribunals owe a state when it comes to assessing how to regulate and manage its affairs»⁷⁰. In the series of cases arising from Spanish energy reform, the first award decided on 21 January 2016 also rejected all allegations. As the claimant argued that the modification of the Spanish program violated his legitimate expectations, protected by the fair and equitable treatment, the tribunal answered that

«while the investor is promised protection against unfair changes, it is well established that the host State is entitled to maintain a reasonable degree of regulatory flexibility to respond to changing circumstances in the public interest. Consequently, the requirement of fairness must not be understood as the immutability of the legal framework, but as implying that subsequent changes should be made fairly, consistently and predictably, taking into account the circumstances of the investment»⁷¹.

To sum up, there is no clash between international economic law and climate change policies. However, because of the insufficient integrated nature of trade and investment agreements, the conciliation between economic objectives and non-economic concerns is set on the sole shoulders of the judicial bodies of the WTO or on the sole shoulders of arbitral tribunals. Consequently, it could cast doubt on the mutual supportiveness between international economic global governance and climate change architecture. The achievement of Goal 13 of the UN

70. Permanent Court of Arbitration, *Mesa Power Group LLC c. Canada*, case n.º 2012-17, Award, 24 March 2016, § 553, available at [<http://www.italaw.com>].

71. Quoting a previous award (*Electrabel v Hungary*), *Charanne B.V. Construction Investment SARL v Spain*, Award, 21 January 2016, § 500, available at [<http://www.italaw.com>]. See also the finding of the European Court of Justice concerning the withdrawal of a support scheme for renewable energy under the principle of the protection of legitimate expectations in EU law in the *Plantano* case: «a regulatory provision of this kind was... capable of indicating at the outset to prudent and circumspect economic operators that the tax exemption scheme applicable to biofuels was liable to be adjusted or even withdrawn by the national authorities in order to take account of changes in certain external circumstances and that, consequently, no certainty that such a scheme would be maintained for a given period could be based on those rules». *Plantano GmbH & Co. KG v Hauptzollamt Darmstadt*, Case C-201/09, [2009] E.C.R. I-08343, § 62.

sustainable development program may be an occasion to remedy to that situation.

3.2. GOAL 13 AS THE OCCASION TO ADAPT TRADE AND INVESTMENT INTERNATIONAL AGREEMENTS TO CLIMATE CHANGE CHALLENGE

There already exist international economic tools that integrate climate change challenge. The preamble of the 1994 Energy Charter Treaty, for example, refers to «the United Nations Framework Convention on Climate Change, the Convention on Long-Range Transboundary Air Pollution and its protocols, and other international environmental agreements with energy-related aspects» and underlines «the increasingly urgent need for measures to protect the environment, including the decommissioning of energy installations and waste disposal, and for internationally-agreed objectives and criteria for these purposes, [...]». Some other recently signed international trade agreements contain a chapter dedicated to renewable energy. This is the case of the 2015 Vietnam – European Union free trade agreement in which article 6 quotes that

«[f]or greater certainty, subject to the requirement that such measures are not applied in a manner which would constitute a means or arbitrary or unjustifiable discrimination between the Parties' products, service suppliers or investors under the circumstances, or a disguised restriction on trade and investment between the Parties, nothing in the Annex shall be construed to prevent the adoption or enforcement by any of the Parties of measures necessary for the safe operation of the energy networks concerned, or the safety energy supply»⁷².

However, the effects of such non-prejudice clauses or preamble statements are quite limited. Consequently, there are many propositions, from scholars or from international organizations, to refashion free trade agreements and international investment agreements in a deeper integrated way.

One of the major concerns, both in trade law and in investment law, is about the fact that renewable energies and conventional energies are put on the same level and can take advantage of the same opportunities and same legal disciplines. Indeed, in the WTO system, goods considered as «like products» must be treated equally. Since there is no express

72. Chapter on non-tariff barriers to trade and investment in renewable energy generation. See also article 7.2 of the 2014 Singapore – European Union free trade agreement.

distinction between conventional energy and renewable energy, the fear is that subsidies or other aids reserved to renewable energy are considered as discrimination towards other sources of energy⁷³. The same problem arises in international investment agreement where national treatment applies between investors in «like circumstances»⁷⁴. Consequently, some suggests introduction, into these treaties, of an express provision that renewable energy is not «in like circumstances» compared to carbon-intensive energy⁷⁵.

In the context of the WTO, it seems difficult to re-open the negotiation of the GATT and other existing trade agreements. However, climate change challenge could integrate WTO disciplines in other way. It might be possible, for example, for the Ministerial Conference to adopt a declaration recognizing that WTO agreements do not and should not prevent members from taking mitigation or adaptation climate change measures. Such a declaration could be modeled on the *Declaration of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights and public health* adopted on 14 November 2001⁷⁶. This act allows flexibilities in the application of the TRIPS Agreement to ensure that it is not an obstacle to member States policies concerning pharmaceutical research and trade in medicines (more particularly for developing States for which the cost of patented drugs can be prohibitive)⁷⁷. The Doha Declaration is an interesting precedent to integrate climate change policy in WTO system. As underlined above, during the last Ministerial Conference in December 2015, nothing was said about climate change. But in accordance with Goal

73. See CONDON B.J., «Climate Change and Unresolved Issues in WTO Law», above n 53, pp. 906-911.

74. See BAETENS F., «Foreign Investment Law and Climate Change: Legal Conflicts Arising from Implementation the Kyoto Protocol through Private Investment», above n 52, pp. 12-15; MILES K., «International Investment Law and Climate Change: Issues in the Transition to a Low Carbon World», above 12, pp. 19-22.

75. BAETENS F., «Foreign Investment Law and Climate Change: Legal Conflicts Arising from Implementing the Kyoto Protocol through Private Investment», above n 52, p. 19; MARSHALL F., «Climate Change and International Investment Agreements: Obstacles or Opportunities?», IISD's «Bali to Copenhagen» trade and climate change project, 2010, p. 65, available at [<http://www.iisd.org>]. More generally, on the necessity to introduce into international investment agreement specific provisions on climate change see WERKSMAN J., BAUMERT K.A. and DUBASH N., «Will International Investment Rules Obstruct Climate Protection Policies? An Examination of the Clean Development Mechanism», *International Environmental Agreements: Politics, Law and Economics*, 2003, pp. 59-60.

76. Ministerial Conference, 4th Session, Doha 2001, WT/MIN(01)/DEC/2.

77. See ATTARAN A., «The Doha Declaration on the TRIPS Agreement and Public Health, Access to Pharmaceuticals, and Option under WTO Law», *Fordham intellectual property, media and entertainment law journal*, 2001-2002, pp. 859-885.

13, which is to be achieved also outside the UNFCCC regime, it could be an alternative to study for the next WTO summit, in 2017.

In the context of international investment regime, it seems to be easier to refashion treaties. Indeed, for the last few years, some States and international organizations have initiated a huge reform, in order to draft more balanced bilateral investment treaties⁷⁸. In the new BIT generation (and other free trade agreements with a chapter on investments), provisions are introduced to recall that host State cannot be prevented «from adopting, maintaining, or enforcing any measure otherwise consistent with this Treaty that it considers appropriate to ensure that investment activity in its territory is undertaken in a manner sensitive to environmental concerns»⁷⁹. Moreover, standards of protection are more precisely defined and investors' rights are balanced with host State sovereign right to act in the general interest. For example, article 17 of the 2007 Common Market for Eastern and Southern Africa investment agreement model clarifies that the effects on the local, regional or national environment, including the cumulative effects of all investments within a jurisdiction on the environment can be taken into account to appreciate the reference to «like circumstances» in the national treatment provision. This provision, without expressly referring to climate change policies, is clear enough⁸⁰.

The under way reform in international investment law could be a useful arm to adapt international economic law to climate change challenge and to participate to the achievement of Goal 13. However, it is still not sufficient. International investment agreements, just like free-trade agreements and WTO treaties, are mostly negative in nature. They prohibit certain actions by governments. Yet, the achievement of Goal 13 needs mechanisms that are positive in nature, to encourage and promote friendly-climate economic activities. Propositions to limit the international investment protection and the national incentives for climate-friendly investment better reflect this perspective⁸¹. But others ask for the adoption

78. See UNCTAD, «Taking Stock of IIA Reform», *IIA Issues Note*, March 2016, n.° 1, available at [<http://investmentpolicyhub.unctad.org/Publications/Details/142>].

79. Article 12 § 5 of the 2012 United States bilateral investment treaty model. In many other recent treaties, we found similar provision, more or less detailed.

80. More generally, on the way an international investment agreement should be drafted to support a host State's climate change objectives, see MARSHALL F., «Climate Change and International Investment Agreements: Obstacles or Opportunities?», above 76, pp. 61-78.

81. MARSHALL F., «Climate change and international investment agreements: obstacles or opportunities?», above 76, pp.12-13; above 50, p. 74.

of a new specific investment regime for climate investment into which foreign investments serve the fight against climate change. For some, this new regime would be modeled on the Kyoto Protocol⁸². Other were thinking about a more integrated international investment regime on a multi-stakeholders perspective with the participation of multilateral banks, export credit agencies, private sector financiers, and re-insurers⁸³.

Considering that the lack of funding resources to promote friendly-climate economy is critical, this last proposition is fundamental. But it is also strongly difficult to achieve. Consequently, one of the main challenges for Goal 13 is probably to imagine the right platform, the right forum, to rationalize action of each stakeholder and the right tools and mechanisms to coordinate these actions. It is doubtful that the UNFCCC system, and the COP, could be this appropriate platform. The possibility to enact a new Kyoto agreement was considered long before the COP 21 but many States were opposed to that proposition⁸⁴. This is not the place to discuss what institution could be this right platform. But in conclusion to this analysis of some aspects of the Goal 13 of the UN sustainable development program in conjunction with international economic mechanisms, it could be said that UNFCCC system should not be considered as the sole framework into which the climate change challenge must be addressed. It is necessary to exploit all available legal mechanisms, and more particularly the positive potential of international economic law tools.

82. See for instance, BOUTE A., «Combating Climate Change through Investment Arbitration», above 50, pp. 653-659.

83. The World Bank and the International Monetary Fund, «Clean Energy and Development: Towards an Investment Framework», April 5, 2006.

84. We can add that the Kyoto Protocol has been extended from 2013 to 2020 but the level of commitment is low for most of States parties.

THOMSON REUTERS

Chapter 17: goal 14

Conserve and sustainably use the oceans, seas, and marine resources for sustainable development

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SUMMARY: 1. INTRODUCTION. 2. ON MARINE POLLUTION. 3. ON THE PROTECTION OF THE MARINE AND COASTAL ECOSYSTEMS. 4. ON OCEAN ACIDIFICATION. 5. ON FISHERIES MANAGEMENT. 6. CONCLUSIONS. REFERENCES.

ABSTRACT:

This work constitutes a detailed examination of one of the SDGs that affects the issues relating to the international protection of the environment. In fact, to conserve and sustainably use the oceans, seas, and marine resources for sustainable development has been one of the main objectives of the international community for a long time and it is therefore an achievement for it to be considered as one of the essential sustainable development goal. The international society must combat the pollution of oceans and seas as comprehensively as possible, a key factor in sustainable development. To complete the process, the international society must also establish mechanisms that ensure the protection of marine systems. Marine resources are also essential in global perspective of protection of marine systems. This work clearly demonstrates both the relation-ship between the environmental protection and sustainable development as well as the consequences of the measures that must be adopted by the international community to make this SDG a reality.

1. INTRODUCTION

Of the 510 million km² that make up the land surface 71% are covered by water and only 29% is land, represented by continents and their islands. This immense amount of salt water is the ocean that covers most of our planet as a thick layer of liquid 3,800 m deep. The ocean constitutes 97.4% of the total volume of water on the planet and 97% of the existing fresh water comes from the ocean as well, through the cycles of evaporation, condensation and rainfall discharges on the continents.

The ocean regulates the global climate, since between it and the atmosphere there is a constant exchange of energy. Warm and cold currents intersect in its interior, producing phenomena such as warming of the waters in the South Pacific, giving rise to the phenomenon of El Niño, which affects a large portion of the planet increasing rainfall in some places and droughts in others. In addition, it absorbs the excess of carbon dioxide found in the atmosphere, which is one of the main causes of global warming. It can be said that the oceans are the «lung of the planet», since the life cycles that develop in it are responsible for the production of most of the oxygen that is required to sustain life.

The ocean has living resources but without these, human life would be different. Somewhat more than 90 million tons of fish are exploited every year for human food. The cultivation of marine species or marine culture is also of great importance. Their living resources have genetic wealth of great value for biotechnology and pharmaceuticals. Thousands of species such as birds, corals, octopuses, squid, turtles, dolphins, and whales inhabit its waters.

On the other hand the ocean also has resources that are not alive, such as oil and gas, the salt that is vital in the diet of man and other living beings and other minerals from the depths such as polymetallic nodules. Recreation and tourism are activities that are part of the daily life of humans and are closely tied to the ocean and the shores. Eighty percent of global transport of goods, food and all kinds of products are mobilized through the ocean in vessels of different types and sizes, boosting the world economy.

Despite its large size, the ocean is fragile and delicate, being subject to many pressures and factors that affect the quality of its waters and of living organisms that live in it. Pollution, waste disposal, overfishing, the introduction of exotic, or foreign species alien to the environment, and the destruction of habitats are the main factors that are having a negative impact on the marine environment. Most of the human activity is carried out in areas more or less close to the coasts with consequences such as the

degradation of beaches, the production of industrial and urban discharges, and the disposal of solid and liquid waste of all kinds.

The importance that the promotion of research and the generation of knowledge have deduced from the panorama described above will allow making adequate use of the ocean under the principles of conservation and sustainable use, which is the only way to ensure that future generations will also have an ocean to enjoy.

Since the second half of the twentieth century, a multitude of conventions and legal instruments have been taken relating to the safety of navigation and the protection of the marine environment against pollution. Special reference should be made to the case of the «*United Nations Convention on the Law of the Sea of 10 December of 1992*»¹, which can be regarded as the framework convention for excellence in the field. Several initiatives have followed such as the «*Rio Declaration on Environment and Development of 1992*»², which resulted in instruments such as the «*Agenda 21*»³ which dedicates chapter 17 to the marine environment. This was however a declaration of intent with no binding nature and that had no timetable for its implementation or a mechanism of control. More enlightened and complete mechanisms are available today as are the «*2030 Agenda for Sustainable Development*»⁴, enacted by the General Assembly of the United Nations in its seventy-summit in New York in September 2015, and the «*Paris Agreement*»⁵, drafted at the 21st.meeting (COP 21) to the United Nations Framework Convention on Climate Change, carried out in this last said and signed on Saturday, December 12 2015. That day will be remembered as one in which the first universal and binding agreement against the climate change was signed.

The 2030 Agenda for Sustainable Development established «17 Sustainable Development Goals (SDGs)»⁶ with 169 related targets. In this current chapter are some annotations and reflections on the SDGs No. 14, which consists in «*Conserve and sustainably use the oceans, seas, and marine resources for sustainable development*». These SDGs consists in turn of 7 goals, but to facilitate their review these will be discussed in the framework of the subtitles: 1. On marine pollution; 2. On the protection of the coastal

1. www.un.org/depts/los/convention_agreements/texts/unclos/convemar_es.pdf.

2. www.un.org/spanish/esa/sustdev/agenda21/riodeclaration.htm.

3. www.un.org/spanish/esa/sustdev/agenda21.

4. www.cepal.org/es/temas/agenda-2030-desarrollo-sostenible.

5. <http://unfccc.int/resource/docs/2015/cop21/spa/109s.pdf>.

6. www.undp.org/content/undp/es/home/sdgoverview.html.

and marine ecosystems; 3. On the acidification of the oceans; and 4. On the management of fishing activity.

2. ON MARINE POLLUTION

Pollution is one of the most serious problems facing the ocean and the planet in general. Seventy five percent of it comes from land-based sources, mostly derived from the sewage produced by the large coastal cities, which is released directly into the ocean without any or poor treatment, or from the cities located in the interior of continents whose sewage flow into the rivers. It is estimated that 300,000 million m³ of sewage enter the ocean annually, 70% of them without treatment (CCO⁷, 2011). Industries contribute a great quantity of pollutants to the ocean, not only the ones located along the coast but also those that are thousands of kilometers away. The pollution of the marine environment by deposits, discharges, spills, radiation, explosions, etc. is the main reason for the problems of survival and development of the marine species. This can produce immediate effects on the physical environment and the living beings or may also be a chronic process to continue for several years, without apparent effects at first sight.

(Seoánes, 2000) groups the pollutants of the sea into the waters and urban and industrial wastes, agricultural inputs, hydrocarbons, minerals, detergents, bacterial contamination, thermal pollution, and radioactive contamination:

Among the pollutants by water and urban waste can be highlighted the waste and litter which are thrown into the sea by neglect, by accident or lack of adequate sanitary systems. The volumes of waste entering the sea exceed 6.4 million tons per year (CCO, 2011). Among the most common wastes that reach the ocean are pieces of plastic, glass, rubber, metal, paper, wood, cloth, etc., which can become traps for many species that ingest them inadvertently. The problem of the plastic in the oceans is of such importance that it was to be included in the agenda of meetings such as the G7 summit at Schloss Elmau, Germany, held between 7 and 8 June 2015⁸, where it was found that plastic is eaten in small particles by birds and fish with the risk of absorbing toxic substances, reaching humans through the food chain with effects that need to be investigated. The urban waste water includes the excreta and domestic waste, which

7. Translators' note: abbreviation in Spanish for Comisión Colombiana del Océano.

8. www.consilium.europa.eu/es/meetings/international-summit/2015/06/7-8/.

come from the kitchens, washing of floors and surfaces with soaps and detergents (Seoánes, 2000).

The waters and industrial waste include the liquid discharges and solid waste coming from the factories after the completion of the processes. A great amount of soluble organic compounds arrive to the sea, which are oxidized by microorganisms leading to a decrease in the dissolved oxygen, which could affect or destroy the natural aquatic fauna, as occurs with the discharges of sugar refineries, canning, dairy and paper industries, distilleries and breweries (Cushing, 1998). Toxic inorganic compounds and particularly heavy metals are dumped into the ocean, which are highly harmful to flora, fauna and man, by accumulation in the body reaching lethal concentrations, as occurs with the discharges of tannery. Discharges of water with high concentrations of nutrients of nitrogen and phosphorus are highly polluting, causing undesirable processes such as eutrophication or accelerated growth of algae, such as those coming from production plants of fertilizers and synthetic fibers industries. Waste with fats and products immiscible in water occupy an important place within this problematic, which by their difference of density stay above or below the liquid adversely affecting the operation of treatment plants (Cushing, 1998). The waters from the food industries, textiles and pharmaceuticals, which carry pathogenic organisms such as bacteria, fungi and viruses, which can cause infection to humans and marine organisms (CCO, 2011) are highly harmful.

The agrochemicals that are used to spray crops on farms are also a major source of contamination. Run-off waters that wash from the fields and that fall first to the streams, then to the rivers and then to the ocean, produce large damage to the quality of the waters, the animals and plants, due to their content of pesticides such as insecticides, herbicides and fungicides. These pollutants can stay a long time in the environment and can produce bioaccumulation in organisms through the food chain, generating at the same time a growing problem called *biomagnification* when organisms that have incorporated the contaminant to their system are consumed by their predators (Seoánes, 2000).

When oil or its derivatives enter the marine environment they generate an immediate impact on living beings by impregnation and suffocation. Some organisms are more sensitive to the presence of these compounds because they cannot escape from the place where they live by not being able to move (algae, corals, sponges, mangrove oysters, mussels, barnacles, balanus and others) or because their displacement is very slow (snails, worms). It is estimated that the total hydrocarbons that are discharged

into the sea ranges between 6 and 8 million metric tons/year (CCO, 2011). The effects of oil and other hydrocarbons on phytoplankton and algae are very negative, considerably reducing the primary production. The fish and invertebrate fauna, as well as the marine birds, also suffer from the effects of the massive presence of oil in the sea. In ports and coasts polluted by oil fish detritivores and commercial species lose their value from acquiring unpleasant tastes (Hall, 1999).

Among the heavy metals that cause great harm to the marine environment and human health are mercury, lead, cadmium, nickel, and zinc listed as the most important. In this group mercury generates great concern as it tends to produce bioaccumulation and magnification along the food chain, in addition to being able to be methylated, causing by-products to be much more toxic. The dietary intake of mercury comes from the fisheries and constitutes a risk to human health (De la Torre y Peña, 2002).

Detergents alter the surface tension of the receiving waters and express their toxic effect causing alterations in the respiration of living beings. It should be emphasized that because of the serious problems that are caused to the aquatic environment, for some years now, the use of biodegradable detergents type LAS is mandatory (Linear Alkyl benzene Sulfonates).

The bacteria found in the sea are the first link in the food chain. However, their introduction to the sea at concentrations above the normal constitutes a pollutant of great importance, more in coastal than in ocean waters, because of the contribution of the submarine emissions, the mouths of sewers and collectors of industrial discharges. There is a large number of bacteria that in normal conditions are not pathogenic as the coli forms *Escherichia coli* and *Streptococcus faecalis* but are often accompanied by pathogenic organisms such as *Vibrio colerae* and *Salmonella* sp. Certain anaerobic bacteria such as those that cause tetanus and botulism are found in wastewater in concentrations between 10 and 100 million per liter (Seoánes, 2000).

Another source of marine pollution is thermal pollution produced by the entry of masses of hot water from food processing industries and energy generation plants. It has been found that in general phytoplankton is very sensitive to thermal pollution, as well as young individuals and larvae of marine species. As the water temperature increases the concentration of dissolved oxygen in it drops down, affecting the living beings present. In the ichthyofauna thermal pollution produces effects such as the shift toward other areas not contaminated and the alteration of migration (Cushing, 1998).

The need to solve the problem of radioactive waste in the years 1960 to 1980 brought as a consequence the proposal of an apparent solution, which was to use the sea as a receiver. Several places in the world were selected and the deposit of waste began in places like the marine NEADS dumpsite, located in the northeast of the Atlantic Ocean, at a depth of 4,400 m. (Seoánes, 2000). The site was studied in detail by an international group of experts that determined that there were no problems with the deposit. However, with the knowledge that there is now, it can be said that the confinement of the coating materials used then on drums and other containers does not guarantee 100% protection within the hundreds to thousands of years of half-life that remains available to many of these residues. The sea has a manifest, and physical-chemical aggressiveness and it is possible that the forecasts of protection analyzed and decided at the beginning of the eighties are insufficient in the medium term, being a growing risk as time passes.

When there are accidents involving large ships carrying oil or chemicals, even radioactive, as the one that happened in 1989 with the tanker «Exxon Valdés» in Alaska⁹, vast expanses of ocean and coasts are affected, killing the animals and plants that live there. In addition these spills damage the landscape, the beauty, and cleanliness of the beaches, affecting the activities that people carry out there, preventing the fishermen to carry out their work and the tourists to enjoy the beach. The recovery of the ecosystems from these accidents is very slow.

The introduction of exotic or foreign species is another form of pollution which threatens marine and coastal biodiversity. Usually, this happens through the waters that are taken in a place and are placed in the tanks of ships to provide stability or prevent their collapse (ballast water), being emptied in another place. This is how animals or their larvae and eggs are moved from one location to another, putting in danger the plants or animals native to the last place. In several places of the world these new species have changed the original ecosystems by altering the composition of the communities, leading to serious ecological imbalances (Cushing, 1998).

Taking into account the stated above, it can be said that it is the responsibility and commitment of all human beings to ensure the preservation of the planet and of the water resources, because water is the basis of life and the permanence of life on the planet depends on its care.

A synthesis on the problem of marine waste, which today has come

9. www.veoverde.com/2014/03/exxon-valdez-la-tragedia-que-aun-no-termina.

to affect pristine areas such as the Antarctic continent, is presented in an article by (Torres y Berguño, 2011). It stresses the importance of the «*Global Program of Action for the Protection of the Marine Environment from Land-based Activities – GPA*»¹⁰, which has objectives related to the problem of marine debris that is needed to apply measures to all emitting sources to prevent and reduce the impact of marine waste. In addition it appoints international legal instruments that relate to the management of the wastes and port infrastructure for the reception of waste from ships.

One of the main agreements which have been made for the prevention and mitigation of the pollution of the sea is the «*Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*»¹¹, also known as «*The London Convention*», which entered into force on August 30 of 1975 and since 1977 has been managed by the International Maritime Organization – IMO. This Convention helps to control and prevent the pollution of the sea by the prohibition of the dumping of certain potentially hazardous materials. It also provides the need for a special permit previous to the dumping of other materials identified, as well as a general permit for the dumping of all other wastes and matter. By means of the amendments that were adopted in 1993, and that entered into force in 1994, the dumping at sea of low-level radioactive wastes was prohibited. In 1996 the Parties adopted the protocol known as «*the London Protocol*», which represents a change of important criterion on how to regulate the use of the Sea as a depository for waste materials. Instead of establishing what are the materials that may not be poured, prohibits any dumping, except those of acceptable wastes contained in the so-called «*list of discharges permitted*». The Contracting Parties to the Convention and Protocol of London have recently taken steps to mitigate the impact of the increasingly high concentrations of CO₂ in the atmosphere and in the marine environment. Currently, these instruments have been the most advanced international standards for addressing the issues related to the capture and seizure of carbon in the geological formations of the marine sub-fund and in the engineering of the marine climate, as for example, the fertilization of the oceans.

Taking into account the great and increasing importance of merchant ships upon the pollution of the seas, in 1973 the International Maritime Organization – IMO adopted the «*International Convention for the Prevention of Pollution from Ships*»¹², now known as the MARPOL Convention, which

10. <http://www.unep.org/gpa/>.

11. www.imo.org/es/OurWork/Environment/LCLP/Paginas/Default.aspx.

12. www.cetmar.org/documentacion/MARPOL.pdf.

has been amended by the Protocols of 1978 and 1997 and kept updated with relevant amendments. The MARPOL Convention addresses pollution from ships by oil, by noxious liquid substances carried in bulk, harmful substances carried in packaged form, sewage, garbage, and the prevention of air pollution from ships. MARPOL has greatly contributed to a significant decrease in pollution from international shipping and applies to 99% of the world's merchant tonnage.

Under the scope of the United Nations Environment Programme (UNEP), a very important mechanism for the prevention and control of the pollution of the seas due to human terrestrial activities is the «*Global Programme of Action for the Protection of the Marine Environment from Land-based Activities – GPA*»¹³, which is a global intergovernmental mechanism which directly addresses the relationship between terrestrial, freshwater, coastal, and marine ecosystems. The GPA was designed to address the accelerating degradation of the world's oceans and coastal areas by encouraging governments and regional organizations to prepare and implement comprehensive, continuing and adaptive action plans to protect the marine environment. UNEP hosts the «GPA Coordinating Unit» and organizes review meetings every 5 years to look at the progress made by countries in the implementation of the GPA through their respective National Action Plans. As part of its strategy to tackle these issues, the GPA secretariat have established three global multi-stakeholder partnerships, the «*Global Partnership on Nutrient Management – GPNM*», the «*Global Partnership on Nutrient Management – GPNM*», the «*Global Partnership on Marine Litter – GPML*» and the «*Global Wastewater Initiative – GWI*»¹⁴.

3. ON THE PROTECTION OF THE MARINE AND COASTAL ECOSYSTEMS

The coastal zone is the area of interaction between the sea and the land and therefore includes the marine and coastal resources. It is the place most inhabited in the world, because there inhabits 60 per cent of the world population, i.e., 3,600 million people (CCO, 2011). That is why, in this area man carries out many activities. There are farms to grow shellfish, industries of several types, homes, hotels, roads and ports are built, and agriculture is also practiced.

Some of the most representative damage caused in the coastal area

13. <http://www.unep.org/gpa/>.

14. www.unep.org/gpa/gpml/gpml.asp.

are the wood-cutting of mangroves, plugging of pipes that communicate the fresh water with the sea, the filling of swamps or coastal lagoons, the destruction of coral reefs and the intensive fishing with destructive fishing gears. The production and accumulation of gases such as carbon dioxide (CO₂) produced by the chimneys of the factories that use coal and by the exhaust pipes of car engines, is the main cause of the increase of the temperature on Earth. It is estimated that because of this increase, by the melting of the glaciers, the sea level will rise significantly causing floods in coastal areas and islands. Similarly, with the increase in the temperature of sea water, when the Earth is heated, plants and animals such as corals and fish that are used to live in other temperatures die (Cushing, 1998). The sea, always on the move, carries materials continuously between different points, eroding in one place and depositing in other places.

An alternative to prevent the degradation of coastal and marine areas is to promote the provision of marine sanctuaries that multiply along the coasts, in the likeness of the national parks that are created on the mainland. More than 1,200 marine protected areas already exist in various countries (CCO, 2011). Although in them the protection is far from being complete, since commercial and sport fishing is authorized in most of them and its total surface remains insignificant, these initiatives must be considered as the first manifestations of a willingness of harmonious integration or at least for a long lasting time of humanity in the womb of the natural systems that allows life to happen.

In accordance with the above, the design of actions for the integrated management and sustainable development of coastal and marine areas and the establishment of global policies for this purpose, with the participation of the different sectors involved is required. This would ensure the proper use, maintenance, and reproduction of the biological diversity and productivity of marine and coastal species. Environmental effects of development or investment projects to be undertaken in any field of action should be previously analyzed carrying out a proper monitoring and evaluation of these. Emergency plans to deal with the impact caused and not foreseen, either by the action of man, natural disasters, climate change, and/or the increase in the level of the sea should also be adopted.

Some of the actions to be taken into account for the protection of the marine and coastal environment are (Seoánes, 2000): (i) the improvement of coastal human settlements in relation to housing, drinking water and the treatment of wastewater and solid waste; (ii) the restoration and conservation of critical habitats altered; (iii) the integration of the different programs that are carried out in the coastal areas such as fisheries,

tourism, industry, transport, etc.; the development and training of human resources and the promotion of technology economically sustainable; and (iv) enforce compliance with the commitments in the international treaties.

While uncertainties remain, one thing is certain: we have the means to sabotage the ocean mechanism, but we are not sure of being able to repair it. For millennia, the ocean has taken care of us and the time has come to reverse the roles.

In accordance with (Seoánes, 2000), the coast has its own areas and areas of influence that must be delimited to define the vocational destination of the soil. Some of the priorities cited by the author for the proper development and management of coastal areas and their areas of influence are: (i) sort in depth uses and activities on the basis of the vocation of the soil and its determinants in the coastal zone; (ii) give the allocation of uses depending on the skills of the coastline or of its area of influence; (iii) incompatibilities should be taken into account; (iv) previous activities should be taken into account (v) account must be taken of the sustainable development, including industrial ports and industries; (vi) the tourist settlements should be located in places where the vocation of the soil permits it; (vii) activities should be organized to avoid incompatibilities, concentration and degradation of the coasts; (viii) fishing activities must be re arranged according to sustainable development; (ix) aquaculture must be greatly developed; and (x) coastal natural reserves must be multiplied.

(Trathan, 2014) describes how the cumulative human impacts over the oceans of the planet are worthy of consideration. While this study was conducted on certain species of penguins (Sphenischidae), the author explains that its results may have relevance for other taxonomic groups in the southern hemisphere and in the northern latitudes, where human impacts are greater. Among the major threats found for the object of its study, the most important were: habitat loss, pollution, and fishing, all of which are factors that humans can mitigate. The author suggests that the protection of the habitats of reproduction, in conjunction with the designation of marine reserves of appropriate scale, including the high seas will be critical for the future conservation of the species.

