



Financing Sustainable Development: Implementing the SDGs through Effective Investment Strategies and Partnerships

Working Paper

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About this document

This Working Paper has been prepared as input into the preparations of the Third Conference on Financing for Development that will be hosted by the Government of Ethiopia in Addis Ababa on 13-16 July 2015. A shorter document on Financing for Development prepared by the SDSN Leadership Council is available on the [SDSN website](#).

About the SDSN

Commissioned by UN Secretary-General Ban Ki-moon in 2012, the Sustainable Development Solutions Network (SDSN) mobilizes scientific and technical expertise from academia, civil society, and business in support of sustainable development problem solving at local, national, and global scales. More information on the SDSN is available at www.unsdsn.org.

¹ The authors are Executive Director and Director of the Sustainable Development Solutions Network (SDSN). The views expressed in this working paper may not represent the views of the SDSN or its Leadership Council.

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Acronyms and Abbreviations

ACT – Artemisinin-based Combination Therapy	GFF – Global Financing Facility in support of maternal and newborn health
AfDB – African Development Bank	GIF – Global Infrastructure Facility
AICD – African Infrastructure Country Diagnostic	GNI – Gross National Income
AIMS – Aid Management Systems (AIMS)	GPE – Global Partnership for Education
APP – Africa Progress Panel	HICs – High-Income Countries
ARV – Anti-Retroviral	HLP – High-Level Panel on the Post-2015 Development Agenda
ATIA – African Trade Insurance Agency	IATI – International Aid Transparency Initiative
BEPS – Base Erosion and Profit Shifting	IBRD – International Bank for Reconstruction and Development
BIS – Bank for International Settlements	ICESDF – Intergovernmental Committee of Experts on Sustainable Development Financing
CAADP – Comprehensive Africa Agriculture Development Programme	ICTs – Information and communication technologies
CBD – Convention on Biological Diversity	IDDRI – Institute for Sustainable Development and International Relations
CCM – Country Coordination Mechanisms (of the GFATM)	IDA – International Development Association
CCS – Carbon Capture and Storage	IDF – International Development Finance
CDM – Clean Development Mechanism	IEA – International Energy Agency
CGIAR – Consultative Group on International Agricultural Research	IFAD – International Fund for Agricultural and Development
COP21 – 21 st Conference of the Parties under the UNFCCC	IFC – International Finance Corporation
CPI – Climate Policy Initiative	IFFIm – International Finance Facility for Immunization
CSO – Civil society organization	IFPRI – International Food Policy Research Institute
DAC – Development Assistance Committee of the OECD	IHME – Institute for Health Metrics and Evaluation
DBR – Domestic Budget Revenues	IHP+ – International Health Partnership
DDPs – Deep Decarbonization Pathways	IMF – International Monetary Fund
DFIs – Development Finance Institutions	INDC – Intended Nationally Determined Contributions
DOTS – Directly Observed Treatment Short-Course	IPBES – Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
DRM – Domestic Resource Mobilization	IPCC – Intergovernmental Panel on Climate Change
ECD – Early Childhood Development	IPPF – Infrastructure Project Preparation Facilities
EITI – Extractives Industry Transparency Initiative	IWRM – Integrated Water Resources Management
EU-ETS – European Union Emissions Trading Scheme	JMP – Joint Monitoring Programme (for water and sanitation)
FAO – Food and Agriculture Organization	LDCs – Least Developed Countries
FiRe – Finance for Resilience	LICs – Low-Income Countries
FfD – Financing for Development	LLINs – Long-Lasting Insecticidal Nets
FTI/EFA – Fast Track Initiative for Education For All	LMICs – Lower-Middle Income Countries
GAfSP – Global Agriculture and Food Security Program	MDB – Multilateral Development Banks
GAVI – Global Alliance for Vaccines and Immunizations	MDFC – Multilateral Development Finance Committee
GCF – Green Climate Fund	
GDP – Gross Domestic Product	
GEF – Global Environment Facility	
GIF – Global Infrastructure Facility	
GFATM – Global Fund to Fight AIDS, Tuberculosis and Malaria	
GFE – Global Fund for Education	

MDGs – Millennium Development Goals
M&E – Monitoring & Evaluation
MICs – Middle-Income Countries
MIGA – Multilateral Investment Guarantee Agency
MSF – Médecins Sans Frontières
NEPAD – New Partnership for Africa’s Development
NSO – National Statistical Office
ODA – Official Development Assistance
ODA-C – Official Development Assistance for Climate Finance
OECD – Organization for Economic Cooperation and Development
OOF – Other Official Flows
OOF-C – Other Official Flows for Climate Finance
OWG – Open Working Group on the Sustainable Development Goals
PEPFAR – President's Emergency Plan For AIDS Relief
PFM – Private Finance Mobilized through official financing
PFM-C – Private Finance Mobilized for climate finance through official financing
PISA – Programme for International Student Assessment
PPP – Public-Private Partnership
PPPT – Public-Private Partnership for Technology
RDD&D – Research Development, Demonstration & Diffusion
RSPO – Roundtable on Sustainable Palm Oil
SDGs – Sustainable Development Goals
SE4All – Sustainable Energy for All
SUN – Scaling up Nutrition Movement
SWA – Sanitation and Water for All Partnership
TB – Tuberculosis
TEEB – The Economics of Ecosystems and Biodiversity
UMICs – Upper-Middle Income Countries
UN – United Nations
UNAIDS – Joint UN Programme on HIV/AIDS
UNCTAD – UN Conference on Trade and Development
UNDP – UN Development Programme
UNEP – UN Environment Programme
UNESCO – UN Educational, Scientific and Cultural Organization
UNFCCC – UN Framework Convention on Climate Change
UNFPA – United Nations Population Fund
UHC – Universal Health Coverage

UNICEF – UN Children’s Fund
VAT – Value Added Tax
WBCSD – World Business Council for Sustainable Development
WHO – World Health Organization

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Executive summary and key messages

Three summits in 2015 will set the stage for international cooperation over the coming decades. In July 2015, governments will convene for the Third Conference on Financing for Development in Addis Ababa, which will focus on Financing for Development (FfD). Two months later, in September 2015, they are scheduled to adopt a new set of Sustainable Development Goals (SDGs) at the United Nations in New York. Finally, in December 2015, the 21st Conference of the Parties (COP21) of the UN Framework Convention on Climate Change (UNFCCC) is expected to adopt a binding agreement on the long-term reduction of greenhouse gas emissions.

The three summits will rise or fall together. Without financing there can be no credible agreement on the SDGs or climate change. Without the SDGs, there can be no guidance on how to design a financing framework for sustainable development. Without a successful climate summit, the hope to end poverty and achieve sustainable development will be lost. In this sense, this year's three summits will forge the sustainable development future of the planet, successful or not. The 2015 Addis Ababa Accord must update and broaden the Monterrey Consensus to cover the financing needs of the SDGs as well as the climate agenda.

This working paper examines some of the questions involved in designing new institutions to handle the long-term, complex investments needed for key sustainable development priorities. It builds on and complements the reports from the Intergovernmental Committee of Experts on Sustainable Development Financing, the World Bank, and many others. In particular, this working paper seeks to add the following to the debate on Financing Sustainable Development:

- **An in-depth discussion of key policy issues that need to be considered by FfD.** The working paper is extensively referenced to guide the interested reader to additional background documentation.
- **An assessment of public and private investment needs across key SDG investment areas.**
- **An analysis of how successful public-private investment partnerships have worked in health, and how lessons might be applied to other areas,** such as education, agriculture, water and sanitation, ecosystems and biodiversity, a data revolution for the SDGs, or infrastructure.
- **Practical proposals for action that could be promoted by member states in the run-up to the Addis Ababa conference.** If adopted these actions will help build momentum towards a successful FfD Conference, SDG Summit, and climate conference.

FfD must recognize the complementary roles of public and private commercial financing. Private commercial finance can support investments in private assets, such as factories, provided they generate an appropriate return. In turn private financing is intrinsically insufficient or impossible in several key areas for the SDGs: (i) helping the poor who do not have purchasing power meet basic needs, (ii) networked infrastructure where social benefits exceed private returns, (iii) global public goods (e.g. post-conflict assistance, biodiversity, climate change); and (iv) promoting new technologies. **A central challenge for FfD is how the public-private partnerships needed to make the SDG investments can be organized and financed.**

The public private investment needs for the SDGs and might be summarized as follows:

Schematic illustration of public/private financing needs for SDGs

Open Working Group Goal	Scale of incremental investments	Share private investments	Share public investments	Role for household contributions?	Priority pooled international finance mechanisms described in this paper
Goal 1: End poverty in all its forms everywhere	Covered under other goals				All pooled finance mechanism contribute to this goal, including IDA
Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	+++	++	++	Limited role in agriculture	Proposed Smallholder and Nutrition Fund (building on IFAD and GAFSP)
Goal 3: Ensure healthy lives and promote well-being for all at all ages	++	+	+++	0	GAVI, GFATM, GFF, UNFPA, UNICEF
Goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	++	+	+++	0	Global Fund for Education (building on Global Partnership for Education)
Goal 5. Achieve gender equality and empower all women and girls	+	+	+	0	Largest investment needs covered under other areas (e.g. health, education); other mechanisms to be determined
Goal 6. Ensure availability and sustainable management of water and sanitation for all	+++	++	++	+	Dedicated financing mechanism or regional facilities
Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all	+++	+++	+	++	SE4All and infrastructure finance
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Covered under other goals				All pooled finance mechanism contribute to this goal, in particular IDA and infrastructure modalities
Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	+++	+++	+	N/A	See infrastructure section
Goal 10. Reduce inequality within and among countries	Covered under other goals				All pooled finance mechanism contribute to this goal
Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable	+++	++	++	N/A	See in particular infrastructure section; other financing mechanisms also contribute
Goal 12. Ensure sustainable consumption and production patterns	++	++	++		In particular GCF, GEF, proposed Smallholder Fund, and infrastructure finance
Goal 13. Take urgent action to combat climate change and its impacts	+++	+++	++	N/A	GCF, GEF, infrastructure finance, other pooled finance mechanisms
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	+++	++	++	N/A	GEF and proposed Smallholder and Nutrition Fund
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	+++	++	++	N/A	GEF and proposed Smallholder and Nutrition Fund
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	+	+	+++	N/A	IDA and budget support mechanisms, other mechanisms to be determined
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	+	+	+	0	A small pooled financing mechanism is needed

Source: Authors' analysis

Meeting the SDGs will require additional investments in the order of \$2-3 trillion per year. FfD will require a clear sense of the volumes of public and private resources that are needed. The working paper and a supporting background document consolidate publicly available estimates to arrive at a preliminary assessment of financing needs. These estimates will need to be revised and expanded over the coming months.

Preliminary and incomplete incremental investment needs for the SDGs in developing countries (in constant 2010 \$ billion)³

Investment Area	Incremental annual investment needs in developing				Corresponding pooled finance mechanisms	Current annual disbursements	Projected annual need
	Total needs	Private, commercial financing	Public, non-commercial financing	Of which ODA/public climate finance			
Health	51-80	~ 0	51-80	TBD	GAVI, GFATM, GFF, UNFPA, UNICEF	[5,6]	TBD
Education	[22]	~ 0	[22]	13,6	Proposed Global Fund for Education	0,4	TBD
Food security	38	2	36	TBD	IFAD, GAFSP, proposed Smallholder Fund	[0,4]	TBD
Access to modern energy (SE4All)	34	10,5	23,5	12,8	GCF	N/A	[6]
Access to water and sanitation	27	3-5	22-24	TBD	Global Water and Sanitation Fund or regional facilities	TBD	TBD
Data for the SDGs	[7.5]	~ 0	[4.5]	[3]	Dedicated trust fund or other mechanism	0,3	[0,5]
Ecosystems including biodiversity	[18-48]*	[3-7]	[15-41]	TBD	GEF	1,1	TBD
Other agriculture	210	195	15	0	N/A		
Large infrastructure (power, transport, telco, watsan)	689-1279	291-595	398-684	TBD	N/A		
Climate change mitigation	[380-680]	[300-564]	[80-115]	TBD	GCF	N/A	100
Climate change adaptation	60-100	0	60-100	TBD	GCF	N/A	TBD
Total	[1535 - 2529]	[805 - 1379]	[728 - 1151]	TBD		TBD	TBD

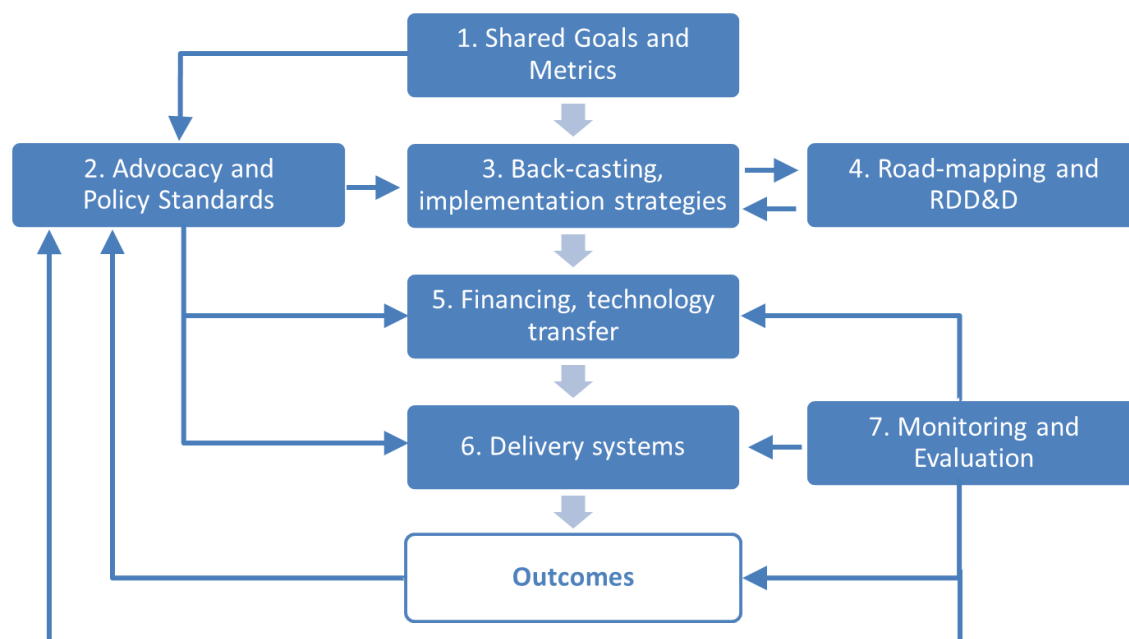
Source: Schmidt-Traub (forthcoming)

Global public goods are an important part of Financing Sustainable Development. Key investment priorities that are discussed in the working paper include: climate change mitigation and adaptation; health (infectious diseases); ecosystem services and biodiversity; and technology development and diffusion.

The health sector shows how goal-based public-private partnerships can be organized with important lessons for other SDG investment areas. Effective partnerships are not centrally planned, and they do not require one actor that oversees all activities. Yet delivering results at the required scale requires a high degree of mobilization and organization. Such global partnerships involve many actors around **(1) shared goals and metrics** that provide a coherent narrative for action, mobilize all actors involved in a particular area, and galvanize the community to develop clear strategies for implementation, raise the financing and develop the technologies needed to implement them; **(2) advocacy and policy standards** to raise awareness of the importance and feasibility of the global goals, mobilize stakeholders, ensure accountability, and translate lessons into standards that other countries can emulate; **(3) back-casting and implementation strategies** to show how the goals can be achieved through sustained investments and supportive policies; **(4) technology road-mapping for Research, Development, Demonstration and Diffusion (RDD&D)** to identify missing technologies and organize public-private partnerships to address them; **(5) financing and technology transfer** mobilizing the right mix of public and private resources to implement goal-based investment strategies; **(6) delivery systems** that translate policies, strategies, and financing into outcomes; and **(7) Monitoring and Evaluation (M&E)** to sharpen the understanding of what works, support the advocacy, and hold all partners accountable.

³ To simplify terminology we refer to US\$ simply as \$ throughout this document.

Seven core components of goal-based investment partnerships



Success in the health sector and lack of progress in other areas demonstrate the central role of pooled financing mechanisms in financing, organization, knowledge transfer, and advocacy. Pooled mechanisms like Gavi and the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) help to promote: (i) effective country-led programs and national ownership; (ii) technical integrity, rapid learning, and efficient knowledge transfer; (iii) lower transaction costs and minimal duplication; (iv) effective mobilization of private finance and leveraging; (v) massive acceleration of innovation through business engagement; (vi) effective financing of technology transfer; (vii) improved allocation of aid to countries most in need; (viii) predictable multi-year funding commitments; (ix) an important global voice and mobilization of civil society; and (x) transparent resource mobilization parameters.

Pooled financing mechanisms are one of many necessary tools for FfD. They complement bilateral programs and project-based finance mechanisms. In several areas, such as infrastructure investments, global funds are not an appropriate mechanism for building global partnerships. **The World Bank's International Development Association (IDA) plays a central role in providing flexible funding that can complement resources from other pooled mechanisms.**

Criteria for when pooled financing mechanisms ought to and ought not to be considered include: (i) program- or system-based financing needs (as opposed to project-based financing); (ii) areas that require substantial ODA volumes, particularly for operating expenditure; (iii) need to mobilize different types of stakeholders, including the private sector; and (iv) need to harmonize the international development finance architecture. **Key design features for effective pooled financing mechanisms include:** (i) independent multilateral organization with multi-stakeholder board; (ii) system-based investment windows; (iii) demand discovery around clearly defined program windows; (iv) independent technical review of country proposals and rigorous M&E; (v) multi-annual replenishment; and (vi) innovation in delivery.

The working paper reviews major investment strategies and financing mechanisms in key investment areas. Some key points from the discussion are summarized below, but they cannot substitute for the detailed discussions in the working paper and the references cited. Recommendations for action are summarized at the end of this executive summary.

1. **Health:** Domestic resource mobilization for health must increase, and building on the success of the GFATM and GAVI the sector needs to harmonize and scale-up investments in health systems.
2. **Education:** While domestic resource mobilization has increased, the sector has not been successful in mobilizing additional international resources under the MDGs. Education in low-income countries remains vastly underfunded. International funding for education must be increased by an order of magnitude. Other partnership components that require strengthening include metrics, advocacy, back-casting strategies, and more creative use of modern technologies to improve learning outcomes and reduce the cost of education.
3. **Sustainable agriculture, food systems, and improved nutrition.** The vast majority of investments in agriculture comes from private sources. A strengthened global partnership is needed around three public-private investment challenges: (i) the needs of smallholder farmers and artisanal fishermen – available financing mechanisms including IFAD and GAFSP are inadequately resourced; (ii) nutrition – a complex, multi-sectoral investment challenge in need of an improved institutional financing architecture; and (iii) agricultural research around a strengthened Consultative Group on International Agricultural Research.
4. **Water and sanitation:** In spite of significant progress on access to water, the world is vastly off-track towards ensuring universal access to safe drinking water and sanitation by 2030. The sector needs greater political attention and resources need to be buttressed by improved financing mechanisms that can leverage private resources wherever possible.
5. **Ecosystem services:** Investments in ecosystem services are woefully inadequate. To preserve vital global public goods and the underpinnings of many economies, the world needs a strengthened Global Environment Facility combined with a stronger focus on improved metrics, the scaling-up of successful strategies for managing ecosystems, and improved private value chain initiatives.
6. **Access to modern energy sources:** The IEA estimates that some \$49 billion will be required in annual investments to achieve the SDG objective of universal access to modern energy sources. These financing needs could be addressed through a dedicated investment mechanism under the Sustainable Energy for All (SE4All) framework.
7. **A data revolution for sustainable development:** In order to become the world's scorecard and management tool for achieving sustainable development, the SDGs require a 'data revolution', which in turn requires a doubling of current investments in data system, including an additional \$200 million in concessional international financing.

8. **Climate finance and access to modern energy services:** The Green Climate Fund is the pivotal mechanism for mobilizing and disbursing incremental investments to adapt to climate change and reduce greenhouse gas emissions. The fund complements existing domestic, bilateral, and multilateral mechanisms. It now requires adequate resourcing and a clear articulation of how it will work with governments, business, and other international mechanisms.
9. **Financing large-scale infrastructure:** Long-term investments in sustainable infrastructure are insufficient in most countries – rich and poor alike. It is vital that all infrastructure investment be compatible with achieving all SDGs, particularly the need for low-carbon and climate resilient infrastructure. A goal-based investment partnership for infrastructure cannot rely on a pooled financing mechanism. It requires: (i) National Public Investment Systems and Infrastructure Project Preparation Facilities for early-stage projects; (ii) effective subsidy and investment risk-mitigation mechanisms; (iii) sound global rules to mobilize private finance and disclosure requirements; (iv) harmonized infrastructure investment platforms and standardization of investment structures; (v) effective recycling of bank capital for infrastructure investments at local, national, and regional levels; and (vi) deeper local saving pools for local infrastructure investments. The working paper explores practical recommendations in each of these areas.
10. **Public-Private Technology Partnerships for the SDGs.** Many goals – particularly on climate, agriculture, urban development – can only be met with the help of improved technologies. Yet, these technologies are undersupplied by private markets acting alone. Public investments in key R&D priorities are vastly underfunded and inadequately organized. The global community must adopt international strategies for ‘directed technological change’ through public-private partnerships to accomplish targeted technology breakthroughs.

A central question for FfD is how incremental public and private resources can be mobilized. Domestic resources – including at municipal and sub-national levels – should take precedence over international public financing, and to the extent possible private resources should substitute for scarce public funding. FfD should consider minimum standards for Domestic Budget Revenues in all countries.

Mobilizing domestic resources will also require improved regulation and transparency to reduce illicit financial flows. In particular, FfD should call for transparent beneficial ownership in all countries; a reform of international tax rules to curb abusive transfer pricing – particularly out of developing countries; enhanced exchange of information among tax authorities and taxation of offshore assets; transparent financial reporting by companies; and open government data.

Greater volumes of International Development Finance, including Official Development Assistance (ODA), Other Official Flows (OOF), and Private Finance Mobilized (PFM) through public resources are needed with better reporting. All high-income countries should commit to giving 0.7 percent of GNI in ODA. They should also commit to halving the gap between current ODA levels and the 0.7 percent target by 2020 and announce a timeline for meeting the target by 2025. Upper-middle-income countries should prepare to become donors and to commit 0.1 percent of GNI in development aid. Reporting on International Development Finance must be overhauled to provide a more open and transparent forum, working with the UNFCCC and building on the International Aid Transparency Initiative (IATI) and the OECD Development Assistance Committee (OECD DAC).

Scarce ODA needs to be directed towards the greatest needs. The working paper proposes that ODA grants be made only to countries that are unable to tap non-concessional lending, e.g. countries eligible for the International Development Association (IDA). Each provider should give at least 0.15-0.20 percent of GNI or 50 percent of ODA towards Least Developed Countries (LDCs), whichever is greater. Additionally, significant volumes of International Development Finance will target global public goods. Upper-middle-income and non-IDA lower-middle-income countries would remain eligible for technical assistance.

Innovative financing mechanisms and private philanthropy can make an important contribution towards FfD. To ensure the most effective use of resources, proceeds from innovative financing mechanisms should be channeled funding through existing pooled financing mechanisms. Similarly private donors should be encouraged to provide funding through existing mechanisms.

Developed countries need to honor their commitment to mobilize \$100 billion in climate finance. Development and climate finance must be closely integrated. Yet, the commitment to provide adequate climate finance has suffered from a lack of clarity of which types of financial flows count towards climate finance and widespread double-counting of development and climate finance. Climate finance could be mobilized through an assessment-based formula that takes into account countries' ability to pay (e.g. through per capita GNI) and their per capita greenhouse gas emissions.

At \$22 trillion per year the world has adequate saving to finance the private investments in the SDGs, but to date private financing directed towards sustainable development remains vastly insufficient. Mobilizing increased investments in the SDGs will require improved national policy frameworks that support long-term investments and correct market failures, e.g. through carbon pricing and public-private partnerships. Likewise, international rules and standards, including for trade, intellectual property rights, banking and insurance regulation, accounting standards, etc. must be made consistent with the objective of achieving the SDGs. Greater consistency can be achieved through 'coherence checks' that determine whether existing rules are consistent with achieving all the SDGs and – if not – how they might need to be amended.

Today's capital markets do not 'price in' climate change and they do not raise the volumes of long-term capital that are required for public-private investment partnerships in the SDGs. By failing to correct the assessment of future revenue flows for unsustainable activities (such as exploration for unconventional oil), capital markets misallocate capital towards investments and activities that work against sustainable development. In addition to adopting the principle of carbon pricing, FfD should therefore promote (i) integrated financial regulation to integrate sustainable development into the mandates of supervisory agencies, listing rules, and financial stability; and (ii) integrated reporting by companies, investment consultants, and asset owners on how they have included sustainable development into their financial reporting and investment decisions.

FfD must be forward looking to ensure that its public-private financing framework may last through to 2030 when the SDGs are set to expire. In order to remain relevant over time, such a framework must anticipate the changes that will occur to the world economy. In particular, this will require a strong focus on the growing importance of private finance as well as clear eligibility and graduation criteria for ODA and climate finance that ensure effective use of scarce public resources and commit all high-income and upper-middle-income countries to help mobilize the needed resources.

All countries and actors will need to contribute to FfD to meet the SDGs and achieve the climate objectives to be agreed under the UNFCCC. This will require compromise and concessions from all parties. Taken on their own some of the proposals in this working paper will prove unpopular with particular groups of countries or actors. Yet they form part of an overall financing framework for sustainable development that is balanced and will require bold commitments from high-income countries, middle-income countries, low-income countries, the private sector, civil society, and multilateral as well as donor agencies.

In conclusion, we present a list of twelve priority commitments that could be made at FfD 2015:

1. **Adopt indicative financing needs – public and private – and estimates of International Development Finance needs** (including ODA and climate finance), as outlined tentatively in Table 2 (p.30). Commit to improving the needs assessment to guide the implementation of FfD by filling gaps and incorporating lessons from implementations. Reaffirm the importance of ODA and concessional climate finance for meeting these objectives in low-income countries and for global public goods – since such funds are hardest to raise and will leverage tremendous private resources.
2. **Adopt clear standards for Domestic Budget Revenues (DBR)** that respond to countries' needs and ability to raise resources. We propose the following minimum standards:
 - For Least Developed Countries (LDCs): 18 percent of GNI
 - For other low-income countries (LICs): 20 percent of GNI
 - For lower-middle-income countries (LMICs): 22 percent of GNI
 - For upper-middle-income countries (UMICs): 24 percent of GNI
 - For high-income countries (HICs): at least 24 percent of GNI

DBR should be directed towards the SDGs, including internationally-agreed sectoral spending targets such as Abuja on health, Dakar and Muscat on education, and Maputo on agriculture. Countries should also consider fiscal decentralization standards to strengthen the mobilization of local and sub-national DBR.

3. **Recognize the central role of pooled financing mechanisms in building goal-based public-private investment partnerships**, in many – though not all – priority investment areas for the SDGs. Agree that these mechanisms should provide roughly half of all multilateral ODA in the respective sector. Commit to the following priority initiatives and scale back other non-essential financing mechanisms to reduce fragmentation, duplication, and overlaps:
 - Building on the GPE and the experience of health financing mechanisms, launch a **Global Fund for Education** aiming to disburse \$15 billion per year by 2020.
 - Expand the GFATM and/or Gavi into a **Global Fund for Health** to provide financing at scale for health systems strengthening. This fund will require some \$15 billion per year by 2015.
 - Expand IFAD (or possibly the GAFSP) to become the **Global Fund for Smallholder Agriculture and Nutrition** aiming to disburse some \$10 billion by 2020.
 - Strengthen the **Global Environment Facility** to perhaps \$6 billion per year and commit that a substantial share – perhaps 20 percent – of the \$100 billion in additional climate finance is channeled through the **Green Climate Fund**.

- Recognize the critical role played by the **International Development Association (IDA)** in providing flexible funding to poor countries and consider ways to strengthen IDA further.
 - Explore how financing in other areas (energy access, water and sanitation, rural infrastructure, etc.) can be strengthened and how all providers (including private philanthropy) can contribute to them.
4. **Promote long-term investments in infrastructure around:**
- **National Public Investment Systems and Infrastructure Project Preparation Facilities** to support the development of early-stage projects at local, national, and regional levels.
 - **Effective global, regional, and national subsidy and investment risk-mitigation mechanisms**, including a strengthened and expanded MIGA.
 - **Reviews of financial and insurance standards (Basel III and Solvency II) to promote long-term investments**, including through annual reports on whether global rules are consistent with countries achieving the SDGs and long-term climate objectives agreed under the UNFCCC.
 - **Harmonized infrastructure investment platforms and an effective secondary market**, to facilitate direct infrastructure investments from institutional investors.
 - **Deeper local saving pools and banking systems** to mobilize greater volumes of domestic financing for local infrastructure investments.
5. **Ensure that capital markets can provide long-term finance for infrastructure and other sustainable development finance needs.** *Inter alia* FfD may resolve to:
- Make integrated reporting from companies and asset managers a global standard.
 - Address excessive short-termism in capital markets.
6. **Adopt clear standards and targets for additional ODA and other forms of international public, concessional finance.**
- All high-income countries that are members of the OECD DAC recommit to increasing their ODA to 0.7 percent of GNI. By 2020 each provider country should at least halve the gap to 0.7 percent of GNI and reach the target by 2025.
 - All non-DAC high-income countries should commit to the same quantitative objectives as the DAC members, including halving the gap by 2020 and reaching the full target no later than 2025.
 - Upper-middle-income countries will soon become high-income countries and should therefore commit at least 0.1 percent of GNI in development assistance.
7. **Agree to transparent eligibility criteria for ODA and other public international flows.** We propose the following standards:
- ODA should be focused on low-income and other IDA-eligible countries. Each provider should provide at least 0.15-0.2 percent of GNI or 50 percent of ODA to LDCs, whichever is higher.
 - Non-IDA lower-middle-income countries will be eligible for low-interest loans and technical assistance, but should not receive any grant assistance or concessional loans. To avoid abrupt disturbances to public finances, aid to these countries should be phased out gradually once they graduate from IDA (Annex 1). The rule should be applied flexibly to support lower-middle-income countries in special situations (e.g. experiencing major

natural disasters or conflict). Specific priority challenges (e.g. high infectious disease burden) should also qualify for targeted ODA.

- Upper-middle-income countries should gradually become providers themselves aiming to provide at least 0.1 percent of GNI in ODA. In the interim, they may be eligible for technical assistance.
8. **Encourage individual holders of large wealth to sign the Giving Pledge and donate a significant share of their net worth to achieving the SDGs**, particularly through specialized SDG global funds. Such investments might further focus on a particular sector or investments in the wealth holder's own country.
 9. **Commit to providing at least \$100 billion in additional climate finance from developed countries** by 2020, roughly mobilized as 1/3 ODA for climate (ODA-C), 1/3 non-concessional public finance (OOF-C), and 1/3 Private Finance Mobilized (PFM) through official finance. Adopt the principle of assessed contributions based on the principle that polluters pay graded by countries' ability to pay. High-income countries should use the opportunity provided by the recent sharp fall in oil prices to introduce domestic fossil fuel levies that can in part mobilize funding for the Green Climate Fund and ODA-C more generally. Even small volumes of resource mobilization will send a powerful signal that countries are serious about providing long-term financing for the GCF.
 10. **Reform international regulation and ensure transparency to support DBR**, by adopting the following principles and ensuring their enforcement:
 - Transparent beneficial ownership of companies, trusts, and other investment vehicles in open data format;
 - Fair transfer pricing regimes and taxation of multinational companies;
 - Exchange of information among tax authorities and taxation of offshore assets;
 - Publish what you pay;
 - Open government data including mandatory disclosure laws and the EITI; and
 - Periodic review of key international rules and standards for consistency with achieving the SDGs.
 - Expansion of the Base Erosion and Profit Shifting (BEPS) initiative to address the needs of all developing countries
 11. **Launch Public-Private Partnerships for key sustainable development technologies to prepare technology roadmaps and promote technology development**. A focus should be on describing how technologies can be developed and deployed with particular attention to facilitating and financing diffusion to all developing countries technologies.
 12. **Launch a new Multilateral Development Finance Committee (MDFC)** – working with the UNFCCC and building on the OECD-DAC and IATI – to provide a transparent, multilateral forum for monitoring all International Development Finance flows, including ODA, OOF, and PFM.

