Achieving the Sustainable Development Goals: From Agenda to Action

September 2015
Institute for Global Environmental Strategies

Achieving the Sustainable Development Goals: From Agenda to Action

Published by the Institute for Global Environmental Strategies (IGES)
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TEL: +81-(0)46-855-3700
http://www.iges.or.jp

IGES is an international research institute conducting practical and innovative research for realising sustainable development in the Asia-Pacific region.

ISBN978-4-88788-189-1
IGES Publication Code PR1501 (2nd Edition)

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Printed and bound by Edo Create Co. Ltd.

Printed in Japan

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Foreword

The term "sustainable development" was conceived more than 25 years ago when the world was at a development crossroads. Conventional approaches to development had left millions in abject poverty and placed progressively greater strains on the carrying capacity of the earth's natural systems. A more sustainable approach to development held promise of fundamentally changing the face and direction of development. Yet for more than two decades governments, businesses, and international organisations have struggled to implement policies consistent with this vision. The sustainable development goals (SDGs) and the post-2015 development agenda within which they are embedded offer a unique opportunity to change course.

This book is written with guarded optimism that the next 15 years can help bring about this much-needed course change. The reason for the optimism is also the focus of the book: governance. The nine chapters cover several timely themes, ranging from the progress on the Millennium Development Goals (MDGs) to challenges in the water sector. But while varying in subject matters, they share the common conviction that reforms in governance will be essential to implementing the policies needed for a sustainable future. The overall message is governance that promotes integration across sectors and inclusion among stakeholders will become vital as countries get ready for the SDGs. Since there is no blueprint for putting in place these readiness conditions, the book begins to open the dialogue that will prove determinative for the SDGs over the months and years to follow.

The Institute for Global Environmental Strategies (IGES) looks forward to contributing to that dialogue. IGES is an international research institute that conducts strategic policy research on sustainable development in Asia and the Pacific. Headquartered in Hayama, Japan, IGES envisages itself as not only contributing analytical inputs into discussions over the SDGs but also actively equipping governments and non-government stakeholders with the tools and platforms needed to bring the post-2015 development agenda into action. This book begins to take important steps in that direction. We look forward to working with our partners in and beyond Asia and the Pacific to move the world onto the path that achieves a sustainable future for all.

Hironori Hamanaka
Hayama, Japan
September 2015

Acknowledgements

Books are rarely produced by one person working in isolation. True to form, this publication reflects the collective effort of many thoughtful and generous people who gave liberally of their time and energy to bring this project to fruition. On behalf of the Institute for Global Environmental Strategies (IGES), I would like to express my sincere appreciation to all those mentioned below.

The book *Achieving the Sustainable Development Goals: From Agenda to Action* was conceived by the Flagship Team of the IGES Programme Management Office (PMO) and researchers in the Integrated Policies for Sustainable Societies (IPSS) Area. Invaluable guidance, leadership and contributions came from IGES Sustainable Development Goals (SDGs) Task Force and its Advisory Group. Useful critique and inputs were received through regular IGES-wide in-house meetings held on different aspects of the SDGs and related issues. The IGES Quality Management team of Mark Elder and Hidefumi Imura provided a constant source of encouragement and feedback, helping to sharpen the focus and recommendations of the chapters considerably.

The book would not have been possible without the comments and able support from Ian Barnes, Peter King, Tetsuya Ishii, Toshiyuki Iwadou, Eisaku Toda and Kazuo Matsushita. My gratitude also goes out to in-house and external resource persons, especially Timothy Cadman from Griffith University, Gideon Rabinowitz from the Overseas Development Institute (ODI) and Kanako Morita from Keio University.

The book was prepared, laid out and edited by a core team at IGES consisting of Magnus Bengtsson, Emma Fushimi, Yoriko Itakura, Jun Kamio, Ikuho Miyazawa, Simon Hoiberg Olsen, Shoko Yamanaka, Tetsuro Yoshida and Eric Zusman. Contributions to the chapters from other colleagues at IGES came from Lewis Akenji, Ilona Aleksiunaite, Robert Didham, Paul Ofei-Manu, SVRK Prabhakar, Henry Scheyvens, Noriko Shimizu, Binaya Raj Shivakoti and Shom Teoh. The Chair of the Board of Directors of IGES, Hironori Hamanaka, provided overall guidance.

IGES has also benefited greatly from interactions with colleagues working on the post-2015 development agenda and the SDGs in other institutes. This publication would not be possible without gracious support from the Project on Sustainability Transformation 2015 (S-11-4). This interdisciplinary research initiative on SDGs was started by the Ministry of the Environment, Japan in 2013 to provide analytical inputs to this important process. I also appreciate the opportunity to work with the Independent Research Forum (IRF) producing timely outputs and securing joint funding. I am also looking forward to working with the Sustainable Development Solutions Network (SDSN) to disseminate the main findings.

Last but not least, I would like to express my special appreciation to the different teams within IGES. We realise working across sectors has been a challenge for all of us, but preaching integrated approaches in this publication necessitates walking the talk. Certainly, this book represents only the very initial analysis of what will be needed to take action on the SDGs agenda. Therefore we very much hope that research and action partnerships will work to help bring the key messages of this book to life.

Hideyuki Mori
Hayama, Japan
September 2015

List of Abbreviations

10YFP	10 Year Framework of Programmes on SCP
ADB	Asian Development Bank
ASEF	Asia-Europe Foundation
CBD	Convention on Biological Diversity
CBDR	Common But Differentiated Responsibility
CBD SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice to the Convention on Biological Diversity
CC	Control of Corruption
COP	Conference of the Parties
CO2	Carbon Dioxide
DESD	United Nations Decade of Education for Sustainable Development
EE	Environmental Education
EFA	Education for All
ESD	Education for Sustainable Development
FfD	Financing for Development
FfD1	First Conference on Financing for Development

FfD2	Second Conference on Financing for Development
FfD3	Third Conference on Financing for Development
FSF	fast-start finance
FTT	Financial Transaction Tax
GA/UNGA	General Assembly of the United Nations
GCED	Global Citizenship Education
GDP	Gross Domestic Product
GCE	Global Campaign for Education
GCF	Green Climate Fund
GE	Government Effectiveness
GEF	Global Environment Facility
GEFI	Global Education First Initiative
GHG	Greenhouse Gas
GNI	Gross National Income
GNP	Gross National Product
GPSD	Global Partnership for Sustainable Development
HIV	Human Immunodeficiency Virus
HLP	High Level Panel
ICLEI	International Council for Local Environmental Initiatives
IFIs	International Financial Institutions
IGES	Institute for Global Environmental Strategies
IMF	International Monetary Fund
IPBES	Intergovernmental Science and Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IRF2015	Independent Research Forum 2015
IWRM	Integrated Water Resource Management

JICA	Japan International Cooperation Agency
JPOI	Johannesburg Plan of Implementation
LDCs	Least Developing Countries
LTF	long-term financing
MDGs	Millennium Development Goals
MOI	Means of Implementation
M&E	Monitoring and Evaluation
NGOs	Nongovernmental Organisations
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
OWG	SDGs Open Working Group
PISA	Programme for International Student Assessment
QESD	Quality Education for Sustainable Development
REDD	Reduced Emissions from Deforestation and Forest Degradation
RL	Rule of Law
SABER	Systems Approach for Better Education Results
SCP	Sustainable Consumption and Production
SDGs	Sustainable Development Goals
SDSN	Sustainable Development Solutions Network
SLE	Sustainable Lifestyle and Education
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNFCCC	United Nations Framework Convention on Climate Change
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA/GA	General Assembly of the United Nations
UNSG	United Nations Secretary General

VA	Voice and Accountability
WTO	World Trade Organisation

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Executive Summary

The Sustainable Development Goals (SDGs) are the centrepiece of a new development agenda. This agenda envisages a world free from poverty and deprivation, and where the fundamental conditions for human prosperity—healthy ecosystems, a stable climate and a clean environment—are safely maintained. This vision is expected to guide international organisations, the private sector, civil society, and governments in all countries and at all levels in the shared pursuit of a healthier world and a better tomorrow. Governments will likely agree on the SDGs in September 2015 in New York, culminating a two-year negotiation process. The recently completed 3rd International Conference on Financing for Development (FfD3) in Addis Ababa, Ethiopia, was the latest milestone in that process, concluding with an agreement upon, amongst others, a technology facilitation mechanism to help implement the SDGs. But while this process has made some headway on this new mechanism and other means of implementation (MOI), considerable work lies ahead in bringing this new development agenda into action.

This book *Achieving the Sustainable Development Goals: From Agenda to Action* joins the timely discussion on what should happen after the SDGs are adopted. It deals with the questions of how globally agreed goals can be made relevant to different national and local contexts, and what institutional architectures and policy frameworks can pave the way for achieving them. More specifically, the book focuses on how

governance—the way authority is exercised and decisions are made and executed—can infuse action into the new development agenda. The book is divided into two main sections. The first half focuses on how governance and finance affected broad-based development goals; the second half concentrates on governance and MOI for education, water, energy and biodiversity.

The introductory chapter outlines an analytical framework that stresses how three different aspects of governance influence development: 1) the make-up of national government institutions; 2) the interaction between the design of international agreements and national compliance with their provisions; and 3) the facilitation of collaboration across multiple stakeholders at multiple levels (see Figure 1 below). It suggests that implementing the SDGs will require attention to how the main actors and primary motivations in these three views can help countries make progress on the SDGs. It further argues that the insights from each of these views can be seen by looking at how governance and other MOI affected past international policymaking processes and how it is likely to affect future developments across (Chapters 2 through 4) and within key sectors (Chapters 5 through 8).

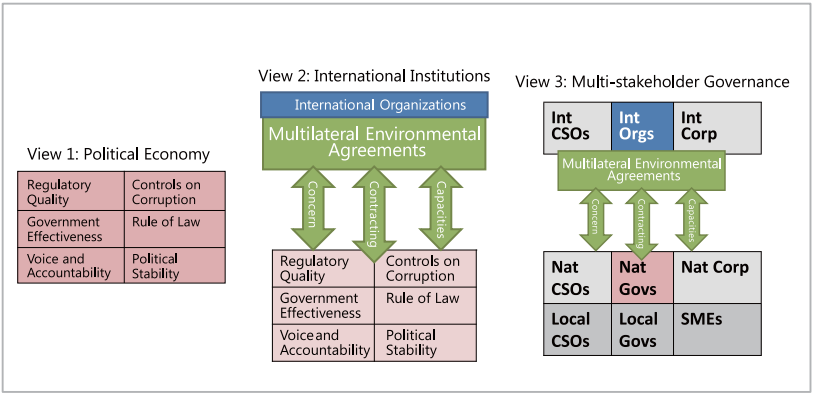

Figure 1 Analytical framework: Three views on governance Source: Authors

Chapter 2 draws chiefly on the first perspective of governance (the make-up of national government institutions) to show that effective governments and rule of law had a significant influence on progress with the MDGs for a wide range of countries. It concludes that international organisations and donor agencies should devote more resources to

building essential skills and base competencies for government institutions; this will not only be essential for achieving basic development priorities but could offer a springboard for a more integrated, transformational and universal agenda under the SDGs. Failure to get these institutional fundamentals in place could stall progress at the formative stages of SDG implementation.

Chapter 3 identifies two basic forms of governance: top-down enforcement-based governance (compliance) and governance based on voluntary stakeholder engagement (collaboration) (the second and third views in the introductory chapter). It then uses a combination of qualitative and quantitative methods to analyse how the discourse of governance has evolved in key intergovernmental documents and agreements on sustainable development. Based on this analysis, the chapter shows that over time there has been a notable increase in references to both compliance and collaborative governance, with an especially pronounced increase in references to collaboration. The chapter concludes that national governments should aim for governance arrangements that complement conventional compliance with those fostering multi-stakeholder collaboration and apply this in their planning and policy making.

Chapter 4 focuses on financing. Its analysis of international agreements on financing identifies key elements for keeping signatories accountable. It argues that clear commitments, strong monitoring frameworks, and substantial high-level dialogues on follow-up measures were essential for accountability in past international agreements. It also identifies a need for indicators not only to monitor the input side—how much funding is provided—but also how funds are spent and how this contributes to concrete development outcomes. These findings are expected to apply not only to financing agreements but international agreements in general. Looking at the outcome of the recently held FfD3 meeting on finance, it concludes that the vague and general commitments of that agreement will make accountability challenging.

Chapter 5 underlines that improving the quality as well as the quantity of education is essential to sustainable development. Few other areas offer as great a return of investment as qualitative upgrades in education. As such, the inclusion of quality education needs not to be seen as simply an SDG but also an essential MOI for other SDGs. Making connections between education and other SDGs will reduce the likelihood that less quantifiable elements of quality education are cut from policy agendas,

budgets, and curricula. The chapter further argues that Education for Sustainable Development (ESD) offers an actionable approach to enhancing education quality.

Chapter 6 argues that the key to making water systems more secure is an integrated perspective that positions water at the core of the SDGs. Failure to operationalise such an integrated perspective could have ramifications for several areas, including food, health, energy and environment. The chapter contends that capturing synergies goes beyond simply recognising water management's inherent complexities; these have been well-documented in calls for integrated water resources management (IWRM). Moving beyond IWRM requires policies and practices that leverage synergies between water and other sustainability objectives. However, which synergies countries pursue will vary depending on the importance they attach to: 1) improved access; 2) enhanced efficiency; and 3) systems transformation (see Figure 2 below).

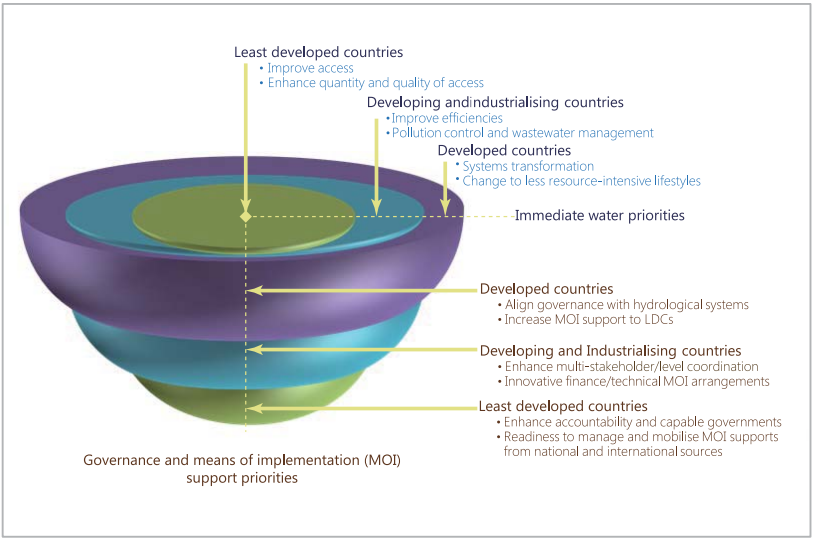

Figure 2 An illustration of how countries may interpret targets and MOI for an SDG on water Source: Authors

Chapter 7 maintains the SDGs are uniquely positioned for "synergistic interactions" with existing legal instruments, namely the Convention on Biological Diversity (CBD) and its Aichi Targets. Capturing these complementarities will necessitate recognising the multiple benefits of integrating biodiversity into the SDGs as well as due attention to

consistency between targets, national planning and policies, multi-stakeholder engagement, and reporting and review mechanisms.

Chapter 8 suggests a well-designed energy SDG can alleviate poverty, improve health and wellbeing, and mitigate climate change. But realising these multiple benefits requires countries to tailor SDGs to national contexts. This will involve placing varying weights on energy access, energy efficiency, renewable energy and energy conservation. These context-appropriate targets are likely to be more effective when embedded in enabling policy environments that allow local governments and businesses to introduce and scale up energy-saving innovations as well as to deploy renewables. Existing initiatives such as Sustainable Energy for All (SE4All) could help support the scaling process; leveraging synergies between energy and other SDGs could also contribute to implementation and scaling of an energy SDG.

Chapter 9 summarises the book's main conclusions and proposes future research. In particular, it highlights the importance and possible tensions within shifts to more integrated and inclusive forms of governance. It further outlines a broadening of research methodologies to actively involve multiple stakeholders in the generation of research outputs, focus on partnerships, and on effective multi-stakeholder participation. These elements are likely to become preconditions for turning aspirational goals and targets into transformational actions.

1

Governing the Sustainable Development Goals: Closing the gap between aspiration and action

Eric Zusman
Magnus Bengtsson
Simon Hoiberg Olsen

1 Introduction

In 2015, the governor of California imposed mandatory water restrictions in reaction to a four-year drought that threatened to paralyse his state's economy. Two years prior, the leadership of China unveiled a series of clean air action plans to curb smog episodes that had begun to choke their country's prosperity. And a year before that, policymakers in Brazil concluded public consultations to help tighten biodiversity targets intended to safeguard some of the world's most valued species and fauna. From California to China to Brazil, the world is addressing a range of sustainability crises. Awareness of how these crises form and interact is growing fast.

The seeds of this awareness were planted more than four decades ago. In 1972, the United Nations convened the first global environmental conference, the United Nations Conference on the Human Environment (UNCHE). At UNCHE, world leaders established the United Nations Environmental Programme (UNEP) to support international cooperation on environmental problems. Since that milestone meeting, the numbers of environmental institutions and agreements have increased sharply; the numbers of government, business, and civil society groups professing support for a sustainable future have followed suit. What has not improved is the state of the environment. Sustainability has become commonly referenced on paper but much less evidenced on the ground. In consequence, the world has already transgressed several planetary limits; humanity is running out of safe operating space by pushing up against many others (Rockström et al., 2009).

This unfortunate state of affairs gives rise to a pressing question: why has support for a sustainable future coincided with society drifting further from that ideal? This question does not lend itself to simple answers. An issue area with as many inherent interlinkages and complexities as sustainable development belies easy solutions. A quick survey of the relevant institutional architecture and policy landscape, however, converges on two broad sets of underlying causes. The first is that key provisions in international environmental agreements, national legislation and local action plans go unimplemented or are implemented ineffectively, resulting in persistent "implementation gaps." (UN, 2012, p.

10). The second is that closing these implementation gaps does not necessarily require more agreements, policies or action plans, but improved governance and institutions.

Yet the transition to more sustainable forms of governance is also easier said than done. The challenge involves not only reforming the internal workings of governments and adjusting external incentives from international institutions, but aligning the interests of increasingly diverse sets of actors operating at different levels of decision making. This challenge is compounded by vested interests and institutions that give inertia to business-as-usual development and thereby lock in the status quo. This book is thus written with a keen awareness that the governance challenge ahead is formidable. It is also written with cautious optimism that the same challenge can be overcome. This guarded optimism stems from experience and opportunity.

> *The transition to more sustainable forms of governance is easier said than done*

In terms of experience, over a four decade period—beginning with UNCHE (1972) and including critical advances at the Rio Earth Summit (1992) and Johannesburg (2002) as well as the Millennium Development Goals (MDGs)—the world has gleaned valuable insights into how different forms of governance have yielded implementation successes and failures. The lessons learned offer useful guideposts as concerned stakeholders contemplate course corrections and ways forward. In terms of opportunity, much of this reflection is informing discussions over a new set of sustainable development goals (SDGs) and a post-2015 development agenda. With an agreement expected in September 2015, the SDGs and post-2015 development agenda could guide development until 2030. Importantly, the SDGs will likely include two goals related to governance (Goal 16 and 17) and separate enabling targets for sector specific goals (UN, 2015). Mirroring analyses prior to the start of formal negotiations, governance is integrated across and within the SDGs (Olsen & Elder, 2013).

Yet, as implied by the cases of California, China and Brazil that began this chapter, whether the SDGs can make a difference will hinge on governance both across and within key sectors. This book hence includes a section that focuses on governance and finance in general (Chapters 2, 3 and 4) followed by a section on governance in the context of the

education, energy, water and biodiversity goal areas (Chapters 5, 6, 7, and 8). Text boxes on sustainable consumption, cities and other pertinent themes supplement chapter-length analyses. The closing chapter identifies areas for future research, focusing specifically on the need for more integrated governance approaches and the role the research community and civil society could play in helping to implement the SDGs. The book's key messages can be summarised as follows:

1. For many countries, capable government administrations and legal institutions proved instrumental in alleviating poverty, improving maternal health, extending educational access, and achieving other development priorities covered by the Millennium Development Goals (MDGs). International organisations and donor agencies should devote more resources to ensuring government agencies and legal institutions possess the skill sets and base competencies to achieve these priorities.
2. Building these skills and competencies will not only be essential for achieving basic development priorities like those under MDGs but could offer a springboard for a more integrated, transformational and universal agenda under the SDGs. Failure to get the institutional fundamentals in place could stall progress at the early stages of SDG implementation.
3. While financial means of implementation (MOI) often feature in international negotiations, institutional MOI are set to gain more attention as countries and international organisations get ready for the SDGs. Both governments and development partners should look beyond financial MOI when putting in place the readiness conditions needed for transitioning to the SDGs (Chapters 2 and 4).
4. When considering readiness conditions, countries should aim to complement and combine governance arrangements based on top-down compliance with those fostering multi-stakeholder collaboration. There is growing recognition in intergovernmental documents of the need to complement compliance-based and collaborative governance, and national governments should not treat this as empty rhetoric.

5. How synergies between compliance and collaboration are captured will vary across countries. Some countries may provide research universities and progressive city governments with economic incentives to work together on piloting innovative solutions (Chapters 3 and 9). Others may strengthen protection of property rights to encourage green businesses to transfer these solutions to foreign markets. Yet others may engage expert communities and concerned citizen groups to support the review and follow-up of SDG implementation. A final set of countries may link together some of the above possibilities to forge effective implementation pathways for the SDGs (Chapters 6, 7 and 8).

Others may strengthen protection of property rights to encourage green businesses to transfer these solutions to foreign markets

6. The mechanisms for tracing the performance of finance will be as critical as the amounts of finance allocated for SDG implementation. The importance of holding signatories accountable for the performance of finance at pivotal junctures in decision making processes cannot be overstated. Accountability of MOI inputs—the resources made available—as well as SDG outputs in the form of development outcomes are especially critical since the post-2015 development agenda will not be legally binding (Chapter 4).
7. Although the SDGs and post-2015 development agenda will not be legally binding, they can help complement implementation of the ongoing initiatives such as the Aichi Targets on Biodiversity (Chapter 7) and Sustainable Energy for All (Chapter 8). Participants in these initiatives should leverage the SDGs to legitimise new norms forming around their areas of concern and think creatively about what governance arrangements and MOI are needed to make them actionable.
8. Thoughtfully-conceived governance arrangements will be vital to strengthen the qualitative dimensions of an education goal. A credible commitment to quality education in national laws, district budgets and school curricula could bring unprecedented returns for development and help achieve a range of other SDGs (Chapter 5).
9. The SDGs can enable advocacy coalitions to put renewed emphasis on integrated governance approaches to energy, water and biodiversity. The application of integrated approaches in these policy

areas is likely to vary across countries. One factor distinguishing these approaches across countries is the relative weight placed on: 1) securing access to basic resources; 2) stabilising consumption through efficiency gains; and 3) curbing consumption with lifestyle and system changes (Chapters 6, 7 and 8).

10. Some SDGs will serve as MOI for other SDGs. National policymakers should consider governance arrangements that can support cross-agency decision making and budgeting to capitalise on cross-goal synergies. International organisations and research institutions would do well to work together to build tools illustrating opportunities for synergies across SDGs as well as between SDGs and various MOI (Chapters 6, 7 and 8).

The remainder of this introductory chapter sets the context for the rest of the book. It begins by introducing recent perspectives of sustainability and the role of governance in steering a more sustainable course. It then discusses how governance is treated in three strands of literature: 1) political economy on requisite functions of governments (rule of law, government capacity, controls on corruption); 2) institutionalism on the design elements of international institutions; and 3) multi-stakeholder governance on an enabling environment for collaboration. The chapter then highlights how these perspectives on governance can help improve governance of the SDGs. The chapter concludes with an overview of how the remaining eight chapters aim to communicate that overriding message, thereby helping to close implementation gaps.

2 Staying within planetary limits: A role for governance

Since UNCHE in 1972, the international environmental community has been advocating an approach to development that stays consciously within ecological limits. However, in 1982 when member states took stock of what had been achieved in the decade following the UNCHE they concluded that progress had been far from satisfactory; the global environment had not improved but continued to deteriorate (UN, 1982). Responding to this apparent shortfall, the United Nations established a commission chaired by the former prime minister of Norway to look into the causes behind the limited progress and build global momentum for change. This commission, known as the Brundtland Commission, held a large number of hearings throughout the world with a wide range of

stakeholders and produced the report *Our Common Future,* which popularised the concept of sustainable development (Brundtland, 1987).

Our Common Future underlined that a healthy economy depends on a healthy environment, meaning that human development and environmental protection are closely interlinked and mutually dependent and therefore cannot be dealt with in a piecemeal fashion (Brundtland, 1987). The commission also underscored the significance of considering the welfare of future generations through its often-cited definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987).

This perspective on the development-environment nexus resonated with observers from diverse backgrounds and set the tone for the next major global meeting on development: the 1992 UNCED conference in Rio de Janeiro. The UNCED adopted the Agenda 21, a comprehensive plan for achieving sustainable development globally, which received significant attention and spurred the establishment of national and local coordination committees and strategy documents. Local implementation and stakeholder involvement were points of emphasis. Despite these well-intended efforts, however, the two following global meetings on development—in Johannesburg in 2002 and Rio de Janeiro in 2012—concluded that progress had again been limited; the global environment had continued to deteriorate, poverty remained widespread, and inequity was increasing. Despite four decades of considerable effort, the global community had still not delivered on its repeated promises to curb human impacts on the living planet and to ensure a life in dignity for all.

There are many reasons why so little progress has been achieved. One contributing factor is the failure to recognise the interconnectedness and interdependence between different aspects of sustainable development. Economic planning in most cases still does not consider long-term environmental impacts and how these affect society. Similarly, private enterprises still tend to "externalise" the damage they do to the environment, passing the bill for those damages to society in general. Furthermore, the idea that developing countries can focus on economic growth and clean up later also remains commonplace. In practice, governments do not seem to have taken seriously the fact that development cannot be sustained by simply focusing on one dimension at the expense of the other (Hopwood, Mellor, & O'Brien, 2005).

In a similar vein, governments have also failed to recognise the limited utility of the economy-only paradigm, despite repeated efforts to expose its faulty logic. Some of these attempts contended that "environmental stewardship" can add the often-overlooked ethical considerations to the capital accumulation that frequently underpins conventional growth models (Worrell & Appleby, 2000). Others argue that the "great acceleration" over the past century and a half demonstrates the deep flaws in these models. This acceleration involves exponential increases in energy and water use, food production, urbanisation, and other measures of development which have placed progressively weightier strains on the carrying capacity of natural systems (see Figure 1.1) (Steffen et al., 2004).

One of the most significant contributions to the discussions on sustainability is the concept of planetary boundaries

In recent years, attention has been drawn to more illustrative metaphors to convey similar sentiments. One of the most significant contributions to the discussions on sustainability is the concept of planetary boundaries (Rockström et al., 2009). The boundaries metaphor highlights that there are limits to how much damage humans can safely do to the planet. Beyond these limits, the risks of systemic planetary collapse are expected to be significant and non-linear. The highest profile example of possible non-linear disruptions stems from anthropogenic climate change (IPCC, 2014); as illustrated in Figure 1.2, there are numerous others. The concept of planetary boundaries for human impacts has changed the earlier discourse on sustainability; the idea that there are quantifiable limits to which we must commit introduces a new way of thinking. Achieving sustainability is not only a matter of reining in humanity's impact on the planet in general but also of keeping the impact within the limits that allows human civilisation to continue.

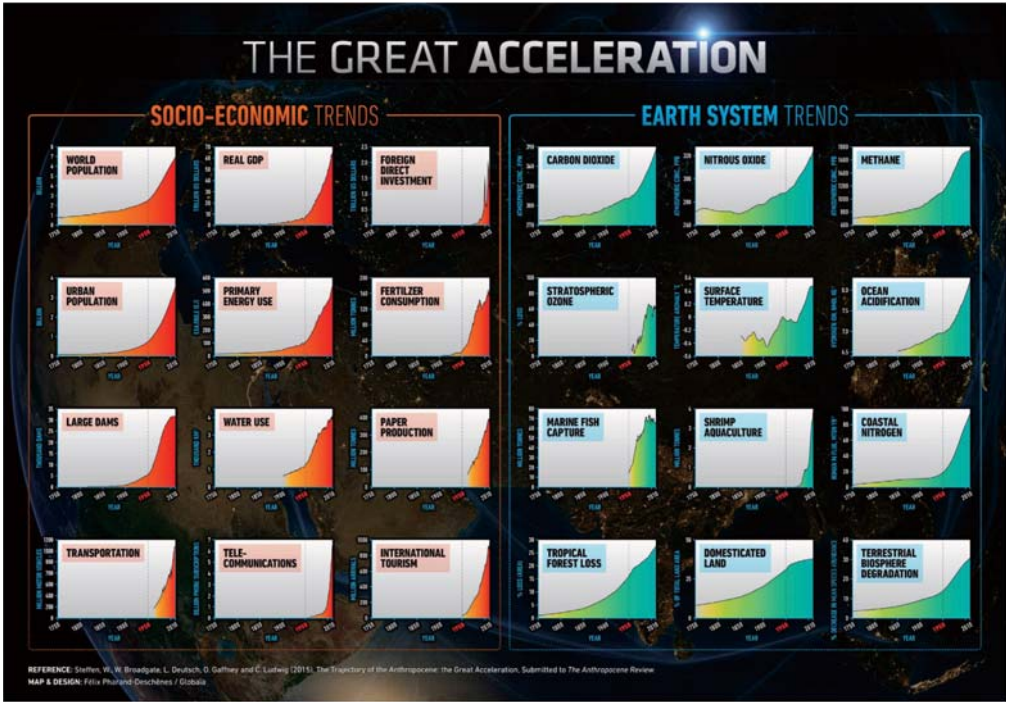

Figure 1.1 The great acceleration Source: Steffen et al., 2015

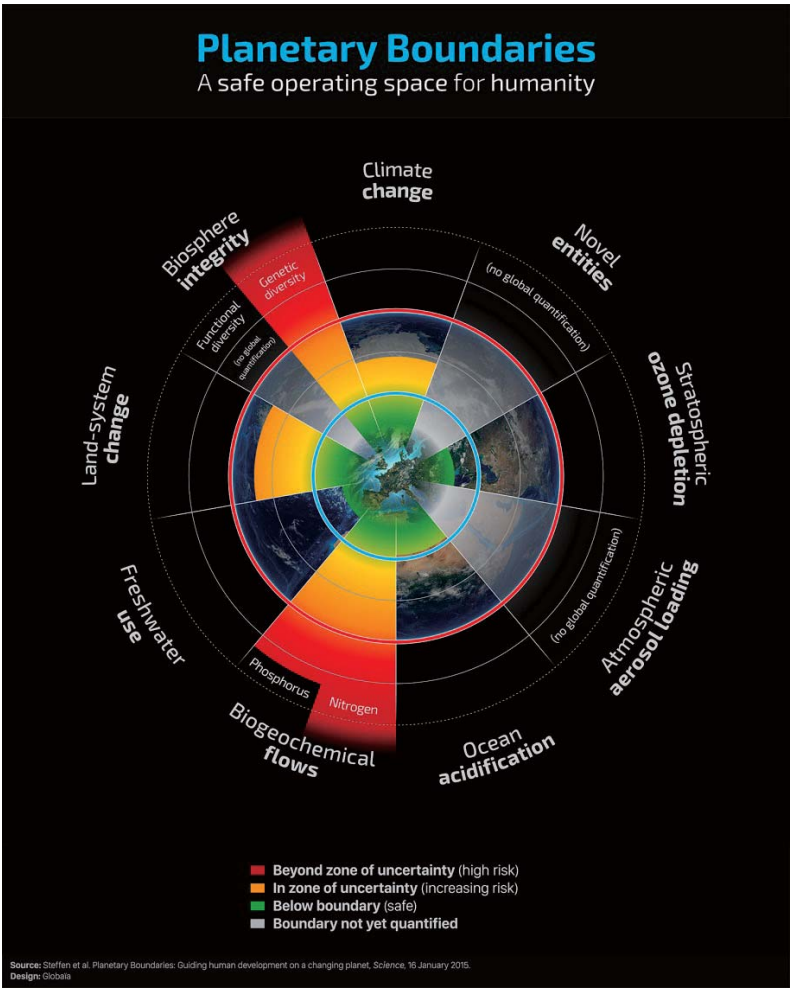

Figure 1.2 Planetary boundaries Source: Steffen et al., 2015

Scientists' work on planetary boundaries has been accompanied by more attention to the social dimensions of development. The most noteworthy attempt to link these social and environmental dimensions is often referred to as the Oxfam donut (Raworth, 2012). The donut shows the planetary boundaries that humanity needs to stay within, and combines these with social limits that are preconditions for well-functioning societies

and human wellbeing. Accordingly, the lower limits are the social foundation that serves as the developmental baseline below which populations face extreme poverty and deprivation. The upper limit is an environmental ceiling above which populations threaten to irreversibly exhaust natural resources and damage ecosystem services. The task for societies is to navigate a path within this "safe operating space"—focusing available resources and human ingenuity to a much greater extent on unmet essential needs while simultaneously ensuring that the aggregated impact on the planet stays within safe limits, considering uncertainties by taking a precautionary approach. Steering development along such a path of moderation is a challenge for the whole world. The question is how this can be done.