Among the agreements and conferences of a global nature that have put their eyes on the protection of the marine and coastal ecosystems it is worth highlighting the «*Agenda 21*»¹⁵, Chapter 17, derived from the «*Rio*

15. www.un.org/spanish/esa/sustdev/agenda21.

*Declaration on Environment and Development of 1992*¹⁶, and more recently the «*United Nations Conference on Sustainable Development – Rio+20*»¹⁷, in which governments reaffirmed the need to intensify efforts to protect and sustainably manage the oceans, seas and coastal areas and their living resources. On the basis of the deliberations of the Conference Rio+20 The UN Secretary General, Mr. Ban Ki-moon, launched a new international initiative to protect the oceans and to support the implementation of the Law of the Sea, called «*The Oceans Compact*»¹⁸, which provides guidelines for the solution of the problems of the deterioration in the health and productivity of the oceans, as well as the poor management of this resource. The Oceans Compact raises three objectives which are: protecting people and improving the health of the oceans; protecting, recovering and sustaining the oceans» environment and natural resources and restoring their full food production and livelihoods services, and strengthen ocean knowledge and the management of oceans.

4. ON OCEAN ACIDIFICATION

Ocean acidification is a consequence of the progressive global reduction in seawater pH because of the accelerating oceanic uptake of atmospheric carbon dioxide (CO₂). In the natural carbon cycle, the atmospheric concentration of CO₂ is balanced among the oceans, terrestrial biosphere, lithosphere, and the atmosphere. Anthropogenic activities, including fossil fuel combustion and land use changes, are a new source of CO₂ to the atmosphere. Some CO₂ has remained in the atmosphere, some is taken up by terrestrial plants, and some has been absorbed by the oceans. When CO₂ dissolves it reacts with water to form ionic and non-ionic chemicals such as dissolved free carbon dioxide, carbonic acid (H₂CO₃) which is the main reason for the increasing acidification, bicarbonate (HCO₃⁻) and carbonate (CO₃²⁻). The projected increase in deposition of atmospheric CO₂ into the oceans will result in a surface water pH decline, and this will impair calcification mechanisms of temperate and tropical corals and coralline microalgae (Raven *et al.*, 2005).

The damage of increased carbon dioxide to coral reef ecosystems, fisheries and recreation industries that depend on them, could amount to economic losses of many billions of dollars annually. In the longer term, changes to the stability of coastal reefs may reduce the protection they offer

16. www.un.org/spanish/esa/sustdev/agenda21/riodeclaration.htm.

17. www.un.org/es/sustainablefuture/about.shtml.

18. http://www.un.org/depts/los/ocean_compact/SGs%20OCEAN%20COMPACT%202012-EN-low%20res.pdf.

to coasts. There may also be direct and indirect effects on commercially important species of fish and shellfish (Feely *et al.*, 2009).

The 20th century increase in atmospheric CO₂ occurred more than ten times faster than any sustained change during the past 22,000 years, implying that global climate change, which is anthropogenic in origin, is progressing at a speed that is unprecedented during this period. At present, the majority of the world is now concerned about changes in global climate patterns, including potential oceanic acidification, but seems disinclined to take action (Raven *et al.*, 2005).

Eisler (2012) classifies the sources of oceanic acidification into four categories: anthropogenic, biological, physical and chemical:

From the anthropogenic point of view, it is important to note that the growth rate in emissions of CO₂ is strongest in rapidly-developing economies, particularly China. Together, the developing and least developed economies, which comprise 80% of the global population, accounted for 73% of global emissions in 2004 (Eisler, 2012). Although reactive sulfur and nitrogen discharged into the atmosphere from fossil fuel combustion and agriculture can alter surface seawater alkalinity, pH, and inorganic carbon storage, on a global scale, the alterations in seawater chemistry from anthropogenic nitrogen and sulfur deposition are only a few percent of the acidification caused by the oceanic uptake of anthropogenic CO₂ (Eisler, 2012). Over the past 250 years, the releases of carbon dioxide from agriculture and industry have increased atmospheric CO₂ by about 100 ppm, raising it to the highest level predicted for at least 650,000 years. On the time scale of several thousands of years, it is estimated that 90% of anthropogenic CO₂ emissions will end up in the ocean (Feely *et al.*, 2009).

From the biological point of view it is necessary to start pointing out that marine phytoplankton is responsible for about a half of the global primary production, and represents the basis of the marine food web. Oceanic ecosystem processes are linked by net primary production in the surface layer, where inorganic carbon is fixed by photosynthetic processes. Carbon uptake of marine phytoplankton and its export as organic matter to the ocean interior lowers the partial pressure of carbon dioxide in the upper ocean, and facilitates the sequestration of atmospheric CO₂ (Raven *et al.*, 2005). Because the precipitation of CaCO₃ results in the sequestering of carbon, some investigators believe that coral reefs can be considered as sinks of global atmospheric CO₂. The only way to mitigate the potential biological consequences of future ocean acidification is to significantly reduce fossil-fuel emissions of CO₂ to the atmosphere (Raven *et al.*, 2005).

From the physical point of view, volcanoes produce about 200 million metric tons of CO₂ worldwide every year. Through ocean ridge volcanism, deep sea hydrothermal vents emit low pH fluids enriched in CO₂. However, the fluxes of CO₂ to the ocean through ocean ridges are significantly smaller than the annual CO₂ fluxes via terrestrial and marine respiration (Eisler, 2012). Future climate change will reduce the efficiency of the earth system to absorb the anthropogenic carbon perturbation (Weart, 2010).

From the chemical point of view, the burning of fossil fuels has increased the concentration of CO₂ in the atmosphere from 280 ppm to 385 ppm over the last 200 years. This increase is larger than has occurred over the past 800,000 years. Ocean acidification lowers the oceanic saturation states of carbonate minerals and decreases the calcification rates of some marine organisms that provide a range of ecosystem services including coastal protection, aquaculture, and tourism (Eisler, 2012).

The first direct impact of oceanic acidification on humans may be through declining harvests and fishery revenues from shellfish, their predators, and coral reef habitats. Substantial revenue declines, job losses, and indirect economic costs may occur if ocean acidification damages marine habitats, alter marine resource availability, and disrupts other ecosystem services. Some developing island and coastal nations that depend heavily on marine and reef ecosystems for food, tourism, and exportable natural resources will suffer the most economically. Moreover, coral damage will expose coastal communities and mangrove ecosystems to storm and wave damage, increasing the potential for economic and social disruption following severe weather events (Cooley *et al.*, 2009).

Fishery resources contribute 15% of animal protein for three billion people worldwide and a further one billion people rely on fisheries for their primary source of protein. Fish stocks, already declining in many areas due to overfishing and habitat destruction, now face the new threats posed by ocean acidification. Fish are very susceptible to a rise in environmental CO₂ (FAO, 2014).

Some strategies have been suggested by scientists in order to mitigate the effect of oceanic acidification. Most scientists agree that the smaller the CO₂ buildup the less the probability of deplorable impacts (Raven *et al.*, 2005). But the demand of cheap fossil energy continues to grow. Unfortunately, not viable and acceptable options to fossil fuels have yet been devised (Eisler, 2012). To reduce CO₂ emissions, it is proposed to plant forests and to use alternative energy sources such as wind, solar and nuclear. Companies around the world would be issued rights by their

governments to produce carbon, which they could buy and sell on an open market. If they wanted to produce more carbon, they could buy another company's rights. If they produced less carbon than they need, they could buy and sell on an open market. From there, developing nations could join giving the companies targets to reduce emissions without obstructing growth. With the right incentives, developing countries will adopt less carbon-intensive growth paths (Eisler, 2012).

The ocean represents the largest potential sink for anthropogenic CO₂ (Herzog, 1998). Oceanic CO₂ levels are expected to rise during the next 200 years to levels not seen for 10 to 150 million years by the uptake of atmospheric CO₂, or potentially through the disposal of waste CO₂ in the deep sea. Ocean sequestration of CO₂ as a possible measure to reduce the rate of increase of atmospheric CO₂ is proposed through: (i) release of gaseous or liquid CO₂ at shallow depths of less than 1,000 m from the coast by pipelines; (ii) discharging liquid CO₂ into intermediate ocean depths of 1,000 to 2,000 m from a moving ship by a towed pipe; or (iii) storing liquid CO₂ in a restricted depression of the deep sea floor below 3,000 m deep. This could be done by first reacting waste CO₂ with water and a carbonate material, such as limestone, to form dissolved bicarbonate for release into the sea (Barry *et al.*, 2004).

A radical new technique promises a cheaper and more secure method of burying CO₂ emissions underground instead of storing it as a gas. The research, called the Carbfix Project¹⁹, took place at Iceland's Hellisheidi power plant, the world's largest geothermal facility. The plant pumps up volcanically heated water to run electricity-generating turbines but this also brings up volcanic gases, including carbon dioxide. Carbon dioxide has been pumped underground and turned rapidly into stone, demonstrating a radical new way to tackle climate change. The unique project promises a cheaper and more secure way of burying CO₂ from fossil fuel burning underground, where it cannot warm the planet. The new research pumped CO₂ into the volcanic rock under Iceland sped up the natural process where the basalts react with the gas to form carbonate minerals, which make up limestone. The researchers were amazed by how fast all the gas turned into a solid – just two years, compared to the hundreds or thousands of years that had been predicted. «We need to deal with rising carbon emissions and this is the ultimate permanent storage – turn them back to stone,» said Juerg Matter, at the University of Southampton in the UK, who led the research published on Thursday in the journal *Science*.

19. www.or.is/englisg/carbfix-project.

Today's need for this field, known as the substantive CO₂ emission reductions could be satisfied more cheaply by available sequestration technologies than by an immediate transition to nuclear, wind or solar energy. Further development of sequestration would assure plentiful, low cost energy for the century, giving better alternatives ample time to mature. Attempts to mitigate CO₂ emissions suggest that reef managers and coastal resource policies must first reduce the influence of declining water quality, coastal pollution, and overexploitation of key functional groups such as herbivores. New techniques should be developed for the mass culture of corals from fragments and spat in an attempt to assist local restoration, or the culture of resistant varieties of key organisms (Eisler, 1012).

Anthropogenic climate change is now likely to continue for many centuries. Climate change is unlikely to be adequately addressed without greatly improved international cooperation and action:

An important achievement of the «*United Nations Framework Convention on Climate Change*»²⁰ was that incorporated a very important line of one of the most successful multilateral treaties on the environment: the «*1987 Montreal Protocol*»²¹, in virtue of which «*the member states are obliged to act in the interest of the human safety even in the absence of scientific certainty*». Another important achievement of the Convention, which entered into force on 21 March 1994 and which today has 197 Parties that have ratified, is that it recognizes that the problem of climate change is real. This is a great achievement since it had less scientific evidence than today when there are still those who doubt that climate change is a real problem. It is difficult to ensure that the nations of the world agree on anything, much less to a difficulty which is complex, the consequences of which are not entirely clear and that will produce its most serious effects within several decades and even centuries from now. The purpose of the Convention was to give guidelines to achieve stabilization of greenhouse gas concentrations. Unfortunately these proposals depend on that humanity makes the transition between its dependence on fossil fuels by the use of alternative energy sources.

To the United Nations Framework Convention on Climate Change a first addendum was made in 1997, the so-called «*The Kyoto Protocol*»²², which entered into force in 2005. This protocol specifies that the signatory countries reduce their emissions of greenhouse gases below specified

20. www.unfccc.int/resource/docs/convkp/convsp.pdf.

21. www.oei.es/salactsi/ADA699D5.pdf.

22. www.unfccc.int/resource/docs/convkp/kpspan.pdf.

levels. The largest polluters, the United States of America and China, responsible for a quarter of the world population and nearly half of their toxic emissions, are not related parties to the Agreement. Japan, which itself is a signatory party, said that it will not reduce their emissions more to the detriment of its economy while the United States and China continue with theirs at full steam.

On 30 November 1999, the executive body of the 1979 Convention on Long-range Transboundary Air Pollution approved the «*Gothenburg Protocol*»²³ to combat acidification, eutrophication, and tropospheric ozone. In this protocol is set for each of the signatory parties the maximum permitted levels of emissions of the four pollutants precursors causing acidification, eutrophication, or tropospheric ozone: sulfur dioxide, nitrogen oxides, volatile organic compounds, and ammonia. It also provided a Code of Good Agricultural Practice to combat ammonia emissions from agricultural sources and a method of management of solvents.

In the «*Third Scientific Symposium on the Ocean in a High-CO₂ World*»²⁴ held in Monterey, California, in September 2012, 540 experts from 37 countries participated, who discussed the results of the investigations relating to ocean acidification, its impacts on ecosystems, their socio-economic consequences and its implications for the policies. Among the conclusions of this symposium some of them should be highlighted: «the acidification of the waters may be increased in 170% this century and result in significant economic losses, with a change in addition in the ecosystem and marine biodiversity»; «Coral and mollusks can be seriously threatened by the acidification that occurs as the CO₂ emitted by human activity and originated mainly from the burning of fossil fuels, is absorbed by the oceans»; «the acidification of the oceans sends a clear message: it is important to be prepared for some significant economic and ecosystem losses»; «The reduction of emissions of CO₂ can protect the corals and other organisms of the ecosystem, but it should also be borne in mind that the oceans are sensitive to other phenomena such as the lack of oxygen, pollution and overfishing. Reducing these factors and introducing more protected areas would slow the acidification»; Experts also stress that «this phenomenon could have consequences on the behavior of fish as well as in the modification of their appearance».

23. www.unece.org/env/lrtap/multi_h1.html.

24. <http://unesdoc.unesco.org/images/0022/002247/224724s.pdf>.

5. ON FISHERIES MANAGEMENT

The fisheries sector is of vital importance for the maintenance and food safety of the world population. According to FAO figures (FAO, 2016), the total world production of fish and crustaceans, mollusks and other aquatic animals reached during 2014 a total of 167.2 million tons. Of this total, the production of the catches was 93.4 million tons, having remained relatively stable during the last decade, while during the same period aquaculture production grew at an annual rate of 5.8 per cent, from 44.3 million tons in 2005 to 73.8 million tons in 2014. While aquaculture has a major growth year after year, the size of the global fishing fleet remains stalled since 2008 at around 4.6 million vessels. On a global scale, fish provides more than 3,100 million people almost 20 percent of the average contribution of animal proteins. During 2013 the world average per capita consumption of fishery products was 19.7 kg. In 2014 87% of the total production (146 million tons) was used for direct human consumption and the remaining 13 per cent (21 million tons) for the production of meal and fish oil. During the same year around 56.6 million people worked in the primary sector of capture fisheries and aquaculture. FAO estimates that, in general, the fisheries and aquaculture guarantee the livelihoods of between 10% and 12% of the world population (FAO, 2014).

Notwithstanding the foregoing, fishery resources are fluctuating and fragile; the fact they can reproduce turn them into renewable resources, but their availability is not inexhaustible but rather limited. If the limited nature of the fishery resources is not taken into consideration, the large initial benefits of its intensive exploitation will be transformed inexorably into losses.

During 2011, 28.8% of the fish populations evaluated were captured in an unsustainable level from the biological point of view and therefore were overexploited (FAO, 2014). Normally the fisheries tend to overfishing due to a set of factors such as social and economic dependency of the fisheries and the lack of alternative employment in the secondary and tertiary sectors. This is linked to the current conditions of free access, which produces the overexploitation of resources on the basis of common ownership, due to the desire to obtain a greater benefit than the neighbors in the shortest possible time. This fact leads to obtaining little fish, expensive and probably with excess of workers. The over exploitation of the resource activates in motion a hellish machinery, because overdoing fishing results in less and smaller fish (Seoánes, 2000).

Another of the problems that affect the living resources of the ocean is the «by-catch» specimens that are discarded and thrown into the sea

because they are not of commercial interest, people are not used to eating them, or their size is very small. This causes a lot of harm to ecosystems and to the food chain, because it prevents these species to fulfill their purpose as food for other species needed in their natural process. It is estimated that 27 million tons of fish considered non-commercial are returned to the sea every year (Seoánes, 2000).

It is also a threat to the integrity of the living resources of the ocean the so-called «Illegal Unreported and Unregulated Fishing», or IUU fishing, term that has been provided to describe a series of fishing activities that are carried out in an irresponsible manner. Some fishermen do not respect fishing regulations, not even those that are contained in the Code of Conduct for Responsible Fisheries of the FAO and other international instruments. Others do not declare or declare wrongly their catches. Some owners change the flag or the national flag of their vessels to raise that of the countries that cannot or do not want to properly monitor the fishing activity. Those who practice the IUU fishing acquire an unfair advantage with respect to the responsible fishers who fish in compliance with the rules. No one knows exactly what the total catches of the IUU fishing amount to, but it is known that in some important fisheries this represents a large percentage of the total catch and the fact that the number of IUU catches throughout the world is increasing is worrying (FAO, 2001).

Many experts predict a major crisis if nothing is done to protect available fishery resources. To allow that resources can be renewed, less and better fishing must take place, avoiding the catch of juveniles. This however implies sacrifices, generally meaning, allowing less vessels fishing, generating a loss of profit for the ship owner or fisherman and a reduction in the number of jobs. It is therefore required in the short term that a management and proper organization of the resource takes place in order to allow a rational exploitation in the medium term.

Rigorous management plans that allow for the restoration of the populations in order to achieve a full and sustainable productivity are needed. The purpose of the fishing regulations is to ensure the sustainable use of resources and in this way contribute to the generation of social and economic benefits for the communities of fishermen and countries, without affecting the capacity for the renewal of resources. A proper management or fishing regulations must include at least (Seoánes, 2000): (i) technical measures, such as the regulation of the size and type of nets to use, the use of selective fishing gear, the prohibition of fishing in certain areas and periods, and the establishment of minimum sizes of catch; (ii) control of fishing effort, through the limitation of the number

of fishing licenses, reduction of the fishing period and limitation of the size of fishing vessels; and (iii) monitoring of catches, providing a total catch quota that is distributed in individual quotas by countries, fleets, companies or fishermen.

But not always governments ensure the sustainable and equitable redistribution of common public goods, such as fishery resources. Frequently it is the market that is actually imposing the rules that control the activity of the fishing industry, which often ends up controlling completely the resource available. This process of hoarding generally contains three mechanisms (García-Allut, 2016): the first of them is the loss of the right to fish on a small scale, due to the existing rules that oblige to possess a right of integrated fisheries in the market, represented by catch quotas, assigned many times to the highest bidder; another mechanism is the loss of direct physical access by part of the small-scale fisherman to their traditional fishing waters, found displaced by projects such as tankers or by large areas that are destined for aquaculture; finally, small fisheries face catches in rapid decline due to the overfishing, pollution and the destruction of the fishing grounds and other vital aquatic habitats, responsibility basically of the big industrial players that have monopolized the resource. All of the above leads to the fact that many times the traditional fisherman end up observing what happens around them with great impotence.

The problem described above requires that precise steps are taken to manage and regulate as needed in accordance to this condition. The ocean is one and the approach of management and protection must be consistent with this consideration.

International agreements are increasingly being subscribed to ensure the permanence and the productivity of ocean resources, being this one, one of the best initiatives to achieve real results that benefit the ocean, its resources, and humanity:

The introduction of the exclusive economic zones (EEZ) in the middle of the seventies and the adoption of the «*United Nations Convention on the Law of the Sea of 1982*»²⁵ offered a new framework for better management of marine resources. Then, the FAO Committee on Fisheries (COFI) in March 1991, called for the elaboration of new criteria that would lead to sustainable and responsible fisheries. Thus, in the «*International Conference on Responsible Fishing*»²⁶ held in 1992 in Cancun (Mexico), FAO

25. www.un.org/depts/los/convention_agreements/texts/unclos/convemar_es.pdf.

26. www.fao.org/3/a-w9634s.pdf.

was requested to prepare an International Code of Conduct to deal with these problems. The results of that conference or «*Declaration of Cancun*», constituted an important contribution to the «1992 United Nations Conference on Environment and Development»²⁷, in particular for its «Agenda 21»²⁸. Subsequently convened the «United Nations Conference on Fish Stocks whose territories are within and outside the Exclusive Economic Zones and Highly Migratory Fish Stocks»²⁹, in which FAO provided an important technical support. In November 1993 the FAO Conference adopted the «*Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the high seas*»³⁰.

As a result of the conferences and events mentioned above, the governing bodies of FAO recommended the formulation of an «*International Code of Conduct for Responsible Fisheries*»³¹ that adjusts to those instruments and that without being mandatory provided principles and standards applicable to the conservation, management, and development of all fisheries. The Code, adopted unanimously on 31 October 1995 by the Conference of the FAO, provides the necessary framework for that, in the field of national and international initiatives, a sustainable exploitation of living aquatic resources is ensured, in accordance with the environment. Its purpose is to provide responsible fisheries, taking into account the biological, technical, economic, social, environmental, and commercial relevant aspects. Most countries have legislation and fisheries policies that are in accordance with the Code, while other countries are planning to adapt them to this.

Since 1995 FAO has assumed the need to incorporate the «*Precautionary Principle*» to the management of fisheries, as one of the general principles of the Code of Conduct for Responsible Fisheries. This principle is based on the following premises (Seoanes, 2000): (i) all fishing activities have environmental effects and it is not appropriate to assume that these are irrelevant; (ii) all fishing activities must be subject to a previous check-up and approval; (iii) although this principle may require the suspension of fishing activities that have potentially adverse effects, it does not mean that fishing cannot take place until they have evaluated all the effects; and (iv) the criteria to be taken into account in the decision-making on the authorization of fishing activities must be proportional to the potential risk to the resource.

27. www.un.org/es/development/devagenda/sustainable.shtml.

28. www.un.org/spanish/esa/sustdev/agenda21.

29. www.fao.org/docrep/007/y5438s/y5438s08.htm.

30. <http://www.fao.org/docrep/MEETING/003/X3130m/X3130S00.HTM>.

31. <http://www.fao.org/docrep/005/V9878S/V9878S00.HTM>.

In 2001 the members of the FAO created the «*International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing – IPOA-IUU*» (FAO, 2001) in order to cope with this problem. The same as the Code of Conduct for Responsible Fisheries, the IPOA-IUU is voluntary and provides countries with the instruments to jointly combat IUU fishing. The IPOA-IUU also requests that steps internationally agreed related to the international market are used. These are instruments whose purpose is to prevent the selling or marketing of the fish caught by those practicing IUU fishing. The IPOA-IUU describes a wide range of instruments of monitoring, control and surveillance for use against IUU fishing, such as the satellite surveillance systems of ships (VMS), observer programs, plans of documentation of the catches, protocols for inspections of vessels in ports and on the sea, and steps for the denial of access to the ports to vessels suspected of IUU fishing.

Another instrument that tends to an adequate management of the fishing activity is the binding agreement of FAO on «*Port State Measures*»³² approved in 2009. These measures are the requirements provided by the Port State Measures that foreign fishing vessels must comply, as a condition for the use of the ports of that State. These measures commonly consist in requirements of notification prior to the entrance to the port, use of certain ports, restrictions for the entry in the ports and for unloading or transshipment of fish, restrictions on supplies and services, documentation requirements and inspection in the ports and related provisions, such as the list of vessels involved in IUU fishing, in addition to other trade-related measures and sanctions. In recent years, many of these measures have been incorporated or become international instruments.

In 2011 the FAO created the «*International Guidelines on Bycatch Management and Reduction of Discards*»³³, which are designed to provide guidance on the sorting factors that range from the creation of an appropriate regulation framework to the components of a good program of data collection, passing through the determination of the fundamental aspects of the management and the measures needed to ensure the conservation of the target species and species that are not the subject of capture, as well as the habitats affected.

Finally, and most recently, on the occasion of the discussion in the «*Conference of Rio+20 2012*»³⁴, FAO has launched the «*Blue Growth*

32. http://www.fao.org/fileadmin/user_upload/legal/docs/1_037t-s.pdf.

33. <http://www.fao.org/documents/card/es/c/e2c4ea4e-a86e-544c-b6aa-b59da5797263/>.

34. www.un.org/es/sustainablefuture/about.shtml.

Initiative»³⁵, by which will help countries to carry out and implement programs focused on the economy and blue growth. This initiative emphasizes the need to design and support programs for the conservation and sustainable management, integrated and sensitive to the technical and socio-economic aspects of the oceans and wetlands, paying special interest to capture fisheries, aquaculture, ecosystem services, trade, and the social protection of coastal communities. The Blue Growth promotes the fisheries and aquaculture responsible and sustainable, through an integrated approach involving all the parties concerned.

However, if in the field of fisheries and fishery resources are presented numerous problems and limitations, such as those previously exposed, the aquaculture sector offers promising prospects to become the global alternative to meet the growing demand for fish and seafood. As has already been said, while the production of fishing have been virtually stagnant during the past two decades, in the last ten years aquaculture production grew at an annual rate of 5.8%, from 44.3 million tons in 2005 to 73.8 million tons in 2014 (FAO, 2016).

Depending on the geographical area, the nature of the catch, the species and the infrastructure and technical means used for their development, there is a great diversity of modalities for aquaculture. In general, this focuses on the breeding and culture of fish, mollusks, and crustaceans, existing also cultures in smaller scale of another type of organisms such as algae.

While the marine aquaculture is a growing activity with exceptional potential to sustain the growing demand for fish and seafood, this should be strictly controlled, because it can produce a huge amount of deleterious effects on the environment, as for example the modification of the natural populations by physical or chemical alteration of the environment, or by attack of pathogens that cause problems of sedimentation of waste and modification of the physical-chemical parameters of the water, as well as of its landscapes virtues. When aquaculture turns into the degradation of coastal mangroves, which are the breeding grounds of many natural species, constitutes a major threat to biological diversity. Today and in the future it will not be enough to generate aquaculture products at competitive prices, but it will be necessary to ensure that these products are obtained in a sustainable manner (FAO, 2014).

To promote the sustainable development of aquaculture is required (Seoánes, 2000): (i) increase the efficiency in resource use and productivity in general; (ii) maximize the contribution to the food safety; (iii) preserve

35. <http://www.fao.org/3/a-mk541s/mk541s02.pdf>.

the genetic material; (iv) develop and adopt criteria of environmental, economic and social sustainability with indicators to measure the development in these areas; (v) adopt management frameworks that can be controlled by regulations; (vi) promote good practices for the production and environmental management; and (vii) to carry out strategies for integrating aquaculture in coastal areas so as not to exceed the load capacity of the surrounding environment.

6. CONCLUSIONS

We have seen how the incidence of man on the sea has almost always been negative, using it in a bad way and acting with selfishness in a very short time, often using a bad management and an erroneous planning. Hundreds of marine species have disappeared as a result of the pollution and overexploitation of fisheries, with what this represents in loss of genetic wealth, food, medical, industrial, leisure, etc. products. The human needs of proteins grow rapidly and it is clear that the sea can provide an important part of them, but this can only be possible if its removal is done in a sustainable manner.

During the next few years the human activity will continue to exert a strong and growing impact on the planet, the ocean and the living resources: will require large amounts of energy and resources of all kinds; emissions of carbon dioxide will continue, and in increasing quantities, making it possible to duplicate by 2050 with a consequent increase in the temperature of the earth, profoundly changing the climates and sea levels; mining and oil wells are going to multiply, including fragile areas or that have until now been protected areas; coal combustion will leave traces of heavy metals and sulfur dioxide, which will enhance the phenomenon of the acid rain; the development and implementation of new energy sources such as nuclear must solve the problem of the risk of accidents and the methods and locations for the waste disposal; the dumping of industrial origin will cause an increase in the pollution by heavy metals, with all the resulting risks of carcinogenic and mutagenic effects.

But this whole problem may be softened to the extent in which appropriate regulations are developed and implemented.

Attention must be drawn to the fact that the air, water and marine resources are *«resources of regular use»*; for this reason, it is not possible to exert a management and control on them as the applied to goods with individual property rights. These should be governed by rules and principles of regional and/or universal coverage, as international agreements and

treaties that each day are conceived in the womb of initiatives such as the United Nations Environment Programme – UNEP. But, in addition to the responsibility of the leaders and world organizations to solve the problems of deterioration of the oceans and marine resources, different societies, as well as the individuals that comprise them in particular, must be appropriately informed about these issues so that they can assume the responsibility that each one of them have in terms of its solution.

It is important to note that, without prejudice to the good intentions that the countries of the globe have demonstrated in the deliberations of the conferences, agreements and treaties appointed in the excerpts of this chapter, many of them have thrown statements that have not led to drastic measures in regard to the elimination of substantive pollution, carbon emissions or overfishing, and have lacked binding nature, as well as a timetable for an implementation and a control mechanism. It is therefore appropriate to welcome the fact that a significant number of countries have acceded, with quantifiable figures, to commitments and instruments such as the «*Agenda 2030 for sustainable development*» of 2015, with its fourteen «Sustainable Development Goals» (SDGs) and 169 goals, and the «*Paris Agreement*» 2015, which for the first time presents a framework of binding nature.

The SDG No. 14 of Agenda 2030, which is the «*conserve and sustainably use the oceans, seas, and marine resources for sustainable development*», is nevertheless nothing less important than the other SDGs present in the same. Together they all make up a plan of action in favor of the people, planet, and prosperity, thus contributing to the universal peace and the freedom of peoples. Addresses the complex issue of the eradication of poverty in all its forms and dimensions, which is required for achieving a sustainable development. It also pretends to open doors for the full exercise of the human rights of the people promoting gender equality and the empowerment of these rights by women and girls. The SDGs and its goals are integrated and indivisible in nature and combine the three dimensions of sustainable development: economic, social, and environmental.

«Each one of us has been part causing the problem; therefore we must also be part of its solution».

REFERENCES

BARRY, J.P., K.R. BUCK, C.F. LOVERA, L. KUHNZ, P.J. WHALING, E.T. PELTZER, P. WALZ, and P.G. BREWER. 2004. *Effects of direct ocean CO₂ injection on deep-sea meiofauna*. J. Ocean, 60, 759-766.

CCO, 2000. *El Océano en las Ciencias Naturales y Sociales*. Comisión

Colombiana del Océano, segunda edición, Dígitos & Diseños Industria Gráfica Ltda., Colombia, 298 p.

COOLEY, S.R., H.L. KITE-POWELL, and S.C. DONEY. 2009. *Ocean acidification's potential to alter global marine ecosystem services*. *Oceanography*, 22, 172-181.

CUSHING, D.H. 1998. *Ecología Marina y Pesquerías*. Ed. Acribia, Madrid, España, 252 p.

DE LA TORRE, A. y E. PEÑA DE TORRES. 2002. *Resumen de las Jornadas de Contaminación Marina*. Santa Cruz de Tenerife, España, *Rev. Toxicol.*, 19: 97-144.

EISLER, R. 2000. *Oceanic acidification: a comprehensive overview*. Science Publishers, New Hampshire, 252 p.

FAO, 2016. *FAO yearbook, Fishery and Aquaculture Statistics, 2014*. FAO, Rome, 105 p.

FAO, 2014. *The State of World Fisheries and Aquaculture 2014*. FAO, Rome, 253 p.

FAO, 2001. *International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing*. FAO, Rome, 27 p.

FEELY, R.A., S.C. DONEY, and S.R. COOLEY. 2009. *Ocean acidification: present conditions and future changes in a high-CO₂ world*. *Oceanography*, 22, 36-47.