1 Motivation, organization, and limitations of this working paper

This working paper examines some of the questions involved in designing new institutions to handle the long-term complex investments needed for health, education, sustainable agriculture, sustainable infrastructure, and other key sustainable development priorities. It builds on and complements the reports from the Intergovernmental Committee of Experts on Sustainable Development Financing (ICESDF: UN 2014), the World Bank⁴ (2013a), and many others cited in this working paper. In particular, the paper seeks to add the following to the ongoing debate on Financing for Development (FfD):

- An in-depth discussion of key policy issues that need to be considered by FfD. The working paper is extensively referenced to guide the interested reader to additional background documentation.
- An assessment of public and private investment needs across key SDG investment areas.
- An analysis of successful public-private investment partnerships for health, and how lessons might be applied to other areas, such as education, agriculture, water and sanitation, ecosystems and biodiversity, a data revolution for the SDGs, or infrastructure.
- Practical proposals for action that could be promoted by member states in the run-up to the Addis conference. If adopted these actions will help build momentum towards a successful FfD Conference, SDG Summit, and climate conference.
- Policy options that can be considered for adoption at the FfD conference. The working paper takes a fairly comprehensive view of the FfD agenda and identifies a preliminary set of twelve recommendations for consideration by member states.

We hope that this working paper will make a useful contribution to the intergovernmental discussions on financing for development that are chaired by the Permanent Representatives to the United Nations of the Republic of Guyana and Norway.

The working paper is structured in seven sections. Following this brief introduction, section 2 discusses the transition from the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs). It explores the critical importance of financing in supporting global efforts to promote sustainable development, including the end of extreme poverty in all its forms and addressing dangerous climate change. Section 3 introduces the terminology for the different international development finance flows reported in this paper and summarizes available information on financing needs, which are discussed further in a background paper (Schmidt-Traub, forthcoming). It also discusses the complementary roles of public and private finance in supporting the SDGs, including investments in global public goods.

In Section 4 we turn to a case study of the highly successful, though incomplete, investment campaigns of the MDG period in public health, notably in reducing morbidity and mortality from TB, malaria, and HIV/AIDS, as well as improving child survival and maternal health. The experience from public health shows how global goals and new institutions – like the Global Fund to Fight AIDS, Tuberculosis and

⁴ For simplicity we use the term ‘World Bank’ to denote the World Bank Group throughout this paper.

Malaria (GFATM) and the Global Alliance for Vaccines and Immunizations (Gavi) – can foster complex public-private investments at the national and local level. Section 4 outlines a general framework for translating global goals into sustainable investment programs at local, national, and regional levels, including the central role of pooled public finance mechanisms.

In section 5 we then apply the general framework for goal-based partnerships to specific SDGs priorities: health, education, agriculture and food security, biodiversity and ecosystems, water and sanitation, access to modern energy sources, the data revolution, climate finance, large-scale infrastructure, and public-private partnerships for technologies. We focus on major opportunities for strengthening existing partnerships, including more effective financing.

Section 6 explores how adequate public and private financing can be mobilized for the SDGs. The section discusses domestic budget revenues (DBR) as well as improved international tax regulation and transparency. We propose eligibility criteria for aid, explore opportunities for deepening the pool of available high-quality Official Development Assistance (ODA), other non-concessional development finance, and climate finance. We also review the need for improved reporting on all international development finance flows, including aid. The section also explores how private resources can be mobilized for the public-private investment partnerships reviewed in the previous section. We briefly review key policy implications and the role of capital markets in financing sustainable development.

Section 7 explores the political economy of international development finance and outlines opportunities for action in the run-up to the Addis conference. We close with twelve recommendations for the 2015 FfD Summit.

The scope of this working paper is limited to complex investment programs in several key areas that require substantial international flows of international investment, both public and private. We do not aim to discuss all thematic initiatives or partnerships in a given area. While recognizing that high-income countries will need to significantly increase domestic investments for sustainable development, our discussion focuses on the financing needs of low-income and middle-income countries.

This working paper does not explore how countries and other stakeholders might report on the SDGs or how intergovernmental arrangements to review progress towards all SDGs might be organized on an annual basis. Some of these important issues are addressed in the SDSN's 'Indicators and a Monitoring Framework for the Sustainable Development Goals' report (2015a) and Espey *et al.* (2015).

2 The importance and scope of Financing Sustainable Development in 2015

Three summits in 2015 will set the stage for international cooperation over the coming decades. In July 2015, governments will convene for the Third Conference on Financing for Development Addis Ababa. Two months later, in September 2015, they are scheduled to adopt a new set of Sustainable Development Goals (SDGs) at the United Nations in New York. Finally, in December 2015, the 21st Conference of the Parties (COP21) of the UN Framework Convention on Climate Change (UNFCCC) in Paris is expected to adopt a binding agreement on the long-term reduction of greenhouse gas emissions.

Success depends on a strong outcome from all three summits. Without financing there can be no credible agreement on the SDGs or climate change. Without the SDGs, there can be no guidance on how to design a financing framework for sustainable development. Without a successful climate summit, we will lose hope of ending poverty climate change impacts many of the world's poorest countries. In this sense, this year's three summits will forge the sustainable development future of the planet, successful or not. Scaled investments in sustainable programs and technologies (for energy, health, education, urban infrastructure, biodiversity, water and sanitation, and other SDG priorities) will be the key to success. Financing those sustainable investments is therefore central to global aims.

This working paper focuses on the broad agenda to be covered by the Third Conference on Financing for Development. This agenda must build and expand upon the landmark Monterrey Consensus (UN 2002) and the Doha Declaration (UN 2008) to address three related changes in moving from the MDGs to the SDGs:

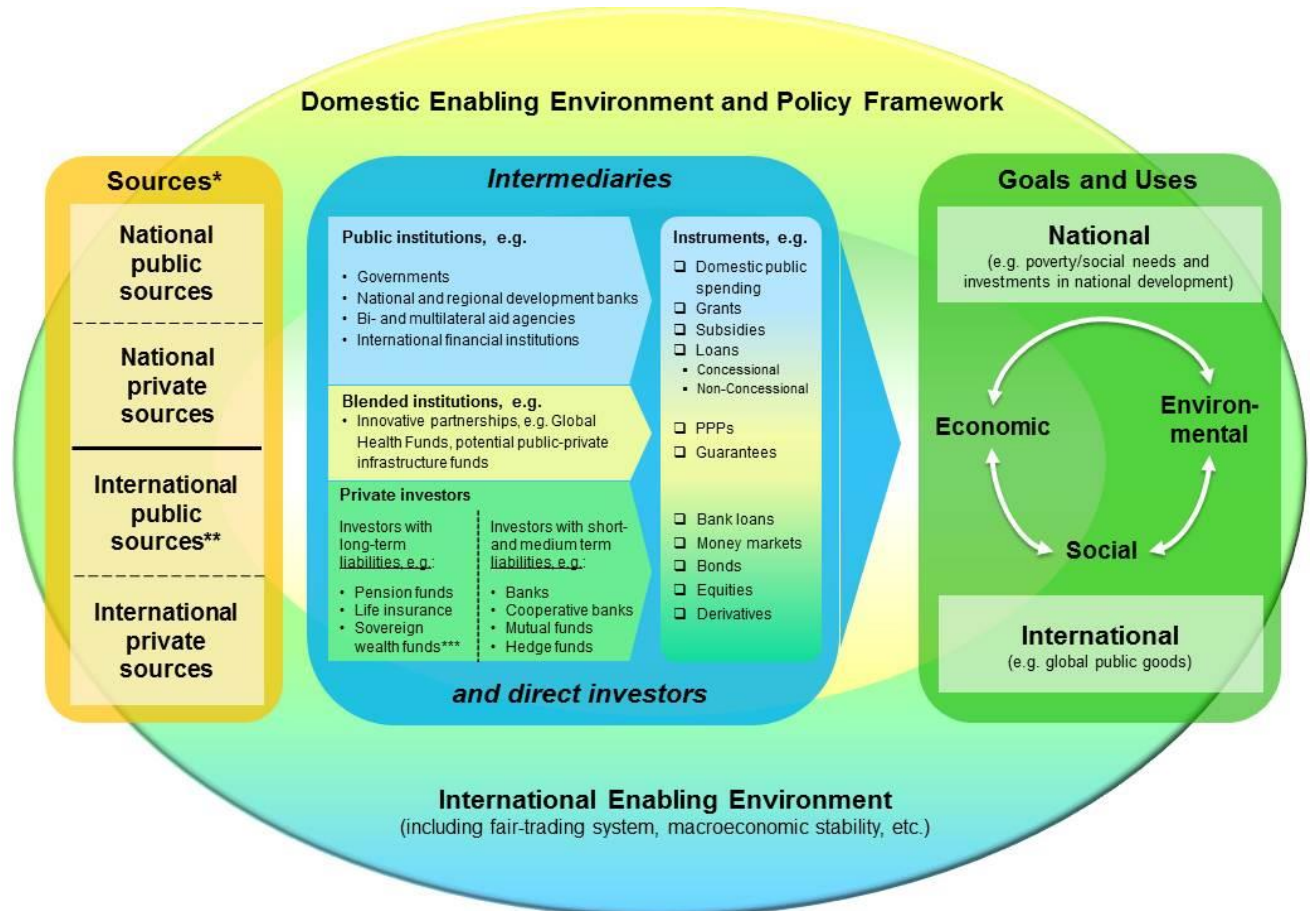
1. A development agenda that retains a sharp focus on ending extreme poverty in all its forms by finishing the job of the MDGs, but also includes a broader set of social and environmental objectives, including the provision and protection of global public goods.
2. A universal agenda that covers the needs of all low-, middle-, and high-income countries.
3. A changed development finance landscape that includes a much broader range of public and private actors than in 2002, including local authorities and non-OECD providers, and will need to mobilize a much greater share of private finance.

In their [13 October 2014 letter to Permanent Representatives and Permanent Observers to the United Nations](#) and the [zero negotiation draft for the Addis Ababa Accord](#), the two co-chairs propose the operative title Financing Sustainable Development. This term underscores the necessary broadening of the Financing for Development agenda, so we recommend that it be adopted as the operative framework for FfD.

Clearly, the implementation of the SDGs and climate goals must be bottom up, based on investments made by local communities, sub-national divisions, countries, and regions. The global financial architecture must also direct new and additional resources to priority areas identified by all parts of society: government, business, and civil society. The fundamental aim of FfD is to create a framework in which long-term saving flows reliably to high-priority, long-term, sustainable investments.

The ICESDF has captured this investment challenge in its framework graph (Figure 1). Public and private financing from domestic and international sources must be organized and intermediated in order to flow towards sustainable development objectives. Domestic and international policies provide the enabling environment for public and private investments.

Figure 1: Flows of funds from international and national financing sources to sustainable development



- Notes: * The size of boxes does not represent financing volumes/importance.
 ** There can be cases where international public finance also directly supports the implementation of international objectives.
 *** Sovereign wealth funds handle public money, but are managed like private investors

Source: UN (2014)

The investments required are necessarily complex and vary from one area to the next. The energy, health, education, infrastructure, and other systems all involve a complex mix of public and private agencies, investments, actions and responsibilities. Indeed, sorting out these respective roles could be the key to success. The financial resources exist for sustainable development, but the systems to design and implement this mix of investments at local, national, regional, and global levels do not exist in most places, at least not yet.

Success will require effective multi-stakeholder public-private partnerships, as has been suggested by the High-Level Panel on the Post-2015 Development Agenda (HLP 2013), Bill Gates (2011), and many others. Markets alone cannot do the job. If they could, we would not need the SDGs. On the other hand, state actors or civil society cannot succeed if business is not engaged at a large scale in research, development, demonstration, and diffusion (RDD&D) of improved technologies, and large-scale provision of sustainable goods and services to the world economy. We are in complex territory, where problem solving inevitably cuts across public and private actors, as well as across many sectors of the economy.

Additional and better-targeted financial resources are urgently needed, but they will of course not resolve all sustainable development challenges. Incremental funding that is not supported by sound policies or effective delivery systems may be wasted. Moreover, some SDG challenges require relatively modest additional funding and rely primarily on improved policies and their implementation. Examples include violence, particularly against women and girls; gender equality; and labor rights. ICPD (2015) describes 'smart investments' focusing on gender equality and women's empowerment.

While achieving the SDGs in high-income countries will require substantial incremental investments in some areas, such as reducing greenhouse gas emissions and sustainable infrastructure, public and private spending in most other areas is adequate to achieve the goals. Here policy changes are needed to improve the efficiency of domestic spending and to redirect it where necessary towards the economic, social, and environmental objectives of the sustainable development agenda. The challenges of mobilizing incremental resources for high-income countries and of directing policies towards the SDGs are important and complex, but it is less clear how the FfD conference can guide them or provide international standards.

Since the SDGs and the climate objectives represent a complex long-term pattern of investment, they will require a suitable pattern of financing. This was true of the MDGs and will be true of the SDGs as well. Just as the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the Global Alliance for Vaccines and Immunizations (Gavi) had to be invented – and funded – in order to tackle child mortality and take on MDG 6 (the fight against major epidemic diseases), new international financing strategies – both public and private – will be needed to achieve the SDGs and meet the climate goals.

The FfD framework must help direct large-scale resources, in this case perhaps \$2-3 trillion per year (Table 2) of incremental private and public saving, towards new investment programs directed at the critical sustainable development challenges. Most of these funds will flow through private intermediaries rather than governments and official institutions. Still they will have to be directed and mobilized with supportive public policies, including market signals and regulations. The incremental investment needs are high, but are still manageable. They constitute roughly 2-3 percent of global GDP, 9-14 percent of the roughly \$22 trillion in global annual saving, or 0.9-1.4 percent of the stock of global financial assets, which has been recently estimated at \$218 trillion (UN 2014).

To some extent, private markets will direct private investments through traditional means: financial intermediaries (e.g. banks or funds) and direct investors (e.g. corporations deploying retained earnings or individuals) will direct funds towards areas of high potential profitability. Policies must ensure that markets send the right signals. For this reason carbon pricing has a very important role to play in shifting investments towards low-carbon energy. Similarly, tobacco taxes can discourage harmful behavior and raise additional public revenues for health.

Yet, the challenge of mobilizing investment for sustainable development is much broader and more complicated than simply 'correcting' market prices to account for externalities like the social cost of greenhouse gas emissions or the social cost of water pollution. Issues such as meeting the needs of the poorest of the poor, RDD&D for new technologies, land use, liability management for social and environmental risks (e.g. regarding carbon capture and storage), peace and security, gender equality, reducing inequalities, protection of biodiversity, protecting the global oceans commons, infrastructure against natural hazards, and countless other areas all require public actions that extend far beyond corrective pricing.

The FfD agenda must weave these complex pieces together into a compelling narrative and a limited number of practical decisions. As we argue in this working paper, the 2015 Addis Consensus must update and broaden the Monterrey Consensus to cover the financing needs of the SDGs as well as the climate agenda. This working paper aims to present the evidence on which informed decisions can be taken by member states in Addis. We hope that the recommendations in the concluding sections will be helpful in crafting the FfD decisions that the world needs to adopt in July.

3 Private and public financing needs for the SDGs


Meeting broad social objectives – such as fighting poverty, mitigating climate change, educating young people, and combatting epidemic diseases – requires the sustained mobilization of large-scale public and private resources. A sound financing framework for the SDGs must rest on a clear understanding of the complementary roles of public and private finance, and how the two can work in tandem to achieve complex social objectives over the long term. Such a framework also requires a clear sense of the financing needs – both public and private – and the extent to which they can be mobilized domestically, including through household contributions.

3.1 Public and private financing terminology used in this working paper

An expanded and harmonized terminology for the types of financial flows is needed in response to the expanded SDG agenda, the need to ensure consistency and integration with climate finance, the rising number of providers of finance, and the growing number of financial instruments. We find that the current development and climate finance terminology lacks clarity in some areas and introduces unnecessary distinctions in others. We therefore propose the following terms summarized schematically in Figure 2 below.

Figure 2: Terminology of types of financial flows

		Official		Private	
		Concessional aid	Other Official flows	Private funds mobilized through official flows	Commercial private finance
Domestic		Domestic Budget Revenues (DBR)		Domestic Private Funds Mobilized (PFM)	Domestic commercial
International	Finance for SDGs	Official Development Assistance (ODA)	Other Official Flows (OOF)	International PFM	International commercial
	Additional climate finance	ODA-C	OOF-C	PFM-C	

 Denotes International Development Financing (IDF)

Note: The size of the cells stands in no relation to the relative scale of the financial flows.

Source: Authors' analysis. See text for explanations.

Official finance comes from domestic and international sources and is divided into concessional and non-concessional flows. We define Domestic Budget Revenues (DBR) as government tax and non-tax revenues that pass through government budgets, excluding loans and external financing. DBR includes expenditures by central governments as well as local governments, including municipalities. Note that DBR is different from the frequently used term Domestic Resource Mobilization (DRM), which is ill-defined but often includes loans and private financing.

Official Development Assistance describes concessional international finance using the definition developed by the OECD DAC. Other Official Flows (OOF) denotes non-concessional international public flows – primarily loans by Multilateral Development Banks (MDBs), Development Finance Institutions (DFIs), as well as public guarantees, insurance, and export credits. For accounting purposes we separate out ODA and OOF for climate finance (ODA-C and OOF-C, respectively – see section 5.8). Currently, development finance flows from non-OECD countries are often referred to as South-South Cooperation. The special responsibilities of high-income countries in providing ODA and OOF are important, but a strong case exists to include financial flows relating to South-South Cooperation in the categories of ODA and OOF (see section 6.3.7). Since many non-OECD countries do not see themselves as ‘donors’ we use the more generic term ‘provider’ in this working paper

Private financing is separated into two categories: (i) Private Funds Mobilized (PFM) through DBR, ODA, and/or OOF that support sustainable development, and (ii) commercial finance, such as foreign direct investment, that does not rely on public co-financing and may not target sustainable development *per se*. The distinction between PFM and commercial flows is important since many SDG financing challenges require the targeted mobilization of PFM for specific objectives. Collectively these two categories are far larger than official flows. The distinction between domestic and international private finance is of lesser importance, so we will group these two flows together in this paper.

Moreover, FfD needs to distinguish between two related concepts: the organizational entity leading a particular investment and the source(s) of financing. When the lead investor is a public entity (a government or a public agency) one speaks of a ‘public investment.’ Alternatively, when the investor is a private company one speaks of a ‘private investment.’ When the main source of financing is the public budget, perhaps augmented by aid flows from abroad, one speaks of ‘public financing.’ When the financing is from private sources such as loans or bond sales, one speaks of ‘private financing.’ Many projects and programs involve a mix of public, private, and social investors, and of public and private sources of financing. Often the project design entails a formal partnership of the public and private sectors, or a Public Private Partnership (PPP), which we review in section 3.5.

3.2 The major investment areas for the SDGs

The Open Working Group on the Sustainable Development Goals (OWG) has proposed 17 SDGs and 169 Targets. These goals and targets may evolve before they are finally adopted by the General Assembly in September 2015. Yet, the unprecedented global discussion on the SDGs has achieved a strong convergence of views on the scope of the agenda, as underscored by comparing the reports of the UN Secretary-General (2013), the HLP (2013), the SDSN (2013), the UN Global Compact (2013), and many others with the outcome of the OWG deliberations. The main differences are in the number of goals and targets, their framing, and the relative emphasis placed on specific issues.

Table 1 provides a schematic illustration of key public and private financing needs for the 17 goals proposed by the OWG. Column 2 indicates the scale of incremental investments made to meet the proposed SDGs. For some goals, the underlying investments are made under other areas, as explained in the table. The next two columns illustrate the relative shares of public and private investments based on the principles introduced in section 3.1 and further developed in sections 3.3, 3.4 and 3.5. The final column highlights some of the pooled financing mechanisms discussed in more detail in section 5.

Table 1 : Schematic illustration of public/private financing needs for SDGs (see text for explanations)

Open Working Group Goal	Scale of incremental investments	Share private investments	Share public investments	Role for household contributions?	Priority pooled international finance mechanisms described in this paper
Goal 1: End poverty in all its forms everywhere	Covered under other goals				All pooled finance mechanism contribute to this goal
Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	+++	++	++	Limited role in agriculture	Proposed Smallholder Fund (building on IFAD and GAFSP); nutrition modalities TBD
Goal 3: Ensure healthy lives and promote well-being for all at all ages	++	+	+++	0	GAVI, GFATM, GFF, UNFPA, UNICEF
Goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	++	+	+++	0	Global Fund for Education (building on Global Partnership for Education)
Goal 5. Achieve gender equality and empower all women and girls	Largely covered under other goals				In particular finance mechanisms for health and education
Goal 6. Ensure availability and sustainable management of water and sanitation for all	+++	++	++	+	Dedicated financing mechanism or regional facilities (TBD)
Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all	+++	+++	+	++	Green Climate Fund and infrastructure finance
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Covered under other goals				All pooled finance mechanism contribute to this goal
Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	+++	+++	+	N/A	See infrastructure section
Goal 10. Reduce inequality within and among countries	Covered under other goals				All pooled finance mechanism contribute to this goal

Open Working Group Goal	Scale of incremental investments	Share private investments	Share public investments	Role for household contributions?	Priority pooled international finance mechanisms described in this paper
Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable	+++	++	++	N/A	See infrastructure section
Goal 12.Ensure sustainable consumption and production patterns	++	++	++		In particular GCF, GEF, proposed Smallholder Fund, and infrastructure finance
Goal 13.Take urgent action to combat climate change and its impacts	+++	+++	++ (including virtually all adaptation finance)	N/A	GCF, GEF, infrastructure finance, other pooled finance mechanisms
Goal 14.Conserve and sustainably use the oceans, seas and marine resources for sustainable development	+++	++	++	N/A	GEF and proposed Smallholder Fund
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	+++	++	++	N/A	GEF and proposed Smallholder Fund
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	+	+	+++	N/A	International Development Association (IDA) and budget support mechanisms
Goal 17.Strengthen the means of implementation and revitalize the global partnership for sustainable development	TBD	TBD	TBD	TBD	TBD

Source: Authors' analysis. See text for explanations.

Grouping the major investment needs for the SDGs yields ten principal investment areas, which we use to organize our subsequent discussion of public-private investment partnerships (section 5):⁵

1. Health
2. Education
3. Sustainable agriculture, nutrition, and food systems
4. Biodiversity and ecosystem services
5. Water supply and sanitation
6. Energy access and Sustainable Energy for All (SE4All)
7. Monitoring and a data revolution for sustainable development
8. Climate finance
9. Financing large-scale infrastructure
10. Public-private technology partnerships

As described further in section 5.10, the International Development Association (IDA) plays an important role in providing high-quality pooled financing that can be allocated flexibly to these and other investment priorities. It thereby complements many of the targeted investment mechanisms reviewed in this paper.

3.3 *Quantifying public and private investment needs for the SDGs*

Attempts to quantify the investment needs for achieving global goals like the MDGs or the SDGs are frequently criticized for reasons including a reliance on inadequate data or strong assumptions, neglect of interactions across goals, or failure to anticipate technological changes and private innovation. Some analysts even suggest that asking the question of how much it would cost to achieve a goal diverts attention from the policy changes that are needed. Some of these technical concerns are justified, but they do not undermine the need for clear assessments of investment needs. In fact, the inadequacy of some existing needs assessments should spur the corresponding technical communities towards filling the gaps and strengthening global, regional, and national needs assessments for the SDGs. This section follows the discussion in Schmidt-Traub (forthcoming). We see four principal reasons why needs assessments are required for the SDGs:

1. **Providing a sense of scale and feasibility of investment needs as well as major knowledge gaps:** It is important to know whether meeting the SDG on education requires, say, \$20 or \$100 billion in additional financing or whether investments in climate change adaptation should be overwhelmingly public or private in nature. Only detailed needs assessments can provide a reliable answer to these important questions of scale and feasibility. Robust needs assessments require a detailed and careful understanding of the underlying interventions needed to achieve the SDGs, the cost of providing them at scale, and the likely evolution of costs as technologies advance, and the scale of activity increases. The health sector has used health needs assessments to inventory current knowledge on implementation and to systematically fill knowledge gaps (Jamison *et al.* 2013, GFATM 2013). In other areas, significant knowledge gaps remain that need to be filled in order to arrive at robust needs assessments.

⁵ As emphasized throughout this document these investment areas do not cover the full range of investments that need to be made in order to achieve the SDGs. For example, achieving gender equality and ending violence against girls and women will require broader measures than discussed here.

2. **Guiding the structuring of public-private investment partnerships for the SDGs:** As described in sections 3.1 and 3.5, and illustrated throughout sections 4 and 5, virtually all investments in the SDGs require carefully designed PPPs. Their structure depends on the scale and nature of the required investments. In all cases, well-organized and efficiently deployed public finance can leverage needed private investments, so a central question for FfD is how domestic and international financing can best be organized. Detailed needs assessments help us understand the needs and provide clear metrics for measuring the success of investment partnerships.
3. **Estimating needed Domestic Budget Revenues (DBR):** Only after determining the overall volume of public and private financing needed – domestic and international – is it possible to identify a reasonable share of public expenditure that can and ought to be mobilized through DBR. Such analyses are sometimes conducted at the sectoral level, but it is important to consider the overall adding-up constraint in a government’s budget, which in turn requires across-the-board needs assessments. Only the residual that cannot be domestically financed should be filled through international public finance.
4. **Estimate international development finance needs:** Since ODA, ODA-C, and OOF fill the financing gaps left by private and domestic public resources, detailed needs assessments across the full spectrum of SDGs are required to understand the volumes of international development finance required in individual countries and groups of countries.

Table 2 provides a preliminary and incomplete synthesis of published estimates for the annual investments needed to achieve sector targets that correspond broadly to the SDGs. For a more detailed analysis of the sources and assumptions behind each number, see Schmidt-Traub (forthcoming).

A few important caveats are in order before considering these numbers. First, some estimates are incomplete and not based on the ambitious SDG agenda. These are therefore likely to understate true investment needs. Second, some estimates are derived using different methodologies and may therefore be difficult to compare at this stage. Third, although care has been taken to remove overlaps from the analyses, there may be some double counting when adding up investment needs from different sectors. Fourth, investments in different areas may have synergies and reduce future investment needs, which are not captured in a sector-by-sector analysis. Greenhill and Ali (2013) and UN Task Team (2013) review a similar list of caveats.

Table 2: Preliminary and incomplete incremental investment needs in developing countries by investment area (in constant 2010 \$ billion)

Investment Area	Incremental annual investment needs in developing countries through to 2030				Corresponding pooled finance mechanisms	Current annual disbursements	Projected annual need
	Total needs	Private, commercial financing	Public, non-commercial financing	Of which ODA/public climate finance			
Health	51-80	~ 0	51-80	TBD	GAVI, GFATM, GFF, UNFPA, UNICEF	[5.6]	TBD
Education	[38]	~ 0	[38]	[19]	Proposed Global Fund for Education	0,4	TBD
Food security	46	2	44	TBD	IFAD, GAFSP, proposed Smallholder Fund	[0.4]	TBD
Access to modern energy (SE4All)	34	10,5	23,5	12,8	GCF	N/A	[6]
Access to water and sanitation	27	3-5	22-24	TBD	Global Water and Sanitation Fund or regional facilities	TBD	TBD
Data for the SDGs	TBD	~ 0	TBD	TBD	Dedicated trust fund or other mechanism	0.3	0.4-0.5
Ecosystems including biodiversity	[18-48]	[3-7]	[15-41]	TBD	GEF	1,1	TBD
Other agriculture	210	195	15	0	N/A		
Large infrastructure (power, transport, telco, watsan)	689-1599	291-755	398-844	TBD	N/A		
Climate change mitigation	[380-680]	[300-564]	[80-115]	TBD	GCF	N/A	100
Climate change adaptation	60-100	0	60-100	TBD	GCF	N/A	TBD
Total	[1559 - 2873]	[805 - 1539]	[752 - 1335]	TBD		TBD	TBD

Source: Schmidt-Traub (forthcoming)

Note: These estimates are preliminary and incomplete. Numbers in square brackets are particularly uncertain or incomplete and subject to refinement.

The table presents incremental investment needs by private and public sources in developing countries, unless otherwise stated. Meeting the SDGs will require additional investments in the order of \$2-3 trillion. Based on these investment needs and proposed DBR standards (section 6.1), the table presents approximate ODA needs. Finally, the table lists available or proposed pooled financing mechanisms that can help organize global goal-based public-private investment partnerships, as described further in sections 4 and 5. We underscore the preliminary and incomplete nature of these estimates.

The investment needs in the table are broadly presented from top to bottom according to increasing volumes as well as increasing levels of uncertainty. Investment areas 1-6 describe social services (health and education) and direct investments in basic infrastructure. The underlying investments require predominantly public financing since they focus on public goods and the needs of the poorest of the poor. Sometimes these investment needs are referred to as the 'MDG+' agenda since they describe a continuation and expansion of the MDGs. Synergies across areas exist, but they are modest in scale and unlikely to substantially affect investment needs overall. Needs assessments for these investment areas tend to be based on detailed bottom-up assessments of investment needs and are relatively robust. However, significant differences exist across sectors in terms of rigor and scope of available needs assessments. Filling these gaps to ensure robust needs assessments for all basic infrastructure needs and key social services must be an urgent priority for the FfD agenda.

Next, investment areas 7-9 describe much larger investment needs in infrastructure, agriculture, and maintaining ecosystems and biodiversity. These estimates tend to be derived from high-level aggregates or macroeconomic analyses that project aggregate investment ratios and elasticities across time. As a

result, projected investment needs are subject to greater uncertainty, particularly since technologies and associated cost curves are difficult to project over time. A larger share of the required financing must come from private sources, which increases the importance of sound public policies and guarantee mechanisms, relative to the direct public investments that must account for the vast bulk of investments in investment areas 1-6.

Finally, investment areas 10 and 11 describe incremental investment needs for climate change adaptation and mitigation. As described in section 5.7 climate finance needs are additional to core investment needs in infrastructure and other areas. Consequently, the uncertainty associated with these numbers is equal to or greater than for the underlying infrastructure or other investment needs.

The SDGs map out a universal agenda, and no high-income country has achieved the full spectrum of economic, social, environmental, and governance objectives. As a result, all high-income countries will need to redirect public-private investments towards the SDGs and increase investment in key areas. High-income countries tend to make significant public and private investments in social services and basic needs (investment areas 1-6). Instead of increasing investment volumes, the main challenge will be to ensure efficient investments and effective targeting of SDG priorities. For this reason, Table 2 excludes incremental investment needs in high-income countries.

The situation is slightly different for infrastructure and ecosystem services, where many high-income countries will need to increase overall investment levels (OECD 2006). Similarly, substantial incremental investments are needed by high-income countries to promote climate change mitigation and adaptation. In spite of significant fiscal pressure on many high-income countries, the incremental investment needs can be met through private and domestic public resources.

3.4 The complementary roles of public and private finance⁶

Financing can come in the form of private commercial funding that seeks a market-rate return, or as non-commercial funding from governments and private providers who are willing to accept no or below-market rates of return.⁷ The fundamental distinction between ‘private’ (commercial) and ‘public’ (non-commercial) funding and opportunities for blending public and private finance are at the center of any viable post-2015 framework for development and climate finance.

Private commercial finance can support investments in private assets, such as factories and machinery, provided they generate a financial return for their owner that is superior to the risk-adjusted cost of capital. Private investors respond to private returns, not to social returns. Therefore, when price signals do not reflect social costs and benefits (e.g. because of negative or positive spillovers), private incentives will not align with public incentives. Corrective pricing (e.g. a carbon tax in line with the social cost of carbon) is therefore both necessary and effective in many cases to spur the requisite private investments.

Markets do not effectively respond to the needs of the poor. Helping the poor to meet basic needs (such as health, education, safe water and sanitation, and food security) is not simply a matter of correcting

⁶ This Section has been adapted from Sachs and Schmidt-Traub (2013)

⁷ Throughout this working paper we include grants from private actors (individuals, foundations, corporations) that do not seek a market return under ‘public’ finance. Similarly, all for-profit finance is termed ‘public finance’ even if it is provided by publicly owned entities, such as state-owned enterprises.

prices. The poor lack purchasing power. Various approaches to recover costs for services to the poor have failed relentlessly over the past quarter century (section 3.66). Usually the poor are simply unable to pay for these costs, and end up being excluded from basic goods and services. The poor very often need public financing rather than private financing to meet their basic needs and build the capital necessary to escape poverty.

Poor individuals and poor governments also lack creditworthiness. Even if a poor person has the opportunity for a high-return investment (e.g. in education, improved nutrition, or job training) typically they do not qualify for financing in private capital markets. Financing typically requires collateral or sky-high interest rates, neither of which are viable options for the poorest people. Group lending and other initiatives of microfinance have partially relieved the situation for some kinds of loans (e.g. working capital for small-scale businesses), but not for other vital needs, such as health, education, infrastructure, agriculture, and more.

The same is true for governments in low-income countries. They may recognize the vital need and high return of investments in water systems, public health, education, or infrastructure, but banks and bond markets are not able to provide adequate capital. Since the enforcement of sovereign lending is difficult in any event, capital markets are reluctant to invest in poor countries that might later resort to defaults or be pushed into insolvency. Granted, private lending and investments in low-income countries has increased significantly in recent years. Yet, this increase comes from an extremely low base, and overall volumes remain vastly insufficient for meeting the SDGs in most low-income countries. The result is both inefficient and inequitable: countries remain trapped in poverty even though the public investments needed to escape from poverty are in plain view and the world is awash in liquidity and capital seeking a good return.