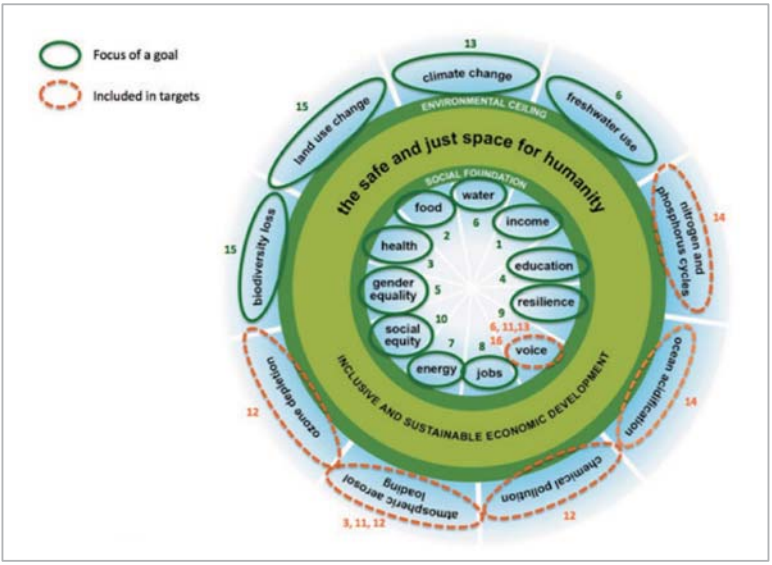

Figure 1.3 The Oxfam donut Source: Raworth, 2014

Some have underlined that the key to staying within the safe operating space is ensuring the three aforementioned dimensions of development balance on a sound foundation of *governance*. Sachs (2013), for instance, argues that achieving "the three bottom lines" of sustainable development are contingent on good governance. But improving governance requires careful deliberation on how governments, businesses and civil society organisations can work together to move

from varying starting points to more sustainable destinations. The literature on governance can shed some light on the thinking and experience that can steer the world safely within limits.

3 Governance for sustainable development

The concept of governance predates the introduction of sustainable development by millennia (Plato, 1991). Its modern-day renaissance owes to a desire to improve the efficacy of public services and private investments in line with mainly neoliberal development policies in the early 1990s (i.e. protection of private property rights) (Williams & Young, 1994; World Bank, 1993). In the past two decades, definitions of governance have expanded from not only supporting free markets but enabling pursuits of other development priorities, including preserving the environment. While an exhaustive review of the governance literature is beyond the scope of this chapter, three strands are particularly relevant: 1) a political economy view; 2) an international institutionalism view; and 3) a multi-level and multi-stakeholder governance view.

The first strand focuses primarily on how the features of governments at the national level can enable socioeconomic development. A recurrent theme is why some countries develop faster—albeit not necessarily more sustainably—than others. Some of this literature traces the differences in development to relatively narrow institutional innovations such as the protection of private property rights (North & Weingast, 1989). Others have taken a broader view of desirable features of governments. The World Bank's Worldwide Governance Indicators (WGI), for instance, capture properties of governance such as rule of law, controls on corruption, and regulatory quality that would *prima facie* seem good for development. These properties are then captured in quantitative indicators that can be used to identify correlations with various development outcomes (see Chapter 2). To illustrate, a sizable literature examines the impact of corruption on countries' development prospects (Campos, Dimova, & Saleh, 2010).

A second view on governance focuses on the interactions between multilateral environmental agreements and national governments. Much of that literature has analysed the extent to which designs of international institutions have elicited compliance with their key provisions (Andersson & Ostrom, 2008). A typical set of these "compliance" arguments underlines that well-designed international institutions can influence three

C's: 1) domestic concerns over environmental issues; 2) financial, institutional and technical capacities to adhere to an agreement; and 3) the overall contracting environment in which the agreement is implemented, including mechanisms for monitoring progress (Haas, Keohane, & Levy, 1993). Others have noted that an agreement's design has some influences on compliance, but the nature of the problem, the interests of countries, and other factors outside the agreement's design itself can play an even greater role in its performance (Mitchell, 2003).

A third and final school of thought also argues for looking beyond whether and why governments comply with international agreements. In adopting this broader view, it observes some of the most innovative solutions to environmental problems involve "collaboration" between governments, the private sector, and civil society. Proponents of collaborative governance have highlighted the potential for an iterative collective problem solving process to identify solutions to shared concerns (Ansell & Gash, 2008). A sub-branch of this strand known as multi-stakeholder, multi-level governance suggests that solutions increasingly involve various stakeholders collaborating within and across different levels of decision making (Meuleman, 2008). For instance, climate change solutions can be identified and transmitted through emergent networks of cities that crosscut traditional boundaries of statecraft horizontally and diagonally (Andonova, Betsill, & Bulkeley, 2009). Another approach sharing some of these core features is known as polycentricism. The polycentric perspective stresses that different actors at different levels play unique roles in identifying, implementing and assessing collaborative solutions; moreover, the locus decision-making power shifts from different actors at different levels during different junctures of this process (Andersson & Ostrom, 2008), (see Chapter 3). Much of the collaboration literature also intersects with a branch of studies on sustainability transitions that require aligning varying actors to identify and scale up innovative solutions at niche, regime and landscape levels (Frantzeskaki, Loorbach, & Meadowcroft, 2012; Lachman, 2013).

Some of the most innovative solutions to environmental problems involve "collaboration" between governments, the private sector, and civil society

The three main approaches to governance outlined above—political economy, international institutions and multi-stakeholder

collaboration—take an important step forward in elucidating the main actors, the primary means and ultimate aims of governance. For instance, the political economy view tends to underline the requisite functions of national governments for achieving a variety of development objectives. The international institutions' view features the interplay between international agreements and national governments in the pursuit of compliance. The multi-stakeholder governance perspective shines a light on the role of an expanding web of actors and means that can locate and bring to scale collaborative solutions. But while the actors, means and ends in these approaches differ, collectively they offer important insights in how governance can help close persistent implementation gaps.

More specifically, closing the implementation gap might require national governments possessing several essential properties; international agreements strengthening the three C's with a view toward compliance; and multiple stakeholders at different levels collaborating and spreading innovative solutions.

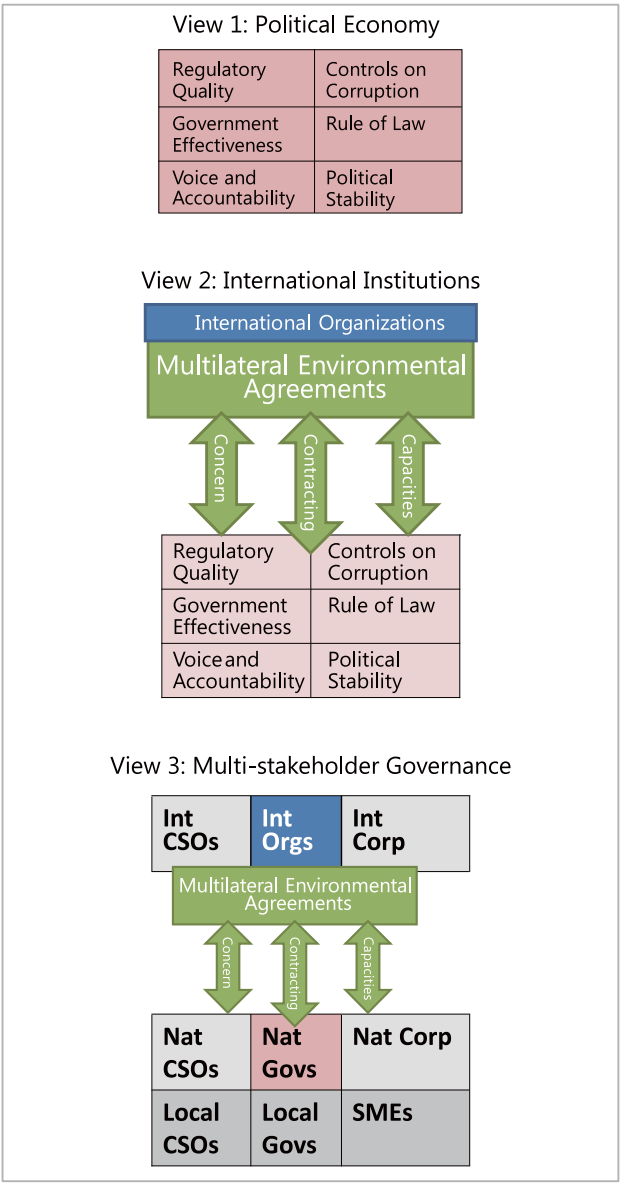

Figure 1.4 Analytical framework: Three views on governance
Source: Authors

A critical question is whether the three views reflect what is already happening or should happen to improve governance for sustainable development. To a certain extent, they reflect progress. From UNCHE to UNCED to JPOI, there has been a growing emphasis on optimising the work of national governments, strengthening the design of international institutions, and enabling collaboration between multiple stakeholders at different levels. Moreover, there were also attempts under the MDGs to support national governments, sharpen the activities of international institutions, and align varied actors to achieve goals under a global partnership for development. Further and as mentioned previously, the SDGs will likely have a governance goal, an MOI goal, and separate governance and MOI-related targets that could draw upon and then extend this progress for the next 15 years.

But to a certain extent, the three views reflect the need for improvement. From UNCHE to UNCED to JPOI, questions remain over the desirable features of national governments, the design of international institutions, and how multiple stakeholders at different levels can collaborate. Similarly, achieving the lone MDG on environmental sustainability was hampered by ill-equipped national governments, poorly designed international institutions, and misaligned incentives for collaboration. Furthermore, there remains limited thought on how these three views could build upon and mutually reinforce each other under a set of SDGs that are intended to be aspirational, transformational and integrated. Last but not least, there is an as-yet unmet need to bring these three views to bear on both governance across and then within particular sectors. This book thus fits into a growing need to relay the lessons of the past with a view toward improving governance for sustainable development. The remainder of this chapter reviews how the other eight chapters of this book work towards that end.

This book fits into a growing need to relay the lessons of the past with a view toward improving governance for sustainable development

4 Overview of the following chapters

Chapter 2 draws upon political economy literature to determine which aspects of governance led to progress on MDGs. Employing a quantitative approach to identify correlations between aspects of good governance and MDG progress, the chapter finds that countries with more effective governments and stronger rule of law experienced the greatest success with the MDGs. The chapter also underlines that government effectiveness and rule of law tend to be correlated with controls on corruption, suggesting that the former may lead to improvements in the latter. While coming to these conclusions, the chapter also notes the need to consider a significant difference between the MDGs, which were mainly organised around single-issue objectives and the SDGs, which are intended to be more holistic and integrated.

Chapter 3 draws upon the literature on institutions and sustainable development governance to analyse how references to different forms of governance and MOI have evolved over time in key intergovernmental documents on sustainable development. Based on relevant scholarly literature, it makes a distinction between two forms of governance: 1) top-down compliance-driven governance, and 2) collaborative governance employing softer voluntary engagement of various stakeholders. Using text analysis and qualitative analysis, the chapter shows that there has been a notable increase in references to both compliance-driven and collaborative forms of governance. The chapter further shows that these trends are mirrored in literature that increasingly calls for complementarities between compliance and collaborative forms of governance. It concludes that it will be critical for national governments to capture these complementarities.

Chapter 4 focuses on a critical but contested MOI: financing. The chapter underlines that much of the discussion of international development finance has concentrated on the quantity as opposed to the quality of finance. By looking at the quality of finance the importance of monitoring the use of finance comes more clearly into view. From there the chapter contends that monitoring both the supply and use of finance will be critical to enhancing accountability in the post-2015 development agenda.

Chapter 5 surveys a growing body of literature and practice that underlines that quality education is essential to sustainable development. Few other areas offer as great a return of investment in terms of

development outcomes. As such, the inclusion of education in the SDGs and post-2015 development is much welcomed. Further, the inclusion of quality education needs not to be seen as simply a goal in itself but also an essential MOI for other SDGs. This multi-dimensional framing will help policymakers at different levels to better envisage the pivotal role for quality education and reduce the likelihood that some of the less quantifiable elements of quality education are not cut from budgets, policy agendas and curricula. The chapter also elaborates on critical MOI that can help strengthen quality education in a future development agenda.

Chapter 6 argues that the key to making water systems more secure is an integrated perspective that positions water at the core of the SDGs. Failure to operationalise an integrated perspective could have ramifications for several areas, including food, health, energy and environment. It then contends that operationalising an integrated perspective goes beyond simply recognising water management's inherent complexities. These complexities have been well-documented in calls for integrated water resources management (IWRM). Moving beyond IWRM requires policies and practices that leverage synergies between water and other sustainability objectives. However, which synergies countries pursue will vary depending on the importance they attach to: 1) improved access; 2) enhanced efficiency; and 3) systems transformation. Governance arrangements that engage multiple stakeholders at multiple levels will become more critical as countries shift their emphasis from the first to the third set of above priorities.

Chapter 7 maintains that the SDGs will aim to strengthen the coverage of biodiversity as previously included under MDGs, but also the Convention on Biological Diversity (CBD) and the Aichi Targets. While the chapter acknowledges the possibility of duplication of the CBD and the Aichi Targets (especially reporting mechanisms) the rapid decline of biodiversity necessitates an integrated approach with other goal areas as well as the elevated status and heightened awareness on the issues that the SDGs could potentially deliver. In short, the added value of the SDGs requires finding complementarities with existing legal instruments in international efforts to conserve biodiversity.

Chapter 8 suggests that an energy SDG should offer a long-term ambitious vision and serve as an inspiring reference for national level target-setting. Within this ambitious vision, countries will need to set their own national energy targets and action plans. While targets and actions

will need to be tailored to national circumstances, the energy SDG should encourage countries to pay varying degrees of attention to four key challenges: 1) energy access; 2) energy efficiency; 3) the share of renewable energy; and 4) reduction in energy consumption. To help implement the energy SDG, the chapter recommends enabling reforms such as feed-in-tariffs (FITs) as well as reallocating government subsidies from fossil-fuels to renewable energy and energy efficiency. Last but not least, it maintains that in order to avoid exceeding the two degree temperature increases (over pre-industrial levels) national follow-up processes need to introduce targets for reduced energy consumption in high-income countries.

The book proposes a broadening of research methods to actively involve multiple stakeholders in the generation of research outputs, with a focus on partnerships, and on effective multi-stakeholder participation

Chapter 9 summarises the main conclusions of the book and proposes topics and roles for the research community. It proposes a broadening of research methods to actively involve multiple stakeholders in the generation of research outputs, with a focus on partnerships, and on effective multi-stakeholder participation. These elements are likely to become important parts preconditions for turning aspirational goals and targets into local and national actions.

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2

How governance affected progress on the Millennium Development Goals: A quantitative analysis

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Eric Zusman

1 Introduction

In recent years, the international development community has proposed a range of reasons why good governance contributes to socioeconomic development. Multilateral banks endorse good governance agendas to improve contract enforcement and lending performance; civil society organisations initiate good governance campaigns to curb corruption and enhance transparency; and national governments undertake governance reforms to shore up legitimacy and bolster administrative capacities. In recent years, the international development community has also subscribed to the view that the Millennium Development Goals (MDGs) have helped the promotion of socioeconomic development. By focusing the work of development banks, civil society organisations, and national governments on a clear set of policy targets and funding priorities, the MDGs helped improve childhood health, combat disease, increase educational access, and achieve other long-held objectives. A logical but difficult question is whether and to what extent governance contributed to progress with the MDGs.

The MDGs helped improve childhood health, combat disease, increase educational access, and achieve other long-held objectives

The reason that this question is difficult involves the challenges of specifying what aspects of governance mattered most for performance on the MDGs. The widespread appeal of governance often comes at the expense of clarifying why and how governance contributed to a particular goal. This chapter employs a statistical technique known as multivariate regression to help shed light on which different elements of governance contributed to cross-national differences in progress with MDGs. The chapter uses regression to test hypotheses on possible associations between national progress on the MDGs and indicators on four features of governance: 1) voice and accountability; 2) government effectiveness; 3) rule of law; and 4) control of corruption. The results indicate that "government effectiveness" and "rule of law" were positively correlated with progress made on the MDGs. As such, international organisations may want to devote more resources to building public institutions and strengthening legal systems when supporting the implementation of the SDGs. The chapter also argues that the findings on the MDGs should be

extrapolated to the SDGs with care. The proposed integrated, transformational and universal nature of the SDGs may require moving beyond strengthening public institutions and legal systems to enabling multi-stakeholder engagement. This is bound to entail a different set of skills and competencies (discussed in greater detail in Chapter 3).

2 Governance and the MDGs

Good governance is frequently held up as being an essential enabler of development. But the extent to which governance actually strengthens implementation of development policies requires delineating what makes governance good. International negotiations have often underlined the virtues of governance while leaving these details undefined (Doornbos, 2001; Weiss, 2000). Some have given these details greater definition by highlighting common themes in international organisations' proposals for improving governance in the future development agenda. These include "legitimacy, rights-based and access issues, as well as well-functioning institutional frameworks that can address crosscutting development issues" (Olsen and Elder, 2013). Others have argued persuasively for "good enough governance," noting that developing countries may lack the capacity to take forward an overly ambitious governance agenda (Grindle, 2004, 2007).

Good governance is frequently held up as being an essential enabler of development

One way of defining the key attributes of governance draws from the political economy literature. Studies in this literature often use quantitative methods to analyse the correlations between a set of governance-related causes and development results. A conventional line of argument in this work is that when countries have less corruption, more democratic institutions, stronger rule of law, and more effective public agencies, they tend to do better on a range of development outcomes (Acemoglu & Robinson, 2006; Barro, 1997; Brown & Mobarak, 2009; Chaudhury, Hammer, Kremer, Muralidharan, & Rogers, 2006; Dzhumashev, 2009; Gamble, 2003; Gupta, Davoodi, & Alonso-Terme, 2002; Mauro, 1995; Meltzer, 1981; North, 1991; Sen, 1981, 1999; Weber, 1979). To date, however, this line of reasoning has not been used to assess the performance on the MDGs. The World Bank's World Governance Indicators (WGIs) are well-suited for such an analysis. The WGIs are based on the views of experts,

policymakers, business people and representatives of civil society, and are reported in 32 data sources. These views and data are then used to construct indicators for six functional properties of governance. The definitions of four of the six key properties used in this chapter are displayed in Box 2.1[1].

[1] The other two properties, political stability and regulatory quality, were not included because there is relatively little debate about the positive effects of stability and relatively little literature on regulatory quality. Further, runs of the models used in this study revealed that neither set of indicators had a discernible effect on progress with the MDGs.

Definitions of Governance Indicators

1. Voice and Accountability (VA) – measured by perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

2. Government Effectiveness (GE) – measured by perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

3. Rule of Law (RL) – measured by perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

4. Control of Corruption (CC) – measured by perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

The WGI draws on four different types of source data:

- Surveys of households and firms
  (9 data sources including the Afrobarometer surveys, Gallup World Poll, and Global Competitiveness Report survey)
- Commercial business information providers
  (4 data sources including the Economist Intelligence Unit, Global Insight, Political Risk Services),
- Non-governmental organizations
  (11 data sources including Global Integrity, Freedom House, Reporters Without Borders), and
- Public sector organizations
  (8 data sources including the CPIA assessments of World Bank and regional development

Source: World Bank, http://info.worldbank.org/governance/wgi/

Box 2.1 Definitions of the World Bank's worldwide governance indicators

The next section of the chapter outlines some of the main arguments

from studies that associate these four key WGIs with various development outcomes. The claims in this literature are largely — albeit not perfectly — aligned with the tests in subsequent sections of the chapter. They therefore provide a sense of possible associations and supporting logic between four key governance indicators and measures of development.

2.1 Voice and accountability

The WGI receiving arguably the most attention is voice and accountability. This is largely because accountability and transparency are two defining features of a democracy, and there is a sizable body of literature on the links between democracy and development (Acemoglu & Robinson, 2006; Brown & Mobarak, 2009; Chaudhury et al., 2006; Helliwell, 1994; Levine & Renelt, 1992, 1992; Meltzer, 1981; Mukherjee & Chakraborty, 2010; Przeworski, 2000; Sen, 1999, 1981). Some studies argue that more accountable and transparent political systems create stronger incentives for decision-makers to pursue development goals (Brown & Mobarak, 2009). Others suggest that democracy is good for development because it targets the needs of the poor. Sen, for instance, maintains that democratic elections provide the poor with opportunities to punish governments that fail to enable access to adequate food, shelter, and other essential goods and services (Sen, 1981, 1999). These claims are often supported by literature that suggests that democracies generate more public goods and redistribute income more evenly because the electoral process motivates officials to spend revenues on education, health and other critical goods and services; autocratic governments face no such referendum on their performance (Acemoglu & Robinson, 2006; Chaudhury et al., 2006; Meltzer, 1981).

Studies suggest that development increases the demand for democratisation rather than the other way around

Some studies, however, have found an inverse relationship exists between development goals and democracies – that is, development increases the demand for democratisation rather than the other way around. For instance, Mukherjee and Chakraborty (2010) note that development fuels demand for a responsive and transparent regime. Others are even less convinced of an association between democracy and development. For those subscribing to this more skeptical view, a frequently-heard rejoinder

is that democracy benefits higher income groups since the benefits of investing in social welfare accrue to politically active middle- and upper-income groups but the less privileged do not receive these benefits. A comparable line of reasoning suggests that part of the explanation for this inequality stems from the incomplete information on government policy and social polarisation (Ross, 2006).

2.2 Controls on corruption

The effect of corruption on development outcomes is also important when assessing the effectiveness of governance. Corruption has been found to have a negative influence on economic growth (Mauro, 1995), income inequality (Gupta et al., 2002) as well as education, health and other development indices (Dzhumashev, 2009). Gupta et al. (2002) demonstrate that high and rising corruption increases income inequality and poverty by undermining economic growth; the progressivity of the tax system; the level and effectiveness of social spending; the formation of human capital; the distribution of asset ownership; and access to education. Others have pointed to a similar result through a different causal logic. Illustrating this alternative perspective, Mauro concludes that corruption (institutional inefficiency) lowers investment and thereby suppresses economic growth in an analysis of subjective indices of corruption, red tape, judicial system efficiency, and various categories of political stability (Mauro, 1995).

A related body of work focused chiefly on institutional channels through which corruption operates (Everhart, Vazquez, & McNab, 2009; Pellegrini & Gerlagh, 2004). Pellegrini and Gerlagh, for example, conducted one of the first empirical studies that attempted to examine the effect of corruption on different aspects of economic growth. Everhart et al. observed that the direct effect of corruption on economic growth measured in terms of per capita GDP is difficult to discern, while the indirect effects of corruption (through private investment, the quality of bureaucracy and public investment) are more clearly visible (Everhart et al., 2009). Therefore, corruption may have both negative and/or positive effects on economic growth depending upon how one examines the relationship. An alternative – and somewhat controversial– view is that corruption, or the use of public funds for private means, "greases the wheels" of change, improves government performance, and stimulates economic growth. For instance, Leff (1964) and Huntington (1968) claim that corruption might raise economic growth through two main

mechanisms: 1) "speed money" that helps individuals to avoid bureaucratic delay, and 2) "bribes" which motivate workers to work harder (Huntington, 1968).

2.3 Government effectiveness

A third category of possible causes relates to the government capacities to provide essential goods and services. Effective governments usually perform better on development outcomes thanks to efficiency in the delivery of public services. Effective governments are known to offer not only higher quality public services, but attract investment, encourage human capital accumulation, use foreign aid more efficiently, accelerate technological innovation, and increase the productivity of government spending (Gupta et al., 2002; Mauro, 1995). Effective governments are also more capable of introducing reforms that promote development, although in some cases the potential to push forward reforms is not good for development. Such cases could include, for example, imposing taxes to seize revenues for a self–interested leadership (North, 1981).

Effective governments are also more capable of introducing reforms that promote development

A related contention is that effective governments might only be motivated to pursue development-friendly outcomes when they are compelled to do so by other dimensions of governance such as democratic elections, a free press, or other political and cultural factors. Studies assessing the correlation between per-capita income and government performance find that ethnolinguistic heterogeneity and the use of a more interventionist legal system, such as socialism or French civil law, predicted inferior government performance, which may, in turn, impair development (La Porta, Rafael, Florencia Lopez-de-Silances, Andrei Shleifer, 1999).

2.4 The rule of law

The rule of law – the fourth and final WGI examined in this chapter – has been portrayed as an enabler of economic development. This is largely because it protects property rights, guarantees fair and credible contract enforcement, supports the enforcement of labour laws, and provides

checks on government and judicial independence. These characteristics are particularly useful for curbing government predation that can undermine economic growth. Similar to the discussion of government effectiveness, this reasoning underlines that sometimes holding back government is crucial for economic performance. Weber, Barro and North emphasise that the legal system's protection of property rights and enforcement of contracts lowers the transaction costs involved in exchanges and allows resources to be transferred to those who can use them most productively (Knack & Barro, 1998; North, 1981; Weber, 1979).

Slightly different views on this matter stress the variant effects of rule of law among countries. These varying effects occur because the legal traditions of particular countries may be rooted in unique culture, history, politics, institutions and conceptions of justice (Berg & Desai, 2013). Haggard and Tiede, for example, suggest that the fundamental constraints on growth that often exist in developing countries are the inability to provide law and order in the most basic sense, which often results in state failure and weak governments (Haggard & Tiede, 2011). Berkowitz et al. also shows that countries that have developed legal orders internally, adapted transplanted law, and/or had a population that was already familiar with basic principles of the transplanted law have more effective legality than countries that received foreign law without any similar predispositions. The relative ease of this transplanting process has a strong but indirect effect on economic development via its impact on legality (Berkowitz, Pistor, & Richard, 2000).

Table 2.1 Summary of literature review

Authors	Independent Variable	Dependent Variable	Summary
Sen A. 1981, 1999	Democracy	Politicians' behaviour	• Democracies provide for free elections and protections on press freedoms that hold politicians accountable for meeting basic needs and providing public goods.
Nazmul, 2006	Democracy	Education/ Health systems	• Democracies have higher levels of accountability, leading to greater expenditures on education and health.
Brown and Mobarak, 2009	Democracy	Regime type	• Development increases the demand for democratisation rather than the other way around.
Ross, 2006	Democracy	Income levels/inequality	• Democracy benefits the wealthy, and the benefits of investing in social welfare accrue to more politically-active, wealthier groups. • The provision of incomplete information related to government policy and social polarisation common in democracies creates greater inequality.
Mauro, 1995	Corruption	Economic growth	• Corruption (institutional inefficiency) reduces investment levels and slows economic growth.

Gupta et al., 1998	Corruption	Income inequality	• High levels of corruption increase the progressivity of the tax system, reduce the level and effectiveness of social spending, undermine the formation of human capital, and cause unequal distribution of asset ownership and access to education.
Dzhumsashev, 2009	Corruption	Education and health	• Corruption gives rise to significant inefficiencies in the public sector, which curtails spending on education and health.
Leff, 1964 and Huntington, 1968	Corruption	Economic growth	• Corruption can have virtuous effects on the economy through two mechanisms: 1) "speed money" that enables individuals to avoid bureaucratic delay; and 2) "bribes" which motivate workers to work harder.
Pellegrini and Gerlagh, 2004	Corruption	Economic growth	• The effect of corruption is statistically insignificant when controlling for private investment and other factors.
Everhart et al., 2009	Corruption	GDP per capita	• The direct effect of corruption on GDP per capita is difficult to see clearly; the indirect effect of corruption is more noticeable on private investment and the quality of governance, including quality of bureaucracy and public investment.

North 1991, Mauro 1995 and Gupta et al., 2002	Government effectiveness	Public services delivery	• Effective governments are better equipped to protect property and thereby encourage greater private investment. • Effective governments produce higher levels of political stability and more efficient bureaucracies. • More stable and efficient governments tend to be associated with many factors that enable growth such as human capital accumulation and technological innovation.
Weber 1979, North 1991	Rule of law	Economic development	• The legal system's protection of property rights and enforcement of contracts lowers transaction costs; this eases exchange and allows resources to flow to more productive investors.
Barro 1997	Rule of law	Economic development	• Formal institutions, including democracy and bureaucratic quality, have a less significant effect on growth than adequate protection of property rights.
Haggard 2011	Rule of law	Economic development	• The rule of law not only places restraints on the capricious use of state power but limits the reach of the private sector into public affairs.

3 Hypothesis testing and regression analysis

One way of exploring whether and to what extent the above effects influenced performance of the MDGs is hypothesis testing. Hypothesis testing involves positing a set of plausible cause-effect relationships and then determining whether the proposed associations are borne out in actual data. A useful method for testing hypothesis is multivariate regression. Multivariate regression can help determine whether and to what extent quantitative measures of key properties of governance (captured by the World Bank governance indicators) correlate with quantitative measures of performance on the MDGs. In the language of regression, the possible causes are known as independent variables (in this case, the WGIs) and the possible effects are known as a dependent variable (in this case, progress on the MDGs).

The independent variables used in the study covered four WGIs: 1) voice and accountability; 2) government effectiveness; 3) rule of law; and 4) control of corruption. Each of these variables were rescored on a 0 to 5 scale (from their original -2.5 to 2.5 scale), with 5 representing the higher, more desirable level and 0 representing the opposite. To ensure that the governance scores track with the period during the implementation of the MDGs, each score was based on per country average taken between 1996 and 2011. The MDG Progress Index (initially developed by the Center for Global Development in 2010 and then updated for 2011) is used for the dependent variables. The index is made up of trends of how individual countries fared against eight core MDG targets based on 2009 and 2010 data. The MDG Progress Index scores countries on whether they are on track (1 point), made some progress (0.5 points), or no progress (0 points) for 7 of the MDGs. Deficiencies in the data continue to make tracking progress on the MDGs difficult and sensitive to missing data, revisions and retractions; however, the MDG Progress Index deals with these possibilities by reporting both an overall and adjusted score that is designed to avoid penalising countries with missing data. Both of the models used in the study included data from 141 developing countries on the MDGs.

The results of the regression analysis are reported in Table 2.2. Variations of the models were employed in previous research; the results from those additional models did not dramatically depart from those reported in Table 2.2. The main finding from the regressions is that "government effectiveness" and "rule of law" appear to have a positive impact on

progress with the MDGs (World Bank, 2014). More concretely, government effectiveness is associated with a coefficient value of 1.23 and p-value just below the 0.05 significance threshold. In non-technical language, the effect of government effectiveness is likely to be positive and unlikely to be due to random associations in the data. Another notable effect involves the rule of law; the coefficient for this has an estimate of 1.39 that is below the 0.05 significance level. Similar to government effectiveness, rule of law is likely to be positive and unlikely to be due to chance alone. Government effectiveness and rule of law hence appear to have a clear effect on progress with the MDGs. For instance, if a country improved its rule of law or government effectiveness by a score of one, this could have the equivalent effect of increasing their MDG progress score by nearly one point. This could be the difference between making no progress and being on track for achieving one of the MDGs.

Table 2.2 Regression results

Variables	Estimated Coefficients/ Standard Errors
Intercept	2.71*** (0.48)
Voice	-0.50* (0.24)
Corruption	-1.41* (0.52)
Law	1.39 ** (0.50)
Effectiveness	1.23* (0.45)
R^2	0.18

Note: *The "intercept" refers to the estimated value on MDG progress when all of the effects of the WGIs equal zero. This is equivalent to the base case when there is no governance. It also suggests that there are other factors that affect MDG progress beyond governance.*

The standard errors of the estimated coefficients for the independent variables are listed in parentheses.