GARCÍA-ALLUT, A. 2016. *Pesca y Agricultura*. En: *Revista Soberanía alimentaria: biodiversidad y culturas*. ISSN 2013-7567, Barcelona, Primavera 2016, 24, 10-13.

HALL, S.J. 1999. *The Effects of Fishing on Marine Ecosystems and Communities*. Oxford, UK, Blackwell Science, 274 p.

RAVEN, J., K. CALDEIRA, H. ELDERFIELD, O. HOEGH-GULDBERG, P. LISS, U. RIEBESELL, J. SHEPARD, C. TURLEY, and A. WATSON. 2005. *Ocean acidification due to increasing atmospheric carbon dioxide*. Policy Doc., 12/05, The Royal Society, 6-9 Carlton House Terrace, London, 57 p.

SEOÁNES CALVO, M., 2000. *Manual de Contaminación Marina y Restauración del Litoral*. Ediciones Mundi-Prensa, Madrid, España, 565 p.

WEART, S.R. 2010. *The idea of anthropogenic global climate change in the 20th century*. *Wiley Interdisc.*, *Rev. Climate Change*, 1, 67-81.

Chapter 18: goal 15

Life on land. Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

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SUMMARY: 1. INTRODUCTION. 2. FOREST AREA AS A PROPORTION OF TOTAL LAND AREA (INDICATOR 15.1.1). 3. PROPORTION OF IMPORTANT SITES FOR TERRESTRIAL AND FRESHWATER BIODIVERSITY THAT ARE COVERED BY PROTECTED AREAS, BY ECOSYSTEM TYPE (INDICATOR 15.1.2). 4. PROGRESS TOWARDS SUSTAINABLE FOREST MANAGEMENT (INDICATOR 15.2.1). 5. PROPORTION OF LAND THAT IS DEGRADED OVER TOTAL LAND AREA (INDICATOR 15.3.1). 6. COVERAGE BY PROTECTED AREAS OF IMPORTANT SITES FOR MOUNTAIN BIODIVERSITY (INDICATOR 15.4.1). 7. MOUNTAIN GREEN COVER INDEX (INDICATOR 15.4.2). 8. RED LIST INDEX (INDICATOR 15.5.1). 9. NUMBER OF COUNTRIES THAT HAVE ADOPTED LEGISLATIVE, ADMINISTRATIVE AND POLICY FRAMEWORKS TO ENSURE FAIR AND EQUITABLE SHARING OF BENEFITS (INDICATOR 15.6.1). 10. PROPORTION OF TRADED WILDLIFE THAT WAS POACHED OR ILLICITLY TRAFFICKED (INDICATOR 15.7.1)

1. IUCN, 28 rue Mauverney, Gland 1196, Switzerland.

2. BirdLife International, Cambridge, UK.

3. UNEP World Conservation Monitoring Centre, Cambridge, UK.

4. World Vision International, Geneva, Switzerland.

AND 15.C.1). 11. PROPORTION OF COUNTRIES ADOPTING RELEVANT NATIONAL LEGISLATION AND ADEQUATELY RESOURCING THE PREVENTION OR CONTROL OF INVASIVE ALIEN SPECIES (INDICATOR 15.8.1). 12. PROGRESS TOWARDS NATIONAL TARGETS ESTABLISHED IN ACCORDANCE WITH AICHI BIODIVERSITY TARGET 2 OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020 (INDICATOR 15.9.1). 13. OFFICIAL DEVELOPMENT ASSISTANCE AND PUBLIC EXPENDITURE ON CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY AND ECOSYSTEMS (INDICATOR 15.A.1 AND 15.B.1). 14. CONCLUSIONS. LITERATURE CITED.

ABSTRACT:

We review progress towards Sustainable Development Goal #15 on life on land, focusing on the 12 official UN indicators. Of these 12, data are already available for five through the SDGs database and two from other authoritative sources; the remaining five do not yet exist. While indicators of responses show improvements, those for state reveal decreases. We speculate as to the explanations and implications of this discrepancy, and propose an agenda to resolve these possibilities.

1. INTRODUCTION

The importance of environmental stewardship and conservation, given both the intrinsic value of nature and its contributions towards socio-economic development, has been recognised by cultures around the world for millennia. With the emergence of global governance mechanisms in the twentieth century, this importance was reflected in the establishment of the three 1992 «Rio Conventions» – the Convention on Biological Diversity (CBD), the UN Convention to Combat Desertification, and the UN Framework Convention on Climate Change. These complement a suite of other international conventions related to biodiversity (such as the Convention on Conservation of Migratory Species, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the International Treaty on Plant Genetic Resources for Food and Agriculture, the Ramsar Convention on Wetlands, the World Heritage Convention, and the International Plant Protection Convention) and along with others related to environmental pollution (such as the Rotterdam, Basel, and Stockholm Conventions on chemicals, and the Minamata Convention on Mercury), and numerous regional agreements.

In 2002, the UN member states adopted the eight Millennium Development Goals, aiming to end poverty by 2015. This represented major innovation in global governance, and encompassed a goal #7 on ensuring environmental sustainability. In 2015, the Millennium Development Goals in turn were superseded by the SDGs, a step which delivered two important advances. First, while the Millennium Development Goals were only relevant to developing countries and countries with economies in transition, the SDGs are universal – they apply to all of the world’s nations. Second, environmental sustainability is comprehensively reflected in the SDGs, which encompass four primarily environmental goals (on water #6, climate #13, life in the ocean #14, and life on land #15), as well as integrating environmental targets into a number of other goals.

Here, we review progress towards SDG #15 for life on land, which aims to «protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss». It encompasses 12 targets and 12 indicators (Table 1). We focus on those indicators established by the 47th meeting of the UN Statistical Commission⁵ through the Inter-Agency Expert Group on SDG indicators⁶, which for all indicators posts both raw data⁷ and metadata⁸. The process has largely avoided use of composite indices, given their widely recognised limitations in documenting change over time in a policy-relevant way⁹. These 12 indicators in turn draw heavily from the Biodiversity Indicators Partnership¹⁰, which mobilises indicators towards the 2011-2020 Strategic Plan for Biodiversity¹¹ for the seven biodiversity-related conventions. We organise the indicators according to the State-Pressure-Response framework¹² (Figure 1). It is notable that most of the indicators (seven) measure response, with only four tracking state and only one tracking pressure.

5. <http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-SDGs-Rev1-E.pdf>.

6. <http://unstats.un.org/sdgs/iaeg-sdgs/>.

7. <http://unstats.un.org/sdgs/indicators/database/>.

8. <http://unstats.un.org/sdgs/metadata/>

9. BÖHRINGER & JOCHEM (2007).

10. <http://www.bipindicators.net/>.

11. <https://www.cbd.int/sp/>.

12. Modified from SPARKS et al. (2011).

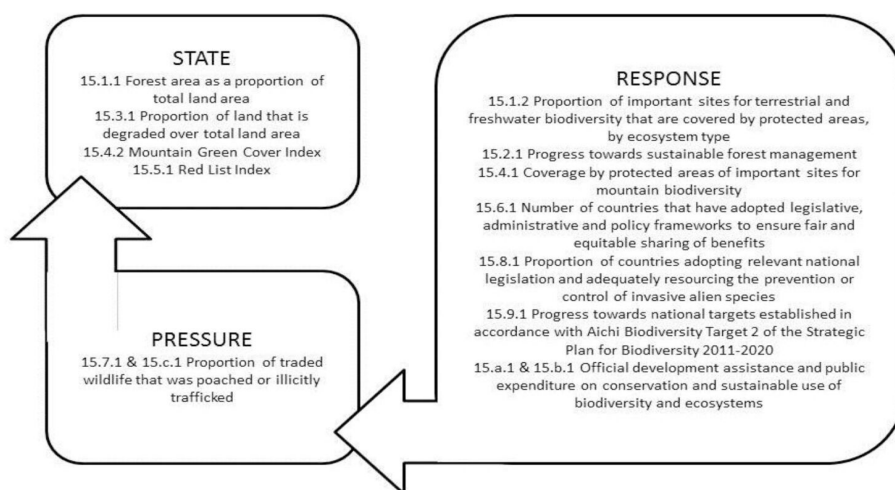
Table 1. Targets and indicators for SDG #15. For indicators, white backgrounds denote that data are already available through the SDGs database, light grey that data are available elsewhere, and dark grey that data do not yet exist

| SDG #15 Targets | SDG #15 Indicators & Metadata |
|---|--|
| 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements | 15.1.1 Forest area as a proportion of total land area ¹ |
| | 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type ² |
| 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally | 15.2.1 Progress towards sustainable forest management |
| 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world | 15.3.1 Proportion of land that is degraded over total land area |
| 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development | 15.4.1 Coverage by protected areas of important sites for mountain biodiversity ³ |
| | 15.4.2 Mountain Green Cover Index ⁴ |
| 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species | 15.5.1 Red List Index ⁵ |
| 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed | 15.6.1 Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits |
| 15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products | 15.7.1 and 15.c.1 Proportion of traded wildlife that was poached or illicitly trafficked ⁶ |
| 15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities | |

| SDG #15 Targets | SDG #15 Indicators & Metadata |
|--|--|
| 15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species | 15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species |
| 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts | 15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020 |
| 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems | 15.a.1 and 15.b.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems ⁷ |
| 15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation | |

1. <http://unstats.un.org/sdgs/metadata/files/Metadata-15-01-01.pdf>.
2. <http://unstats.un.org/sdgs/metadata/files/Metadata-15-01-02.pdf>.
3. <http://unstats.un.org/sdgs/metadata/files/Metadata-15-04-01.pdf>.
4. <http://unstats.un.org/sdgs/metadata/files/Metadata-15-04-02.pdf>.
5. <http://unstats.un.org/sdgs/metadata/files/Metadata-15-05-01.pdf>.
6. <http://unstats.un.org/sdgs/metadata/files/Metadata-15-07-01.pdf>.
7. <http://unstats.un.org/sdgs/metadata/files/Metadata-15-0A-01.pdf>.

Figure 1. Indicators for SDG #15 arranged according to the State-Pressure-Response framework



2. FOREST AREA AS A PROPORTION OF TOTAL LAND AREA (INDICATOR 15.1.1)

Arguably, forest is the most important ecosystem type, with timber supplied by plantation forests while biodiversity, climate change mitigation, and the maintenance of indigenous cultures are critical functions of primary forests¹³. This state indicator therefore tracks changes in the relative extent of forest. It is compiled at national levels at 5 year intervals through global forest resources assessments of the Food & Agricultural Organisation¹⁴. The Biodiversity Indicators Partnership reports the indicator as absolute (rather than proportional) change in forest area¹⁵. Forest is defined as land spanning >0.5 ha with trees >5 m tall and a canopy cover of >10%. It excludes land that is predominantly under agricultural or urban land use. It is not possible to determine error for the indicator, because reporting varies across countries depending on available information. The indicator does not differentiate between natural forests and plantation forests, which is a serious limitation because the two are important for very different reasons.

In total, the percentage of the world's land area covered by forest was 31.7% in 1990¹⁶. The SDGs database¹⁷ documents that this decreased to 31.1% in 1990 to 30.7% in 2015 (Figure 2). Among regions, the largest net losses are from Latin America and the Caribbean, Sub-Saharan Africa, and South-Eastern Asia, while the largest net gains have been from Eastern Asia. The total 3.3m ha annual net rate of deforestation in the 2010s represents a drop by more than half from the 7.3m ha per year annual net rate in the 1990s. However, Figure 2 suggests that the power of this indicator to detect change may be rather low, maybe due to the lack of standardised methods for data collection, reporting, and documentation of error. Techniques to address these issues may be provided by the recent emergence of techniques for robust forest cover change detection using remote sensing¹⁸ although differentiating between natural forests and plantation forests remains a challenge¹⁹.

13. GIBSON et al. (2011), MACKEY et al. (2014).

14. <http://www.fao.org/forest-resources-assessment/en/>.

15. <http://www.bipindicators.net/foretextent>.

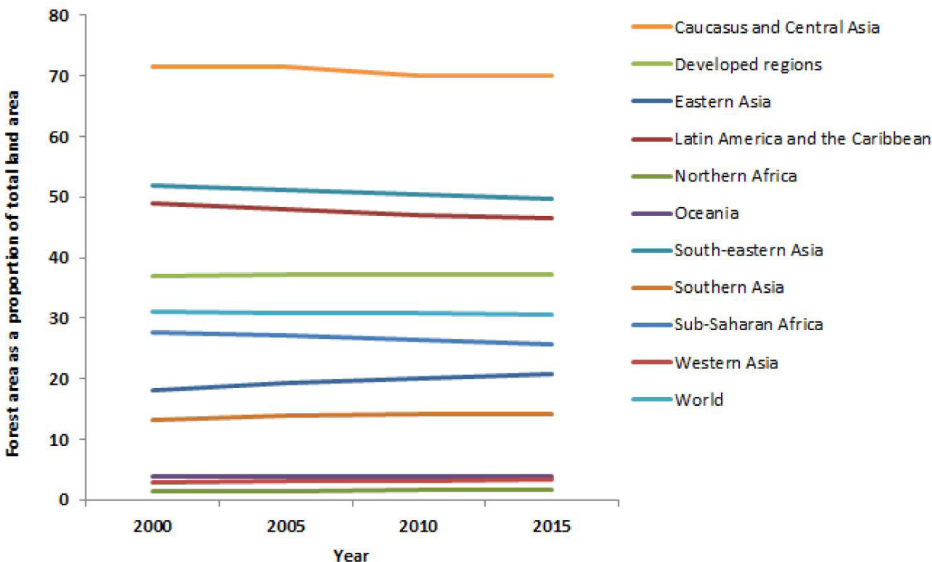
16. <http://unstats.un.org/sdgs/report/2016/>, p. 40.

17. <http://unstats.un.org/sdgs/indicators/database/?indicator=15.1.1>.

18. HANSEN et al. (2013).

19. TROPEK et al. (2014).

Figure 2. Forest area as a proportion of total land area 2000-2015.



3. PROPORTION OF IMPORTANT SITES FOR TERRESTRIAL AND FRESHWATER BIODIVERSITY THAT ARE COVERED BY PROTECTED AREAS, BY ECOSYSTEM TYPE (INDICATOR 15.1.2)

Protecting important sites for terrestrial and freshwater biodiversity is vital for ensuring long term conservation and sustainable use of natural resources, as long as these protected areas are effectively managed and located in areas that are important for biodiversity²⁰. This response indicator therefore measures trends over time in the percentage of important sites for the global persistence of biodiversity (terrestrial and freshwater Key Biodiversity Areas) that are completely covered by protected areas. The data used for this indicator are also used by the Biodiversity Indicators Partnership²¹.

The indicator is calculated from a spatial overlap of digital polygons (i.e. site boundaries) and associated years of designation for protected areas (from the World Database on Protected Areas²²) with terrestrial and freshwater Key Biodiversity Areas (from the World Database of

20. JUFFE-BIGNOLI et al. (2014).

21. <http://www.bipindicators.net/paoverlays>.

22. IUCN & UNEP-WCMC (2016).

Key Biodiversity Areas²³, including Important Bird and Biodiversity Areas²⁴, Alliance for Zero Extinction Sites²⁵, and other Key Biodiversity Areas, e.g. for freshwater²⁶; available through the World Database on Key Biodiversity Areas²⁷ as well as via the Integrated Biodiversity Assessment Tool²⁸). Any terrestrial and freshwater Key Biodiversity Areas for which >98% of their area is overlapped by one or more protected areas was defined as completely protected (to allow for resolution and digitisation errors in the underlying spatial datasets). Data on year of protected area designation is unknown for 14% of terrestrial and freshwater protected areas. Dates for these were therefore assigned randomly (from among the dates of the other protected areas within the same country for undated protected areas in countries with ≥5 dated protected areas; otherwise from among the dates of all other protected areas) 1,000 times, and the median dates plotted²⁹.

Overall, the SDGs database³⁰ documents that terrestrial Key Biodiversity Areas have greater coverage by protected areas than freshwater sites, although the patterns vary by region. The percentage of terrestrial Key Biodiversity Areas completely covered by protected areas has increased from 16.5% in 2000 to 19.3% in 2016 (Figure 3). Protected area coverage of terrestrial Key Biodiversity Areas is higher in developed than developing regions; lowest in Caucasus and Central Asia (4.3% of sites completely covered by protected areas) and Western Asia (4.6%) and highest in Eastern Asia (26.6%) and Sub-Saharan Africa (26.4%). The percentage of freshwater Key Biodiversity Areas completely covered by protected areas has increased from 13.8% in 2000 to 16.6% in 2016 (Figure 4). Again, coverage is higher in developed than developing regions; it is lowest in Western Asia (1.2% of sites completely covered by protected areas) and Caucasus and Central Asia (3.7%) and highest in Northern Africa (25.5%) and Sub-Saharan Africa (24.2%). Worryingly, the growth in protection of both terrestrial and freshwater Key Biodiversity Areas appears to have slowed since 2010.

23. <http://www.keybiodiversityareas.org/>.

24. <http://www.birdlife.org/datazone/site>.

25. RICKETTS et al. (2005); <http://www.zeroextinction.org/>.

26. HOLLAND et al. (2012).

27. <http://www.keybiodiversityareas.org>.

28. <https://www.ibat-alliance.org/ibat-conservation/login>.

29. BUTCHART et al. (2012); BUTCHART et al. (2015).

30. <http://unstats.un.org/sdgs/indicators/database/?indicator=15.1.2>.

Figure 3. Percentage of Key Biodiversity Areas for terrestrial biodiversity that are completely covered by protected areas, by year of designation of all designated protected areas included in the World Database on Protected Areas in April 2016.

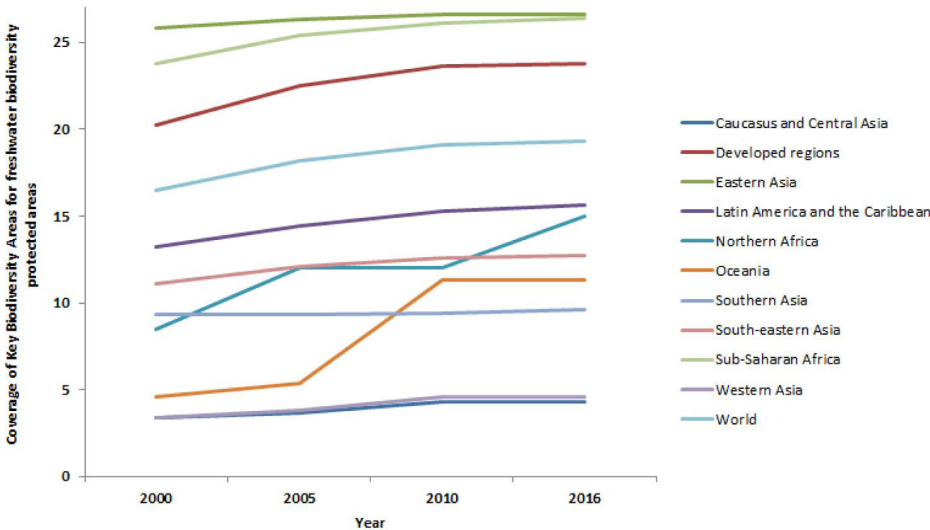
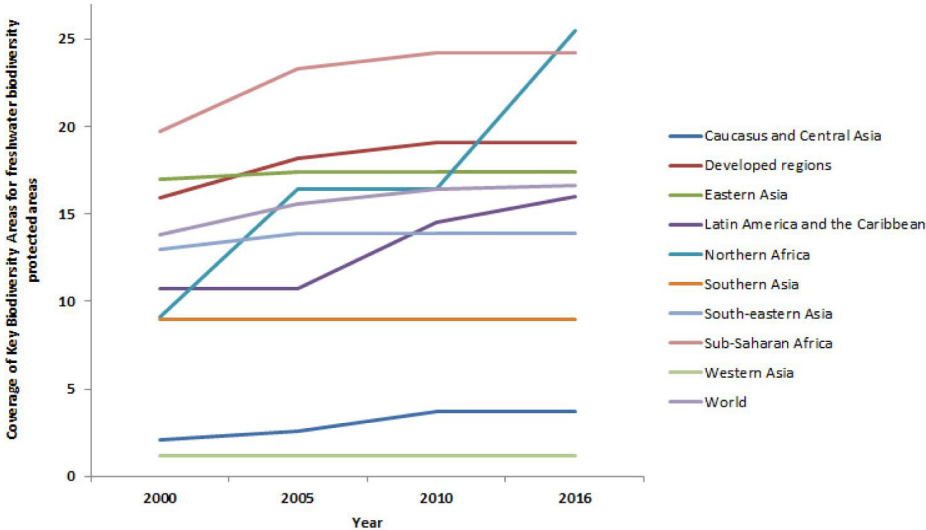


Figure 4. Percentage of Key Biodiversity Areas for freshwater biodiversity that are completely covered by protected areas, by year of designation of all designated protected areas included in the World Database on Protected Areas in April 2016



Future developments to the indicator will include: a) incorporating data on a wider variety of terrestrial and freshwater vertebrates, invertebrates, plants, and ecosystem types into identification of Key Biodiversity Areas through application of the Key Biodiversity Areas Standard³¹; and b) improvements in the data on protected areas by increasing the proportion of sites with documented dates of designation and with digitised boundary polygons.

4. PROGRESS TOWARDS SUSTAINABLE FOREST MANAGEMENT (INDICATOR 15.2.1)

As explained (see section 2 above), forest ecosystems have disproportionate importance for a variety of needs, including timber production, biodiversity, climate change mitigation, and indigenous cultures. It is therefore very important that forest use be sustainable, and so the Food & Agricultural Organisation have begun development of an indicator accordingly, based on data compiled at national levels at 5 year intervals through global forest resources assessments³². This is currently rated as «Tier III» by the Inter-Agency Expert Group on SDG indicators, and so is not yet documented in their metadata depository, but an earlier metadata draft is available³³. This proposes use of a composite «index of sustainable forest management» based on a) average annual percentage change in forest area, b) average annual percentage change in above-ground carbon, c) proportion of forest area dedicated to biodiversity conservation, and d) proportion of forest area certified for sustainable timber production. Similar formulations of three of these components are already recognised as indicators towards SDG 15 in their own right, regarding forest cover (SDG indicator 15.1.1), carbon stocks (SDG indicator 15.3.1), and protected area coverage (SDG indicator 15.1.2).

Given the difficulty in interpreting trends in such composite indicators (because without disaggregation or further analysis it is impossible to determine which of the underlying metrics explains the observed trend), we focus on here on the fourth component, of forest certification for sustainable use. A similar formulation is reported through the Biodiversity Indicators Partnership of «area of forest

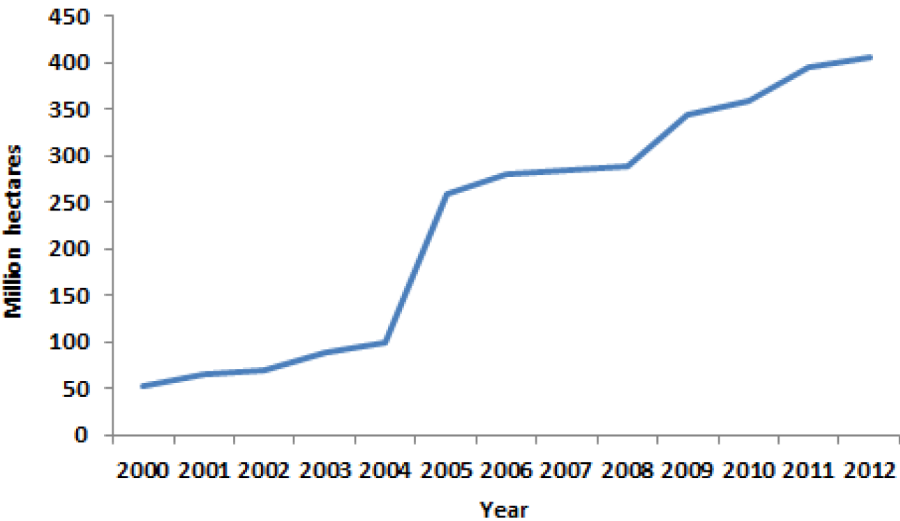
31. IUCN (2016).

32. <http://www.fao.org/forest-resources-assessment/en>.

33. <http://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-15.pdf>, pp. 12-14.

under sustainable management: certification»³⁴. Data for the indicator are available since 1995 through the Forest Stewardship Council³⁵ and the Programme for the Endorsement of Forest Certification³⁶. In total, the area of certified forest has increased from 53 million hectares in 2000 to 407 million hectares in 2012 (Figure 5). Limitations of the indicator³⁷ include a) omissions, because many forests are sustainably managed but not certified as such, or are not certified using the two schemes considered, b) double-counting, because some forests may be certified by both programmes (and the indicator simply sums the areas from both schemes, without spatial analysis), and c) the inclusion of plantation forests (9% of the total), which often comprise non-native species, and are generally of low value for native biodiversity.

Figure 5. Area of forest under sustainable management: certification



34. <http://www.bipindicators.net/forestcertification>.

35. <https://ic.fsc.org>.

36. <http://www.pefc.org/>.

37. TITTENSOR et al. (2014) Supplementary Online Material, pp. 55-56.

5. PROPORTION OF LAND THAT IS DEGRADED OVER TOTAL LAND AREA (INDICATOR 15.3.1)

Concern regarding the degradation of land is expressed globally through the United Nations Convention to Combat Desertification³⁸, which defines land degradation as the loss of the biological or economic productivity and complexity of lands resulting from human activities. The extent of land degradation is measured by national authorities to generate a state indicator as the net total of land areas undergoing changes in land cover, land productivity, and above- and below-ground carbon stocks. This is currently rated as «Tier III» by the Inter-Agency Expert Group on SDG indicators, and so is not yet documented in their metadata depository, but an earlier metadata draft is available³⁹.

6. COVERAGE BY PROTECTED AREAS OF IMPORTANT SITES FOR MOUNTAIN BIODIVERSITY (INDICATOR 15.4.1)

The maintenance of biodiversity in mountain ecosystems is best ensured by the protection of important sites⁴⁰, as is the case for terrestrial and freshwater biodiversity in general (see section 3 above) and indeed for marine biodiversity (as reflected in the SDG 14.5.1 indicator⁴¹). This response indicator therefore tracks trends over time in the complete protected area coverage of Key Biodiversity Areas that overlap $\geq 50\%$ with mountains as defined by the digital world mountain map⁴². The methodology underpinning the indicator is otherwise the same as that for SDG indicator 15.1.2 (again, see section 3 above).

The SDGs database⁴³ reveals that the percentage of Key Biodiversity Areas in mountains completely covered by protected areas has increased from 18.1% in 2000 to 20.1% in 2016 (Figure 6). Protected area coverage of mountain Key Biodiversity Areas is higher in developed than developing regions; it is lowest in Western Asia (3.5% of sites completely covered by protected areas) and Caucasus and Central Asia (6.4%) and highest in Eastern Asia (42.3%).

38. <http://www.unccd.int>.

39. <http://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-15.pdf>, pp. 15-17.

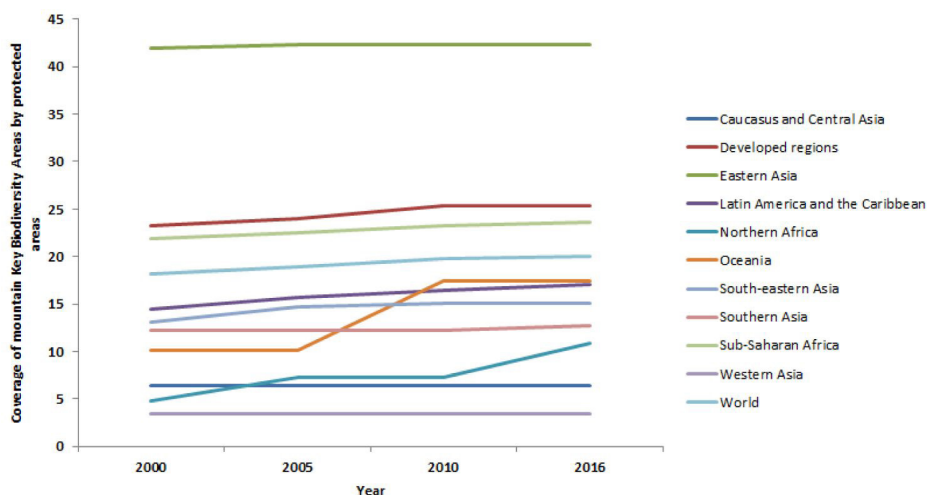
40. RODRÍGUEZ-RODRÍGUEZ et al. (2011).

41. <http://unstats.un.org/sdgs/metadata/files/Metadata-14-05-01.pdf>.

42. UNEP-WCMC (2002).

43. <http://unstats.un.org/sdgs/indicators/database/?indicator=15.4.1>.

Figure 6. Percentage of mountain Key Biodiversity Areas that are completely covered by protected areas, by year of designation of all designated protected areas included in the World Database on Protected Areas in April 2016



7. MOUNTAIN GREEN COVER INDEX (INDICATOR 15.4.2)

The Green Cover Index is proposed by the Food & Agricultural Organisation to measure the changes in forest cover in mountain areas. It would be derived from intersection of data on forest cover change across 30 arc-second pixels ($\sim 1 \times 1$ km), from the Global Land Cover SHARE dataset⁴⁴ with the world mountain map⁴⁵. This is currently rated as «Tier II» by the Inter-Agency Expert Group on SDG indicators, and so is not yet documented in their metadata depository, but an earlier metadata draft is available⁴⁶. The relationship between this and the SDG 15.1.1 indicator is not yet clear – it seems that both are based on forest cover measurement, but drawing from different underlying datasets, which may risk generating inefficiency and complicating interpretation. It might be valuable to consider harmonising the two as a multipurpose indicator derived from the same underlying dataset.

44. http://www.glcn.org/databases/lc_glcshare_en.jsp.

45. UNEP-WCMC (2002).

46. <http://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-15.pdf>, pp. 25-26.

8. RED LIST INDEX (INDICATOR 15.5.1)

Unsustainable human activities are causing species extinctions at rates three orders of magnitude faster than those normal through Earth's history⁴⁷. The IUCN Red List of Threatened Species has for more than 50 years served as the mechanism to assess the risk of species extinctions. It is based on standard categories and criteria⁴⁸, and implemented by the IUCN Red List Partnership⁴⁹ to assess the extinction risk facing 82,845 species⁵⁰ (version 2016.1).

For a number of species groups, all species have been assessed multiple times (birds, mammals, amphibians, corals and cycads), allowing the calculation of the Red List Index as a multi-purpose indicator measuring the aggregate change in survival probability (the inverse of extinction risk) across the entire species group. Data for other species groups will become available soon. The Red List Index is calculated based on genuine changes in the number of species in each category of extinction risk on The IUCN Red List of Threatened Species⁵¹. It is also reported through the Biodiversity Indicators Partnership⁵². Red List Indices for each region/country are weighted by the fraction of each species' distribution occurring within the country or region. The Red List Index varies from 1 if a region/country has contributed the minimum it can to the global index, to 0 if the region/country has contributed the maximum it can to the global index. An aggregate Red List Index for each region/country is then calculated as the arithmetic mean across all taxonomic groups⁵³. The Red List Indices for each taxonomic group for each year are modelled to take into account uncertainty resulting from data deficiency, extrapolation uncertainty, and temporal variability.