In general terms, public financing covers areas where private, for-profit financing is intrinsically insufficient or impossible:

Helping the poor to meet basic needs: Most social services, including health care, early childhood development (e.g. safe childcare and pre-school), education, and job training, are considered ‘merit goods’ which should be available to all members of society, rich and poor alike. These merit goods are typically described as ‘human rights’ or ‘basic human needs.’ They will be at the center of many SDGs and are enshrined in the Universal Declaration of Human Rights. To ensure that merit goods are available to all, including the very poor, public financing is essential. For poor countries, ODA is needed to complement DBR so that national budgets can finance the necessary basic level of social services (section 6).

Networked infrastructure: Many types of network infrastructure (rail, roads, pipelines, power distribution, some forms of ICT) are natural monopolies or allow for only very limited competition.⁸ In such cases the government is typically the direct provider of the infrastructure or must at least regulate a private provider in order to restrain market power. Since infrastructure is vital for economic development, governments in poor countries will need international support in order to be able to carry out the needed public investments in infrastructure.

⁸ Other infrastructure services, such as access to basic energy services or water supply, constitute merit goods as discussed above.

Post-conflict assistance and peace-building: International assistance for peacekeeping, peace-building, post-conflict humanitarian aid, and post-conflict development is needed because of the inherent weakness of national and local governments and civil-society organizations in post-conflict conditions. Post-conflict assistance and peace-building are important public goods since stability benefits everyone in a country, as well as neighboring countries and the world at large.

Climate change mitigation and adaptation: In all countries, public investments will be required for climate change mitigation and adaptation such as protection against rising sea levels and increasing storm intensity. Poor countries will also need international financing to respond to extreme climate events. Such financing might in parts be considered ‘compensation’ for losses incurred by poor countries caused by the greenhouse gas emissions of richer countries and should therefore be financed under the framework of the UNFCCC. Governments of low-income countries have also been promised financial help to bear the incremental costs of low-carbon energy and other mitigation efforts.

Biodiversity conservation and ecosystem services: The preservation of biodiversity and ecosystem services constitutes local, regional, and global public goods, and as such requires a combination of regulation, market-based incentives (taxes and subsidies), and public investments in infrastructure and conservation. This applies to terrestrial biodiversity and ecosystems (forests, savannahs, wetlands, freshwater ecosystems) as well as marine and coastal biodiversity and ecosystems. In particular, global public goods such as the world’s oceans, the Arctic and Antarctic, or major terrestrial biomes require targeted public-private policy frameworks and investments.

Promoting innovations in sustainable technologies: As a general matter, governments play a large role in the innovation process because scientific knowledge and technical know-how are public goods. If all knowledge is fully privatized (such as through patents), there will be an under-use of knowledge. By co-financing RDD&D of new technologies alongside business, governments spur economic progress and find solutions to challenges such as human-induced climate change. It is notable that most of the technological advances of recent decades – including space science, semiconductors, computer science, genomics, molecular biology, nanotechnology, the Internet, and more – were strongly backed by governments in the early stages of their development (section 5.11).⁹

3.5 The special role of public-private partnerships (PPPs)

In almost all areas just mentioned, business will play a direct and indeed often dominant role in delivery and implementation. Businesses will deliver most investments in infrastructure and can sometimes play

⁹ In technical economic terms, basic science and technological know-how are ‘knowledge goods’, which have the property of being ‘non-rival.’ Non-rival goods are those that can be used by one person without diminishing their accessibility to others. For-profit markets underprovide knowledge goods: either these goods are made freely available (such as with basic scientific knowledge) and therefore do not generate a return for private inventors, or they are held by temporary monopolists protected by patents, which in turn restricts their adoption and diffusion. Either way, the development and diffusion of technology is less than optimal, and the poor may be hurt the most. As a result, public (co-)financing is needed to help generate and diffuse new technologies. This will be especially important for sustainable development, since deep and rapid technological change will be the hallmark of success in achieving a sustainable-development trajectory. Global public financing will be needed to promote research and development, pilot new technologies, and promote their rapid diffusion to low-income countries.

an important role in improving social service delivery. They can also leverage public financing, so that scarce public resources can go further.¹⁰ Private companies are also major sources of R&D, early-stage technology deployment, large-scale production systems, and often have knowledge of the best practices for technology diffusion to low-income settings. Note, though, that in some areas, such as health, education, or biodiversity protection, business' role is typically backed by public funds and public regulation. In other areas, such as infrastructure, private financing will probably account for much or most of the required financing.

Today's markets do not provide adequate incentives for private businesses to contribute to sustainable development. In many instances the private incentives of businesses are misaligned with the social objective of sustainable development, exacerbating social exclusion and environmental degradation. Many companies are willing to work towards sustainable development, but they lack good interfaces to work with the public sector.

The key towards mobilizing the private sector for sustainable development is to combine public financing, regulation, and private market participation into an effective public-private partnership (PPP). Such PPPs can be structured by national as well as sub-national governments, including local authorities. They can come in a variety of forms:

- **Private provision on public contract:** Business may be the supplier on a publicly-financed contract. This can be for R&D, early-stage technology development, or deployment of infrastructure. Many key technologies, such as the early semiconductor industry, have developed on the basis of government procurement (section 5.11).
- **Market price corrections:** A variety of tax and subsidy corrections exist to provide incentives for business in line with social costs and benefits. Examples include tax credits for investments in new (risky) technologies, feed-in tariffs for renewable energy, carbon pricing, tobacco taxes, and investment and export guarantees or insurance.
- **Differential pricing by business:** Business may provide discounts or free supplies for products and services to low-income settings against a promise from governments to maintain (higher) patent-protected pricing in all other markets. An important example for differential pricing is the marketing of essential medicines in developing countries, which has made a tremendous contribution to the fight against many infectious diseases, including HIV/AIDS.
- **Global fund mechanisms:** The GFATM and Gavi are examples of public-private partnerships organized around health delivery with public financing that can in turn mobilize a significant share of private co-financing.
- **Technology consortia:** The public sector may sponsor a consortium of private and public entities to carry out R&D and pre-commercial trials for new technologies (section 5.11).
- **Market maker:** Publicly (co-)financed institutions may aggregate diffuse demand across a large number of countries and provide long-term visibility to suppliers to support the creation of markets that are financially viable, but too complex to establish for private actors alone.¹¹

¹⁰ See sections 5.8.2 and 6.4 for detailed discussion. UN (2010) provides common leverage ratios.

¹¹ A powerful example for market making is the global vaccine market, as discussed in Section 4.2.2.

PPPs offer great promise for sustainable development, but they can be extremely complex to design and sometimes fail. As underscored by the ICESDF (2014), poorly designed PPPs can lead to “high returns for the private partner, while the public partner retains all the risk” (see also Alexander 2013). Among the myriad of challenges that must be tackled in designing effective PPPs are:

- **Cost-effectiveness:** In many instances, private companies have proven to be more efficient and cost effective in delivering investments than public entities, but this is not always the case. In particular, networked infrastructure and other ‘natural monopolies’ can give rise to predatory pricing by private entities, which reduces the attractiveness of PPPs. Similarly, the US system of private provision of healthcare based on public funds is one of the causes of extraordinarily high unit costs for care.
- **Efficient scale of investment:** Only public (co-)financing can ensure an efficient scale of public goods provision. The more a PPP requires private entities to provide co-financing for capital or operating expenditure, the bigger the risk that the overall level of investment will be too low or that the outcomes be misaligned with the social objectives (e.g. to provide healthcare services to the poor). Achieving the efficient level of overall investment without squandering scarce public resources requires highly sophisticated service contracts, a careful calibration of incentives, and effective implementation.
- **Equity in financing and service delivery:** Private companies maximize profits and therefore have an incentive to reduce the level of service or infrastructure provision to ‘loss-making’ customers. For example, private utilities may generate financial losses on poor or remote customers. Unless effectively regulated, PPPs can reduce equity in financing and service delivery compared with public provision.
- **Competition and non-capture by incumbent companies:** Many PPPs give rise to natural monopolies, so PPP design must ensure effective competition in the awarding of contracts and proper regulation and price controls in the management of the PPP. These natural monopolies invite collusion between private providers and public regulators, the so-called ‘capture’ of the regulators.
- **Transparency and non-corruption:** In general, PPPs must be transparent and include sophisticated safeguards to minimize the risk of corruption by public officials as well as private employees and to ensure minimum social and environmental safeguards. Such safeguards are hard to enforce in general, especially in places with weak governance.

This list underscores the ‘principal agent’ problems that PPPs can generate and the complexity that effective design, monitoring, and policing may require. Public institutions may not be strong enough to design and implement effective PPPs, particularly in the poorest countries. Consequently, the transaction costs of PPPs and the ability of a country to manage PPPs must be carefully weighed against the benefits they are intended to generate.

3.6 The limited role of household contributions and remittances

In poor countries, household contributions to financing the SDGs are very limited. This is simply a reflection of household poverty. In health and education, experience has repeatedly shown that user

fees dramatically discourage access to health and education, particularly for girls and women, and they mobilize very limited additional financial resources. As a result, a clear global consensus has emerged that basic education and health care should be free of charge to users. The evidence on health is presented by WHO (2010c), Moreno-Serra and Smith (2012), Savedoff (2012), Yates (2009), Jamison *et al.* (2013), and Agyepong *et al.* (2014). For evidence in the education sector see for example Bentaouet (2006), Chavan *et al.* (2014), Greenhill and Ali (2013), and UNESCO (2013).

Infrastructure gives rise to similar issues of access for the poor. On the one hand, utility companies (e.g. for power and water) need to cover their costs. Yet, uniform pricing for all customers would again exclude the poor, just as with healthcare and education. One common approach, therefore, is a subsidy that is applied to all customers. The problem, however, is that middle-income and high-income consumers end up receiving the lion's share of an across-the-board subsidy, even though such a subsidy is ostensibly for the poor. A preferable approach is called a 'lifeline tariff,' which provides free or highly subsidized access for a good or service (e.g. water or power) up to a given quantity that is deemed to be the 'basic need.' Above that level, consumers must pay the full cost of the services. Indeed, the cost of providing the lifeline tariff can be included in the full price paid by the larger (and richer) buyers of the service.

Another case for a lifeline tariff is in smallholder agriculture. In many parts of the world smallholder farmers require subsidized access to basic infrastructure services (e.g. electricity for irrigation) and farm inputs such as seeds and fertilizer. These core inputs can be provided for free or at very low cost, but only up to a given quantity. Beyond that quantity, farmers pay the full cost for further infrastructure services and farm inputs.

Remittances are private flows of financing, usually within families, which support household investments (e.g. in small enterprises, housing) and consumption expenditures (e.g. payment for food, school fees, or medical expenses). They can be an important income source for poor households and can make a significant contribution towards reducing income poverty (Gupta *et al.* 2007).

Yet, remittances neither finance public goods, nor transfer incomes from rich households to poor households. Increasing the ability of the poor to earn income by working in richer countries is double edged. It provides more income for poor families on a market basis, but it can contribute to brain drain and lead to a tragic loss of family cohesion, as children grow up without the presence of one or both parents. For all these reasons, remittances should never be confused with ODA or with public financing more generally. Remittances are unlikely to make a significant contribution towards the financing of the sustainable investments reviewed in this working paper.

Still, the volume of global remittances is substantial and rising. The World Bank estimates that developing countries received \$404 billion in remittances in 2013, and forecasts this figure to grow at an average annual rate of 8.4% to \$516 billion in 2016 (World Bank 2014e). Fees for transferring remittances internationally are excessive, at 8 percent on average globally and rising to 12 percent in sub-Saharan Africa (World Bank 2014e). Governments can and should act to reduce the cost of transferring remittances by fostering competition and a level playing field for operators. For example, governments may reduce the scope for exclusivity arrangements between money transfer operators and banks or agents. They may also encourage other institutions, such as post offices, cooperatives, microfinance organizations, or possibly telecom operators to play a larger role in money transfers.

Remittances should not be confused with diaspora bonds or funds that mobilize private diaspora savings for bond-financed public projects. Globally, diaspora funds are estimated at \$400 billion (Ratha and Mohapatra 2011). Such funds may harness patriotism in the interest of development finance, and in a few countries they can contribute significantly to financing sustainable development. For example, India and Israel have successfully mobilized tens of billions of dollars in diaspora bonds (Ketkar and Ratha 2010). Yet one needs to be careful before extrapolating from these two examples, one a middle- and the other a high-income country, to opportunities for lower-income economies. Diaspora bonds have a role to play, but for most poor countries their contribution will be modest in scale and limited to investments that offer commercial or near-commercial rates of return.

3.7 Domestic vs. international public finance and the continued need for ODA

Private finance can be sourced domestically or internationally, and so, too, can public spending, which may come from domestic sources (such as income taxes, indirect taxes, customs revenues, state-enterprise profits) as well as international sources (as ODA,¹² climate finance, public loans, or Other Official Flows (OOF)). As agreed in the Monterrey Consensus (UN 2002) and the Busan Partnership for Effective Development Cooperation (2011), each country has primary responsibility for its development and development finance. Concessional international public finance should only be mobilized in areas where domestic public resources are insufficient, and business is unable to mobilize adequate private finance.

The substantial rise in per-capita incomes in most developing countries since 2000 has significantly increased domestic budget revenues (DBR), but most countries can do more (section 6.1). In particular, DBR at the local or municipal level will need to rise steadily. Yet ODA remains vital for most low-income countries, particularly in sub-Saharan Africa.

Gates (2011) explains eloquently why ODA will be needed for the foreseeable future to sustain life-saving investments in low-income countries and to finance global public goods. The African Economic Outlook 2010 (AfDB *et al.* 2010) shows that aid exceeds tax revenues in twelve African countries and is larger or equal to half the tax revenues in 24 countries. The Outlook concludes that if aid “were to disappear, several states would simply collapse.” The Committee on Development Finance cites data from Development Initiatives (2013) showing that, in most countries with government spending of less than \$500 PPP per person, ODA accounts for more than two thirds of international resource flows, and about one third of government revenues. Even if ODA and public climate finance make up a modest share of overall development finance globally, they play a vital role in some of the poorest countries – particularly for financing essential public services and for leveraging much larger volumes of private finance. Yet they are hard to mobilize and to disburse efficiently. This working paper therefore places particular emphasis on public international finance as an enabler of private finance.

The case for ODA rests mainly on closing financing gaps for the poor. A very clear example is public health. A rudimentary primary health system requires public outlays of at least \$86 (in 2012 dollar terms, Chatham House 2014) per person per year (compared with thousands of dollars per capita spent in high-income countries). Yet consider the case of a low-income country with per capita income of

¹² In this working paper we use the term ODA to denote all concessional international public finance flows, including ODA from members of the OECD DAC, aid from other high-income countries, as well as concessional South-South cooperation.

\$1000 per year, i.e. at the upper end of the low-income threshold. The government might be able to raise around 20 percent of GDP in domestic revenues, or roughly \$200 per capita. Given the demands on these funds (for public administration, infrastructure, education, training, law enforcement, judiciary, and more), the health sector might be able to claim 15 percent of the total domestic budget revenues (corresponding to the so-called Abuja Target for health spending). This would leave health spending at \$30 per person per year, slightly more than one-third of the basic need. The gap would have to be closed by ODA. By the same token, a middle-income country at \$2,000 per capita can meet its public health needs out of its own revenues.

In addition to the needs of the poorest countries, concessional international public financing is needed for essential global public goods. We return to global public goods in section 3.8 below.

3.8 Financing global public goods

The shift from the MDGs to the SDGs sharpens the focus on key ‘global public goods’ – public goods that are of global significance. No universally-accepted definition of global public goods exists, but two broad types can be identified. First, some global public goods consist of global rules, governance, and regulations that drive international cooperation and economic exchange. Such rules are critical for the SDGs (section 6.2), but they do not constitute significant investment areas in themselves. Second, several global public goods require direct investments, largely from public resources. The four most important investment needs are:

- **Climate change mitigation and adaptation:** A safe and stable climate is a critical global public good that requires investments in adaptation, mitigation, and improved science. As described in section 5.7, a global investment partnership for climate change mitigation and adaptation should be structured around the Green Climate Fund or the Global Environment Facility (GEF), and requires targeted financing through so-called climate finance (section 6.3.6).
- **Health:** As underscored by the Ebola pandemic that is currently affecting several countries in West Africa, the control and treatment of infectious diseases are important global public goods.¹³ Apart from dedicated research efforts, the bulk of investments in this area are required to ensure functioning and robust national public health systems and the achievement of Universal Health Coverage (UHC). Similarly, R&D for health constitutes an important global public good. These investment needs are covered in section 5.1.
- **Ecosystem services and biodiversity:** Other critical global public goods are ecosystems (e.g. boreal and tropical forests, the Polar Regions, oceans), their services (e.g. clean water, clean air, fisheries, etc.), and the preservation of biodiversity. A blend of public and private financing is needed to preserve these global public goods with the GEF playing a central role in directing public and blended investments.
- **Technology development and diffusion:** As described in section 5.11 and elsewhere in this working paper, achieving the SDGs will require vastly better technologies and their diffusion across all countries. These technologies and the underlying knowledge are global public goods that require significant public-private co-financing. The underlying public and private investment

¹³ The persistent underfunding of public health systems in Guinea, Liberia, and Sierra Leone has left these systems weak and unable to cope with the Ebola crisis.

needs are significant but difficult to quantify. They are broadly included in the investment areas covering climate change, energy, infrastructure, health, and other areas.

Each of these global public goods requires dedicated public co-financing. While climate change mitigation and adaptation will rely largely on concessional and non-concessional climate finance, the other global public goods described above will require significant volumes of public concessional finance from other sources. An important question is whether ODA should be used to finance global public goods even if the funding does not go directly towards a developing country. As discussed in section 6.3.1, ODA is a precious source of financing for the needs of the poorest countries. It therefore seems important not to dilute the definition of ODA to include investments in global public goods in high-income countries beyond the technical assistance that is already covered under today's definition of ODA. Instead, ODA should be focused on direct investments in achieving the SDGs in poorer developing countries. Therefore, public financing for global public goods in developed countries should probably not be eligible for ODA and instead come from Other Official Flows (OOF).

4 Learning from public health: Designing goal-based investment partnerships

The health sector has mounted by far the most coordinated, sophisticated, and ultimately successful campaigns and partnerships to implement the MDGs. From 1990 to 2013 the annual number of under-5 deaths worldwide fell from 12.7 million to 6.2 million (UNICEF 2014a). There is strong evidence of a structural acceleration in annual reductions of child mortality following the adoption of the MDGs. Even sub-Saharan Africa, which had been lagging behind the rest of the developing world in reducing child mortality, reached high rates of mortality reduction under the MDGs. All in all, at least 7.5 million additional child deaths were averted compared with a business-as-usual scenario (McArthur 2014).

During the same time maternal deaths almost halved (WHO, 2014). By 2012 nearly 10 million HIV/AIDS-infected individuals in low-income and middle-income countries were receiving anti-retroviral treatment, up from virtually zero as recently as 2001. However, the successes in health remain incomplete because many people still die of preventable causes or lack access to affordable health systems. In particular, maternal mortality rates remain unacceptably high.

Yet the experience in the health sector offers important lessons for how to move rapidly from global goals to successful implementation on a global scale. This section describes how this progress was achieved and distills key lessons on the design of goal-based, public-private investment partnerships that can guide the implementation of the SDGs.

4.1 *Rapid progress in health was improbable*

With hindsight, it is difficult to appreciate how unlikely it must have appeared at the turn of the 21st century that public health outcomes would improve as dramatically as they have over the past 15 years, particularly in the poorest countries. Back then it would have been easy to be despondent, and indeed many were for the problems seemed profound: the incidence and mortality rates from malaria, TB, and HIV/AIDS were rising rapidly, and the world lacked a coordinated response against these killers (Murray *et al.* 2014). Countries lacked long-term strategies for tackling the major diseases and other causes of mortality.

Available tools, such as malaria treatment with chloroquine or standard regimes for treating TB, were losing their efficacy, and critical new tools were still unavailable or not widely known. These included Directly-Observed Treatment Short-course (DOTS) for TB, low-cost artemisinin combination therapy (ACT) to treat malaria in children and adults, long-lasting insecticidal bed nets (LLINs) to control the transmission of malaria, rapid diagnostic tests for malaria, and many more.

Some tools, such as anti-retroviral therapy (ARV) to treat HIV/AIDS were available in high-income countries, yet only at patent-protected prices that put them out of reach of the low-income countries. There seemed little prospect that such medicines would become available at cost in low-income countries anytime soon. The pharmaceutical industry was at loggerheads with civil society (Oxfam 2011) and with governments in poor countries over access to the new medicines. With the failure of technology diffusion and technology transfer, major diseases seemed out of control, and a global partnership for health was improbable. In fact the dominant view in the early 2000s was that HIV/AIDS treatment in Africa was impossible (Brown 2000, Ogunbodede 2004).

As described by the WHO Commission on Macroeconomics and Health, the health sector lacked the financial resources and key institutions needed to support large-scale public health programs. Yes, UNICEF, the Red Cross, and many others did conduct successful vaccination campaigns around the world particularly against measles and polio, but there was hardly any money mobilized to control and treat HIV/AIDS, malaria, TB, and other killer diseases. Public finance discussions conducted by the IMF and others were largely unaware of the financing needs of health, and paid little attention to the growth-enhancing potential or the supply-side effect of reductions in mortality and morbidity (CGD 2007). Partly as a result, health ministries and health systems in most developing countries were totally unprepared in 2000 for the large-scale programs that were launched over the subsequent decade and that have proven so successful.

Of course, isolated successes had been achieved by 2000, including the widespread immunization against polio, measles, and other diseases (Miller and Sentz 2006). However, any dispassionate observer of public health in poor countries at the time the MDGs were adopted could be forgiven for ruling out the rapid and dramatic improvements that have swept across the health sector after the adoption of the MDGs. So what changed and how were millions of lives saved over a few short years?

4.2 The changes that have transformed public health since the early 2000s

Among the many changes that have occurred in the health sector, we identify four principal transformations that coalesced in the early 2000s to form global health partnerships involving a multitude of stakeholders:

4.2.1 Back-casting from shared goals to drive implementation and policy standards

In the early 2000s, the health sector adopted goal-based approaches as its operating framework and operationalized them through back-castings that systematically assessed the steps and interventions needed to achieve outcome targets over the long term.¹⁴ For example, the Commission on Macroeconomics and Health (2001) and the UN Millennium Project (2005) identified broad frameworks for achieving the health MDGs, including success in the fight against HIV/AIDS, TB, and Malaria. The underlying needs assessments pioneered the goal-based approach to the MDGs and made clear that scaling-up health care would require a mix of DBR and much larger ODA for health. Many of the recommendations of the Commission on Macroeconomics and Health were adopted in the early 2000s. It is important to highlight that goals were nothing new to the health sector. Under James Grant, UNICEF pioneered successful immunization campaigns in the 1980s that were based around ambitious goals. As head of the WHO in the late 1990s, Gro Harlem Brundtland promoted a number of goals, some of which were consolidated into the MDGs. In many ways, the MDGs themselves have learnt and taken inspiration from the health sector, which partly explains why three out of eight MDGs focus on health. Still, the MDGs provide an important organizing framework for the health priorities and embed them in

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a broader set of goals focusing on extreme poverty in all its forms. This has put to rest the futile debates of whether health or education or agriculture were more important. The MDGs allowed everyone to focus on implementation, and the health sector seized its opportunity. While the recommendations of the UN Millennium Project were broadly adopted at the special MDG Summit in 2005 (McArthur 2013).

Such back-casting exercises became the norm for several specific initiatives around the key diseases. For example, the Stop TB Partnership designed the Global Plan to Stop TB, which launched national campaigns to roll out Directly Observed Treatment Short-Course (DOTS) with remarkable results. TB mortality has fallen 45 percent since 1990. Roll-Back Malaria and other malaria programs drew up the Global Malaria Action Plan and detailed national strategies for controlling and treating malaria in priority countries. Another good example was the extremely ambitious '3 by 5 campaign' launched by the WHO, UNAIDS, and others to extend ARV treatment to at least 3 million people by 2005. Even though the latter did not quite achieve its objective (the target was achieved in 2007), it galvanized the community and put the focus squarely on the need for scaled-up approaches to ARV treatment. Family Planning 2020 and the Partnership for Maternal, Newborn, and Child Health (PMNCH) have both advanced back-castings for sexual and reproductive health, as well as newborn and child health.

Partly motivated by the MDGs, academics, civil society organizations (CSOs), governments, and international organizations assembled rigorous evidence on the effectiveness of key policy prescriptions. Major policy breakthroughs were achieved in dropping user fees for health services and replacing the social marketing of LLINs with free or highly subsidized distribution of LLINs. Over time the evidence-based advocacy led to a shift in official positions towards free distribution of LLINs (WHO 2007) and more gradually towards free access to universal primary health care (Yates 2009). The dropping of user fees for primary health care became a major driver for increasing access to health care and improving health outcomes, particularly for reproductive, maternal, newborn, and child health.

The back-castings around tangible goals spurred other important discussions around policy coherence and operational challenges. Of particular importance, the WHO-hosted High-Level Forum on the Health MDGs, which *inter alia* advanced the agenda on fiscal space for domestic investments in health, and the Global Health Workforce Alliance worked to address human resource bottlenecks like workforce shortages, geographic imbalances, and poor performance of health workers (Vujicic et al. 2012). Similarly, the International Health Partnership (IHP+) became a critical forum for addressing challenges of aid effectiveness and coherence with national policies and investments. It provided an important forum for reducing fragmentation in health financing, in particular around GFATM-funded programs (Vujicic et al. 2012). Through these and other initiatives, the health sector gradually chipped away at implementation challenges towards achieving the health goals and built a robust set of policy standards.

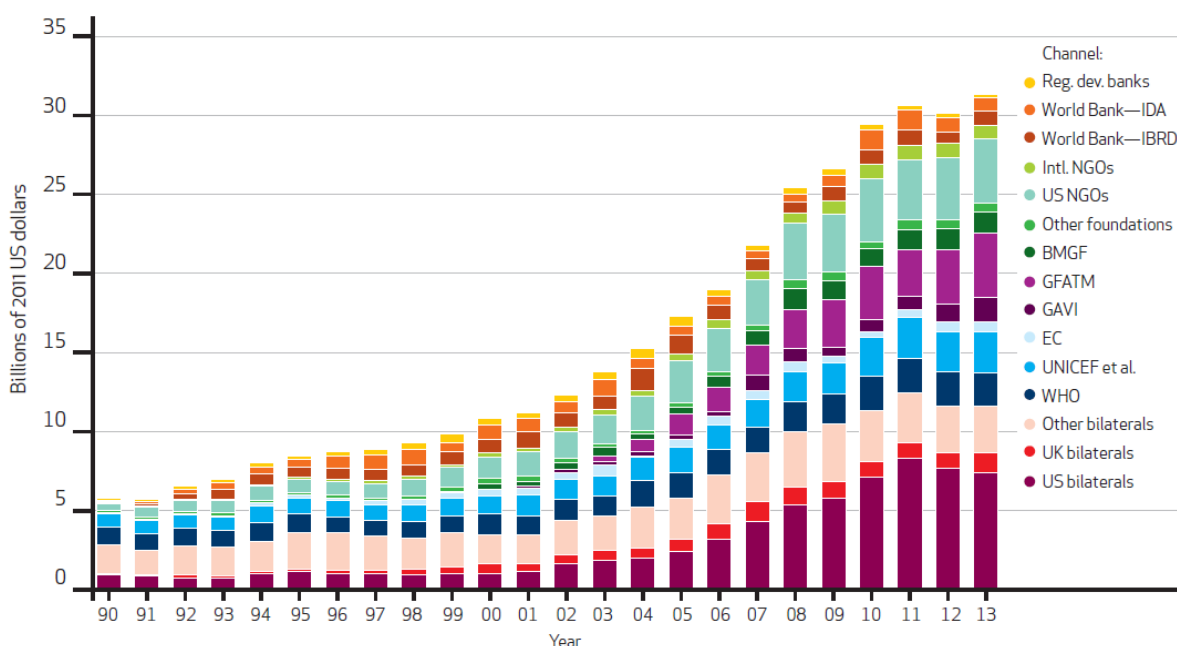
4.2.2 *Launch of the GFATM and Gavi*

The GFATM and Gavi were the first to make large-scale funding available to national programs for the control and treatment of major diseases. Critically, the funding was provided competitively on the basis of countries' proposals, thus ensuring country ownership and a healthy competition for available financial resources. In contrast, many bilateral programs – with the notable exception of the President's Emergency Plan For AIDS Relief (PEPFAR) and the President's Malaria Initiative that were established by the US – were too small and too slow to provide sufficient co-financing for national-scale health programs. In spite of improved provider coordination efforts, bilateral programs also tended to be much less demand-based and much more cumbersome than was the case with GFATM and Gavi funding. They also did not encourage adequate competition for resources and failed to generate the 'demand

discovery’ that became central to innovation and learning in the fight against HIV/AIDS, malaria, and other major infectious diseases.

Figure 3 shows the evolution of ODA to health and the substantial increases in real terms recorded since 2000. Most of the increase is accounted for by the GFATM and Gavi in combination with the very large US bilateral programs – essentially PEPFAR and the President’s malaria initiative. The Bill and Melinda Gates Foundation was the other major provider who increased funding for the health sector substantially.

Figure 3: ODA for health, by channel of assistance 1990-2013



Source: Dieleman *et al.* (2014).

The implications of the GFATM and Gavi models on national health systems were profound. First, health ministers were empowered to develop large-scale programs. In many countries, finance ministers started to work effectively with their health ministers for the first time in the design and implementation of national-scale investment programs for health, which in turn removed major organizational and governance bottlenecks in the health sector. The multi-stakeholder Country Coordination Mechanisms (CCM) of the GFATM promoted engagement with civil society and other stakeholders, proving particularly important for tackling infectious diseases, such as HIV/AIDS, which may be associated with social stigma or require behavior change from large segments of a population. In several countries, the GFATM is the only outside provider that enjoys the trust and support from governments and civil society to co-finance programs tackling stigmatized infectious diseases.

Second, by providing funding at scale with medium-term to long-term visibility, the GFATM and Gavi created an effective partner for business,¹⁵ which in turn drove unparalleled innovation in the

¹⁵ The International Finance Facility for Immunization (IFFm) established by Gavi is an important example of providing long-term visibility and financing commitments to business, which in turn enables private companies to invest in the costly and drawn-out development of new vaccines.

development and delivery of tools for prevention, treatment, control, and diagnosis of major diseases. The harmonized funding of national health strategies made it possible for the pharmaceutical industry to agree on differential licensing arrangements and to develop vaccines and drugs for the needs of low-income countries. It took the dedication and leadership of President Clinton working with UNITAID to clinch the first major deal on differential drug pricing, but this would have scarcely been possible without the GFATM and Gavi.

Both institutions also helped map and consolidate demand from a large number of countries to provide secure, long-term demand projections for companies' products, thus allowing business to ramp up research and production efforts. Powerful examples were the vaccine market roadmaps¹⁶ and advanced market purchase commitments for new vaccines under Gavi or long-term projections of demand for LLINs by the GFATM. The latter made possible the massive expansion of LLIN production facilities by companies, including a growing number of producers in Africa.

Third, the rigorous and transparent project appraisal, monitoring, and evaluation by the GFATM and Gavi – combined with the widespread sharing of lessons learnt across countries – led to a rapid diffusion of knowledge and expertise on how to design and implement national-scale programs. In particular, the quality of African health programs improved tremendously in a short period of time. The importance of this shift cannot be overstated: in the early 2000s no health expert – let alone African ministers of health – would have been able to write down an operational national malaria control program. Most of the pieces were known, but they had never been put together at scale, and there was little understanding of how such large programs could be operated.

It took the availability of large-scale resources through the GFATM and the President's Malaria Initiative, coupled with effective technical support through the Roll-Back Malaria Partnership, to change this situation. Today, African health ministers can give PowerPoint presentations on their national programs spelling out goals, milestones, budgets, logistics, Monitoring and Evaluation (M&E), etc. In a short period of time, the sector learnt how to develop national-scale programs, and this knowledge spread quickly across the entire continent. In contrast, other sectors, such as education, water and sanitation, or agriculture, lack the detailed operational knowledge (and experience) of how to conduct large-scale programs in resource-poor settings because they lack the equivalent of a GFATM.

As new institutions, the GFATM and Gavi have come under heavy criticism, sometimes justifiably so. For example, in the early years there was certainly much ground for criticism of cumbersome GFATM procedures and processes that many recipient countries perceived as disruptive. Over time, however, the two organizations have improved performance and won over the critics through superior performance and impressive outcomes. Other criticisms have focused on the GFATM's promotion of 'vertical' programs. We discuss these and other criticisms in section 4.3.2, which discusses the role of pooled financing mechanisms in public-private investment partnerships.