*Significance values are coded as such: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1. The significance suggests the likelihood that the estimated coefficient might actually equal zero. As such, the lower the significance value, the less likely that the actual coefficient would be equal to zero.*

The R^2 is a measure of what percentage of the variation in MDG progress is explained

by all of the WGIs. While it used to be convention to aim for high R2 , this is no longer the case. Instead more attention is placed on whether and to what extent the independent variables are associated with the dependent variable.

Data: Center for Global Development, MDGs Progress Index 2011; World Bank Governance Indicators, 2012.
**For countries without data in the period of 2009-2013, the score is taken from available data; Belize (2011), Cuba (2011), Djibouti (2007), Libya (2009), Syrian Arab Republic (2007), Myanmar (UN data, 2011).*

The study also produced some surprising results; namely that the control of corruption and voice and accountability seem to have muted and/or had a counterproductive effect on achievement of the MDGs. These findings should nonetheless be treated with caution in a few respects. The first is that many of the WGI are correlated with each other. When there are strong correlations between the independent variables this can weaken or even alter the sign of the effect with a dependent variable. The second consideration is that voice and accountability and controls on corruption may not be essential for making progress on the core development priorities in the MDGs. For many of these priorities, having strong institutions and a credible legal system may be essential first steps. The pursuit of more integrated and aspirational goals like the SDGs may require increased voice and accountability to a greater extent than the MDGs, because of the possible trade-offs between different SDGs. A third consideration is that the WGIs for voice and accountability and controls on corruption may capture a bundle of related institutional factors that do not all correlate positively with development needs. In consequence, they may miss some of the narrower instruments such as a free press that make up the variables. Hence there may be a need to further unpack governance indicators.

4 The way forward

In sum, the study findings are largely consistent with the development literature, namely, that government effectiveness and rule of law appear to have a positive impact on progress with the MDGs. Several policy implications follow from these findings. First, rule of law seems to have an important impact on achievement of the MDGs. Second, government effectiveness may also be a useful area to target for improving governance — enhancing the quality of public institutions may engender positive developmental outcomes.

An area for potentially fruitful research would be expanding the scope of governance to look more broadly at the role of actors outside of governments. A fast growing body of literature on multi-level, multi-stakeholder governance underscores the diversity of actors that play important roles in delivering global and local public goods (Hooghe & Marks, 2001). Of particular importance for the post-2015 development agenda would be how interactions between the public and private sector and a growing variety of means of implementation (MOI) influence development outcomes. These issues are discussed in greater detail in the next chapter.

Rule of law seems to have an important impact on achievement of the MDGs— enhancing the quality of public institutions may engender positive developmental outcomes

Parts of this chapter have been published earlier as an IGES publication in: Miyazawa. I., & Zusman, E. (2015). *A Quantitative Analysis of the Effect of Governance on the Millennium Development Goals (MDGs): Implications for the Post-2015 Development Agenda.* IGES Discussion Paper No. 2014-02. Hayama, Japan: Institute for Global Environmental Strategies.

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3

Trends in the international sustainable development policy discourse: Compliance, collaboration or both?

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1 Introduction

A long-running debate revolves around which forms of governance are optimally suited to realising sustainable development. Much of the relevant literature diverges on the relative merits of compliance-based governance, based mainly on governments' employment of hard policy tools, or collaborative forms of governance, where governments work mainly with softer approaches such as voluntary agreements and partnerships. More recently, this literature has converged on arguments that these two forms of governance are complements rather than substitutes. National governments can enable multi-stakeholder collaboration while at the same time mandating top-down compliance. This literature, however, often draws its conclusions from a limited selection of cases over short periods of time. Surveying a longer history of intergovernmental documents from milestone meetings and other high-level policy documents can help clarify whether international negotiations on sustainable development reflect the trend towards increasing complementarities between compliance and collaboration.

International negotiations are increasingly encouraging governments to employ collaboration with various stakeholder groups

This chapter employs a combination of qualitative and quantitative methods to shed light on these trends. The analysis demonstrates a steady increase in attention to compliance-based governance in key documents followed by a more recent and sharp uptick in references to collaborative governance. The chapter concludes that international negotiations are encouraging governments to employ collaboration with various stakeholder groups. As governments get ready to implement the SDGs they too will need to contemplate how expanding collaboration and partnerships with stakeholders can complement and enhance the effectiveness of conventional top-down planning and implementation. This could involve, for instance, providing non-governmental organisations (NGOs) with formal channels to shape the national SDG implementation plans, or review progress towards achieving development goals and targets. Capitalising on such potential complementarities between traditionally separate stakeholders promises to be particularly

important for capturing synergies and building multi-stakeholder alignment for action on the integrated and transformational development goals, not least for goals with cross-cutting elements such as water, energy and biodiversity that are featured in later chapters.

2 Tracing trends in sustainable development governance

Policymakers have promoted sustainable development as a response to human-caused global environmental degradation for decades. Realising a sustainable future has remained a formidable challenge over the same period. The recent negotiations over the SDGs have made the point clearly that implementing the SDGs will depend not merely on introducing new policies and sources of financing, but also on improving governance arrangements for decision-making on these issues (United Nations, 2014). The scholarly literature has also noted the importance of governance in improving policy action. A common theme in this literature is that governance is critical because it influences which actors exercise authority as well as the means through which they seek to achieve desired goals. A rough distinction can be made between governance for compliance and governance through collaboration.

Realising a sustainable future has remained a formidable challenge

Compliance was once portrayed as the overriding objective of governance due to its clear and immediate implications for implementing environmental agreements (Mastenbroek, 2005). Compliance involves two discrete but related concepts: implementation and effectiveness. Effectiveness refers to the degree to which policies solve the problem(s) they are formulated to remedy and thus often serves "as a valuable proxy for effectiveness" (ibid: 23). But compliance is only possible with mechanisms that elicit meaningful behavioural changes (Wettestad, 2001:317). For many years, compliance mechanisms consisted of administrative penalties and sanctions designed to encourage national governance to enforce policies intended to result in those changes. Over time, the types and design of mechanisms would expand to include other forms of technological, institutional, and financial incentives. These mechanisms, however, made "minimal progress on *implementation*,"

leading to a search for new approaches to governance (Humphreys, 2006: 99 - emphasis in the original; Zaelke, Durwood, Kainaru, & Kruzikova, 2005).

It was these discussions of new forms of governance that highlighted the importance of collaborating (Cadman, 2011, p. 22). Collaborative forms of governance involve more networked arrangements with a wider range of "civic and private sectors, as well as the state, in the development of policy responses" (ibid: 37). They also tend to promote more discursive and deliberative decision-making than top-down government led models. They further often favour combinations of different financial, technological and institutional means to achieve desired ends. In terms of the number of actors and the exercise of authority, collaborative forms of governance seemed to agree with sustainable development's more holistic and multi-dimensional view of development (Mackendrick, 2005, p. 22).

Table 3.1 The distinguishing characteristics of two forms of governance

Type of governance	Compliance	Collaboration
Exercise of authority	Unidirectional	Multidirectional
Main actors	National governments and international organisations	Multiple state and non-state entities
Means of implementation	Administrative penalties, financial and technological incentives	Combinations of financial technological, capacity building incentives

In contrast to the above, others have argued that collaborative and compliance forms of governance are complements not substitutes. This complementary view notes that collaboration enables multiple stakeholders to find a balance between 'soft' and 'hard' compliance mechanisms (Skjaerseth, Stokke, & Wettestad, 2006, pp. 104–105). For instance, this may include stronger verification and review systems that backstop flexible goals. Voluntary regulation reinforced by robust regulatory and policy regimes offers another example of a possible combination of compliance and collaboration (Potoski & Prakash, 2005,

pp. 246–247). The proliferation of 'co' arrangements that are anchored by governments but engage non-state actors are yet a third illustration (Cadman, 2009, pp. 98–99). This includes the intentions of the Global Partnership for Sustainable Development (GPSD), arguably a central pillar of the post-2015 development agenda.

Viewed from one perspective, these two streams of compliance and collaborative governance literature appear to be making competing arguments. On the one hand, the compliance-based governance claims stress the unidirectional top-down exercise of authority with national governments and international organisations serving as the chief actors wielding a limited set of means to achieve "effective" outcomes. On the other, the collaborative governance claims tend to underline the multidirectional flows of authority with a wider variety of actors deliberating over what combinations of means can help achieve mutually agreeable outcomes. This perspective and the related descriptions in Table 3.1 make more of the differences than the similarities between these two streams of literature.

It is often less about one particular governance-type over another, but rather about finding the right balance between the two

More nuanced views suggest that, in many cases, it is less about any single pure form of governance than identifying an ideal point on a continuum that runs from compliance to collaboration (Mackendrick, 2005; Skjaerseth et al., 2006). Though not stated explicitly in the literature, the location of that ideal point may depend upon the particular case at hand. Another such similarity is that, while much of the literature draws from empirical case studies, it also has decidedly normative orientation. Much of the literature implies which forms of governance ought to be pursued based on a review of a cross section of cases at a particular time and place in history (Andonova, Betsill, & Bulkeley, 2009; Baeckstrand, 2008; Cadman, 2009, 2011; Mackendrick, 2005; Potoski & Prakash, 2005; Skjaerseth et al., 2006) (see Table 3.2). Yet another parallel is that, due to the normative orientation and relatively selective pool of evidence, neither set of studies systematically examines how intergovernmental understandings of governance have moved along this possible continuum over time. The same set of literature that appears to be converging on the need for combining elements of both compliant and collaborative governance, offers a relatively limited view of what extent those calls appear in a broader cross section of evidence.

Table 3.2 Surveyed literature

Source	Evidence/Cases	Type of governance
Andonova, Betsill, & Bulkeley (2009)	• Theory development based on case studies	Public, private, hybrid forms of governance
Ansell & Gash (2008)	• Case studies on collaborative governance, recognising the pivotal role of governments	Collaboration
Baeckstrand (2008)	• Transnational climate governance through public-private partnerships	Collaboration, hybrids
Birnie (2000)	• UN	Lack of binding commitments
Cadman (2009)	• Global forest management institutions	Collaboration (participation, deliberation)
Cadman (2011)	• Four forest management institutions	Collaboration/ Voluntary approaches
Humphreys (2006)	• Reviews of international negotiations in the context of forest governance	Compliance, collaboration
Mackendrick (2005)	• Canadian case studies	Collaboration/ Voluntary approaches
Mastenbroek (2005)	• EU compliance regimes	Compliance

Meuleman (2008)	• Case studies of three EU countries and the European Commission	Meta-governance[1]
Lynn, Heinrich, & Hill (2002)Skjaerseth, Stokke, & Wettestad (2006)	• Theory development based on case studies of soft and hard law and interplay between different institutions	Compliance, collaboration
Wettestad, (2001)	• Institutional analysis of international regimes	Compliance
Zaelke, Durwood, Kainaru, & Kruzikova, (2005)	• Theory on strengths and weaknesses of environmental compliance within legal systems	Compliance

To a significant extent, the above three commonalities are also limitations of the reviewed sustainable development governance literature. Yet these limitations open the possibility to analyse whether and to what extent different understandings of governance have appeared at the global level. In fact, from this juncture the chapter aims to examine how much the arguments about preferred forms of governance have appeared across a relatively long period of time. Three hypotheses emerge:

[1] The author defines meta-governance as, "an approach aiming at combining and managing successful combinations of ideas from different governance styles". See: http://www.ps4sd.eu/index.php/en/themes/metagov

H1: References to governance will increase in key intergovernmental documents over time

H2: References to compliance-based governance will increase in key intergovernmental documents over time

H3: References to collaborative forms of governance will increase in key intergovernmental documents over time

3 Case selection and research methods

To examine the empirical evidence for these hypotheses the authors conducted a multi-step text analysis of nine milestone intergovernmental documents listed in Table 3.3. The documents were selected because they define the population of high-profile global texts on sustainable development. In examining these documents, the authors employed both a close-to-the-text qualitative assessment paired with a broader quantitative overview of trends. The main research steps are described in greater detail in Figure 3.1. As suggested in this figure, using a mixed qualitative and quantitative approach made it possible to select key terms that could serve as guideposts to trace broader empirical trends in the coverage of governance over time.

Table 3.3 Summary of documents analysed

Document	Summary
1972 Report of the United Nations Conference on the Human Environment	For the first time, brings developed and developing nations from East and West together to draw attention to the increasing degradation of the environment and the role of international cooperation in addressing degradation.
1987 Brundtland Report, Our Common Future	Drafted by the independent World Commission for Environment and Development, this is a strong agenda setting document that officially defines sustainable development.

1992 Agenda 21	A comprehensive and lengthy programme of work for sustainable development in the 21st century. The world's leaders approved it by consensus in Rio de Janeiro, Brazil in 1992.
1997 GA Resolution A/RES/S-19/2	Adopted in 1997 as a "...Programme for the Further Implementation of Agenda 21".
2002 Johannesburg Plan of Implementation	Builds on the outcomes of the United Nations Conference on the Human Environment, Stockholm 1972, as well as the Rio Earth Summit. Multilateralism and partnerships were two areas of emphasis in this document.
2012 The Future We Want	The main outcome document of the Rio+20 Conference in Rio de Janeiro in 2012. It reaffirmed countries' commitments to sustainable development and focused on institutional reforms necessary for sustainable development. It also set the stage for development of the SDGs.
2013 High Level Experts Panel Report on Post-2015 Development Agenda	Refers to the 2013 non-negotiated report by a panel of experts on sustainable development that convened to provide inputs to the post-MDG era.
2014 Open Working Group Proposal for the Sustainable Development Goals	Held 13 open and inclusive meetings between 2013 and 2014 in which the main characteristics of the future SDGs were debated and agreed by tacit compromise among more than 70 member states of the UN. The OWG proposal contains 17 possible SDGs with 169 targets.
2015 The Road to Dignity by 2030: Ending Poverty, Transforming All Lives and Protecting the Planet. Synthesis Report of the Secretary-General	Came out in late 2014 and summarises the achievements of the preceding OWG with its proposed goals. It outlines a way to organise the 17 goals into key areas for the sake of communicability and emphasises the importance of governance and means of implementation.

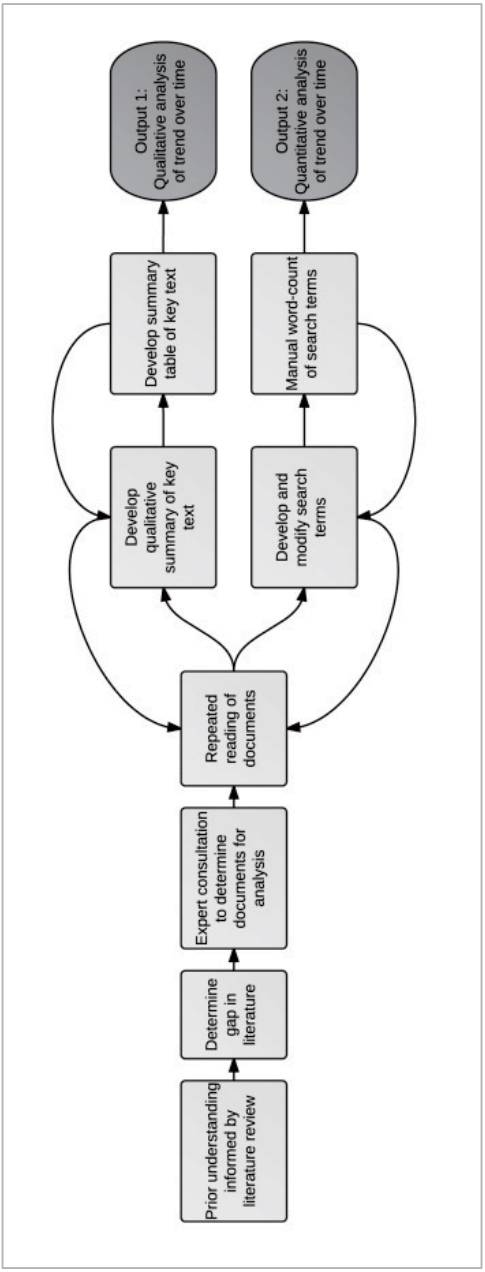

Figure 3.1 Research approach Source: Authors

3.1 Qualitative assessment

To operationalise the approach illustrated in Figure 3.1, the authors repeatedly read the nine documents to understand the trends related to the three hypotheses. Table 3.4 was then created to compile the result of a reading of the documents as Output 1 (see Figure 3.1). Before reviewing the trends, it is important to note some inconsistency in the categorisation of compliance and collaboration words. This is unfortunately unavoidable due to some degree of overlap between categories. These limitations notwithstanding, some interesting trends can be gleaned from Table 3.4 below.

Table 3.4 Key emphasis on compliance and collaboration over time

Document	Overall Assessment	
	Compliance	Collaboration
UNCHE	Focuses on equity among nations and peoples; the need for financial and technical assistance; the role of education, research and development (both from national governments and multilateral organisations); and for integrated approaches to development planning. The outcome also emphasises the need for national institutions to be created to oversee management of natural resources. It further calls for states to cooperate on developing international law to assign liability and compensation for transboundary pollution. It also calls for a cooperative spirit and for international organisations to play a coordinated and efficient role.	
	• National institutions to oversee the management of natural resources. • States to cooperate on developing international law assign liability and compensation for transboundary pollution.	• Equity • Financial and technical assistance • Integrated approaches to development planning • States to cooperate on developing international law and to assign liability and compensation for transboundary pollution • Cooperative spirit and for international organisations to play a coordinated and efficient role
Brundtland Report	Emphasises the shared global dimensions of development, cooperation and partnerships among developed and developing nations as well as countries from the East and the West. It calls for institutional change for integration of environment and development concerns and also the need for popular participation. It further reminds countries of the responsibilities of international financial institutions and international businesses. It states the need for capacity to deal with environmental issues and to fill gaps in national and international law related to the environment.	

	• Responsibilities of international financial institutions and international businesses issues • Nations to fill gaps in national and international environment law	• Cooperation and partnerships • Institutional change towards integration of environment and development concerns
Agenda 21	Highlights international, national, and local information exchanges; integration across sectors; and networks among science and businesses. It also emphasises collaboration on technology; establishing institutional frameworks for increased coherence; laws, regulations, rules, standards and incentives; and the enforcement of agreements. It further underlines the importance of data; research for tracking development; and five main MOI, including the roles of science, technology transfer, education, international institutions and financial mechanisms.	
	• Laws, rules and regulations • Enforcement • Standards and incentives • Data and research	• International, national, and local levels • Information exchange • Integration among sectors • Networks including business and science
GA Resolution A/RES/S-19/2	Highlights regional coordination among actors and the importance of finance epitomised by the International Monetary Fund and World Bank. It further points to the importance of information and communications technologies; and the roles of the United Nations and other international organisations. It also mentions regulations and commitments in a general manner and the keys from Agenda 21.	
	• Regulations • Commitments	• Coordination among actors • Information and communication technologies
JPoI	Stresses coherence between different scales of governance and reiterated the importance of science, technology and networks. It further highlights the need for partnerships involving the stakeholders and the private sector, actors such as UN, IFIs, and IOs, the role of natural and social science as well as emphasising the importance of research and development. With regards to compliance, it highlighted impact assessments, compliance with trade agreements as well as laws on fundamental access to information.	

	• Montreal Protocol (as example of compliance)	• Science and technology • Partnerships • Networks • Stakeholders and corporations • Research and development
TFWW	Emphasises international level action, science and research; and the importance of access to information as well as the role of statistical offices in tracking progress. More conceptually, it highlights the role of innovation, technology, and data. It further references the importance of certification for private sector as well as the need to curb illicit flows of money. It also points to the importance of partnerships and cooperation on finance, science and particular issue areas like health and energy.	
	• Monitoring • Control • Surveillance	• National, regional, and international • Academia, science and technology • Best practices • Information sharing • Partnerships Research • Government and UN
HLP	Emphasises all levels of governance and coherence among them, the roles of science, technology and research. References monitoring, control and surveillance.	
	• Certification • Business • Illicit financial flows	• Science • Information • Research • Statistical Offices • National agencies • Innovation • Technology • Development data

OWG	Contains approximately 74 targets that relate broadly to governance or implementation; 19 of the targets are under Goal 17—a goal that focuses exclusively on MOI—while most of the remaining 55 targets are listed as enabling targets for the other 16 goals. The OWG organises MOI (Goal 17) into seven clusters: (i) trade; (ii) finance; (iii) technology; (iv) capacity building; (v) policy and institutional coherence; (vi) multi-stakeholder partnerships, and (vii) data, monitoring and accountability. It also embeds enabling targets throughout all the SDGs.	
	• N/A	• Global • Cooperate • Partnership • Multi-stakeholder
SGs Report	Refers to governance 12 times and includes two out of five sections on implementation. It also suggests the value of volunteerism and collaboration elements.	
	• N/A	• Innovation • Participation • Inclusiveness • Cooperation • Partnerships

First, over time there is a generally greater emphasis on governance. Second, compliance-based governance words such as regulations, laws and rules receive less of an emphasis over time. Third, collaborative governance words such as partnerships; information, research, capacity and others receive greater emphasis over time. In short, the qualitative review of the documents seems to support the three main hypotheses.

Collaborative governance words that focus on partnerships; information, research, capacity and others receive greater emphasis over time

While this first step qualitative analysis of how these documents treat different forms of governance yielded interesting results, it was at times difficult to survey changes due to the myriad of details in the documents. Even with the simplifying summaries in Table 3.4, it can be challenging to see the bigger picture when looking across these documents. To get a broader vantage point, a second quantitative element was added to the analysis.

3.2 Quantitative assessment

Building on the above readings, the authors identified sets of key words relating to (i) compliance (11 key words), (ii) collaboration (17 words), and (iii) words that relate to implementation (19 words). The words that were selected contain (and build on) the governance framework for compliance and collaboration-based governance from one of the works in the literature review (Cadman, 2009) (See Annex 1 for a list of the key words). This framework is, however, elaborated by additional search words related to governance that emerged through the repeated reading of the documents as well as discussions with experts. The applied search terms are an 'approximation' of what the authors believe characterises compliance and collaboration.

In the quantitative step, manual human coding was used to count the occurrence of the search terms in the documents. As other research has argued, text analysis can be imperfect, especially in attempting to deduce the true positions of political actors (Klemmensen, Hobolt, & Hansen, 2007; Laver & Garry, 2000, p. 2). Thus, neither automated or manual word counting would replace repeated reading in conducting text-analysis (Benoit, Laver, & Mikhaylov, 2009). Reading is the only way to gain an

understanding of the overall meaning and underlining message of the text.

At the same time, quantitative text analysis has been used in several policy-related contexts where it is useful to trace trends over time, perhaps most notably in the Comparative Manifestos Project (CMP) for "expert coding of party manifestos" where it "represents a core source of information about the policy positions of political actors" (Laver & Garry, 2000, p. 1). While this form of analysis used to be a time- and labour-intensive process, the development of software and digital text has eased the burden greatly.

For the quantitative text analysis the authors searched mostly for unigrams (single words), and in some cases also bigrams and trigrams (compound-words). To execute the word count, the authors included different grammatical tenses of the search terms. In some cases, the authors also 'lemmatized' or reduced a word to its most basic form to discover all different versions in the text. When counting the occurrence of specific words, the authors represent text as data to establish 'term frequency'.

> *'Governance' in the documents has increased markedly over time*

For the manual word count in the second step of this analysis, a few general patterns stand out. First, the term frequency of 'governance' in the documents has increased markedly over time, starting at a low point of zero in 1972 to 0.085% in 2014 – this is a significant increase.

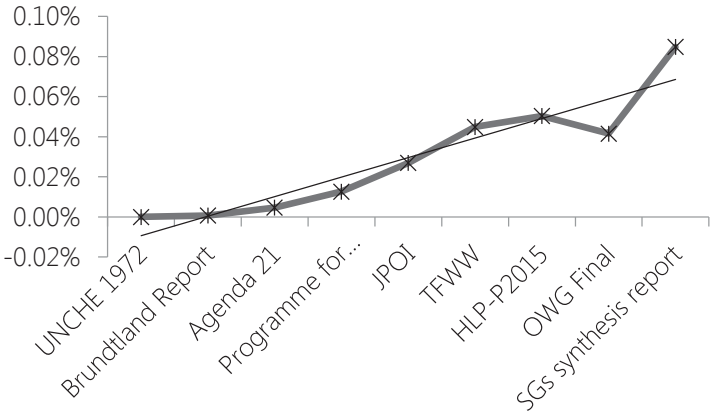

Figure 3.2 Frequency of the term "governance" over time

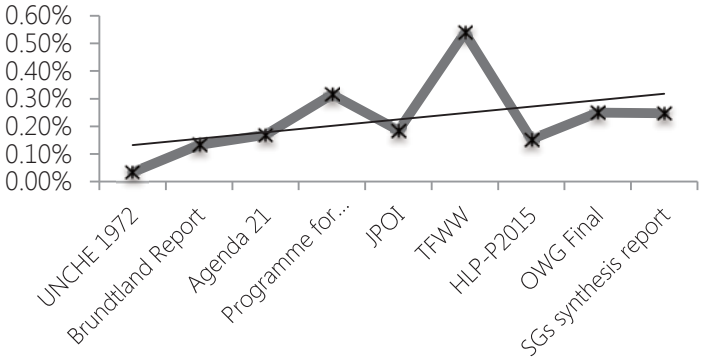

Figure 3.3 Frequency of references to compliance-based governance over time

Next, the development of compliance-focused key words in the reviewed documents is shown. Figure 3.3 demonstrates that there was a spike in compliance-based governance words in the Rio+20 outcome document to nearly 0.54% representation; this is proportional to the total word count. However, the main trend of compliance-based governance key

words increased more gradually from almost zero to over 0.2% between 1972 and 2014. The words causing this increase are 'legal' and 'commit'. The deviation around Rio+20 is caused mainly by the key-word 'commit', and when re-reading the Rio+20 outcome document two caveats become clear: 1) that governments have used this word primarily to reaffirm their political commitment to implement earlier agreements on development and sustainability - especially those that have not been implemented; and 2) that commitments do not necessarily only refer to binding and compliance-based governance, but are ambiguous and can refer to commitments to voluntary collaboration-based governance arrangements.

Strong compliance key words, such as 'mandatory', 'binding', or 'enforce' do not appear. The same goes for punitive compliance words such as 'sanction', 'fine' or 'punish'. This is not surprising, given the lack of sovereign authority of any organisation at the international level to date.

When looking at the softer key words for collaborative types of governance, the analysis shows that the most frequently mentioned words are 'partnership', 'cooperation' and 'participation'. With regards to frequency over time, collaborative governance-type words increase from just above 0.2% occurrence in 1972 to almost 1.1% in the recent synthesis report of the UNSG.

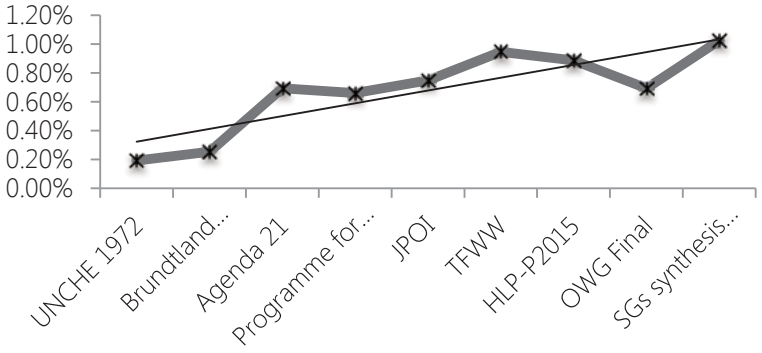

Figure 3.4 Frequency of references to collaborative governance over time

In addition, key words that could indicate effectiveness of governance outcomes such as 'dispute settlement', 'problem solving', 'behavioural change' and 'dispute resolution' (Cadman, 2009), do not occur very often in the analysed documents. It would be more encouraging if these stronger compliance-related words occurred more frequently, even if only referring to what governments should do at national levels. In this regard, the box below will make some suggestions as to how existing subnational initiatives and their collaborative partnerships can help bring the sustainable development agenda down to the local level.

The significance of local solutions for the SDGs

Author: Shom Teoh

Much like Agenda 21 spurred significant activity at the local level, the SDGs will have to be contextualised to fit specific local realities. But the SDGs agenda will not fall into a vacuum at subnational levels, because a large number of cities and municipalities are already trying to become more sustainable. Approaches to local sustainability show great diversity as reflected by the diversity of concepts used to connote sustainability, such as 'green growth', 'eco-cities', 'low carbon city', 'model cities', 'green cities', 'local MDGs', 'resilient cities'. However, since the concept of sustainability is very multi-faceted there is no universally accepted framework for a 'sustainable city'. Efforts to bring clarity on what characterises sustainability at local levels has given rise to a rich discussion involving a wide range of academic disciplines. (Andersson & Ostrom, 2008; Bithas & Christofakis, 2006; Blassingame, 1998; Egger, 2006; Pickett, Cadenasso, & Grove, 2004).

The interest among international donors and development agencies in supporting sustainable development at the local level through capacity building and technical assistance, including through the transfer of policy experiences and practices through city-to-city twinning arrangements, is growing (ICLEI, 2012). Furthermore, inter-city cooperation is also increasingly embraced by city governments in economically advanced countries, such as for example Kitakyushu and Yokohama in Japan (Nakamura, 2010).

The SDGs are likely to stimulate such national and international efforts to pursue sustainability locally. More specifically, interpreting the SDGs locally could become a part of a unifying framework for sustainable

development at subnational levels, not only because there is a cities goal (SDG 11), but also because many development issues will have to be implemented locally. Existing networks and initiatives could help bring momentum to the SDGs at subnational levels, incorporating specific targets and indicators of the SDGs framework into their action plans and programmes, where relevant. This local response to the global goals would be important, because achieving the goals locally will require creative forms of collaboration among stakeholders from government, private sector and civil society. Platforms for such collaboration already exist through city level initiatives.

Actions at the local level can be facilitated or constrained by national regulations and policies. National governments therefore have a responsibility to create a supportive environment for sustainable development at local levels. Providing frontrunner local administrations with the freedom and resources to innovate and experiment, to put pressure on the laggards, and to try to increase the level of ambition across the board, can be instrumental in this regard.

4 Discussion and way forward

The post-2015 development agenda is expected to be transformative, integrated and universal. Living up to that ambition requires a change in the way different actors approach development, from pursuing competing short-term interests to striving for longer-term common interests. This means, among other things, that implementing the new global agenda requires collaboration and partnerships among many and diverse stakeholders, in addition to governmental leadership, command-and-control and compliance.

The literature reviewed in this chapter emphasises the importance of more collaborative types of governance—with more nuanced views suggesting complementarities with traditional compliance-based governance. These conclusions are mostly based on case studies in particular policy areas, regions and periods of time. It has not yet been empirically analysed to what extent intergovernmental reports and negotiated documents on sustainability at the international level reflect the shift in emphasis over time from mainly compliance-based governance to more collaborative and hybrid forms of governance. The chapter helps to fill this gap by showing that over the last four decades

governance, and especially collaborative forms of governance, are becoming more pronounced features of the sustainable development discourse at the intergovernmental level.

The trends illustrated here show the evolution in how national governments and the UN system understand governance. The chapter has thus far eschewed discussing what is causing these trends or trying to interpret what they may imply for governance in the post-2015 era. In this section the authors offer some possible and speculative interpretations.

The analysis presented in previous sections suggests that the older and narrower view of governance being mainly about governments' use of command-and-control measures is gradually shifting to a broader view that includes collaboration in addition to compliance. This broadening can be understood in different ways. There are two main interpretations: that collaborative forms of governance, or hybrid forms combining compliance and collaboration, have indeed been found to be more effective, or that national governments have come to realise that they are actually less in command of what happens in their countries than is often assumed. Arguing against the first interpretation is that if collaborative or hybrid governance is in fact more effective, and if governments have increasingly adopted such approaches, more progress would have been seen in the implementation of international agreements. But as noted earlier in this chapter, there is still a huge and widely recognised implementation gap, which indicates shortcomings in government effectiveness (Chapter 2). There is perhaps more support for the second and less positive interpretation, and the process of globalisation, which has accelerated over the last few decades, has likely contributed to further weaken the authority of governments. Under such circumstances, governments that are engaged in international negotiations may find it easier to agree on soft forms of cooperation that arguably have less direct implication for accountability than concrete legal measures which have been seen to go nowhere at the international level.