The SDGs database⁵⁴ reveals that Latin America and the Caribbean, South-eastern Asia and Southern Asia have contributed the most to increases in extinction risk in recent decades, driven by threats including habitat loss and unsustainable use of cycads, mammals, and birds, chytrid fungal disease for amphibians, and climate change-driven bleaching for corals (Figure 7). Consideration of the data for individual countries behind

47. PIMM et al. (2014).

48. IUCN (2001).

49. <http://www.iucnredlist.org/partners/partners>.

50. <http://www.iucnredlist.org>.

51. BUTCHART et al. (2007).

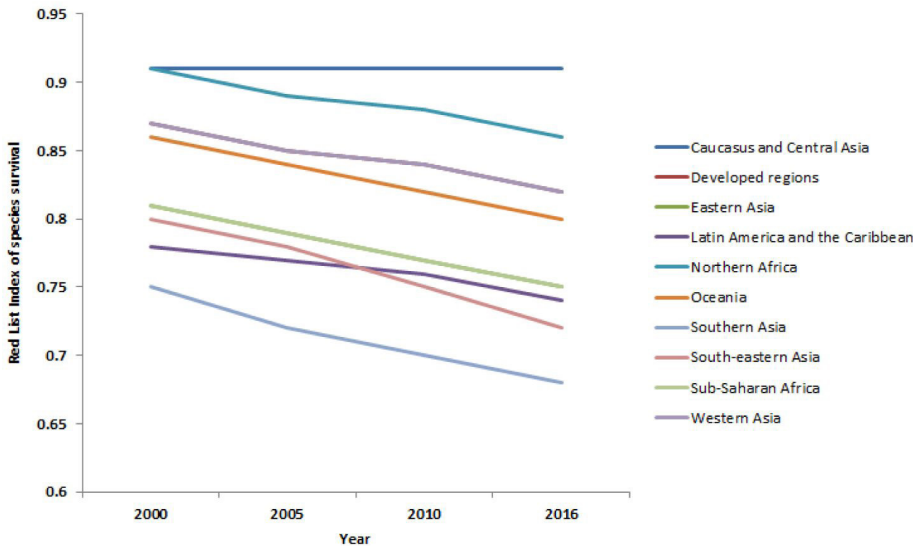
52. <http://www.bipindicators.net/rli/2010>.

53. BUTCHART et al. (2010).

54. <http://unstats.un.org/sdgs/indicators/database/?indicator=15.5.1>.

these regional contributions reveals that in five small island nations (Cook Islands, Fiji, Mauritius, Seychelles, and Tonga), conservation actions have been so successful that the aggregate trend for vertebrate species is now one of decreasing extinction risk⁵⁵.

Figure 7. Red List Indices of species survival weighted by the fraction of each species» distribution occurring within each region



9. NUMBER OF COUNTRIES THAT HAVE ADOPTED LEGISLATIVE, ADMINISTRATIVE AND POLICY FRAMEWORKS TO ENSURE FAIR AND EQUITABLE SHARING OF BENEFITS (INDICATOR 15.6.1)

This proposed response indicator is based on the numbers of agreements reached through two mechanisms on the transfer of genetic resources between the resource provider and recipient, including on how benefits arising from the use of the genetic resources will be shared. These two mechanisms are the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization⁵⁶ to the Convention on Biological Diversity and the Standard Material Transfer Agreement under the International Treaty

55. RODRIGUES et al. (2014).

56. <https://www.cbd.int/abs/>.

on Plant Genetic Resources for Food and Agriculture⁵⁷. Parties to the Nagoya Protocol, which subjects access to genetic resources to prior informed consent, are obliged under Article 6 (3)e to issue a permit as evidence of the decision to grant prior informed consent and of the establishment of mutually agreed terms⁵⁸. Similarly, the Standard Material Transfer Agreement is a mandatory contract that Parties to the International Treaty have agreed to use whenever plant genetic resources falling under the Treaty's Access and Benefit-sharing mechanism are made available; 34,898 were recorded as of August 2015. This composite indicator extends the indicator of ratification status of the Nagoya Protocol used by the Biodiversity Indicators Partnership⁵⁹. It is currently rated as «Tier III» by the Inter-Agency Expert Group on SDG indicators, and so is not yet documented in their metadata depository, but an earlier metadata draft is available⁶⁰.

10. PROPORTION OF TRADED WILDLIFE THAT WAS POACHED OR ILLICITLY TRAFFICKED (INDICATOR 15.7.1 AND 15.C.1)

The United Nations Office on Drugs and Crime⁶¹ proposes an indicator to track progress towards this target as the proportion of seizures of illegally traded plants and animals to the total traded plants and animals evidenced by export permits issued for species that are legally traded and included in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora⁶². It is therefore a pressure indicator, although it is heavily influenced by response (because it depends not only on the volume of illegal trade but also on efforts to detect and control this). The proportion of overall wildlife crime represented by the indicator is unknown and variable. Data on seizures (currently >164,000 seizures from 120 countries) and legal trade (>16m records) are maintained by national authorities, which report annually on legal trade and biennially on illegal trade. The indicator will use standard prices from import records in a common market, as a consistent means of aggregating unlike products (because it is not meaningful to compare or add the weights or numbers of different wildlife products). Although the

57. <http://www.fao.org/plant-treaty/en/>.

58. AHRÉN et al. (2012).

59. <http://www.bipindicators.net/NagoyaProtocolratification>.

60. <http://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-15.pdf>, pp. 34-35.

61. <https://www.unodc.org/>.

62. <https://www.cites.org/eng>.

indicator is rated as «Tier II» by the Inter-Agency Expert Group on SDG indicators, data are not yet available.

Disaggregation of the Red List Index (impacts of utilisation), which measures genuine changes in extinction risk to species groups based on changes in the degree to which they are used sustainably or unsustainably, has also been proposed as an indicator towards this target⁶³. This is already available⁶⁴ and in use by the Biodiversity Indicators Partnership⁶⁵ as a genuine indicator of pressure from unsustainable use not conflated with response effort.

11. PROPORTION OF COUNTRIES ADOPTING RELEVANT NATIONAL LEGISLATION AND ADEQUATELY RESOURCING THE PREVENTION OR CONTROL OF INVASIVE ALIEN SPECIES (INDICATOR 15.8.1)

This indicator measures the management response to the threat of invasive species, by tracking legislation for their control and prevention at national and international levels⁶⁶. Data are generated by the IUCN Species Survival Commission's Invasive Species Specialist Group⁶⁷, based on any national legislation relevant to controlling invasive alien species (available for 191 Parties to the Convention on Biological Diversity), and used by the Biodiversity Indicators Partnership. Legislation is considered relevant if it applies to multiple taxonomic groups and is not exclusively intended to protect agriculture. If two separate sets of legislation within a country cover plants and animals, the date of the more recent legislation is used. The indicator is currently rated as «Tier III» by the Inter-Agency Expert Group on SDG indicators, and so is not yet documented in their metadata depository, but an earlier metadata draft is available⁶⁸.

To date, 55% of countries have enacted overarching national legislation to prevent, control and/or limit the spread and impact of invasive alien species (Figure 8). The global trend in policy response has been positive for the few last decades and accelerated in the 1990s, although the rate of increase appears to have slowed over recent years. Work is underway

63. BROOKS et al. (2015).

64. BUTCHART (2008).

65. <http://www.bipindicators.net/redlistindexforbirdsmammalsandamphibians>.

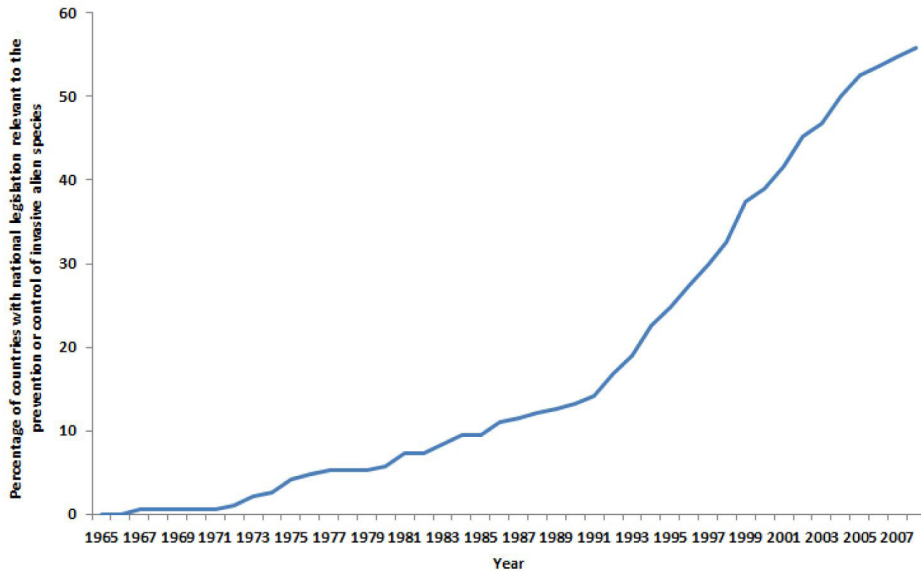
66. MCGEOCH et al. (2010).

67. <http://www.issg.org/>.

68. <http://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-15.pdf>, pp. 38-40.

to update the indicator, and to incorporate measures of the «adequate resourcing» element of the indicator.

Figure 8. Percentage of countries with national legislation relevant to the prevention or control of invasive alien species



12. PROGRESS TOWARDS NATIONAL TARGETS ESTABLISHED IN ACCORDANCE WITH AICHI BIODIVERSITY TARGET 2 OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020 (INDICATOR 15.9.1)

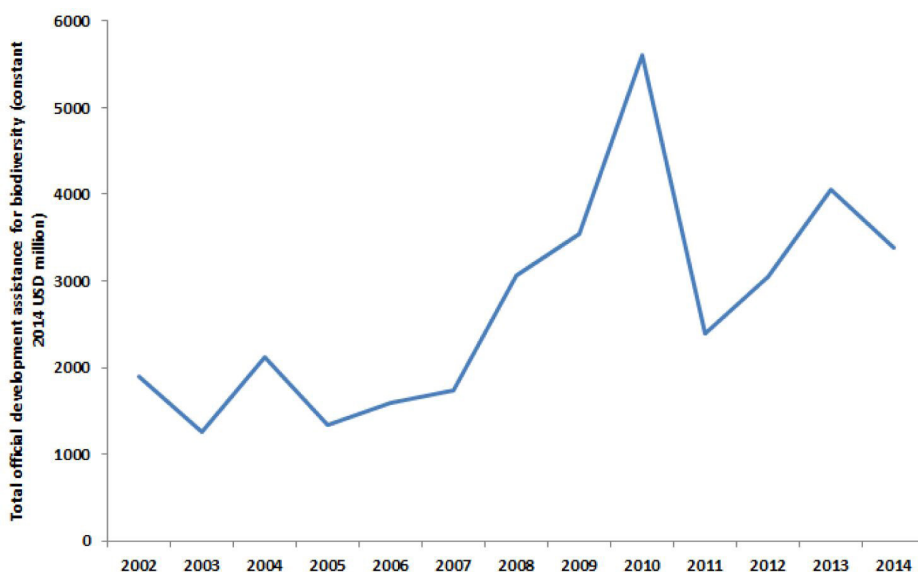
No indicator has yet been developed for this target, nor under the Biodiversity Indicators Partnership, and the indicator has been rated as «Tier III» by the Inter-Agency Expert Group on SDG indicators, so no metadata are available⁶⁹. It is anticipated that indicator development will in due course be based on national self-assessments of progress towards established national targets, maybe with a rating system with guidance to provide a degree of standardization.

69. <http://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-15.pdf>, pp. 34-35.

13. OFFICIAL DEVELOPMENT ASSISTANCE AND PUBLIC EXPENDITURE ON CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY AND ECOSYSTEMS (INDICATOR 15.A.1 AND 15.B.1)

The official development assistance indicator tracks the transfer of bilateral aid to developing countries on conservation and sustainable use of biodiversity. It is maintained by the Organisation for Economic Co-operation and Development⁷⁰, which has maintained data in its Creditor Reporting System since 1973, into which a «Rio marker» for «biodiversity» was introduced in 2002. Documentation includes information on sector, recipient country and region, income group, and aid instrument used (grants, loans, equity investment). A similarly-formulated indicator is also delivered through the Biodiversity Indicators Partnership⁷¹. The SDGs database⁷² suggests an increase in official development assistance in support of biodiversity over the last 15 years (Figure 9), despite substantial inter-annual variation.

Figure 9. Total official development assistance for biodiversity



70. <http://www.oecd.org/dac/financing-sustainable-development/>.

71. <http://www.bipindicators.net/oda>.

72. <http://unstats.un.org/sdgs/indicators/database/?indicator=15.a.1> and <http://unstats.un.org/sdgs/indicators/database/?indicator=15.b.1>.

14. CONCLUSIONS

Of the 12 indicators established by the 47th meeting of the UN Statistical Commission through the Inter-Agency Expert Group on SDG indicators, data are already available for five through the SDGs database and two more are available from other authoritative sources. The remaining five do not yet exist. We urge that those institutions charged with developing these indicators do so in a way that maximises synergy with the existing seven indicators. One way of doing this might be to use different indicator disaggregations to report against multiple targets. This approach is already in place for the SDG 15.1.2 and 15.4.1 indicators (the second is a disaggregation of the first), with the SDG 14.5.1 indicator also formulated in the same way. A similar approach could also be used for the SDG 15.1.1 and 15.4.2 indicators, and also the SDG 15.5.1 and 15.7.1 indicators – in both cases, the disaggregation of the first could be harnessed to yield a powerful indicator for the second. This would improve efficiency, consistency, and harmonisation, avoid any duplication of effort, and increase the number of indicators which can be reported already from seven to nine. For the remaining three proposed indicators (SDG 15.3.1, 15.6.1, and 15.9.1), efforts are needed to mobilise relevant datasets, develop the methodologies, and publish these into the peer-reviewed literature. It would also be valuable to strengthen the incorporation of pressure indicators for SDG 15, given that only one is proposed at present.

The maintenance and improvement of the data underlying the existing seven indicators is a very high priority. While the policy importance of these indicators is unquestionable, investment in their currency and quality often lags behind. For example, a recent assessment of the data underlying SDG indicators 15.1.2, 15.4.1, and 15.5.1 revealed that current investment in their maintenance each year (\$6.5m) is only about half that necessary (\$12m) to support their comprehensive global coverage⁷³. It would be valuable for those institutions charged with delivering the other indicators to undertake similar assessments of their current and required costs.

The seven indicators that exist already reveal an important discrepancy. On the one hand, the five indicators of response all show positive trends – efforts towards implementation of SDG 15 are increasing. On the other hand, worryingly, SDG indicators 15.1.1 and 15.5.1, the two indicators available so far on the state of life on land, both show declines. This discrepancy has been highlighted before⁷⁴, but diagnosis of what is

73. JUFFE-BIGNOLI et al. (2016).

74. TITTENSOR et al. (2014).

causing it remains elusive. We posit that understanding why the overall state of nature is declining despite increasing efforts towards conservation and sustainable development is an urgent priority if SDG 15 is to be met.

We suggest three broad possible different explanations for this discrepancy, with each having very different policy implications. First, it could be the case that the wrong set of responses is being implemented. This would imply that current responses should be phased out or modified, and/or new, different ones developed. If this is the case, genuine impact assessment of existing actions would reveal that trends in the state of nature anticipated in the absence of the action were no different than those with the action. Emerging evidence suggests that this explanation is unlikely: for example, declines in the Red List Index (SDG indicator 15.5.1) for birds and mammals would have been at least 20% greater in the absence of conservation actions over the last three decades⁷⁵.

The second possible explanation for the discrepancy could be that the right set of responses is being implemented, but not at sufficient scale to reverse pressures. If this is the case, the policy implication would be to increase investment in existing actions. A third explanation could be a combination of the first and second – that existing responses have a positive impact in slowing the loss of nature, but that these should be supplemented by additional responses in order to actually overcome existing pressures and hence reverse loss. Rigorous meta-analysis of the impact of conservation actions will be necessary to disentangle these possibilities and hence elucidate the necessary policy responses. Conservation does not have a strong history of robust impact assessment to date, but recent calls for adoption of counterfactual approaches to document genuine impacts⁷⁶ appear to be gaining traction. We see this as extremely important if the world's countries are to have a chance of delivering SDG 15 and ensuring the persistence of life on land.

LITERATURE CITED

AHRÉN, M., ALI, N., CABRERA MEDAGLIA, J.A., GREIBER, T., KAMAU, E.C., NIETO CARRASCO, J., OLIVA, M.J., PENA MORENO, S., PERRON-WELCH, F. & WILLIAMS, C. «An explanatory guide to the Nagoya Protocol on access and benefit-sharing», IUCN Environmental Policy and Law Paper, 2012, vol. 83, pp. 1-372, available from <https://portals.iucn.org/library/node/10258>.

75. HOFFMANN et al. (2010).

76. FERRARO & PATTANAYAK (2006).

BÖHRINGER, C. & JOCHEM, P.E.P. «Measuring the immeasurable – a survey of sustainability indices», *Ecological Economics*, 2007, vol. 63, n.º 1, pp. 1-8.

BROOKS, T.M., BUTCHART, S.H.M., COX, N.A., HEATH, M., HILTON-TAYLOR, C., HOFFMANN, M., KINGSTON, N., RODRÍGUEZ, J.P., STUART, S. & SMART, J. «Harnessing biodiversity and conservation knowledge products to track the Aichi Targets and Sustainable Development Goals», *Biodiversity*, 2015, vol. 16, pp. 157-174.

BUTCHART, S.H.M. «Red List Indices to measure the sustainability of species use and impacts of invasive alien species», *Bird Conservation International*, 2008, vol. 18, suppl. 1, pp. 245-262.

BUTCHART, S.H., AKÇAKAYA, H.R., CHANSON, J., BAILLIE, J.E., COLLEN, B., QUADER, S., TURNER, W.R., AMIN, R., STUART, S.N. & HILTON-TAYLOR, C. «Improvements to the red list index», *PLoS One*, 2007, vol. 2, n.º 1, p. e140.

BUTCHART, S.H.M., WALPOLE, M., COLLEN, B., VAN STRIEN, A., SCHARLEMANN, J.P.W., ALMOND, R.E.A., BAILLIE, J.E.M., BOMHARD, B., BROWN, C., BRUNO, J., CARPENTER, K.E., CARR, G.M., CHANSON, J., CHENERY, A.M., CSIRKE, J., DAVIDSON, N.C., DENTENER, F., FOSTER, M., GALLI, A., GALLOWAY, J.N., GENOVESI, P., GREGORY, R.D., HOCKINGS, M., KAPOV, V., LAMARQUE, J.-F., LEVERINGTON, F., LOH, J., MCGEOCH, M.A., MCRAE, L., MINASYAN, A., HERNÁNDEZ MORCILLO, M., OLDFIELD, T.E.E., PAULY, D., QUADER, S., REVENGA, C., SAUER, J.R., SKOLNIK, B., SPEAR, D., STANWELL-SMITH, D., STUART, S.N., SYMES, A., TIERNEY, M., TYRRELL, T.D., VIÉ, J.-C. & WATSON, R. «Global Biodiversity: Indicators of Recent Declines», *Science*, 2010, vol. 328, n.º 5982, pp. 1164-1168.

BUTCHART, S.H.M., SCHARLEMANN, J.P.W., EVANS, M., QUADER, S., ARINAITWE, J., BENNUN, L.A., BESANÇON, C., BOUCHER, T., BOMHARD, B., BROOKS, T.M., BURFIELD, I.J., BURGESS, N.D., CLAY, R.P., CROSBY, M.J., DAVIDSON, N.C., DE SILVA, N., DEVENISH, C., DUTSON, G.C.L., DÍAZ FERNÁNDEZ, D.F., FISHPOOL, L.D.C., FOSTER, M., HOCKINGS, M., HOFFMANN, M., KNOX, D., LARSEN, F., LAMOREUX, J.F., LOUCKS, C., MAY, I., MILLETT, J. PARR, M., SKOLNIK, B., UPGREN, A. & WOODLEY, S. «Protecting important sites for biodiversity contributes to meeting global conservation targets», *PLoS ONE*, 2012, vol. 7, n.º 3, p. e32529.

BUTCHART, S.H.M., CLARKE, M., SMITH, B., SYKES, R., SCHARLEMANN, J.P.W., HARFOOT, M., BUCHANAN, G., ANGULO, A., BALMFORD, A., BERTZKY, B., BROOKS, T.M., CARPENTER, K.E., COMEROS, M., CORNELL, J., FICETOLA, G.F., FISHPOOL, L.D.C., HARWELL, H., HILTON-TAYLOR, C., HOFFMANN,

M., JOOLIA, A., JOPPA, L., KINGSTON, N., MAY, I., MILAM, A., POLIDORO, B., RALPH, G., RICHMAN, N., RONDININI, C., SKOLNIK, B., SPALDING, M., STUART, S.N., SYMES, A., TAYLOR, J., VISCONTI, P. WATSON, J.E.M. & BURGESS, N.D. «Shortfalls and solutions for meeting national and global protected area targets», *Conservation Letters*, 2015, vol. 8, pp. 329-337.

FERRARO, P.J. & PATTANAYAK, S.K. «Money for nothing? A call for empirical evaluation of biodiversity conservation investments», *PLoS Biology*, 2006, vol. 4, n.º 4, p. e105.

GIBSON, L., LEE, T.M., KOH, L.P., BROOK, B.W., GARDNER, T.A., BARLOW, J., PERES, C.A., BRADSHAW, C.J., LAURANCE, W.F., LOVEJOY, T.E. & SODHI, N.S. «Primary forests are irreplaceable for sustaining tropical biodiversity», *Nature*, 2011, vol. 478, n.º 7369, pp. 378-381.

HANSEN, M.C., POTAPOV, P.V., MOORE, R., HANCHER, M., TURUBANOVA, S.A., TYUKAVINA, A., THAU, D., STEHMAN, S.V., GOETZ, S.J., LOVELAND, T.R., KOMMAREDDY, A., EGOROV, A., CHINI, L., JUSTICE, C.O. & TOWNSHEND, J.R.G. «High-resolution global maps of 21st-century forest cover change», *Science*, 2013, vol. 342, n.º 6160, pp. 850-853.

HOFFMANN, M., HILTON-TAYLOR, C., ANGULO, A., BÖHM, M., BROOKS, T.M., BUTCHART, S.H.M., CARPENTER, K.E., CHANSON, J., COLLEN, B., COX, N.A., DARWALL, W.R.T., DULVY, N.K., HARRISON, L.R., KATARIYA, V., POLLOCK, C.M., QUADER, S., RICHMAN, N.I., RODRIGUES, A.S.L., TOGNETTI, M.F., VIÉ, J.-C., AGUIAR, J.M., ALLEN, D.J., ALLEN, G.R., AMORI, G., ANANJEVA, N.B., ANDREONE, F., ANDREW, P., AQUINO ORTIZ, A.L., BAILLIE, J.E.M., BALDI, R., BELL, B.D., BIJU, S.D., BIRD, J.P., BLACK-DECIMA, P., BLANC, J.J., BOLAÑOS, F., BOLIVAR-G., W., BURFIELD, I.J., BURTON, J.A., CAPPER, D.R., CASTRO, F., CATULLO, G., CAVANAGH, R.D., CHANNING, A., CHAO, N.L., CHENERY, A.M., CHIOZZA, F., CLAUSNITZER, V., COLLAR, N.J., COLLETT, L.C., COLLETTE, B.B., CORTEZ FERNANDEZ, C.F., CRAIG, M.T., CROSBY, M.J., CUMBERLIDGE, N., CUTTELOD, A., DEROCHER, A.E., DIESMOS, A.C., DONALDSON, J.S., DUCKWORTH, J.W., DUTSON, G., DUTTA, S.K., EMSLIE, R.H., FARJON, A., FOWLER, S., FREYHOF, J., GARSHELIS, D.L., GERLACH, J., GOWER, D.J., GRANT, T.D., HAMMERSON, G.A., HARRIS, R.B., HEANEY, L.R., HEDGES, S.B., HERO, J.-M., HUGHES, B., HUSSAIN, S.A., ICOCHEA M., J., INGER, R.F., ISHII, N., ISKANDAR, D.T., JENKINS, R.K.B., KANEKO, Y., KOTTELAT, M., KOVACS, K.M., KUZMIN, S.L., LA MARCA, E., LAMOREUX, J.F., LAU, M.W.N., LAVILLA, E.O., LEUS, K., LEWISON, R.L., LICHTENSTEIN, G., LIVINGSTONE, S.R., LUKOSCHEK, V., MALLON, D.P., MCGOWAN, P.J.K., MCIVOR, A., MOEHLMAN, P.D., MOLUR, S., MUÑOZ ALONSO, A., MUSICK, J.A., NOWELL, K., NUSSBAUM, R.A., OLECH, W., ORLOV, N.L. PAPENFUSS, T.J., PARRA-OLEA, G., PERRIN, W.F., POLIDORO, B.A., POURKAZEMI, M.,

RACEY, P.A., RAGLE, J.S., RAM, M., RATHBUN, G., REYNOLDS, R.P., RHODIN, A.G.J., RICHARDS, S.J., RODRÍGUEZ, L.O., RON, S.R., RONDININI, C., RYLANDS, A.B., SADOVY DE MITCHESON, Y., SANCIANGCO, J.C., SANDERS, K.L., SANTOS-BARRERA, G., SCHIPPER, J., SELF-SULLIVAN, C., SHI, Y., SHOEMAKER, A., SHORT, F.T., SILLERO-ZUBIRI, C., SILVANO, D.L., SMITH, K.G., SMITH, A.T., SNOEKS, J., STATTERSFIELD, A.J., SYMES, A.J., TABER, A.B., TALUKDAR, B.K., TEMPLE, H.J., TIMMINS, R., TOBIAS, J.A., TSYTSULINA, K., TWEDDLE, D., UBEDA, C., VALENTI, S.V., VAN DIJK, P.P., VEIGA, L.M., VELOSO, A., WEGE, D.C., WILKINSON, M., WILLIAMSON, E.A., XIE, F., YOUNG, B.E., AKÇAKAYA, H.R., BENNUN, L., BLACKBURN, T.M., BOITANI, L., DUBLIN, H.T., DA FONSECA, G.A.B., GASCON, C., LACHER, JR., T.E., MACE, G.M., MAINKA, S.A., MCNEELY, J.A., MITTERMEIER, R.A., MCGREGOR REID, G., RODRIGUEZ, J.P., ROSENBERG, A.A., SAMWAYS, M.J., SMART, J., STEIN, B.A. & STUART, S.N. «The impact of conservation on the status of the world's vertebrates», *Science*, 2010, vol. 330, n.º 6010, pp. 1503-1509.

HOLLAND, R.A., DARWALL, W.R.T. & SMITH, K.G. «Conservation priorities for freshwater biodiversity: The Key Biodiversity Area approach refined and tested for continental Africa», *Biological Conservation*, 2012, vol. 148, n.º 1, pp. 167-179.

IUCN «IUCN Red List categories and criteria, version 3.1», IUCN, Gland, Switzerland, 2001, available from <https://portals.iucn.org/library/node/7977>.

IUCN «A Global Standard for the Identification of Key Biodiversity Areas», IUCN, Gland, Switzerland, 2016, available from <https://portals.iucn.org/library/node/45956>.

IUCN & UNEP-WCMC «World Database on Protected Areas, version April 2016», UNEP-WCMC, Cambridge, 2016, available from <http://www.protectedplanet.net>.

JUFFE-BIGNOLI, D., BURGESS, N.D., BINGHAM, H., BELLE, E.M.S., DE LIMA, M.G., DEGUIGNET, M., BERTZKY, B., MILAM, A.N., MARTÍNEZ-LÓPEZ, J., LEWIS, E., EASSOM, A., WICANDER, S., GELDMANN, J., VAN SOESBERGEN, A., ARNELL, A.P., O'CONNOR, B., PARK, S., SHI, Y.N., DANKS, F.S., MACSHARRY, B. & KINGSTON, N. «Protected Planet Report 2014» UNEP-WCMC, Cambridge, UK, 2014, available from <https://portals.iucn.org/library/node/44896>.

JUFFE-BIGNOLI, D., BROOKS, T.M., BUTCHART, S.H.M., JENKINS, R.B., BOE, K., HOFFMANN, M., ANGULO, A., BACHMAN, S., BÖHM, M., BRUMMITT, N., CARPENTER, K.E., COMER, P.J., COX, N., CUTTELOD, A., DARWALL, W.R.T., DI MARCO, M., FISHPOOL, L.D.C., GOETTSCH, B., HEATH, M., HILTON-TAYLOR,

C., HUTTON, J., JOHNSON, T., JOOLIA, A., KEITH, D.A., LANGHAMMER, P.F., LUEDTKE, J., NIC LUGHADHA, E., LUTZ, M., MAY, I., MILLER, R.M., OLIVIERA-MIRANDA, M.A., PARR, M., POLLOCK, C.M., RALPH, G., RODRÍGUEZ, J.P., RONDININI, C., SMART, J., STUART, S., SYMES, A., TORDOFF, A.W., WOODLEY, S., YOUNG, B. & KINGSTON, N. «Assessing the cost of global biodiversity and conservation knowledge», *PLoS ONE*, 2016, vol. 11, n.º 8, p. e0160640.

MACKEY, B., DELLASALA, D.A., KORMOS, C., LINDENMAYER, D., KUMPEL, N., ZIMMERMAN, B., HUGH, S., YOUNG, V., FOLEY, S., ARSENIS, K. & WATSON, J.E. «Policy options for the world's primary forests in multilateral environmental agreements», *Conservation Letters*, 2015, vol. 8, n.º 2, pp. 139-147.

MC GEOCH, M.A., BUTCHART, S.H., SPEAR, D., MARAIS, E., KLEYNHANS, E.J., SYMES, A., CHANSON, J. & HOFFMANN, M. «Global indicators of biological invasion: species numbers, biodiversity impact and policy responses», *Diversity and Distributions*, 2010, vol. 16, n.º 1, pp. 95-108.

PIMM, S.L., JENKINS, C.N., ABELL, R., BROOKS, T.M., GITTLEMAN, J.L., JOPPA, L.N., RAVEN, P.H., ROBERTS, C.M. & SEXTON, J.O. «The biodiversity of species and their rates of extinction, distribution, and protection», *Science*, 2014, vol. 344, n.º 6187, p. 987.

RICKETTS, T.H., DINERSTEIN, E., BOUCHER, T., BROOKS, T.M., BUTCHART, S.H.M., HOFFMANN, M., LAMOREUX, J.F., MORRISON, J., PARR, M., PILGRIM, J.D., RODRIGUES, A.S.L., SECHREST, W., WALLACE, G.E., BERLIN, K., BIELBY, J., BURGESS, N.D., CHURCH, D.R., COX, N., KNOX, D., LOUCKS, C., LUCK, G.W., MASTER, L.L., MOORE, R., NAIDOO, R., RIDGELY, R., SCHATZ, G.E., SHIRE, G., STRAND, H., WETTENGEL, W. & WIKRAMANAYAKE, E. «Pinpointing and preventing imminent extinctions», *Proceedings of the National Academy of Sciences of the U.S.A.*, 2005, vol. 102, n.º 51, pp. 18497-18501.

RODRIGUES, A.S.L., BROOKS, T.M., BUTCHART, S.H.M., CHANSON, J., COX, N., HOFFMANN, M. & STUART, S.N. «Spatially explicit trends in the global conservation status of vertebrates», *PLoS ONE*, 2014, vol. 9, n.º 11, p. e113934.