In 2013, the GFATM adopted its New Funding Model, which moved away from rounds-based financing towards pre-determined country allocations. Each eligible country can now submit a proposal for its allocation. Some elements of 'demand discovery' have been retained in the new funding model, which provides a modest amount of incentive funding (\$1 billion for the period 2014-2016) for additional support to high-quality programs. Country requests that have been approved by the Technical Review

¹⁶ See, for example, the market roadmap for Japanese Encephalitis (Gavi 2014c) or other market roadmaps on the Gavi website.

Panel and exceed the country allocation as well as available incentive funding are placed on a register of ‘unfunded quality demand’ that third-party providers are invited to contribute to. Key reasons for the GFATM shift included the need for (i) a more iterative approach to developing and reviewing programs instead of a binary ‘yes’ or ‘no’; (ii) eligible countries to be able to apply at any time during the three-year allocation period to better align with national budgeting cycles and to provide more predictable funding; (iii) assurance that non-Anglophone countries, particularly in West Africa, receive funding allocations that are proportionate to their needs; and (iv) a response to a strong sense among the provider community that ODA volumes for GFATM and large bilateral programs – particularly in the US – had to be capped by pre-assigning allocations to each country.¹⁷

This shift away from the competitive rounds-based model raises questions about the continued effectiveness of the ‘demand discovery’ approach, which has been a hallmark of GFATM success. Encouragingly, early signs indicate that countries continue to submit country requests that exceed the GFATM country allocations. Still, we see grounds for concern that the allocation-based funding model suppresses demand and undermines innovation. This would drive up the real costs of tackling the diseases for developing countries and providers alike, and any suppression of demand would make it harder to meet the SDGs.

We emphasize that the GFATM and Gavi are only successful when international provider support complements rather than substitutes for DBR for public health. There can be no doubt that, where available, domestic resources should finance national health systems, and international public finance should come in only where core needs cannot be financed domestically. The 2001 Abuja targets on domestic health funding and similar initiatives in other regions have established important benchmarks for DBR that should be followed by all countries. International concessional public finance provided by GFATM, Gavi, and others may in part be made contingent on countries’ strategies for achieving the Abuja benchmarks.

Some exceptions can be made in middle-income countries with high-disease burdens. When external co-financing through the GFATM or other mechanisms is needed to support the design of national programs, then limited ODA should be provided even though the recipient countries are macro-economically able to shoulder the necessary expenditure themselves (see sections 5.1 and 6.3.1 for a more detailed discussion of health financing and eligibility criteria).

4.2.3 Mass mobilization by activist CSOs and others around Health MDGs

The MDGs included three health goals that mobilized the health community around the world, particularly with regards to the fight against major infectious diseases (HIV/AIDS, TB, and malaria) and child mortality. In parallel to the MDGs and in extension of the global headline goals, the health community adopted a number of aggressive global goals for tackling key health challenges, such as the Stop TB goal of getting 3 million on TB treatment, the ‘3 by 5’ goal of expanding ARV coverage in developing countries from literally zero to 3 million by 2005, or the 2015 Roll-Back Malaria goal of a 75 percent reduction in malaria morbidity and mortality relative to 2005.

¹⁷ Even before the adoption of the New Funding Model, the GFATM experienced significant resource constraints. For example, following the successful round 8 the GFATM Board decided to reduce financing for all programs that had been approved by the Technical Review Panel by 10 percent for Phase 1 and to limit resources available for Phase 2 by 75 percent of approved programs (Board decision GF/B18/DP13). In 2011, the Board had to cancel Round 11 and transform it into a ‘transitional funding mechanism’ (Board decision Point GF/B25/DP16). These examples demonstrate that in spite of its successful resource mobilization, the GFATM has been underfunded.

Many individuals and civil society organizations raised awareness, fostered collaboration, and promoted practical approaches to addressing the health challenges. For example, CSOs around the world forced governments to pay attention to HIV/AIDS and helped tackle the stigma associated with this sexually transmitted disease, which in turn enabled the rapid progress in expanding ARV treatment. CSOs also participate actively in the GFATM CCMs, which provide an important multi-stakeholder forum for developing and implementing countries' strategies. In many countries, CSOs play critical roles in implementing programs and in reaching affected and frequently marginalized populations.

The Gates Foundation made critical contributions to building the 'ecosystem' of these global health partnerships. In particular, it has provided flexible and fairly elastic start-up funding for major new initiatives in the sector, such as funding the Commission on Macroeconomics and Health as well as the launch of Gavi. To this day, it is a major funder for activist CSOs that drive greater accountability, advocate for increased resources, and promote novel approaches to tackling health challenges.

The role of persistent advocacy must not be underestimated. Most of the progress in public health came despite cynicism and open doubts. It took long battles to win the case for anti-retroviral treatment of poor people in poor countries, for the free distribution of LLINs and other anti-malaria control measures, for attention to multi-drug resistant TB, and for action against 'neglected tropical diseases.' Similarly, several pharmaceutical companies strongly resisted differential drug pricing at first (Oxfam 2011). No victory was assured at the start. Yet the existence of global goals and effective monitoring and evaluation of successful programs made it much easier for advocates to make their voices heard.

4.2.4 Improved tools and standards through RDD&D and public-private partnerships

On the basis of the global goals international organizations like WHO and UNICEF, CSOs like the International Federation of the Red Cross and Red Crescent, and MSF, and research institutions inventoried and standardized the tools needed to achieve the goals, identified gaps in interventions, and developed new tools, notably through dedicated series in the medical journal *The Lancet* (e.g. Jamison et al. 2013, Horton 2013). For example, UNITAID offers long-term purchasing commitments to spur development of new health products. Similarly, under guidance from WHO and the World Health Assembly, treatment regimens for malaria, particularly for children, shifted to ACT. LLINs were established as a proven and effective tool in controlling malaria in endemic areas, and over time WHO also recommended the free distribution of LLINs (WHO 2007), since social marketing campaigns had proven ineffective at reaching the required scale.

Private-sector companies stepped up their participation dramatically, particularly in health product development partnerships (Kaplan *et al.* 2013). In the case of GFATM, companies developed novel technologies and committed the investments to scale up production (e.g. production of ACT). Several private-sector producers of antiretroviral medicines committed to providing their medicines at cost to low-income countries, and also in some cases to provide open licensing for production by generics manufacturers. More can and needs to be done: the GFATM is currently expanding its partnerships with companies in the IT, logistics, financial and consumer good sectors to strengthen supply chain management, finance, and risk management and program quality.

The Stop TB Partnership standardized DOTS treatment protocols for application around the world and enlisted private industry to tackle the challenges of multi-drug-resistant TB. UNICEF, UNFPA, and many others have promoted essential child health packages, defined the core interventions for sexual and reproductive health, as well as maternal and newborn health. These global efforts to inventory tools, standardize treatment protocols, and establish global standards enabled an unprecedented diffusion of knowledge and technologies in a short period of time.

Of particular importance were the often small-scale demonstration projects that informed and inspired the scaling-up of proven health-care interventions. For example, the small CSO Partners in Health demonstrated how complex ARV treatment regimens could be administered in Haiti and other low-income countries, thus paving the way for the large-scale rollout. Similarly, UNICEF and the International Federation of the Red Cross and Red Crescent pioneered campaigns for vaccination and distribution of LLINs. The Millennium Villages Project demonstrated the feasibility of rapid malaria control through an integrated strategy of free bed-net distribution, community-based malaria control delivered by community health workers, rapid diagnostic tests, and free access to ACT. Organizations like MSF showed how child mortality could be reduced in some of the most impoverished settings. Each of these demonstration projects inspired action and chipped away at the excuses for not tackling the health challenges at scale.

The Gates Foundation played a central role in promoting innovation through its heavy investments in improved performance metrics for health and PPPs for technology development. The latter have borne fruit on a number of breakthrough enabling technologies in support of global health goals.

Successful implementation strategies spelled out the responsibilities of national and international actors, and provided budgets, milestones, and clear metrics for tracking progress. The latter became critical during implementation when monthly or quarterly progress reports were submitted from each country or health district, thus creating a dynamic and energetic 'campaign' during which all partners were rigorously held to account for achieving the best results in the shortest period of time. Implementation protocols were regularly revised to take into account lessons learnt during national and regional roll-outs.

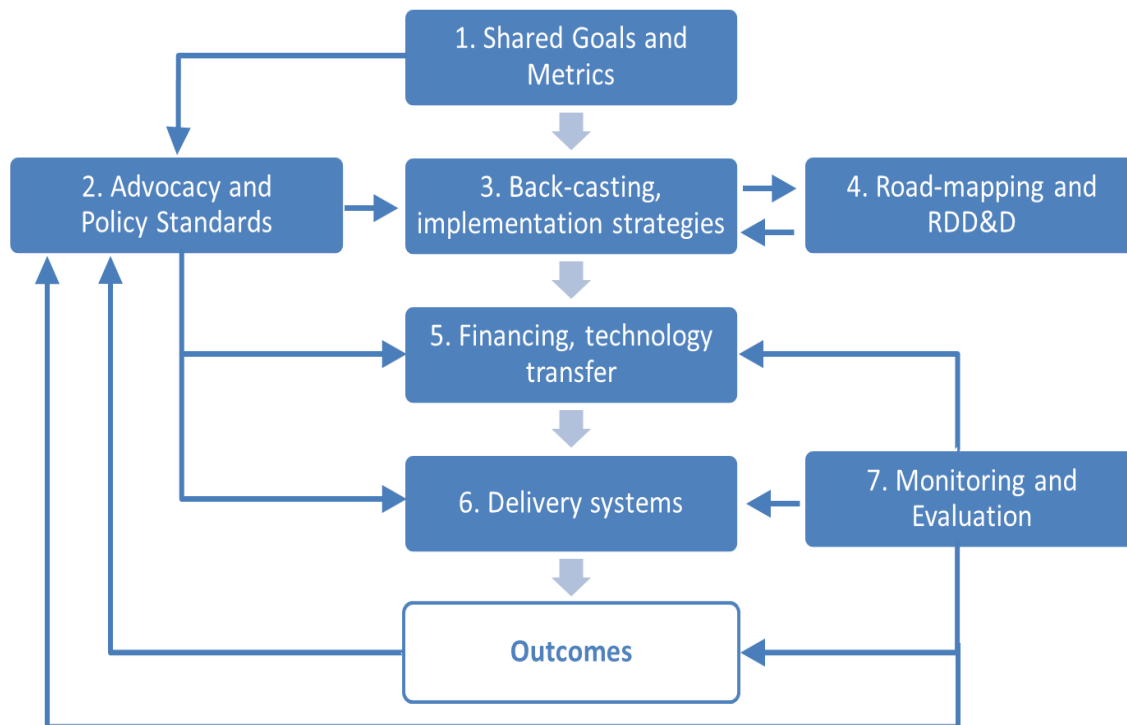
4.3 Applying the lessons from health: Developing public-private investment partnerships

The global partnership on health shows how a multitude of actors including national governments, CSOs and civil society, businesses, international organizations, foundations, and the scientific community can be mobilized around shared goals to solve a complex long-term investment challenge. Together these actors can create a dynamic ‘ecosystem’ that mobilizes an entire epistemic community, ensures accountability, fosters innovation, and transfers knowledge for national-scale implementation programs. Goals provide energy, commitment, resources, and timelines. They give rise to partnerships that can create real change. In this way goal-based development constitutes a critical approach for solving extremely complex operational and investment challenges at global, regional, national, and local levels.

4.3.1 The functioning of goal-based investment partnerships

Each investment area or sector has unique features and requirements for success, so there cannot be a one-size-fits-all approach to building global public-private investment partnerships. Yet, it is possible to identify seven core processes of goal-based partnerships, which are illustrated in Figure 1 and described below.

Figure 4: Seven core components of goal-based investment partnerships



1. **Shared global goals and metrics:** John F. Kennedy famously explained the power of clear goals: “By defining our goal more clearly - by making it seem more manageable and less remote - we

can help all peoples to see it, to draw hope from it, and to move irresistibly toward it.” This is how global goals like the MDGs can work. They provide a coherent narrative for action, mobilize all actors involved in a particular area, and galvanize the community to develop clear strategies for implementation, raise the financing, and develop the technologies needed to implement them. Well-crafted SDGs can play this role in all priority areas for sustainable development (SDSN 2013). They would need to be translated into operational targets and objectives, just as the public health community adopted the ‘3 by 5’ target on HIV/AIDS control or the ‘Reach 3 million’ target to control TB on the back of the MDGs. Clear metrics will help us understand whether we are on track towards achieving the goals (SDSN 2015a).

2. **Advocacy and policy standards:** Activist CSOs and other stakeholders can raise awareness of the importance and feasibility of the global goals, mobilize stakeholders, and ensure accountability. They will help ensure effective implementation strategies and play a central role in mobilizing the needed public financing. Rigorous evidence-based advocacy also helps establish policy standards in collaboration with international organizations, such as the consensus that both primary schooling (Kattan and Burnett 2004) and primary healthcare (reviewed in Yates 2009) should be free or the WHO standard on the free or highly subsidized distribution of LLINs (WHO 2007). Good advocacy in turn requires flexible funding for CSOs (e.g. through philanthropists, such as the Gates Foundation) as well as reliable evidence on the efficacy of the proposed programs, which is provided through rigorous monitoring and evaluation. The successful achievement of outcomes strengthens advocacy, as happened in health where success in one country and against one disease was used to spur greater action elsewhere.
3. **Back-casting and implementation strategies:** We use the term ‘back-casting’ to describe the process where long-term targets are set, and then the changes needed to achieve these targets are systematically determined by working backward from the targets. Back-casting is not to be confused with rigid central planning – it allows for bottom-up innovation and must be adaptive, as strategies and pathways will have to be continually revised and updated based on new scientific insights, technological innovation, and lessons learnt from implementation. Such back-castings form the basis for national implementation strategies that spell out the operational milestones, means of implementation, responsibilities, and so forth. Implementation strategies may cover a few years and often require quarterly performance benchmarks and reporting on results. The public health community used back-castings to great effect by showing how ambitious treatment and mortality targets can be achieved through targeted investments over sustained periods of time. Based on national and global back-castings, provided by organizations such as the Commission on Macroeconomics and Health (2001), countries developed national strategies to control HIV/AIDS, TB, malaria, and address other health priorities.
4. **Technology road-mapping for Research, Development, Demonstration and Diffusion (RDD&D):** Based on the global goals, rigorous RDD&D is required to inventory ‘reservoir technologies’, fill gaps in interventions and available technologies, demonstrate the efficacy of new technologies and tools, and ensure their widespread adoption through diffusion. In areas where major technological progress is required (e.g. in vaccines or low-carbon energy technologies), the expert communities can develop long-term road maps for technology development, often with strong participation from business and academia. Important examples in the health sector are the Gavi vaccine market roadmaps (Gavi 2014c), UNITAID’s long-term funding commitments to support product development partnerships, or disease-specific roadmaps (WHO 2011). Such roadmaps and findings from RDD&D in turn will influence the back-castings and implementation

strategies. Technology roadmaps have been used to great effect in other areas, including the International Technology Roadmap for Semiconductors (ITRS 2013), the NIH Epigenomics Mapping Consortium,¹⁸ or various energy technology roadmaps undertaken by the IEA.¹⁹ Each of these roadmaps has accelerated technological progress on semiconductors, genome sequencing, and energy technologies. Similar roadmaps are required for all SDGs that rely on significant technical progress.

5. **Financing and technology transfer:** Each area needs to identify the appropriate blend of public and private resources for capital and operating expenditure and how these can be provided at scale and with minimal transaction costs in countries and for global public goods. Where substantial flows of international public finance are required, pooled multilateral financing mechanisms can make an important contribution towards keeping transaction costs low and organizing the sector. Technology transfer must be integrated into international financing mechanisms since the private holder of the intellectual property will need to be compensated for any transfers at reasonable rates (section 5.10). For example, Gavi and the GFATM have scaled up ODA for public health, but they have also drastically increased the efficiency and effectiveness of the funding (section 4.3.2). Both institutions were vital in making advanced technologies widely available in developing countries by purchasing large volumes of commodities and drugs from the businesses that produced them.
6. **Delivery systems:** Effective national delivery systems that are supported by international partners vary from sector to sector. Where public goods need to be financed, delivery systems may be of a public administrative nature (e.g. health, education) or comprise public-private partnerships (e.g. for finance, construction, and operation of infrastructure). Some delivery systems may be largely run by CSOs, as is common in some South Asian countries, or businesses.
7. **Monitoring and Evaluation:** Rigorous and transparent M&E will sharpen the understanding of which interventions and delivery systems work and how they can be improved, track public and private resource mobilization and their effective use, track technology transfers, and, above all, monitor the outcomes. M&E holds all actors to account for results and ensures efficient use of resources. It provides the evidence base for effective advocacy and policy standards. In the case of health, rigorous independent M&E has been hardwired into all programs supported by Gavi and the GFATM. Over time, M&E has contributed to substantial improvements in the design and delivery of health programs, and these lessons were shared widely within the public health community. A key driver of success has been the leadership from many different stakeholder, including the financing mechanisms, CSOs, universities, governments, and businesses.

All functioning global partnerships have successfully utilized these seven components. Each component can be driven by many different actors – governments, CSOs, businesses, and universities – and each works in harmony with the others. The components also differ markedly across investment challenges. For example, a global partnership for the low-carbon energy transformation would have very different needs from health partnerships, though each of the seven components will play an important role. We will review the differences across investment partnerships in section 5.

¹⁸ See <http://www.roadmapepigenomics.org/>

¹⁹ See <http://www.iea.org/roadmaps/>

4.3.2 *The central role of pooled financing mechanisms*

Effective partnerships are not centrally planned, and they do not depend on one actor that oversees all activities. Yet delivering results at the required scale requires a high degree of mobilization and organization. So, successful partnerships rely on one or more ‘engines’ that can drive progress and mobilize other partners to act.

In health, the thematic pooled financing mechanisms, Gavi and the GFATM, as well as the large US bilateral programs PEPFAR and the President’s Malaria Initiative, proved vital to building the investment partnership (Figure 3, p. 43). This lesson can be generalized to many other PPPs for the SDGs: pooled financing mechanisms for international public finance play a central role in translating global goals into effective investment strategies and partnerships. We note that the International Development Association (IDA) of the World Bank is a pooled financing mechanism that provides highly flexibly and un-earmarked funding to the poorest countries. We return to the special role of IDA and its relationship to the thematic pooled financing mechanisms in section 5.10.

The greater effectiveness of pooled financing mechanisms relative to fragmented approaches has been widely recognized and documented (Arakawa *et al.* 2014, Ban *et al.* 2008, CPI 2011, Gates 2011, OECD 2011, Polycarp *et al.* 2013, UN 2014, World Bank 2013a), but it would be a mistake to reduce their role only to the mechanics of disbursing financing. Experiences in the health sector and elsewhere show that well-designed pooled financing mechanisms play important roles in financing, organization, knowledge transfer, and advocacy. They help to promote:

1. **Effective country-led programs and national ownership:** Large-scale funding that is provided competitively on the basis of country-led programs developed by the responsible line ministries will improve the organization, quality, and national ownership of country programs. Experiences in the health sector and elsewhere show that when countries can apply for large-scale pooled funding, the responsible line ministry becomes a potential source of significant volumes of predictable funding, which can in turn foster effective cooperation with finance and other ministries. Open and competitive processes of ‘demand discovery’ can mobilize unprecedented efforts on behalf of governments as well as civil society to ensure the success of these programs, particularly when national multi-stakeholder mechanisms, such as the GFATM CCM, mobilize and coordinate government and non-government actors. The large number of current and former government leaders who have signed up as Global Fund Advocates is a powerful testament to the GFATM’s success in fostering national ownership. Such country leadership and ownership simply cannot be mobilized through a series of poorly coordinated small-scale aid programs.²⁰
2. **Technical integrity, rapid learning, and efficient knowledge transfer:** Pooled funding programs of significant scale can develop robust systems to ensure independent high-quality technical

²⁰ Take the example of the health sector where it is common for some African countries to deal with over 30 providers (excluding CSOs and foundations). Each of these providers has its own requirements for the use of funds, disbursement schedules and conditions, and reporting. In some extreme cases, part of the aid remains tied and/or must go through separate vertical programs outside the control of the national health system. In such a context African ministers of health and finance spend an inordinate amount of time negotiating and dealing with the representatives of multilateral and bilateral programs. It becomes virtually impossible to have a true national program, and ‘national ownership’ becomes a rhetorical commitment that is impossible to materialize. Here the International Health Partnership (IHP+) process has also led to significant improvements (Save the Children 2011).

appraisals of funding proposals, monitoring and evaluation. They also provide effective forums for rapid learning and knowledge transfer across countries. Such ‘capacity building’ and training becomes effective, because it is tied to the prospect of mobilizing the resources to implement programs at scale. For example, before the GFATM was established not a single African country had an effective national-scale malaria control program in place. Now virtually all malaria-endemic countries do, thanks to the tremendous learning and knowledge transfer²¹ made possible through its large-scale funding. In education, the Global Partnership for Education (GPE) and its predecessors have not been successful in mobilizing the required resources, but they did consolidate best practice for national education programs and have had a significant impact on improving the quality and efficacy of national education strategies.

3. **Lower transaction costs and minimal duplication:** By reducing the number of interfaces, reporting requirements, and financial flows, pooled mechanisms can reduce fragmentation and transaction costs on provider and recipient sides (OECD 2011). Likewise, it becomes much easier to avoid redundancies and overlaps in the international development and climate finance architecture once the bulk of financing flows through a small number of global funds, regional programs, or other large-scale pooled financing mechanisms.²²
4. **Effective mobilization of private finance and leveraging:** Another important advantage of large pooled financing mechanisms lies in their ability to define PPP windows and blending mechanisms for public and private financing. Instead of having to negotiate with a large number of bilateral provider agencies, private investors can deal with ideally one pooled financing mechanism for each sector. This in turn will increase competition among private providers and lower the cost of private blending. Since the opportunities and effective operational modalities for blending public and private financing vary across sectors, blending mechanisms should be structured along sectoral lines (e.g. agriculture or energy) in order to facilitate private leveraging of public funds. Similarly, pooled mechanisms can raise debt in the capital markets, thus extending their resources several-fold (World Bank *et al.* 2011). This approach has been demonstrated by Gavi’s success in developing a number of scalable specialized public-private co-financing vehicles for specific health financing needs, including the International Finance Facility for Immunization (IFFIm) and the Global Matching Fund (Gates 2011). The GFATM in turn has struck a partnership with (RED), a consumer marketing initiative that raises awareness of and funding for programs to control and treat HIV/AIDS in Africa.

²¹ The design of pooled financing mechanisms has important implications for the learning and knowledge transfer they generate. At one end of the spectrum, the GFATM has established clear funding rounds for well-defined challenges, such as national malaria control. As a result, all national malaria control programs could be compared, and successful innovations in one program spread quickly to others. In comparison, the GEF has for years maintained funding windows accepting proposals for projects that could be very different in scope, scale, and implementation modalities. Since the projects were difficult to compare, much less learning occurred on how to implement them successfully. Under its 6th replenishment round, the GEF is now moving towards financing large-scale and comparable programs under a small number of thematic windows.

²² It is sometimes argued that pooled financing mechanisms, such as global funds, would add another layer of complexity, which is of course not the case. Instead, global funds and other pooled financing mechanisms reduce the number of bilateral financing negotiations and interfaces that currently occur in every country. Where effective pooled financing mechanisms already exist, the efficiency gains can be immediate. For example, in the health sector, virtually every bilateral and multilateral provider already works with the GFATM, so broadening the fund’s mandate would lead to a drastic reduction in transaction costs.

5. **Massive acceleration of innovation through business engagement:** Pooled financing mechanisms and the scaling-up and harmonization of national implementation strategies that they entail provide the clear interface that business needs to invest in innovation and new technologies. Thanks to the GFATM and Gavi, many innovations became possible in health that would otherwise not have occurred. Conversely, the lack of pooled financing mechanisms and the insufficient mobilization of epistemic communities they promote explain why innovation and the adoption of new technologies have been relatively slow in other sectors.
6. **Effective financing for technology transfer:** The SDGs will outline shared global challenges that require shared technologies. For this reason, developing countries rightly insist on the need for effective mechanisms for technology transfer. The appropriate modalities for technology transfer differ by sector and may include differential pricing (e.g. for HIV/AIDS treatment), technology licensing (co-)financed through public subsidies, differential patent tenors, joint ventures, compulsory licensing, and many other mechanisms. Pooled financing mechanisms can co-finance technology transfer, either as part of their program funding or through dedicated financing windows that are adapted to the types of technologies and applications financed by the pooled financing mechanism. Each pooled financing mechanism needs to have a dedicated financing window to support R&D and the development and deployment of pre-commercial technologies. These windows would also support the diffusion of technologies, particularly to low-income countries.
7. **Improved allocation of aid to countries most in need:** Compared with bilateral agencies, multilateral funding mechanisms are less encumbered by historical and geopolitical relationships in the allocation of their financing. For example, the education sector shows that multilateral agencies are better able to allocate funding according to need and ability to spend (Rose and Steer 2013). IDA provides some of the highest quality aid available to the poorest countries. Similarly, the GFATM has been tougher than most bilateral providers on recipient governments that misappropriated funds. This has greatly improved the transparency, effectiveness, and results-focus of aid in the health sector overall.
8. **Predictable multi-year funding commitments:** In contrast to many bilateral aid programs, the GFATM, Gavi, or IDA provide predictable funding over several years. Such predictable funding is critical for the effective programming of resources and public financial expenditure management. The need for medium-term predictability is particularly important in the social sectors where recurrent salaries and other operating expenditures require visibility over available resources so that delivery systems can be strengthened and expanded.
9. **An important global voice and mobilization of civil society:** The GFATM and Gavi have become important global voices and advocates for mobilizing resources at scale and meeting the health goals. Each has helped mobilize additional resources and has fostered political commitments to public health. Both have been effective in mobilizing civil society partners and advocates who in turn have led advocacy for increased funding to health in their own countries, recipient and provider countries alike. The GFATM's extensive civil society network, buttressed by multi-stakeholder Country Coordinating Mechanisms in recipient countries, has been a critical driver of the successful resource mobilization and for building the case to channel taxpayers' money through a multilateral mechanism. The success of the health mechanisms' mobilizing power is in significant part attributable to their data-driven results orientation and the subsequent availability of hard data that substantiates their effectiveness. Similarly, the IDA replenishment rounds focus

the international community's attention on the financing needs of the poorest countries. Other pooled financing mechanisms can play a similar role by helping raise the global visibility of the issues, demonstrating the feasibility of rapid progress, and establishing a clear ask for additional resources.

10. Transparent resource mobilization parameters: The financing of global funds and other large pooled financing mechanisms can be ensured on the basis of clear country-by-country assessments, using per-capita income levels and total national income as guidelines (as with IMF and World Bank quotas and UN assessed dues). Over time, such 'assessed contributions' promise to be the fairest way to finance international development cooperation and climate finance. A key challenge we will return to is the need to coordinate the replenishment rounds of global funds and pooled financing mechanisms (see also Arakawa *et al.* 2014).

Global funds and other pooled financing mechanisms have faced criticism from a number of stakeholders. Common criticisms include, first, that global funds are simply extra entities that create additional transactions costs. However, the opposite is true with well-designed pooled financing mechanisms. The transaction costs of passing provider resources through a single mechanism are vastly lower than passing funds through literally dozens of bilateral arrangements. Of course, this will work only if providers agree on a small number of multilateral pooled financing mechanisms, as suggested in this working paper.²³ Second, concerns have been expressed that global funds shift the focus away from DBR in recipient countries. But in practice, large pooled financing mechanisms are in fact better placed to promote a reasonable division of domestic and international financing than large numbers of bilateral and multilateral ODA programs would be.

The GFATM's new funding model includes mandatory counterpart financing requirements and uses 'willingness to pay' as an important criterion in determining the volume of funding a country can apply for. In this way, the Fund is playing an important role in *increasing* DBR. The successful transition of China from GFATM support and the efforts made by the Chinese government to continue the programs with domestic resources is a powerful example of the catalytic role of well-designed programs supported by pooled financing mechanisms. In China's case, for example, the GFATM's support has laid the foundations for China to have an ambitious multi-drug resistant TB (MDR-TB) control program over the coming years (Minghui *et al.* 2015).

A more serious, third issue concerns the political economy of mobilizing resources. Parliaments in provider countries find it easier to mobilize taxpayers' resources if the funds are disbursed through national institutions. This affords greater control over the use of resources and allows aid to be tied to specific foreign policy and commercial interests of the provider country (Sridhar 2012). The result, of course, is to politicize aid rather than to professionalize it. Thankfully, with the success of Gavi and GFATM backed up by rigorous M&E and data, many governments have been able to explain to their voters how ODA contributes to successful development initiatives. A powerful illustration of this shift in the attitudes of governments and the public is the positive reaction of the British media, which can be highly critical of development assistance, to the UK's 2013 announcement to more than double its previous GFATM pledge (GFATM 2013b). Clearly, if the UK can drastically increase its resources to the GFATM, then other countries should also be able to channel a larger share of their ODA through pooled multilateral financing mechanisms.

²³ As one egregious example described further below, the several dozen international climate funds clearly are an ineffective and inefficient way of channeling scarce public resources.

Fourth, the GFATM in particular has been criticized by some for promoting vertical, disease-specific programs at the expense of ‘horizontal’ health system strengthening. There are cases where vertical programs are justified to achieve quick results in tackling priority challenges, but over time countries do need to strengthen health systems. Yet this criticism should not be leveled at the GFATM but at its providers. The GFATM has a health systems window and would like to promote horizontal programs more effectively, but it lacks the resources to do so. In fact, an independent assessment has found that the GFATM has leveraged existing flexibilities in its mandate and funding model to increase synergies between disease-specific financing, support for health systems strengthening, and reproductive, maternal, newborn, and child health services (iEAG 2014). A next step must be to fully resource the health systems financing window of the GFATM or to provide additional resources for health systems to Gavi.²⁴ The delivery of increased funding for health systems could be coordinated with the IHP+ Partners. It could also promote interventions to prevent and respond to gender-based violence.

Finally, some critics have pointed to corruption and poor results in some GFATM-funded programs as a sign that pooled financing mechanisms do not ensure effective use of resources. This concern seems unfounded since independent evaluations (Macro International 2009) of the GFATM attest to effective mechanisms for control and good results. All cases of improper use of GFATM resources were uncovered by the Fund’s own control mechanisms, and corrective actions were taken (Dybul 2013, MAR 2011, 2013). The GFATM has been credited with being highly transparent about the fraud it uncovers (Rivers 2012). No case can be made that well-designed pooled financing mechanisms have poorer oversight than a larger numbers of individual projects.

On balance, the case for considering pooled financing mechanisms as a central component of public-private investment partnerships to achieve the SDGs is clear and powerful. The importance of pooled disbursement has been widely recognized in many international forums, including the Intergovernmental Expert Committee on Sustainable Development Financing and the DAC, but far too little progress has been made towards its widespread adoption.

Clearly, though, there is a case for continuing bilateral assistance, for example to enable individual provider countries to experiment, to mobilize national expertise, and to partner with national business and civil society. We are not denying the usefulness of such bilateral activities. Rather, we are emphasizing the power of pooled financing to make large, scaled progress towards shared global goals.

4.3.3 When are pooled financing mechanisms needed and how should they be designed?

As emphasized in the next section, many investment areas do require strengthened pooled financing mechanisms, but in some areas such mechanisms are not an appropriate tool. Likewise, the mere existence of pooled financing mechanisms is not a guarantee of success. Each mechanism must be well resourced and well designed. It is therefore important to identify the criteria that can help guide the public discussion on whether one or more pooled financing mechanisms are needed in a particular investment area and how such mechanisms should ideally be designed. Pooled global financing mechanisms appear necessary and appropriate when some of the following requirements are met:

²⁴ Looking beyond the question of horizontal vs. vertical programs in health, the choice between un-earmarked, flexible funding à la IDA and issue-specific funding à la GFATM or – as proposed below – a Global Fund for Education requires a careful analysis. We will return to this question in section 5.10 on IDA where we argue that both instruments are needed with IDA playing the vital role of filling large-scale financing gaps at the country level that cannot be addressed through a system issue-specific pooled financing mechanisms.

- **Program- or system-based financing needs (as opposed to project-based financing):** Pooled financing mechanisms are ideally suited for co-financing government programs, such as national malaria-control programs or health systems. Helped by their ability to make available macro-economically significant funding, they are an effective mechanism for focusing attention on the design and implementation of such programs, promoting the necessary learning, and supporting DBR. They also play a critical role in overcoming fragmentation among bilateral and multilateral agencies (see discussions on education and health below in sections 5.1 and 5.2). Examples of areas where global financing mechanisms are well suited are health, education, smallholder farmers, nutrition, and so forth.