Governments engaged in international negotiations may find it easier to agree on soft forms of cooperation that arguably have less direct implications for accountability than concrete legal measures

It is worth considering what kinds of capacities can help facilitate the collaboration among diverse stakeholders

For the future SDGs, and for establishing relevant targets and policy directions nationally, collaboration among stakeholders and efforts to align diverse interests will surely be important. However, incentives for action may be too weak without active governmental orchestration and also without the possibility of compliance-based policy measures.

Based on the findings of the current study, and reflecting its limitations, the authors have identified five areas for further research.

First, the change of emphasis on governance has been traced at the level of intergovernmental texts but studies have not been done on whether governance at the national level reflects a similar trend. Subsequent research could study trends in governance at this level, and differences and similarities among countries and country groups. If national trends are found to differ from those that have been observed at the global level in the current study, follow-up research could seek to explain such differences.

Such an exercise will be important for identifying relevant SDG targets and action plans at national and local levels. Some have rightfully questioned whether documents from the United Nations agenda have 'real' roots (Hajer et al., 2015; United Nations, 2014). To trace if this positive trend at the level of intergovernmental agenda setting has an effect in countries, there needs to be a follow-up at national levels with comparative case studies to investigate whether the increase in emphasis on governance at the intergovernmental correlates with similar patterns at national level policy agenda setting.

Second, a related topic pertaining to collaborative types of governance at the national level is whether countries are institutionally prepared to use collaborative governance mechanisms to translate aspirational SDGs into relevant national targets and actions. It is worth considering what kinds of capacities can help facilitate the collaboration among stakeholders and enable partnerships among such diverse stakeholders.

Third, the research findings are based on empirical analysis of a limited number of documents. It may be fruitful to cast the net wider to include a larger number of documents from other forums. In this regard, it would

be equally interesting to carry out explorations on how the trend of civil society engagement has shifted over time, and which statements regarding collaborative governance have been made by whom. This would involve a more detailed mapping of the emerging discourse at the intergovernmental level and could help shed some light on whether governments increasingly use collaborative governance text in their outcome documents as part of real intent or just as lip-service to assuage NGO pressure.

Fourth, the present study does not distinguish between different kinds of collaboration and stakeholder involvement. Whether an increase of collaborative governance means increasing participation of civil society in government decision making or more public-private partnerships, is likely to affect sustainability outcomes. Follow-up studies of changes in governance over time should pay more attention to this aspect.

Lastly, the underlying assumption in this chapter has been that a broader conceptualisation of governance with processes to create trust and rapport among different stakeholders will create broader ownership of sustainable development objectives, which subsequently will strengthen implementation. The authors believe that to be true, but such assumption would have to be revisited and examined in detail when national level implementation of the new development goals begins.

Acknowledgements

This research was conducted with support from the "Project on Sustainability Transformation 2015 (S-11-4)" for the Environment Research and Technology Development Fund of the Ministry of the Environment, Japan.

Parts of this chapter are based on Olsen, Zusman, Bengtsson and Cadman (2015*). Governance Trends in the Intergovernmental Sustainable Development Discourse: A Text Analysis*. IGES Working Paper. Hayama: IGES.

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4

Accountability for financing the Post-2015 agenda: Lessons from earlier agreements

Gideon Rabinowitz
Noriko Shimizu
Kanako Morita

1 Introduction

Over the last two years the international community has been negotiating the Sustainable Development Goals (SDGs), a framework of global sustainable development norms, objectives and targets to succeed the MDGs. The SDGs are due to be finalised and endorsed at the UN General Assembly meeting in September 2015.

Ahead of this key moment came another event critical to the pursuit of the SDGs - the third UN Financing for Development (FfD3) Conference in Addis Ababa. At the time of writing (September 2015) the outcome of the FfD3 had already been announced. This Conference attempted to identify and secure commitments to pursue the financing and related actions required to achieve the SDGs. These issues also will be subsequently addressed by the SDG framework itself, as the proposed SDG number 17 focuses on the need to "Strengthen the means of implementation and revitalise the global partnership for sustainable development", and the outcome document of the SDGs Summit is also expected to have a separate section on Means of Implementation (MOI), including financing. The commitments agreed at the Addis Ababa Conference are critical to determining whether developing countries will have the means to make SDGs a reality.

> *Commitments agreed at these meetings will be critical to determining whether developing countries will have the means to make SDGs a reality*

It is however important to note that the impact of the FfD3 and SDG agreements on the financing context of developing countries will not be determined simply by the financing goals and commitments they address. It goes without saying that any goal or commitment means nothing without implementation. The importance of holding the signatories of these agreements accountable for their performance in implementing financing goals and commitments therefore cannot be overstated, especially as these commitments will not be legally binding.

Since the SDG process was launched in 2012, with the formation of the High Level Panel on post-2015, much has been written about the

financing goals and commitments that need to be addressed by the SDG and FfD3 agreements (e.g. OECD, 2014; Schmidt-Traub & Sachs, 2015; UNICEF, 2014; World Bank Group, 2013). However, to date there has been far less attention on identifying how the design of these agreements and the follow-up processes that accompany them can help to ensure that there is strong accountability for implementing these goals and commitments. This is the theme addressed by this chapter.

The chapter reviews the accountability experiences of a range of contemporary international policy processes focussing on development and environmental financing. The chapter draws on these experiences to identify the main characteristics of effective accountability frameworks. Based on these analyses, the chapter provides recommendations for the SDGs agreement and related follow-up processes.

The design of these agreements and the follow-up processes that accompany them can help to ensure that there is strong accountability for implementation

Section 2 introduces the main policy processes reviewed by this chapter, most significantly the predecessors to the FfD3 and SDG processes, the Monterrey/Doha FfD (FfD1+2) and MDG processes respectively. Section 3 is structured around the three main sets of characteristics that determine the strength of accountability systems linked to international policy agreements, each of which is introduced based on analysis of the experiences of international policy processes. Section 4 then identifies some additional priorities for designing an accountability system for the financing goals and commitments addressed in the FfD3 and SDG agreements. Section 5 concludes the chapter by identifying the recommendations which emerge for the FfD3 and SDG agreements and efforts to pursue accountability for their implementation.

2 Overview of major international financing agreements and related accountability systems

This section identifies the international policy processes which provide the evidence base for this chapter—the processes covered include all the

major international agreements on development and climate financing in the last two decades. It summarises the background to each of these processes, the policy issues they address and the systems that have been put in place to pursue accountability for their implementation.

MDG 8 – "develop a global partnership for development"

The MDGs addressed financing through MDG 8, which committed the international community to develop a global partnership for development. Amongst the sub-components addressed by MDG 8 was one which would "Develop further an open, rule-based, predictable, non-discriminatory trading and financial system" (UN, 2000). Although this commitment does not explicitly address aid and other forms of development finance, it has been widely interpreted that these sources are an important element of this agenda.

The pursuit of MDG 8 was monitored through a range of processes. Firstly, the annual UN MDG Report included a chapter reporting global trends related to each of sub-components of MDG 8. Since 2008 the MDG Gap Task Force - which was created by the UN Secretary-General to improve the monitoring of MDG 8 - produced a dedicated in-depth report on progress in implementing MDG 8. In 2005 and 2010, there were high level inter-governmental reviews of progress on the MDGs (including on MDG 8) held through the UNGA. More recently, in 2012, the UN established the Integrated Implementation Framework (IIF), a web-tool to monitor all commitments made by UN members states to help meet the MDGs, which also addressed progress on MDG 8.

The 2002 Monterrey Consensus and 2008 Doha Declaration on financing for development

The Monterrey Consensus was adopted at the first International Conference on Financing for Development in Monterrey, Mexico, in March 2002 (FfD1). It emerged in response to the challenges posed by efforts to "fulfil internationally agreed development goals, including those contained in the Millennium Declaration" (UNDESA, 2003). The Doha Declaration was adopted at the second International Conference on Financing for Development in Doha, Qatar in November/December 2008 (FfD2). Its main objective was to respond to the "severe impact on development of multiple, interrelated global crises", including the emerging global financial crisis (UN, 2008). Both of these agreements were structured around six main policy themes: 1) Domestic financial resources; 2) Foreign Direct Investment and other private flows; 3)

International trade; 4) International financial and technical cooperation; 5) External debt; and 6) Systemic issues relating to the operation of the international monetary, financial and trading systems.

The 2002 Monterrey Consensus identified a number of channels through which follow-up to its commitments would be pursued. These channels include a biennial high-level intergovernmental Dialogue on FfD, to be held through the UN General Assembly (UNGA); an annual report from the UN Secretary General (UNSG) on FfD follow-up efforts, which has fed into annual UNGA resolutions; and an annual formal dialogue on FfD between the UN, the World Bank, the International Monetary Fund (IMF) and the World Trade Organisation (WTO). Since the Doha conference, the Economic and Financial Committee (also called the Second Committee) of the UNGA has also facilitated regular debates on FfD issues.

The Rome, Paris, Accra, Busan and Mexico aid and development cooperation effectiveness conferences

Since 2003 there have been a number of international conferences organised under the auspices of the Organisation for Economic Cooperation and Development (OECD) and (since 2011) the Global Partnership for Effective Development Cooperation to address challenges related to aid and development cooperation effectiveness. These have led to the adoption of Rome (2003), Paris (2005), Accra (2008), Busan (2011) and Mexico (2014) agreements, which identify a wide range of aid reform commitments for both developing country and donor governments to implement.

The 2005 Paris Declaration on Aid Effectiveness introduced a framework for monitoring implementation of a select group of commitments addressed in the agreement, including targets against which to assess the performance of signatories (OECD, 2008). This framework was subsequently used to undertake in-depth monitoring surveys of performance by individual signatories of these agreements in 2005, 2008 and 2010, with a revised framework used for an additional round of monitoring in 2014. The results of these surveys have provided an opportunity to compare the performance of individual actors, and also offered a critical input to the high level discussions on progress in implementation held at the Accra, Busan and Mexico conferences.

COP 15 and 16 commitments on climate change financing

At the 15th Conference of the Parties (COP15) of the UNFCCC held in Copenhagen in 2009, developed countries pledged to provide USD30 billion in additional climate finance to developing countries for the period 2010-2012 (UNFCCC 2010). This collective commitment has come to be known as 'fast-start finance (FSF)'. Following this at COP16 in Cancun in 2010, developed countries committed to jointly mobilise USD100 billion per year by 2020 through a wide variety of sources - public and private, bilateral and multilateral (including alternative sources) - to address the long-term financing (LTF) needs of developing countries in relation to climate change (UNFCCC, 2011).

Monitoring the delivery of FSF and LTF has largely involved self-reporting by developed country governments through submissions to the UNFCCC. As a result, it has been found that those reporting 'have not used strict thresholds for assessing what is additional', and therefore FSF figures should be treated with caution (Nakhooda et al., 2013; OECD, 2011a).

In addition to monitoring efforts, the first biennial high-level ministerial dialogue on climate finance was held in 2014 during COP20 in Peru to discuss progress on delivery of climate finance commitments amongst other issues.

3 International development financing agreements – What characteristics determine accountability for their implementation?

This section identifies the characteristics of international development financing agreements which affect accountability for their implementation (2.1-2.3), and provides some insights about how these characteristics interact (2.4). In the analysis that follows no attempt is made to empirically test (e.g. through statistical analysis) the relationship between particular characteristics of these agreements and the extent of their delivery or accountability outcomes. The characteristics were derived from the literature; here they are organised into a two-layered analytical framework which is then applied to the financing agreements included in the study. This analysis illustrates how the characteristics affected accountability in each case, either negatively or in a positive sense.

3.1 Focused and clearly defined commitments

The first set of characteristics relevant to pursuing accountability for the implementation of international development financing agreements relates to the nature of the goals and commitments addressed in these agreements. It is clear from reviewing the experiences of the policy processes identified in section 1 that the more clearly defined the goals and commitments in these agreements are, the easier it is to pursue accountability for their implementation. It is also clear that such definitional clarity is required along three main dimensions.

> *The more clearly defined the goals and commitments in these agreements are, the easier it is to pursue accountability for their implementation*

The first dimension relates to the types of goals and commitments addressed in the agreement itself. It is important that these are not too general in nature and provide clear detail on the actions required for implementation. This point is illustrated by the Monterrey/Doha agreements, in which, with the exception of some of the commitments relating to aid quantity (to provide 0.7% of Gross National Income (GNI), with 0.15%-0.2% to LDCs), commitments are mostly quite general and provide limited clarity on the actions required to implement them. For example, paragraph 61 of the Monterrey Consensus states that "[good] governance at all levels is also essential for sustained economic growth, poverty eradication and sustainable development…", but it does not state what aspects of governance are important or what corrective actions should be taken (UNDESA, 2003, para 61) (see Chapters 1 and 2 of this book for discussions of varying functional properties of governance). Another example is provided by the MDG 8 framework, which includes general commitments such as to "develop further an open, rule-based, predictable, non-discriminatory trading and financial system" (UN, 2000, target 8a), again providing limited clarity on how this outcome should be pursued. These characteristics of the Monterrey and Doha agreements may go a long way towards explaining the weak accountability and follow-up processes that have emerged in relation to their commitments.

A useful contrast to the mostly general commitments in these agreements is provided by the aid/development effectiveness agenda. For example, the Paris Declaration committed signatories to pursue alignment of aid with national institutions, and identified that this goal could be pursued through a specific range of actions (e.g. using country financial management and procurement systems for aid delivery) (OECD, 2008). This specificity has clearly helped to promote a substantive and concrete monitoring process for these commitments to emerge.

Specificity has helped promote a substantive and concrete monitoring process for these commitments to emerge

The second dimension in this area relates to the concepts and terms used to introduce the agreement's goals and commitments. It is important that there is clarity on the definition of these concepts and terms, as ambiguities on how to interpret them can undermine efforts to monitor implementation progress. An illustrative example of this point is provided by the climate finance agenda. Although there seems to be sufficient clarity on the commitments made by developed countries at COP9 and COP10 on climate finance – USD30bn between 2010-12 for FSF and USD100bn annually in LTF by 2020 – these agreements left climate finance undefined[1] (especially in the case of LTF). As a result, providers have had "substantial latitude to define for themselves what counts as climate finance, and they have done so in different ways" (Nakhooda et al., 2013, p. 39). Such substantial variation of counting can be seen in Figure 4.1 below, which illustrates how estimates of North-South climate financial flows in 2009-10 range from approximately USD70bn to USD120bn.

[1] There is currently a range of definitional issues on climate finance on which there is a lack of consensus, including: 1) there is no commonly accepted definition of climate finance, e.g. whether climate finance includes efficient coal fired power plants or not; 2) there is no widely shared understanding of when climate finance should be counted (at the commitment stage or disbursement stage); 3) there is no agreement on whether climate finance is counted as net or gross and how insurance and other guarantees will be counted. (Stadelmann et al., 2013); 4) there is no consensus on whether and how to account for other official flows in comparison to ODA; and 5) there is no agreement on whether only "additional" public and private flows should count (Clapp et al., 2012).

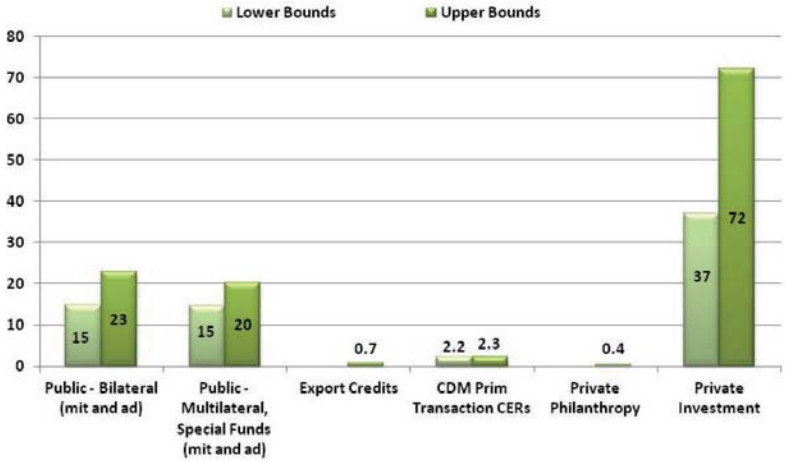

Figure 4.1 Estimates of North-South climate finance flows (USD billion), 2009-2010

Source: Clapp, Ellis, Benn, & Corfee-Morlot (2012)
Note: "mit" and "ad" stand for mitigation of and adaptation to climate change.

Again, the aid/development cooperation effectiveness agenda provides a useful contrast to these agreements with regard to such conceptual issues. Although there are some significant questions about the commitments in the Busan Partnership agreement, its text and monitoring framework provided details vital to identifying required implementation actions in a range of areas. For example, to fulfil the commitment to strengthen aid transparency, the Busan agreement directs signatories to implement a "common, open standard for electronic publication" (OECD, 2011, para 23c) of information on aid. This standard was then defined further through a process of negotiations following the Busan conference. These details have provided an important foundation for the concrete monitoring of efforts to strengthen aid transparency since the Busan conference.

> *Specificity has helped promote a substantive and concrete monitoring process for these commitments to emerge*

A final dimension in this area relates to whether there is clarity on the roles and responsibilities of individual signatories in pursuing implementation. Amongst the agreements addressed in this chapter, those on climate finance are notable in identifying commitments to be met by developed countries collectively. As a result, it has not been clear to what degree individual governments should take responsibility for implementation, and therefore it becomes more challenging to hold signatories accountable for their performance. In contrast, not only did the Paris Declaration and Busan Partnership agreement make it clear that commitments were addressed towards individual signatories, they also identified performance targets to be met in a range of policy areas which could be applied to individual governments. This clarity has helped to facilitate a strong process of monitoring implementation of these agreements focused on the performance of individual signatories.

3.2 A strong monitoring system

The second set of characteristics which seems to be significant in supporting accountability for internationally agreed financing commitments relates to the monitoring system in place to track implementation. It is clear from reviewing the experiences of the policy processes identified in section 1 that where there is a clear commitment to take forward an ambitious monitoring process, accountability efforts have progressed further. It is also clear that such definitional clarity is required in a number of main dimensions.

> *Where there is a clear commitment to take forward an ambitious monitoring process, accountability efforts have progressed*

The first dimension in this area relates to whether there is consensus (ideally within the agreement itself) that a substantive monitoring process should take place. The Monterrey/Doha agreements contained poorly elaborated commitments on follow-up (i.e. for an annual report to be produced by the UNSG), which did not even reference the term "monitoring". This seems likely to have contributed to a relatively weak follow-up and monitoring process, which has done little to strengthen accountability for implementation by individual signatories.

In contrast, the aid/development effectiveness agreements and climate finance agenda have explicitly called for substantial monitoring activities

to be pursued. These commitments have led to donors and recipients collaborating on monitoring in the former case, and donors self-reporting in the latter case. These substantial monitoring efforts have helped to deepen dialogue on implementation progress and challenges in both cases, albeit on the basis of monitoring outputs on which questions of quality and impartiality (especially with regard to climate finance reporting) have been raised (Nakhooda et al., 2013; OECD, 2011b).

The second dimension in this area relates to whether there is consensus on indicators which can be used to undertake monitoring. In the absence of such a consensus, inconsistent and unfocused monitoring efforts can emerge, which ultimately weakens efforts to promote accountability. A clear example of this dynamic is provided by monitoring of the Monterrey agreement. Paragraph 13 of this agreement focuses on corruption, and states "[f]ighting corruption at all levels is a priority" (UNDESA, 2003, para 13). In addressing this commitment, the UN Secretary General's annual follow-up reports for 2011 and 2012 (UNGA, 2011, 2012) both make references to progress in taking forward the United Nations Convention against Corruption, but the 2013 report (UNGA, 2013a) fails to reference this Convention.

Also, with regard to the MDG 8 framework there was no agreement at the time of its endorsement on indicators to be used for monitoring. This is likely to have contributed to the fact that the first official substantive monitoring report on the MDG 8 commitments was not produced until 2008, as well as this report's limited focus on the performance of individual signatories.

Again the Paris Declaration and Busan Partnership agreements provide somewhat of a contrast to the relatively weak monitoring terms elaborated in the Monterrey/Doha agreements and MDG 8 framework. The Paris and Busan agreements included a detailed monitoring framework, which elaborated a set of clearly defined indicators negotiated by its signatories (OECD, 2008, 2011b). However, it is also the case that such indicators were only identified for a very narrow set of commitments in this agreement, which has ended up skewing monitoring towards these commitments and away from a wide range of other commitments in this and subsequent agreements (Wood et al., 2011).

3.3 Substantive high level dialogue on follow-up

All of the agreements explored in this chapter display significant weaknesses in the degree to which their follow-up processes involve substantive high level dialogue amongst signatories**.** Such dialogue can help to bring attention to where and amongst whom there are gaps in implementation, and thereby inform agreement on remedial action to take implementation further. Such dialogue requires two important elements to be in place.

Follow-up processes should involve substantive high level dialogue amongst signatories

The first element of such a dialogue that seems to be important is discussion of the implementation performance of individual signatories to agreements. Clearly where there has been only weak monitoring of implementation across signatories such discussions are more difficult to undertake. However, the absence of formal official monitoring does not preclude substantive discussion on implementation by signatories. This is because, as is the case with most of the agreements reviewed in this chapter, there is no shortage of independent external analysis (i.e. conducted outside of the governance structures established by or overseeing these agreements) available to inform these discussions.

An illustration of a follow-up process where substantive discussions on implementation have failed to materialise is that related to the Monterrey and Doha agreements. The summary reports of the biennial high-level dialogues on FfD suggest that these dialogues commonly address only a very limited range of commitments in any significant detail, with almost no discussion of the performance of individual signatories. The lack of a more focused and substantive process for monitoring implementation of these agreements is certainly an obstacle to such dialogue emerging. There is a wide range of external analysis which could inform these high level dialogues, but this does not seem to be referenced in any substantive way. The following statement from the UNGA President's summary of the 2013 biennial high-level dialogue of FfD is typical of the type of dialogue on implementation which seems to have been addressed in these spaces: "The President noted that…the perilous state of public finances in many developed countries had led to a fall in official

development assistance" (UNGA, 2013b, para 6). This statement says nothing about where ODA had fallen and where it had not, nor does it offer any judgement on this outcome.

It is also important to highlight with regard to the MDG 8 framework that high level dialogues on implementation performance have only taken place infrequently (as part of the overall MDG review process), with such dialogues occurring in 2005 and 2010. Also, a review of documents produced in relation to the MDG review process suggests that dialogue on MDG 8 has been addressed in quite general terms, with only a limited range of issues addressed in any detail, and little substantive use of official or external analysis to assess the performance of individual signatories.

A somewhat contrasting case is provided by the aid/development effectiveness agreements, for which detailed monitoring reports and evaluations were produced in order to inform the dialogue on implementation at High Level Forums in Accra, Busan and Monterrey. As a result these High Level Forums involved quite substantive discussion on aid/development cooperation policy areas where progress was least advanced, as evidenced by the outcome documents which emerged from them (OECD, 2008, 2011b) (see paragraphs that follow for more details).

The second element is the discussion and identification of follow-up priorities and actions which can help to address shortcomings in implementation. This step is important in helping to bring the accountability process full-circle and ensure that priorities evolve as implementation efforts proceed. These priorities can then be followed up in further phases of monitoring and dialogue.

> *Largely general follow-up priorities and actions have done little to bring clarity to the measures needed to implement these agreements*

Generally the high level dialogue processes attached to the agreements reviewed in this chapter do not perform strongly with regard to this second element. The outcome documents from dialogues relating to the Monterrey/Doha agreements and the MDG 8 framework propose largely *general* follow-up priorities and actions (beyond those on ODA), which have done little to bring clarity to the measures needed to implement these agreements. For example, the outcome document from the MDG Review Summit in 2010 states the importance of pursuing

"measures to curtail illicit financial flows at all levels, enhancing disclosure practices and promoting transparency in financial information," but fails to identify what specific actions in these areas are required (UNGA, 2010, para 78(i)).

Another example of less than ideal practice in this area is provided by the climate finance agenda. A range of high level international summits and gatherings have been held since the 2010 COP where the USD100bn LTF commitment was reached, and little has been achieved to date in clarifying the terms of this commitment. The introduction of biennial high-level ministerial dialogues on climate finance (the first in 2014) may help to address this issue.

Amongst the cases reviewed in this chapter the high level dialogues on the aid/development effectiveness agreements have involved the most concrete follow-up agenda, including a number of clear commitments in the outcome documents from the Accra and Busan summits to address shortcomings in implementation. However, most of the commitments in these outcome documents are general in nature, and therefore provide limited guidance for follow-up implementation efforts.

Table 4.1 Overview of the accountability characteristics of selected sustainable development financing agreements

	MDG8 framework	Monterrey/Doha FfD agreements	Aid/development effectiveness agreements	Climate finance commitments
Concrete and clear commitments	Weak – mostly general and poorly defined commitments (except on ODA)	Weak - mostly general and poorly defined commitments (except on ODA)	Strong/moderate – concrete commitments in a range of areas, with monitoring framework helping to elaborate actions required by individual governments	Weak – no clarity on how to define finance to be delivered, as well as on responsibilities of individual governments
Strong monitoring process	Weak – very limited before 2008; limited focus on individual governments since 2008	Weak – limited range of commitments monitored, and little on individual governments	Strong/moderate – detailed framework of indicators and targets on select issues, although neglected most commitments	Moderate – annual/bi-annual self-reporting by signatories
Substantive high level follow-up process	Weak – limited and infrequent dialogue on MDG8 in MDG review processes	Weak – regular dialogues, but little emphasis on individual governments and mostly general follow-up actions	Moderate – some clear commitments to respond to state of implementation, although many still general in nature	Weak /moderate – limited high level dialogue to date, although bi-annual high level process initiated in 2014

Source: Authors

3.4 Complementarity among the key characteristics

The analysis presented in this section has illustrated how crucial each set of characteristics is in its own right for facilitating strong accountability. This analysis does also point towards another important conclusion; that it is actually the combination of these characteristics which is most critical. Where there are deficiencies in even one of these sets of characteristics, this can be sufficient to weaken accountability efforts.

Having concluded this, it also seems to be the case that the most crucial set of all is the first - the elaboration of focused and clearly defined commitments. Where these are not in place the prospects of designing a monitoring process and addressing follow-up in a substantive way are extremely poor. This dynamic is clearly illustrated by the case of climate finance, the monitoring and accountability for which has been deeply undermined by continued ambiguities in agreed commitments. It is also emphasised by the experience of the Monterrey/Doha agreements, for which an extensive inter-governmental follow-up process was arguably rendered toothless due to the lack of clarity and direction provided by these agreements.

What seems to be crucial is that ambitions for and the parameters of accountability processes are clearly elaborated on in the agreements themselves, as without this the obstacles to agreeing to pursue this in an ambitious way seem unsurmountable.

4 Other priorities for tracking finance

Section four of this chapter provides insights into the characteristics and elements of post-2015 financing agreements and follow-up processes that will likely determine success in promoting accountability for their implementation. This section addresses some thematic issues which could usefully be given emphasis in efforts to pursue accountability for post-2015 financing.

4.1 Tracking private finance

Private finance is already playing an important role in both development and climate finance. In fact, in the case of climate finance, private sources have been more prominent than public sources to date, with private finance contributing the majority of resources for LTF.

However, despite its significance for sustainable development financing efforts, a number of technical and practical difficulties in tracing private finance remain unresolved. The private sector all too commonly does not undertake full information disclosure, and its financial flows can also be complex to track (Caruso & Ellis, 2013; Clapp et al., 2012; Shimizu et al., 2013; Stadelmann, Michaelowa, & Roberts, 2013). Table 4.2 below shows some examples of institutions that track some types of private finance, and illustrates that the current system of tracking private finance is patchy and inconsistent.

Table 4.2 Examples of private finance tracking and related gaps

Type of private finance	Who is tracking and what are the major gaps?
FDI	Available from OECD and UNCTAD, but this does not include 'confidential investment'
Portfolio Investment	Available from World Bank and IMF, although no sectoral data are available
Investments mobilised by bilateral agencies	Bilateral agencies do not report on the levels of private finance mobilised by their publicly financing activities
Voluntary payments by companies, NGOs, and private individuals	Available from OECD, but data from several countries are missing entirely and some other countries' data are incomplete

Source: Stadelmann et al. (2013)

It is therefore vital that the post-2015 financing process facilitates improved efforts to track private finance flowing to developing countries.

4.2 Monitoring effectiveness of private and blended finance

Secondly, the issue of effectiveness has been inadequately addressed in development finance agreements to date. These agreements have addressed issues related to effectiveness with regard to aid, but have failed to widen this agenda to also focus on the effectiveness challenges as they apply to other forms of development finance.

Amongst the priorities here could be to promote greater accountability for the effectiveness of aid which is pooled with and used to support the private sector. Efforts to scale-up using aid for such priorities was actively pursued during the Addis Ababa FfD negotiations and by many donor agencies in order to address financing gaps in areas such as infrastructure and private sector development. However, there are currently only weak social and environmental safeguards and standards which apply to these operations and therefore strengthening them could help to ensure that these financing approaches genuinely support sustainable development.

> *Strengthening social and environmental safeguards could help ensure that financing genuinely supports sustainable development*

Ensuring that private finance also contributes in a more substantive way to sustainable development could also be a critical agenda to be addressed by the post-2015 financing discussions. This could involve some substantial additional commitments from the private sector to report on their social and environmental impacts and improve their general levels of transparency.

4.3 Scaling up domestic revenues

Domestic revenue is the most critical resource available to developing countries to support their development. This source of financing has grown rapidly across developing countries in recent years, although for the poorest countries these revenues are still some way below the levels they require even to invest in addressing basic development needs.

It is therefore critical that the FfD and SDG processes address the accountability issues related to domestic revenue mobilisation. An important element of this agenda should be promoting efforts to strengthen the transparency and accountability of developing country governments and to tackle corruption.

However, it is also vital that efforts are made by developed countries to address their responsibilities related to domestic revenue mobilisation in developing countries. This could include efforts to ensure that companies report fully on their business activities (through committing to apply company by company reporting, and the automatic exchange of information by tax authorities) in order to address challenges of tax evasion and avoidance, channels through which developing countries lose many billions of dollars in revenues each year (GFI, 2014).

4.4 Strengthening the focus on results

A limitation of this paper is that it has focused on accountability for the delivery of finance, but neglected an exploration of how accountability for the impacts of such financing can be strengthened. Section 3.2 contributes towards addressing these issues, as the approach that is taken to delivering finance is critical to ensuring support for sustainable development outcomes. This section offers some additional ideas on how to strengthen focus on outcomes of financing.

> *Results-based financing can help supporting sustainable development outcomes*

A measure to help pursue such an agenda is results-based financing. This involves making the delivery of financing conditional on the result it achieves, thereby rewarding those activities which deliver the most substantive results. Such an approach to delivering sustainable development financing has been most extensively tested with regard to aid, for which issues of programme effectiveness and quality have been long-standing challenges (Williamson & Dom, 2010). The proponents of results-based aid claim that it has the potential to ensure incentives related to performance, quality and results are directly targeted and strengthened in aid programmes (Birdsall, Mahgoub, & Savedoff, 2010).

Examples of results-based aid programmes include the European Union's MDG Contracts (budget support, a proportion of which is contingent on results achieved in priority areas), Cash on Delivery Aid (support to governments based on verified results in sectors such as education) and Output Based Aid (payment to third party delivery agents based on the number of people reached by services). Experience with such instruments suggests that they need to be designed carefully to ensure that they focus on the most critical results (World Bank, 2015), measure performance accurately (Sandefur & Glassman, 2014), and effectively address challenges of weak implementation capacity in many contexts (Chee et al., 2007).

5 Conclusions

This chapter has identified a range of characteristics of sustainable development financing agreements and their follow-up processes which are vital to promoting accountability for their implementation. These characteristics have been identified on the basis of reviewing the experience of contemporary agreements related to development and climate financing, and include focused and clearly defined commitments in the agreements; consensus on strong monitoring processes and indicators; and substantive high level dialogue to discuss performance and follow-up priorities. These characteristics are important in their own right, but it is also critical that they are present in combination in order to promote effective accountability.

An initial assessment of the outcome of the FfD3 meeting—the Addis Ababa Action Agenda—shows that the experiences with regards to accountability have only partly been considered. While the document stresses the importance of monitoring and follow-up and specifies modalities for this, it contains very few commitments for which signatories can be held accountable. This is regrettable, since clearly defined commitments are critical components of accountability frameworks. Looking forward, one should thus hope that the SDG agreements and other follow-up processes elaborate the general statements of the Addis Ababa Action Agenda.