RODRÍGUEZ-RODRÍGUEZ, D., BOMHARD, B., BUTCHART, S.H.M. & FOSTER, M.N. «Progress towards international targets for protected area coverage in mountains: a multi-scale assessment», *Biological Conservation*, 2011, vol. 144, n.º 12, pp. 2978-2983.

SPARKS, T.H., BUTCHART, S.H.M., BALMFORD, A., BENNUN, L., STANWELL-SMITH, D., WALPOLE, M., BATES, N.R., BOMHARD, B., BUCHANAN, G.M., CHENERY, A.M. & COLLEN, B. «Linked indicator sets for addressing biodiversity loss», *Oryx*, 2011, vol. 45, n.º 3, pp. 411-419.

TITTENSOR, D.P., WALPOLE, M., HILL, S.L., BOYCE, D.G., BRITTEN, G.L., BURGESS, N.D., BUTCHART, S.H., LEADLEY, P.W., REGAN, E.C., ALKEMADE, R., BAUMUNG, R., BELLARD, C., BOUWMAN, L., BOWLES-NEWMARK, N.J., CHENERY, A.M., CHEUNG, W.W.L., CHRISTENSEN, V., COOPER, H.D., CROWTHER, A.R., DIXON, M.J.R., GALLI, A., GAVEAU, V., GREGORY, R.D., GUTIERREZ, N.L., HIRSCH, T.L., HÖFT, R., JANUCHOWSKI-HARTLEY, S.R., KARMANN, M., KRUG, C.B., LEVERINGTON, F.J., LOH, J., LOJENGA, R.K., MALSCH, K., MARQUES, A., MORGAN, D.H.W., MUMBY, P.J., NEWBOLD, T., NOONAN-MOONEY, K., PAGAD, S.N., PARKS, B.C., PEREIRA, H.M., ROBERTSON, T., RONDININI, C., SANTINI, L., SCHARLEMANN, J.P.W., SCHINDLER, S., SUMAILA, U.R., THE, L.S.L., VAN KOLCK, J., VISCONTI, P. & YE, Y. «A mid-term analysis of progress toward international biodiversity targets», *Science*, 2014, vol. 346, n.º 6206, pp. 241-244.

TROPEK, R., SEDLÁČEK, O., BECK, J., KEIL, P., MUSILOVÁ, Z., ŠÍMOVÁ, I. & STORCH, D. «Comment on “High-resolution global maps of 21st-century forest cover change”», *Science*, 2014, vol. 344, n.º 6187, p. 981d.

UNEP-WCMC «Mountain Watch: Environmental Change and Sustainable Development in Mountains», UNEP-WCMC, Cambridge, 2002.

Chapter 19: goal 16

Peace, justice and strong institutions. Promote just, peaceful and inclusive societies¹

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SUMMARY: 1. INTRODUCTION. 2. THE LEGAL AND PRACTICAL INTERACTIONS BETWEEN PEACE, JUSTICE, STRONG INSTITUTIONS AND SUSTAINABLE DEVELOPMENT. A. *The inclusive approach as established in the texts*. B. *The practical and legal challenges at stake*. a. Peace and Sustainable Development. b. Justice and Sustainable Development. c. Strong institutions and sustainable development. 3. THE NEED FOR LAW ENFORCEMENT TO REALIZE PEACEFUL, JUST AND INCLUSIVE SOCIETIES. 4. CONCLUSION.

ABSTRACT:

The call for the promotion of «just, peaceful and inclusive societies» is the result of a necessary integrated approach of sustainable development and constitutes an ambitious program. This paper aims to clarify its legal containing. It concludes on the need for law enforcement for the existing legal binding instruments on one part. It concludes on the other part that goal 16th of the agenda expends an explicit promotion of the application of the rule of law and the principle of good governance, far from the myth of the neutrality of law.

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1. I'd like to thank the coordinators for having me associated with the project. Concluding this work on 14th July 2016, I also wish to dedicate it to the victims of the terrorist attack in Nice, taken away by blind violence.

1. INTRODUCTION

The formulation of the 16th goal of the 2030 agenda represents a symptomatic expression of the steady enlargement and deepening of the concept of sustainable development since its apparition². To the primary aspects of sustainable use of resources and environmental protection had been added considerations of economical development but also some requirements regarding public participation, good governance and respect of human rights. The call for the promotion of «just, peaceful and inclusive societies» is the result of this necessary integrated approach of sustainable development³, and includes in the recent UN program voted in 2015 the following targets⁴:

16.1 *Significantly reduce all forms of violence and related death rates everywhere*

16.2 *End abuse, exploitation, trafficking and all forms of violence against and torture of children*

16.3 *Promote the rule of law at the national and international levels and ensure equal access to justice for all*

16.4 *By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime*

16.5 *Substantially reduce corruption and bribery in all their forms*

16.6 *Develop effective, accountable and transparent institutions at all levels*

16.7 *Ensure responsive, inclusive, participatory and representative decision-making at all levels*

16.8 *Broaden and strengthen the participation of developing countries in the institutions of global governance*

16.9 *By 2030, provide legal identity for all, including birth registration*

16.10 *Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements*

16.a *Strengthen relevant national institutions, including through*

2. See SCHRIJVER N., *The Evolution of Sustainable Development in International Law: Inception, Meaning and Status*, Hague Academy of International Law, Leiden/Boston, Martinus Nijhoff Publishers, 2008, 265 p; especially p. 208. See also C. R. FERNÁNDEZ LIESA, this volume.

3. SCHRIJVER N., *The Evolution of Sustainable Development in International Law: Inception, Meaning and Status*, op. cit., regarding the principle of integration. See also Preamble A/RES/70/1 of 25 September 2015.

4. A/RES/70/1.

international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime

16.b Promote and enforce non-discriminatory laws and policies for sustainable development

Such objective is the result of a contemporaneous approach of sustainability –and wasn't part of the eight Millenium Development Goals for 2015⁵–, but the link between the notions of development, peace and justice was early underlined by official texts⁶. As interesting an inclusive meaning of sustainable development could be, it is important for the efficiency of the agenda to clarify the legal containing of the call for «peace, justice and strong institutions» as identified by the General Assembly Resolution of 25th September 2015⁷. As a matter of fact, it is fundamental to think development as a whole issue in connection with social factors able to guarantee minimum standards of living for human beings. However, at the same time, «alertness is called for to prevent sustainable development from becoming an all-encompassing concept, if not a mantra, and there should be an accurate and continuous reconsideration of what could and could not be part of the concept»⁸. A balanced answer can be at least partly found in law. This chapter aims to bring some clarification on the legal substance of the requirements about «peace, justice and strong institutions» as a basis of sustainable development, to measure the gap between the actual situation and the objectives, and to deal with the necessary measures to reach them.

2. THE LEGAL AND PRACTICAL INTERACTIONS BETWEEN PEACE, JUSTICE, STRONG INSTITUTIONS AND SUSTAINABLE DEVELOPMENT

After having underscored how the link between the involved notions had been historically established (A), it will be necessary to analyse the legal and practical challenges at stake (B).

5. <http://www.un.org/millenniumgoals/>.

6. *Infra*.

7. A/RES/70/1.

8. SCHRIJVER N., *The Evolution of Sustainable Development in International Law: Inception, Meaning and Status*, *op. cit.*, p. 218.

A. THE INCLUSIVE APPROACH AS ESTABLISHED IN THE TEXTS

The link between peace, justice and development was early formulated, regarding the history of the concept of sustainability. The Declaration on Social Progress and Development voted in December 1969 by the UN General Assembly is an interesting example, as the Resolution, in its Preamble, reaffirms «faith in human rights and fundamental freedoms and in the principles of peace, of the dignity and worth of the human person, and of social justice proclaimed in the Charter (...)»⁹. The General Assembly also made in this text the general observation that «international peace and security on the one hand, and social progress and economic development on the other, are closely interdependent and influence each other»¹⁰.

Since then, the interdependence of sustainable development, peace and justice was constantly reiterated. Many references to the notion of justice (and/or injustice) can be found in the 1987 Report of the World Commission on Environment and Development (Brundtland Commission)¹¹. A special part of the report is dedicated to the connection with «peace, security, development and the environment» presenting the possibility of a nuclear war as the gravest threat for the environment¹². The redactors also asserted that «environment is a social justice issue and environment even is a peace and security issue»¹³. In the Rio Declaration, several principles focus on these interactions. According to Principles 25 and 26, «Peace, development and environmental protection are interdependent and indivisible», and «States should resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations»¹⁴. The Rio Principle 10 is also of interest when it aims to guarantee «effective access to judicial and administrative proceedings, including redress and remedy (...)»¹⁵. Moreover, the useful 2002 ILA New Delhi Declaration of Principles of International Law relating to Sustainable Development identifies the concept as a «global objective» and reserves special attention on the access to justice in its fifth part, stating that:

9. Declaration on Social Progress and Development proclaimed by A/RES/2542 (XXIV), 11 December 1969.

10. *Ibid.*

11. UN Document, Report of the World Commission on Environment and Development: Our Common Future, «Brundtland Report», 1987, p. 45, 240, 241, 247.

12. *Ibid.*, p. 24, and Chapter 11, p. 239.

13. *Ibid.*, p. 247.

14. Rio Declaration on Environment and Development, 1992, A/CONF.151/26 (vol. I).

15. *Ibid.*

«(t)he empowerment of peoples in the context of sustainable development requires access to effective judicial or administrative procedures in the State where the measure has been taken to challenge such measure and to claim compensation»¹⁶.

Even if these sources don't deal with the institutional aspect as an independent issue, it appears transversally and constitutes a key point in the effectiveness of these procedures, as well as the concrete support of the sustainable aspirations. The notion of «efficient institutions» has to be connected with the necessary «good governance», a legal aspect of the concept of sustainable development as identified by the New Delhi Declaration¹⁷. As a matter of fact, the principle of good governance by States and International Organisations is of first importance to guarantee the rule of law, or the fight against corruption¹⁸.

The UN General Assembly Resolution on the 2030 Agenda for Sustainable Development marks another important step in the officialised interconnection between the general concepts of peace, justice and sustainable development, by creating the 16th goal. The text of the resolution is also very clear on that point, in its preamble and in its introduction. Governments declared to be «determined to foster peaceful, just and inclusive societies which are free from fear and violence»¹⁹, and that «(t)here can be no sustainable development without peace and no peace without sustainable development»²⁰. Also recognized is

«(...) the need to build peaceful, just and inclusive societies that provide equal access to justice and that are based on respect for human rights (including the right to development), on effective rule of law and good governance at all levels and on transparent, effective and accountable institutions»²¹.

Therefore, the existence of goal 16th of the UN plan of action on sustainable development constitutes an evolution compared to the Millenium Goals program, but is the result of a long and steady recognition of the inextricable link between peace, justice and sustainability factors.

16. ILA Declaration of Principles of International Law relating to Sustainable Development, Report of the 70th Conference, New Delhi, London, ILA, 2002, 5.3, available at www.ila-hq.org.

17. *Ibid.*, part 6.

18. *Infra*.

19. A/RES/70/1, Preamble.

20. *Ibid.*

21. *Ibid.*, Introduction, § 35.

B. THE PRACTICAL AND LEGAL CHALLENGES AT STAKE

It clearly appears in the different sources mentioned, and especially in the 2030 Agenda, that the notions of sustainable development, peace, justice, and institutions, are used in a very wide sense. This makes the legal containing of the expressions employed more difficult to extract. This global approach is completely assumed by the redactors of the Agenda when they explain sustainable development as a three aspects concept including «economic, social and environmental» dimensions, «in a balanced and integrated manner»²². When formally established the link with peace, justice and institutions, the question then could be: which peace, which justice, and which institutions?

a. Peace and Sustainable Development

Regarding the formulation of the UN General Assembly Resolution 70/1, the connection between development and peace is based on a logical articulation: «(s)ustainable development cannot be realized without peace and security; and peace and security will be at risk without sustainable development»²³. In other words, it could be said that peace is a factor of development, and development is a factor of peace. That is what statistics tend to demonstrate. According to the UN Development Program, while the world's richest 85 people have as much combined wealth as the poorest 3.6 billion²⁴, 1.5 billion of the world's population live in countries affected by fragility and repeated cycles of violence²⁵. The world's population living in conflict affected countries» account for 70% of the infant deaths²⁶. The approximate cost of armed conflicts in Africa between 1990 and 2005 was 300 billions of US dollars²⁷. Regarding global trends published in June 2016 by the UN Refugee Agency, «global forced displacement has increased in 2015, with record-high numbers» of 65.3 million of people forcibly displaced –including 21.3 millions of refugees, 40.8 million internally displaced people,

22. *Ibid.*, § 2.

23. *Ibid.*, Introduction, § 35.

24. UNDP Support to the Implementation of Sustainable Development Goal 16, «Promote Peaceful and Inclusive Societies, Promote Access to Justice and Build Effective, Accountable and Inclusive Institutions», p. 6, available at <http://www.undp.org/content/undp/en/home/librarypage/sustainable-development-goals/undp-support-to-the-implementation-of-the-2030-agenda/> quoting Working for the few», Oxfam briefing paper, 20 January 2014.

25. *Ibid.*, quoting World Bank 2011 World Development Report.

26. *Ibid.*

27. *Ibid.*, quoting Oxfam/IANSA/Saferworld 2007 Africa's Missing Billions.

and 3.2 asylum-seekers– as a result of persecution, conflict, generalized violence and violation of human rights²⁸.

In its article on «Proposals for the Preservation for Peace», Pr. Achilles Skordas recalls that «(t)he term “peace” is both a legal and a sociological /philosophical concept»²⁹. In a practical point of view, «“preservation” of peace includes maintenance and restoration of peace, as well as reform of the international system and its institutions in view of maintenance and restoration of peace»³⁰. That means that the situations in which peace is breached in the international community are various. Replacing the notion of peace into the historical work of the United Nations, it can be observed that the 2030 Agenda fits into the larger context of the strategy adopted by the Organization since its creation. The institution and its members have worked in three main areas which are peaceful settlement of disputes and prohibition of the use of force, human rights, and decolonization³¹, on the basis of the general principles of the UN Charter settled in Article 2(3) and (4) and the multiple commitments for the promotion of human rights. Policies for peace have also been oriented towards the promotion of the decolonization and the respect of the principle of self-determination. In that sense, it is interesting to note that Resolution 70/1 explicitly refers to the non autonomous territories when it makes the specific statement about the

«(...) call for further effective measures and actions to be taken, in conformity with international law, to remove the obstacles to the full realization of the right of self-determination of peoples living under colonial and foreign occupation, which continue to adversely affect their economic and social development as well as their environment».³²

To understand the concept of peace as used in the UN vocabulary, an essential tool is certainly the 1992 famous Agenda for Peace. In his report, the UN General Secretary Boutros-Boutros-Ghali connected in detail concepts of security and development through situations of conflicts, disease, famine or oppression³³. The study also brought some clarification

28. UNHCR, Global Trends on Forced Displacement in 2015, 2016, 66 p, available at: <http://www.unhcr.org/statistics/unhcrstats/576408cd7/unhcr-global-trends-2015.html>.

29. A. SKORDAS, «Peace, Proposals for the Preservation of» p. 138 in R. WOLFRUM (dir.), *The Max Planck Encyclopedia of Public International Law*, vol. VIII, Oxford, 2012, 1138 p.

30. *Ibid.*

31. A. SKORDAS, «Peace, Proposals for the Preservation of», op. cit., p. 146.

32. A/RES/70/1, Introduction, § 35.

33. B. BOUTROS-GHALI, «An agenda for peace: préventive diplomacy, peacemaking and peacekeeping», A/47/277, 17 June 1992, for instance § 13.

on the concepts of preventive diplomacy, peacemaking, peacekeeping, and post-conflict peace building, as well as post-conflict peace-building³⁴. Peace efforts that have been made into the UN framework since 1990's, with varying success, as well as the role played by regional organizations, require to adjust these definitions³⁵, but they underline the cloth interaction between the objectives of the UN Charter and the notion of peace as it used in the UN vocabulary.

However, that doesn't mean that the 2030 Agenda understanding should be limited to this already broad conception of peace. Its containing is actually much wider as it addresses issues relative to intern conflicts, which do not necessarily threat international security, and even pretends to cover some situations of «private» violence³⁶. One key point in the comprehension of Goal 16th is that the Agenda is not only about the Charter concept of peace, it is also about fighting against all forms of violence. It is not only used in its legal meaning, but also in its social and philosophical sense. The United Nations Development Program (UNDP) Support to the Implementation of the 2030 Agenda for Sustainable Development insist on the contemporaneous forms of violence which constitute barriers to development when it recalls that:

«Violence and violent deaths are not limited to conflict affected regions, and in fact about 90 percent of violent deaths in the world occur in non-conflict situations. In 2014, half a million persons were victims of intentional homicide.

34. According to it, preventive diplomacy is «action to prevent disputes from arising between parties, to prevent existing disputes from escalating into conflicts and to limit the spread of the latter when they occur»; peacemaking «is action to bring hostile parties to agreement, essentially through such peaceful means as those foreseen in Chapter VI of the Charter of the United Nations»; peacekeeping «is the deployment of a United Nations presence in the field, hitherto with the consent of all the parties concerned, normally involving United Nations military and/or police personnel and frequently civilians as well»; post-conflict peace-building consists in the «action to identify and support structures which will tend to strengthen and solidify peace in order to avoid a relapse into conflict», *Ibid.*, § 20 et 21.
35. On these issues, for instance see: A. CAHILL-RIPLEY, «Reclaiming the Peacebuilding Agenda: Economic and Social Rights as a Legal Framework for Building Positive Peace – A Human Security Plus Approach to Peacebuilding», *Human Rights Law Review*, vol. 16, issue 2, 2016, pp. 223-246; E. CASTELLARIN, «Les Nations unies et les opérations de maintien de la paix des organisations régionales européennes», *L'Observatoire des Nations unies*, vol. 37, 2014, pp. 79-102.
36. On this last aspect, UNDP Support to the Implementation of Sustainable Development Goal 16, «Promote Peaceful and Inclusive Societies, Promote Access to Justice and Build Effective, Accountable and Inclusive Institutions», p. 2, available at <http://www.undp.org/content/undp/en/home/librarypage/sustainable-development-goals/undp-support-to-the-implementation-of-the-2030-agenda/>.

Violent extremism is increasingly an issue of global, regional and national concern. There has been a rise in the number of powerful, non-state, armed groups possessing multiple agendas antithetical to peace and development and threatening the very existence of nation states.

*Varied forms of violence, a complex multi-dimensional set of drivers and an increasing number of non-state actors using new technologies and social media and with transnational connections, are changing the nature of violent conflicts.»*³⁷

The enforcement of the 2030 Agenda relies on this realist approach of the actual forms of violence, including terrorism, but is also complicated by such a wide scope of application. The 16th goal of sustainable development then includes the traditional principle of international peace and security, but goes much beyond, by considering all forms of peace breaching, even at a private or community level.

b. Justice and Sustainable Development

A similar conclusion can be reached regarding the notion of justice, whose different meanings have also various consequences, legally speaking. On one hand, the notion of justice can be linked to the «classical» meaning of sustainable development. In that sense, the call for access to justice as formulated in the 2030 Agenda means accountability and prosecution for the crimes against environment, and appropriate access to justice and reparation for the victims of such crimes. Although sustainable development and international criminal justice constitute two different aspects of international law at first sight, a useful connection can be made between the two fields, to prospect for instance on how international law criminalize or not damages to environment³⁸. Indeed, the Rome Statute considers environmental prejudice, but the concerned provisions are of limited application. Article 8 (2) (b) provides that crime war definition includes intentional attack «in the knowledge that such attack will cause (...) widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated»³⁹, and or

37. *Ibid.*

38. On this issue, the interesting volume of S. JODOIN and M.-C. CORDONIER SEGGER, *Sustainable Development, International Criminal Justice, and Treaty Implementation*, Cambridge, 2013, 367 p.

39. Roma Statute, Article 8(2) (b) (iv). See M.-C. CORDONIER SEGGER, «International Law, Criminal Justice, and Sustainable Development», in the édition of the same author, *op. cit.*, p. 34; and M. GILLET, «Environmental Damage and International Criminal Law», *ibid.*, p. 77. As M. GILLET underlines, the formulation had been suggested by New Zealand and Switzerland: Working paper submitted by the Delegations of New

intentional deprivation of objects indispensable to survival⁴⁰, as food or water. Both provisions only apply to international armed conflicts, and the disposition of Article 8 (2) (b) (iv) regarding «widespread, long-term and severe damage to the environment», which is the one that mostly clearly addresses environmental damages, is assorted with a balancing test. The provisions of Article 35(3) of the Additional Protocol I to the Geneva Convention and ICRC Rule 45 reflecting customary humanitarian law prohibit more generally «(...) methods or means of warfare that are intended, or *may be expected*, to cause widespread, long-term and severe damage to the natural environment»⁴¹ and do not submit the prohibition to a balancing test. Moreover, ICRC Rule 45 should not be limited to international conflicts –the point is discussed–, and adds that «(d) destruction of the natural environment may not be used as a weapon»⁴². However, France, United Kingdom and United States are considered persistent objectors to the application of this prohibition to the use of nuclear weapons⁴³. This limited scope could be overcome by the creation of general crime against environment⁴⁴, a project defended from a long time⁴⁵, but facing States' reticence and potential enforcement difficulties.

On the other hand, the 2030 Agenda also connects the very wide notion of justice with a broader conception of development, including social and economical aspects. Here again, as for peace, the connection is mutual: justice contributes to development and development contributes to justice. Yet the conclusions about the Millennium goals identified barriers to sustainable development as an enabling factor for crime and violence,

Zealand and Switzerland, UN Preparatory Committee on the Establishment of an International Criminal Court, A/AC/249/1997/WG.1/DP.2, 1997, § 3.

40. *Ibid.*, Article 8(2) (b) (xxv).

41. Our italics, Article 35 (3) of Additional Protocol I of the Geneva Conventions of 12 June 1949, and Relating to the Protection of Victims of International Armed Conflicts, 8 June 1977 (also contained in Article 55(1) of Additional Protocol I), available at <https://www.icrc.org/applic/ihl/ihl.nsf/Article.xsp?action=openDocument&documentId=0DF4B935977689E8C12563CD0051DAE4>; ICRC Rule 45 of Customary Humanitarian International Law: J.-M. HENCKAERTS and L. DOSWALD-BECK, *Customary International Humanitarian Law*, ICRC, Vol. I. Rules, Cambridge, 2009, p. 151.

42. ICRC Rule 45, *ibid.*

43. J.-M. HENCKAERTS and L. DOSWALD-BECK, *Customary International Humanitarian Law*, *op. cit.*, p. 151; and J.-M. HENCKAERTS, «Étude sur le droit humanitaire international coutumier. Une contribution à la compréhension et au respect du droit des conflits armés», *Revue internationale de la Croix-Rouge*, Volume 87, 2005, p. 307.

44. F. MEGRET, «The Case for a General International Crime against Environment», in S. JODOIN and M.-C. CORDONIER SEGGER, *op. cit.*, p. 50.

45. *Ibid.*, and P. SHARP, «Prospects for Environmental Liability in the International Criminal Court», *Virginia Environmental Law Journal*, vol. 18, 1999, p. 217.

when criminality and violations of international law are at the same time enabling factors for environmental, social and economical damages⁴⁶. It also means that «the pursuit of sustainable development could help three factors associated with the prevalence of international crimes: economic inequality and underdevelopment, resource scarcity, and natural resource predation»⁴⁷. The relationship between sustainable development and justice, both in a broad meaning, is not just philosophical. As a matter of fact, «(...) while one instinctively feels a symbiosis between a *just* global system and a *sustainable* world (...)», «(...) global justice and sustainable development can, and perhaps must, be considered not only as mutually supportive but, more than that, normatively integrated»⁴⁸. Concepts of distributive/procedural justice, intergenerational justice, economical justice, social justice and environmental justice all can be invoked⁴⁹. Justice, in all these aspects, appears closely linked to sustainable development, but this proliferation of definitions makes the identification of the legal containing of justice uneasy. Using the classical dichotomy between procedural and substantive aspects, two general types of orientations could be identified. On the one hand, goal 16th requires accessible and efficient judicial procedures for States but especially for individuals, as well as reparation for the victims of violation of human

46. For instance, UN, Millenium Development Goals Report 2015, p. 7, available at http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20Summary%20web_english.pdf.

47. Ch. SEGUIN, «Sustainable Development, Conflicts, and International Crimes», p. 265 in S. JODOIN and M.-C. CORDONIER SEGGER, *op. cit.*

48. D. FRENCH, «Sustainable Development and the Instinctive Imperative of Justice in the Global Order», pp. 4 and 5 in D. FRENCH, *Global Justice and Sustainable Development*, Leiden, Boston, Martinus Nijhoff Publishers, 2010, 416 p.

49. On the general notion of justice, the famous study of JOHN RAWLS should be useful: J. RAWLS, *A theory of justice*, Cambridge, 1972, XVI, 607 p. On the different aspects of justice and the link with sustainable development: L. GURUSWAMY, «Energy Justice and Sustainable Development», *Colorado Journal of International Environmental Law and Policy*, vol. 21, afl. 2, 2010, 231-265; G. E. HENDERSON, «Rawls and Sustainable Development», *Mc Gill International Journal of Sustainable Development Law and Policy*, Vol. 7, n.° 1, 2011, available at SSRN: <http://ssrn.com/abstract=2621713>; D. HERVE, «Environmental Justice and Sustainable Development: Guidelines for Environmental Law-Making», pp. 307-326 in D. FRENCH, *Global Justice and Sustainable Development*, *op. cit.*; O. LANGHELLE, «Sustainable Development and Social Justice: Expanding the Rawlsian Framework of Global Justice», *Environmental Values*, Vol. 9, n.° 3, 2000, pp. 295-323. The notions of intergenerational justice and social justice transversally omnipresent in the Brundtland Report, «Our Common future: Report of the World Commission on Environment and Development», *op. cit.* On the contemporaneous idea of justice in the international society: E. TOURME-JOUANNET, *What is a Fair International Society? International Law between Development and Recognition*, Oxford, Hart Publishing, 2013, 252 p.

rights including ecological damages. Besides, according to the ILA New York Declaration, the principle of public participation, included in the concept of sustainable development, as already quoted, requires that «(t)he empowerment of peoples in the context of sustainable development requires access to effective judicial or administrative procedures in the State where the measure has been taken to challenge such measure and to claim compensation», but also that «States should ensure that where transboundary harm has been, or is likely to be, caused, individuals and peoples affected have non-discriminatory access to the same judicial and administrative procedures as would individuals and peoples of the State in which the harm is caused»⁵⁰. The principle of public participation then implies a responsibility for governments to guarantee such procedures and supposes efficient and transparent administrative and judicial institutions⁵¹.

On the other hand, it calls for efficient and enforceable measures to protect human rights, as well as judicial decisions taking in account the parameters of the necessary sustainable development. The procedural aspect of justice is expressed by target 16.3 when it sets out the «equal access to justice for all». The substantial aspect lies in target 16.10 about the protection of fundamental freedoms, and in target 16.b about the promotion and enforcement of «non-discriminatory laws and policies for sustainable development». Substantial justice, and particularly social justice, is inevitably connected to the notion of an equitable share of resources and an equitable treatment. The relation between justice and equity⁵² has been renewed through the concept of sustainable development. Some academics used the notion of «intergenerational equity»⁵³ to express this new paradigm, and defined as a «principle of ordering of the community of mankind which will make it possible for every generation, by virtue of its own effort and responsibility, to secure a proportionate share in the common good of the human species»⁵⁴.

The objectives defined by States in the 70/1 Resolution carrying the 2030

50. ILA New Delhi Declaration, *op. cit.*, (5).3.

51. *Infra.c.*

52. On equity in international law: M. CHEMILLIER-GENDREAU, «La signification des principes équitables dans le droit international contemporain», *RBDI*, vol. 16, 1981, pp. 509-535; A. GOURGOURINIS, «Delineating the Normativity of Equity in International Law», *International Community Law Review*, vol. 11, issue 3, 2009, pp. 327-347.

53. For instance, J. HEPBURN, «Intergenerational Equity and Rights and International Criminal Law», pp. 171-189 in S. JODOIN and M.-C. CORDONIER SEGGER, *Sustainable Development, International Criminal Justice, and Treaty Implementation*, *op. cit.*

54. E. AGIUS, «Obligations of Justice towards Future Generations: A Revolution on Social

Agenda on Sustainable Development fits directly in this evolution, and in a contemporaneous apprehension of international law, which would not be only a political instrument of liberalism but also a instrument of regulation and of social intervention⁵⁵. Besides, authors as Pr. Emmanuelle Tourme-Jouannet identified a new branch of international law directly connected to the law of development, under the title of «international law of recognition»⁵⁶. Regarding this idea, target 16.9 appears particularly interesting when it formulates the commitment of the UN members to «provide legal identity for all, including birth registration». The text pleads for the enforcement of the fundamental right to have a nationality as set out by the 1954 New York Convention relating to the Status of Stateless Persons and the 1961 Convention on the Reduction of Statelessness, and the fundamental right to have his birth registered as provided by Article 7 (1) of the Convention on the Right of the Child. The commitment is at the same time a call for recognition of every human being, and so do the promotion of non-discriminatory laws and the inclusive participation of individuals to decision-making procedures. The case of birth registration and fight against statelessness is of high importance as, in 2013, it was estimated by UNICEF that 230 millions of children under the age of five had no birth registration⁵⁷ and that, in 2016, «at least 10 millions around the world are denied a nationality»⁵⁸.

The wide and classical notion of justice then finds an interesting basis in the 16th goal of the UN sustainable development plan of action for its actual renewal through the evolution of the international legal order. The objectives linked to justice require therefore the application of fundamental principles of human rights, and support democratic governments respectful of the rule of law. They are in that sense inseparable from the institutional aspects.

and Legal Thought», in E. AGIUS (ed.), *Future Generations and International Law*, 1998, quoted by J. HEPBRUN, *op. cit.*

55. E. TOURME-JOUANNET, «Le droit international comme instrument de régulation et d'intervention sociale», *Le droit international*, Paris, Presses Universitaires de France, «Que sais-je?», 2013, p. 70, URL: www.cairn.info/le-droit-international-9782130608646-page-70.htm.
56. E. TOURME-JOUANNET, *What is a Fair International Society? International Law between Development and Recognition*, Oxford, Hart Publishing, 2013, 252 p; E. TOURME-JOUANNET, H. MUIR WATT, O. de FROUVILLE and J. MATRINGE, *Droit international et reconnaissance*, Paris, Pedone, 2016, 370 p.
57. *United Nations Children's Fund, Every Child's Birth Right: Inequities and trends in birth registration*, UNICEF, New York, 2013, p. 14.
58. UNHCR website: <http://www.unhcr.org/stateless-people.html>.

c. Strong institutions and sustainable development

The institutional dimension of goal 16th is transversal to the whole program regarding peace and justice. However, the explicit mention of «strong institutions» is the 2030 Agenda involves a specific treatment. The need for «effective, accountable and inclusive institutions», at local, national, regional and international level, appears from facts, as the impressive level of institutional corruption, especially among the judiciary and police institutions⁵⁹. It is estimated that «corruption, bribery, theft and tax evasion cost some US \$1.26 trillion for developing countries per year» and that «this amount of money could be used to lift those who are living on less than \$1.25 a day above \$1.25 for at least six years»⁶⁰. To fight these barriers to proper development, goal 16th is dedicated in a significant proportion to institutional issues through various commitments as promoting the rule of law (target 16.3), reducing illicit financial and arms flows, recovering of stolen assets and fighting all forms of organized crimes (target 16.4), reducing corruption and bribery in all their forms (target 16.5), developing effective, accountable, and transparent institutions at all levels (target 16.6), ensuring public access to information (target 16.10), and strengthening relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries (target 16.a).