On the other hand, pooled financing mechanisms are less well suited for large infrastructure projects or other project-based financing modalities. Here, institutions with a banking license are better able to provide the full suite of financing services needed. An important exception to this criterion is the Green Climate Fund (GCF) that owes its existence to the critical need for mobilizing additional climate finance under the UNFCCC (section 5.8).

- **Substantial ODA needs, particularly for operating expenditure:** The purpose of pooled financing mechanisms is to pool concessional and, where possible, non-concessional finance. So they work well in areas and countries where substantial international co-financing is required around national programs. In particular, pooled mechanisms are well suited for supporting the gradual scaling up of national systems and their attendant operating expenditure. In contrast, fragmented aid tends to lack the predictability and opportunities for gradual scaling-up that are so essential for success. On this count, once again, the social sectors, nutrition, and smallholder farmers stand out as areas where pooled financing mechanisms are particularly well suited and can draw in substantial private sector commitments. In contrast, areas that are dominated by technical assistance, such as governance and public financial management systems, are less suited to pooled global financing mechanisms. Similarly, standing pooled financing mechanisms have not proven successful as a tool for supporting emergency operations.
- **Need to mobilize different types of stakeholders, including the private sector:** Pooled financing mechanisms have a tremendous ability to support multi-stakeholder partnerships in support of ambitious objectives. In areas where significant technological progress is possible and can (partly) be delivered through the private sector, or where civil society must be mobilized (e.g. to address the stigma surrounding sexually-transmitted diseases), then pooled financing mechanisms offer tremendous benefits. As described above, only the GFATM was able to support programs targeting socially excluded groups in some countries where other outside partners were unable to work effectively. Similarly, Gavi and the GFATM were able to help mobilize an unprecedented effort to fill technological gaps in the health area. On this basis, global financing mechanisms seem particularly indicated for nutrition, smallholder farming, and sanitation (where a multitude of stakeholders must be mobilized around complex sets of issues), as well as education (where, as we argue below, greater use must be made of information and communication technologies).
- **Need to harmonize the international development finance architecture:** In some areas the world not only has too many bilateral but also too many multilateral financing mechanisms. For example, there are dozens of international climate funds (section 5.7). Such arrangements are inefficient and counterproductive. In such cases, pooled financing mechanisms can help absorb

existing funds and bring greater coherence to the international development finance architecture. By offering governments a 'single number to call,' well-designed pooled financing mechanisms support national ownership, results focus, and coherence.

We note that the International Development Association (IDA) is an extremely successful pooled financing mechanism that eschews a thematic focus or earmarking and does not conform to the above criteria. IDA does indeed play a special and complementary role in the international development finance architecture, as discussed further in section 5.10.

Each mechanism is unique, but key design features for effective pooled financing mechanisms might include the following:

- **Independent multilateral organization with multi-stakeholder board:** Pooled financing mechanisms are particularly effective when they are an independent organization with its own voice, instead of dedicated trust funds, and have a link to the UN system (though the mechanisms do not need to be a dedicated UN organization). They should have a multi-stakeholder board comprising provider governments, recipient governments, civil society institutions, and the private sector. It is critical that they start with strong support from several member states.
- **System-based investment windows:** Pooled financing mechanisms should provide systems-based support (e.g. for health or education systems). In order to promote learning and an outcome focus it may be advisable to establish funding windows for specific needs, such as early childhood development, primary education, and lower-secondary education. Well-designed and adequately financed funding windows are fully consistent with system-based approaches (for a discussion on education see section 5.2.2).
- **Demand discovery around clearly defined program windows:** Each pooled financing mechanisms should endeavor to make available macro-economically significant volumes of funding in key areas (e.g. health systems, infectious diseases, etc.). Countries are invited to submit their own proposals that compete for the available funds. Only the best ones that meet stringent technical and operational standards should be funded. Reasons for approving and rejecting proposals should be made explicit so that other countries can learn quickly how to improve their programs. Such 'demand discovery' will help drive innovation and results focus in each sector.
- **Independent technical review of country proposals and rigorous M&E:** Like the GFATM and Gavi and to ensure technical integrity, all funding requests to pooled financing mechanisms should be appraised by an independent technical board comprising leading technical experts. Likewise, every program and the pooled financing mechanism itself must be subject to rigorous monitoring and evaluation (M&E) to identify lessons learnt, ensure sound use of public resources, and track results achieved. Outside CSOs can play an important role in promoting transparency and results focus of pooled financing mechanisms.
- **Multi-annual replenishment:** To ensure predictable resource flows, pooled financing mechanisms require multi-annual replenishment cycles, perhaps once every four years. Such replenishment cycles should be coordinated as efficiently as possible with the replenishment rounds for other pooled financing mechanisms.

- **Innovation in delivery:** Global financing mechanisms should allow for funds to be disbursed and managed by a broad range of partners, including national and local governments, civil society organizations, and possibly businesses. Such flexibility can help ensure effective use of scarce resources and encourages maximum innovation.

5 Major investment strategies and financing mechanisms for the SDGs

In this section, we apply lessons from the successful partnership around shared health goals to other areas that require sustained public-private investments to achieve the SDGs. Each sub-section discusses the nature of the investment needs and the required resources. We then explore how existing financing mechanisms can be strengthened to achieve the corresponding SDGs. Where major institutional gaps exist, we propose how they might be closed. Finally, we identify other components of the partnership (Figure 4) that might require strengthening. Together, these elements address an important component of the ‘Means of Implementation’ for the SDGs that were at the heart of discussions in the OWG.²⁵

A comprehensive discussion of every partnership would exceed the scope of this working paper, so we will focus our discussion on key pooled financing mechanisms and some priority non-financing challenges. Examples of important SDG priorities that are not considered in adequate detail below include gender equality, the special needs of fragile states, and human rights.

We underscore that there cannot be a one-size-fits-all approach across vastly different investment and implementation challenges. Perhaps most importantly, the ability of business to provide financing and drive implementation varies sharply from one area to the next (Table 2). We will therefore highlight the specificities of goal-based strategies and investment programs in each area and outline some of the other institutions and mechanisms that will make up an effective global partnership.

5.1 Health

The health sector has made tremendous progress since the adoption of the MDGs, and the core components of an effective global partnership for long-term public-private investments are in place. Public health has clear goals, and the community has conducted effective back-castings to understand how long-term health objectives can be met. These back-castings have been translated into operational strategies for strengthening health systems and addressing priority challenges, such as infectious diseases or child mortality. The scientific community has identified clear RDD&D priorities, including new vaccines, treatments, and diagnostic tools that are being pursued across the world – often with critical support from the Gates Foundation. Countries across Africa have adopted and are implementing the Abuja targets committing to devote at least 15 percent of their budgets to health. With the GFATM, Gavi, UNFPA, UNICEF, the recently launched Global Financing Facility (GFF) in support of maternal and newborn health, and several very large bilateral health finance programs, public health also disposes of effective institutions for delivering international public finance. Public health CSOs are active around the world in providing services, holding governments to account, and ensuring high visibility for the public health sector.

²⁵ Means of Implementation can be divided into three types of questions that are each addressed in this working paper and should form a core part of the FSD agenda: (i) overall funding needs (section 3.2), (ii) the nature and structure of public-private investment partnerships to achieve the SDGs (this section 5), and (iii) global rules for investment, trade, intellectual property rules, and so forth that must be made coherent with the objective of achieving the SDGs (section 6.4.1).

5.1.1 *Investment needs to meet the health SDG*

The SDGs proposed by the OWG continue the strong MDG focus on primary healthcare, infectious diseases, reproductive health as well as child, maternal, and newborn health. The SDGs will likely include ambitious outcome targets that operationalize the notion of ‘getting to zero.’ Moreover, the health agenda will be broadened through the inclusion of universal health care, non-communicable diseases, environmental health, and nutrition.

Achieving this broader agenda and addressing the shortfalls in MDG implementation – notably on maternal mortality – will require much greater investments. In particular health systems and health workforces require strengthened and targeted investments. As shown in Table 2, investments in the health SDGs are overwhelmingly public in nature and will require an additional \$24 billion in annual investments. The detailed needs assessments conducted by the GFATM and Gavi for their most recent replenishment rounds point to similar financing gaps (GFATM 2013, Gavi 2014b). In some areas – notably advance market commitments for vaccines and other medicines – important opportunities exist to leverage public funding with private resources, for example through the issuance of bonds.

5.1.2 *Gaps in resource mobilization and financing mechanisms*

We see three principal financing challenges in the health sector:

Adequate Domestic Budget Revenues

Developing countries – particularly in Africa – have made progress in mobilizing additional domestic resources for health, but between 2010 and 2012, just six of the 43 sub-Saharan African countries for which there is data had met or exceeded the Abuja target on average: Liberia, Malawi, Rwanda, Swaziland, Togo, and Zambia. Fully meeting the Abuja Targets may mobilize more than \$27 billion per year (ONE 2014).²⁶ Public outlays for health will need to increase, as the evidence shows that private financing through private health insurance and household expenditure is inconsistent with achieving the public health objectives of ending preventable deaths and achieving universal health coverage (Agyepong *et al.* 2014, Moreno-Serra and Smith 2012, Savedoff 2012).

Clear standards by the GFATM, Gavi, and other pooled health financing mechanisms can provide important incentives for increased DBR. As one example, the GFATM’s new funding model incorporates mandatory counterpart financing requirements for the entire health sector, to establish a basis for future sustainability of national disease programs. The GFATM also applies ‘willingness-to-pay’ as a qualitative factor for adjusting country funding allocations. These incentives have led to steadily-rising domestic contributions towards GFATM-funded programs.

Consumption taxes on tobacco products have been shown to have a very positive impact on reducing tobacco use and improving health. Higher tobacco taxes are particularly effective at reducing consumption by vulnerable populations, particularly youth. In many countries, tobacco taxation is also an important source of government revenue and is dedicated to tobacco control activities, hospital services and other health prevention or promotion services. (Council on Foreign Relations 2014; Ko Sy *et al.* 2014). Similar considerations apply to other harmful health practices, such as excessive consumption of alcohol or sugary drinks.

²⁶ Others have recently recommended that countries spend at least 5 percent of GDP in public outlays on health and that countries move progressively to reach this target (Chatham House 2014).

Better integration of vertical programs into health systems

Vertical programs (e.g. to control malaria or HIV/AIDS) are critical for focusing attention and resources, mobilizing communities, and running tightly-managed campaigns to achieve ambitious objectives. Without such vertical programs, progress in vaccinating children, fighting and at times eradicating priority diseases, and improving other health outcomes would have been far slower. Well-designed vertical programs will also strengthen horizontal systems, particularly in reproductive, maternal, child, and newborn health, as demonstrated by the fact that in spite of its focus on infectious diseases, the GFATM has contributed at least \$3.12 billion to maternal, newborn, and child health between 2003 and 2010 (iEAG 2014). They can also promote prevention and response to gender-based violence. Yet, most countries now need to focus on strengthening their health systems by striking a balance between ‘vertical’ and ‘horizontal’ approaches, which in turn requires better coordination across government agencies and between providers (c.f. the example of Mozambique, Save the Children 2011).

Turning the GFATM and/or Gavi into a Global Fund for Health and ensuring adequate financing

Several governments and the World Bank have recently announced the creation of the Global Financing Facility (GFF) in support of maternal and newborn health. We applaud the leadership of the governments and the World Bank in mobilizing more resources and giving more prominence to maternal and newborn health. Yet, as the health sector is moving towards horizontal health system strengthening there is a growing need for harmonized, system-based funding.

There is a strong case for avoiding fragmentation by turning the GFATM and/or Gavi into a Global Fund for Health and merging it, where appropriate, with the financing windows of UNICEF, UNFPA, or the newly-created GFF. The Global Fund for Health would expand the GFATM and/or Gavi work to finance primary health systems with a focus on reproductive, maternal, newborn, and child health, through both vertical and horizontal programs. Any mergers would be difficult – politically, institutionally, and legally – but should nonetheless be explored. And if they do not attempt a merger *per se*, these global financing mechanisms should aim to harmonize their respective grant-making, reporting processes, and evaluations in order to support country programs more coherently.

Meeting the health goals will require substantially more ODA, and a significant share should be disbursed through the Global Fund for Health (or, failing this, Gavi and the GFATM). In the case of health, it is demonstrably true that the required resources can be spent effectively, so full replenishments for Gavi and the GFATM and their further expansion into health systems must be an integral part of the post-2015 commitment to achieve the health SDGs. We estimate that a Global Fund for Health should disburse some \$15 billion per year. This compares with approximately \$3.9 billion and \$1.3 billion disbursed each year by the GFATM and Gavi respectively.

5.1.3 Non-financing priority: Fully mobilize modern technologies for health

Public health has embraced modern technologies and research in the search for better tools and treatments, but important gaps remain. For example, research and development on women’s and children’s health remains underfunded (UNFPA 2012, WHO 2014), and major gaps remain in the tools available to fight neglected tropical diseases (WHO 2011). This work can be further strengthened, perhaps with a lead role for UNITAID. See section 5.11 for a broader discussion of product development partnerships.

We also see great opportunities in creatively rethinking health service delivery models. For example, community health workers can play a much greater role in the delivery of health and ancillary services, particularly in low-income countries. Moreover, the dramatic advances in information and communication technologies (ICTs) have yet to be exploited fully in health systems. Great opportunities exist for improving access to, and the quality of, healthcare through m-health and other uses of ICTs – including in combination with community health workers, as illustrated by the 1M Community Health Worker Campaign.²⁷

5.2 Education

Substantial progress has been made in expanding primary school enrolment under the MDGs, but overall, the sector has fared significantly less well than public health. Between 1999 and 2011, the number of children out of primary school fell by 45 million, yet 57 million remain out of school. The challenge is particularly acute in conflict and post-conflict settings, which account for half the children out of primary school (UNESCO 2013). Access to pre-primary education – a priority highlighted in the SDGs – is about 50 percent globally, but a mere 18 percent in sub-Saharan Africa (UNESCO 2014b).

While primary school enrolment has gone up, there has been too little change in secondary schooling. Too few children transition to secondary schools, where completion rates are even lower. Some 69 million adolescents are out of secondary schools (UNESCO 2014b). In many countries, girls face tremendous barriers in accessing high-quality education. This has adverse effects on their well-being and that of their future children (Chavan *et al.* 2014).

In addition to insufficient enrolment and completion rates, the world faces a major learning crisis due to poor-quality education. Some 250 million children worldwide cannot read, write or count – often despite having spent four years in school (UNESCO 2012a). Learning outcomes are far too weak to empower youth to become productive members of a globalized economy. Education outcomes are also becoming highly unequal in many countries – rich and poor alike.²⁸ Children from wealthy families increasingly attend good private schools, while many public school systems languish. Measured in terms of years of schooling the gap between the poorest and wealthiest 20 percent is widening (Watkins 2014). The post-2015 agenda must therefore focus on equity in education (Save the Children 2014), as also called for in the Convention on the Rights of the Child (UNICEF 2014b).

Worryingly, progress in improving enrolment and education outcomes appears to have stalled in recent years. At the same time the magnitude of the problem will increase with rapidly growing cohorts of young people in many developing countries, particular in the poorest countries. For example, in sub-Saharan Africa the population of children between the ages of 5 and 14 years is expected to grow by 45 percent between 2010 and 2030 (Rose and Steer 2013).

At first sight, it may seem surprising that health has fared better than education. As demonstrated by UNESCO (2014b) and many others, there is a strong case for investing in education since it is unquestionably the foundation for all economic and social development. Without education, countries simply cannot prosper. Moreover, delivering health care is more expensive, and there is no compelling reason to argue that improving health outcomes is easier or less complex to deliver.

²⁷ See <http://1millionhealthworkers.org/>

²⁸ A point first emphasized in the 2010 Global Monitoring Report (UNESCO 2010).

Yet, a careful analysis and comparison against the seven core components of goal-based public-private investment partnerships (Figure 4: Seven core components of goal-based investment partnerships) shows why the education sector is performing poorly. The sector is vastly underfunded and fragmented. Its back-castings, advocacy community, M&E, and other critical elements of a successful partnership do not yet operate at the scale, urgency, and rigor needed to deliver the necessary results. Below, we identify some of the key issues that must be addressed by a global partnership for achieving the education SDGs.

5.2.1 Adequate domestic and international public investments in education

The SDGs proposed by the OWG significantly expand the scope of the education agenda to include early childhood development, secondary schooling and transition to work – all with a stronger focus on learning outcomes. We strongly support the SDGs' focus on equity in learning outcomes to ensure that all children will have access to quality education, but reaching the 'hard-to-reach' children will require substantially more resources – likely 30 percent more on a per-student basis (UNESCO 2015). Overall, the new agenda is broader, requires more resources, and will be more complex to deliver than the education MDG. Just as in health, private financing opportunities in education are limited for meeting basic needs.²⁹

The Education for All Global Monitoring Report has recently released new estimates for the cost of meeting the education SDGs relating to pre-primary, primary and lower-secondary education, and adult literacy in low-income and lower-middle-income countries (UNESCO 2015). The estimates exclude upper-secondary and tertiary education, so they probably represent a lower-bound estimate of the investments needs. The authors conclude that the required average annual education investments over the period 2015 to 2030 will amount to \$239 billion, which corresponds to more than a tripling of current spending. The main drivers of the increase relative to current spending and earlier estimates (UNESCO 2015) are (i) the inclusion of pre-primary education, (ii) higher per-student expenditure to improve the quality of education outcomes and ensure greater equity, and (iii) a larger cohort of students owing to demographic growth, particularly in the poorest countries.

The authors assume that domestic resource mobilization will expand substantially in line with the recent Muscat Agreement (UNESCO 2014a) to provide 4 to 6 percent of GDP or at least 15-20 percent of public expenditure to education. Total education spending in low-income countries is projected to reach 5.4 percent of GDP by 2030, and spending on pre-primary, primary, and lower-secondary education is projected to rise from 2.3 percent to 3.4 percent of GDP. This comes on top of a 0.7 percent of GNI increase in the share of domestic spending on pre-primary, primary, and lower-secondary education in low-income countries between 1999 and 2012.

Yet even these aggressive increases in domestic resource mobilization will not be sufficient to finance universal pre-primary, primary, and lower-secondary education. A residual funding gap of \$22 billion per year will need to be closed through ODA and other concessional international finance. Across pre-primary, primary, and lower-secondary education, ODA for low- and lower-middle-income countries will need to quadruple. Looking only at low-income countries reveals that current ODA of some \$2.3 billion will need to increase to \$10.6 billion per year (UNESCO 2015).

²⁹ Privately financed schools can offer higher-quality education to those households that can afford it, but the evidence is clear that user fees bar the poor – particularly girls – from a quality education (Bentaouet 2006 as cited in Greenhill and Ali 2013, UNESCO 2013a).

While domestic resource mobilization for education increased significantly under the MDGs,³⁰ the international fundraising for education under the MDGs was more a failure than a success, as illustrated in Figure 5, which compares the trajectories of ODA for education and health.³¹ Education spending has lagged far behind health. The contrast is even starker when one subtracts the imputed cost of students from developing countries studying in DAC member countries, i.e. funds that never leave the provider country and do not benefit the developing country directly.³² Compared to the sharp increase in health ODA since 2000, ODA from all providers to education has increased only very modestly in absolute terms until 2006 and flat lined since then. This stands in contrast to a doubling in total ODA from all DAC and non-DAC providers since 2000.

In addition, ODA to education includes large shares of technical assistance and correspondingly lower shares of direct grants or project aid. This stands in sharp contrast to the composition of ODA for health, where in-country expenditures dominate (Development Initiatives 2013).³³

Aid to basic education increased modestly through to 2004, but has since stayed steady even though primary education was a headline priority under the MDGs. The MDGs only started to filter through into implementation after 2004/5 (McArthur 2013), which shows that they were not successful in mobilizing much-needed additional external resources for education.³⁴ The share of ODA for basic education has fallen from 2.5 percent in 2000 to 2.1 percent in 2012 and 1.2 percent in 2013.

³⁰ As the annual Global Monitoring Report makes clear, though, averages hide significant discrepancies across countries. Most developing countries are not on track to reaching the target of spending 4-6% of GDP on education. While variations in costs and needs may justify this in part, some countries are spending clearly too little (Rose and Steer 2013). They can and must mobilize greater domestic resources in support of education. If they fail to do so, the funding gap in education risks only to grow larger. Some developing countries can and must mobilize greater domestic resources in support of education.

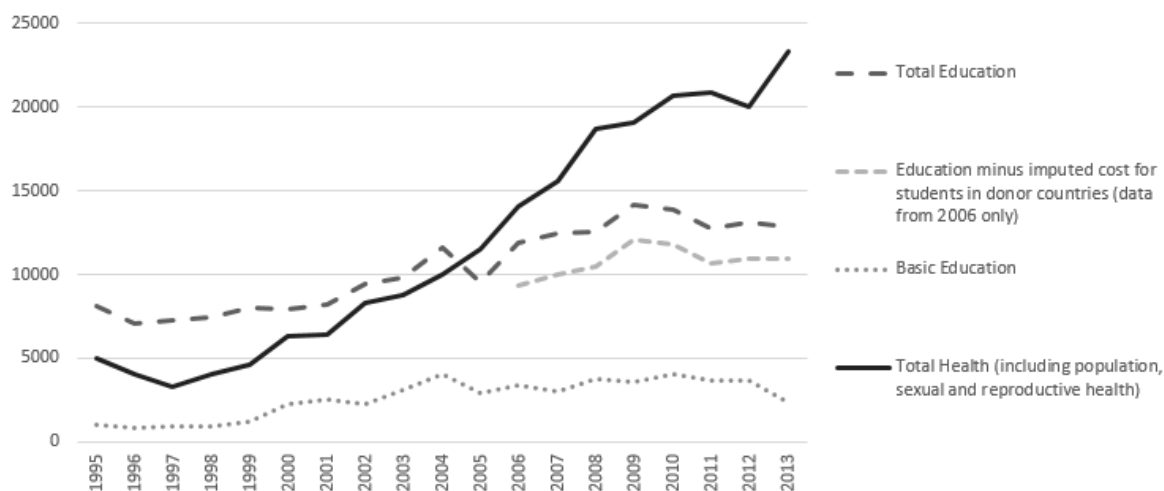
³¹ See also Figure 3 on page 30 for a breakdown of ODA to the health sector.

³² We do not subtract the cost of scholarships provided by DAC members to students from developing countries since these expenditures provide more direct benefits to developing countries even though they are overwhelmingly spent in the provider country. The cost of such scholarships amounted to some \$1.2 billion in 2012.

³³ As underscored further below, technical assistance can play a very important and positive role towards achieving the SDGs as a complement to increased direct investments. There is nothing wrong with providing high levels of technical assistance if adequate funding is available for capital and recurrent expenditures of education systems.

³⁴ As can be seen from the graph, basic education experienced a significant rise in percentage terms at the very beginning of the decade, perhaps as a result of the adoption of the Education for All Goals in 2000. Yet, this increase was not sustained over the long term.

Figure 5: Total ODA to education and health (in constant 2013 \$ million)



Sources: OECD DAC database, and OECD Creditor Reporting System (CRS) for imputed costs for students

In addition to insufficient volumes of ODA for education, international aid in the education sector is highly fragmented with large numbers of providers providing ‘non-significant ODA’, as defined by the OECD (2011). Transaction costs are high, and many countries in Africa and elsewhere have to coordinate with more than 20 providers. For example, in Kenya, 82 percent of country programmable aid was disbursed by 6 providers. The remaining 18 percent was disbursed by 16 other providers, of which 6 were ‘non-significant’ (Rose and Steer 2013).

If the promise of the education SDG is to be realized, then aid to education will need to increase substantially in conjunction with a further increase in DBR and increased efficiency of government spending. This financing challenge cannot be met on a ‘business-as-usual’ trajectory of marginal expansion of international aid coupled with incremental improvements in aid effectiveness. The lesson from the health sector and the experience of the GFATM and Gavi is clear: the education sector needs a Global Fund for Education (GFE) building on the Global Partnership for Education (GPE). We turn to the rationale and possible design features of the GFE in the next section.

5.2.2 Launch a Global Fund for Education building on the GPE

Six major multilateral financing institutions operate in the education sector: the World Bank, African Development Bank, Asian Development Bank, European Commission, Global Partnership for Education (GPE), and UNICEF. Of these, the World Bank, European Commission, and the two Regional Development Banks provide the most significant volume of resources. Yet, the share of multilateral aid in education is falling, with all five multilateral providers accounting for a mere 26 percent of total ODA flows. Country programmable aid disbursed by global funds in 2011 was 10 times larger in the health sector, at \$3.3 billion, than in education, at \$385 million (Rose and Steer 2013).

The GPE has supported the increase in DBR for education and improved coordination among bilateral and multilateral providers in the education sector. We applaud the leadership of the GPE and its board for the substantial reforms and improvements the mechanism has realized since it was born out of the Fast Track Initiative in 2011. These include but are not limited to: increasing the representation of

recipient governments, civil society, and other partners in the GPE Board and other governance mechanisms, expanding its work in conflict and post-conflict countries, promoting greater results focus, strengthening M&E, improving the operational relationship with the World Bank, improving disbursement rates, and enhancing transparency in its operations.

How to turn the GPE into a Global Fund for Education

The GPE is a highly meritorious initiative, but it remains vastly sub-scale. During the ongoing second replenishment, the GPE has so far mobilized pledges of \$26 billion from developing countries (exceeding the expected outcome of \$16 billion) but a mere \$2.1 billion in aid from developed countries (only 60 percent of the targeted \$3.5 billion). The discrepancy in financial commitments from developed and developing countries speaks volumes about the state of education financing. Donors' pledges to the GPE correspond to \$525 million per year, compared with some \$3.9 billion per year pledged to the GFATM alone and the need for \$22 billion in ODA for education to meet the SDGs (UNESCO 2015).

Even assuming aggressive increases in DBR for education, many developing countries will require substantial co-financing of capital and operating expenditure for education. Such core funding cannot be provided by a 'partnership' focusing on catalytic support. It requires a dedicated fund, and this should be reflected in changing the name of the GPE to the Global Fund for Education, which will become the educational equivalent of the GFATM.³⁵ The financing envelope available for the GPE must be scaled up by an order of magnitude to some \$15 billion annually, the disbursement of which would naturally be underpinned by stringent performance criteria.

Shifting from a partnership to a fund will also send a clear signal to developing countries and providers alike that the world is getting serious about meeting the education SDGs and filling the gap in international financing for the sector. But more than a change in name is required. The GPE business model needs to be reformed further to become fit for purpose as a Global Fund for Education. Required changes require, *inter alia*:³⁶

Demand discovery and a needs-based funding model: Under its 'new funding model,' the GPE assigns financing volumes for Program Implementation Grants to countries based on a needs-based set of criteria. Government proposals can be funded up to this volume. Since available funding is woefully insufficient, governments tend not to prepare national education strategies that are consistent with achieving the SDGs. Effective demand is suppressed. Unsurprisingly, many national plans lack the ambition and operational sophistication needed to achieve the education SDGs. Many also remain un-costed, particularly with regards to reaching the most marginalized children. Instead, the GFE should invite countries to submit national-scale programs that are then funded if they are approved based on technical merit. Such a 'demand discovery' process will build genuine country ownership, thereby unleashing ambition, creativity, and innovation in national education programs.

³⁵ The case for a Global Fund for Education has been made powerfully in the past by Brown (2012)

³⁶ Many of these proposed changes have already been identified and proposed by the executive leadership of the GPE. Some are being implemented as we speak. We do call on the board and the providers to the GPE to support the GPE management in instituting these and other changes rapidly to convert the GPE into a true fund. We further recognize that the GPE Fund meets some, though not all, of the proposed characteristics of the GFE.

Independent Technical Review Panel: Just like the GFATM, the GFE requires a technical review panel comprising perhaps 8-12 independent education experts of global renown who review and vet all incoming country proposals based on technical merit. Such a panel must avoid all conflicts of interest: actors benefitting from a grant should have no say in its approval. The panel should also publish its evaluations of national programs and support the consolidation and propagation of knowledge on how national-scale education programs can be designed, implemented, and monitored.

Direct disbursements to governments and other stakeholders: Today, GPE funding is provided only to Supervising or Managing Entities – typically the World Bank – instead of the government or other stakeholders, such as CSOs or businesses. This disbursement modality is a remnant of the Fast Track Initiative and is incompatible with the objectives of a GFE. By disbursing directly to national/local governments, CSOs, and/or businesses the GFE will greatly strengthen country ownership, reduce transaction costs, and – critically – promote innovation by enabling non-government actors to propose their services. The GFATM experience demonstrates that civil society organizations and in some select cases businesses can be efficient recipients of scaling-up funds. Some of their ‘business models’ and innovations have helped shape national scale-up programs – particularly in reaching out to marginalized populations. They have also proven critical in extending GFATM funding in conflict-affected countries. The same will likely be true for a GFE.³⁷

Predictable multi-year funding aiming for \$15 billion per year by 2020: Like Gavi, the GFATM, and the GPE, the GFE should provide predictable multi-year funding over a 3-4 year period. Given the \$22 billion financing gap for education, we propose that the GFE aim to disburse some \$15 billion per year by 2020.

Support adapted to country circumstances: We commend the GPE leadership for raising international attention to the needs of out-of-school children in countries that are in conflict or emerging from conflict. Conflict or post-conflict countries have very different needs and capacities from non-conflict countries. We therefore propose that the GFE organize its funding into at least three categories: (i) stable low-income countries, (ii) stable lower-middle-income countries, and (iii) countries in conflict or emerging from conflict (Steer and Smith, forthcoming).³⁸

Four thematic funding windows: The GFE will cover a broad spectrum of education investments ranging from pre-primary education to adult literacy programs. These different components and stages of a national education system are interdependent, but they do require specialized expertise, monitoring, and – above all – political leadership. GFE funding should therefore be disbursed across four or more thematic financing windows: (i) early childhood / pre-primary education (0-5 years of age), (ii) basic education (6-14 years), (iii) lower and upper secondary education (15-18 years), and (iv) adult literacy and preparation for work. Additionally, the GFE might include dedicated windows for humanitarian emergency programs and global public goods (such as national education accounting systems, learning metrics, technological innovations in education).

Some observers criticize dedicated financing windows, arguing that these might undermine country ownership and lead to an artificial fragmentation of national education programs. We believe that both these concerns can be addressed. Just as in the case of the GFATM, countries can submit proposals for

³⁷ As one example, the South Sudan Basic Services Fund demonstrates the progress that can be made under some of the most difficult conditions.

³⁸ Alternatively this third category could be further divided into low-income countries and middle-income countries.

all funding windows. The modular approach will make it easier to match gradually-rising resources with needs and expected outcomes, and each funding window will contribute towards building functioning national education systems. The multiple funding windows also encourage countries to evaluate their needs cohesively without having to choose, for example, between basic education and secondary education. Without dedicated funding windows, the education sector may not achieve the level of organization and razor-sharp focus on results that is needed to accomplish the unprecedented scaling-up for the SDGs.

Rigorous M&E and a focus on results: Global advocacy for a quadrupling of education ODA and large increases in DBR can only succeed if outcomes can be clearly linked to resources. The GPE has been making tremendous progress since 2011 in strengthening the results focus of the education programs it supports. Yet more needs to be done, and the GFE should require rigorous M&E of education outcomes for every national program it supports (see also section 5). This will in turn support the results-based advocacy for greater resources that has been a hallmark of Gavi and GFATM success.

A high-powered Board and high-level political support groups: As in the case of the GFATM and Gavi, the GFE will require a board with representation from all critical stakeholder groups and comprising high-powered individuals who will help build the international standing of the institution. The GFE might also consider establishing a ‘Friends of the GFE’ group along the lines of the ‘Friends of the GFATM’ organization³⁹ mobilizing former and current heads of state and other leaders from civil society, government, and business to advise and support the fund, including through advocacy for greater resources.

Full operational independence from the World Bank: The World Bank has made very important contributions to the Fast Track Initiative and the GPE. In recent years, the GPE has taken over additional responsibilities from World Bank staff. As the GPE transitions into a GFE, the operational relationship between the two institutions will need to be rethought further, leading to greater independence of the GFE from the Bank.

Effective coordination with other multi- and bilateral financing mechanism: Just like Gavi and the GFATM work effectively with other bilateral and multilateral financing mechanism, the GFE must find ways to leverage the strengths of each institution – particularly the World Bank – to promote effective co-financing of national education plans by MDBs and other major multilateral and bilateral providers. Just as in health (Figure 3: ODA for health, by channel of assistance 1990-2013), the GFE will not obviate the need for other complementary mechanisms.

Addressing common objections to a Global Fund for Education

In addition to concerns about multiple funding windows (discussed above) we have encountered three common arguments against a Global Fund for Education:

³⁹ See <http://www.afmeurope.org/en/>

1. No need for a new institution: This concern stems from the fear of fragmentation of aid and multiplicity of institutions. The argument is made most frequently by providers, but it is of particular relevance to recipient countries, which should not have to deal with too many counterparties. It is a legitimate concern, but we are not proposing a new institution. The GPE already exists and has many years of experience in disbursing pooled funds to countries. It can be converted into a Global Fund for Education without creating a ‘new’ institution. To be successful, the new GFE will of course need to look quite different from today’s GPE (see above), and it will need the support of all providers, including bilateral and multilateral funds, private philanthropists, civil society, and business.