This chapter has also identified a range of thematic areas in which accountability for action could be strengthened by the SDG agreement. These include strengthening the tracking of and accountability for private finance flows, applying effectiveness principles to all forms of financing,

achieving results from financing efforts, as well as action from developing and developed countries to address domestic resource mobilisation challenges.

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5

The role of education in the sustainable development agenda: Empowering a learning society for sustainability through quality education

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Paul Ofei-Manu

1 Education as a catalyst for change and sustainable development

> "*Education is key to the global integrated framework of sustainable development goals. Education is at the heart of our efforts both to adapt to change and to transform the world within which we live. A quality basic education is the necessary foundation for learning throughout life in a complex and rapidly changing world"* (Irina Bokova, Director General of The United Nations Educational, Scientific and Cultural Organization (UNESCO), in UNESCO 2015: 3).

Education has a long history as an international priority, and the right to education was first enshrined in the *Universal Declaration of Human Rights* in 1948. Improving education and ensuring all people are afforded a high standard of education will be reaffirmed as a key global goal of development under the post-2015 development agenda. The recent synthesis report of the UNSG on the post-2015 development agenda stated that "high-quality education and life-long learning" and the capacity of teachers are key factors in empowering youth as a "globally connected engine for change" (UNSG, 2014: 21-2). In fact, many people around the world believe that education is the most important goal for this agenda. At *My World 2015,* individuals can rank their top priorities for the agenda. Over 7.6 million people have voted, and of the sixteen potential priorities, provision of good education is consistently ranked as the highest priority across all cohorts and has received prioritisation by over two-thirds of all voters.[1]

[1] From My World 2015: http://data.myworld2015.org/ [accessed: 29 June 2015]

It is clear that education will remain important in the post-2015 development agenda, but how best to integrate and frame education's role in strengthening sustainable development must be further explored. To effectively promote these aspects, an international development goal on education must continue to support increases in both educational access and attainment. This goal must also be ambitious in its efforts to achieve essential improvements to the quality of education in order to catalyse the transformative learning needed for realising a sustainable future for all. Additionally, education serves as a means of implementation (MOI) that cuts across all of the SDGs and will support the overall achievement of the post-2015 development agenda, for which education is recognised as having one of the highest long-term returns on investment of all development goals.

Education is recognised as having one of the highest long-term returns on investment of all development goals

This chapter examines the current proposal for SDG 4 on education and the Education 2030 agenda with a critical perspective on how they may best galvanise the achievement of sustainable development in an integrated and inclusive manner. Section 1 highlights the benefits that education has for human development and sustainable development, and section 2 reviews the two parallel tracks in education related to these historical distinctions and argues that these two tracks must be harmonised within the post-2015 development agenda for overall effectiveness. Section 3 considers how education could be operationalised under the SDGs and considers the key MOI for the education sector. The chapter concludes by recommending two ways in which SDG 4 and the Education 2030 agenda may be strengthened to support achievement of a learning society for sustainability. First, an enhanced understanding on the importance of quality education – elucidated in the framing of education for sustainable development – should be integrated throughout the implementation of SDG 4 and the Education 2030 agenda. Second, an appreciation of education as a cross-cutting means of implementation for advancing achievement across the post-2015 development agenda should be further coordinated under the SDGs framework and its implementation.

1.1 Education's value in human development

The International Commission on Education for the Twenty-first Century highlighted the importance of education in supporting human development. "The Commission does not see education as a miracle cure or a magic formula opening the door to a world in which all ideals will be attained, but as one of the *principal means available to foster a deeper and more harmonious form of human development* and thereby to reduce poverty, exclusion, ignorance, oppression and war" (Delors, 1996: 11). Education serves as an important means of implementation for sustainable human development due to the number of positive benefits it brings across the development goals.

Quality improvements in education provide an even more significant boost to economic growth compared to simply increasing attainment

Improvements in education clearly aid in poverty reduction and economic growth. At an individual level, each additional year of schooling strengthens individual earning potential by an average of 10% (Polacheck, 2007). At a national level, an increase in average school attainment by one year has a demonstrated correlation to a 0.58% increase in national GDP per capita growth rates. However, quality improvements in education provide an even more significant boost to economic growth compared to simply increasing attainment. A one standard deviation increase in average test scores (using international student achievement tests) is associated with a 2% higher GDP per capita growth rate (Hanushek & Woessmann, 2008).

The benefits that education improvements have across the development goals are most notable in those countries where achievement of these goals is most lacking. One study estimated that a 12% reduction in global poverty could be achieved merely by ensuring that all children in low-income countries leave school with basic reading skills – this is the equivalent of lifting 171 million people out of poverty (EFA Global Monitoring Report 2011: 8). The OECD projected that lower and middle income countries could enjoy a 28% higher GDP per year over the next 80 years by achieving basic education and basic skill levels for all youth by 2030 (Hanushek and Woessmann 2015: 61).

Education contributes to improvements in health, disease prevention, and

social equity. Education has a more positive influence on health than either income or employment (Lochner, 2010). Attainment of primary education leads to a 50% reduction in child mortality rates, and educated mothers are generally more responsive to children's health needs (EFA Global Monitoring Report, 2011; Mattos, MacKinnon, & Boorse, 2012). Strong links between increased education and improvements in civic participation and political stability have also been demonstrated (Center for Global Development, 2006). For example, the World Bank reports that a 10% increase in secondary school enrolment rates is correlated with a 3% reduction in the risk of civil war (Collier and Sambanis 2005: 34). Education for women boosts agricultural productivity; and in Sub-Saharan Africa if all women attained a primary education, agricultural yields could increase by 25% (IFPRI 2005).

1.2 Education's value in sustainable development

Education is also an important means of implementation for sustainable development, and it provides an important construct where the perceived tensions between economic, social and environmental development can be harmonised and integrated into a single concept and pursuit of sustainable well-being for all. This goes beyond education being named as a single SDG, thus requiring better understanding of education's role as a cross-cutting means of implementation to strengthen achievements across many other goals. "The SDGs call on governments to take a fresh look at the content of education. Education will be the lynchpin of a sustainable development agenda whose success relies on individuals, throughout their lifetime, acquiring relevant knowledge and developing positive attitudes to address global challenges" (EFA Global Monitoring Report 2015: 294). A broadened understanding of education practiced across formal, non-formal and informal education creates a strong mechanism for supporting social learning/change, which enables synergies between education and other critical elements of an enabling environment including lifelong learning, professional career development, community learning, and public participation.

Jacques Delors and the International Commission on Education for the Twenty-first Century were quite clear on the importance of education as a highly influential process of social framing:

> *"There is a need to rethink and broaden the notion of lifelong education. Not only must it adapt to changes in the nature of work, but it must also constitute a continuous process of forming whole human beings – their knowledge and aptitudes, as well as the critical faculty and the ability to act. It should enable people to develop awareness of themselves and their environment and encourage them to play their social role at work and in the community"* Delors (1996: 21).

With its ultimate goal being societies competent in the principles of sustainability and striving to live within the carrying capacity of the planet, implementation of education for sustainable development should be culturally-relevant, locally appropriate, occurring across all levels and sectors of society.

As a social process, ESD can aid in engendering a culture respectful to the principles of sustainable development. ESD includes a large number of concepts, theories, policy prescripts and practical methods/tools aimed at reshaping education systems to address the socio-economic and ecological dimensions of sustainable development (Lenglet, Fadeeva, & Mochizuki, 2010). ESD promotes educational reform towards quality education to enhance students' lifelong learning, critical reflexivity, cooperative learning relationships, and holistic interpretations of knowledge. "Quality education is about what and how people learn, its relevance to today's world and global challenges, and its influence on people's choices. Many now agree, quality education for sustainable development reinforces people's sense of responsibility as global citizens and better prepares them for the world they will inherit" (Buckler and Creech 2014: 28). ESD addresses important thematic topics such as climate change and sustainable consumption, but it also advances value and skill-based learning. Applying action-oriented and problem-based learning, ESD supports critical examination of worldviews to enable learners to achieve sustainable living through practical, daily actions and

develop their capacities to become effective agents of social change.

This chapter argues that education, and ESD specifically, should be viewed as an essential MOI for achieving necessary capacity development and human/social capital to realise the transformative targets of the SDGs. Carneiro notes that, "Education systems are a source of *human capital* (Becker), *cultural capital* (Bourdieu), and *social capital* (Putnam)" (1996: 202). For example, Lutz, Muttarak, and Striessnig (2014) argue that investment in education can be more effective for increasing a country's adaptive capacity to climate change than investments in physical infrastructures, especially in situations where the impacts of climate change remain highly uncertain. For sustainable consumption, education helps individuals to better understand the environmental and social impacts of their daily lifestyle choices. Education also supports cooperative learning and critical examination which leads to collective reimaging of lifestyle practices and identification of sustainable solutions (UNEP, 2015).

2 Harmonising education agendas through an integrated sustainable development approach

Over the past two decades, the agendas for human development and sustainable development have run in parallel to each other. The SDGs provide the first substantial attempt by the global community to reconcile and integrate these processes, and the situation for education is a prime example of this effort (see Figure 5.1). The importance of education for human development led to several international initiatives over the past few decades aimed at improving educational access and attainment globally. Reaffirming the Jomtien Declaration (1990) on Education for All (EFA), the World Education Conference in 2000 set targets to achieve universal free and compulsory primary education, halve global illiteracy rates, eliminate gender disparities in education, and improve early childhood care and education by 2015. This aligned directly with the objectives of the UN Millennium Declaration (2000), Millennium Development Goal (MDG) 2 – to achieve universal primary education by

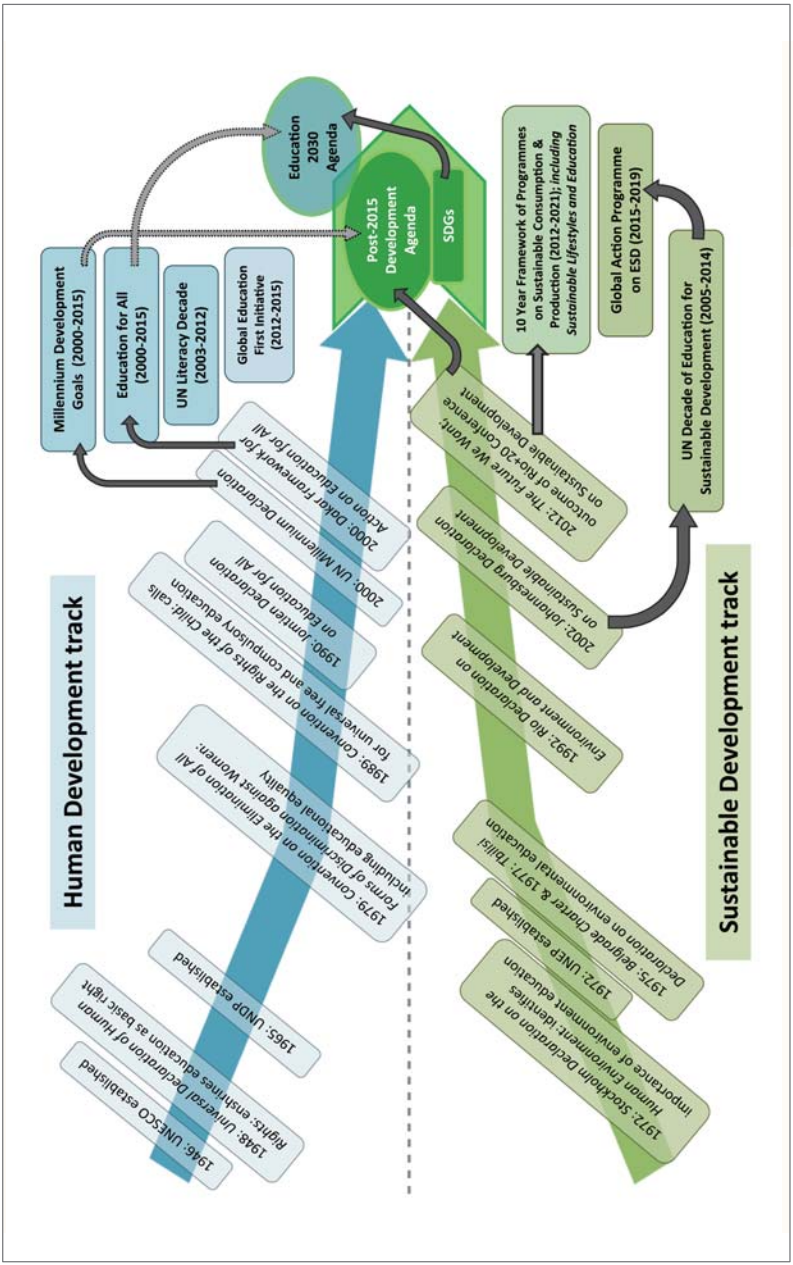

Figure 5.1 Two parallel development tracks and their influence on education

2015, and MDG 3 – to eliminate gender disparity at all education levels. In support of these goals, the UN Literacy Decade also ran in parallel from 2003 to 2012.

The goals of MDG 2, MDG 3, and the Dakar Framework for Action on EFA detail the quantitative educational improvements that the international community strived to achieve over the past fifteen years, especially in regards to educational access, attainment and equity. These goals also call for qualitative improvements in education, but difficulties in qualitative measurement saw these aspects neglected during subsequent target setting processes. The UN Decade of Education for Sustainable Development (DESD, 2005-2014) aimed to advance these educational improvements by incorporating the principles, practices and values of sustainable development into all facets of education and learning. With other goal-setting processes focused on quantitative educational improvements, DESD was intended to enhance qualitative reforms to education systems and "…promotes a set of underlying values, relational processes and behavioural outcomes, which should characterize learning in all circumstances" (UNESCO, 2005).

ESD evolved from environmental education (EE), and added to it an integrated sustainable development perspective with stronger focus on social and economic dimensions. EE came to international prominence in the *Stockholm Declaration* in 1972 and was further elaborated in the *Belgrade Charter* in 1975 and the *Tbilisi Declaration* in 1977. However, since the *Rio Declaration on Environment and Development* in 1992 recognised the importance of education as a primary mechanism for achieving sustainable development, there has been a gradual blending of EE and ESD. The World Summit of Sustainable Development in 2002 and the subsequent agreement on DESD further propelled ESD and 'learning for a sustainable world' as an overarching objective of education.

In addition to the two major agendas of EFA and ESD that ran in parallel over most of the past fifteen years, there are several other important international education initiatives that are influencing the future education agenda. For example, the United Nations Secretary General (UNSG) launched the Global Education First Initiative (GEFI) in 2012 to renew and strengthen international efforts to reach global education goals. This is notable as the first time that the UNSG has endorsed education as a UN priority – directly recognising the significance education plays in meeting all human development goals in a sustainable and inclusive manner. The priorities of GEFI are threefold: 1) to put every child in school; 2) to

improve the quality of learning; and 3) to foster global citizenship (UNSG, 2012). In response, UNESCO identified Global Citizenship Education (GCED) as one of its strategic areas of work from 2014 to 2017. Another complimentary initiative is the Sustainable Lifestyle and Education (SLE) programme, part of the UN's ten year framework of programmes on sustainable consumption and production (10YFP on SCP) – agreed at the Rio+20 Conference on Sustainable Development (2012) as a global action framework to accelerate a shift towards SCP. The SLE programme framework identifies three work areas: 1) developing and replicating sustainable lifestyles; 2) educating for sustainable lifestyles (ESL); and 3) transforming current and shaping future generations' lifestyles. Under work area 2, priorities include mainstreaming sustainable lifestyles into formal education; making ESL a focus in all learning environments (i.e. formal, non-formal and informal); and empowering youth for sustainable lifestyles (UNEP, 2014).

2.1 Reviewing current achievements

The MDGs and EFA goals spurred considerable efforts to improve education globally, and significant progress has occurred. Primary education enrolment and achievement rates increased, especially in developing countries where enrolment rose from 82% in 1999 to 90% in 2010. More children now attend school than ever before, and in sub-Saharan Africa alone where net enrolment rates rose from 58% to 76%, this represents 43 million more children in school. More girls are also attending school, and gender parity is nearly achieved with the enrolment ratio between girls and boys rising from 91 in 1999 to 97 in 2010 in developing countries (United Nations, 2012). The combination of debt relief and funding initiatives allowed many developing countries to achieve free primary school education. Development aid supported infrastructure and capacity development for education, particularly for building schools and training teachers (CIDA, 2013; McArthur, 2013).

However, many challenges remain. Progress in enrolment has slowed in recent years, and a serious barrier remains to reach the most disadvantaged children. In fact, 24% of children of primary school age in sub-Saharan Africa and 7% in Southern Asia were not in school as of 2010 (United Nations, 2012). The priority on educational access ignored the content of learning and teacher competency, and the fact remains that many students finish school without basic competency in numeracy or literacy (McArthur, 2013; UNESCO & UNICEF, 2013; United Nations,

2013). The present deficit of 1.9 million teachers globally and the capacity gaps created by under-trained teachers, particularly in developing countries, continue to contribute to poor learning outcomes (UNESCO & UNICEF, 2013). Gender disparities continue to exist in some regions. The total share of girls among out-of-school children is 65% in Western Asia and 79% in Northern Africa (United Nations, 2012). While rapid population growth in some regions overstretches limited resources, a worrisome decline in aid for education development has appeared in recent years (UNESCO Institute for Statistics, 2013).

Under the framework of DESD, notable improvements were also achieved. Many countries implemented ESD related policies and measures, and a better understanding of the value of ESD was generally elaborated. However, the reformative aspects of ESD related to qualitative improvements for education systems remain least addressed in practice and deserve attention in the post-2015 development agenda. Efforts to properly monitor and evaluate the benefits and achievements from ESD remain inconsistent. Additionally, the need to further institutionalise ESD and better align the education and sustainable development paths remains a challenge (Buckler & Creech, 2014).

2.2 The future of education and the SDGs

The importance and prioritisation of education within the post-2015 development agenda is well supported with the clear indication that SDG 4 will provide a standalone goal with the aim to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (Kutesa 2015: 12). SDG 4 provides a basis for the educational improvements the global community will strive for under the post-2015 development agenda and includes seven main targets and three additional targets on means of implementation. This is further strengthened by the general agreement on the "Education 2030 Agenda" and the draft Framework for Action – Education 2030 (UNESCO, 2015a) at the World Education Forum 2015 (19-22 May 2015) which provides a detailed plan of implementation for SDG 4 and specifies the monitoring and reporting mechanisms for this goal. Additionally, the Education 2030 agenda is structured to incorporate the existing trends and initiatives in international education (identified earlier in this section) into one common agenda.

With the strong consensus and support mechanisms for SDG 4 agreed at the World Education Forum 2015, preparations for formalising this goal are generally progressing well. Nonetheless, a few critical questions need to be furthered addressed regarding how education will be aligned meaningfully with the post-2015 Development Agenda. These include:

1. What mechanisms will be put in place to achieve effective financing for education?
2. How can effective monitoring and reporting on SDG 4 be ensured to capture both the qualitative and transformative attributes of education?
3. How can advancement of "quality education" be actualised as a key priority of SDG 4?
4. What efforts are needed to empower education as a cross-cutting means of implementation for sustainable development (in addition to being a specific, standalone goal)?
5. How to once-and-for-all align the two parallel purposes of education, one for improving human development and the other for advancing sustainable development, into a single integrated paradigm?

3 Operationalising education within the post-2015 development agenda

"We further reaffirm that full access to quality education at all levels is an essential condition for achieving sustainable development, poverty eradication, gender equality and women's empowerment, as well as human development, for the attainment of the internationally agreed development goals, including the Millennium Development Goals, and for the full participation of both women and men, in particular young people."

UN General Assembly, Resolution 66/288: The Future We Want (27 July 2012: para. 229).

SDG 4 (see Annex 2 for the current proposed text of the SDGs) complements and replicates many of the previous targets laid out in MDG 2 including those relating to access, attainment, literacy and gender equality. However, SDG 4 also presents a more holistic and aspirational role for education within the future development agenda through the inclusion of stronger targets on early childhood care and education, relevant skills for decent jobs, and education for sustainable development, sustainable lifestyles, and global citizenship (Kutesa, 2015). Additionally, strong emphasis is placed on the quality of education. This is not entirely new as EFA goal 6 addressed the quality of education. In subsequent target setting for EFA goal 6 though, the need for quantifiable measurements meant that the survival rate until grade 5 was used as a proxy indicator thus weakening the focus on quality improvements in actual implementation. SDG 4's stronger emphasis on quality education will hopefully ensure its inclusion within future implementation plans, but the identification of appropriate indicators to accelerate quality education improvements still remains elusive within the proposed Framework for Action (UNESCO, 2015a).

Concerns have been expressed about whether some of the targets are too ambitious and others outright unrealistic or non-relevant. For example, Target 4.1 is deemed unrealistic to meet in the proposed timeframe due to the addition of achieving free, universal secondary education by 2030 when the past fifteen years of effort on MDG 2 and EFA goal 2 to achieve free, universal primary education stalled half way through this period and still 58 million children today do not receive primary education (EFA Global Monitoring Report, 2015). In fact, it is suggested that at current rates of progress, universal lower secondary education will not be achieved in lower and middle income countries until after 2050 and universal upper secondary education will not be achieved within this century (EFA Global Monitoring Report 2015: 282, 286). Thus, achieving Target 4.1's aspirational milestone of free, universal secondary education by 2030 would require doing so within only 17% of the projected business-as-usual timeline.

The EFA Global Monitoring Report 2015 also warns that a set of overly ambitious and unrealistic targets will hinder countries in developing effective implementation strategies and potentially lead to a situation where resources become too divided to achieve meaningful progress in any single target. This mirrors Ban Ki-Moon's statement that, "[The Agenda] should include concrete goals together with measurable and *achievable* targets .... Countries must not be overly burdened by an

agenda *that creates additional challenges* rather than alleviate burdens" (UNSG 2014: 17-8). Returning to Target 4.1, this calls for universal completion of secondary education and for its free provision. However, in Target 4.2 on pre-primary education, the call is only to ensure access for all, but does not require it to be free or compulsory. The EFA Global Monitoring Report 2015 is critical about the lack of inclusiveness and equitability in the differences between these goals, "Some of the proposed targets promote forms or levels of education that especially benefit the most advantaged students, possibly leading to inequitable public spending" (2015: 286).

It is intriguing that even though SDG 4 is a sustainable development goal, the term 'sustainable' is used for the first and only time in Target 4.7. Without playing down the importance of the other targets, Target 4.7 is the only outcome oriented target explicitly linked to sustainable development, therefore capturing the transformative aspiration of the post-2015 development agenda (EFA Global Monitoring Report 2015: 289-90). This target could be further strengthened by drawing on the lessons learned during DESD that beyond including sustainable development topics in the curriculum, ESD also provides an effective reformative approach for education aimed at driving quality education improvements. "ESD is influencing learning pedagogies and advancing approaches that help learners to ask questions, analyze, think critically and make decisions in collaboration with others. Innovative approaches to learning are contributing to changes in knowledge and understanding among learners that will support sustainable development in the future" (Buckler and Creech 2014: 30).

3.1 The MOI for education

The MOI for education are the aspects that will facilitate an enabling environment and foster successful implementation of SDG 4 and the Education 2030 agenda. Implementation of SDG 4 should occur from global to local scales, engage participatory and transformative partnerships, and involve multi-stakeholder collaboration (UNSG, 2014). National, regional and global mechanisms will need to be developed to respond to these MOI.

The proposed SDG Targets 4.a, 4.b, and 4.c are expressed as MOI: a) safe and effective learning environments, b) educational scholarships for developing countries to increase enrolment in higher education, and c)

strengthening the supply of qualified teachers. Additionally, SDG 17 details nineteen MOI that apply across all SDGs. These include finance, technology, capacity building, trade, policy and institutional coherence, multi-stakeholder partnerships, and monitoring and evaluation (Kutesa, 2015). The draft Framework for Action – Education 2030 (UNESCO, 2015a) also elaborates four implementation modalities: 1) governance, accountability and partnerships; 2) effective coordination; 3) monitoring, reporting and evaluation for evidence-based policies; and 4) financing. This last list will structure the discussion below on MOI and their alignment with the education goal, and this will first address financing as it is an enabling requirement for achieving all other MOI (see Table 5.1 for an overall summary of MOI recommendations).

3.1.1 Financing education

The broad ranging and ambitious nature of the 169 targets proposed by the Open Working Group on the SDGs means that a significant amount of financing will need to be mobilised through a diversity of mechanisms and sources (UNEP Inquiry, 2015), or both the practicality of achieving these goals and the credibility of the international agreements on the SDGs will be severely undermined. Therefore, effective financing will be critical in achieving quality education that is inclusive and equitable, provides lifelong learning, and also strengthens sustainable development. Optimising all financial streams "domestic public, domestic private, international public, international private and blended finance" and coordinating them for greatest impact is critical (UNSG 2014: 26).

> *Target 4.7 could be further strengthened by drawing on the lessons learned during DESD that beyond including sustainable development topics in curriculum, ESD also provides an effective reformative approach for education aimed at driving quality education improvements*

Traditional sources for education funding are: government (domestic) resources; foreign aid (from multilateral and bilateral donors/agencies); and private entities (households, individuals, private organisations) (EFA Global

Monitoring Report, 2012). It is commonly agreed that governments, through public expenditure, hold the key mechanism and main responsibility for long-term, sustainable financing of education. In 2006, the High Level Group on EFA recommended that governmental spending between 4-6% of GNP and 15-20% of public expenditure should be allocated to education. These benchmarks were then included in the Muscat Agreement on Global Education for All Meeting in May 2014 (EFA Global Monitoring Report 2015: 241). However, in lower and middle income countries where large investments are still required for overall infrastructure improvements in education systems, international aid and financing remains crucial. If all countries achieved these ambitious targets for domestic spending on education, it is projected that there would still be a shortfall of USD 22 billion annually over the next fifteen years to achieve the basic education targets by 2030 (EFA Global Monitoring Report 2015: 296).

Historically, a general trend of increasing finance for basic education by governments was observed over the past decade until recently. Between 1999 and 2010, domestic spending on education increased in 63% of countries and accounted for larger shares of total national income. Notable increases were recorded in many lower income countries (EFA Global Monitoring Report, 2012). Despite these significant increases in education financing through domestic resource mobilisation, considerable shortfalls in the required resources to achieve EFA persist in many lower and middle income countries. Moreover, the education sector only experienced limited success in mobilising additional international financial support under the MDGs (EFA Global Monitoring Report, 2012).

For lower income countries where education remains significantly underfunded, the multilateral donor agencies (MLAs) are extremely important. Despite the continued flow of educational financing from some important donors[2], the donor base for education remains narrow, and many bilateral donors are decreasing overall funds for education (EFA Global Monitoring Report, 2015). Although multilateral aid for education increased between 2002 and 2011, the share allocated to basic education declined in favour of higher education funding, so this needs to be addressed in the future.

[2] World Bank, African Development Bank, Asian Development Bank, the European Commission, UNICEF and the Global Partnership for Education.

Reviewing the distribution of country programmable aid (CPA) among five types of aid categories (i.e. water and sanitation, agriculture, health, population and reproductive health, and education), the share of aid to education that actually reaches the recipient countries is significantly lower than in other sectors. Of the total direct aid to education, only 68% of it reaches recipient countries. The main reason for this is that 25% of total direct aid to education is spent in donor countries through scholarships to support students from recipient countries to study at their universities (EFA Global Monitoring Report 2015: 273). There is actually little evidence that such scholarships help to build knowledge or teaching capacity within the expected recipient countries, and concerns have been raised that such practices may either lead to domestic brain drain or an increase in inequality for these countries (EFA Global Monitoring Report 2015: 290). Thus, the fact that SDG Target 4.b calls for an increase in such scholarships and is the only education target to specifically address bilateral and multilateral financing is troubling as it may lead to further decreases in the amounts of CPA actually reaching those countries most in need of developing the capacities of their education systems.

One of the key factors that hinders effective financing is the lack of a global aid architecture for education that coordinates donors (EFA Global Monitoring Report, 2015). To improve efficiency of financing, national education accounts have been proposed for better coordination and oversight as well as a more complete picture of education funding (Rose & Steer, 2013; Schmidt-Traub & Sachs, 2015). There are also calls to establish a Global Education Fund aiming to disburse USD 15 billion annually by 2020 which could draw on the organisational and operational experiences of the Global Partnership for Education (Schmidt-Traub & Sachs, 2015). Furthermore, financial support from the private sector could contribute significantly to achieving global education goals, although currently they account for only a fifth of the funding compared to government sources (EFA Global Monitoring Report, 2012). It is vital to explore the potential of new financing sources and to establish innovative funding approaches to fill financing gaps and strengthen how/where such aid is spent (EFA Global Monitoring Report, 2012; UNESCO, 2015a; World Bank Group, 2013). Although there is growing optimism regarding global support for education, caution should be exercised in relation to the perception that once a global fund is initiated "it would quickly attract supporters from around the world" because the "turnover rate" on investment in education is longer term and would dissuade donors who normally have expectations for quick, short-term results from investments (Sachs, 2015).

Another issue hindering educational financing at the domestic level is the substantial share of the budget that must be allocated to secure teachers' salaries and the limited funds that directly support other key elements such as textbooks and desks which determine the quality of learning the students receive. Not to detract from importance of well-paid teachers, but in many lower income countries the non-salary expenditure for education is less than 5%; and this is further exacerbated in a number of countries where corruption remains a major problem for effective mobilisation of resources (EFA Global Monitoring Report, 2015). Thus, appropriate national mechanisms to manage budget allocation and its effective governance are urgently required.

Good governance of education depends on inclusive participation of key actors and development of multi-faceted partnerships

3.1.2 Governance, accountability and partnerships

Governments play the key role in implementation, management and financing of effective and equitable national education systems. "Governments should integrate education planning into poverty-reduction and sustainable development strategies where appropriate, and ensure that policies are aligned with their legal obligations to respect, protect and fulfil the right to education" (UNESCO 2015a: 14). Good governance of education depends on inclusive participation of key actors and development of multi-faceted partnerships, and it is the role of governments to ensure that the governance processes for education are participatory and transparent. "The main parties contributing to the success of educational reforms are, first of all, the local community, including parents, school heads and teachers; secondly, the public authorities; and thirdly, the international community. Many past failures have been due to insufficient involvement of one or more of these partners" (Delors 1996: 26). Inclusivity, participation and accountability are recommended as essential criteria for good governance of education (UNSG, 2014; UNESCO, 2015a).

Institutional factors of governance include legal mandates and legislation, but these also require effective policy coherence and coordination. Governments will need to "guide the process of contextualising and implementing the Education 2030 goals and targets" into the mandates for education (UNESCO 2015a: 14), and SDG 4 targets should be aligned with countries' individual policies and strategies for sustainable development. Advancing education within the context of the SDGs also necessitates inter-ministerial collaboration and cross-sectoral coordination. Furthermore, streamlining the flow between policy and implementation in education requires delegation of responsibilities and authority at all levels of the policy process from national governments down to individual schools and classrooms. Additional consideration on how education mandates influence practice across various sectors is needed. Formal education policies act as direct mandates for responsible public institutions, while non-formal education policies often require governments to strongly facilitate the engagement of civil society, community and private sectors (Didham & Ofei-Manu, 2012a).

Partnerships can support evidence-based policy making, practical planning and applicability, applied and relevant learning, transparency and accountability

Both the final monitoring reports for EFA (EFA Global Monitoring Report, 2015) and DESD (Buckler & Creech, 2014) identify multi-stakeholder partnerships as decisive for progress made and view such partnerships as vital in increasing implementation capacities of education systems. Calls have been made for the inclusion of families, communities, youth, students, and teachers in partnerships for policy development and decision making; while civil society, the private sector, foundations and the research community are identified as key actors in mainstreaming and implementing education policies (UNESCO, 2015a). These partnerships can lead to a holistic and integrated understanding of education systems and through this support evidence-based policy making, practical planning and applicability, applied and relevant learning, transparency and accountability.

Accountability is particularly important for the governance of education. It must be framed across the entire educational process – meaning it must be integrated into education governance and decision-making

structures; it must be part of the review process in education planning; and it must be a focus in the assessment of schools, teachers and student performance. In terms of governance, accountability needs to ensure that policies are properly put into action, responsibilities are fulfilled, and resources are effectively mobilised. For the management of education systems, the quality of curricula, schools, and teachers should all be benchmarked against specific criteria and qualifications. Within educational practice, mechanisms "may include accountability measurements such as practice standards and targets, value and behaviour change, ESD knowledge gain and assessment tools for monitoring and evaluation" (Didham and Ofei-Manu 2012b: 87).