All these targets are the expression of sustainable development in its modern and enriched version, that is to say including the recognition of the need for democratic societies and the respect of the rule of law. The ILA New Delhi Declaration identifies in the concept of sustainable development the principle of «public participation and access to information and justice» and the principle of «good governance»⁶¹. The first principle finds its first basis in the early texts of sustainable development. It was then developed in the Rio Declaration⁶², and in the 1998 Aarhus Convention of the Economic Commission for Europe⁶³. According to the

59. UN website: <http://www.un.org/sustainabledevelopment/peace-justice/>.

60. *Ibid.*

61. ILA NEW Delhi Declaration, *op. cit.*, (5) and (6).

62. Rio Declaration Principle 10 deals about access to information for individuals and their right to participate in the decision-making processes, as well as «effective access to judicial and administrative proceedings, including redress and remedy (...)».

63. Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, Aarhus Denmark, 25 June 1998. On this point, N.J. SCHRIJVER, *op. cit.*, p. 73 and p. 199. The author properly underlines that the importance of the participation for individuals had in some points been already mentioned in the 1994 Anti-Desertification Convention regarding indigenous people, and in the ACP-EU Lomé/Cotonou conventions.

ILA New Delhi Declaration, public participation requires the participation of women⁶⁴, the effective protection of «the human right to hold and express opinions and to seek, receive and impart ideas», the «right of access to appropriate, comprehensible and timely information held by governments and industrial concerns on economic and social policies regarding the sustainable use of natural resources and the protection of the environment (...)»⁶⁵, and the already mentioned access to effective judicial or administrative procedures»⁶⁶. It means public participation in an inclusive approach, enforceable protection of freedoms relating to information and opinion, and state accountability on the existence and effectiveness of these mechanisms.

The principle of good governance, for its part, is considered «essential to the progressive development and codification of international law relating to sustainable development»⁶⁷, and, still according to the New Delhi Declaration, commits States and international organizations:

«(a) to adopt democratic and transparent decision-making procedures and financial accountability;

(b) to take effective measures to combat official or other corruption;

(c) to respect the principle of due process in their procedures and to observe the rule of law and human rights; and

(d) to implement a public procurement approach according to the WTO Code on Public Procurement»⁶⁸.

It is a duty for States and institutions to ensure this good governance, and a right for individuals and civil society to benefit from it. The central place of the principle had been identified, but its legal binding force had been discussed as it was not so clear⁶⁹. Governance is a general term that is increasingly used, and whose legal meaning lacks delimitation.

64. Declaration (5).1.

65. Declaration (5).2.

66. Declaration (5).3, quoted *supra*.

67. *Ibid.*, Declaration 6.1.

68. *Ibid.*

69. See H. ADDINK, «Good Governance: A Principle of International Law», pp. in C. RYNGAERT, E.J. MOLENAAR, S.N.H. NOUWESS (eds.), *What's wrong with International Law? Liber Amicorum A.H.A. Soons*; M. KAMTO, *Droit international de la gouvernance*, Paris, Pedone, 2013, 340 p; A. MUNGIU-PIPPIDI, *The Quest for Good Governance: How Societies Develop Control of Corruption*, Cambridge, 2015; A. SEIDMAN, R.B. SEIDMAN and T.W. WALDE (eds.), *Making Development Work: Legislative Reform for Institutional Transformation and Good Governance*, The Hague, Kluwer, 1999, 336 p; T.G. WEISS, «Governance, Good Governance and Global Governance: Conceptual and Actual

However, the New Delhi Declaration appears as a good intent for that, and there are serious indicators to prove its existence in positive law, not only in mere declarations of intentions. Pr. Maurice Kamto reached this conclusion, when he wrote that there is a general legal obligation for States «to govern well», which commits governments to «establish, respect and make respect the rule of law» on one hand, and on the other hand to «establish and respect the liberal democracy principles», as well as to «manage transparently and as “good fathers” the economical and financial resources of their country»⁷⁰.

In other words, the 2030 Agenda pleads for an international order that would be far from its tradition neutrality towards forms of governments, by expressing the commitments of States to promote democratic values through international rules. All levels and types of institutions have then a key role in the fulfillment of Goal 16th regarding peace and justice, being a condition of efficiency, but also representing the concrete place where all actors, including public and private ones, can meet and achieve a sustainable society as understood by United Nations. To that aim, international law can be a useful tool as the principles of public participation and good governance had gained in legal containing over the last decades.

3. THE NEED FOR LAW ENFORCEMENT TO REALIZE PEACEFUL, JUST AND INCLUSIVE SOCIETIES

The actual indicators about poverty, inequality, violence and migrations in the world are the deploring demonstration that nor the objectives of the United Nations as formulated in the Charter, nor the Millenium Program were fulfilled, and the mere intentions are far from sufficient to guarantee peace, justice, and respect of human rights⁷¹. Here's a triviality

Changes», *Third World Quarterly*, vol. 21, 2000, p. 795; Z. WEX, *Human Rights and Good Governance*, Leiden, Boston, Brill Nijhoff Publishers, 2016.

70. Our traduction, M. KAMTO, *Droit international de la gouvernance*, Paris, Pedone, 2013, pp. 313-314.

71. For instance, in his report of 2014 on the post 2015 Agenda, The Un General Secretary Ban Ki Moon observed that «(...) conditions in today's world are a far cry from the vision of the Charter. Amid great plenty for some, we witness pervasive poverty, gross inequalities, joblessness, disease and deprivation for billions. Displacement is at its highest level since the Second World War. Armed conflict, crime, terrorism, persecution, corruption, impunity and the erosion of the rule of law are daily realities. The impacts of the global economic, food and energy crises are still being felt. The consequences of climate change have only just begun. These failings and shortcomings have done as much to define the modern era as has our progress in science, technology and the mobilization of global social movements», *The road to*

to underscore it. The 2030 Agenda is a very ambitious plan of action that must be taken for what it is, some orientation and framework for the international community. Is that to say that it deprived of any legal scope? No in the sense that the containing of the program can easily be connected with some existing international binding rules and principles.

The justice aspect of the new UN plan of action is central, but also especially challenging. The project of some society free from violence and corruption can easily sound as a utopia⁷². Some concrete actions are nevertheless available through legal tools, especially through the scope of human rights protection dispositions and existing mechanisms and procedures. From the international law perspective, the accomplishment of goal 16th doesn't need so much new legal instruments, but above all a better enforcement of the existing regulation. Numerous international treaties actually deal with the identified targets. Obviously, the more specific is a target, the less difficult it is to link it with legal obligations and to be able to measure its achievement. In that sense, the challenge to «ensure equal access to justice for all» or «to develop effective, accountable and transparent institutions at all levels», doesn't suffer comparison with the commitment of providing «legal identity for all, including birth registration». A considerable number of conventions could be useful in order to push the compliance of Goal 16th. It would not be possible to treat all of them, as almost the whole corpus of human rights could be directly or indirectly concerned. Here are some examples of fundamental texts, with a low level of enforcement, whose dispositions appear decisive in the realization of peaceful and just societies⁷³.

For instance, the ending of abuse, trafficking and forms of violence against children (target 16.2) requires the application of the 1989 Convention on the Rights of the Child and its three additional protocols on the involvement of children in armed conflicts, on the sale of children, child prostitution and child pornography, and on a communications

dignity by 2030: ending poverty, transforming all lives and protecting the planet. Synthesis report of the Secretary-General on the post-2015 sustainable development agenda, A/69/700, 4 December 2014, § 10.

72. It won't be necessary to recall here the now classical theory of M. KOSKENNIEMI about the inherent contradiction of international law argument, *From Apology to Utopia*, Cambridge, reissue 2005, XIX, 683 p.

73. On the general issue of law enforcement regarding human rights, see the récent publication of A. YOUTOPOULOS-MARANGOPOULOS (dir.), *L'état actuel des droits de l'homme dans le monde*, Paris, Pedone, 2016, 300 p.

procedure⁷⁴. The Convention was massively ratified⁷⁵, and provides States responsibility to protect children from economical exploitation⁷⁶, from the illicit use of drugs⁷⁷, from sexual exploitation and sexual abuse⁷⁸, from abduction, sale and traffic⁷⁹, from other forms of exploitation prejudicial⁸⁰, and from torture, cruel or inhuman treatment⁸¹. A Special Committee on the Rights of the Child, composed of 18 experts, monitors the implementation of the Convention and protocols, through States reports, and, on the basis of the third optional protocol, is able to hear some complaints regarding violations of the Convention and the first two optional protocols⁸². It is then a complete mechanism, with some clear and specific legal binding dispositions, and enforcement procedures. It is completed by other conventions, such as the 2000 UN Convention against Transnational Organized Crime, and its Protocol to Prevent, Suppress and Punish Trafficking in Persons Especially Women and Children (Palermo Protocol), which offer definition and regulation on human trafficking⁸³. The ILO Convention n.º182 (1999) also deals with all the worst forms of child labour⁸⁴. Despite the existence of these texts and their ratification by an overwhelming part of the States, it is estimated that 1.2 million of children worldwide are victims of human trafficking each year⁸⁵.

As already mentioned, target 16.9 on birth registration especially requires the enforcement of Article 7 of the Convention on the Rights of the Child, which states:

«1. The child shall be registered immediately after birth and shall have the right

74. United Nations, Treaty Series, vol. 1577, p. 3. For details on ratifications: <http://www.ohchr.org/EN/HRBodies/CRC/Pages/CRCIndex.aspx>. There are 196 parties to the Convention.

75. For details on ratifications: <http://www.ohchr.org/EN/HRBodies/CRC/Pages/CRCIndex.aspx>. There are 196 parties to the Convention.

76. Article 32.

77. Article 33.

78. Article 34.

79. Article 35.

80. Article 36.

81. Article 37.

82. <http://www.ohchr.org/EN/HRBodies/CRC/Pages/CRCIntro.aspx>.

83. United Nations, Treaty Series, vol. 2225, p. 209. A/55/83 and United Nations, Treaty Series, vol. 2237, p. 319; Doc. A/55/383.

84. http://www.ilo.org/dyn/normlex/fr/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID,P12100_LANG_CODE:312327,en:NO.

85. ILO, A Future Without Child Labour, 2002, p. 32. On its website, UNICEF considers this data is still the reference.

from birth to a name, the right to acquire a nationality and, as far as possible, the right to know and be cared for by his or her parents.

2. States Parties shall ensure the implementation of these rights in accordance with their national law and their obligations under the relevant international instruments in this field, in particular where the child would otherwise be stateless.»

The New York 1954 Convention Relating to the Status of Stateless People (88 Parties)⁸⁶ and the 1961 New York Convention on the Reduction for Statelessness (67 Parties)⁸⁷ are two UN fundamental texts. After a special campaign conducted by UNHCR, there were 49 new accessions to the two conventions between 2011 and 2015⁸⁸. However, despite these efforts, as recalled before, it is estimated that at least 10 millions of persons are in 2016 without any nationality⁸⁹. According to the Institute of Statelessness and Inclusion, «(i)n absolute numbers, statelessness is documented as affecting far more people in Asia and the Pacific than in any other region of the world», although examples can be found worldwide⁹⁰. UNHCR focuses on this challenge, and require the collaboration of the civil society, as well as the other UN Agencies as UN Children's Fund (UNICEF), the UN Population Fund (UNFPA) and the High Commissioner for Human Rights (OHCHR)⁹¹. The UNHCR «#Ibelong» Campaign is more ambitious that the 2030 Agenda as it aims to eradicate statelessness by 2024⁹².

On the aspect of arms flows and organized crimes, that are supposed to be significantly reduced by 2030 (target 16.4), the 2000 UN Convention against Transnational Organized Crime (187 Parties)⁹³, and its Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition (114 Parties)⁹⁴ are of particular interest. Through the Protocol introduced by the UN General Assembly Resolution 55/255 of 31st May 2001 and entered into force in 2005, Parties commit to adopt regulation about the criminalization of illegal manufacturing and trafficking in firearms, about a system of authorizations, and on the

86. United Nations, Treaty Series, vol. 360, p. 117.

87. United Nations, Treaty Series, vol. 989, p. 175.

88. <http://www.unhcr.org/un-conventions-on-statelessness.html>.

89. Supra.

90. Institute on Statelessness and Inclusion (ISI), The World's Stateless, December 2014, p. 8.

91. <http://www.unhcr.org/un-conventions-on-statelessness.html>.

92. <http://www.unhcr.org/ibelong/>.

93. United Nations, Treaty Series, vol. 2225, p. 209.

94. United Nations, Treaty Series, vol. 2326, p. 208.

tracing of firearms⁹⁵. The recent UN Arms Trade Treaty doesn't have the same scope of application⁹⁶, but could contribute to its part to the general objective of pacification⁹⁷.

The redaction of goal 16th of the 2030 Agenda also demonstrates a great preoccupation about the consequences of corruption and illicit finances on the proliferation of criminal organizations and terrorism, and on the violation of the rule of law. This transversally and explicitly appears through the commitments to «significantly reduce all forms of violence and related death everywhere» (target 16.1), to «promote the rule of law (...)» (target 16.3), to «significantly reduce illicit financial and arm flows, strengthen the recovery of stolen assets and combat all form of organized crime» (target 16.4), to «substantially reduce corruption and bribery in all their forms» (target 16.5), to «develop effective, accountable and transparent institutions» (target 16.6), and to «strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent terrorism and crime» (target 16.a). The identification of corruption as a major threat against the respect of human rights and the barrier it represents to sustainable development is not new. In 2004, UN General Secretary K. Annan was presenting corruption as:

«an insidious plague that has a wide range of corrosive effects on societies. It undermines democracy and the rule of law, leads to violations of human rights, distorts markets, erodes the quality of life and allows organized crime, terrorism and other threats to human security to flourish»⁹⁸.

In its preamble, the 2003 UN Convention against Corruption (178 Parties)⁹⁹ recalls that according to the Johannesburg Declaration on Sustainable Development, corruption is a «threat to the sustainable development of people»¹⁰⁰. As a matter of fact, illicit finance, corruption,

95. *Ibid.* See United Nations Office on Drugs and Crime, Model Law against the Illicit Manufacturing of and Trafficking in **Firearms**, their parts and components and ammunition, 2011, XI-165 p.

96. Adopted in 2013, the Treaty entered into force in December 2014 and concerns the commerce of classical weapons. https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVI-8&chapter=26&lang=en.

97. On the Treaty and its apportation: J. RÍOS RODRÍGUEZ, «Les Nations Unies et le Commerce Illicite des Armes», p. 63 in *Les 70 ans des Nations Unies: Quel rôle dans le monde actuel? Mélanges en l'honneur du Professeur Yves Daudet*, Paris, Pedone, 2014, 258 p.

98. UN Office on Drugs and Crimes, *United Nations Convention against Corruption*, Vienna, 2004, Foreword p. iii.

99. United Nations, *Treaty Series*, vol. 2349, p. 41.

100. *Ibid.* *UN Convention Against Corruption*, 2003, Preamble. The text refers to the Johannesburg Declaration on Sustainable Development, 2002, paragraph 19.

international criminal organizations and terrorism are closely linked. For instance, it has been underscored by experts that:

«A fully effective local and global effort to combat terrorism financing benefits from well-functioning, transparent and corruptionfree economies that are equipped with appropriate anti-money laundering (AML) legal, regulatory and institutional frameworks»¹⁰¹.

The challenge is huge: death as a result of terrorism increased a 85% from 2014 to 2015¹⁰², and terrorism cost in 2014 52.9 billions of dollars¹⁰³. The enforcement of the UN convention against corruption, providing useful providing and repressive detailed dispositions, is her essential¹⁰⁴. The Addis Ababa Action Agenda of the Third International Conference on Financing for Development, result of the third international Conference on Financing for Development which took place from 13 to 16 July 2015, shows an evident displaying of political and economical efforts on this issue. For instance paragraph 23 of the Agenda states:

«We will redouble efforts to substantially reduce illicit financial flows by 2030, with a view to eventually eliminating them, including by combating tax evasion and corruption through strengthened national regulation and increased international cooperation. We will also reduce opportunities for tax avoidance and consider inserting anti-abuse clauses in all tax treaties. We will enhance disclosure practices and transparency in both source and destination countries, including by seeking to ensure transparency in all financial transactions between Governments and companies to relevant tax authorities. We will make sure that all companies, including multinationals, pay taxes to the Governments of countries where economic activity occurs and value is created, in accordance with national and international laws and policies»¹⁰⁵.

Therefore, all these examples demonstrate that international legal binding dispositions do exist to assess the targets of goal 16th on

101. See CTITF Working group Report, *Tackling the Financing of Terrorism*, UN, 2009, p. 7.

102. UNDP Support to the Implementation of Sustainable Development Goal 16, «Promote Peaceful and Inclusive Societies, Promote Access to Justice and Build Effective, Accountable and Inclusive Institutions», p. 6, available at <http://www.undp.org/content/undp/en/home/librarypage/sustainable-development-goals/undp-support-to-the-implementation-of-the-2030-agenda/>.

103. *Ibid.*

104. See N. PASSAS, «Development and Anti-corruption Agendas Aligned: the Contribution of the United Nations against Corruption», pp. 401-430 in Ch. RIGIKI MAJINGE and A. DIANG (eds.), *Rule of Law through Human Rights and International Criminal Justice: Essays in Honour of Adama Diang*, Cambridge, 2015, xviii, 519 p.

105. Addis Ababa Financing For Development Plan of Action, G/RES/69/313 of 27 July 2015, § 23.

sustainable development. Most of the mentioned conventions received a major adhesion. The effort from the perspective of international law should then not be so much about more ratifications –even if they would be welcomed– but above all on the appropriate enforcement by national authorities. This requires communication and formation for the social and legal professionals involved with these questions. The keyrole of national parliaments, including for encouraging the inexistent ratifications and promoting the appropriate reporting and national legislation, had been underlined in the 70/1 Resolution¹⁰⁶. Such improvement of law enforcement also requires an integrated coordination within the UN system. For instance, the UNDP website on sustainable development links goal 16th with the *United Nations Educational, Scientific and Cultural Organization*, the *Office of the High Commissioner for Human Rights*, the *UN Department of Political Affairs*, the *United Nations Office on Drugs and Crime*, the *UNICEF #EndViolence Program*, and the *UN Counter Terrorism Committee*¹⁰⁷. The list could actually be must longer, and include special rapporteurs as the special rapporteur on the sale of children, or specific committees as the Committee on the Rights of the Child (CRC). The challenge then partly lies not only on State's will but also on an efficient coordination within the UN system and towards civil society.

4. CONCLUSION

By using notions of justice, peace and sustainable development in their very broad meaning, goal 16th of the UN 2030 Agenda does not deliver a clear legal containing at first sight. It is however based on an inescapable connection between sustainable development as a global concept and the need for peace and justice, as expressed by early UN declarations. To resume it a few words, there's no sustainable development without peace and justice, and no peace and justice without sustainable development.

Although empirical, this tight interaction about societies free from violence, insecurity and discrimination could sound as a mere declaration of good will. The different targets of goal 16th, mainly relating to access to justice, respect of human rights and fight against corruption, are however

106. A/RES/70/1, § 45 states: «We acknowledge also the essential role of national parliaments through their enactment of legislation and adoption of budgets and their role in ensuring accountability for the effective implementation of our commitments. Governments and public institutions will also work closely on implementation with regional and local authorities, sub-regional institutions, international institutions, academia, philanthropic organisations, volunteer groups and others».

107. <http://www.un.org/sustainabledevelopment/peace-justice/>.

the expression of already existing binding dispositions for States. This leads to two types of observations. The first one is that there's much more need for law enforcement, than for creation of new binding instruments. International legal conventions prohibiting human trafficking, establishing the legal framework of the fight against corruption, or providing right to legal identity and birth registration already exist. The low level of enforcement of agreements such as the Convention on the Rights of the Child, the Convention on the Reduction of Statelessness, the Convention against Transnational Organized Crime, or the Convention against Corruption, as well as their Additional Protocols, could only be overcome through appropriate information and formation, as well as efficient national regulation and reporting.

The second observation is that the 2030 Agenda, and especially its goal 16th constitutes a good illustration that the traditional neutrality of international law regarding forms of government doesn't fit into the UN plan of action. The call for just, peaceful and inclusive societies expends an explicit promotion of the application of the rule of law and the principle of good governance, through transparent, accountable and efficient institutions at all levels.

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Chapter 20: goal 17

Sustainable development goals. SDG 17: Partnerships for the goals

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SUMMARY: 1. INTRODUCTION. 2. THE CREATION OF A GOAL TO SUPPORT THE AGENDA 2030 IMPLEMENTATION. 3. SDG 17. 3.1. *Finance*. 3.2. *Technology transfer*. 3.3. *Trade*. 3.4. *Systemic Issues*. 4. IMPLEMENTATION OF SDG 17 A YEAR SINCE THE ADOPTION OF THE 2030 AGENDA. 5. CONCLUSIONS.

ABSTRACT:

This chapter looks at the main issues discussed during the negotiation of Sustainable Development Goal Number 17, «Partnership for the Goals», analyzes the context and different positions around them, and their final definition. It also reviews progress made, or reported on this goal a year after the Agenda 2030 was agreed. Issues such as finance, technology transfer, trade and the so called «systemic issues» were not new for the international community; the history of these discussions permeated the SDG negotiations and their outcome will signal the road ahead in implementation of this historic agreement.

1. INTRODUCTION

The 17 Sustainable Development Goals, which are the heart of the United Nation's 2030 Agenda for Sustainable Development, encompass a complex set of the most critical human challenges that the world's countries have agreed to tackle as nations and united as a race.

Sustainable Development Goal 17 is not only one of the new Agendas'

key innovations, it's a critical piece in the accomplishment of all its goals and targets. The «SDG 17: Partnerships for the goals» title, sends a message of hope and union in the face of otherwise unattainable objectives.

Reaching this goal's targets will propel the capacities of the human race to accomplish the other 16 SDGs. This chapter intends to give a brief account of how this goal and its targets came to be, why they are important for the success of the Agenda and a general overview of progress on the implementation of SDG 17, a year since the groundbreaking agreement was adopted.

2. THE CREATION OF A GOAL TO SUPPORT THE AGENDA 2030 IMPLEMENTATION

The «Post 2015» discussions took place right after an economic crisis that had affected most of the world, and from which it has not yet fully recovered. Developing countries felt historical promises about financial assistance from developed countries had been broken, and global issues such as climate change were threatening to make development and prosperity even harder to achieve. With this background it is not hard to imagine the emergence of the question of how developing countries were going to be able to achieve the ambitious goals that were being defined.

Although the Millennium Development Goals (MDGs) included Goal number 8: «A Global Partnership for Development», many countries and experts felt that without stronger, more specific targets, subject to the same follow-up and review mechanisms as the rest of the goals and targets, there was a significant risk for pledged support for the implementation of the SDGs to become nothing more than empty words. On the other hand, developed countries felt the finance/means of implementation (MoI) issues were being discussed in too many arenas at the same time – both within the Post 2015 discussions and in other international forums –, running the risk of duplication. During 2014 and 2015 there were MoI discussions going on in multiple places of what was to develop into the 2030 Sustainable Development Agenda, the Addis Ababa Action Agenda, the United Nations Framework Convention on Climate Change, and a plethora of other negotiations.

The concrete proposal that finally emerged was to include MoI targets for each SDG and have a MoI SDG that had its own targets and indicators (see figure 1 below).

Fig. 1. Comparison between MDG 8 and SDG 17 targets:

MDG 8: A global Partnership for Development

Target 8.A: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system

Target 8.B: Address the special needs of least developed countries

Target 8.C: Address the special needs of landlocked developing countries and Small Island developing States

Target 8.D: Deal comprehensively with the debt problems of developing countries

Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries

Target 8.F: In cooperation with the private sector, make available benefits of new technologies, especially information and communications

Monitoring aid delivery

The Integrated Implementation Framework (IIF) was developed to record and monitor financial as well as policy commitments made in support of the MDGs by UN Member States and other international stakeholders.

SDG 17: Partnerships for the goals

Finance

Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection.

Indicators:

17.1.1 Total government revenue (by source) as a percentage of GDP

17.1.2* Proportion of domestic budget funded by domestic taxes

Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries ODA providers are encouraged to consider

setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries

Indicator: 17.2.1 Net official development assistance, total and to least developed countries, as a percentage of OECD/Development Assistance Committee donors» gross national income

Mobilize additional financial resources for developing countries from multiple sources

Indicators:

17.3.1* Foreign direct investments (FDI) as a percentage of total FDI and official development assistance

17.3.2 Volume of remittances (in United States dollars) as a percentage of total GDP

Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress

Indicator: 17.4.1 Debt service as a percentage of exports of goods and services

Adopt and implement investment promotion regimes for least developed countries

Indicator: 17.5.1* Number of national and investment policy reforms adopted that incorporate sustainable development objectives or safeguards by country

Technology

Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism

Indicators:

17.6.1* Access to patent information and use of the international intellectual property system

17.6.2 Fixed Internet broadband subscriptions, by speed

Promote the development, transfer, dissemination and diffusion

of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed

Indicator: 17.7.1 Total amount of approved funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies

Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology

Indicator: 17.8.1 Proportion of individuals using the Internet

Capacity building

Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation

Indicator: 17.9.1* The dollar value of financial and technical assistance, including through North-South, South-South and triangular cooperation, committed to developing countries» designing and implementing a holistic policy mix that aims at sustainable development in three dimensions (including elements such as reducing inequality within a country and governance)

Trade

Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda

Indicator: 17.10.1 Worldwide weighted tariff-average

Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020

Indicator: 17.11.1 Developing countries' and least developed countries' share of global exports

Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that

preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access

Indicator: 17.12.1 Average tariffs faced by developing countries, least developed countries and small island developing States

Systemic issues

Policy and institutional coherence

Enhance global macroeconomic stability, including through policy coordination and policy coherence

Indicator: 17.13.1* GDP

Enhance policy coherence for sustainable development

Indicator: 17.14.1* Number of countries that have ratified and implemented relevant international instruments under the International Maritime Organization (safety, security, environmental protection, civil liability, and compensation and insurance) and the fundamental conventions and recommendations of ILO, and that have adopted carbon pricing mechanisms

Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development

Indicator: 17.15.1* Numbers of constraints that are embodied in official development assistance or loan agreements, international investment agreements, regional trade agreements, etc.

Multi-stakeholder partnerships

Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries

Indicator: 17.16.1* Mutual accountability among development cooperation actors is strengthened through inclusive reviews

Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

Indicator: 17.17.1 Amount of United States dollars committed to public-private and civil society partnerships

Data, monitoring and accountability

By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts

Indicators:

17.18.1 Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics

17.18.2* Number of countries that have national statistical legislation that complies with the Fundamental Principles of Official Statistics

By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

Indicators:

17.19.1 Dollar value of all resources made available to strengthen statistical capacity in developing countries

17.19.2* Inclusive Wealth Index

Source: www.un.org and UN Economic and Social Council Distr.: General 19 February 2016 E/CN.3/2016/2/Rev.1*

3. SDG 17

The discussions around SDG 17 picked up where other crucial international discussions on support for developing countries' development left off, chiefly the Monterrey Consensus and its successor, the Doha Declaration. These discussions gravitated mainly around six broad issues; finance, technology transfer, trade, policy space and the so called Systemic Issues, data, monitoring and accountability, and participation in global decision making and norm-setting. Most of these areas can now be seen as sub-divisions or chapters within this SDG. The

following is a recount of the main discussions surrounding each set of issues, as recalled by negotiators who participated in the open working group and subsequent negotiations towards the adoption of the Agenda in 2015.

3.1. FINANCE

Discussions on financial support from developed countries to developing countries to support development have a long history and have never been simple. Under the means of implementation for SDGs deliberations, there were some countries that pushed for confirmation or increase of the official development aid (ODA) commitments, while others wanted to emphasize more on how developing countries could improve their financial situations internally to ensure sustainability. The result was a combination of both, with the Monterrey Consensus commitment on ODA being upheld, and some targets developed to signal changes that countries should do internally to build more robust economies.

Another area where lengthy discussions were had, was the issue of where funds should come from. The Group of 77 and China strongly believed commitments on means of implementation should come from the public sector of developed countries only, given that it is only states that would be bound under the Agenda, while developed countries wanted to expand the scope and tap on additional sources, concessional and non- concessional, including the private sector.

The end result was the language on «multiple sources» that can be seen in third finance target under SDG 17, combined with the aforementioned ODA commitment in the second target.

3.2. TECHNOLOGY TRANSFER

Technology has been recognized since Agenda 21 and reaffirmed consistently in the JPOI and in Rio +20 as a key means of implementation, or a key tool for sustainable development, however, progress in this area has been insufficient. One of the proposals that has been discussed since this summit has been the creation of a global technology facilitation mechanism. Considering possible arrangements for such a mechanism had been at the center of the part of the General Assembly Structured Dialogues as mandated by its resolution 69/210, taking place from 2013 to 2015, with some progress but no tangible outcome, so naturally there was a strong push for the issue to be discussed under SDG 17 and under means of implementation for several other Objectives. These discussions were

also an important part of the Addis Ababa Plan of Action, and language developed under that negotiation track was the one finally included in the 2030 Agenda.

The other, rather obvious point of discussions under technology transfer was the conditions under which the «transfer» was to happen. There is a clear interest from countries where technology is developed and sold to protect intellectual property rights to continue to provide incentives for research and development, but there is also a dire need for improving access to technology in the developing world if these countries are to close the gaps with the developed world and leapfrog into a sustainable development. This is quite a significant matter in areas such as health, climate change, food security, sanitation, among others. The final language of «favorable terms, including concessional and preferential terms, as mutually agreed» was a true show of compromise by all interested Parties, which was the attainable balance between giving a direction to these types of exchanges and language to broad to be used as guidance.

3.3. TRADE

Many discussions on trade between developing and developed countries have been under discussion in the World Trade Organization (WTO) for years without a final resolution. Some of these issues were taken up in the post 2015 discussions, in particular the contentious discussions on agricultural subsidies. These discussions were later transferred from MoI to SDG 2, «End hunger, achieve food security and promote sustainable agriculture». Under this SDG, target 2.b. was defined as «Correct and prevent trade restrictions and distortions in world agricultural markets including by the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round».

On the other targets under the trade chapter of SDG 17, WTO language was incorporated to avoid duplicating discussions or deviating from the organisms agreements.

3.4. SYSTEMIC ISSUES

To someone that did not take part in the discussions leading to this special chapter of SDG 17, it would seem strange to see a section dedicated to targets that are more like principles rather than measurable outcomes. Again, the root of the discussion can be traced back to the

Monterrey Consensus, where there is a chapter devoted to these issues. Many countries felt the need to protect each country's sovereign right to establish its own policies to accomplish their own developmental goals, and always prioritize its own constitution, law or policies over international ones. When these issues developed in the post 2015 setting, as SDGs were being framed, there was also a fear that these arguments could be used by some as an «excuse» to not act, or not deliver on the 2030 Agenda, or to undermine international commitments agreed in other settings.