2. Education is different from health, which focuses on procuring commodities: Another common objection to the proposal for a GFE is that education is different from health. It is argued that education requires long-term investments in national systems that produce results over long periods of time. In comparison, health is said to focus on specialized vertical programs that can deliver results quickly and rely mainly on internationally-sourced commodities. But this argument misunderstands the health sector: while Gavi does spend a significant share of its resource envelope on internationally-sourced vaccines this is not the case with the GFATM and other major providers in the health sector. In fact the GFATM has disbursed some 37 percent of Round 8 in support of health systems strengthening (Warren *et al.* 2013) with substantial long-term benefits (IEAG 2014). Direct investments in infectious diseases further include substantial salary costs and not just commodities. Moreover, the GFATM does not source commodities globally for recipient countries: procurement is done locally in most cases. Finally, many GFATM investments in health systems strengthening and disease-specific prevention and control programs also take many years to produce results.

In summary, it is simply not true that the GFATM is a ‘procurement vehicle for globally sourced commodities’ that can focus on short-term results only. Certainly, there are major differences between health and education, but the evidence does not support the argument that global funds are suitable for infectious diseases and health systems strengthening but not for primary education or other components of education systems. Just like health systems, national education systems are complex, and this is why we recommend dedicated financing windows that work in harmony with one another while ensuring maximum focus on results.

3. Country needs are too diverse to be covered by a Global Fund for Education: This argument is another variant of ‘education is different from health.’ It is said that the needs of conflict countries, low-income countries, and upper-middle-income countries are so different that a global fund for education cannot be successful. However, health system strengthening must be accomplished in a similarly diverse set of country settings. The demand-led model of Gavi and the GFATM has supported country-specific programming, and so should the GFE.

5.2.3 *Non-financing priorities for the global education partnership*

Increased investments in education are urgently needed, but achieving the education SDGs will of course require more than ‘just’ money. We identify three major non-financing priorities for the global education partnership:

A data revolution for education: improved performance metrics and National Education Accounts

In contrast to health, education still lacks an effective and comprehensive set of comparable metrics and data for outcomes, inputs, and education financing. Despite improvements under the MDGs and Education for All, and tremendous progress under the GPE, education data remain patchy, particularly in low-income countries. Countries’ administrative data systems, which provide the bulk of education data are often weak and sometimes politicized, leading to poor-quality data. As a result M&E in education is not as widespread and rigorous as in health. There is too little information about the quality of education, the qualifications of teachers, the uses of new ICTs in the classroom, and the quality of education outcomes. Any push for education must be accompanied by better metrics and data on implementation. A ‘data revolution’ is both required and imminently feasible (IEAG 2014; section 5.7).

As an example, the Learning Metrics Task Force convened by the Brookings Institution⁴⁰ has yet to achieve a consensus on how to design effective learning outcome metrics, though a proposal for an International Platform for Assessing Learning is under development. Many non-OECD countries resist using the Programme for International Student Assessment (PISA) or other comparable standards⁴¹ as a metric, so a gap still exists on how to measure and benchmark the performance of education systems within and across countries. At the country level, the situation is improving slowly. Virtually all developing countries now have some form of national learning assessment system in place, but the lack of comparability makes it hard to advocate for the education sector at a global level.

As underscored by Rose and Steer (2013) a more complete and rigorous picture is also needed of education financing. The sector lacks an equivalent of National Health Accounts, which have proven critical in tracking financing in health, promoting greater coordination of resource flows, identifying financing gaps, and promoting greater accountability. The GFE and other funding agencies should support National Education Accounts, building on initial efforts by the UNESCO Institute for Statistics and the International Institute for Education Planning and others.

Better goals, explicit performance metrics, and rigorous M&E will improve national education programs. They will make it easier to compare programs, transfer lessons and ‘success stories’ from one country to another, and hold governments and their partners to account. They will also ensure that scarce domestic and international public funding is used to greatest effect, which in turn will support advocacy for the expansion of resources for education. In summary, better metrics and M&E are an essential component of the ‘race to the top’ that the education sector needs so urgently and will create the foundation for a successful GFE.

⁴⁰ See <http://www.brookings.edu/about/centers/universal-education/learning-metrics-task-force-2>.

⁴¹ See <http://www.oecd.org/pisa/>

Better (funded) advocacy

Even though a large number of CSOs and international organizations work in the education sector, their advocacy is not as visible as the advocacy for health. Three main features explain the strength of advocacy in health. They can and need to be replicated in the education sector. First, the Gates Foundation and other donors have funded data-driven advocacy in the health sector, but the education sector lacks similar anchor donors for advocacy. Given the relatively modest sums involved, one or more large philanthropists could easily fill this gap by providing the flexible funding that improved advocacy requires. The benefits and visibility from such strengthening of the ‘ecosystem’ for education advocacy would be tremendous. Who can play Bill Gates’ role for the education sector remains a key question.

Second, and as mentioned, the education sector currently lacks the same breadth and depth of data, but this gap can be overcome through investments in improved metrics. Third, health advocacy has benefitted from the remarkable solidarity among HIV-positive people in developed and developing countries. This solidarity explains, in part, the tremendous mobilization of advocacy CSOs in support of the GFATM replenishment rounds. Perhaps a similarly effective narrative can be built around the primacy of education for realizing the rights of children, promoting gender equality, and achieving economic development.

Greater investments in RDD&D for education and new delivery models

The education sector faces major structural challenges. These include rising costs, and difficulties in training and retaining quality teachers who have good job opportunities in urban centers and are increasingly reluctant to enter underpaid positions in remote rural areas. At the same time, many public school systems face severe management and performance challenges.

Against this backdrop, it comes as a surprise that the education sector is not investing more heavily in how ICTs and other technologies can improve the quality of education while reducing costs. Though there are encouraging signs, including the recent launch of the Global Business Coalition for Education, the large ICT companies have by-and-large not yet entered into the kind of PPPs that were developed by the health sector soon after the adoption of the MDGs. Much innovation is happening in high-income countries, but this is not feeding through into developing countries. Expanded investments in rigorous RDD&D for educational technologies along the full education cycle should be a central priority for a post-2015 development agenda. A well-resourced Global Fund for Education could provide targeted support to innovative approaches and then help spread lessons to other countries.

5.3 Sustainable agriculture, food systems, and improved nutrition

The SDGs proposed by the OWG correct a major gap in the MDGs by giving greater prominence to sustainable agriculture and other dimensions of the food system, such as fisheries. The draft goals also provide more specificity on nutrition outcomes,⁴² even though some observers maintain that nutrition is not adequately covered in the draft goals and targets (IFPRI 2014).

⁴² We describe nutrition in this section but note the cross-sectoral nature of nutrition. For example, key nutrition interventions are provided through the health system and need to be supported by corresponding financing mechanisms.

5.3.1 *Investment needs for SDGs for sustainable agriculture, food systems, and nutrition*

The investment needs for food systems and nutrition are complex and multi-faceted. Overall investment needs are dominated by private financing and amount to an investment gap of some \$260 billion per year (Table 2) to increase agricultural productivity and reduce food loss and waste. Yet, substantial increases in public investments will also be required, particularly to fill the estimated \$46 billion financing gap for ensuring food security (Schmidhuber and Bruinsma 2011).⁴³ For this reason it is worth reviewing investment needs in some detail before turning to the question of how a global partnership in these areas can be strengthened.

According to the FAO, some 805 million people are currently classified as chronically hungry, down by more than 100 million over the last decade, and 209 million lower than in 1990–92. The global prevalence of hunger has decreased from 18.7 to 11.3 percent since 1990–92. In developing countries hunger has declined from 23.4 to 13.5 percent over the same period. This progress has prompted FAO to declare that MDG target 1c is ‘within reach’ (FAO 2014b). However, hunger remains a major concern in South Asia and sub-Saharan Africa where over 60 percent of the hungry live. In addition, the world is not on track to meeting any of the six global nutrition targets set by the World Health Assembly on exclusive breastfeeding, anemia, stunting, low birth weight, wasting in children under the age of five, and overweight in children under the age of five (IFPRI 2014).

The situation is more serious and complicated than suggested by these headline numbers. An additional 1 billion or more people have serious micronutrient deficiencies, including in iron, Vitamin A, and iodine (Swaminathan 2014). Some 161 million children under 5 years of age are stunted (UNICEF, WHO, World Bank 2013), a condition that contributes to devastating under-development of the brain and other organs, and to chronic diseases later in life.

Under-nutrition is a complex biological and social phenomenon that is about far more than the quantity of food intake. It is also about the quality of the diet; reductions in chronic infections through improved sanitation, hygiene, and functioning health systems; gender equality; and the ability to make food choices. Therefore, the fight against hunger involves: (i) adequate food intake including through boosting smallholder yields, (ii) adequate micronutrient intake, (iii) safe water, sanitation and hygiene (Harris 2014), (iv) an effective health system (e.g. to manage diarrhea, provide deworming and micronutrients supplementation); (v) gender equality, since many farmers are women; and (vi) hygienic food storage and preparation (Bhutta *et al.* 2013, Gillespie *et al.* 2013).

Another dimension of the food security challenge is that food production systems (agriculture, animal husbandry including aquaculture, and fishing) have profound impacts on the environment. Agriculture and livestock account for one third of global greenhouse gas emissions. Agricultural production, including livestock, is the biggest source of reactive nitrogen in the biosphere, which is leading to widespread eutrophication in freshwater and coastal regions, including in a rapidly growing number of ‘dead zones’ (Grizzetti *et al.* 2011). Agriculture and livestock are also the biggest drivers of land-use change, including deforestation and biodiversity loss, particularly in the tropics. Global marine fisheries’ catches have been declining since 1996 due to overfishing. One third of global fisheries are overexploited (FAO 2014a). Finally, agriculture accounts for some 70 percent of human freshwater withdrawals and is responsible for unsustainable exploitation of aquifers and freshwater ecosystems

⁴³ Schmidhuber and Bruinsma (2011) estimate a total investment need of \$50.2 billion, \$4.1 billion of which are investments for rural electrification. We subtract this figure to avoid double counting rural electrification needs, which we cover in section 5.6 (on access to modern energy sources).

around the world (UNESCO and UN Water 2014). Taken together, food production systems probably have a greater impact on the environment than any other sector of human activity, including the energy system.

Current agricultural, livestock, and fishing practices are unsustainable, particularly in light of the fact that the world's demand for food is growing rapidly owing to continuing population growth and a rising demand for protein-rich diets, which require more energy and water per unit of agricultural production consumed by humans. This presents the world with a conundrum, namely how the growing demand for food can be squared with the imperative of making agriculture, livestock, and fisheries sustainable. For a detailed description of smart and environmentally sustainable intensification of agriculture, see Dobermann and Nelson (2013).

A final major challenge of sustainable agriculture, livestock, and fisheries consists in making the food production system resilient to climate change. Climate change already has major adverse effects on food production in most countries – developed and developing countries alike (IPCC 2014a). For example, the 2014 National Climate Assessment Report for the United States (Melillo *et al.* 2014) highlights the massive impact climate change already has on agriculture across the country. Similarly, nutrition outcomes may worsen substantially in the absence of adequate adaptation measures. The challenges in lower-latitude countries are projected to be even starker and will require major adaptation measures.

Adaptation measures for climate change will include drought- and flood-resistant varieties of the major food crops; crop varieties that tolerate temperature spikes or salinity; massive efficiency increases in irrigation and water use for agriculture; accompanying investments in water management infrastructure; and farming techniques that are resilient to climate change. Improved technologies, including ICTs, will be central to any strategy for adaptation. For a global partnership to promote sustainable agriculture and improved nutrition, the need for long-term investments in RDD&D for improved crop varieties and farming practices stands out.

Each component of addressing the challenges of sustainable food production systems – productivity increases for smallholder farmers; reductions in food loss and waste; improved nutrition outcomes; lowering environmental impact; and adapting to climate change – is well understood, though difficult to deliver. The knowledge exists to feed the world in a sustainable way. Yet, the world is falling short of making the necessary public-private investments at scale and with the required determination, urgency, and integration. The global partnership for sustainable agriculture, food systems, and improved nutrition is not working adequately.

5.3.2 Gaps in resource mobilization and financing mechanisms

Food systems and nutrition span a very broad range of investment needs. They require investments discussed in other parts of this section, such as health (section 5.1), infrastructure (section 5.9), biodiversity and ecosystem services management (section 5.4), water and sanitation (section 5.5), energy (section 5.6) as well as incremental investments in climate change mitigation and adaptation that may be co-financed by the Green Climate Fund (section 89).

The bulk of agriculture investments promote productivity and sustainability in commercial farming operations, including reductions in post-harvest food loss and waste. These investment needs are predominantly private in nature and rely on adequate public policy frameworks and incentives for sustainable agriculture. A number of initiatives exist to strengthen market-based solutions for

agricultural value chains. They include: Grow Africa promoted under the New Partnership for Africa's Development (NEPAD), Grow Asia promoted by the World Economic Forum, the Alliance for a Green Revolution in Africa (AGRA) initiated by the Rockefeller and Gates foundations. Many major companies, such as Unilever, Wal-Mart, and Yara have made important commitments to support smallholder farmers and sustainable food systems through their supply chains.

As described in more detail below, five financing challenges must be addressed to achieve the SDGs related to food systems and nutrition: (i) greater DBR for food systems and nutrition; (ii) an effective international financing framework for smallholder agriculture and nutrition, including rural infrastructure; (iii) expanded RDD&D through the Consultative Group on International Agricultural Research (CGIAR) and (iv) other mechanisms to improve crop varieties and techniques for farming, livestock/aquaculture, and fisheries management. Section 5.7 discusses the fifth challenge: the need for better data, including on food systems and nutrition.

Greater Domestic Budget Revenues for food systems and nutrition

As emphasized throughout this working paper, concessional public international finance should be directed to help the poorest countries close their financing gaps, after they themselves have mobilized an appropriate volume of domestic resources. In 2003, African heads of state and government signed the Maputo declaration in which they committed to allocating 10 percent of their national budgets to agriculture, as part of the Comprehensive Africa Agriculture Development Programme (CAADP). According to IFPRI, some 13 countries across Africa had met the target in 2012 (Benin and Yu 2012) – a significant increase since 2003, but still well short of the financing needed for the sector. Countries in Africa and elsewhere must redouble their efforts to allocate more domestic resources to agriculture. Similarly, domestic investments in nutrition appear inadequate.

Private investments in agriculture are also insufficient in many countries, particularly in sub-Saharan Africa. Key reasons for the low investment levels include inadequate rural infrastructure and poor regulatory frameworks, which combine to create high costs of doing business and impose substantial risks on private investors. These challenges are emblematic of the challenges countries face in attracting private investments, and need to be tackled with urgency (section 6.4).

However, available domestic public and private resources are not sufficient to meet the investment needs for boosting productivity and resilience of smallholder farmers, subsistence herders, and small-scale fishermen. ODA to agriculture has picked up following the food crisis in 2006, but it remains low compared to the levels spent in the mid-1980s (OECD 2010). Similarly, public finance for agricultural RDD&D and nutrition progress remain inadequate, and existing programs do not complement the agriculture programs with quality efforts to meet the challenges of nutrition. Some \$46 billion may be required in incremental expenditures, of which a substantial share will need to come in the form of ODA (FAO 2011).

An effective international financing framework for smallholder agriculture and nutrition

The world is witnessing a glaring underinvestment in smallholder agriculture and rural infrastructure for transport and storage. There are more than 500 million small family-run farms worldwide. These small-

scale operations provide income, food and employment for more than 2 billion people, but they are often isolated from essential advisory services, credit facilities, and markets, all of which are essential to achieve rural transformation. The International Fund for Agricultural Development (IFAD) has been supporting smallholder agriculture for more than three decades. IFAD, in partnership with others, including FAO, has consistently demonstrated the potential to raise smallholder production and incomes. The challenge remains to take this experience to scale, to reach communities and households who continue to experience poverty, hunger, and malnutrition, and are most vulnerable to impacts of climate change.

Following the Global Food Crisis of 2006-2008, the Global Agriculture and Food Security Program (GAFSP) was established as a multilateral financing mechanism to assist in the implementation of pledges made by the G8 in L'Aquila and the G20 in Pittsburgh in 2009.⁴⁴ The objective was to improve incomes and food security in low-income countries by boosting agricultural productivity. Hosted by the World Bank, GAFSP was structured to co-finance underfunded, country-led agricultural strategies. Since its inception in 2010, GAFSP has mobilized \$1.2 billion (of which \$979 million was through the Public Sector Window, and \$238 million through the Private Sector Window). GAFSP expects to benefit 13 million smallholder farmers and their families. GAFSP notes that in every call for proposals for the Public Sector Window, the demand for funding far outweighed the available resources. This means that many deserving, technically sound proposals could not be supported (GAFSP 2014).

The first three years of GAFSP have created important lessons and successes, but the current institutional arrangement does not provide adequate visibility and financing for smallholder farming. Thanks to GAFSP and IFAD, we know that effective support to smallholder agriculture requires public-private partnerships that combine the provision of essential public goods like rural infrastructure, advisory services, and research, with private-sector-driven investments in input supply, marketing, and processing. Blended public-private investments will create important synergies that would unleash the potential of smallholder agriculture.

The recently formed Scaling-Up Nutrition (SUN) Movement brings together governments, civil society, the United Nations, providers, businesses and scientists to improve nutrition outcomes through nationally-owned and -led plans. Nutrition interventions promoted by the movement include exclusive breastfeeding, fortification of foods, micronutrient supplementation, quality complementary feeding, and treatment of acute malnutrition. Nutrition-sensitive interventions include investments in agriculture, clean water and sanitation, education and employment, improved health care, women's empowerment and girls' rights.

SUN is making an important contribution to nutrition outcomes, including through its Multi-Partner Trust Fund, but it is not a financing mechanism. Just like other core SDG priorities, nutrition needs a clearer financing architecture that can provide funding at scale and promote goal-based investment strategies. The need for a clearer architecture is underscored by the significant, but so far unfulfilled commitments to nutrition. In 2013, some 25 governments and many other stakeholders from civil society and the private sector pledged over \$4.15 billion to tackle nutrition up to 2020 under the Nutrition for Growth Compact (Nutrition for Growth 2013). The 2014 Rome Declaration on Nutrition and the Framework for Action was signed by more than 170 governments.

⁴⁴ See Ad Hoc Advisory Group to the Madrid Conference on Food Security (2009) for an analysis of the financing challenges for smallholder food production and the rationale for creating GAFSP.

Other options for increasing investments in nutrition include scaling-up the Global Catalytic Fund for Nutrition or the Global Financing Facility (Lewis 2014). Alternatively, nutrition investments could be scaled up through dedicated financing mechanisms in health, agriculture, and other areas. Both approaches have their merit, and the one most likely to mobilize incremental resources for nutrition should be pursued. Given the overall lack of concessional international public financing for the SDGs and the need to focus on a relatively small number of apex funds, we focus below on the integration of nutrition investments into existing mechanisms. We would, however, gladly support a dedicated nutrition fund if such a mechanism can operate at the required scale.

Since the majority of interventions required for improving nutrition fall into the health sector (Bhutta et al. 2013), the Global Fund for Health needs to scale up nutrition investments as part of the broader health system upscaling (section 5.1.2). SUN could support strategies for health-related nutrition interventions and their integration into broader development strategies, in the same way that the Roll-Back Malaria Partnership supports developing countries in preparing and implementing malaria control strategies for submission to the GFATM.

Building on the initial experience of GAFSP and IFAD and considering the clear need for increased investments in nutrition, we propose the establishment of a Global Fund for Smallholder Agriculture, Pastoralists, Artisanal Fisheries, and Nutrition (the ‘Smallholder and Nutrition Fund’). To avoid creating a new institution, IFAD could become this new fund.

The Smallholder and Nutrition Fund should be based at IFAD in Rome or, alternatively, be built from the GAFSP. It should be modeled after the design of GAFSP and the GFATM, including the principle of competitive ‘demand discovery’ whereby countries are invited to submit national investment strategies that are financed following approval by an independent technical panel. Rather than establish separate Public and Private Sector windows, the Fund would blend concessional finance and private investment, with the common objective of making smallholder agriculture more productive and sustainable while improving nutrition.

As part of the 2015 FfD Conference, governments should resolve to establish the Smallholder and Nutrition Fund as a mechanism for mobilizing and disbursing funds for smallholder agriculture, including livestock and fisheries. To achieve the SDGs, the Smallholder and Nutrition fund should be able to disburse some \$10 billion per year – up from some \$0.5 billion disbursed annually by IFAD. The Smallholder and Nutrition Fund would complement private-sector led initiatives, such as Grow Africa and the New Alliance. Through Grow Africa, some \$15 billion in agricultural investments have been promised with \$1 billion secured (Grow Africa 2014).

RDD&D for productive, sustainable and resilient food systems

Agricultural systems are under growing pressure from climate change, which leads to temperature extremes, increased frequency and severity of droughts in some parts of the world, and other stresses. At the same time, agricultural production must increase to meet the growing demand for food, but it must also reduce its environmental footprint, including by lowering water use, greenhouse gas emissions, release of reactive nutrients, and chemical pollution.

The challenges facing agriculture are particularly severe in Africa, where the total population is expected to reach 2.4 billion by 2050 (UN DESA 2013). To feed this larger population, food production might need to increase several-fold. At the same time, Africa is highly vulnerable to the effects of climate change,

with the IPCC (2014b) projecting significant reductions in productivity for key commodities. Only substantial improvements in agricultural technologies can deliver these changes.

Therefore the world needs to increase investments in agricultural RDD&D, including in improved seeds and germplasms, farming techniques, ICT-based or other mechanisms for gender-sensitive agricultural extension services, and adaptation strategies. Particularly in developing countries, such research requires overwhelmingly public funding - IFPRI estimates that only 6 percent of investment in agricultural research in developing countries is from private sources, compared with 55 percent in developed nations (Beintema et al. 2012).

Much of this research can and should be delivered through a strengthened and better-financed Consultative Group on International Agricultural Research (CGIAR). The CGIAR should strengthen its cooperation with business, academia, and civil society in order to accelerate the development of sustainable agricultural technologies. As an important complement to the Smallholder and Nutrition Fund, we propose an increase in the CGIAR budget to at least \$2 billion per year.

5.3.1 Non-financing priorities for agriculture/food systems and nutrition

As is the case with other public-private investment partnerships, several non-financing priorities must be addressed if the SDGs related to sustainable agriculture and nutrition are to be met. Without aiming to be comprehensive, we identify two important priorities:

Clear targets and improved metrics

The MDGs pay too little attention to food systems, and the need for sustainable intensification of agriculture, animal husbandry, and fishing. The SDGs therefore need to provide clear targets that can rally the respective communities. As is the case with health, such targets must be underpinned by effective metrics and indicators. For example, the world needs improved metrics and data for nutrition (particularly for micronutrients), food loss, efficiency of fertilizer use, nitrogen and phosphorous flows, and water efficiency and use. Since agriculture is predominantly a private-sector undertaking, much data also rests with the private sector. The 'data revolution' (IEAG 2014) for agriculture should therefore draw extensively on such unofficial data and explore the potential of modern technologies – particularly remote sensing and mobile broadband – to improve metrics and data for agriculture and nutrition. These opportunities are discussed in more detail in SDSN (2014), Espey et al. (2015) and UNSCN (2014), which outline preliminary options for filling current gaps.

Back-casting and road-mapping

Today, virtually all food production systems are unsustainable. Some produce not enough high-quality food. Others use too much water, emit too much greenhouse gases, release too many nutrients, suffer massive land degradation, encroach on critical ecosystems, pollute coastal ecosystems, or deplete fisheries. Still others are highly vulnerable to climate change. Many food systems combine several or all of these characteristics.

Yet, it is much harder to define what would constitute a 'sustainable food production system.' For this reason, countries need to define what sustainable agriculture, animal husbandry, and fisheries might mean within their local context, taking into account factors such as agro-ecological zones and farming

systems, water availability, greenhouse gas emissions, local food preferences, available fish stocks, and opportunities for trading food internationally.

As reviewed in section 4.3.1, goal-based investment strategies require back-castings to translate the long-term transformations into operational strategies. Even high-income and upper-middle-income countries tend not to have long-term pathways for transitioning towards sustainable food production systems, even though their current practices are unsustainable (Dobermann and Nelson 2013). The SDSN, in partnership with Rothamsted Research, is launching an initiative to support such long-term back-castings, drawing on lessons from its work on long-term Deep Decarbonization Pathways (IDDRI and SDSN 2014). First back-castings will be prepared in China, the UK, and Uruguay. Over time, other countries will be added to this initiative.

Long-term back-castings can then inform roadmaps for the development of key technologies, including farming practices. Such back-castings will create an effective interface for key industries, including food companies, fertilizer companies, seed and germplasm producers, and the fishing industry. Many of these discussions could be coordinated by FAO or other international organizations, following the successful example of technology roadmaps for energy pioneered by the International Energy Agency (IEA 2014a).

5.4 Ecosystem services

Healthy and well-managed ecosystems, together with a stable climate, are critical for long-term sustainable development. Ecosystems provide a range of services to people and societies, including provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling. As noted, for example by the Millennium Ecosystem Assessment (2005), Rockström et al. (2009), Cardinale et al. (2012), and Steffen et al. (2015), healthy ecosystems and a stable climate provide a vital planetary life support system. Functioning ecosystem services can also enhance social inclusion by meeting the needs of the poor and vulnerable, and by reducing the risk of conflict and insecurity.

The degradation of ecosystem services has intensified since the landmark 1992 Rio Earth Summit – in spite of an unprecedented improvement in our scientific understanding of ecosystems and biodiversity, the inclusion of environmental sustainability in the MDGs, and the ratification of the Convention on Biological Diversity (CBD). Environmental pressures are increasing across a broad spectrum, including biodiversity loss, climate change, deforestation, degradation of international water bodies, land degradation, and chemical pollution. The Millennium Ecosystem Assessment found that some 60 percent of ecosystem services globally have been degraded in the past 50 years.

Costanza et al. (2014) try to estimate the economic value of ecosystem services and arrive at the extremely high figure of some \$125 trillion per year (in 2007 US\$) – almost twice world GDP. TEEB (2010) describes how ecosystem services can be valued. Needless to say, these numbers have been queried. Yet, whatever the ‘true’ numbers are, a clear consensus exists that ecosystems and their services are of critical value to humanity and are being degraded at rapid rates. Yet, the world is not acting with the urgency and determination needed.

These challenges are highlighted in goals 14 and 15 proposed by the OWG (2014), which in turn are broadly consistent with the Aichi Targets for biodiversity protection:

- 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.

Several action plans have been adopted to halt the loss of biodiversity (CBD 2012a), but to date, the world has failed to ‘bend the needle’ on the degradation of ecosystems and the loss of biodiversity, as highlighted in the recent Global Biodiversity Outlook 4 (CBD 2014a), which summarizes the progress made towards achieving the Aichi biodiversity targets.

5.4.1 Investment needs to meet the biodiversity and ecosystem SDGs

Investments to preserve and manage biodiversity and ecosystems are highly complex. They cover diverse sets of systems (forests, oceans, wetlands, urban biodiversity, etc.), geographic scales (local, national, regional, and global goods), a continuum of public and private investments (e.g. to sustainably manage freshwater systems in agricultural zones), and highly context-specific governance arrangements that condition feasible policy responses (e.g. land tenure systems, federal/central governance models). Finally, improving the management of critical ecosystems cannot be the responsibility of a single line ministry and requires changes across a broad range of government ministries and industries. If one were to look for some of the most complex investment challenges, then strengthening ecosystems and preserving biodiversity, the core mandate of the Global Environment Facility (GEF), would be an excellent place to start.

Several needs assessments have been conducted for the CBD (2012a, 2012b). The results of these needs assessments are framed around the broad Aichi Biodiversity Targets, and are not broken down by investment areas, operating/capital expenditure, private or public investments. The SDSN is working with several organizations to better understand available needs assessments and fill gaps. Until then, the headline number of \$135 billion serves as a placeholder.

5.4.2 Resource gaps and areas for strengthening the Global Environment Facility

A significant share of investments in ecosystem services and biodiversity protection can and ought to come from private sources, but substantial public finance from domestic and international sources will be required. This in turn will require a significant strengthening of the Global Environment Facility (GEF), the primary pooled financing mechanism for biodiversity management adopted at the 1992 Rio Conference.

We do not have precise estimates of the level of public financing required for biodiversity and ecosystem services, but it is clear that the GEF is sub-scale at annual commitments for the sixth replenishment of around of \$1.1 billion.⁴⁵ A reasonable target for annual disbursements through the GEF might be \$6 billion per year.

⁴⁵ Some 30 countries pledged \$4.43 billion for the period 2014-2018 (GEF 2014a), corresponding to some \$1.1 billion per year.

We note that even a strengthened GEF will only disburse a modest share of overall public-private investment needs, and that the bulk of public expenditure might need to come from domestic resources. However, as discussed in section 4.3, effective public-private investment partnerships do depend, in part, on well-organized and managed flows of international public finance. This in turn makes a strong and effective GEF – working with governments, business, and civil society – central to success.

Even the imperfect information available today shows that the GEF and other mechanisms require substantially more resources than are currently available. However, the important question of how an effective investment response can be organized must also be posed. Clearly, the lessons of the GFATM and Gavi in the health sector cannot be applied one-for-one to biodiversity and ecosystem services, but the experience in health raises a number of important organizational questions that should be considered carefully for a goal-based investment partnership on ecosystem services and biodiversity, and the central role that the GEF occupies.

In the past, the GEF has financed relatively small-scale projects across a broad spectrum of activities instead of providing macro-economically significant funding, as done in health by the GFATM. This has impeded the close collaboration with other ministries – including ministries of finance – that was so successful in health. Overall, economies of scale and scope were limited. The GEF has not had the financial resources and funding model needed to drive learning and experimentation on how to scale up operational strategies. In spite of the excellent work done by the GEF and a large number of highly successful projects, the world still lacks a clear understanding of how investments in biodiversity protection and ecosystem management can be applied at scale.

In contrast, the GFATM's broad funding windows for malaria, TB, and HIV/AIDS, under which countries can apply for funding, have facilitating learning and scaling up. While no two malaria control strategies are the same, they are highly comparable across countries, and successful lessons from one can be applied to other strategies. Over time, the GFATM has helped build the operational knowledge of how to control malaria, TB, and HIV/AIDS at the national scale – both among health ministries and other members of the Country Coordinating Mechanism, as well as GFATM staff and members of the Technical Review Panel.

A central question for all pooled financing mechanisms, such as the GEF, is how they can promote the bottom-up experimentation, learning, knowledge transfer, and subsequent promulgation of best practices that are needed to solve the complex public-private investment challenges the world confronts (sections 3.8 and 4.3.1). Recognizing the need to promote scaled-up investments and impacts, facilitate private co-financing, and ensure effective learning and results management, the GEF leadership used the recently completed 6th replenishment to emphasize a sharper focus on addressing the underlying drivers of environmental degradation, and on supporting integrated, systemic solutions to address common drivers of environmental degradation.

It seems clear that an effective global response to the biodiversity and ecosystem challenge requires an effective GEF. This, in turn, requires careful answers to questions on how the GEF funding model should operate to strengthen bottom-up experimentation and scaling up; how the program appraisal can be organized along technical lines to promote learning and knowledge transfer; how M&E can be strengthened and data-driven advocacy empowered; how non-government stakeholders, such as civil society and business, can effectively contribute to the design, implementation, and assessment of GEF-funded programs; and so forth. Perhaps the process leading up to FfD provides an opportunity to discuss these issues in detail and propose recommendations for strengthening the GEF further.

5.4.3 Non-financing priorities for biodiversity and ecosystem services

The above discussion on the role of the GEF has already touched on several non-financing priorities for a goal-based partnership, such as the critical role of M&E and data driven advocacy, and of effective interfaces for civil society and the private sector. These elements are critical for success, and deserve the same attention as the headline need for more resources. In this preliminary overview of the challenges, we highlight four additional priority areas:

Improved science and clear metrics for success

Our understanding of how critical biomes and ecosystems function has improved significantly in recent decades, but three major knowledge gaps remain: (i) it is now widely recognized that ecosystems and biomes have tipping points beyond which major change may become irreversible, but the level and nature of such tipping points at local, regional, and global levels remain poorly understood and defy quantification in many areas (Rockström et al. 2009, Steffen et al. 2015); (ii) policymakers have insufficient metrics and data to track the health of key ecosystems and biomes (SDSN 2014); (iii) much biodiversity has yet to be studied carefully and inventoried, particularly in the ocean (SDSN 2013).