3.1.3 Effective coordination

Multi-level coordination of education serves as an extension of the governance MOI. Effective coordination can ensure that policy-level goals for inclusiveness, equality, effectiveness and quality are met in the management and implementation of education. A 'whole government' approach is needed to ensure that what is practiced within schools and communities contributes to the development of knowledge-based societies and the necessary skills/capacities to realise sustainable well-being for all (UNESCO, 2015a). Effective coordination starts at international and regional levels to tackle common challenges and scale-up good practices. At national, sub-national, and local levels, effective coordination will ensure multi-stakeholder engagement, common mechanisms for planning, financing and evaluation, as well as appropriate implementation methodologies. Additionally, "there is need for stronger leadership, coordination and synergy within governments as regards education development and its integration into wider socio-economic development frameworks" (UNESCO, 2015a: 16). National governments must ensure effective coordination and planning from international down to local level. This is a prerequisite for successful adaptation and contextualisation of the Education 2030 agenda for their countries and for efficient mobilisation of necessary capacities and resources needed for implementation.

3.1.4 Monitoring, reporting and evaluation for evidence-based policies

Monitoring and evaluation (M&E) is a crucial MOI because it reveals achieved progress in a timely manner and enables corrective actions when results are unsatisfactory. M&E thus enables an iterative cycle for regular review and improvement of implementation. The final report of DESD highlights the need to improve M&E mechanisms as one the main challenges for ESD and argues for a stronger effort to elucidate the causal relationship between education and sustainable development. "To date, there has been limited use of monitoring tools to assess the quality of ESD programmes, the extent of their implementation, and the ESD learning outcomes they generate. M&E must be improved to secure the evidence for continued and expanded investment in ESD, and for reflexive engagement with ESD as an emerging educational reorientation process" (Buckler and Creech 2014: 32).

M&E is essential across all SDGs, and it necessitates a massive undertaking to identify appropriate indicators, collect, manage and evaluate essential data, and ensure timely assessment so adverse results may be quickly resolved. The key purpose of M&E deserves emphasis, "to engender a process of both individual and institutional learning by creating an action-reflection cycle that supports the continual review and improvement of … implementation and practice" (Didham and Ofei-Manu 2012b: 103). Within the Education 2030 agenda, the expertise from the EFA global monitoring mechanisms will be renewed as the Global Education Monitoring Report. National governments are to take the primary responsibility for establishing and incorporating the mechanisms for effective monitoring and accountability into their respective policy and planning strategies (UNESCO, 2015a).

With quality education improvements a key objective in learning for sustainable development, the M&E of SDG 4 is more arduous than previous education goals. This requires "a multi-dimensional approach, covering system design, inputs, contents, processes and outcomes" (UNESCO 2015b: 17). Monitoring global progress towards universal access and attainment in education is statistically straightforward (although still difficult to conduct), but assessing if education empowers societal change towards sustainability is more demanding. Lessons from DESD show a tendency "to measure inputs, such as the development of strategies, plans, coordinating mechanisms and resources, as well as

intermediate outcomes, such as changes in policy and curricula. Whether these have led to the desired changes in learning attainments or whether learners are now contributing to the sustainability of communities and nations has been difficult to assess" (Buckler and Creech 2014: 184).

This challenge requires looking beyond traditional M&E mechanisms and pursuing a strategic approach to assess the quality and performance of educational systems – not only in regards to the level of knowledge dissemination, but also in terms of the lifelong learning skills and adaptive/problem solving capacities that are individually and collectively gained. In one sense, an M&E process is inherently limited by its data collection and assessment methods because this predicates what type of information can be collected. However, in another sense the M&E process is determined by the selected targets and indicators it must report on, and this further directs actual work prioritisation and implementation as efforts are commonly aimed at demonstrating improvements only in areas which are specifically measured.

In order to understand if education is contributing to the sustainability of society, M&E processes must look beyond indicators that solely track progress on MOI, key system inputs and general access and attainment data. One useful division of indicators established during the DESD include three types of indicators (concrete examples will be given in the subsequent paragraphs):

- *Status Indicators:* assess variables that determine the position or standing of ESD in a country. Baseline indicator types belong to this category.
- *Facilitative Indicators:* assess variables that assist, support or encourage engagement with ESD. Context, process and learning indicator types are in this category.
- *Effect Indicators:* assess variables relating to initial, medium and long-term achievements during the DESD. Output, outcome, impact and performance indicators belong here (UNESCO APRBE 2007: 30).

While M&E of global development has mainly focused on status indicators because they are relatively easy to collect and evaluate, further consideration on potential facilitative and effect indicators useful in the context of SDG 4 is needed if actual learning outcomes are to be understood.

Traditional status indicators are commonly used and understood. They will naturally address the MOI themselves and institutionalised data on access and attainment. Facilitative indicators aim to capture and comprehend needed system capacities for implementing quality education. Three such essential targets allow the elaboration of clear indicators: strengthening teacher training (e.g. Target 4.c), ensuring safe and effective learning environments (e.g. Target 4.a), and improving the quality and relevance of curricula (currently there is no set target). Teachers, the direct interface between the education system and the students, are the most influential actors in ensuring that children are gaining quality education and effective learning. Ensuring all teachers reach a basic standard of training is thus essential (through pre-service qualification, in-service training and continuing professional development). Standards for teacher training can further facilitate quality education by including specific requirements (and thus also indicators) on pedagogies and teaching methodologies, holistic and interdisciplinary teaching approaches, and use of formative and summative assessment at classroom level. Safe and effective learning environments can be enhanced and schools can become models of sustainable practices if criteria, achievement targets and indicators are established for: 1) applying environmental management principles to school operations and facilities; 2) schools engaging with local communities and contextualising learning activities to address local needs and challenges; and 3) schools providing real-world and experience-based learning opportunities. The quality and relevance of curricula is reflected in: 1) application of clear learning methodologies; 2) use of progressive learning objectives (i.e. scaffolded learning); 3) use of a 'life-cycle' approach in defining skill-based education; and 4) good coverage of the knowledge-based competencies relevant to sustainable development (Didham and Ofei-Manu, 2013).

Teachers are the most influential actors in ensuring that children are gaining quality education and effective learning

Effect indicators are least reflected in the current SDG 4 text and the Framework for Action – Education 2030. International performance based assessment can provide one method to assess learning outcomes, and the proposed effort by OECD to integrate a sustainability perspective into future PISA testing is welcomed. There are additional effect indicators that can strongly aid in achieving transformative learning for sustainability. These include:

provision of cooperative and participatory learning approaches, development of critical analysis and problem solving skills, and inclusion of values-based learning components (e.g. through global citizenship and peace education). Cooperative and participatory learning can be monitored based on: 1) the amount of time students spend on collaborative learning activities and projects; and 2) the level of student engagement in setting education syllabus, lesson plans and contents. Critical analysis and problem solving skills can be monitored based on: 1) the amount of time students spend on examining real-life problems and developing/testing solutions; and 2) the use of performance based assessment to demonstrate skill-based learning. Monitoring of values-based learning can use the cumulative amount of time spent on: 1) teaching on multi-cultural perspectives; 2) service learning and opportunities for volunteerism; and 3) capacity building for civic engagement (Didham and Ofei-Manu, 2013).

Table 5.1 Education *means of implementation (MOI)* and recommendations

Key *Means of Implementation*	Recommendations
Financing	• Governments have key responsibility for the long-term, sustainable funding of education, and they should play the lead role in coordinating the optimisation of all financial streams. It is recommended to allocate to education 4-6% of GNP and 15-20% of public expenditures. • International aid and financing will be crucial for meeting the large investment gap in lower and middle income countries for infrastructure improvements in education systems. • The low level of CPA to education reaching recipient countries needs improvement. Decreasing aid allocation to basic education, in favour of higher education, raises concerns that SDG 4's wide-reaching targets will overstretch limited resources. • Development of a Global Education Fund would facilitate a global aid architecture, better donor coordination, and improve the financing efficiency of national education accounts. • Increases in private sector funding could significantly contribute to global education goals. • New financing sources and innovative funding approaches should be developed to fill financing gaps and strengthen the efficacy of disbursement. • National mechanisms for effective budget allocation and managing its governance are urgently needed to ensure that all parts of the education system receive adequate funding.

Governance, Accountability and Partnerships	• Governments play the leading role in implementation, management and financing of education systems, but good governance of education depends on the inclusive participation of key actors. • Inclusivity, participation, transparency and accountability are essential criteria for good governance. Governments should also uphold the rights of its citizens to education. • Inter-ministerial collaboration, cross-sectoral coordination and delegation of responsibilities/authority at all policy levels are needed to strengthen planning and implementation processes. • Multi-stakeholder partnerships can improve implementation capacities of education systems. • Accountability must be integrated into education governance and decision-making structures, the review process in education planning, and in the assessment of schools, teachers and student performance. The quality of curricula, schools and teachers should all be benchmarked against specific criteria and qualifications.
Effective Coordination	• Multi-level coordination should be used to extend the governance MOI into the management and implementation of education. • A 'whole government' approach in the implementation of education should be facilitated to ensure the policy goals *for inclusiveness, equality, effectiveness* and *quality* extend to schools and communities and contribute to the development of knowledge-based societies. • National governments should provide leadership to successfully adapt and contextualise the international education agenda into national strategies/plans and to mobilise the needed national capacities/resources to create enabling environments for effective implementation. • International and regional coordination can aid in tackling common challenges, scaling-up good practices, and employing appropriate implementation methodologies.

Monitoring, Reporting and Evaluation For evidence -based policies	• M&E should facilitate individual and institutional learning by creating a mechanism to support continual improvement of education implementation/practice by ensuring timely assessment, identification of good practices, and quick resolution of adverse results. • National governments have responsibility for establishing and incorporating effective M&E mechanisms into education policy and planning strategies. • A strategic approach to M&E needs to be developed that can assess the quality and performance of educational systems, i.e. learning outcomes, and extends beyond a focus on easy-to-quantify statistics like access and attainment. • To understand if education is contributing to the sustainability of society, an approach that distinguishes different levels of indicators would be useful and provide a direction for progress. o *Input Indicators* will provide baseline data on education MOI and enrolment/attainment. o *Facilitative Indicators* will focus on teacher training, safe and effective learning environments, and the quality/relevance of curricula. o *Effect Indicators* would address the efforts to achieve transformative learning for sustainability, such as the advancement of cooperative learning and critical analysis skills.

3.2 Importance of quality education for sustainable development

The discussions on the post-2015 development agenda have focused attention on education as an essential mechanism to achieve sustainable development. "Across all levels and types of education – formal, non-formal, informal – ESD is also helping to advance the change in teaching and learning processes, bringing in approaches that 'stimulate pupils to ask questions, analyse, think critically and make decisions,' that are cooperative rather than competitive and that are more student-centred" (Buckler and Creech 2014: 65). Both literature and practice now underscore the value of quality education on people's ability to live healthier, happier and more productive lives in a sustainable manner. No other development goal provides greater return on investment. Quality education outcomes have higher influence on economic growth than school enrolment rates, and improving quality can be more cost effective as it depends on systematic knowledge investments more than new resource allocation. A quality education for sustainable development (QESD) approach supports higher order learning thus strengthening competencies to analyse, synthesise and evaluate complex information in decision-making, planning and problem solving (Ofei-Manu & Didham, 2014).

> *To enable measurable improvements in learning targets and performance-based outcomes, a stronger focus on enhancing quality education will be more effective*

A singular focus on quantitative improvements in education, which emphasises access and attainment as well as rote learning, can lead to inadequate or declining learning outcomes. For example, the efforts to meet MDG 2 created a situation for several sub-Saharan African countries where large increases in student enrolment were not met by adequate increases in qualified teachers – resulting in steadily increasing pupil-teacher ratios in these countries (UNESCO Institute for Statistics, 2006). In order to enable measurable improvements in learning targets and performance-based outcomes, a stronger focus on enhancing quality education, which emphasises a holistic and practical

solutions-orientation to education, will be more effective. Nevertheless, in countries where enrolment rates are still a concern, the pursuit of quantitative improvements alongside qualitative improvements remains essential.

In order to achieve quality education, attention must be paid to quality teaching, curricula and appropriate learning environments (Global Campaign for Education (GCE) and Beyond 2015 Partnership, 2013). Qualitative reform of education requires progressive and dynamic curricula and the establishment of effective learning spaces that support collaborative and experiential learning. Furthermore, the QESD approach applies a comprehensive approach to educational improvements with respect to the content of learning, the approach for knowledge and skill transfer, the status of learning environments and the context in which learning takes place.

Strengthening learning performance is at the core of pursuing QESD because the aim is to empower learners with the capacities to envision and actualise a sustainable future (Ofei-Manu & Didham, 2014). ESD provides a contextualised framework that reinforces learning performance. It requires holistic integration of key educational components salient and relevant to the learner's ability to contribute to social change and transformation in a cooperative and collective manner. This should not only cover the educational contents as addressed in SDG Target 4.7, but it must also expand on the learning processes that are essential to enhancing quality education. The QESD approach would not only support the realisation of the SDG 4 targets, but it would also strengthen the effectiveness of education as a cross-cutting MOI across the entire sustainable development agenda.

4 Conclusion: Empowering a learning society for sustainability

The Global Action Programme on ESD identifies two parallel objectives simply defined as 1) integrating sustainable development into education, and 2) integrating education into sustainable development (UNESCO, 2014). Throughout the discussion on SDG 4 in this chapter, the opportunity for enhancing the quality of education through the integration of sustainable development – or ESD specifically – has been

repeatedly stressed. Not quite as frequently but with as much zeal, the importance of education as a cross-cutting MOI and the ability to enrich achievement across the SDGs through the stronger integration of education throughout the sustainable development agenda (and not only as a standalone goal) has also been highlighted. Although ESD is present within Target 4.7, throughout the post-2015 development agenda and the Education 2030 agenda an integrated and holistic understanding of education and sustainable development (or learning for sustainability) is relatively unapparent. This chapter concludes by recommending two parallel approaches for achieving a learning society for sustainability through a focus on integrating education into sustainable development and integrating sustainable development into education (see Figure 5.2 and Table 5.2 for additional information).

Figure 5.2 Two parallel approaches for empowering a learning society for sustainability

Section 1 of this chapter identified the distinct benefits of education to human development and to sustainable development separately. However, it is also argued that within the context of the post-2015 development agenda these two historical tracks will need to be harmonised towards the common purpose of achieving sustainable well-being for all. A critical examination of the current proposal for SDG 4 and the Education 2030 agenda supports an argument that while the goal and agenda are both robust and inspirational, they are still mainly

framed around advancing human development. Only Targets 4.7, 4.a and 4.c offer clear incentives for attaining quality education for sustainable development in a truly integrated pattern. However, there is little positioning of education as a cross-cutting MOI for empowering society with the transformative capacities to transcend business-as-usual scenarios and fulfil the aspirations for sustainable development.

For the 'integration of sustainable development into education', the focus of the recommendations is on the combined perspective of advancing quality education and achieving ESD-based learning performance. This perspective needs greater incorporation into SDG 4 and its implementation. Achieving quality education for sustainable development (QESD) must be stressed as a universal goal that builds on and supports the goals for access and attainment. This QESD perspective could be integrated into the targets of SDG 4 to strengthen its overall efficacy, but it also needs to serve as the defining construct in national-level education planning and for the mobilisation of relevant education MOI. Such identification of QESD as a long-term achievement target will help to ensure that policymakers and practitioners better appreciate quality education's pivotal role in sustainable development and reduce the likelihood that the less quantifiable elements of quality education are cut from budgets, policy agendas and curricula in favour of short-term, quantifiable gains.

For the 'integration of education into sustainable development', the value and benefits that education can provide to the achievement of the other SDGs need to be more clearly elaborated and galvanised. This effort requires an understanding of education that extends beyond the boundaries of formal education institutions, thus expanding the opportunities for life-long learning, continuing professional development, and community-based/social learning. An appreciation of education as a 'strategic development investment' is also required, which can position social learning within the SDGs, "as the foundation and conduit for harnessing the human propensity to contemplate our fate and futures" and in so doing supplant "economic

The value and benefits that education can provide to the achievement of the other SDGs needs to be more clearly elaborated

growth as the metanarrative and vehicle for bringing about a more sustainable and desirable world for all" (Glasser, 2009: 38). Inclusion of an individual target for education under SDG 17 would support this and may be added as an additional target under the "capacity building" section (currently only target 17.9). Efforts could also be taken to clearly identify the role of education under specific goals, such as is done in targets 3.7 and especially 13.3. To achieve a strong role for education as a cross-cutting MOI though, there needs to be stronger recognition that 'transforming our world by 2030' in the aspirational manner currently detailed in the proposed post-2015 development agenda necessitates a tremendous shift in social and cultural paradigms. Such a transition requires inclusive processes to redefine widely held norms and values on what we understand as 'quality-of-life' and 'well-being'. For this, we find in education the potential for developing the capacities of individuals and creating enabling environments for people to come together in this cooperative pursuit of sustainable development. Thus, an overall purpose of the post-2015 development agenda should be to facilitate and empower a learning society for sustainability where such change can take hold at local and collective levels.

Addressing the recommendations for strengthening the role of education in achieving sustainable development can be done at multiple levels. Better framing of a quality education for sustainable development perspective directly within the SDGs and the Education 2030 agenda may currently be the most difficult to achieve, but such action would have far reaching influence. Subsequently, national governments will respond to these international agendas through their appropriate contextualisation in national policies and strategies, thus allowing these points to be more clearly elaborated and integrated in national sustainable development strategies, national education plans, and education curricula. Integration of this QESD perspective into implementation processes and monitoring and evaluation frameworks will strengthen the execution of these recommendations.

Table 5.2 Recommendations on two approaches to a learning society for sustainability

Integrating Sustainable Development in Education	Integrating Education in Sustainable Development
• *Quality Education for Sustainable Development* needs to be emphasised as a universal goal. • *Education for Sustainable Development* provides a holistic learning model that supports Quality Education improvements. • The *Quality Education for Sustainable Development* learning performance framework can guide educational reforms and clarify the multi-stakeholder governance of education under the 2030 agenda. • The pursuit of *quality education* and *learning for sustainable development* should be identified in national education strategies and plans as a key long-term objective and as such be duly reflected in budgets, policy agendas and curricula. • The *focus on learning performance* is inherently qualitative in nature, but it lends itself to clear monitoring of educational outcomes and their linkage to sustainable development impacts.	• A strong *Education Perspective*, that includes formal, non-formal and informal education, can play a dynamic role in supporting achievement of all SDGs. • Education is a *strategic development investment* that supports life-long learning, continuing professional development, community-based and social learning. • Education should be mobilised as an inclusive *Means of Implementation* for all SDGs, and through this can enrich the influence of social and cultural dimensions for 'transforming our world by 2030'. • As a cross-cutting MOI, education should aim at *strengthening individuals' capacities and creating enabling environments* for collaboration and cooperation on sustainable development. • A *learning society for sustainability* is needed to address the transformative nature of the post-2015 development agenda, and this may be facilitated and empowered through integrating education and social learning into all SDGs.

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6

The role of water security in achieving the Sustainable Development Goals: Realising synergies, balancing trade-offs

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Binaya Raj Shivakoti

1 Introduction

Water is indispensable for producing food, maintaining ecosystems, and ensuring human health and dignity. Good management of water is thus a core element of human development. For many countries, meeting diverse water needs requires reconciling several tensions, including competing demands from agriculture and urban sectors. It also involves ensuring sufficient flows to maintain vital ecosystem functions and achieving resilience to climate change. Achieving water security thus presents multiple challenges for governance. The Sustainable Development Goals (SDGs) offer a much more holistic agenda than the Millennium Development Goals (MDGs) and will thus require more significant governance reforms, both within the water sector itself and in how it interacts with other relevant sectors.

This chapter proposes a simple three-stage model to help countries evaluate the governance reforms needed to make this holistic vision a reality. The logic underlying the model is that water governance arrangements will shift as national priorities move from: 1) improved access to water for basic human needs; to 2) enhanced efficiency; and then to 3) systems transformation. This will not necessarily be a linear process wherein countries transition seamlessly from one stage to the next. Some countries will face multiple challenges at once. Others will have different priorities in different parts of the country. Yet others may leapfrog stages to avoid becoming locked into resource-intensive development patterns. International organisations and research institutions have a pivotal role in helping countries optimise allocations of water to meet multiple and diverse needs. They can also assist national and local governments in tailoring governance reforms to different contexts.

International organisations and research institutions have a pivotal role in helping countries optimise allocations of water to meet multiple and diverse needs

2 The water security crises

At present, many of the world's water systems face an impending crisis. Escalating demands, worsening pollution and extreme climatic events have placed the security of water systems at risk. The seriousness of these threats is highlighted in the 2015 Global Risk Report that identifies a water crisis as one of the few global risks with both a high likelihood and high impact (WEF, 2015).The trends highlighted in Table 6.1 underscore the magnitude of this crisis.

Table 6.1 Signs of global water security crisis

Area	Situation and trends
Water and sanitation	As of 2012, 748 million people lacked access to improved sources of drinking-water, 2.5 billion people did not use improved sanitation, and 1 billion practiced open defecation (WHO & UNICEF, 2014).
Water for food	Approximately, 70% of the water withdrawals from lakes, rivers and underground reserves at global level currently go to irrigation. An additional billion tonnes of cereals and 200 million tonnes of meat will need to be produced annually by 2050 to satisfy growing food demand for projected a population of nine billion. Production of each kilogram of cereal requires 1,500 litres of water and meat production requires 8-10 times more water than cereal.
Water for energy, industry and cities	Approximately 15% of the world's total water withdrawals in 2010 (583 billion m^3) were used for energy production. Roughly 70% of industrial water use is for energy production. Global water withdrawals are projected to increase by 55% through 2050 due to growing demands from manufacturing (400%), thermal electricity generation (140%) and domestic use (130%).
Water scarcity	Over 1.4 billion people currently live in river basins where the use of water exceeds minimum recharge levels, leading to the

	desiccation of rivers and depletion of groundwater. By 2025, 1.8 billion people will be living in countries or regions with absolute water scarcity (<500m3/capita/year), and two-thirds of the world's population could be living under water-stressed (<1,700 m3/capita/year) conditions.
Water-Food-Energy Nexus	Demand for water, food and energy is expected to rise by 30-50% by 2030. Any strategies to deal with this demand by ignoring interconnections risks serious unintended consequences (WEF, 2011).
Water Pollution	Up to 90% of wastewater in developing countries flows untreated into water bodies. Aound 80% of Asia's rivers are in poor health, threatening USD 1.75 trillion in ecosystem services per year(ADB & APWF, 2013).
Water-related disasters	The frequency and intensity of water-related hazards is generally rising. By 2050 the number of people vulnerable to flood disaster is expected to increase to 2 billion.
Climate Impacts	Climate change could force an additional 1.8 billion people to live in a water-scarce environment by 2080. Rain-dependent agriculture could be down by 50 percent by 2020 due to climate change impacts.

Source: UN-Water Statistics (http://www.unwater.org/statisticscitedon2015January10), unless specified

Climate change represents an increasing and serious risk to development that demands special attention. Many of the impacts of climate change will be felt through increased variations in the water cycle, more frequent floods, or extended droughts on global, regional and local scales. In implementing the SDGs, capacity to predict local and regional climate risks and devise appropriate adaptive measures must be enhanced. Preparations taken to mitigate these risks would help to achieve water security, which would ensure security in multiple other areas, including food, health and energy.

The adoption of a separate SDG on water raises the profile of water issues and signals political commitment to improved water governance.

However, the inclusion of a water goal in the SDGs does not guarantee that effective solutions to water security challenges will be implemented. One concern is that the central role of water in achieving poverty reduction, food security, energy access, health and other goals is insufficiently emphasised in the SDGs framework itself. These interlinkages must be considered at national and subnational levels during implementation.

3 The crucial role of water in achieving the SDGs

Avoiding the water risks and reaping the multiple development benefits of water security requires better coordination and effective water governance. Water is a shared resource serving multiple, often competing purposes, such as direct public use and health (drinking, sanitation, personal hygiene), food (irrigation, aquaculture, livestock), energy (hydropower, cooling of power plants, bio-fuels production), industrial production, environment (hydrological integrity, ecosystem functions, recreation, assimilation of pollutants), and transport (navigation). The SDGs provide an unprecedented opportunity for dealing with the water security crisis by enhancing coordination across sectors, stakeholders and levels. In order to establish better coordination between water and other sectors/areas, it is important to identify the linkages between the water targets and other SDG goals and targets. Figure 6.1 provides a simple framework for how this can be done.

There are two basic kinds of linkages between water and other goals and targets (see the right hand side of Figure 6.1):

1) How efforts to meet water targets can either support or impede the achievement of other SDGs targets;

2) How efforts to meet other SDGs targets can either support or impede the achievement of water targets.

The first approach to assessing interlinkages emphasises how improved water management can contribute to other aspects of sustainable development. For instance, access to safe drinking water and sanitation will have positive spill-over effects on goals related to education and gender equality (improved restroom facilities in schools can lead to a lower drop-out rate for girls), health (reduction in waterborne diseases),

and environment (less pollution and reduced risk of eutrophication, if wastewater is managed properly). Similarly, improved water use efficiency in one sector can increase the availability of water for other uses and result in a reduction in the volume of wastewater.

The second approach emphasises how improved governance of other aspects of sustainable development can contribute to water security. For instance, targets on zero hunger or universal access to energy could lead to an expansion of irrigated agriculture or the construction of water-intensive power plants. This could in turn increase the pressure on available water resources. Similarly, improved access to energy can increase water abstraction by providing energy for water pumping. However, such linkages are not well reflected in the SDGs; only the goals on health, cities and settlements, sustainable consumption and production, and ecosystem/environment mention water in their targets. Implementation processes need to consider other relevant linkages as well, since failure to do so could result in unwanted trade-offs.

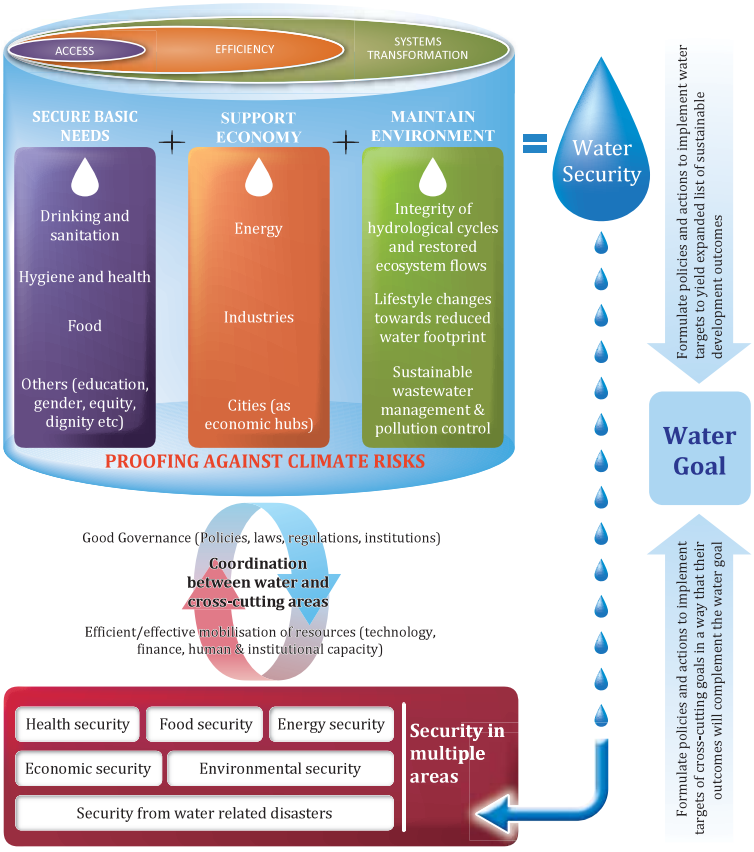

Figure 6.1 Linkages between water security and other aspects of sustainable development Source: Authors

In the processes of planning and implementation, governments will need to view the SDGs through a water lens and seek solutions that create synergies rather than trade-offs. In the area of agriculture and food, for example, drought-resistant crop varieties, drip irrigation, controlling overconsumption, minimisation of food wastage, and adoption of diets with lower water footprint such as choosing plant protein instead of meat or minimised consumption of processed foods are among the options that offer strong water-related synergies.

Some goals and targets can yield strong synergies and serve as means of implementation (MOI) for achieving others. This will help allocate scarce resources effectively and efficiently. Implementation plans for the SDGs should thus be based on assessments of linkages between goals and targets. This is needed for effective implementation of the SDGs in general, but particularly relevant for water. The science and research community could play an important role in clarifying linkages and international organisations can offer support to governments in countries where analytical capacity is insufficient.

However, linkages between water and other development objectives are likely to be complex. Even with scientific input and careful planning, predictions of how actions towards meeting one objective influence efforts to achieve others will be uncertain. This uncertainty suggests a need for adaptive planning with good monitoring of progress and systems for quick feedback and revision. It also necessitates tailoring approaches to different circumstances.

4 Tailoring governance arrangements to shifting challenges and needs

The need for effective policy coordination of water issues, both within the water sector and with related domains, is universal. However, the approach needed for operationalising such coordination will vary from one country to the next. Figure 6.2 shows a simplified model of water priorities and corresponding governance arrangements for three groups of countries at different levels of development. It is suggested that as a country moves up the development ladder its water governance systems could gradually shift focus from: 1) improved access to water for basic human needs; to 2) enhanced efficiency; and then to 3) systems transformation.

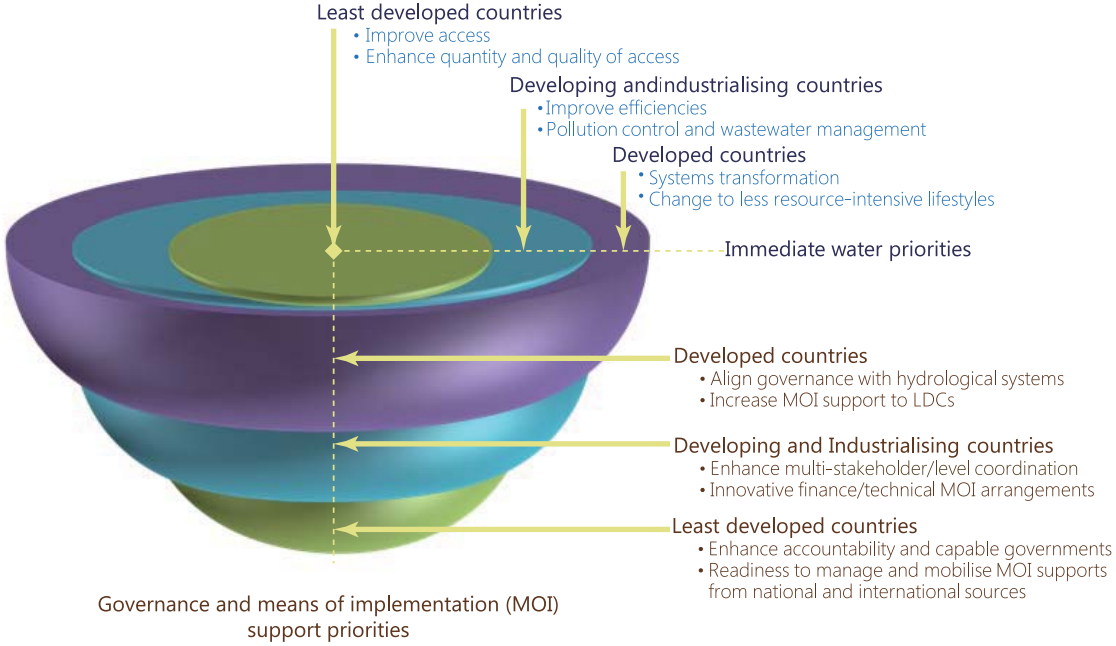

Figure 6.2 An illustration of how countries may interpret targets and MOI for an SDG on water Source: Authors

The first basic challenge is to secure access to water needed for basic human needs. Addressing this challenge is a high priority for most Least Developing Countries (LDCs) and this was the focus of the MDGs. But while the MDGs helped elevate the status of water and sanitation in a general sense and led to significant improvement, the SDGs need to place more emphasis on the quality and sustainability dimensions of water services (UNSGAB, 2014). Such a reframing will help ensure that water policy more effectively promotes health, food security and other essential livelihood needs.