Another significant discussion under this chapter was whether to refer to a Global Partnership for the Agenda's implementation, or to multiple specific issue-based partnerships, which could include non-state actors. The end result was a combination of the two, giving a clear signal both that states need to lead the partnership, but that the Agenda's success depended highly on non-state actor's engagement for implementation and follow-up.

On data, monitoring and accountability, there was a clear consensus from the beginning that the success off the 2030 Agenda, and one of the areas where there would be a marked evolution from the MDGs, would be the world's ability to track its progress. Some very interesting discussions surrounded the «how».

For example, while many countries felt that the current way of tracking countries' economic development –GDP and related indicators– where effective and should continue to be the basis for defining a country's state of development, others disagreed, arguing that this measurement oversimplifies real conditions on the ground, including the multidimensional nature of poverty. Examples of these are inequalities within a country, challenges facing countries in conflict or post-conflict situations, environmental degradation, which are in turn not taken into account in country classifications which are crucial for determining international cooperation and other types of support for developing countries, particularly concessional support. This was mainly an area of disagreement within developing countries, and ended up prompting the development of a specific target that mandates work on measurements that «complement» GDP, building on existing initiatives at the UN.

A final area of significant discussion that started under MoI, then moved to SDG 10, and later extensively deliberated on under the development of the Addis Ababa Plan of Action, was participation in international economic and financial decision-making processes.

Developing countries have, for many years, tried to open space for

a more fair and equitable participation in organisms where critical international financial system decisions are taken. Their voting power in the World Bank, the International Monetary Fund, and other key organisms has not changed since the 1950s, and does not reflect current demographic nor economic realities. A reform in this regard was agreed in 2010, but has yet to be fully implemented, and many countries feel that it is not enough. These issues were later resolved under two targets in SDG 10 «Reduce inequality within and among countries»: 10.5: «Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations», and 10.6 «Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions».

4. IMPLEMENTATION OF SDG 17 A YEAR SINCE THE ADOPTION OF THE 2030 AGENDA

Countries came out of the 2015 General Assembly with an acclaimed piece of international policy that seemed like a miracle. The 2030 Agenda was comprehensive, complex, reflected the realities of intersectoral dependencies and the need for all states to work together and work with non-state actors to achieve its goals. Then we all went home and started analyzing it, trying to wrap our heads around what it would mean to try and implement it. Changes would have to be made in the way we think, work, and conceive inter-institutional coordination.

It is no surprise then that most countries' first step was to try to re-configure the way their institutions worked to plan, implement and monitor actions to ensure sustainable development. Many countries have embarked in a «readiness» phase, developing inter-sectorial bodies, new ways to talk to their local governments and non-state actors. Some examples of this can be seen in Fig. 2 and 3.

Many changes will have to be made in terms of monitoring and reporting as well. Many countries will have data requirement for areas and issues they have never measured before, or a need to disaggregate by gender, age, or other factors in data that was normally not disaggregated. This will mean a need to gather data from new actors and in different ways, all which require strengthened human and technical capacity, and in some instances even technological innovations.

So what have countries done so far? How have they, and other actors started helping each other achieve the SDGs?

There are announcements of bilateral, multilateral, philanthropic and even private investments and cooperation being re-engineered to fit the «SDG format». There is some movement in funding and capacity building for readiness programs in different countries, but almost one year after the Agenda was approved, has there really been movement on SDG 17?

During the «High Level Thematic Debate on SDG Implementation» (New York, USA. 22 of April 2016), there were three sessions where countries shared their vision on the Agenda, how they were implementing it or preparing themselves for implementation, and what the challenges were.

Fig. 2. References to international cooperation, support made during the High Level Thematic Debate on SDG Implementation (New York, USA. 22 of April 2016)

| |
|---|
| • China: announced the creation of a south-south fund. |
| • Sweden: commits to contribute one percent of its GDP to ODA. |
| • Denmark: Is preparing action plan for following-up on cooperation for sustainable development at national and international levels. They are also offering cooperation on use and management of innovative technologies that facilitate the achievement of several SDGs. Mention of bilateral project with Kenya. |
| • France: Created an international solidarity policy for the most vulnerable countries and regions, will invest four thousand million Euros up to 2020 (of which half will be to address climate change). |
| • Italy: Increased ODA, proposes to create a new development platform for African countries. |
| • Chile: Supports south-south programs. |
| • Iceland: Will implement geothermal energy projects in Africa and is supporting four UN education programs on sustainable development. |
| • United Arab Emirates: Is carrying out international meetings to improve renewable energy and create capacity on the issue at a global scale, supports renewable energy projects and infrastructure in more than 25 developing countries. |
| • Germany: Is creating global alliances to promote supply chains to developing countries, pledged 0.7% of its GDP will go to ODA, proposes to double international financing for climate change issues. |
| • Turkey: Increased its ODA to 3200 million dollars in 2015. |

Source: Notes from high-level interventions during the event

Later, in July 2016, the first High Level Political Dialogue (HLPF),

took place in New York. The HLPF is meant to be the scenario for follow-up and increased political support and awareness of the Agenda and country's progress towards its implementation. While the specific guidelines for follow-up were still being negotiated, the event took place with a good level of participation, but to some, with some concerning messages about challenges and a difficult international atmosphere. SDG 17 was mentioned in few interventions, and it was clear to many that the atmosphere of global collaboration needed to be revived and strengthened for this objective to be fulfilled and for it to play the crucial role in promoting the implementation of all the others, as it was intended to.

During the inaugural session, the Vice-president of ECOSOC expressed his concern over the yearly progress report that indicated that in general, circumstances are not adequate for SDG implementation, given the current global economic situation, health crisis and the decline of commodity prices. This was followed by several developing countries calling for international cooperation to enable them to move into the implementation of the agenda.

On the developed country side, one mentioned its efforts to align its international cooperation agenda to the 2030 Agenda, and another pointed to the strengthening of cooperation in countries of origin of migrants.

A second session, on «Ensuring that no one is left behind: Unlocking means of implementation for the Sustainable Development Goals and creating an enabling environment», revived some themes from the negotiation of the Agenda, mainly the discussion about where the funds for implementation should come from, with some arguing that developed countries should be the primary source, and others pointing out that developing countries should be supported in order to increase their capacity to raise funds internally, through improved taxed schemes, among others.

Finally, during the voluntary national presentations, SDG 17 was mentioned in only five of twenty-two presentations. Again there was a reference to work in aligning their cooperation agenda with the 2030 Agenda, this time by a middle-income country, a developed country mentioned its efforts to prioritize its needs for international cooperation regarding the SDGs, and other developed countries signaled specific areas of the Agenda or types of countries they would focus their efforts on. Many countries described serious difficulties with implementation and monitoring due to lack of data and capacity in their statistical agencies and other institutions in charge of producing key information.

5. CONCLUSIONS

It is clear that SDG 17 was one of the key parts of the 2030 Agenda, and that it will even be more crucial in its implementation. As countries advance in their arrangements for implementation and dive into implementation and monitoring, more needs and challenges will become clear, and more help will be needed in the form of finance, capacity building, technology transfer, sharing experiences and best practices, and overall awareness and support to keep the instrument alive.

A year into its approval, progress on this area has been limited, and does not seem to be well organized, providing great opportunities for countries, UN agencies, NGOs, philanthropic organizations and the private sector to have strategic conversations about how the collaboration that was at the heart of the SDG creation process, can come in to effect in a pragmatic and efficient manner. Limiting actors to follow-up discussions will not accomplish this, and therefore organized and targeted discussions and mechanisms, such as the technology transfer mechanism, need to be put into place quickly.

Implementation of Sustainable Development Goals: Crosscutting analysis¹

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SUMMARY: 1. INTRODUCTION. 2. THE UNGA RESOLUTION: THE ROLE OF STATES AND INTERNATIONAL ACTORS IN THE IMPLEMENTATION OF SDGS. 2.1. *What role for national actors?.* 2.2. *The United Nations Development Group and its contribution to the SDGs.* 2.3. *The Addis Ababa Action Agenda: a precondition for implementation of the SDGs.* 3. THE TECHNOLOGY FACILITATION MECHANISM. 3.1. *A UN inter-agency task team on science, technology and innovation for the SDGs.* 3.2. *A collaborative Multi-Stakeholder Forum on Science, Technology and Innovation (STI) for the SDGs and an online platform.* 3.3. *A high-level political forum on sustainable development.* 4. FOLLOW-UP AND REVIEW. 4.1. *Global indicator framework.* 4.2. *The UN Secretary-General's report and the 2016 Global Sustainable Development Report.* 5. CONCLUDING REMARKS.

ABSTRACT:

The adoption of the 17 Sustainable Development Goals (SDGs) and 169 specific targets on which this book focuses is per se a great achievement. In order for this agreement to make a difference, all actors need to be aware of the relevance of implementation. This chapter focuses on the mechanisms that Member States and international organizations are articulating to confront the challenges of implementation of those goals. It presents crosscutting issues that may arise, and reflects on what kind

1. The positions and opinions contained in this article are written by Dr. Garcia DÍ A in her personal capacity and do not represent the position of the organization.

of measures and instruments could contribute to boosting the efforts of Member States and the international community.

1. INTRODUCTION

In September 2015, the international community reached an agreement that has been identified as crucial for the future of nations: the adoption of the 17 Sustainable Development Goals (SDGs) and 169 specific targets on which this book focuses. This is *per se* a great achievement to the extent that it shows good will and awareness of UN Member States of the need to continue in the path drawn by the Millennium Development Goals. Nevertheless, in order for this agreement to make a difference, all actors need to be aware of the relevance of implementation.

The UNGA Resolution (A/RES/70/1) adopted in New York containing the SDGs starts with an inspiring introduction, which defines this endeavor as a great collective journey after which no one will be left behind². Looking back at the historical foundation of the United Nations and the adoption of the UN Charter, this resolution calls for all relevant actors in the international community to generate a change that will constitute a milestone in the history of humanity. This change, described in the document as a journey of unprecedented scope and significance, is admitted to be supremely ambitious and requiring a transformational vision, going far beyond the MDGs³. Furthermore, the resolution calls «for all of us to ensure that the journey is successful and its gains irreversible»⁴.

As all ambitious endeavors, the SDGs are viewed with scepticism, given the great challenges that their achievement will entail. The language used along the UNGA Resolution shows that Member States envisage the SDGs to be the commitment that will transform the world into a better place⁵. That will require financial resources, policy changes, legal developments, international cooperation and high doses of perseverance at the local, national, regional and international level. The changes the SDG Declaration calls for would transform the international economic order, balance inequalities, and empower societies and minorities. Besides, vested interests would be affected and lobbies would try to influence the process, hampering the completion of some of those goals.

In that complex context, measures and steps taken to facilitate implementation of the SDGs are of essence to ensure that the SDG

2. UNGA Resol., A/RES/70/1, Para 49 to 53.

3. Para 17.

4. Para 53.

5. Para 3.

Resolution goes beyond a mere declaration of good will. UN Member States showed awareness of the relevance of designing efficient implementation mechanisms for the success of the SDGs and devoted part of the Resolution to them.

Each of the 17 goals have been observed in detail in this publication, and the difficulties faced in each area have been duly analyzed. This chapter focuses on the mechanisms that Member States and international organizations are articulating to confront the challenges of implementation of those goals. It does not do it from the perspective of each particular goal but from an overall perspective, presenting crosscutting issues that may arise, and reflecting on what kind of measures and instruments could contribute to boosting the efforts of Member States and the international community.

It is not unusual to hear severe critics to the international community for reaching agreements that show good will but fail in their implementation. Nevertheless, it should be noted that sometimes it is not (or not only) the lack of political will but the great complexity of the multinational structure what hinders the full implementation of an agreement. The SDGs are probably the greatest example of a technically, operationally, politically and financially complex endeavor. Therefore, all possible efforts to articulate mechanisms that facilitate the completion of the 169 targets and the 17 goals will be needed to come closer to the better world that the Declaration looks forward to.

For a successful achievement of the SDGs, concrete negotiation channels need to be put in place to connect many different actors at diverse decision levels. In this regard, steps need to be taken to strengthen the Global Partnership established in the context of the MDGs. Technical support is also crucial for the correct management of information and data collection and analysis, as is the design of robust indicators that can be used as a basis for decision-making. Besides, a very complex balance is needed between international cooperation and the respect for sovereign specificities and powers. The Technology Facilitation Mechanism defined in the UNGA Resolution envisages, among other measures, the establishment of a high-level political forum that could greatly contribute to finding this balance.

2. THE UNGA RESOLUTION: THE ROLE OF STATES AND INTERNATIONAL ACTORS IN THE IMPLEMENTATION OF SDGS

The UNGA Resolution does not only contain an inspiring message on the responsibility that our generation has with the world and its peoples and a list of goals and specific targets. It also tackles the challenge of implementation by establishing mechanisms envisaged to facilitate

the efforts of all actors and maximize the impact of those efforts. The international community shows with this Resolution its awareness of the complexity of the enterprise, as well as the integration of some of the lessons learned from the implementation of MDGs.

In paragraph 60 of the Resolution, Member States reaffirm their «strong commitment to the full implementation» of the 2030 Agenda, and recognize that this will only be possible with a revitalized and enhanced Global Partnership for Sustainable Development and «comparably ambitious means of implementation». The fact that one SDG focuses on the strengthening of the Global Partnership (SDG 17, see previous chapter), shows the relevance that parties recognize to its role. Such partnership would facilitate, according to the Resolution, «an intensive global engagement in support of implementation of all Goals and targets, bringing together Governments, civil society, the private sector, the UN system and other actors and mobilizing all available resources».

Unlike the MDGs, which applied only to developing countries, SDGs are universally applicable. The international community has taken a holistic and integrated approach that goes far beyond the MDGs. This makes even more necessary to account for the different national realities, capacities and levels of development. For this and other reasons, the Resolution puts nations in the center of the system, making States mainly responsible for this Agenda, and giving international and regional organizations the role of supporting this process and facilitating cooperation. Governments and national public institutions are responsible for the strategies and policies that shall make possible the successful completion of the SDGs, working together with institutions at the regional, sub-regional, local and international level, as well as with civil society. National parliaments are expected to play an essential role through enactment of legislation and adoption of budgets, as well as to ensure accountability for the effective implementation of the commitments⁶.

A key element for the implementation of the SDGs is that the UNGA Resolution conditions their achievement to the completion of the Addis Ababa Action Agenda for financing development, adopted in July 2015. This Agenda is critical for the realization of the SDGs and targets, and signatory Member States commit to support its implementation. They have also committed to support implementation of other relevant strategies and programmes of action, such as the Istanbul Declaration and Programme of Action, the SIDS Accelerated Modalities of Action (SAMOA) Pathway, and the Vienna Programme of Action for Landlocked

6. Para. 45.

Developing Countries for 2014-2024, among others. This commitment introduces a higher degree of complexity, calling for great efforts of cooperation between actors of diverse nature.

According to the SDG Resolution, efforts to address all those challenges should be strengthened through the exchange of experiences, improved coordination and better and focused support of the UN development system, the international financial institutions, regional organizations and other stakeholders⁷.

The SDGs could be defined as a global framework for national efforts⁸. Member States commit to work for the achievement of those goals, respecting international rules and with the support of international organizations. According to the SDG Resolution, national efforts must «remain consistent with relevant international rules and commitments»⁹, with a particular emphasis on the purposes and principles of the Charter of the United Nations, the Universal Declaration of Human Rights, international human rights treaties and full respect for international law.

2.1. WHAT ROLE FOR NATIONAL ACTORS?

As mentioned above, the Resolution states that the successful completion of the SDGs is the responsibility of Member States, with the support and help of international organizations. The wording of paragraph 63 is very clear in this respect. It relies on «cohesive nationally owned sustainable development strategies, supported by integrated national financing frameworks». This same paragraph reiterates that «each country has primary responsibility for its own economic and social development and that the role of national policies and development strategies cannot be overemphasized».

The fact that the SDGs are universally applicable, and not only applicable to developing countries as was the case of the MDGs, strengthens the need to account for the different national realities, capacities and levels of development. In this regard, the signatory parties in the Resolution do not only commit to «respect(ing) each country's policy space and leadership to implement policies for poverty eradication and

7. Para. 65.

8. BIZIKOVA, L., SWANSON, D., SEARCY, C., «Implementing the Sustainable Development Goals at Home», International Institute for Sustainable Development, 21 Sept. 2015, URL: <https://www.iisd.org/blog/implementing-sustainable-development-goals-home>.

9. Para. 63.

sustainable development» but also recognize the leading role of national governments and parliaments in the completion of the SDGs strategy. National parliaments are the actors in charge of enacting legislation and approving the budgets allowing national Governments and institutions to adopt particular measures that will contribute to the implementation of the SDGs and targets. National parliaments should also play a role in monitoring the actions taken by their respective governments and in ensuring accountability for the effective implementation of their commitments¹⁰. Building on existing planning instruments developed in the context of the MDGs, Member States are encouraged to develop, as soon as practicable ambitious national responses to the overall implementation of the 2030 Agenda¹¹.

National institutions are also to play a key role in the follow-up and review process. They are encouraged to conduct regular and inclusive reviews of progress at the national and subnational levels that are country-led and country-driven¹². Their contribution is particularly relevant in relation to the establishment of sound systems for collection and interpretation of data and, therefore, for in the correct functioning of the Global indicator framework and Technology Facilitation Mechanism. It is also to be highlighted that Member States are encouraged to identify the most suitable regional forum in which to engage¹³.

But it is not only national institutions that can be seen as the driving forces of the SDGs at the national level. In order to be achieved, the SDGs need to be based on a participatory process where all stakeholders from different sectors and levels should be involved. Regional and local authorities, sub-regional institutions, NGOs, universities, volunteer groups and all kinds of civil society organizations and relevant stakeholders should be given the opportunity to participate in the process. This participatory process is not easy to materialize and requires strategies to encourage different sectors to work together, which are expected to be developed by each State. In that sense, legitimate and transparent consultation processes should be established to explore the relevance and impact of each SDG for different places, regions and people, in order to base any action or strategy on the results of those consultations¹⁴. This could have an institutional impact

10. Para 45.

11. Para 78.

12. Para 79.

13. Para 81.

14. BIZIKOVA, L., SWANSON, D., SEARCY, C., «Implementing the Sustainable Development Goals at Home», *op. cit.*, note 8.

in some States, as is already the case in some countries where national councils for sustainable development were established.

National actors are at the center of the SDG strategy. However, poor results would be achieved if their efforts were done in an isolated manner. Those efforts need to be supported by all available international cooperation mechanisms. This includes international organizations but also diverse forms of transnational networking instruments that could contribute to enhancing the positive impact of those efforts.

In an attempt to meet the growing demand for cooperation arising from the complex and transformative challenge that the SDGs pose, some voices call for a systematic integration of an «orchestration instrument» for the implementation of the SDGs. In the current multipolar international system, where emerging powers are increasingly relevant, transnational networks have become a central and effective feature of global governance, allowing actors from civil society, the private sector, ministries, agencies, cities and municipalities to assume a global role. This form of multilateral cooperation between States, which has been successfully tested in various areas of sustainable development, such as environmental, health and development policy, could foster global networks that could eventually improve conditions of international cooperation, at the same time that they helped mobilizing contributions to global sustainable development¹⁵.

2.2. THE UNITED NATIONS DEVELOPMENT GROUP AND ITS CONTRIBUTION TO THE SDGS

The 2030 Agenda sets up SDGs to be achieved by Member States with the support of international actors, especially of the UN system. Such a significant change could not be pursued without the support and involvement of the United Nations, particularly of the United Nations Development Group (UNDG)¹⁶.

In order to ensure that the diverse members of the UN development system work collaboratively to support implementation of the 2030 Agenda, the UNDG has established a set of Core Principles for Collaboration for

15. KLINGEBIEL, S., SEBASTIAN, P., «Orchestrierung: ein Instrument für die Umsetzung der Sustainable Development Goals, Analysen und Stellungnahmen 6/2015, Deutsches Institut für Entwicklungspolitik (DIE).

16. The United Nations Development Group unites the UN funds, programmes, specialized agencies, departments, and offices that play a role in development in over 150 countries. Its composition can be consulted here: <https://undg.org/home/about-undg/members/>.

Effective Implementation of the 2030 Agenda¹⁷. The objective is to guide the support given to national actors to achieve the SDGs. As reflected in those principles, the Group follows the imperative of national ownership, designing its actions based on the needs and national capacities of the respective countries, and trying to be as flexible as possible to adapt to country contexts. It also works for delivering integrated strategic analysis, policy advice and, where possible, programme support drawing on the wide range of expertise from across the UN development system. An essential element of those principles is also innovation, at the global, regional and national level, including in the use of data, technologies and public engagement techniques, to open up the agenda to the best evidence, expertise and partnerships that countries wish to access. Last, the UNDG intends to uphold internationally agreed norms and standards focusing on serving the needs of the most vulnerable and marginalized so that no one is left behind¹⁸.

The main characteristic of the work of the UNDG in the context of the SDGs comes following a call from the UN Secretary-General for UNDG to work «across the Charter». Given all the aspects, fields and sectors involved, the achievement of the 2030 Agendas requires integrated approaches to add efforts from the development, human rights, humanitarian and peace and security pillars of the UN system. With this aim, the UNDG is taking forward «integrated planning frameworks across the UN pillars at country level, based on shared strategic objectives, root cause analysis, risk assessment and management, planning and monitoring»¹⁹.

The UNDG is very committed to put those principles into practice and has therefore developed the MAPS approach (Mainstreaming, Acceleration and Policy Support). This approach frames the UN development system's support to UN Member States' Engagement in the implementation of the new agenda through their respective UN Development Assistance Frameworks.

One of the aspects where the contribution of the UNDG is expected to be crucial is in mainstreaming the 2030 Agenda in national development

17. UNDG delivering together in support of the 2030 Agenda. Discussion note. URL: <https://undg.org/wp-content/uploads/2015/11/UNDG-Support-for-Implementing-the-2030-Agenda.pdf>

18. CLARK, H., Speech on Sustainable Development Goal Implementation – the UN Development System and UNDP's Roles, January 2016, URL: <http://www.undp.org/content/undp/en/home/presscenter/speeches/2016/01/18/sustainable-development-goal-implementation-the-un-development-system-and-undp-s-roles.html>.

19. *Ibid.*

agendas. Member States need to set up realistic but ambitious timelines for the adoption of measures that will enable the completion of the SDGs, which can be an especially difficult task in some cases due to the scarce access to information. The UN Development System is integrated by bodies, agencies and programmes focusing on particular fields, and is best positioned to advise governments and national institutions on how to face some of the crosscutting challenges that need to be taken into account. With this aim, already in 2015 UNDP, WFP and UNICEF led, in collaboration with other UNDG entities, a reference guide for UN Country Teams on mainstreaming, featuring a menu of approaches and tools to adapt the 2030 Agenda to national, sub-national and local conditions. Countries like Bhutan, Cape Verde, Colombia, Honduras, El Salvador or Somalia are already testing this guide. UNDP has also worked with countries such as Indonesia, Tunisia and the UK to explore approaches to implementing and monitoring governance-related national goals and targets for SDG 16.

The acceleration element of the MAPS approach aims at providing countries support in the identification of obstacles and bottlenecks that could prevent the achievement of goals and targets and in solving them. In this regard, the UNDG is developing a toolkit to support governments and other stakeholders to accelerate SDG progress, by promoting actions that will consciously support progress across a range of targets.

The third element of the MAPS approach, policy support, will make coordinated policy and technical support available from the UN system to countries. It is about making sure that the skills and expertise held in the UN development system is made available in a timely manner and at the lowest possible cost. UNDG agencies are formulating topic-specific policy support offerings in line with their respective expertise²⁰.

An important characteristic of the MAPS approach is that it intends to bring together the work of the UN development system without precluding other UN initiatives in support of the SDGs, not restricting how the UNDG provides individual agency support to the SDGs. The mainstreaming, acceleration and policy support efforts are supplemented by the support for national-level partnership development activities, the establishment of monitoring and review frameworks to hold decision makers accountable, and the contribution to strengthening national capacities to collect and analyze information to monitor progress on the SDGs. All these efforts are expected to contribute to ensure that inter-

20. UNDG, MAPS –Mainstreaming, Acceleration and Policy Support Strategy for Post-2015 Implementation, June 2015.

agency work under the MAPS, together with the work of national actors, strengthens coherent and joint work towards the completion of the 2030 Agenda²¹.

2.3. THE ADDIS ABABA ACTION AGENDA: A PRECONDITION FOR IMPLEMENTATION OF THE SDGS

As stated in the Resolution, national efforts towards the completion of the 2030 Agenda need to be supported by an enabling international economic environment, including coherent and mutually supporting world trade, monetary and financial systems, and strengthened and enhanced global economic governance. In this regard, the UNGA Resolution conditions their achievement to the completion of the Addis Ababa Action Agenda (AAAA) for financing development, adopted in July 2015.

The AAAA is a milestone in the attempt to fund development strategies and programmes, as well as one of the main pillars of the post-2015 Agenda. It provides a comprehensive set of policy actions by Member States, with a package of over 100 concrete measures to finance sustainable development, transform the global economy and achieve the SDGs. It also provides a new global framework for financing sustainable development that aligns all financing flows and policies with economic, social and environmental priorities and ensures that financing is stable and sustainable²².

The Addis Ababa Agenda provides a policy framework that realigns financial flows with public goals, under the assumption that the 2030 Agenda can be covered with the available global public and private investment, but only if financial resources were invested in and aligned with sustainable development. This is exactly what the AAAA tries to ensure: that public finance is mobilized, appropriate public policies and regulatory frameworks are set, the transformative potential of the private sector is unlocked and incentives are inserted for consumption, production and investment patterns to support sustainable development²³.

The Addis Agenda identifies the following areas of action, where commitments were achieved:

21. UNDG, MAPS: Mainstreaming, Acceleration and Policy Support for the 2030 Agenda, UNDG Concept Note, 26 October 2015.
22. DESA Briefing Note, «Financing sustainable development and developing sustainable finance. The Addis Ababa Action Agenda», July 2015.
23. *Ibid.*, p. 2.

- Domestic public resources;
- Domestic and international private business and finance;
- International development cooperation;
- International trade as an engine for development;
- Debt and debt sustainability;
- Systemic issues;
- Science, technology, innovation and capacity building²⁴.

The implementation of the AAAA is part of the challenge of implementation of the SDGs. In this regard, the AAAA considers how the international community should monitor its implementation, emphasizing the relevance of high-quality disaggregated data for policymaking, and prioritizing capacity building in this area. In an attempt to respond to some of those challenges, the Financing for Development Annual Forum, established to guarantee an adequate follow-up of the implementation of the AAAA, met in April 2016 for the first time. The meeting counted with the participation of a large number of high-level participants, including Ministers, government officials in the fields of finance, foreign affairs and development cooperation, World Bank, IMF and UN representatives, and a strong representation of civil society and private sector organisations²⁵.

3. THE TECHNOLOGY FACILITATION MECHANISM

The AAAA recognized that the creation, development and diffusion of innovations and technologies and associated know-how, including the transfer of technology on mutually agreed terms, are powerful drivers of economic growth and sustainable development. However, it also noted the inequalities in access to technology and therefore marked this area as one of its priorities²⁶. Paragraph 123 of the AAAA called for establishing a Technology Facilitation Mechanism (TFM) to support the SDGs, to be launched at the UN summit for the adoption of the post-2015 Agenda²⁷.

24. Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda), adopted at the Third International Conference on Financing for Development (Addis Ababa, Ethiopia, 13-16 July 2015) and endorsed by the General Assembly in its resolution 69/313 of 27 July 2015.

25. More information available on: <http://www.un.org/esa/ffd/ffd-follow-up/ecosoc-ffd-forum.html>.

26. Paras 114 and 115 of the AAAA.

27. Para 123 of the AAAA.

In September 2015, the UNGA Resolution on SDGs launched the TFM, based on a multi-stakeholder collaboration between Member States, civil society, the private sector, the scientific community, UN entities and other stakeholders. The TFM will be composed of the following pillars or elements:

- a) a UN inter-agency task team on science, technology and innovation for the SDG;
- b) a collaborative multi-stakeholder forum on science, technology and innovation for the SDGs;
- c) an online platform; and
- d) a high-level political forum on sustainable development.

One of the key principles of the AAAAA, which is also followed by the SDG Resolution, is the recognition of the need to address the diverse challenges faced by countries in special situations. In an attempt to provide LDCs with the adequate tools to work towards the successful completion of the 2030 Agenda, a Technology Bank dedicated to LDCs is expected to be launched in 2017.

The four TFM elements revised below are interconnected and designed to facilitate the achievement of the universal, indivisible and interlinked 17 SDGs and 169 targets.

3.1. A UN INTER-AGENCY TASK TEAM ON SCIENCE, TECHNOLOGY AND INNOVATION FOR THE SDGS

The establishment and launch of the TFM is the result of a thorough process starting in 2012, when the UN Conference on Sustainable Development («Río + 20») called for identifying options for a technology facilitation mechanism. Eight workshops took place in 2013 and 2014 where Member States discussed different models for this mechanism and, following recommendations from the UNSG²⁸, an Interagency Working Group on a Technology Facilitation Mechanism (IAWG) was initiated.

This IAWG reconstituted as the UN Inter-Agency Task Team (IATT) on Science, Technology and Innovation (STI) for the SDGs. As stated in the UNGA Resolution on SDGs, the IATT will promote coordination,

28. The road to dignity by 2030: ending poverty, transforming all lives and protecting the planet. Synthesis report of the Secretary-General on the post-2015 sustainable development agenda, A/69/700, para. 125. URL: http://www.un.org/ga/search/view_doc.asp?symbol=%20A/69/700&Lang=E.

coherence and cooperation within the UN system on science, technology and innovation related matters, enhancing synergy and efficiency, in particular to support capacity-building initiatives. The Team has also received a mandate to support the efforts related to the other pillars of the TFM that will be analyzed below. It should prepare proposals for the modalities for the high-level forum and the online platform, prepare the meetings of the multi-stakeholder forum on STI for the SDGs and work together in the development and operationalization of the online platform²⁹.

The IATT is open to participants of all UN agencies, funds and programmes and the functional commission of the Economic and Social Council. It is composed of the entities that integrated the informal working group on technology facilitation, that is, the Department of Economic and Social Affairs, the United Nations Environment Programme, UNIDO, the United Nations Educational, Scientific and Cultural Organization, UNCTAD, the International Telecommunication Union, WIPO and the World Bank. DESA and UNEP are the initiators of the Group³⁰.

Its work is supported by a Secretariat consisting of a team of staff of participating UN system entities. It is organized in the following work streams, some of which have already been completed:

- WS1: Establishment and management of the Inter-Agency Task Team;
- WS2: Group of 10 representatives of civil society, private sector and science (Advisory Group);
- WS3 Collaborative, multi-stakeholder forum on STI for the SDGs;
- WS4: Online platform;
- WS5: Mapping of STI initiatives, background research and reports in support of the TFM activities;
- WS6: UN capacity building programme on technology facilitation for SDGs; and
- WS7: Partnership and fund raising³¹.

The IATT is supported by a UN 10-Member Group entrusted with the task of providing ideas, guidance and recommendations to the IATT, and

29. Para. 70 of SDG Resolution.

30. For further information, visit the website of the IATT. URL: <https://sustainabledevelopment.un.org/topics/technology/facilitationmechanism/iatt>.