From a risk management perspective, it is irresponsible that the world is flying partially blind in the face of unprecedented changes to global biomes and life support systems. Therefore, major investments are needed in the policy-relevant science of biodiversity and ecosystem functioning. In particular, three critical global science-policy initiatives should be promoted: Future Earth, the global environmental change research program, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), and the Global Biodiversity Outlook under the CBD (2014b). Each of these programs requires better and more funding. This should be a priority for the international community.

Private value chain initiatives

Businesses account for some two thirds of global resource use, and unsustainable value chains for key commodities, such as palm oil or industrial production, are central drivers of environmental degradation. In recent years, major business initiatives have been launched to make value chains more sustainable, and large corporations are increasingly requiring their suppliers to adhere to minimum standards. For example, the Roundtable on Sustainable Palm Oil (RSPO) has led to a substantial increase in the acreage of palm oil plantations that are sustainably managed. Such value-chain initiatives must be supported by national legislation and be scaled up to include all major companies around the world across key commodities.

Goal-based back-castings

Virtually every assessment of biodiversity and ecosystem services concludes that the world is on a profoundly unsustainable business-as-usual trajectory. Things will get worse as the world's population grows and per capita income increases. As a result, it is impossible to manage biodiversity and ecosystems on rolling annual or five-year cycles. Countries, regions, and the international community must develop long-term 'back-castings' to map out pathways for the necessary transformations. SDSN

and IDDRI (2014) have applied the back-casting approach to decarbonization. Similar exercises are necessary for agriculture and land-use change, forests, oceans, coastal areas, protected areas, and other priorities. A promising example of such long-term approaches is Marine Spatial Planning (Intergovernmental Oceanographic Commission 2009).

Such long-term pathways and planning tools should be developed through multi-stakeholder processes and be subject to consultations with all affected communities. In this way, they can become a platform for developing a public consensus on how pressing ecosystem and biodiversity challenges can be addressed in harmony with other social and economic objectives. Moreover, such a platform will help identify critical questions that require better answers from science, which can then be addressed by Future Earth, IPBES, or other global research programs.

Improved technologies for decoupling

The use of environmental resources and associated pollution must be ‘decoupled’ from economic growth (Rockström *et al.* 2013). Such ‘absolute decoupling’ is extremely challenging and can only be achieved through vastly improved technologies that have yet to be developed or deployed. Examples include low-carbon energy, energy efficiency, farming techniques that are efficient in fertilizer and water use, new materials that replace environmental resources, etc. Preserving biodiversity and safely managing ecosystems is therefore also a major technology challenge. We discuss opportunities for financing sustainable technologies in section 5.10 below.

5.5 Water and sanitation

The MDGs have focused attention on access to *improved* water and sanitation through dedicated targets. The SDGs stand to broaden the focus to include *safe* water and sanitation, water resources management and hygiene. The shift from improved to safe water might seem trivial, but it does represent a major expansion of the agenda since safe water supply includes water quality, while improved supply merely focuses on the construction standard of the water supply or the sanitation facility.⁴⁶

In this sub-section, we discuss access to safe water and sanitation. The bulk of investments in water and sanitation are needed to provide large-scale urban water supply and sanitation infrastructure. These investments are critical for achieving the SDGs, but go beyond providing access. Moreover, they are overwhelmingly financed using infrastructure financing modalities, such as project finance, so we will discuss opportunities for financing them in section 5.9 on infrastructure. Likewise, water resource management is addressed briefly in section 5.4 on biodiversity and ecosystem services. A very large share of investments in water supply and sanitation will need to be structured and implemented at the local level, including through local authorities.

⁴⁶ Formally, MDG target 7c was to reduce by half, between 1990 and 2015, “the proportion of the population without sustainable access to safe drinking-water and basic sanitation,” but the indicator used to track this target was the “proportion of households using water from an improved source.” Concerns were raised about what could be counted as an ‘improved source’ and data released in 2010 by WHO and UNICEF as part of their Rapid Assessment of Drinking-Water Quality project revealed that many ‘improved sources’ (including piped water) were actually unsafe, because of poor water quality (see Bain *et al.* 2012 for a detailed discussion).

5.5.1 Investment needs to meet the SDG on access to water supply and sanitation

To finish the job of ending extreme poverty in all its forms, countries need to ensure that all sections of the population, including the extreme poor and marginalized, have access to safe water and adequate sanitation. Significant progress has been made in expanding access to water supply and to a lesser extent sanitation. Between 1990 and 2012 an additional 2.5 billion people received access to an improved water source. Yet the gaps remain large. Some 748 million people lacked access to improved water supply, and over 2.5 billion did not have access to adequate sanitation in 2012. The number of people without access to improved sanitation has stayed almost constant since 1990, underscoring the insufficient progress in this area (WHO and UNICEF 2014).

Yet, this data seriously underestimates the water and sanitation crisis. First, it overstates access to water supply and sanitation, particularly in informal settlements or slums located in urban areas (Mitlin and Satterthwaite 2013). Moreover, data from the Joint Monitoring Programme (JMP) does not report on water quality. In its most recent report, it suggests that as many as 1.8 billion people might use drinking water that is contaminated with oral-fecal bacteria. Some 10 percent of 'improved water sources' may present a 'high' risk of fecal contamination (WHO and UNICEF 2014). The true extent of the water and sanitation challenge is therefore much higher than suggested by the MDG indicators.

Many developing countries face challenges in extending access to water and sanitation. Yet, sub-Saharan Africa is by far the region with the lowest access to drinking water. All other regions have achieved the MDG Target of halving the number of people without access ahead of time, making this a largely African challenge. In turn, the sanitation crisis is concentrated in South Asia and Africa. In both regions, open defecation remains widespread and hygiene is poor. The absolute numbers of people without improved sanitation are rising in many countries, with access levels being particularly low in West Africa (WaterAid 2013). The health implications are severe and include high child mortality rates, poor nutrition, and widespread child stunting. In Africa, it is estimated that some 400,000 children might die prematurely because of poor sanitation and hygiene (WaterAid 2013). See Harris (2014) for a powerful illustration of the impact of poor sanitation on health and nutrition in India.

In spite of the importance of access to water and sanitation for ending poverty and promoting development, the global partnership for water and sanitation is not working at the required scale and goal-orientation that the sector require. The challenges are broad and extend beyond investments in infrastructure and its upkeep. In particular, sanitation and hygiene require strong political leadership to break taboos around discussing and improving sanitation and hygiene behavior. The 'zero open defecation' campaigns that have been particularly successful in rural parts of Bangladesh demonstrate what can be achieved without marshaling significant financial resources. Moreover, strong leadership is required to strengthen systems for managing water resources and water infrastructure. All too often, providers and countries prioritize capital expenditure over operating expenditure, so that newly built water access points fall into disrepair and expose communities to unsafe water.

Yet, there can be no doubt that overall, vastly more public and private investments are required annually for the sector (WaterAid 2013, WHO 2012, WHO and UN Water 2012, World Bank 2011). The World Health Organization (WHO 2012) estimates that an incremental \$27 billion will be required to ensure universal access to drinking water and sanitation, with sanitation accounting for the majority of incremental resource needs.

5.5.2 Changes required to strengthen a global partnership on water and sanitation

The sector clearly lacks resources, but it also requires better organization and more effective delivery mechanisms to achieve the SDGs. Some of the principal changes required for water and sanitation are illustrated below. While there is a reasonable consensus on the key challenges in the sector, there is much less clarity on how the sector should respond. We therefore emphasize the preliminary and incomplete nature of these recommendations for improvement.

Greater political focus on sanitation in particular

Sanitation and hygienic behavior are complex issues with important cultural and gender dimensions, as well as important intra-household inequalities. Particularly in South Asia and most parts of sub-Saharan Africa, the sanitation crisis and the lack of access to improved water supply do not receive the political attention they need and deserve. The example of Rwanda and Madagascar show how dedicated political leadership can drive profound changes in sanitation and water supply, provided that it is backed up by adequate resources (WaterAid 2013, WSCCC 2015). The Sanitation and Water for All Partnership (SWA),⁴⁷ launched in 2010, is mobilizing governments and other stakeholders to increase political support for scaled-up investment programs in water and sanitation.

Adequate Domestic Budget Revenues and viable national and sub-national sector programs

A universal coverage obligation for water and sanitation requires significant public investments (World Bank 2011), including grant schemes for the extreme poor. These include so-called lifeline tariffs, where daily subsistence needs in water are provided free of charge, or through cross-subsidization, where wealthier households subsidize the needs of the extreme poor. Such schemes must be designed carefully to ensure proper targeting of public subsidies and minimize the risk of leakage.

The 2012 GLAAS survey (WHO and UN Water 2012) has demonstrated that national and local governments, particularly in Africa, allocate few resources to water and sanitation. Sector programs are often not viable technically or financially. DBR for the sector amounts to one-third the level of health and one sixth the level of education expenditure. The situation is particularly grave for sanitation, where very few African countries meet the 2008 eThekweni commitment to provide at least 0.5 percent of GDP in funding for sanitation and hygiene (WaterAid 2013). WaterAid has suggested that African countries should spend 4.5 percent of GDP on water and sanitation, in line with the Africa Infrastructure Country Diagnostic (AICD) assessments (Greenhill and Ali 2013).

In many countries, investments in urban water and sanitation systems are led by local authorities, but these authorities often lack the means to provide the necessary public financing, including access to pooling mechanisms and sovereign guarantees. Addressing the need for sub-sovereign public financing for water and sanitation raises complex questions of public financial management, devolution of powers, capacity to execute complex investments, and other issues that must all be resolved on a case-by-case basis in every country. See section 6.1.3 for a more extensive discussion of these issues.

Increased attention to integrated water resources management (IWRM) and water quality

⁴⁷ See <http://sanitationandwaterforall.org/>

The combination of growing per capita use of water; expanding agriculture and industrial production; rapid urbanization and population growth in many regions; and the profound impacts of climate change on the water cycle will all combine to increase the scarcity and lower the quality of water supplies. Many countries are already water-scarce and many more face acute water shortages unless they lower demand and drastically increase the efficiency of water use (UNESCO and UN Water 2012). Addressing these challenges will require a mix of (i) improved policies and regulation; (ii) investments in water treatment systems, covered under 'large infrastructure' below; and (iii) programs to promote and invest in efficient water use.

Global or regional pooled financing mechanism(s) for water and sanitation

The water and sanitation sector mobilizes too little domestic and private financing. It also receives insufficient volumes of international public finance, and the scarce resources are disbursed inefficiently. WaterAid (2013) highlights the extent of aid fragmentation, with many small African countries needing to work with well over 20 providers in a sector that receives modest financial inflows overall. A significant number of multilateral finance mechanisms exist, but they are similarly fragmented, under-resourced, and often in competition with one another.

The current financing architecture is inadequate to provide the volume and quality of financing that the water and sanitation sector needs. Partly as a result, sector plans are inadequate. We therefore believe the sector needs effective pooled financing mechanisms that can mobilize and leverage greater volumes of public and private financing, mobilize household and community savings⁴⁸, reduce transaction costs, and help organize a more effective and goal-oriented response, particularly for sanitation. The benefits of pooled international financing mechanisms highlighted in section 4.3.2 and the lessons from public health (section 4) all apply directly to the water and sanitation sector. In particular, such mechanisms can help raise the profile of water and sanitation both domestically and internationally – provided of course that they are adequately resourced.

The Sanitation and Water for All Partnership has reviewed the case for such a mechanism and concluded that a global fund could be viable if it targets LDCs. Moreover, the mechanism would need to meet several key conditions (SWA 2010). An effective pooled financing mechanism should (i) have a focus on the poorest and most vulnerable, (ii) include mechanisms to support and reinforce government systems, rather than create parallel coordination and monitoring mechanisms, (iii) have a governance structure led by member states, (iv) have representation and technical capacity in countries, to support governments in accessing funding by developing credible policies and plans and systems to monitor and account for the use of the funds and the results achieved, and (v) be hosted within an organization that has experience managing WASH-related funds and programs of significant magnitude that are multi-region/multi-country in nature.

We strongly concur with these criteria and would merely add that the governance of such a mechanism should also involve civil society, business, and representatives of local authorities. Moreover, we encourage a 'demand discovery' funding model, whereby countries are invited to submit their own

⁴⁸ For example, anecdotal evidence from Madagascar under verification in 2015 points to individual households participating in the national sanitation and hygiene improvement programme as having invested approximately \$25 million in sanitation facilities, nearly three times greater than the actual funding level of the programme. (WSSCC 2015).

proposals, which are then reviewed by an independent technical panel (section 4.3.3. discusses criteria for effective pooled financing mechanisms).

Some observers who have commented on earlier drafts of this working paper have expressed scepticism regarding a pooled global financing mechanism for the water and sanitation sector, though the experience of the Global Sanitation Fund (GSF) since 2008 is widely seen as very encouraging. Deploying the principles described above, the GSF has gained strong support from 6 bi-lateral providers, including Sweden and Switzerland⁴⁹, who have mobilized USD 105 million for a mechanism that enables 13 member states in Africa and Asia to eliminate open defecation for 36 million people through behaviour change programming (WSSCC 2015). Other options include strengthening regional facilities, particularly in sub-Saharan Africa and South Asia. Regional approaches could be housed at, or implemented in collaboration with, the regional development banks.”

Clearly, the issue requires further reflection and careful analysis. We therefore urge the sector to discuss how the architecture for mobilizing and disbursing International Development Finance in the water and sanitation sector can be made fit for purpose. Substantial reforms strike us as necessary if the sector is to mobilize the resources and organization necessary to achieve the – rightly – ambitious SDG on water and sanitation by 2030. The SDSN would be delighted to support such discussions.

5.6 Access to modern energy sources

Energy is a fundamental driver of economic growth and poverty reduction. Yet, some 1.3 billion people do not have access to reliable electricity, and a staggering 2.7 billion rely on unsafe primary biomass for their cooking (IEA 2011). Closing this access gap and ensuring the long-term convergence of per capita incomes between developed and developing countries will be part and parcel of the challenge of staying within 2°C (section 5.8). While preference should be given to cost-effective low-carbon energy technologies for meeting the Sustainable Energy for All (SE4All) target, fossil fuels will likely play an important role in closing the energy access gap in many LDCs (see for example Demierre *et al.* 2014). The resulting greenhouse gas emissions are relatively small, and the burden of decarbonization should not fall on the poorest and most marginalized members of society.

Energy access was not a priority under the MDGs and progress in expanding access has been slow. The expansion of access is barely keeping up with population growth, particularly in sub-Saharan Africa and parts of South Asia. Increased domestic and international investments are urgently needed if the goal of universal access to electricity and modern cooking solutions is to be met. The IEA (2011) estimates that some \$49 billion will be required annually through to 2030. This includes some \$45 billion for universal access to electricity and \$4.4 billion for modern cooking solutions (IEA 2011).

The SE4All initiative is advocating for a dedicated financing window for energy access. Since such investments address the needs of the poorest population and comprise significant network externalities (section 3.4), they will require a substantial share of public financing, particularly in rural areas. Certainly, this public financing must mobilize substantial private funds, including from the beneficiaries and businesses providing the technologies.

⁴⁹ See http://www.who.int/water_sanitation_health/glaas/2014/sida_sweden.pdf and https://www.eda.admin.ch/content/dam/deza/en/documents/Themes/factsheet-globalprogramm-wasserinitiativen_EN.pdf

Though we will not explore this question in detail in this working paper, we believe the case for a dedicated financing mechanism for energy is strong. The sector requires substantial incremental public resources that must be mobilized and deployed with minimal transactions costs and maximum predictability. Moreover, there are many unresolved technical and organizational issues on how to design, scale up, and finance low-cost systems for access to electricity and improved cook stoves. The situation is reminiscent of the state of malaria in the early 2000s when the knowledge of how to create national-scale malaria programs did not exist. As described in section 4, the GFATM and Gavi played a central role in helping build and propagate this knowledge. A similar effort is urgently needed in access to sustainable energy.

Perhaps most importantly, there is scope and indeed a need for tremendous innovation in technologies, business models, scale-up strategies, and financing modalities for access to electricity and modern cooking fuels. Business and other stakeholders will play a central role in driving innovation. A dedicated global financing vehicle for energy access could help foster innovation by offering an effective platform for collaboration with business, science, and civil society. Again, the experience of Gavi and the GFATM shows what can be achieved through improved organization of financing at the global level.

While financing energy access is of course an infrastructure investment, the investment and project design modalities differ from major infrastructure projects and finance discussed further in section 5.9 below. Most energy access programs focus on small-scale infrastructure and service provision and are therefore less amenable to project-finance modalities that are commonly employed for infrastructure. For this reason we believe dedicated financing mechanisms for energy access merit consideration.

Several options exist for building a pooled financing mechanism for energy access without adding new institutions. Such a mechanism could be attached to the Secretary-General's Sustainable Energy for All Initiative. Alternatively, the Green Climate Fund (GCF) could create a dedicated financing window for energy access. To our knowledge this options has not been discussed in the GCF, but it merits consideration. A third option might be to create regional mechanisms inside the Regional Development Banks or other MDGs. A global or a series of regional mechanisms might need to disburse some \$10 billion annually by 2020.

5.7 A data revolution for sustainable development

High-quality, disaggregated, and timely data is vital for evidence-based planning and budgetary processes, as well as goal-based public-private investment partnerships (sections 3.8 and 4.3.1). However, with the notable exceptions of health and core macroeconomic data, high-quality data remains in short supply and is reported too infrequently. The MDGs have accelerated progress towards harmonized reporting on key variables, but even among the 61 MDG indicators, data is unavailable for a large number of countries. Available data is often reported at very low frequency and sometimes with a lag of four years or more. For example, data on extreme income poverty measured at \$1.25 per day is typically 4-5 years out of date when it is published (see also Alkire and Samman 2014, Cassidy 2014). The situation is often worse with management data, which countries need to monitor progress in on a quarterly or more frequent basis.

At the same time, tremendous opportunities exist to harness such data for sustainable development and to develop creative new ways of tracking key inputs and outcomes. Technical progress, chiefly through modern information and communication technologies, is generating ever-larger volumes of data at a

rapidly diminishing cost. Recent innovations in information and communications technologies (ICTs), notably satellite imagery, mobile data collection and crowd-sourced citizen reporting, are bringing down costs and increasing the efficiency of data production. This creates tremendous scope for innovation, and National Statistical Offices (NSOs) should harness the potential of these new techniques and technologies to improve their datasets.

Following the call for a data revolution for sustainable development from the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda (HLP 2013), the UN Secretary-General launched an Independent Experts Advisory Group on the Data Revolution. This group has issued its report (IEAG 2014), which has described the needs and opportunities for the data revolution in clear and compelling terms. The group proposes a number of important processes to operationalize the data revolution over the years to come.

The SDSN's ongoing contribution to the data revolution has focused on indicators and metrics for the SDGs and how data can be made available on an annual basis. The network has identified a set of 100 indicators for global SDG reporting plus a larger number of complementary national SDG indicators. The SDSN has also identified major gaps in available indicators and is working with interested organizations to explore how such indicator gaps can be filled (SDSN 2015a).

A broad coalition of experts on data for development, including SDSN, The World Bank, Open Data Watch, PARIS21, Simon Fraser University, UNICEF and others, is publishing a needs assessment for the data revolution (Espey *et al.* 2015). They estimate that the improvement of national statistical systems for the SDGs will cost US\$1 billion per year over the 2016-2030 period. This estimate is conservative, applying to a sample of 77 countries that currently qualify for concessional borrowing through the International Development Association (IDA) (see Annex 1). It includes the total cost of core statistical products (US\$ 838-878 million per year) to which is added a 14 percent allowance for human resource investments and policy and legislative reforms, but it excludes costs associated with data literacy, communication and/or long-term programs of modernization.

The authors estimate further that eligible countries are projecting that ODA and other concessional international public finance cover around 52 percent of the financing needs for current National Statistical Development Strategies (NSDS). The financing gap is difficult to evaluate due to the lack of data on current domestic spending, so we highlight the uncertainty behind the following figures. However, we do know that as of 2013, approximately \$300 million per annum was being provided in ODA to support statistics. If ODA is to cover nearly half of NSDS financing needs, this contribution therefore needs to be scaled up by up to \$200 million more per year, to ensure all countries have the capacity to monitor progress on the SDGs.

Key investment needs include, *inter alia*:

- Improved administrative data systems
- Environmental monitoring, including remote sensing
- Geocoded data on government facilities and basic infrastructure
- Improved censuses as well as civil and vital registration systems
- Regular high-quality surveys of households, businesses, etc.
- Making data more available and accessible
- Support and incentives for data innovation

- Strengthening the capacity of NSOs and other bodies charged with the data revolution for sustainable development.

These data investments will help to improve government performance, accountability to citizens, and through better disaggregated data, will shine a spotlight on the most disadvantaged groups. The lack of disaggregation in many datasets masks inequalities between social and economic groups, leading to an underreporting of the experiences of vulnerable people such as minorities and indigenous groups, the disabled, or those living with HIV/AIDS. It is therefore important that NSOs have the capacity to disaggregate data along gender, age, educational background, economic quintile, geographic region, ethnic group, disability, and any other relevant dimensions which can make the data more meaningful and offer a more accurate reflection of the progress that is being made across targets.

The Financing for Development Conference in Addis Ababa this July represents a crucial opportunity for member states to commit to greater investments, from both domestic and international sources, to improve the capacity of NSOs, so that they embrace innovative forms of data collection and enhance the accuracy, coverage, timeliness and public availability of data for the SDGs. In addition, the FfD should lay the foundations for a Partnership for Development Data, supported by an adequate financing mechanism to disburse finance for statistics. Owing to the modest size of the required investments this could be a trust fund or other vehicle.

The financing needs of the data revolution are relatively small compared to the overall needed investments for the SDG agenda. Given the major benefits they would bring, investments in the data revolution represent a particularly low-hanging fruit for FfD.

5.8 *Climate finance*

Man-made climate change represents an unprecedented challenge to human well-being and economic growth in rich and poor countries alike. To avert catastrophic climate change, governments have agreed to limit the increase in average global temperatures to less than 2°C. Many climate scientists believe that even at 2°C, the climate might undergo profound changes (IPCC 2014a) and some argue for much tighter emissions reduction targets (Hansen *et al.* 2013). At the same time, countries have yet to grapple seriously with the challenge of decarbonization. The IEA reports that growth in coal-fired power generation capacity, the fuel with the highest carbon content, continues to outpace growth in all non-fossil fuel power sources combined (IEA 2014b). As a result, an increasing number of leaders worry that it might be impossible to stay within 2°C.

The Deep Decarbonization Pathways Project (DDPP) shows that 2°C remains just within reach if countries take decisive action at the 2015 UNFCCC climate conference in Paris. It outlines how countries can transform their energy systems to decouple per capita GDP from greenhouse gas emissions, so that the world can stay within the 2°C limit and each country can achieve its long-term development objectives (IDDRI and SDSN 2014). Another report, by the Global Commission on the Economy and Climate (New Climate Economy 2014) shows that incremental investments in climate change mitigation are affordable, particularly if the co-benefits (e.g. better health through cleaner air) are taken into consideration.

5.8.1 *Investment needs and financing instruments for climate change*

Tackling climate change requires major long-term public and private investments in mitigation and adaptation to the consequences of climate change. The term ‘climate finance’ describes a broad spectrum of investments in reducing greenhouse gas emissions and in adaptation to climate change. It includes investments in, *inter alia*:

- **Infrastructure:** Low-carbon energy and transmission, efficient buildings, low-carbon industrial plants, sea walls to protect against rising sea-levels, climate resilient cities, water management infrastructure, etc. (sections 5.5 and 5.9)
- **Agriculture:** Low-carbon agriculture and animal husbandry, drought-resistant farming practices and infrastructure, improved water management infrastructure, soil erosion control, climate-resilient livestock management practices, improved food storage facilities, etc. (c.f. section 5.7)
- **Health:** Strengthening of emergency health systems; control of vector-borne diseases, such as malaria and dengue fever; prevention and treatment of heat stress; etc. (section 5.1)
- **Biodiversity and ecosystem services:** Improved monitoring systems, reduced deforestation, integrated water resources management, etc. (section 5.4)
- **RDD&D:** Climate resilient technologies for energy, agriculture, water management, healthcare, etc. (section 5.10)

This illustrative list underscores that most investments in climate change adaptation and mitigation are impossible to distinguish from investments in development (Fankhauser and Schmidt-Traub 2009, UN 2010, Green Growth Action Alliance 2013, New Climate Economy 2014). For this reason, institutional mechanisms for climate and development finance must be closely aligned, as is described in the next section. They must also be able to provide incremental funding to national as well as sub-national governments, including local authorities, since the latter execute many of the infrastructure investments in urban areas.

The main difference between climate finance and development finance lies in the resource mobilization side, as well as the governance dimension. While development finance provides resources for global public goods and public investments that cannot be financed by the poorest countries, climate finance covers the cost resulting from excessive greenhouse gas emissions. It should therefore be borne by the polluters under the overall framework of the UNFCCC (section 6.3.6).

UNCTAD (2014) estimates that an incremental \$380-680 billion will be required annually for climate change mitigation in developing countries, to which one must add some \$60-100 billion in incremental expenditure for adaptation (Green Growth Alliance 2013, UNCTAD 2014). A major share of these resources must come from private investments (Table 3: The public and private components of Official Climate Financing (\$ billion), so an important focus of public climate finance needs to be on leveraging private resources.

Even if there is substantial uncertainty about the precise volume of financing required, currently available climate finance is vastly insufficient and has been leveling off at some \$359 billion in public and private finance (CPI 2013). This is below even the most conservative estimates of investments needs. In

comparison, a single company (ExxonMobil) generated revenues of \$438 billion in 2013, and governments subsidize fossil fuel use to the tune of some \$400 billion per year (World Bank 2013).

The framework for climate finance comprises a number of policies, regulatory tools, and investment instruments that are summarized in detail by the Advisory Group on Climate Change Financing (UN 2010):

1. **A clear price on greenhouse gas emissions:** At the heart of the climate problem is a market failure since greenhouse gas emitters do not bear the marginal social cost of the damage their emissions cause. As a result, governments, businesses, and households ‘over-invest’ in greenhouse-gas intensive technologies, and insufficient private capital is available for clean energy. To address this imbalance, countries need to impose an implicit or explicit price on greenhouse gas emissions. Such a carbon price can be established through carbon markets, such as the EU Emissions Trading Scheme (EU-ETS); taxes on greenhouse gas emissions, such as fuel taxes; or regulatory instruments, such as gas-mileage standards in the automotive industry.

In practice, carbon markets have underperformed as a policy instrument. Markets work very well for flow pollutants like NO_x and SO_x where spot market prices can regulate the flow of short-lived pollutants to achieve the optimal social outcome. Since carbon dioxide and other greenhouse gases reside for a long time in the atmosphere, addressing the climate challenge will require that stocks of greenhouse gases be managed over the long term. Carbon market prices have proven to be too volatile and sensitive to the design features of the markets, as well as short-term economic fluctuations, to provide a stable long-term price signal that will direct private investment towards clean alternatives.⁵⁰ On balance, carbon taxes that rise predictably over time offer more certainty and significantly lower transaction costs.

A clear carbon price in every major economy is critical for redirecting private investments towards deep decarbonization and for mobilizing public resources for direct investments. However, a carbon price will not be sufficient on its own, since deep transformations of countries’ energy systems require long-term policy frameworks and coordination around each country’s energy system (see below). For example, decisions on where to build which types of power plants involve complex political, social, economic, and environmental considerations that are not mediated through markets alone.

2. **Direct public investments and subsidies:** Governments need to subsidize or invest directly in a number of climate mitigation and adaptation measures, including technology RDD&D (section 5.10), public infrastructure, incentives for energy efficiency measures, monitoring systems, etc. This may include public insurance or guarantee mechanisms for new technologies, international investments, or other high-risk investments with high social benefits.
3. **International concessional climate finance:** Programs in low-income and some middle-income countries require incremental public financing that cannot be mobilized domestically. International concessional climate finance, including ODA-C, needs to fill these financing gaps. Such non-market-based funding might come from pooled financing mechanisms (GCF, GEF,

⁵⁰ Another challenge with carbon markets has been the emphasis on a uniform global carbon price. While such a carbon price is indicated by economic theory, it is far too complex a tool, both politically and operationally, to play a role in the coming years.

GFATM, etc.), multilateral institutions (World Bank, New Development Bank, Regional Development Banks, Asia Infrastructure Investment Bank), bilateral agencies or Development Finance Institutions.

4. **Private investments:** A large share of investments in infrastructure, agriculture, and other areas, mediated through an effective carbon price, will be privately financed. Such market-based financing may come from pension funds, insurance companies, corporations, banks, bond issuance, sovereign wealth funds, and other sources.

5.8.2 Operationalizing \$100 billion in additional climate finance⁵¹

Developed countries have committed to ensuring at least \$100 billion per year in climate financing for developing countries as of 2020, but confusion reigns on what does and does not count towards this commitment. FfD should clarify that the \$100 billion comprises International Development Financing (IDF) of various kinds (including Official Development Assistance (ODA), Other Official Flows (OOF), and Private Funds Mobilized (PFM)). The commitment should exclude purely commercial private flows⁵² and funds raised by national development banks for use in the same country. Developing countries will in fact need much more than \$100 billion per year in climate financing, with the balance mobilized through DBR, additional IDF, and commercial private sector financing.

According to the outcome of the 2014 COP20 in Lima, it seems likely that the \$100 billion for 2020 will be divided roughly 50-50 between mitigation and adaptation. This share seems appropriate, particularly given the substantial public finance needs for adaptation. RDD&D and Losses and Damages are not part of the \$100 billion commitment and will likely require additional funding.

FfD also needs to clarify the meaning of ‘additional’ climate finance. Developing countries have long insisted, and most developed countries have long acknowledged, that official climate financing should be additional to traditional development financing, because climate financing represents an added hurdle and expense for developing countries. For this reason a dollar of IDF should only be counted once as either climate finance or non-climate IDF. To distinguish the part of IDF devoted to climate financing, the notation ODA-C, OOF-C, and PFM-C should be used. The sum of these categories should reach \$100 billion per year by 2020, and we propose that each category contribute an equal share (Table 3). ODA-C cannot be counted towards the commitment to provide 0.7 percent in GNI as ODA.

Table 3: The public and private components of Official Climate Financing (\$ billion)⁵³

Climate Financing	Minimum Target 2020
Additional climate ODA (ODA-C)	33.3
Other Official Flows (OOF-C)	33.3

⁵¹ This section follows the discussion in SDSN (2015c), which highlights 8 key criteria for ensuring that an agreement at the COP21 in Paris avoids highly dangerous climate change.

⁵² The distinction between purely commercial flows, such as foreign direct investment (FDI), and PFM is important, since public finance should be directed towards leveraging a maximum volume of private resources.

⁵³ We do not have robust estimates of current flows since there are many contentious issues of measurement and classification. For example, ODA that is currently counted as climate financing is rarely from a source that is additional to non-climate ODA and therefore should not count towards ODA-C, or at least not in full.

Private Funds Mobilized through public resources (PFM-C)	33.3
Official climate financing	100

We propose three ‘additionality tests’ for climate finance. The first, and perhaps most important and convincing way to ensure additional climate financing, is to develop new sources of climate financing beyond traditional official sources. A key source of climate financing, and of ODA-C in particular, should be the revenues raised by the governments of developed countries via carbon taxation and the sale or auction of carbon emission permits. If developed countries contributed \$2 per ton of carbon dioxide emissions towards ODA-C raised in this way, they would generate an additional \$36 billion in ODA-C, which could in turn leverage OOF-C (mainly loans from multilateral development banks) and PFM-C (mainly private loans and bonds with official guarantees) to reach the full \$100 billion in official climate finance effort as of 2020.

Recent, sharp falls in the price of fossil fuels provide a unique opportunity for developed countries to scale back fossil-fuel subsidies and introduce carbon pricing in support of ODA-C. Other promising mechanisms for mobilizing public climate finance include domestic revenues collected on new Financial Transaction Taxes and levies on fossil fuel emissions resulting from international aviation and maritime transport.

The second additionality criterion concerns new programs or projects that would not have been implemented without climate finance. In practice, though, it may be difficult to determine which projects are additional, as the difficult experience of the Clean Development Mechanism (CDM) has shown (Müller 2009). A pragmatic way to address this issue would be to distribute a significant share of climate finance through dedicated financing mechanisms, chiefly the Green Climate Fund (GCF). We propose that at least 20 percent of the \$100 billion flow through the GCF and another 5-10 percent flow through an expanded Global Environment Facility (GEF). The rest would flow mainly through MDBs and other development institutions that specialize in co-financing PPPs, particularly those engaged in the areas of infrastructure and the protection of natural capital (Table 4: Disbursement of Official Climate Finance today and by 2020 (\$ billion)).