To meet these needs, LDCs will require significant increases in technology access, finance mobilisation (international as well as domestic), and capacity (both human and institutional) to drill wells, build dams and construct purification and distribution systems and manage them effectively. The returns on these investments could be significant: losses from inadequate investment in water and sanitation globally are estimated to be USD 260 billion annually (Hulton & WHO, 2012). However, national and subnational water governance reforms could significantly improve access to international financing. Access to finance depends to a high degree on the quality of governance, not least in the water sector (Grigg, 2008). In the absence of good governance, countries will neither be able to mobilise resources effectively (including private financing) nor put domestic funding to good use. Development partners and international organisations should therefore pay more attention to institutional capacity building for improved water governance as an essential complement to funding. Support for climate adaptation is also of vital importance in this context.

The second basic challenge is enhancing efficiency. This is especially relevant for industrialising and middle-income countries where access for basic needs has generally been achieved but where issues associated with rapidly increasing consumption, worsening pollution and competition over water from multiple sectors are moving up the political agenda. In these countries, improved water efficiency is gradually becoming a necessary complement to efforts to expand supplies. This is in many cases a prerequisite for increased energy generation, urban development, growing industrial production, and rising agricultural output.

The efficiency challenge is usually met through an engineering approach involving technology substitution, such as improved performance of centralised wastewater treatment, and, in certain cases, adoption of water reuse and recycling. But the deployment of more efficient solutions

requires appropriate policies and institutions. Economic incentives such as water pricing are often recommended. However, designing and implementing effective water pricing-policies (and ensuring they do not burden low-income groups) requires sufficient administrative capacity and good governance arrangements. Similarly, growing competition over water resources necessitates legally-defined water rights as well as institutions to protect those rights and help resolve conflicts. Competition over water from different sectors is a particular challenge and the water-energy-food-climate nexus (Hoff, 2011) is a useful framework for analysing such linkages.

Like LDCs, developing and industrialising countries may also need development assistance and technology transfer. But they also need to look increasingly to private capital, public-private partnerships and other innovative funding schemes to boost water efficiencies. A well-designed enabling environment—including economic instruments, incentives for efficient water distribution, and water recycling programmes—will be critical to attracting such resources. Domestic institutional arrangements that support the scaling of sound regulatory practices and technologies promise to be similarly crucial. Perhaps most central is the need for forms of governance that engage multiple stakeholders at multiple levels. More effective forms of multi-level, multi-stakeholder governance will be instrumental to making the most of financial, technological and human resources.

The third challenge is labelled here as systems transformation. Systems transformation implies a holistic approach to providing water-related services while ensuring that the use of water resources remains sustainable at all geographical scales. This should be the priority of advanced countries, although this is not always the case in practice. Systems transformation should also guide developing and industrialising countries, inspiring them to "leapfrog" polluting and resource-intensive stages of conventional development. Systems transformation can be pursued along four mutually supportive tracks:

- Working with natural systems. This can involve forest conservation or reforestation in upstream parts of river basins to reduce the severity of floods, protection of natural wetland areas for water regulation and purification, and land management that facilitates rainwater infiltration and natural recharge of groundwater aquifers.

- Addressing the interlinkages between water systems and nutrients, in

particular nitrogen and phosphorus. This can involve both protecting water bodies from pollution—including from non-point sources, such as runoff from cultivated land—and promoting circulation of nutrients between food consumption, especially in cities, and food production.

- Steering lifestyles and consumption patterns away from water-intensive practices and products. This can involve limiting consumption of water-intensive products, such as meat or processed foods, minimising food wastage, and promoting farming and landscaping that do not require intensive irrigation.

- Making water infrastructure less energy- and resource-intensive. Conventional urban water systems are energy-intensive and generate significant amounts of greenhouse gases (GHGs). Reducing these impacts requires innovative thinking and systems redesign based on ecological principles.

The three basic challenges and the differentiation between country groupings are intentionally indicative and simplified. As has been mentioned, countries need not move in a linear fashion from access to efficiency to systems transformation. In fact, when countries move up the development ladder they should be careful not to adopt outdated unsustainable solutions. Once access for basic needs have been generally achieved, countries should try to leapfrog to more sustainable solutions than are currently common in advanced countries – in line with the systems transformation described above. To help developing countries make such transitions, developed countries can play a catalytic role by transferring good water management experiences and appropriate technologies as well as helping to build capacity and institutions for good water governance. South-South experience sharing and technology transfer should also be given more attention.

In addition, the diversity within countries can be as great as between countries. Different regions, settings (cities, slums, peri-urban, rural) and income groups are often facing quite dissimilar water challenges. This brings a need for governments to deal with different circumstances and priorities simultaneously. Some middle-income countries may be in a situation where they need to address all the three basic challenges outlined above, potentially straining capacity for water governance. The international community has an important role to play to assist countries in dealing with such challenges.

5 Towards national implementation

The SDGs framework includes a standalone goal on water and sanitation, with six specific targets and two supporting targets on means of implementation. This raises the visibility of water issues and recognises water security as a key priority for sustainable development. However, the water goal by itself may not prompt governments, donors and other related stakeholders to undertake the reforms needed to avert water crises. Governments should realise that it is in their own national interest to look at water in a more holistic way rather than just seeking to achieve the individual SDG targets as stated. More specifically, they need to ensure that appropriate legal frameworks and institutional arrangements are in place to address the linkages between water and other SDGs and coordinate related actions.

> *Governments need to ensure that appropriate legal frameworks and institutional arrangements are in place to address the linkages between water and other SDGs*

Financial and other resources are always limited and it may not be possible to allocate sufficient support for each and every target. Some goals and targets will get more attention than others – especially those where there are already established institutions, delivery mechanisms, and constituencies with clear demands. In light of this situation, it will be essential to make sure that available resources are used effectively. Water is one of the areas where the potential synergies with other objectives are particularly high, but maximising such synergies requires carefully conceived cross-sectoral actions, based on good understanding of inter-linkages.

Multiple stakeholders need to be engaged in joint problem-solving. Countries, with national governments taking the lead, are expected to draw up their own SDG implementation plans reflecting their specific circumstances. These national planning processes of setting priorities, establishing nationally appropriate numerical targets, and selecting indicators to guide the implementation will be a critical step for moving the Post-2015 Development Agenda forward. Here, an inclusive multi-stakeholder process is needed to reflect the interests of various

groups and sectors and take advantage of their capabilities. In particular, the areas of agriculture, energy, industrial development, urban planning, environment and health all need to be linked to water planning.

Countries that host transboundary river basins or aquifers can go one step further by setting up joint planning and monitoring mechanisms for these shared water resources. Ideally, common numerical targets and indicators should be agreed for whole transboundary basins or internationally shared aquifers. Without such joint planning, countries might face setbacks in implementing their SDGs water targets domestically.

> *Countries need to establish robust monitoring systems that are suited to national circumstances for successful achievement of the goals and targets*

Achieving the SDG on water and beyond will also require good indicators, robust data and appropriate mechanisms for learning as well as follow-up and review processes. In addition to the international review mechanisms that will be agreed for the SDGs, countries themselves need to establish robust monitoring systems that are suited to national circumstances. This is not just a prerequisite for accountability but also for effective learning, follow-up, and ultimately successful achievement of the goals and targets. Such systems should also include officially recognised channels for monitoring and reporting by various stakeholders, including the academic community and civil society.

Parts of this chapter have been published earlier as: Shivakoti, B. R. & Bengtsson, M. (2015). *Placing Water At The Core Of The Sustainable Development Goals (SDGs): Why An Integrated Perspective Is Needed*. IGES Policy Brief 31. Hayama, Japan: Institute for Global Environmental Strategies.

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7

How the Sustainable Development Goals can complement existing legal instruments: The case of biodiversity and forests

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1 Introduction

A growing body of evidence suggests a rapidly globalising economy and fast-changing consumption patterns have taken a heavy toll on biodiversity. According to the Worldwide Fund for Nature (WWF), approximately 28 percent of the world's biodiversity declined between 1970 and 2012. Other estimates underline that 5.2 million hectares of the world's forests—home to 80 percent of terrestrial biodiversity—were lost annually between 2000 and 2010 (Natural Environmental Strategy Division, Nature Conservation Bureau, Ministry of the Environment, 2015; WWF, 2015). With the world's population on track to reach nine billion people by 2050 (UNFPA), these trends could intensify, posing a grave threat to the sustainability of global ecosystems and to life itself. This chapter focuses on how the Sustainable Development Goals (SDGs) can reinforce the concerted global effort needed to maintain the multiple benefits of healthy ecosystems.

The SDGs will carry forward the achievements of the Millennium Development Goals (MDGs). The new goals will help to support implementation in areas that have so far received limited policy attention, such as sustainable consumption and production (SCP) (see Box on SCP in Chapter 9). But what additional value the SDGs can offer for areas already covered by existing international agreements, such as biodiversity, is less clear. At worst, the interplay between two sets of agreements focusing on the same issue may create unnecessary disruptions, possibly siphoning away resources from ongoing implementation efforts. However, contrary to such concerns, this chapter argues that SDGs are uniquely positioned for stimulating "synergistic interactions" between existing legal instruments (Gehring, 2006). Capturing these complementarities will necessitate recognising the multiple benefits of integrating biodiversity into the SDGs as well as due attention to consistency between targets, national planning and policies, multi-stakeholder engagement, and reporting and review mechanisms. The remainder of the chapter is divided into four sections. The next section outlines why a global approach to preserving ecosystems is necessary. The third section discusses the benefits of integrating biodiversity into the SDGs and the main steps that need to be taken to capture complementarities. A concluding section reiterates main arguments and suggests a biodiversity SDG can strengthen implementation of also other goals.

2 Preserving biodiversity: The need for a global approach

Biodiversity and ecosystem services are indispensable to the health and well-being of the planet and its people. The Millennium Ecosystem Assessment (MEA) defines ecosystem services as the benefits people obtain from ecosystems. It categorises those services into four groups: 1) provisioning services such as food, water, timber and fibre; 2) regulating services that affect climate, floods, disease, wastes and water quality; 3) cultural services that provide recreational, aesthetic and spiritual benefits; and 4) supporting services such as soil formation, photosynthesis and nutrient cycling (Millennium Ecosystem Assessment, 2005). The MEA assessment, which is written from an anthropocentric vantage point, concludes that preserving biodiversity is essential to humankind for numerous reasons. However, biodiversity can be regarded as having values beyond services provided for humans; an eco-centric perspective, which is espoused by many people, suggests that biodiversity and forests should be preserved for the survival of all living organisms.

Biodiversity and ecosystem services are indispensable to the health and well-being of the planet and its people

A global approach to biodiversity preservation is warranted on several grounds. The first is related to international flows of goods and services. For example, people in Japan nowadays regularly consume fruits harvested in Latin America. Income earned from those exports could potentially be used to purchase computer components manufactured from rare metals mined in a country such as Mongolia. Those computers could then be used to make online purchases for furniture in Indonesia. In a globalised economy, consumer demand and rapid movements of goods and services can place heavy strains on biodiversity.

No country can successfully manage biodiversity conservation on its own. Perhaps the most visible illustrations of any such constraints are rare species and fauna that cross territorial boundaries. Fish and birds regularly move from one country to another. Plants and microorganisms also cross borders with relative ease. Moreover, often protected animal and plants are found in the shared property of the international community such as the high seas and polar regions.

Arguably the area related to biodiversity that has gained the most notoriety at the international level is forests. Like biodiversity in general, forests offer a range of ecosystem services, including providing food, medicine, daily commodities and recreation. Forests also help deliver other environmental amenities, including clean air, clean water and fertile soil. However, the main reason that protecting forests has become a global concern is that approximately 17 percent of the world's greenhouse gases (GHG) are due to deforestation. Protecting forests is critical to prevent global climate change; this was recognised with the creation of a mechanism that allocates climate finance to help reduce emissions from deforestation and forest degradation (REDD+) (IPCC, 2007). A global approach to preserving biodiversity is thus essential. The next question is how this was pursued prior to the SDGs.

3 Existing legal instruments – Convention on Biodiversity and Aichi Targets

Numerous goals on biodiversity and forests have been enacted but implementation has often proved disappointing. The Earth Summit produced the Convention on Biological Diversity (CBD) in 1992. After coming into effect the following year, the membership of the CBD has now grown to 193 parties and thus achieved quasi-universal status; the United States is the lone major non-member. The CBD has three main objectives: 1) conservation of biological diversity; 2) sustainable use of its components; and 3) fair and equitable sharing of benefits from genetic resources. Global targets have been developed twice under the auspices of the CBD: the 2010 Target (formulated in 2002) and Aichi Targets (formulated in 2010). The 2010 Target was based on a pledge "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth." (The Convention on Biological Diversity, 2015).

Since 2010, CBD parties have reported their progress in achieving these targets. The CBD Secretariat also prepared the Global Biodiversity Outlook 3 (GBO3) as a review of targets. The GBO3 shows that approximately 170 countries have national biodiversity strategies and action plans. It further clarifies that the 2010 Target "has helped to stimulate important action to safeguard biodiversity." On the other hand, assessments to date suggest that nine of the 15 assessment indicators

exhibited a worsening trend (Secretariat of the Convention on Biological Diversity, 2010). When examined overall, results show that the goal to reduce the rate of biodiversity loss—the principal objective of the 2010 Target—has fallen short. Not surprisingly, increasing the protected areas without effective management does not help preserve biodiversity. Furthermore, while official development assistance (ODA) for biodiversity is growing, there is a lack of clarity on what funds are allocated to which purposes, thereby casting doubt on their actual use and effectiveness. Although measures such as formulating national biodiversity strategies and expanding protected areas have made some progress, the current status reveals considerable room for improvement.

Table 7.1 Status of agreed subsidiary objectives for the 2010 biodiversity targets

Goal 1. Promote the conservation of the biological diversity of ecosystems, habitats and biomes		
	**1.1: At least 10% of each of the world's ecological regions effectively conserved.**	Not achieved globally, but more than half of terrestrial eco-regions meet the 10% target. However, management effectiveness is low for some protected areas. Marine and inland water systems lack protection, though this is increasing.
	**1.2: Areas of particular importance to biodiversity protected.**	Not achieved globally, but an increasing proportion of the sites of importance for conserving birds, and those holding the last remaining populations of threatened species, are being protected.
Goal 2. Promote the conservation of species diversity		
	**2.1: Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups.**	Not achieved globally as many species continue to decline in abundance and distribution. However, some efforts have resulted in the recovery of targeted species.
	**2.2: Status of threatened species improved.**	Not achieved globally, as species are on average at increasing risk of extinction. However some species have moved to lower risk categories as a result of actions taken.

Source: Secretariat of the Convention on Biological Diversity (2010)

Based on the synopsis of the GBO3 and to continue the unfinished business of biodiversity conservation, a new strategic plan to meet targets for 2011 to 2020 (Aichi Targets) was agreed upon in 2010. This includes a target stating "By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan" (The Convention on Biological Diversity, 2010, target 17). As mentioned previously, the setting of targets and drafting of action plans will be necessary but insufficient; rather, it is essential to strengthen implementation through monitoring and assessment to follow up results (discussed later in the chapter).

Biodiversity was also covered under the MDG 7 in order to "Ensure Environmental Sustainability." However, MDG 7 is commonly regarded as one of the two least effective MDGs. In the cases of biodiversity, its ineffectiveness was partially due to the issue being bundled in an *ad hoc* manner with multiple environmental concerns. There was also limited regard for linkages between biodiversity and other targets. The overall picture that emerges is thus one where substantial effort was expended but limited progress was made in protecting biodiversity at the global level. The question is whether and how integrating biodiversity into the SDGs could enhance the efficacy of future preservation efforts.

Substantial effort was expended but limited progress was made in protecting biodiversity at the global level

4 Integrating biodiversity into the SDGs: Synergies or disruption?

The SDGs have become part of the Post-2015 Development Agenda, adopted at the UN General Assembly in September 2015. To formulate the goals, the Intergovernmental Open Working Group (OWG) was established in March 2013. Representatives from over 70 nations participated and negotiations continued for over a year. The process produced a document with 17 goals and 169 targets in July 2014. The protection and sustainable use of forests and biodiversity are addressed in a separate goal, as are targets related to marine life.

The inclusion of biodiversity in the SDGs help the preservation of ecosystems. But the advantages of integrating biodiversity into the SDGs are not as straightforward as they may seem. There is a growing literature that suggests the possibility of both disruptive and synergistic interactions between multiple international institutions (Gehring, 2006). Some of this literature has cautioned of the possible problems from "treaty congestion" (Weiss, 1993). Others have pointed to particular instances where incentives for tree planting created by the Kyoto Protocol led to monocultural tree planting and worked against goals in the CBD to make ecosystems more diverse (Pontecorvo, 1999). From cases like these, others have called for "clustering" multilateral environmental agreements (Oberthür, 2002) or creating supra-organisations that would coordinate across fields and reduce possible duplication (Biermann & Bauer, 2005).

In the case of the SDGs and biodiversity, several goal-conflicts could emerge. One possible drawback is unnecessary duplication that could ultimately hinder the implementation of both the SDGs and other relevant agreements, especially the CBD and the Aichi Targets. A related hurdle is that the SDGs could be weaker and less comprehensive than past agreements, effectively allowing governments to backtrack on past commitments. An even larger possible stumbling block is that the SDGs may divert human and financial resources from implementing existing efforts. These concerns have been articulated among UN Member States on how to design SDG goals and targets on biodiversity and ensure consistency with existing ones (Open Working Group, 2014). The remainder of the chapter outlines why the benefits of including biodiversity under the SDGs could outweigh the costs. It then explains what will be needed to capture complementarities to realise these benefits.

4.1 The benefits of a biodiversity SDG

The first such set of benefits is that the SDGs are expected to receive attention from a broader range of stakeholders than the existing biodiversity targets. This is partially because the process to draft the SDGs has been significantly more participatory than other global efforts; this is exemplified by a series of consultations and compiled views from over seven million people across the world (United Nations Development Group, 2013). The SDGs involve goal-setting on a global scale that happens once every 15 years. As such, they also represent an unprecedented opportunity to raise awareness and inject momentum into preservation efforts at multiple levels. Put differently, issues not incorporated into the SDGs may receive little attention in international planning agendas and national government budgets. The attention given nationally and internationally to HIV/AIDS, malaria and other diseases that were incorporated into the MDGs, for instance, made a considerable difference while in comparison much less progress was made on other transmittable diseases.

The SDGs, as part of the post-2015 development agenda, will be adopted at a high level politically and as such, they can help advance action on biodiversity by reconfirming government commitments. With the exception of perhaps climate change, the SDGs are expected to generate more attention than past efforts at international environmental diplomacy. The goal-setting stage at the international level will conclude at the UN

Summit in September 2015 with participation from the heads of states and other ministerial level delegates. Should the Aichi Targets be reconfirmed through the SDGs, their realisation may be accelerated and strengthened. This is hence a golden opportunity to reinforce commitments from countries and other stakeholders to work collectively on the issue.

The SDGs are also intended to promote more inclusive approaches to implementation. As such, they could be designed to continually raise awareness on biodiversity and forests among policymakers and other stakeholders. This could even involve reaching out to ordinary citizens who could play a pivotal role by altering consumption patterns and requesting governments to account for policy decisions which may be detrimental to biodiversity, thereby strengthening implementation. The SDGs can also shine a fresh light on the current status of implementation of other international targets. This could open eyes to where progress has been slow and draw financial and other means of implementation (MOI) to make up shortfalls.

Yet another set of benefits involves the proposed simplicity in the design of the SDGs. To be effective awareness-raising tools, the SDGs need to be concrete, concise, easy-to-understand, and consistent with existing laws and commitments. When Agenda 21 was adopted at the 1992 Earth Summit as an action plan to realise sustainable development, it was also intended to raise awareness and catalyse action. But Agenda 21 consisted of 40 chapters and over 350 pages that even experts struggled to digest. As the MDGs were eight concise goals, they were reputedly successful in providing an easy-to-follow vision for raising global concern on poverty eradication. The 17 goals and 169 targets of the SDGs will likely be part of an agreement including a political declaration, a set of MOI, and mechanisms for review and follow-up. It remains to be seen whether the whole package of the post-2015 development agenda will be concise enough to be effectively communicated and taken up around the world—but simplicity and clarity of purpose seem likely to underpin the SDGs.

To be effective awareness-raising tools, the SDGs need to be concrete, concise, easy-to-understand, and consistent with existing laws and commitments

4.2 Realising complementarities between the SDGs and existing legal instruments

The next question is how complementarities between the SDGs and existing legal instruments can be realised. The first step is to formally reiterate the potential for synergies. The importance of biodiversity, and of implementing the CBD and the Aichi Targets, for sustainable development were repeatedly stated by Member States during the OWG 8 meeting, which discussed Forest and Biodiversity (IISD Reporting Services, 2014). SDG 15.1 could be understood to summarise the overall objective of the CBD as conserving biological diversity. It thus needs to be understood that the SDG on biodiversity, and the CBD and Aichi Targets are complements and not substitutes. Ensuring complementarity between these two agreements will be essential for achieving consistency on targeting, national implementation strategies, multi-stakeholder engagement, and reporting and monitoring.

4.2.1 Targeting

An important aspect to consider in capturing complementarities is the coverage of the two agreements. The Aichi Targets consist of 20 targets, which are clustered as five strategic goals. The SDG on biodiversity includes 12 targets, three of which are MOI. Consequently, SDG targets are less comprehensive and deal with fewer issues compared with the Aichi Targets. Two such issues are Target 3 of the Aichi Targets, which states "By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts…" and Target 15, stating that "By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration…" There are also numerical targets contained in the Aichi Targets, such as "restoration of at least 15 per cent of degraded ecosystems", that have not been included in the draft SDGs. The Aichi Targets can therefore help fill some of the gaps left by the SDGs; and policymakers at different levels should interpret them as such.

On a related note, due attention should be paid to the different time scales of the targets. The target year for most of the existing Aichi Targets is 2020, so they will remain in effect after 2015 with the adoption of the SDGs. These targets were agreed upon following a long and difficult

negotiation process. Since the SDGs' target is 2030, it is necessary to harmonise the Aichi Targets and the SDGs. The Co-Facilitators of the Post 2015 Intergovernmental Negotiations suggested to rectify different target years and increase the level of consistency by keeping the same target year of 2020 but adding the phrasing 'take further action as needed by 2030' (Co-Facilitators of Post 2015 Development Agenda Negotiations, 2015). In this way, the consistency and the same ambition level as the Aichi Targets could be maintained. It will take time and patience to structure and implement both SDGs and Aichi Targets, but it will not be impossible.

4.2.2 National plans and policies

The formulation of relevant national plans and policies is also a process that must be considered in strengthening complementarities. The 2010 Targets and the Aichi Targets called for the formulation and implementation of national strategies and action plans on the part of participating nations. To link the SDGs to implementation, there must be a similar devolution of targets to the national level and the formulation of targets and strategies by each country. This process is also essential to increase the motivation of countries and suitably reflect their various circumstances and priorities. Fortunately, some countries have already had some success with the transposition of international agreements down to national and local levels for implementation with the CBD. Others have experienced challenges that could provide lessons and hopefully lead to improvements.

Japan is one country that has generally enjoyed success with the CBD process. After becoming party to the CBD, Japan established the first National Biodiversity Strategy in 1995 and revised the content of the legislation several times. In 2008, it adopted the Basic Act on Biodiversity to deal with biodiversity in a more holistic manner than the existing patchwork of laws. It is noteworthy that the law was developed in full consultation with civil society organisations and clarifies responsibilities for multiple stakeholders including national governments, businesses and citizens. This participatory process of law-making is a result of a global trend manifested by the Rio process (see Chapter 3). The Japanese government is required to report on the status of biodiversity and its measures for conservation and sustainable use annually. As such, prefectural as well as local strategies are developed, reflecting unique local circumstances on ecosystems.

Indonesia, on the other hand, has faced more challenges than Japan with the transposition process. To implement the CBD, the Indonesian government has been carrying out the Indonesian Biodiversity Strategy and Action Plan (IBSAP) since 2003 and plans to continue implementation until 2020. The National Development and Planning Agency (BAPPENAS) reviewed its implementation in 2012. In the review, several shortcomings were identified such as lack of understanding and political support for biodiversity conservation, lack of human resources with relevant knowledge, the absence of monitoring and evaluation institutions (Ministry of Environment and Forestry of Indonesia, 2014). Another challenge is that IBSAP is not a legal document and its implementation is entirely voluntary. Additionally, no institution was given a clear mandate to review and implement IBSAP.

It goes without saying that governments have the role of drafting the necessary laws and policies to facilitate the creation of sustainable societies. In Japan, this process of transposition went relatively smoothly; in Indonesia, the process was more challenging. However, both cases illustrate the need for due attention to national contexts. Unlike the MDGs that targeted developing countries, agreement has been reached that the SDGs are to cover all countries. This coverage, of course, raises questions about how the SDGs will be implemented in any particular country. The problems and priority issues in each country are diverse, making it difficult to establish common targets that are appropriate and acceptable for all nations. Most relevant to this chapter is that the reduction of forest area is not a problem everywhere. While forests in tropical regions of South America, Africa and Southeast Asia are rapidly decreasing, forest area has been on a slight increase in parts of Europe and East Asia. The SDGs could be universal in coverage while offering flexibility for tailored approaches in implementation at national level.

Governments have the role of drafting the necessary laws and policies to facilitate the creation of sustainable societies

The experience of Japan and Indonesia with the CBD also highlights the fact that it is virtually impossible to implement biodiversity targets relying solely on governments. Actions from the part of the private sector and citizens are indispensable. As mentioned above, the Act on Biodiversity in Japan stipulates responsibilities of stakeholders but some of these stakeholders are not aware of their responsibilities. To fill this kind of gap

in the context of the new SDGs, governments will need to make every effort to raise the awareness of citizens and the private sector.

4.2.3 Multi-stakeholder engagement

SDGs are expected to spur citizens' awareness on the environment and sustainability as well as encourage corporate actions. Some companies have already adopted goals for their operations to be more sustainable. For instance, Procter and Gamble (P&G) has established a mid-term target to "procure 100% of wood fibre, excluding recycled material, from third-party certified sources by 2015", and was able to raise its rate of third-party certified procurement to 97% in 2013. In the area of renewable energy, P&G set a target to "raise the rate of renewable energy use to 30% in factories by 2020" and a rate of 7.5% was realised as of 2013 (P&G, 2014). This is just one example of the kind of steps taken by influential multinational companies for sustainable development. Actions like these are expected to be encouraged by the SDGs.

Another unique action was the New York Declaration on Forests made in 2014 at the UN Climate Summit. This Declaration aims to "cut natural forest loss in half by 2020, and strive to end it by 2030". This is markedly different from similar major declarations in the past due to the fact that major multinationals and NGOs joined forces to create a "non-legally binding political declaration that grew out of dialogue among governments, companies and civil society" (United Nations, 2014). This also reflects a recent trend for the international community to recognise the importance of multi-stakeholder collaboration. It is also significant that 34 multinational companies with activities having major impacts on the world forests and biodiversity such as Johnson & Johnson, Kellogg's, L'Oreal and Marks & Spencer joined this declaration.

> *SDGs are expected to spur citizens' awareness on the environment and sustainability as well as encourage corporate actions*

Ideally the SDGs will encourage the setting of similar types of targets and implementation on the part of multiple stakeholders such as the private sector, local governments and other citizen groups. "Coalitions of the willing"—groups of corporations or citizens that independently set sustainability targets and work toward

their implementation—may become helpful additions to government policy. Some notable examples are the Consumer Goods Forum, with the participation of the world's leading companies in the distribution industry and daily goods manufacturing, and the Global Electricity Initiative, with members including major global corporations. Ideally the SDGs will strengthen this trend and inject much needed momentum to work on biodiversity. This is particularly important since many of the forces that pose a threat to biodiversity lie outside the influence of national governments.

4.2.4 Reporting mechanisms

A final aspect that requires attention to capture complementarities involves reporting mechanisms. The CBD has 193 state parties, out of which 170 countries have adopted National Biodiversity Strategies and Action Plans. The CBD also requires each state party to report "on measures which it has taken for the implementation of the provisions of this Convention and their effectiveness in meeting the objectives of this Convention" (Article 26). This reporting system has not been without challenges; late or low rates of submission, and difficulty in assessing the overall situations and the effectiveness of measures taken have been observed (Convention on Biological Diversity, 2003). Even when state parties submit their reports, the quality of reports has varied and information presented was sometimes of limited use.

Learning from these experiences and recognising the limited capacity of developing countries, the Global Environmental Facility (GEF), the financing entity for the CBD, has funded activities to prepare national reports. So far, 143 countries submitted their fifth national reports (Convention on Biological Diversity, 2015). These reports have been used to prepare the Global Biodiversity Outlooks and contain valuable information on the status of biodiversity around the world, which can also be used to measure the effectiveness of the CBD and the Aichi Targets. Such reports already resemble an established reporting mechanism and should not be duplicated but rather strengthened and complemented by the SDGs.

It will be critical to avoid duplication of reporting mechanisms as many government officials in charge of drafting and compiling these reports, including those of developed countries, expressed concerns over the current cumbersome reporting requirements. Overburdening

government officials might risk the reports being written for the sake of reporting rather than improving performance. Importantly, existing agreements already have reporting and monitoring mechanisms in place to track progress. There is no need to reinvent the wheel for reporting and monitoring mechanisms for the SDGs.

5 Conclusion

Some may argue that including biodiversity in the SDGs is unnecessary duplication which could ultimately compromise the implementation of both the SDGs and other relevant agreements, especially the CBD and the Aichi Targets. This concern has been voiced in discussions among UN Member States on how to design SDG goals and targets on biodiversity and ensure consistency with existing ones.

It is hoped that the global community will be able to address the challenges of biodiversity loss based on a spirit of cooperation rather than competition

This chapter recognises such concerns but argues there is more to be gained from complementing existing legal instruments with the SDGs. This is partially because the SDGs are designed to communicate the importance of sustainability to much broader audiences than those traditionally concerned with CBD and its Aichi Targets. It also suggests that the rapid decline of biodiversity necessitates an integrated approach with other goal areas as well as the elevated status that the SDGs could potentially achieve. Echoing messages in other parts of this book, the chapter underlines that there are possible complementarities between the compliance-driven approach of the CBD and the more collaborative approach of the SDGs. It is important to integrate the essence of the CBD into the SDGs without undermining the CBD's content and respecting variations between the two agreement's implementation mechanisms. In doing so, it is especially important to consider how the agreements are translated into national plans and strategies, what stakeholder groups they are likely to engage, and how the systems for monitoring, evaluation and follow-up can work together.

It is not easy for countries at differing levels of development to share common goals. There is significant potential for negotiations to reach impasses on controversial issues such as finance. However, it is hoped

that the global community will be able to address the challenges of biodiversity loss based on a spirit of cooperation rather than competition. To guarantee the earth's sustainability, measures are required from multiple perspectives. From the destruction of biodiversity, poverty and corruption, to the preservation of biodiversity and adaptation to climate change, it is no exaggeration that all human activities are interrelated.

An easy-to-understand example of such synergistic linkages is when renewable energy, which replaces fossil fuels, leads not only to lower GHG emissions but also to cleaner air, thereby yielding benefits for both human and ecological health. But there are also instances where objectives can conflict, such as when building infrastructure for renewable energy such as hydroelectric power dams destroys local habitats for fauna and flora. Linkages can also be more complex; for example, it is not intuitive how efforts to preserve biodiversity and actions aimed at reducing poverty interact. The preservation of biodiversity is not merely the protection of animals, but the maintenance of a better living environment for humans. In other words, preserving biodiversity is an MOI for other goals.

SDGs aim to illustrate the overall picture of sustainable development ranging from poverty eradication to SCP, and biodiversity sits at the centre of that picture. This positioning demonstrates to policy makers and citizens alike the interlinkages between different sectors and the need to carefully assess them when pursuing sustainable development. In illustrating correlations among numerous goals and issues, a biodiversity SDG could help forge new norms around integration and give rise to the governance arrangements needed to realise them.

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8

Achieving the multiple benefits of a sustainable development goal for energy

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Eric Zusman

1 Introduction

This chapter provides recommendations on the national implementation of a central component of new development agenda: a sustainable development goal (SDG) for energy. An SDG for energy should ensure access to affordable, reliable, sustainable and modern forms of energy for all, which in turn could alleviate poverty, improve health and wellbeing, and mitigate climate change. Realising these multiple benefits requires that countries tailor SDGs to different national contexts. When countries set national targets they may place varying weights on energy access, energy efficiency, renewable energy and energy conservation. National targets must also reflect how to mobilise investments. Policies that shift public financing from fossil-fuel subsidies to support for energy efficiency and renewables can help greatly in this regard. Targets are likely to be more effective when embedded in enabling environments that allow local governments and businesses to introduce and scale up energy-saving innovations. Existing initiatives such as Sustainable Energy for All (SE4All) could help support these efforts, while leveraging synergies between energy and other SDGs could also contribute to implementation.