31. Terms of Reference for the UN IATT on STI for the SDGs, adopted on 22 October 2015, pages 7 to 9.

of supporting the development and operations of the TFM. This group shall be integrated by 10 representatives of civil society, the private sector and the scientific community and shall reflect geographic diversity and ensure a mix of disciplinary expertise capturing science, technology and innovation aspects across the full range of the SDGs³². The Group, which had a first meeting with the IATT in March 2016, should be involved in the preparation of the meetings of the multi-stakeholder forum on STI for SDGs, advice on the design of the forum and the online platform and support their development, and provide briefings and notes as requested by the forum.

One of the key messages sent during this first meeting was how important it is to mobilize the right audience. In the context of the organization of the multi-stakeholder forum on STI, it was highlighted that decision-makers, practitioners, experts, and users should be involved and the whole range of communities along the STI continuum should participate, at the time that various sources of knowledge are included, with a particular reference to indigenous knowledge³³.

3.2. A COLLABORATIVE MULTI-STAKEHOLDER FORUM ON SCIENCE, TECHNOLOGY AND INNOVATION (STI) FOR THE SDGS AND AN ONLINE PLATFORM

The multi-stakeholder forum on STI is envisaged to become the venue for facilitating interaction, matchmaking and the establishment of networks between relevant stakeholders and multi-stakeholder partners, within and beyond the UN. Its aim is to identify and examine technology needs and gaps, including on scientific cooperation, innovation and capacity building, and to help facilitate development, transfer and dissemination of relevant technologies for the SDGs³⁴.

The Multi-Stakeholder Forum, which should meet annually preceding the High-level Political Forum, convened its 2016 meeting in June. The focus of this meeting was «the potential of science, technology and innovation for all to achieve the sustainable development goals». The title of one of the sessions of this dialogue was meaningful and shows the spirit of the meeting. The session was entitled: «Creating shared value: How do we make it work?». The Forum gathered representatives of UN Member

32. UN 10-Member Group to support the TFM. Terms of Reference. 4 March 2016.

33. Summary of the First Meeting of the 10-Member Group to Support the TFM with the IATT, 3-4 March 2016, New York.

34. Para. 70 of SDGs Resolution.

States and groups of stakeholders who engaged in an interactive dialogue where different aspects were discussed on how to move towards effective STI policy frameworks. One of the concluding notes was that achieving the SDGs requires better integration of science, technology and innovation, involving a vast number of stakeholders³⁵. ECOSOC President Oh Joon said it is time to make the TFM operational and beneficial for all, and called for strengthening STI capacity in every country, creating innovative knowledge societies that use scientific evidence to inform policy, making advances that greatly facilitate technology transfer and diffusion, and supporting social technologies to change mindsets and behaviors. Discussions were also held on how the Multi-stakeholder forum on STI for SDGs could be more supportive for the High-Level Political Forum³⁶.

Another pillar of the TFM is the establishment of an online platform. As stated in the 2030 Agenda, this platform will be used to establish a comprehensive mapping of, and serve as, a gateway for information on existing science, technology and innovation initiatives, mechanisms and programmes, within and beyond the UN³⁷. It is envisaged as a mechanism that will facilitate access to information, knowledge and experience, as well as best practices and lessons learned, on STI facilitation initiatives and policies. Given the complex and universal nature of the SDGs and the diversity of stakeholders and actors involved, the contribution of a digital platform will not just facilitate the achievement of the SDGs and targets; it will generally make it possible. Through this platform, information, initiatives and experiences will be shared and discussed in an accessible way.

As agreed in the UNGA Resolution, an independent technical assessment taking into account best practices and lessons learned from other initiatives within and beyond the UN will be the basis for the development of the platform. In that context, the IATT and the 10-Member Group have already undertaken consultations to develop terms of reference for the independent technical assessment. The terms of reference, adopted on 21 June 2016, opened a call for submission of proposals and establish a tentative timeline according to which work on the assessment is expected to begin in August 2016 and the full report

35. Remark made by Co-Chair VAUGHAN TUREKIAN (US).

36. IISD Briefing note on the First Multi-Stakeholder Forum on STI for the SDGs. URL: <http://www.iisd.ca/sdgs/sti/forum1/>.

37. Para. 70 of the Resolution.

should be available at the end of February 2017³⁸. On that basis, the online platform should be established.

3.3. A HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

The fourth pillar of the TFM, more policy oriented, is the UN-High Level Political Forum (HLPF) on Sustainable Development. This forum is the UN central platform for the follow-up and review of the 2030 Agenda. Since the UNGA Resolution on the SDGs mention it as part of the TFM, it has been included in this section, although given its main aim to review and follow-up on the implementation of SDGs, it is also mentioned on section 3 of this chapter.

The HLPF is expected to provide political leadership, guidance and recommendations on the SDG Agenda's implementation and follow up, but also to keep track of progress of the SDGs, spur coherent policies informed by evidence, science and country experiences, and address new and emerging issues. In order to address those issues, the composition of the forum is envisaged to provide for the full and effective participation of all Member States of the UN and of specialized agencies³⁹.

The 2016 meeting of the HLPF took place in New York, from 11 to 20 July, while this publication was being finalized. The sessions included reviews of implementation of the SDGs in 22 countries which have volunteered for it⁴⁰ and thematic reviews of progress on the SDGs, including cross-cutting issues, supported by reviews by the ECOSOC functional commissions and other inter-governmental bodies and forums. Since this is the first year of reviews after the adoption of the 2030 Agenda, organizational aspects and discussions on the design of certain mechanisms for implementation and follow-up were especially present, although assessment of progress in 22 volunteering States was also a main aspect of the meeting.

38. Terms of Reference for Independent Technical Assessment for Development of an On-line Platform as part of the Technology Facilitation Mechanism (Finalized on 21 June 2016), URL: <https://sustainabledevelopment.un.org/content/documents/10545Terms%20of%20reference%20independent%20assessment%20online%20platform.pdf>.

39. A/RES/67/290.

40. This year 22 countries – China, Colombia, Egypt, Estonia, Finland, France, Georgia, Germany, Madagascar, Mexico, Montenegro, Morocco, Norway, Philippines, Republic of Korea, Samoa, Sierra Leone, Switzerland, Togo, Turkey, Uganda and Venezuela – take part in the national reviews for 2016 on a voluntary basis.

4. FOLLOW-UP AND REVIEW

Having come into effect on 1 January 2016, the new goals and targets are envisaged to guide the decisions that signatory Member States take over the next 15 years⁴¹. In the 2030 Agenda Resolution, Member States recognized that a robust, voluntary, effective, participatory, transparent and integrated follow up and review framework will make a vital contribution to implementation and will help countries maximize and track progress in implementing this agenda in order to ensure that no one is left behind⁴².

The Resolution also recognized the relevance of mutual trust and understanding among all nations for the completion of the universal SDGs Agenda⁴³ and set up a list of principles that will guide follow-up and review processes at all levels. All of them will be voluntary and country-led, as is already the case of the 22 countries that accepted to be reviewed in 2016. During the HLPF, ECOSOC President Oh Joon called for all Member States to volunteer for reviews, so that in the next 14 years country reviews for all Member States could be presented once or twice⁴⁴.

Other principles recognized in the resolution are national ownership of reviews, respect of national particularities and priorities, long-term orientation, transparency, the use of an evidence-based, people-centered and gender-sensitive approach, respect of human rights, and a particular focus on the poorest and more vulnerable groups⁴⁵. The principle establishing rigorous reviews based on evidence highlights the relevance of access to high-quality data that is also reliable, timely and disaggregated by income, sex, age, race, ethnicity, migration status, disability and geographic location and other characteristics relevant in national contexts⁴⁶. In that regard, and in general referring to other challenges, these principles name active support of the UN system and other multilateral institutions as crucial. They also recognize the need for enhanced capacity-building support for developing countries, including the strengthening of national data systems and evaluation programmes, particularly in the most vulnerable countries⁴⁷.

As mentioned above, and as stated in paragraph 82 of the Resolution,

41. Para 21 of the UNGA Resolution on SDGs.

42. Para 72.

43. Para 73.

44. Press conference at the end of the first day of the HLPF, 11 July 2016.

45. Para 74.

46. Para 74, g).

47. Para 74, h).

the HLPF plays a central role in overseeing a network of follow-up and review processes at the global level, working coherently with the General Assembly, ECOSOC and other relevant organs and forums, in accordance with existing mandates. It will facilitate the sharing of experiences, including successes, challenges and lessons learned, and provide political leadership, guidance and recommendations for follow-up. Additionally, it should promote system-wide coherence and coordination of sustainable development policies and ensure that the Agenda remains relevant and ambitious, particularly concerning more vulnerable countries⁴⁸.

Another key element of the follow-up and review strategy is the Global Sustainable Development Report. This report expected to inform every year the meetings of the HLPF with the aim of strengthening the science-policy interface and providing a strong evidence-based instrument to support policymakers in promoting poverty eradication and sustainable development⁴⁹.

The UN Secretary-General was also requested to prepare a report, in consultation with Member States, outlining critical milestones towards coherent, efficient and inclusive follow-up and review at the global level⁵⁰.

4.1. GLOBAL INDICATOR FRAMEWORK

As already mentioned, timely access to high-quality data is of essence for any follow-up and review attempt in the context of SDGs. For this reason, the Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDGs), a group established by the UN Statistical Commission in 2015 with the task of developing the indicator framework and addressing related methodological issues, presented to the Statistical Commission a proposal for the global indicator framework during its 47th Session in March 2016. This proposal included an initial set of indicators. It is to be highlighted that the process to prepare the proposal was led by national statistical agencies in an inclusive and transparent way, involving a large number of stakeholders⁵¹.

The UN Statistical Commission agreed with the proposed global indicator framework, containing 230 indicators for the Goals and targets

48. Para 82.

49. Para 83 of the Resol.

50. Para 90.

51. Remarks from W. BIVAR, Chair of the Statistical Commission. Economic and Social Council, Coordination and Management Segment. 1 June 2016.

http://unstats.un.org/unsd/statcom/ecosoc/Chairs%20Remarks_ECOSOC_1%20June%202016_Final_English.pdf.

of the 2030 Agenda for Sustainable Development as a practical starting point. However, it was noted that the development of a high-quality indicator framework is a technical process where «refinements and improvements will be needed over the years, as knowledge improves and new tools and data sources become available»⁵². It was observed that not all global indicators in this framework are necessarily applicable to all national contexts and, according to paragraph 75 of the SDG Resolution, global indicators will be complemented by indicators at the regional and national levels developed by Member States.

The UN Statistical Commission insisted on the relevance of enhancing capacity building for collecting robust data in all countries, especially in small island developing States, LDCs, landlocked developing countries and other countries in special circumstances. Data disaggregation was also identified as a priority for the full implementation of the global indicator framework. A High-Level Group for Partnership, Coordination and Capacity-Building for statistics for the 2030 Agenda for Sustainable Development was also established to consider the data needs and advise on the actions to be undertaken to enable countries to produce and utilize the necessary data for the full implementation of the 2030 Agenda.

After the adoption of the proposed Global indicator framework as a starting point, the IAEG-SDGs met in Mexico and reviewed the tier system for the global indicators, discussed the mechanisms for future refinements and reviews of the global SDGs indicators and examined data flows from the national to the global level. The IAEG will continue its work based on a work plan agreed in Mexico, which highlights the main steps to finalize the classification of the indicators in Tiers, the refinements of indicators where necessary and the revisions of the indicator framework over the years, as requested by the Commission⁵³.

4.2. THE UN SECRETARY-GENERAL'S REPORT AND THE 2016 GLOBAL SUSTAINABLE DEVELOPMENT REPORT

The UNSG provided his report on «critical milestones towards coherent, efficient and inclusive follow-up and review at the global level» as requested by the UNGA Resolution in January 2016⁵⁴. In the Report, the SG outlined some of the main challenges on implementation of the SDGs

52. UN News, UN Statistical Commission agrees on global indicator framework, URL: <http://www.un.org/sustainabledevelopment/blog/2016/03/un-statistical-commission-endorses-global-indicator-framework/>.

53. Op. cit., note 54.

54. A/70/684, 15 January 2016, URL: http://www.un.org/ga/search/view_doc.asp?symbol=A/70/684&Lang=E.

and proposed recommendations that may help the General Assembly in considering further steps to ensure coherent, efficient and inclusive follow-up and review at the global level. According to the report, the General Assembly could decide on a sequence of thematic reviews for the same period that support the annual themes of the high-level political forum, with SDG 17 reviewed every year.

Another aspect on which the report contains recommendations is the voluntary national reviews of the HLPF. As was then repeated during the HLPF meeting in July 2016, the report called for encouraging all Member States to volunteer to carry out voluntary national reviews, aiming for at least twice by 2030. The possibility of encouraging reviews at the regional level was also proposed. Recommendations were as well included concerning the work of the GA and of the Economic and Social Council, Functional commissions, and other intergovernmental bodies and forums, and non-UN organizations, among other aspects.

The content of the 2016 Global Sustainable Development Report (GSDR) builds mostly upon GSDR 2014 and GSDR 2015 and intends to document and describe the landscape of information on specific issues. A draft version of the report informed the HLPF and its outcome was reflected in the Ministerial Declaration of the HLPF 2016, adopted on 20 July.

As indicated in the GSDR 2016, leaving no one behind has implications for the operationalization of the SDGs from a science-policy perspective. There needs to be a clear definition of «those left behind», and they need to be reached through delivery mechanism and empowered. In that regard, the report indicates that «it will be critical to systematically collect further scientific evidence on how existing development strategies do indeed reach the furthest behind». Additionally, the report proposes some steps in that direction.

Another aspect broadly covered by the report is technology. This is not surprising given that 14 of the 169 targets of the SDGs explicitly refer to technology, 34 relate to issues more often discussed in technology terms, and technology has been recognized as crucial for implementation of the SDGs. The relevance of inclusive institutions for Sustainable Development, with a particular reference to national parliaments and to national councils for sustainable development is also mentioned.

It is also to be highlighted the call for systematizing data, materials and information available, in a way that is informed by a sustainable development perspective, in order to provide policy-makers in the HLPF

with readily accessible information. These and other emerging issues are identified in the report.

5. CONCLUDING REMARKS

The 2030 Agenda is one of the most ambitious sets of goals ever adopted within the UN system and the international community for many reasons. It involves many areas of action, it has a universal nature, diverse actors and stakeholders need to participate in the process to guarantee their successful completion, a high amount of data is required to make informed decisions, and measures need to be taken in a complex international context.

This ambitious endeavor could be a definitive opportunity to ensure that no one is left behind. But the great challenges it entails could hinder progress in the respective SDGs. Member States and the UN System have already put in place several mechanisms to facilitate implementation of the goals, most of which have been presented in this chapter. Many of them were based on the implementation mechanism for the MDGs and on the lessons learned from the past, and could be revised as the SDG dynamics start moving forward and emerging issues are identified and possibilities for improvement detected.

In that regard, the 2030 Agenda builds on the MDGs and seeks to complete what they did not achieve, particularly in reaching the most vulnerable⁵⁵. The idea is to build on the achievements of the MDGs, which provided an important framework for development and made significant progress in a number of areas. Member States are encouraged to build their national responses on implementation of the SDGs on existing planning instruments, such as national development and sustainable development strategies⁵⁶, ensuring a smooth transition from the MDGs to the SDGs. Implementation of the MDGs taught us some lessons that need to be taken as a basis for further developments⁵⁷.

The time for implementation, 15 years, puts high levels of pressure on the involved actors, given the nature of some of the goals, the achievement of which will require transformation processes at the normative, social and structural levels. In order to observe positive results by 2030, firm steps

55. Para 16 of the Resol.

56. Para 78 of the Resol.

57. BINAT SARWAR, M., National MDG implementation: Lessons for the SDG Era, Working Paper 428, November 2015, 22 pp.; UN, The Millennium Development Goals Report 2015, 75 pp.

need to be taken already now. Financial plans for national sustainable development strategies are required, as well as a rigorous approach to effectiveness of public spending⁵⁸, at the same time that all possible efforts are done by the UN system to support Member States. Organizational aspects will also raise important challenges, many of which will hopefully find solutions through the work of the forums and groups presented in this chapter. Additional difficulties will be encountered with respect to countries in a situation of conflict or with fragile public institutions. However, facing those particular difficulties is also part of the 2030 Agenda, and it is hoped that the designed mechanisms will adapt to respond to those challenges.

Given that it is national governments and parliaments who will lead the process towards the achievement of the SDGs, the role of civil society is of essence to provide input to national and international actors: for the design of policies and for the decision-making process; for engaging civil society organizations in SDGs advocacy oriented actions; and for holding national governments and parliaments accountable for the decisions they make and the actions they take. In that regard, the design of a successful campaign would definitely contribute to the achievement of the SDGs. UNDP has launched the successor to the former UN Millennium Campaign, the UN SDG Action Campaign, which aims not only at making citizens and organizations aware of the SDGs but also at them playing an active role in implementation and ensuring accountability⁵⁹. Its progress will have to be revised over the years to assess its effectiveness.

58. KHARAS, H., «Why we need to think about implementing the Sustainable Development Goals», Brookings, Future Development, Economics to End Poverty, March 2015, URL: <http://www.brookings.edu/blogs/future-development/posts/2015/03/03-implementing-sustainable-development-kharas>

59. CLARK, H., Speech on Sustainable Development Goal Implementation – the UN Development System and UNDP's Roles, January 2016, URL: <http://www.undp.org/content/undp/en/home/presscenter/speeches/2016/01/18/sustainable-development-goal-implementation-the-un-development-system-and-undp-s-roles.html>.

Reference list

English

ALONSO J.A.; and OCAMPO, J.A., *Global Governance and Rules for the Post-2015 Era. Addressing Emerging Issues in the Global Environment*, Eds. Bloomsbury Academy, New York, 2015.

ALONSO, J.A., Supporting LDCs' Transformation: How Can ODA Contribute to the Istanbul Programme of Action in the Post-2015 Era?, *CDP Background Papers 28*, UN Department of Economic and Social Affairs, 2015.

ALONSO, J.A.; CORNIA, G.A.; and Vos, R., *Alternative Development Strategies for the Post-2015 Era*, eds. Bloomsbury Academy, New York, 2013.

ALONSO, J.A.; and OCAMPO, J.A., *Development Cooperation in times of crisis*(eds.), Columbia University Press, New York, 2012.

ATAPATTU, S. Sustainable development. Myth or Reality? A survey of sustainable development under International Law and Sri Lanka Law, *G.I.E.I.E.L.*, 2001-2002, pp. 265-300.

BARRAL, V. Sustainable development in International Law. Nature and operation of an evolutive legal norm, *EJIL*, 2012, pp. 377-400.

BEYERLIN, U. The concept of sustainable development, R. WOLFRUM (edit.), *Enforcing environmental standards: Economic mechanism as viable means?*, Berlin, 1996, pp. 95-121.

BOSSELMANN, K. *The principle of sustainability. Transforming law and governance*, Farnham Ashgate, 2008.

COSTANZA, R., et al., *Building a Sustainable and Desirable Economy in Society and in Nature*, United Nations, 2012.

CORDONIER, M.C. and KHALFAN, A. *Sustainable development law. Principles, practices and prospects*, Oxford, 2004.

DREXHAGUE, J., and MURPHY, D., Sustainable Development: From Bruntland to Rio 2012 *Background Paper*, UN, 2010.

EHRENFELD, J. R., The Roots of Sustainability, MITSloan, *Management Review*, 2005, vol. 46 n.º 2.

FRENCH, D. The rol of State and international Organizations in reconciling sustainable development and globalization, n. SCHRIJVER and F. WEISS (edits.) *International Law and sustainable development. Principles and practice*, Leiden, 2004, pp. 53-71.

GINTHER, K. Sustainable development and good governance: development and evolution of constitutional orders, K. GINTHER et al. (edits.), *Sustainable development and good governance*, Dordrecht, 1995, pp. 150-164.

LAMMERS, J. G., and MUNRO, R. (edits.) *Environmental protection and sustainable development. Legal principles and recommendations adopted by Experts Group on Environmental law of the world Commission on Environment and development*, London, 1987.

LOWE, V. Sustainable development and unsustainable arguments, A. BOYLE and D. FREESTONE (edits.), *International law and sustainable development. Past achievements and future challenges*, Oxford, 1999, pp. 19-37.

MALANCZUK, P. Sustainable development: Some critical thoughts in the light of the Rio Conference, K. GINTHER et al (edits.), *Sustainable development and good governance*, Dordrecht, 1995, pp. 23-52.

MATSUY, Y., The road to sustainable development evolution of the concept of development in the UN, K. GINTHER et al (edits.), *Sustainable development and good governance*, Dordrecht, 1995, pp. 53-71.

MCGOLDRICK, D., Sustainable development and human rights: An integral approach, *I.C.L.Q.*, 1996, pp. 796-818.

MEBRATU, D., Sustainability and sustainable development: historical and conceptual review, *Environmental impact assessment review*, 1998, n. 18, pp. 493-520.

MOFFATT, I., HANLEY, N. and WILSON, M., *Measuring and modeling sustainable development*, The Parthenon Publishing Group Inc., 2001.

PALLEMAERTS, M., International Environmental law from Stockholm to Rio: Back to future, *R.E.C.I.E.L.*, 2003, pp. 1-11.

SANDS, Ph., International law in the field of sustainable development, *B.Y.I.L.*, 1994, pp. 303-381.

SANDS, Ph., International law in the field of sustainable development.

REFERENCE LIST

Emerging legal principles, W. LANG (edit.), *Sustainable development and international law*, Dordrecht, 1995, pp. 53-66.

SANDS, Ph., Sustainable development. Treaty, Custom and cross-fertilization of international law, A. BOYLE and D. FREESTONE (eds.), *International law and sustainable development. Past achievements and future challenges*, Oxford, 1999, pp. 39-60.

SANDS, Ph., Environmental protection in the twentieth century: sustainable development and international law, N. J. VIG and R. S. AXELROLD (eds.), *The global environment. Institutions, law and policy*, Washington, 1999, pp. 116-137.

SCHRIJVER, N. The evolution of sustainable development in international law: Inception, meaning and status, *R.C.A.D.I.*, 2007, pp. 217-412.

SCHRIJVER, N. and WEISS, F. (eds.), *International law and sustainable development. Principles and practice*, Leiden, 2004.

TIMOSHENKO, A. S., From Stockholm to Rio: The institutionalization of sustainable development, W. LANG (edit.), *Sustainable development and international law*, Dordrecht, 1995, pp. 143-160.

TLADI, D. *Sustainable development in international law. An analysis of key enviro-economic instruments*, Pretoria, 2007.

TURNER, R., Speculations on weak and strong sustainability. CSERGE, *Working paper. GEC 92-96*, CSERGE, Norwich: University of East Anglia, 1992.

VAN DEN BERGH, J. and HOFKES, M., Theory and Implementation of Economic Models for Sustainable Development, *Economy & Environment*, vol. 15. 1998.

VICTOR, D. G. *Recovering sustainable development*, F. A., 2006, pp. 91-103.

VICTOR, P., Indicators of sustainable development: some lessons from capital theory, *Ecological Economics*, 1991, n. 4, pp. 191-213.

WEINSTEIN, M. P. et al., The global sustainability transition: it is more than changing light, *Sustainability transition: it is more than changing light bulbs*, 2013, volume 9/1.

French:

AKNIN A. et al., Environnement et développement –quelques reflexions autour du concept de «développement durable», *Développement durable?– Doctrines, pratiques, evaluations* (textes réunis et présentés par J.Y. MARTIN), Paris, 2002, pp. 51-71.

AUBERTIN, C. et al., *Le développement durable. Enjeux politiques, économiques et sociaux*, Paris, 2010.

BERGER, A.; DE PERTHUIS, Chr.; et PERIN, N., *Le développement durable*, Paris, 2014.

BRUNEL, S., *Le développement durable, Que sais-je?* Paris, 2010.

DOSSIER: *Le développement durable: éthique et stratégie du XXI^e siècle*, *Revue politique et parlementaire*, 2009, pp. 5-210.

EPINEY, A. et SCHEYLI, M. Le concept de développement durable en droit international public, *R.S.D.I.D.E.*, 1997, pp. 247-266.

GUIZARD, P., *Les développements durables*, Montpellier, 2011.

LASCOUMES, P.; BONNAUD, L.; LE BOURHIS, J.P.; et MARTINAIS, E., *Le développement durable. Une nouvelle affaire d'État*. Paris, 2014.

MALJEAN-DUBOIS, S. Environnement, développement durable et droit international. De Rio à Johannesburg: et au-delà?, *A.F.D.I.*, 2002, pp. 592-623.

MARECHAL, J.P., et QUENAULT, B., *Le développement durable: une perspective pour le XXI^{ème} siècle*, Rennes, 2005.

NICOLAS, Y., *Développement durable et solidarité internationale. Enjeux, bonnes pratiques, propositions pour un développement durable du Sud et du Nord*, Haut Conseil de la Coopération Internationale, 2006.

SERVET, J.M. Les illusions des «objectifs du Millénaire», LAFAYE DE MICHEAUX E. (dir.) et al., *Institutions et développement: la fabrique institutionnelle et politique des trajectoires de développement*, Rennes, 2007, pp. 63-88.

STRANGE, T. et BAYLEY, A., *Le développement durable à la croisée de l'économie, de la société et de l'environnement*, Paris, 2008.

TOUZET, A. Droit et développement durable, *Revue du droit public et de la science politique en France et à l'étranger*, 2008, pp. 453-488.

VAILLANCOURT, J. G., Action 21 et le développement durable, *Vertigo-La revue électronique en sciences de l'environnement*, 2002, pp. 1-15.

VAILLANCOURT, J-G., L'histoire du concept de développement durable, *Franc-Vert*, 1992, vol. 9, n.° 5, pp. 30 ss.

VAILLANCOURT, J-G., Penser et concrétiser le développement durable *Écodécision*, 1995 n.° 15, pp. 24-29.

VIVIEN, F.D. Jalons pour une histoire de la notion de développement durable, *Mondes en développement*, 2003/1.

ZACCAI, E., *25 ans de développement durable, et après?*, Paris, 2011.

Spanish

ALONSO, J.A., La Agenda de Desarrollo post-2015: Consideraciones Críticas. *Tiempos de Paz* n.º 115, pp. 73-80, 2014.

BERMEJO GARCÍA, R. El derecho al desarrollo: un derecho complejo de contenido variable, *ADI*, 1985, pp. 211-243.

CARIDE GÓMEZ, J. A., Nuevas perspectivas para un futuro viable: los Objetivos de Desarrollo del Milenio, *Revista de educación*, 2009 (Ejemplar dedicado a: Educar para el desarrollo sostenible), pp. 77-98.

CLEMENCE, C., Cooperación internacional y objetivos del milenio para el desarrollo: ¿Puede ser la cooperación internacional una herramienta para alcanzar los objetivos del milenio para el desarrollo y luchar de manera sostenible contra la pobreza?, *I Congreso Internacional «África-Occidente»: necesidad de nuevas relaciones*, M. MONTANO GARCÉS, (coord.) Estrella Gualda, 2009, pp. 211-216.

DÍAZ BARRADO, C. M., Los objetivos de desarrollo sostenible: un principio de naturaleza incierta y varias dimensiones fragmentadas, *Anuario Español de Derecho Internacional*, vol. 32, 2016, pp. 7-46.

DURÁN Y LALAGUNA, P., *Derechos sociales y políticas sociales: coincidencias y diferencias*, Valencia, Tirant lo Blanch, 2013.

DURÁN Y LALAGUNA, P., Las referencias onusianas para una definición europea de derechos sociales, *Persona y derecho: Revista de fundamentación de las Instituciones Jurídicas y de Derechos Humanos*, 2012, pp. 29-48.

DURÁN Y LALAGUNA, P., Cómo introducir el fortalecimiento institucional en la cooperación al desarrollo, *Colección H+D para el Desarrollo* n.º 9, 2012.

FERNÁNDEZ LIESA, C. R., Transformaciones de Derecho internacional por los Objetivos de desarrollo sostenible, *Anuario Español de Derecho internacional*, vol. 32, 2016.

FERRANDIS MARTÍNEZ, A., A propósito del desarrollo sostenible: Origen, evolución y teorías alternativas, *Terra: Revista de desarrollo local*, 2016, pp. 74-96.

GÓMEZ CONTRERAS, J. L., Del desarrollo sostenible a la sustentabilidad ambiental, *Revista Facultad de Ciencias Económicas: Investigación y Reflexión*, 2014, pp. 115-136.

JUSTE RUIZ, J. El desarrollo sostenible y los derechos humanos, *Soberanía del Estado y Derecho Internacional. Homenaje al Prof. J. A. Carrillo Salcedo*, Sevilla, 2005, pp. 757-778.

MARIÑO MENÉNDEZ, F. y FERNÁNDEZ LIESA C. (eds.), *El desarrollo y la cooperación internacional*, Madrid, 1997.

MARTÍN PALMERO, F., Desarrollo sostenible concepto, evolución, modelos y sistemas de medición, *Tesis doctoral dirigida por Fernando González Laxe*, Universidade da Coruña, 2002.

MENDIZÁBAL ARACAMA, M. T., Nacimiento y evolución del concepto de desarrollo sostenible, *¿Es sostenible el mundo en que vivimos?: un enfoque interdisciplinar*, C. Alonso Bedate (ed.), 2013, pp. 33-52.

PONS, X., Desarrollo sostenible y financiación del desarrollo, *Agenda ONU*, 2002, pp. 109-170.

RODRIGO, A. J. El desarrollo sostenible como uno de los propósitos de las Naciones Unidas, X. PONS, *Las Naciones Unidas desde España. 70 aniversario de las Naciones Unidas. 60 aniversario del ingreso de España en las Naciones Unidas*, Barcelona, 2015, pp. 265-291.

RODRIGO, A. J. *El desafío del desarrollo sostenible, Los principios de derecho internacional relativos al desarrollo sostenible*, Madrid, 2015.

RODRIGO, A. J., El concepto de desarrollo sostenible en el Derecho Internacional, *Agenda ONU: Anuario de la Asociación para las Naciones Unidas en España*, 2006-2007, pp. 159-214.

RODRIGO, A. J., El principio de integración de los aspectos económicos, sociales y medioambientales del desarrollo sostenible, *Revista española de derecho internacional*, 2012, pp.133-161.

RUIZ-GIMÉNEZ AGUILAR, M., Objetivos de desarrollo sostenible: Una agenda transformadora, *Crítica*, 2016, pp. 14-21.

SANAHUJA, J. A., De los objetivos del Milenio al desarrollo sostenible. Naciones Unidas y las metas globales post-2015, M. MESA (coord.), *Focos de tensión, cambio geopolítico y agenda global*, Anuario 2014-2015, pp. 49-83.

SANAHUJA, J. A., La agenda 2030 de desarrollo sostenible: de la cooperación Norte-Sur al imperativo universalista del desarrollo global, *Gaceta sindical: reflexión y debate* (ejemplar dedicado a: Incertidumbres y retos del nuevo escenario mundial), pp. 205-221.

SANAHUJA, J. A., La Agenda 2030 y los Objetivos de Desarrollo

REFERENCE LIST

Sostenible: hacia una ética universalista del desarrollo global, *Razón y fe: Revista hispanoamericana de cultura*, 2015, pp. 367-382.

SÁNCHEZ-TERÁN, G. y VALCÁRCEL, D., La reforma de la ONU y los objetivos del milenio, *Política Exterior*, 2005, pp. 145-160.

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THOMSON REUTERS

THOMSON REUTERS