> *SDG for energy should ensure access to affordable, reliable, sustainable and modern forms of energy for all*

The remainder of the chapter is divided into seven sections. The second section reviews the multiple benefits associated with an SDG for energy. The third section discusses how an SDG for energy can be tailored to a wide range of national contexts. The fourth section underlines the MOI and governance arrangements needed to help achieve national targets. The fifth section reflects on possible support from global initiatives such as the SE4All. The sixth section underlines that leveraging linkages between an energy SDG and other SDGs can also strengthen implementation. The final section outlines the way forward as countries get ready to implement an SDG for energy.

2 The multiple benefits of an SDG for energy

Meeting the energy SDG has the potential to also reduce poverty, and improve health and wellbeing. Access to energy enables social and economic development, offering the opportunity for improved livelihoods and economic progress (United Nations Foundation, 2013). Energy access is a key precondition for human development; indeed no country in modern times has substantially reduced poverty without a sizable increase in energy services (UNEP & WHO, 2009). Further, access to clean and affordable energy can deliver benefits ranging from longer study times for children to prevention of 800,000 premature child deaths due to exposure to indoor smoke. There are still significant numbers of people who lack access to modern sources of energy, as can been seen in Figure 8.1 below.

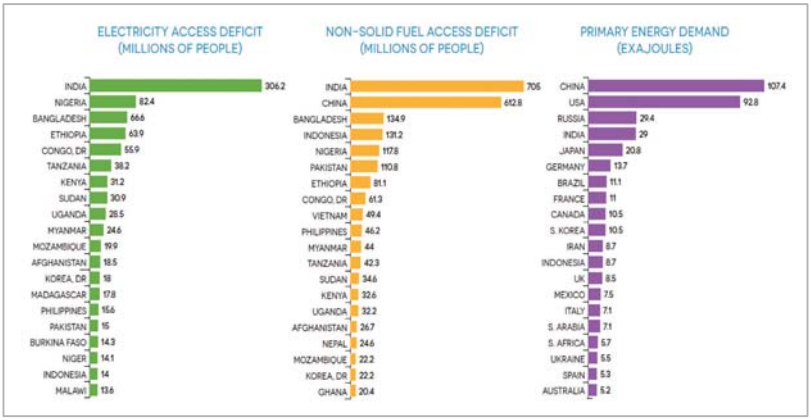

Figure 8.1 Deficits in access to electricity and non-solid fuels, and primary energy demand in selected countries

Source: World Bank 2013

Sustainable energy also plays a key role in mitigating climate change. In order to stay within safe global climate limits, populations with high per-capita fossil-fuel energy use will need to greatly reduce their greenhouse gas (GHG) emissions. The threshold of atmospheric carbon dioxide (CO_2) concentration proposed by Rockström and others as one of the planetary boundaries will soon or has already been exceeded (depending on whether one uses a 350 or 550 ppm boundary) (Rockström et al., 2009). Although improvements in energy efficiency cut

cumulative global energy demand by more than 25% over 1990- 2010 and renewable energy supplied a cumulative total of more than 1,000 exajoules globally over the same period, rapid population increase and economic growth diluted these advances (World Bank, 2014). In other words, global progress in energy efficiency and renewable energy share have been outpaced by growth in total energy consumption, which is estimated to increase rapidly in parallel with rising global populations and economies. Neither energy efficiency nor renewable energy measures alone can keep global warming to within two degrees by 2030 (Rogelj, McCollum, Reisinger, Meinshausen, & Riahi, 2013). Energy conservation is also a common feature of an integrated sustainable energy policy and a number of countries already have energy saving targets. Several EU countries have set national targets for energy saving.

Although energy itself has traditionally been a highly contentious issue, the multiple benefits of sustainable energy are beginning to draw support from many actors. This is perhaps why an energy goal enjoyed such widespread support at Rio+20 (Rio+20 UN Conference on Sustainable Development 2012) and also at the Open Working Group (OWG). Previously, at the World Summit for Sustainable Development Johannesburg Summit in 2002, the EU and Brazil suggested adopting concrete renewable energy targets, but met with opposition from G77 and OPEC on the grounds that access to energy for the poor should take priority (Ohga, 2012). Thus, going forward, it will be important for the next set of universal goals to provide a long-term vision, buttressed by targets and indicators for selective use at regional, national, local and even community levels. Those targets will then need to be tailored to national circumstances.

3 Adapting targets to national circumstances

Different countries confront different challenges regarding how they should set priorities and targets for energy. Varying development levels, resource endowments and the existing energy infrastructure all influence a country's energy use. There is a need to develop national energy targets and action plans for each individual country, which are then aligned with global goals. For example, Iceland and Paraguay have already achieved 100% renewables whereas countries like Libya have almost no renewable energy. The Chinese government, to cite another case, has introduced a series of "green measures" in the 12th Five-Year Plan that set forth a 16% reduction in energy intensity target (energy

consumption per unit of GDP), a reduction in carbon intensity reduction target (carbon emissions per unit of GDP) by 17% below 2010 levels by the end of 2015, and a non-fossil energy target of 11.4% of total energy use (Lewis, 2011). To make the global goals relevant and useful in national contexts, localised energy goals based on national realities and priorities will be essential.

Appropriate ambitious targets should be set based on a bottom-up approach at local and national levels. At the same time, local circumstances should be accounted for to maintain ownership and relevance while a global goal set under a long-term vision shared by the international community (e.g. zero fossil fuels, zero nuclear energy) should encourage efforts of multiple stakeholders at various levels to raise additional finance and other supporting MOI. The translation of these global goals at the national level with adjustments made using the bottom-up approach at the country level is critical for goals to be implemented, as it requires both clear government support and local innovation. While there is no hard and fast rule on how countries approach this process, different countries may want to prioritise the following four points as they prepare for an energy SDG: 1) energy access; 2) energy efficiency; 3) renewable energy; and 4) energy conservation.

3.1 Energy access

There is a correlation between the lack of modern energy access and underdevelopment. Thus developing countries which have not achieved universal modern energy access need to prioritise access in order to improve human wellbeing. Electricity access deficits and non-solid fuel (e.g. LPG, kerosene) access deficit are predominantly issues of lower income developing countries. Further, it is still unrealistic for developing countries to achieve universal access to energy by 2030 via clean energy without significant external financial and technical support (the year 2030 is the target year for the SDGs and the development agenda). The high costs of renewable energy present a challenge, especially for developing countries. This makes it evident that in many places, especially low income countries, energy access would still need to be ensured via conventional energy sources. Enabling leapfrogging of technology in developing countries would require substantial financial and technical cooperation from developed countries, other developing countries and other stakeholders such as companies and international organisations. It would

also necessitate a keen eye for understanding what works and why in some contexts but not others.

3.2 Energy efficiency

Since global energy demand is estimated to grow by 33% from 2010 to 2035, energy efficiency improvements will become increasingly important over the coming decades. An energy efficiency goal is particularly important for emerging economies, which often have large-scale but inefficient industrial and utility sectors. There is usually ample room for efficiency improvements, such as building retrofits and upgrading appliances. Many of these economies use energy in the production of export commodities, which, in turn, are consumed in developed countries. This points to the need to engage consuming countries providing the right technology to help the emerging export-led economies upgrade their energy mix towards greater efficiency. Energy efficiency investments can also have many positive spillovers: they often pay for themselves, enhance energy security and are relatively easy to implement.

3.3 Renewable energy

The importance of increasing the global share of renewable energy is now widely accepted. It would offer climate change mitigation, improved air quality and increased energy security benefits. Since fossil fuels are being rapidly depleted and the nuclear option entails risks and radioactive waste, renewable energy is the only truly sustainable form of power generation. The growing popularity of renewables is reflected by the adoption by 138 countries of policy targets for increased deployment of renewable energy and the adoption by 127 countries of renewable energy support policies—more than two-thirds of which are developing countries or emerging economies (Mcginn, D., Green, D., Hinrichs-Rahlwes, & R., Sawyer, 2013).

The question is whether the new set of global goals on energy can provide the impetus for strengthening existing national policy targets and policies and lead to further implementation. The current global share of renewable energy in final energy consumption is still low—estimated at 16.7% (REN 21, 2012)—but while goals related to renewable energy can be applied to developing countries, they cannot be applied evenly throughout the world due to differences in renewable energy potential.

The costs of raising the renewable proportion of the energy mix depend greatly on the potential of renewable energy. A target of 20% renewable share of electricity is too ambitious for some countries but easily achievable or already achieved by others, and while doubling the share of renewable energy in the global energy mix may be appropriate at the global level (suggesting a global share of renewable energy of around 32–36% by the year 2030) it may not be the best starting point for some countries.

3.4 Energy conservation

Energy conservation is a common feature of energy policy in developed countries, a number of which already have such targets. Several EU countries have set national targets for energy conservation and have adopted the trading of 'white certificates' or 'energy savings certificates', which demonstrates that a certain reduction in energy consumption has been attained to meet required targets (Bertoldi & Rezessy, 2009). Goals related to energy efficiency can provide synergies with energy conservation, as the latter targets provide incentives to improve energy efficiency. On the flipside is a scenario that ignores energy conservation, in which energy demands overshadow any progress in energy efficiency and renewable energy deployment. Each of the above four priorities will not be achieved without the support of governance arrangements and MOI.

4 Governance and means of implementation

The energy sector represents the largest share of global GHG emissions (41%) (International Energy Agency, 2012), which makes it critical to the SDG agenda. National governments play an integral role in steering energy policy and setting the enabling conditions for various stakeholders to effectively participate in formulating relevant targets for the energy SDG. Successful energy policies such as financial assistance for training and capacity building on renewable energy (Sovacool, 2012), the feed-in tariff (FIT) and removal of fossil fuel subsidies may be adopted as some of the enabling targets and indicators for the energy SDG.

There is also a need to ensure that governance structures are enhanced to incorporate elements of top-down and bottom-up governance. National governments may need to be supported by international institutions to provide sufficient capacity and accountability in government institutions to drive ambitious energy targets. Governments may also be responsible for providing institutional frameworks (e.g. feed-in tariff law/policy, infrastructure such as local grids, renewable energy subsidies) where multiple stakeholders such as local governments, businesses and individual citizens could innovate and participate in the market to achieve the transformation to sustainable energy. Clear, reliable and consistent policy over the long-term is especially important to attract the necessary investments and buy-in from the private sector.

> *National governments play an integral role in steering energy policy and setting the enabling conditions for various stakeholders to effectively participate in formulating relevant targets for the energy SDG*

Broader elements of the governance agenda, such as the rule of law, competent public agencies and controls on corruption, are also needed (which may be better placed under other goals/targets), to support clear, coherent energy policies (see also Chapter 2 for a review of these broader elements of governance). These are the cornerstones of sustainable development, and as such represent enabling conditions paving the way for further investment in energy.

While there are already many international actors promoting renewable energy, there is still room for improvement for international and regional organisations to provide access to green technologies and high quality advisory assistance to member states. The availability of standardised, reliable data on critical issues such as electricity prices and renewable energy potential is still scant in developing countries and would need further resources for research purposes.

Further, governments in developing countries are often unsure of which renewable options to choose and tend to replicate technologies promoted elsewhere, despite differing implementing contexts and conditions. International organisations with expertise in energy efficiency and renewable energy could assist developing countries by helping them

choose appropriate renewable technologies, sharing information on context-appropriate good practices and the latest renewable technologies (e.g. via expert and practitioner workshops), compiling and sharing essential data on websites, and providing technical and policy advice. One of the more important initiatives that could contribute to and benefit from an energy SDG is Sustainable Energy for All (SE4All).

5 Sustainable energy for all

The energy SDG shares much common ground with the UN Secretary-General's existing SE4All objectives of energy access, energy efficiency and share of renewable energy—with the exception that the former attaches no specific figure to the share of renewable energy due to worldwide variations. SE4All is a voluntary initiative based on the Year of Sustainable Energy for All in 2012, as designated by the UN General Assembly and offers many potential synergies with the Energy SDG (the Secretary-General's High-Level Group on Sustainable Energy for All 2012).

There have been no official globally-agreed goals or legal instruments on energy access, energy efficiency and the share of renewable energy, thus an SDG on energy would help contribute to and raise the profile of the existing work of SE4All and other energy-related initiatives undertaken by governments, the United Nations, businesses and civil society organisations. The initiative may further support an ambitious energy SDG by presenting a long-term vision to the whole world, such as "Achieving 100% renewable energy" and spur countries which have already achieved the targets to be even more ambitious. The additional attention given to energy through the SDGs may also help proponents in SE4All build new coalitions with similar interests in enabling greater access to sustainable sources of energy. This will also require recognising interlinkages between energy and other SDGs.

6 Interlinkages between the energy SDG and other SDGs

There are a number of positive interlinkages between energy and other SDG goal areas such as water, education, health and climate change mitigation, but there are also possible tradeoffs with energy, e.g. the 'overdraft' of water by water pumping and the competing use of water for drinking, agriculture and energy generation. As the largest single consumer of water, agriculture competes directly with the energy sector for water resources (U.S. Department of Energy, 2014), and this is a particular concern in many parts of the world that are short of water (Bhattacharya & Mitra, 2013). Many of these places would benefit directly from renewable energy generation such as solar photovoltaics (PV) and wind since no water is involved, unlike the large quantities required for fossil fuel and nuclear energy generation. It may not be possible to address all interlinkages since targets and indicators need to be simple to be effective, but identifying and then weighing the costs and benefits of implementing policies in line with these linkages will be important for all countries. Chapter 6 of this book on the water SDG expands on some of the considerations necessary for taking a similarly integrated approach to a water goal.

There are a number of positive interlinkages between energy and other SDG goal areas such as water, education, health and climate change mitigation

7 The way forward

It is important to consider that there will be differences in how individual countries develop their energy sector sustainably. Effective institutions and policies as well as good governance are the cornerstones of sustainable development because they ensure the efficient use of financial resources and enhance transparency (United Nations, 2014). Sound public policy, strong institutions and effective governance—identified in Chapter 2 as enablers for the implementation of SDGs—will play a crucial role in achieving an energy SDG.

Policymakers need to carefully consider MOI and governance reforms, with the aim of achieving the four goals of energy access, energy efficiency, renewable energy and energy conservation highlighted above. In particular, energy-related issues are typically handled by several government ministries and departments so inter-ministerial coordination and cross-sectoral working groups will be key for effective implementation as will engagement of private companies in the energy sector. Possible reforms supporting greater integration would include strengthening interagency coordination mechanisms, cross-training between officials with overlapping administrative portfolios, and piloting multi-criteria for budgeting decisions and programme evaluation. Building the capacity and knowledge of government institutions and key stakeholders to raise awareness and to share information can encourage greater acceptance from the public.

Effective institutions and policies as well as good governance are the cornerstones of sustainable development because they ensure the efficient use of financial resources and enhance transparency

A number of countries have already set domestic targets on energy efficiency and renewable energy and are working towards them, thus for the SDGs to add value they need to be more ambitious than countries' existing targets. Governments around the world are already taking action on sustainable energy—the role of the SDGs is to strengthen these efforts further, especially to ensure that the needs of the poor are in focus and that new energy systems are environmentally sustainable and compatible with a stable global climate.

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9

Conclusions: Bringing the agenda into action

Magnus Bengtsson
Simon Hoiberg Olsen

1 The way forward

The new Sustainable Development Goals (SDGs) are a call for action to change the course of history—to make development benefit all and to safeguard the planet for future generations. The launch of the new agenda, which will guide development in the period 2016-2030, provides a unique opportunity for governments, citizens, businesses and various stakeholder groups to assess existing institutions and practices, and to undertake necessary reforms. The SDGs are universal and ambitious, and hence could provide impetus for transformative change. But the real test for the SDGs will be in their ability to inspire and empower. Governments are expected to play a leading role in implementation; however, to bring about meaningful change the new agenda must resonate across different sectors and stakeholders (Hoekstra, R., Smits, J.P et al., 2015). This fits with the global consultation among governments, experts, and a wide range of other stakeholders that supported the formulation of the SDGs. As such, the goals represent the joint aspirations of many people and groups from all parts of the world for more balanced and inclusive forms of development (UNDG, 2014).

But the integrated and inclusive nature of the SDGs agenda also represents a fundamental challenge. The comprehensive set of development goals includes traditionally contradictory development objectives that will be difficult to reconcile without a carefully conceived plan of implementation. The stakeholders supporting those goals may or may not be willing to compromise on "their" goal to achieve others. Furthermore, as of yet, the agenda provides no guidance on how to handle potential conflicts between sectoral interests and stakeholder priorities. It has also offered limited counsel on how to minimise trade-offs, such as how to deal with the tensions that often arise between economic development, social justice and environmental sustainability (ASEF, 2014). To be sure, tough compromises will have to be made. This underlines the significance of the implementation process—of who gets involved, at what stage, and how varying viewpoints and interests are articulated, weighed, and reconciled (ESCAP, ADB, & UNDP, 2015). In other words, it underscores the critical role of the topic of this book: governance.

2 The role of governance in turning SDG aspirations into action

Governance—here broadly understood as the way authority is exercised and decisions are made and executed—will undoubtedly be a key factor behind the success or failure of the SDGs. Few would disagree with that. But governance is an inherently multifaceted concept, which can mean different things to different people. This book therefore attempts to provide some insight on which aspects of governance are likely to matter the most for the SDGs. In doing so, it both draws from the extensive literature on governance and presents studies of past agreements, ranging from the outcome of the 1972 Stockholm Conference on the Human Environment, through the 1987 Brundtland report and the 1992 Rio Summit, to the more recent Millennium Development Goals, agreements on climate finance, and Rio+20—the conference that set in motion the process to define the SDGs.

Governance will undoubtedly be a key factor behind the success or failure of the SDGs

The introductory chapter provided a framework to help organise different views on governance. The framework consists of three perspectives on governance and its role in promoting development: 1) the quality of public institutions; 2) international agreements and compliance by nation states; and 3) actions by various stakeholders collaborating at multiple levels. These three perspectives recur throughout the book and inform the analyses presented in the chapters. The first perspective was explored in more detail in Chapter 2, which concluded that differences in rule of law and government effectiveness can explain why some countries have made more progress on the MDGs than others. Chapter 3 took inspiration from complementarities between the second and the third perspective for its study of international agreements and high-level policy documents on sustainable development. It illustrated clear trends from a reliance mainly on top-down policy implementation by governments to broader approaches to governance emphasising also collaborative partnerships with various stakeholders. Chapter 4, in contrast, belongs in the tradition of the second perspective—how international agreements can ensure effective follow-up action at national level. Its analysis of international agreements on financing identified key elements for keeping signatories accountable. Clear commitments, strong monitoring frameworks, and substantial high-level dialogues on follow-up were

found to be essential and mutually-reinforcing elements for accountability. It also identified a need for indicators not only to monitor the input side—how much funding is provided—but also how funds are spent and how this contributes to concrete development outcomes. These findings on accountability and monitoring could apply not only to financing agreements but also to international agreements in general.

The four chapters in the second part of the book combined the three perspectives on governance in their analyses of specific sectors and issues: education (Chapter 5), water (Chapter 6), biodiversity (Chapter 7), and energy (Chapter 8). A common theme of these chapters were the strong linkages that exist between different SDGs—for example, how poverty eradication requires investments in education, how rapid expansion of renewable energy and improvements in energy efficiency are key to stabilising the global climate, how food security depends on achieving water security, and how biodiversity targets would relate to existing international agreements. These interlinkages point to the need for more integrated forms of governance that cut across traditional policy areas and economic sectors—to realise potential synergies and reduce conflicts and trade-offs. Such integrated approaches need to mobilise actors from different parts of society to identify and work towards common objectives.

The chapters on water and energy discussed the international aspects of governance and pointed out the importance of support for developing countries to achieve multiple objectives. These countries are facing the challenge of ensuring access to basic services, while at the same time striving to improve efficiency and also starting to address emerging wasteful consumption patterns. Making progress on these objectives simultaneously requires good governance at national and sub-national levels as well as international support. Of particular relevance are effective mechanisms for international collaboration to help developing countries leapfrog to sustainable systems without necessarily emulating energy- and resource-intensive solutions common in the developed parts of the world. Such collaboration implies not only sharing of technology and expertise among countries, but also that developed countries lead by example to illustrate how transitions to more sustainable societies can happen and how human well-being can be made compatible with ecological imperatives.

The rest of this concluding chapter elaborates on these findings on governance for the SDGs and provides recommendations for practitioners, especially policymakers at the national level. Finally, it offers some reflections on the role of research in the implementation of the SDGs, including suggested topics for future study.

3 Cross-sectoral and integrated governance

Managing the linkages between different goals and targets will be one of the most important but also most challenging aspects of implementing the SDGs (ICSU & ISSC, 2015). That is also a key conclusion of the studies in this book.

> *Governments should approach the SDGs as a system of interconnected objectives rather than a list of separate goals and targets*

This requires governments to approach the SDGs as a system of interconnected objectives rather than a list of separate goals and targets. To do so in practice, governments need to adopt more integrated forms of governance that bridge traditional policy domains and span multiple economic sectors (ActionAid, 2015; Independent Research Forum, 2014). This, in turn, requires institutional innovation and reforms of routines for operational planning, human resource management and budget allocation (Antonio, Ofei-Manu, & Olsen, 2014). Governments and state administrations must have the capacity to identify misguided solutions—policies, technologies, infrastructure designs, and institutional arrangements—that would create strong tensions among different SDG objectives, and to identify options that are more synergistic across the entire SDGs framework.

In this context, it is of particular importance to ensure that environmental objectives are not systematically compromised—as is currently often the case (Akenji & Bengtsson, 2014). The approach to implementation has to reflect that access to natural resources, intact ecosystems, and a stable climate play fundamental roles in human development and well-being (A4S et al., 2015), and that efforts to promote development at the expense of environmental deterioration are undermining themselves and will eventually fail (Griggs et al., 2013).

In this regard, it will be important for governments and other stakeholders to analyse what institutional arrangements can be the most conducive to integrated cross-sectoral policymaking. This should include a mapping of how different development objectives are linked to each other and help identify solutions with high synergies, as well as trade-offs to be avoided. Governments at all levels therefore need to institutionalise routines for screening plans and proposals that consider multiple criteria (Waage & Yap, 2015). In these processes, both civil society and the science community will play essential roles. The Box below illustrates the importance of linkages between different goals from the perspective of the SDG on sustainable consumption and production (SCP) and discusses implications for governance at both national and international levels.

Governance and SDG 12 on Sustainable Consumption and Production

Author: Lewis Akenji

What will likely become Goal 12 of the SDGs (Ensure Sustainable Consumption and Production Patterns) illustrates some of the main reasons governance is crucial if the targets and objectives of the framework are to be realised. Key reasons governance is so important include the following:

SCP is a cross-cutting theme, and an overarching objective of sustainable development. This is well reflected in the draft framework document that lists likely SDGs. SCP is needed for poverty eradication (Goal 1) and sustainable food production and distribution (Goal 2), which contributes to health and well-being (Goal 3); production and consumption are the bedrocks of the economy (Goal 8) and industrialisation (Goal 9), which affect biodiversity (Goal 15). There are many other such linkages as well. These linkages underline why SCP cannot be achieved as a standalone goal—it requires making good progress on all other SDGs as well. It also suggests why governance of SDGs would require more than just engagement of ministries of environment, and needs to involve ministries responsible for the economy, agriculture, natural resources, health, strategic planning, etc. An integrative approach to SCP would allow it to serve as means of implementation (MOI) for other goals.

There is already a UN 10-Year Framework of Programmes on SCP (10YFP), which was adopted at Rio+20. This means that there will be simultaneously an SCP goal as part of the SDGs and an international framework specifically on SCP. If these two are not properly coordinated, it could lead to unhealthy competition for resources and political attention, rather than providing synergies. Target 12.1 of the SDGs is to implement the 10YFP, though it does not say how. Thus the 10YFP and SDG 12 would need integration at the level of objectives, indicators, and monitoring and reporting frameworks. Good international governance mechanisms will be crucial here.

SCP typifies and highlights some of the more contentious practical and political differences between developed countries and developing countries, and highlights the applicability of the principle of common but differentiated responsibilities (CBDR). To achieve the SCP SDG, proper governance at the international level would need to address three issues: 1) equity among populations and equal access to ecological resources; 2) fairness in distribution of burden and damages from historic and present unsustainable consumption and production; and 3) differences in capacities of developed and developing countries to address the problems of unsustainable consumption and production.

4 Multi-stakeholder and inclusive governance

The argument for integration across different sectors also pertains to the inclusion of different stakeholders. Multi-stakeholder engagement and participation are increasingly put forward as core elements of governance for sustainable development. This was clearly recognised in the participatory and inclusive processes to formulate the post-2015 development agenda. Decision-makers and development actors are increasingly aware of the limitations of top-down planning and implementation. Agreements and action based on consensus and an ethos of inclusiveness and multi-stakeholder engagement are thus recognised as critical (Bäckstrand, 2006; Eckley, 2001). But there also remains tension between the benefits and costs of participation.

Many studies have argued that inclusion and engagement have significant benefits. Earlier literature on environmental issues viewed participation as a normative 'good' and as an expression of a democratic society (Arnstein, 1969). Other literature on participation has argued that participation leads to better development outcomes because it reflects a broader set of development aspirations (Bass, Dalal-Clayton, & Pretty, 1995; Swidler & Watkins, 2009). This is also partly because participation creates ownership of the development process (Booth, 2012). Increasing participation and openness can also challenge existing interests and the institutional and political structures that support them. This can help ease the institutional and political reforms that would otherwise prevent transformative approaches to development.

But some would advise caution about the costs of inclusiveness. Stakeholder participation can be time-consuming and inefficient. For this reason, it may be neither desirable nor efficient to try to involve everyone in discussions on every issue (Irvin & Stansbury, 2004). A further set of concerns cautions about inclusiveness being handled through *pro forma* processes that lend legitimacy to government decisions but limits actual co-design of policies and decisions. Another possible drawback is that inclusiveness can also create so many stakeholders that it is difficult to hold any single party accountable for an outcome (Brett, 2003). Inclusiveness can thus come at the expense of accountability, especially if there is a lack of accountability mechanisms that clearly define roles and responsibilities of relevant actors.

While most of the chapters in the book underline the importance of making the policy processes as inclusive as possible, it will thus also be vital to aim for institutional arrangements that can balance the merits of inclusion while minimising its drawbacks. Striking the right balance will depend upon national and subnational contexts. And this will likely prove challenging in many parts of the world. At the very least, there will be a need to consider which stakeholders are included through which engagement mechanisms and at what stages of the decision-making processes. This will require some careful reflections from governments as they begin to get ready to implement the SDGs. It is also an area upon which the research community could shed some useful light.

5 The roles of the research community

The research community has played an active role in the design of the SDGs agenda, and it will continue to have significant roles to play also during implementation. This section identifies some areas where involvement of the research community is expected to be critical.

At the early stages of the implementation process, the research community can help countries translate the global goals and targets into national and local contexts and assist in setting appropriate targets. During planning for implementation, research can clarify how different goals and targets of the SDGs framework are related, thereby helping governments and other actors identify synergies and anticipate trade-offs. As pointed out repeatedly in this book, how these linkages are managed will be one of the most important aspects of the implementation process. Here, the research community can also assist the assessment of various solutions and help identifying options with stronger synergies and that create less tension across the SDGs. A related task is to identify the options where investments are expected to yield especially high or limited societal returns.

> *The study of sustainable development is not always best practiced from the detached perspective of the laboratory but from experiences of living among people and hoping for a better society*

Another role for the research community is monitoring and evaluation. The limited availability of quality data is widely recognised as a key challenge for implementation. Researchers can contribute to the generation of data in areas that are not well covered by regular statistics. The research community can also be actively engaged in implementation activities, working directly with various stakeholders and facilitating joint learning. The complexity of the SDGs agenda necessitates an adaptive approach to implementation where experiments, quick feed-back, learning and adaptation will be essential. The research community can play an important part in facilitating such processes.

Research can also help evaluate the degree of success of different implementation arrangements. This book emphasises the need for reforms in governance and for institutional innovation towards better

integration and meaningful participation. In these areas, the research community can assist by assessing the performance of different approaches to governance, such as of integration mechanisms involving multiple policy areas and of various models of civil society engagement. An especially pertinent research topic is to explore how participation and partnerships for sustainable development can be designed and carried out in ways that can reconcile the tensions discussed above between legitimacy and effectiveness or inclusiveness and accountability. For this, it will be relevant to analyse how multi-stakeholder partnerships can achieve high levels of accountability and legitimacy, as well as exploring how to bolster effective participation under resource constraints—when decisions about implementation have to be made with limited time, money and people.

Overall the research community will not be able to simply sit back and observe idly as the SDGs are implemented. Researchers will need to be engaged. There is a risk that one sacrifices objectivity by becoming too much a part of the process that one studies. At the same time, the study of sustainable development is not always best practiced from the detached perspective of the laboratory but from experiences of living among people and hoping for a better society. The SDGs mark an unprecedented opportunity to change the trajectory of history—too much could be lost by watching that period pass by.

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ANNEX 1

List of search terms for Chapter 3

Annex 1 List of search terms for Chapter 3

List of search terms for Chapter 3

Collaborative governance key words (17)	*Compliance governance key words (11)*
– Equality – Accountability – Transparency – Democracy – Agreement – Dispute settlement – Behavioral/behavioural change – Problem solving – Durability – Deliberation – Collaboration – Participation – Partnership – Engage – Involvement – Cooperation – Consult	– Compliance – Conform – Legal – Commit – Mandatory – Sanction – Punish – Fine – Binding – Adhere – Enforce
Overarching Implementation related key words (20)	
– MOI – Resources – Inputs – Outcomes – Partnership – Commit – Finance – Technology – Institutions – Trade	– Review – Reporting – Target – ODA – Donor – Capacity – University – Common – Differentiated – Ownership

ANNEX 2

Proposed
SDG goals and targets,
as of August 2015

Annex 2

Proposed SDG goals and targets, as of August 2015

Sustainable Development Goals

- Goal 1. End poverty in all its forms everywhere
- Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3. Ensure healthy lives and promote well-being for all at all ages
- Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5. Achieve gender equality and empower all women and girls
- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 10. Reduce inequality within and among countries
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12. Ensure sustainable consumption and production patterns
- Goal 13. Take urgent action to combat climate change and its impacts*
- Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- 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 levels
- Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

* Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.

Goal 1. End poverty in all its forms everywhere

1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day

1.2 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

1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

1.4 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

1.5 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

1.a 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

1.b 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

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

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

Goal 3. Ensure healthy lives and promote well-being for all at all ages

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, 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

3.4 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

3.7 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

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

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance 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.c 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.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

4.2 By 2030, 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

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

4.5 By 2030, 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

4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

4.7 By 2030, ensure that all learners acquire the 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 non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries

4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

Goal 5. Achieve gender equality and empower all women and girls

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

Goal 6. Ensure availability and sustainable management of water and sanitation for all

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

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

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

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

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

6.b Support and strengthen the participation of local communities in improving water and sanitation management

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Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

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, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries

8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead

8.5 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

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training

8.7 Take 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 labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products

8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all

8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries

8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to

African countries, least developed countries, landlocked developing countries and small island developing States

9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

Goal 10. Reduce inequality within and among countries

10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

10.2 By 2030, 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

10.3 Ensure 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

10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations

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

10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies

10.a Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements

10.b Encourage 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

10.c By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

11.1 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

Goal 12. Ensure sustainable consumption and production patterns

12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries

12.2 By 2030, achieve the sustainable management and efficient use of natural resources

12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses

12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products

12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

Goal 13. Take urgent action to combat climate change and its impacts*

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

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

* Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information

14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation

14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

14.b Provide access for small-scale artisanal fishers to marine resources and markets

14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

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

15.2 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

15.3 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

15.4 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

15.5 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

15.6 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

15.7 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

15.8 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

15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts
15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

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

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

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 levels

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 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

Annex 2

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development Finance

17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection

17.2 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

17.3 Mobilize additional financial resources for developing countries from multiple sources

17.4 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

17.5 Adopt and implement investment promotion regimes for least developed countries

Technology

17.6 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

17.7 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

17.8 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

Capacity-building

17.9 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

Trade

17.10 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

17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020

17.12 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

Systemic issues

Policy and institutional coherence

17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence

17.14 Enhance policy coherence for sustainable development

17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development

Multi-stakeholder partnerships

17.16 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

17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

Data, monitoring and accountability

17.18 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

17.19 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