Table 4: Disbursement of Official Climate Finance today and by 2020 (\$ billion)⁵⁴

Some Specific Financing Mechanisms	Current disbursement	Indicative targets by 2020
Bilateral	24	25-30
Green Climate Fund	0	20
GEF	1	5-10
MDBs	13	36
Private Capital (PFM)	0-5	28
Total	38-43	At least 100

Third, additionality should be defined in relation to developed countries’ commitment to provide 0.7 percent of GNI in ODA. Since concessional climate finance (ODA-C) should not be double-counted, a

⁵⁴ Current disbursement data cited from OECD (2014i)

consistent interpretation of the Copenhagen and Cancun commitments of additional climate finance implies that the concessional component of the \$100 billion, we suggest that this be at least \$33 billion (Table 3: The public and private components of Official Climate Financing (\$ billion)), needs to be outside and additional to the 0.7 percent commitment. This corresponds to some 10 percent of the 0.7 percent target or \$315 billion at 2013 GNI (calculated from OECD 2014d). This ratio will fall as rich countries' GNI grows, so a hard definition of climate finance additionality is not a 'game changer' in terms of overall volumes of concessional finance required. In turn, though, this additionality requirement will build trust in the international community's commitment to mobilize adequate volumes of concessional and non-concessional financing for sustainable development, including climate change.

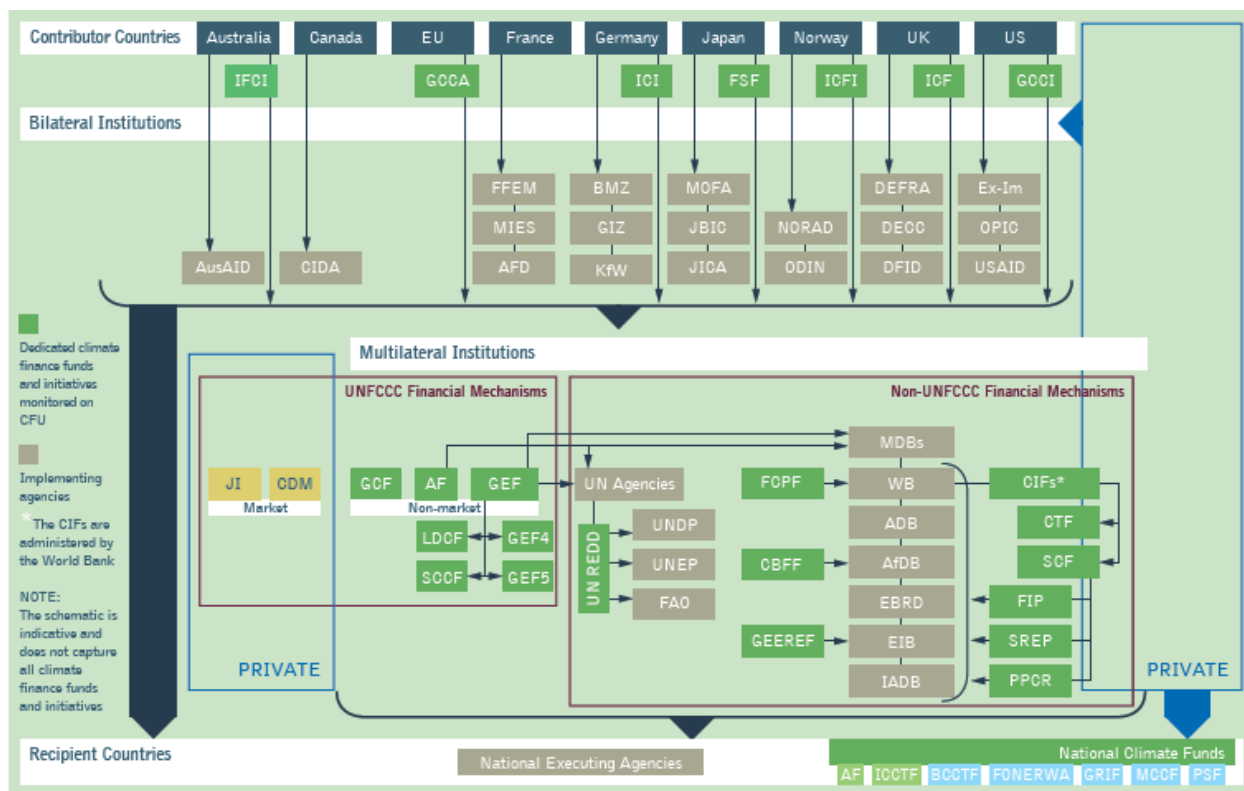
5.8.3 The role of the Green Climate Fund

The list of climate finance instruments introduced in section 5.8.1 shows that climate finance is not a stand-alone financing modality, nor is it a simple add-on. It operates in conjunction with other public and private sustainable development finance flows and must be integrated into development finance, to avoid false distinctions or separations. To illustrate this point, it would be a grave mistake if a national program to distribute long-lasting insecticide-treated malaria bed-nets (LLINs) in higher altitudes experiencing malaria as a result of climate change were organized and financed separately from existing national bed-net programs in adjoining lower-lying areas. Similarly, a climate change adaptation program to reduce the climate vulnerability of an irrigation system must not be separated from a development program to extend the same system.

The operational indivisibility of most climate and development finance has important implications for the role and design of the Green Climate Fund (GCF), which was launched by parties of the UNFCCC as the public finance mechanism for climate change adaptation and mitigation. It plays a central role in addressing climate change:

- **Reduced fragmentation and greater transparency:** There are dozens of multilateral, bilateral, and national climate funds, many of which have little or no resources (Nakhooda and Watson 2013). The resulting climate finance architecture is highly complex and fragmented (Figure 6). This impinges progress in lowering emissions and adapting to climate change. The international community must urgently rationalize the landscape of international climate finance and should ensure that incremental resources pass, to the extent possible, through the GCF as the world's climate finance mechanism. Over time the GCF should become the leading multilateral mechanism for investing in climate change mitigation and adaptation, with smaller multilateral and bilateral institutions investing alongside it to further reduce transaction costs and increase coherence.

Figure 6: Climate finance architecture



Source: Nakhoda and Watson (2013). See source for abbreviations.

- Feeder fund for thematic pooled financing mechanisms to ensure system coherence:** As mentioned above, the world must avoid a situation where different funds finance the same programs separately. For example, the GCF and the GFATM must avoid uncoordinated financing of national malaria control programs. Since the GFATM has the expertise and systems in place to solicit, appraise, fund, and monitor national health strategies, the GCF should act as a feeder fund to the GFATM for health-related investments. Similar arrangements should be considered for biodiversity and ecosystem services (in partnership with the GEF), agriculture (with the proposed Smallholder and Nutrition Fund), and other core SDG investment needs. This would free the GCF to focus on co-financing major infrastructure-related programs and leveraging private capital through the effective use of public resources.⁵⁵
- Promoter and co-financier of national climate change strategies:** Countries need coherent long-term plans of action to reduce emissions and adapt to climate change. Currently, a number of planning tools exist, but they are poorly coordinated and rarely backed up by adequate international co-funding. The GCF can provide macro-economically significant co-financing to national climate change strategies. This will help ensure greater coherence and visibility in the fight against climate change.

⁵⁵ This feeder-fund function is currently not foreseen in the GCF design document, but it should be explored as a matter of priority.

- **Resource mobilization through assessed contributions:** As discussed more fully in later sections on innovative mechanisms for mobilizing concessional financing (section 6.3.6) and climate finance (section 6.3.5), climate finance for global public goods, as well as adaptation and mitigation measures in poorer countries, should be mobilized from countries with high greenhouse gas emissions. The GCF has a unique opportunity to levy assessed contributions from all developed and high-income countries to ensure adequate and predictable public financing, reaching some \$100 billion per year. Other countries with particularly high per capita greenhouse gas emission will also be invited to contribute. We will return to the question of how to mobilize climate finance in section 6.3.6.
- **A vital component of an international climate agreement:** The commitment to launch the GCF and to provide adequate climate finance was a central component of the 2010 Cancun agreement of the UNFCCC Conference of the Parties. A transparent and effective Green Climate Fund will be the glue that holds together a long-term climate agreement to stay within the 2°C target.

Just like pooled financing mechanisms in other areas surveyed in this working paper, the GCF has a central role to play in organizing the international response to climate change. As a mechanism without a banking license (currently the World Bank serves as the Trustee of the GCF).⁵⁶ The fund should co-finance national programs and participate in project finance alongside other finance mechanisms. Key design features for a successful GCF might include:

- **A mitigation window with a strong private sector facility** to provide concessional co-financing on a first-loss or *pari passu* basis, particularly for infrastructure projects. Financing through this facility should be coordinated with international risk-mitigation mechanisms, including the Multilateral Investment Guarantee Agency (MIGA), regional public infrastructure windows operated by the World Bank, the Regional Development Banks or other multilateral financial institutions (section 5.9), and private-sector mechanisms. Where appropriate, the GCF might also provide program support against national climate change strategies. It could also become a critical financier of Infrastructure Project Preparation Facilities discussed in the infrastructure section (5.9.2).
- **An adaptation finance window** to provide grants or concessional loans to adaptation projects and programs. As highlighted above, many adaptation measures are ‘development interventions’ (e.g. water management, improved agricultural practices/R&D, control of vector-borne diseases, climate resistant infrastructure), so the adaptation window should prioritize acting as a feeder fund to other pooled financing mechanisms, such as the GEF, the GFATM, or the proposed Smallholder and Nutrition Fund. Only adaptation programs that cannot be financed through other pooled financing mechanisms (e.g. higher sea walls or climate-resilient urban infrastructure) should be directly co-financed by the GCF. In this way the GCF will help reduce transaction costs and avoid duplication. As appropriate, the GCF might also provide program support against national climate change strategies.
- **RDD&D financing window** to finance technology development and diffusion, including technology transfer. Such a window could co-finance licensing fees of new technologies and provide research grants for research priorities (section 5.10).

⁵⁶ See IDFC (2013) for a discussion of different business models for the GCF.

5.8.4 Other non-financing priorities in the fight against climate change

Transitioning to a low-carbon economy that ensures human well-being and is consistent with the 2°C limit is perhaps the most complex challenge that humanity has ever faced. It will require, *inter alia*, a profound transformation of countries' energy systems that must be planned and financed over the long-term, i.e. through to mid-century. Since the energy system is at the heart of every modern economy, such deep transformations can only be pursued around long-term pathways for deep decarbonization that 'back-cast' from the global benchmark of 1.67tCO₂e in energy-related average per capita greenhouse gas emissions by 2050 (IDDRI and SDSN 2014). These deep decarbonization pathways provide the long-term investment path that public and private actors need to pursue. See SDSN (2015c) for a more detailed discussion.

The members of the Deep Decarbonization Pathway Project have prepared initial national deep decarbonization pathways (DDPs) for fifteen of the largest global emitters of greenhouse gas emissions. Others are in preparation. Each pathway is organized around four main pillars: energy efficiency; decarbonized power generation; electrification of transport, heating, and other point emission sources; and emission reduction in non-energy emissions, including in industry. These pathways are in the process of being refined, particularly with regards to spelling out the country-level investment needs for deep decarbonization.

Every country except the poorest nations, which should focus on promoting access to modern energy sources, should prepare a DDP. Such DDPs should be transparent and publicly debated, including with key industries, such as energy, finance, transport, construction, steels, or cement. They should be revised in the light of emerging lessons and evolving technologies, and they should be compared and benchmarked internationally.

Long-term DDPs provide a framework for countries to develop and commit to short and medium-term targets and strategies for reducing greenhouse gas emissions (SDSN 2015c). In this way countries will ensure that their shorter-term measures are consistent with the long-term objective of deep decarbonization by 2050. So legally non-binding, long-term DDPs can become part of an international climate agreement under the UNFCCC, to inform the shorter-term Intended Nationally Determined Contributions (INDCs). Ensuring transparency and consistency of INDCs with global long-term benchmarks for decarbonization will build trust across countries, help identify technology benchmarks for deep decarbonization, and provide a framework for RDD&D (see below).

DDPs also provide a framework for establishing technology benchmarks that provide clear signals for the long-term RDD&D that is required for transforming countries' energy system. Well-designed benchmarks will be ambitious to be consistent with 2°C; be flexible to allow for many different technologies to 'win' (e.g. electric vehicles, fuel cells, hybrids running on biofuels); provide long-term clarity for business and governments to re-orient R&D programs; and are coordinated internationally as part of a climate agreement to ensure a level playing field. Technology benchmarks will also need to differentiate between countries according to the principle of common but differentiated responsibilities.

Examples for global technology benchmarks that could be incorporated in a UNFCCC agreement are outlined below. The target dates and benchmarks are indicative and need to be carefully reviewed

- Moratorium on development of new coal deposits and non-conventional fossil fuel reserves (e.g. oil sands, Arctic oil, deep-ocean oil, or methane hydrates) after 2015. Such moratoriums

would be lifted only in the event of large-scale diffusion of point source CCS (for coal) or air CCS (for oil);

- No new coal-fired power plants licensed for construction after 2018 except with CCS (2025 for low-income countries (LICs));
- All existing coal-fired power plants retrofitted with CCS, or closed, by 2030 (2040 in low-income countries);
- Carbon intensity of power generation <100 g/kWh by 2050;
- All new personal vehicles sold after 2030 with zero tailpipe emissions (2035 for low-income countries), and all commercial vehicles with electric, natural-gas power, or sustainable, low-carbon biofuels;
- All new residential and commercial buildings heated by electricity or co-generation after 2025 (2035 for low-income countries);
- Global standards on carbon dioxide intensities for appliances and industrial processes by 2025 (2035 in low-income countries).
- Other measures to reduce the emission of short-lived climate pollutants.

Section 5.10 on Public-Private Technology Partnerships describes how public-private partnerships can be established to set and achieve technology benchmarks.

5.9 Financing infrastructure

Infrastructure is critical for promoting economic growth, social inclusion, and environmental sustainability. Key infrastructure services include energy (power generation, power transmission and access, access to cooking fuels), drinking water and sanitation, transport and freight (roads, railways, mass transit, ports), and communication (fixed and mobile). Infrastructure investments to decarbonize the energy system are vital to stay within the internationally agreed limit of 2°C.

We cover infrastructure investments for basic needs, including access to core infrastructure services, in previous sections: universal access to electricity and modern cooking solutions (section 5.7) as well as universal access to safe water and adequate sanitation (section 5.5). Here we address residual infrastructure needs in energy, water, and sanitation, as well as the financing needs for transport infrastructure and telecommunications.

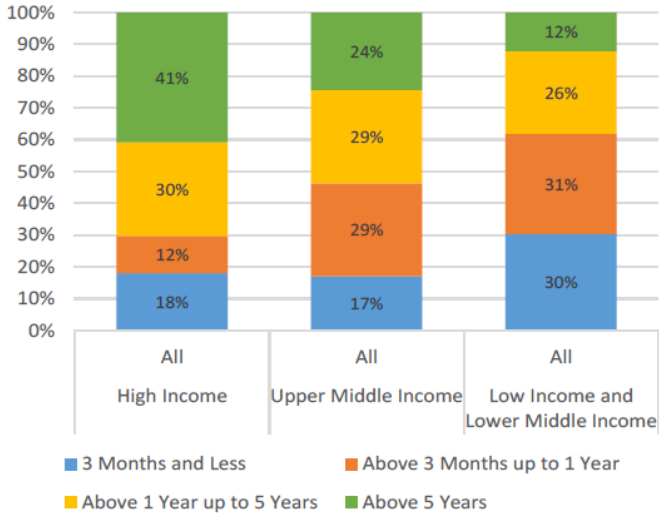
Infrastructure finance differs in several important ways from other investment requirements reviewed in this working paper.⁵⁷ First, private investors play a much larger role than in any other area, with the exception of commercial agriculture. Yet, varying degrees of public guarantees and co-financing are required in all infrastructure areas, particularly in poorer countries. The notable exception to this rule is mobile phone infrastructure, which is being financed entirely through private means in rich and poor

⁵⁷ See Ehlers (2014) for an excellent overview of the infrastructure financing challenges.

countries alike. Second, infrastructure investments can have a lifetime exceeding 30 to 70 years, and payback periods on capital investments are often in the order of 20-25 years. Such long-term investment tenors impose substantial risks on private investors, which must be mitigated on a country-by-country basis. Comprehensive global studies of infrastructure projects have proven significant and enduring cost over-runs in transport infrastructure: 44.7 percent for rail, 33.8 percent for bridges and 20.4 percent for roads, making it even more challenging for private financing of infrastructure (Flyvbjerg 2009). Third, a growing share of infrastructure investments is made by local governments and municipalities, requiring municipal bonds and other sub-sovereign financial instruments. Finally, infrastructure investment is project-based and much less amenable to the type of sector program that can deliver social service investments. Since infrastructure projects generate revenues in local currencies, but international investors tend to prefer dollar or euro-denominated debt or equity, currency mismatches need to be managed over the duration of an investment.

The investments required are high, but they are small in comparison with global saving of \$22 trillion per year and liquidity at a historical high (UN 2014). There is ample capital and liquidity, yet the world is facing a growing mismatch between long-term investment needs and short-term finance, particularly for infrastructure. This mismatch is particularly acute in lower-income countries, as Figure 7 illustrates for the case of bank loans.

Figure 7: Proportion of bank loan maturities by country income level



Source: Global Financial Development Report 2015 cited in World Bank (2014c)

Current flows of infrastructure finance are vastly insufficient to meet investment needs – particularly if one factors in incremental investment needs to curb greenhouse gas emissions and adapt to climate change. The situation might get worse as national and local governments’ balance sheets deteriorate, particularly in developed countries, and some private investors reduce their exposure to long-term infrastructure investments in response to adverse global rules and regulation (section 5.9.2). Raising the required finance for infrastructure investments will therefore be one of the biggest challenges for implementing the post-2015 development agenda.

5.9.1 Infrastructure investment modalities

Much infrastructure is financed off balance sheets by governments (national and local) and large corporations through sovereign, municipal, or corporate bonds, respectively. Most of this financing is mediated through capital markets or direct bond issuance to institutional investors. Challenges arise when the balance sheets of sovereign and corporate investors cannot support adequate bond issuance (as is the case in many low-income and lower-middle-income countries) or when the needed equity investment must be raised from third parties.

In such cases, project finance modalities whereby investors take direct non-recourse positions in an infrastructure project are used. This sub-component of the global infrastructure market is dominated by banks, which provide funds for some two-thirds of global project, followed by institutional investors (18 percent) and governments (10 percent) (Inderst 2013). According to Inderst and Stewart (2014) institutional investors in OECD member countries have over \$79 trillion in assets under management, but have only around 1 percent of their portfolio directly invested in infrastructure assets. Furthermore, only some 8 percent of assets under management by OECD institutional investors are truly long-term (WEF 2011). The principal impediments towards greater participation of institutional investors in infrastructure project finance are (i) the long delays in structuring project finance deals and the highly specialized expertise required for structuring and appraisal, and (ii) the low liquidity of project finance investments.

The project finance market for infrastructure needs to grow rapidly, particularly to meet investment needs in developing countries and their municipalities that have only limited access to international bond markets. Since institutional investors, such as pension funds, insurance companies, endowments, and sovereign wealth funds manage a large share of global saving and have relatively long investment horizons, their low share of direct infrastructure investments points to a major mismatch which must be addressed by FfD.

5.9.2 A global partnership for infrastructure development and finance

A global partnership for infrastructure development and finance in support of the post-2015 development agenda should focus on six priorities to unlock private capital in a responsible manner, in order to meet the infrastructure investment needs and complementing the public investments in energy, climate mitigation, and water and sanitation described above. Taken together these six priorities can help deliver better infrastructure at a lower cost. In fact, Palter and Pohl (2013) argue that up to \$1 trillion or 40 percent of needed infrastructure investments can be saved annually through optimizing project identification and selection, streamlining project delivery, and getting more out of existing infrastructure.⁵⁸

1. National Public Investment Systems and Infrastructure Project Preparation Facilities

It is often said that the principal challenge in infrastructure finance lies in mobilizing private capital, but in many countries the biggest bottleneck is the lack of bankable or 'shovel-ready' projects supported by experienced and well-funded promoters. It takes several years for a project to reach a stage when banks and other investors can consider direct investments. During this time the project suffers the greatest risks of failure, and aborted projects do not generate a financial return for investors. As a result the

⁵⁸ The magnitude of the projected savings is surprising given the fact that most infrastructure projects are delivered behind schedule and over budget (Flyvbjerg 2009).

appetite and ability of the private sector to fund early-stage infrastructure development activities and to take on the development risk is very low.

There are two complementary ways in which the shortfall of bankable projects can be addressed. First, countries need competent and effective teams of public sector officials who can design infrastructure projects, craft effective public tendering documents and processes, and evaluate and supervise complex engineering projects. Many countries have cut back on such public ‘planning’ and rely entirely on private intermediaries who do not fill this critical need. The problem is even greater at municipal levels, since cities have growing responsibilities for managing infrastructure investments, but tend to lack the skills needed for successful structuring and execution. For example, none of Latin America’s big cities has a metropolitan transport authority that can design and supervise the construction of an integrated transport system.⁵⁹ Many African governments do not have the capacity to support and accompany the preparation of more than 1-2 privately-financed greenfield infrastructure projects at any one time. As a result, many worthwhile projects are not developed to a point where they can become bankable.

Countries therefore need to invest in their public capacities for investment promotion and infrastructure planning. This will require dedicated Infrastructure Project Preparation Facilities (IPPF) and management teams, which must have the authority to standardize and streamline procurement and project approval processes across a number of ministries and other authorities. They should also be able to work directly with sub-national governments, including local authorities, in designing and executing infrastructure investments. Chile has dramatically improved the efficiency of its capital spending after setting up a National Public Investment System. In other countries, public officials tend to lack the skills or the political independence to make sound investment decisions on infrastructure (see also WEF 2014, UNCTAD 2014).

Each IPPF should have access to substantial resources to co-finance the project preparation. Such ‘readiness funding’ will help generate bankable projects, which in turn can attract private financing. ODA and other forms of concessional public finance could and should finance effective IPPFs in low-income countries and for transboundary projects that present higher political risks. Given the small size of many African countries and their corresponding reliance on regional infrastructure, such infrastructure teams could be housed at the sub-regional level, perhaps in the Regional Economic Commissions. Financing for such teams could come from the World Bank, IDA, Regional Development Banks, the GCF, or bilateral partners.

A second, complementary approach is to promote a greater level of private participation in the early-stage preparation of infrastructure projects to help alleviate capacity constraints. To this end, private developers could be granted access to the IPPF funding at the same terms as public counterparties.

The need for effective IPPFs has been recognized by multi- and bi-lateral development partners who have set up a multitude of project preparation facilities. However, most of these facilities suffer from important limitations. They tend to focus on fairly mature projects where the risk is lowest, but where the value added provided by the project preparation facility is also lower. Most facilities have low funding limits that can only support the task-based bankability of projects. Finally, most facilities resist investing in the ‘upstream’ phase of projects and supporting the entire development process through to financial close. Yet, this is exactly where the bottlenecks are, and they must be removed. FfD can make a

⁵⁹ See The Economist, May 17, 2014.

major contribution towards infrastructure development by mobilizing financing for effective IPPFs that work with public infrastructure teams and/or private project developers.

2. Effective subsidy and transparent investment risk-mitigation mechanisms

Given the scale and diversity of infrastructure finance needs, as well as the need for investors to participate in the complex and often bespoke structuring of each project, it seems unadvisable to establish a global infrastructure fund. Instead, another urgent need is to strengthen and streamline international systems for credit enhancement and managing risk that is unrelated to a project's commercial viability. Examples of credit enhancements include first-loss equity tranches, loan guarantees, or subordinated debt at concessional terms. Key risks that private investors find hard to manage alone are payment risks and political risks, such as expropriation or regulatory changes (including retro-active changes to feed-in tariffs). Of these the risk of non-payment by government or private counterparties, including retroactive changes to feed-in tariffs for power-purchase agreements, typically ranks highest.

The World Bank, largely through its Multilateral Investment Guarantee Agency (MIGA), and Development Finance Institutions (DFIs) in many high-income and upper-middle-income countries, provide credit enhancement services, but the systems are small, fragmented, and highly risk-averse. Private investors need bigger and more standardized tools for credit enhancement and guarantees (Venugopal and Srivastava 2012).

MIGA is the biggest multilateral political risk insurance provider insuring around \$1-2 billion a year in new investment. Other important public players are the US Overseas Private Investment Corporation (OPIC) and the African Trade Insurance Agency (ATIA). Yet, MIGA has only paid out 8 claims since its inception in 1988, totaling \$16 million. This hardly represents a level of risk-taking commensurate with existing opportunities in developing countries (Kharas and McArthur 2014). A more effective MIGA that has greater capacity for underwriting and due diligence with streamlined project approval processes would be able to support a greater number of projects. Enhanced MIGA access to the reinsurance market would enable MIGA to support more marginal projects, particularly in countries with weak counterparties, including loss-making utilities. Such a more effective MIGA should be a centerpiece of global risk mitigation mechanisms for infrastructure investments.

It is sometimes argued that political risks should be covered through private insurance alone, but this misunderstands the role that the World Bank plays. Governments tend to be very careful to honor agreements with the World Bank and the larger DFIs since failure to do so can trigger hold-outs on other investment projects and programs. As a result, no private party could offer similar guarantees against non-payment at a comparable price. In fact, political risk insurance from companies, such as Lloyd's and the 'companies markets' (e.g. Zurich, AIG), does not tend to cover payment risk in low-income countries, which constitutes by far the biggest risk for international infrastructure investments.

A second priority is to increase the contribution of non-traditional development finance institutions from non-DAC countries, particularly China and other BRICS. These development partners frequently offer concessional or semi-concessional loans for physical infrastructure development, which complements the grant financing for budget support and social sectors provided by many DAC member countries. Some have also pioneered infrastructure-for-resources deals that reduce recipient countries' need for upfront finance.

Non-traditional providers already contribute 38 percent of total infrastructure financing in developing countries (\$8 billion in 2006), the same order of magnitude as private infrastructure finance, and significantly greater than traditional ODA financing (\$5 billion or 22 percent of total financing) (Foster 2009, cited in World Bank 2013a). In this regard the recently announced New Development Bank and the Asian Infrastructure Investment Bank have the potential to become important actors complementing existing development finance institutions.

Third, the capacity of Multilateral Development Banks (MDBs), like the International Bank for Reconstruction and Development (IBRD), the International Finance Corporation (IFC) or the Regional Development Banks, to make debt and equity investments, including through first-loss tranches of credit, should be enhanced. At least three challenges warrant action to use available MDB resources more effectively and to target their use in the countries that need them most:

- Many countries, particularly upper-middle-income countries, use MDBs as contingent funding vehicles by keeping committed MDB lending capacity at hand without using it for projects. Such undisbursed balances of committed loans can make up about a third of total loan commitments and are unavailable to finance real projects elsewhere. This inefficient practice can be curtailed by charging higher commitment fees and actually enforcing them.
- Most MDBs charge interest rates that are too low to cover administrative costs. For example, Lerrick (2006) notes that IBRD loan revenues have fallen short of administrative costs by a cumulative US\$3 billion over the period 1994-2006. Such highly subsidized borrowing is particularly widespread for upper-middle-income countries, and it comes at the expense of IBRD lending to lower-middle-income countries. MDBs should be required to offer differentiated pricing for loans to avoid unnecessary subsidies and increase their overall lending capacity.
- MDBs and other international financial institutions have limited capacities to lend directly to sub-sovereign entities, such as city governments, even though the bulk of infrastructure investment needs are in urban areas. The challenges of sub-sovereign lending have been discussed for a long time, but until now precious little progress has been made in enhancing local authorities' access to international concessional loans and guarantee instruments.

Fourth, most infrastructure lending occurs in international currencies, such as the US dollar or euro, but the revenues that will pay back outstanding loans accrue in local currency. Currently, it is extremely difficult for investors and borrowers to hedge currency risks over sufficiently long periods to adequately de-risk this dimension of project finance, particularly for the currencies of smaller low-income countries. The ability of the MDBs to offer currency hedges in support of infrastructure investments should be increased through the greater use of international currency swaps, including with countries' central banks.

A final priority is to harmonize MDB and DFI standards and investment promotion windows. Significant progress has been made in coordinating standards among some European DFIs, but the financial structuring of credit enhancements and risk-mitigation mechanisms still varies significantly across institutions. Similarly, social and environmental standards for project appraisal and approval tend to differ, which imposes unnecessarily high transaction costs on borrowers and syndication agents.

In return for better risk-mitigation and insurance mechanisms, private investors need to commit to transparent structures and financing arrangements for infrastructure projects, to avoid the abuse of

public funds. For example, pricing structures for infrastructure projects should be disclosed and be benchmarked against similar projects elsewhere to avoid cases where governments and tax payers shoulder an undue share of the financing burden. This applies in particular to power projects, where estimates of the levelized cost of power generation should be published to ensure that the projects deliver fair value for money.

3. Sound global rules to mobilize private finance and disclosure requirements

Some global rules undermine resource mobilization and private investments in long-term infrastructure. Important examples are global standards for the regulation of banking (Basel III) and insurance (Solvency II); investment rules; sector-specific rules, such as unbundling rules in the power sector; and global standards for disclosure and transfer pricing (section 6.2). Reforming them will be a central priority for meeting the SDG investment needs in infrastructure in all countries.

New global standards for national regulation of the financial and insurance industries, which were tightened in the wake of the 2008 financial crisis to increase the stability of the financial system, are having unintended but severe impacts on mobilizing private investment for infrastructure. Spencer and Stevenson (2013) review the impact of the Basel III and Solvency II standards for banking and the insurance industry, respectively, showing that the revised standards increase the cost of long-term obligations on the balance sheets of banks and insurance companies. This in turn will increase bank disintermediation from long-term loans, thus making it harder to finance infrastructure projects. It will also increase the re-financing risk for long-term infrastructure investments.

The complex structuring and syndication of long-term infrastructure projects has traditionally been led by banks who tend to be the only market actors that have the full range of expertise available in-house. There is growing concern that the changing regulatory landscape and banks' declining readiness to invest long-term will reduce the number of infrastructure structuring teams. Even if other sources of private finance, notably from institutional investors, are unlocked, the lack of project structuring and syndication expertise may become a serious bottleneck towards delivering the infrastructure investments the SDGs will require.

Another regulatory challenge stems from unbundling rules that require separate ownership for transmission and generation infrastructure in order to prevent monopolies and increase competition in the power sector (Kaminker *et al.* 2013). As an unintended consequence, these rules increase counterparty risks and uncertainty for long-term investments in electricity infrastructure, which in turn lowers private investor's appetite for investing in such assets.

The World Bank (2013a) highlights a third regulatory challenge that affects developing and developed countries alike. Tax revenues are increasingly lost to abusive transfer pricing, opaque corporate disclosure rules in many jurisdictions, and widespread tax evasion (see also Collier *et al.* 2013). According to Hollingshead (2010), between 2002 and 2006 developing countries might have lost between \$98 billion and \$106 billion in tax revenue to abusive transfer pricing alone. We return to these issues in section 6.2.

It will be difficult and perhaps inadvisable to review the current global regulatory standards, but the design of upcoming Basel IV and Solvency III regimes should ensure coherence between the objectives of financial stability and the need to scale up long-term investments in infrastructure and climate mitigation. Similar coherence checks need to be conducted for other global rules and standards that

apply to all countries, including but not limited to trade regimes, intellectual property standards, accounting standards, listing rules on international stock exchanges, corporate reporting, mandatory disclosure standards, environmental norms, and labor standards. To this end the SDSN proposes that the SDGs include a target on ensuring coherence between such international rules and achieving the SDGs (SDSN 2013, Target 10a), including associated indicators (SDSN 2015a).⁶⁰

Finally, rating agencies tend to assign emerging country ratings as the default rating for infrastructure project. However, a well-designed infrastructure project may deserve a higher rating, which would in turn reduce its cost of capital and mobilize other funds.

4. Harmonized infrastructure investment platforms and standardization of investment structures

The financing structures for infrastructure projects have become very complicated with great differences across projects, even when the projects are of a similar type. Today only large investment banks have all the technical expertise in-house to structure complex infrastructure transactions. The complexity of infrastructure finance combined with the sometimes long periods to take a project from a feasibility study to financial close (which can take up to several years) are two important reasons why institutional investors and the funds they manage find it difficult to invest in infrastructure.

There is significant scope for harmonizing investment structures through harmonized infrastructure investment platforms,⁶¹ particularly for core infrastructure in developing countries. In recent years, institutional investors from China and other emerging countries have demonstrated how the structuring of infrastructure projects can be simplified to allow for rapid execution. Public and private investors from high-income countries, including the multilateral development finance institutions, can learn a great deal from these experiences.

Several important international infrastructure investment platforms and mechanisms for greater standardization have been launched. They all deserve prominence and additional support:

- **Global Infrastructure Initiative and Global Infrastructure Hub:** The Brisbane G20 summit has endorsed the Global Infrastructure Initiative, a multi-year program to support public and private investments in infrastructure. A dedicated Global Infrastructure Hub, located in Sydney, will be launched to provide leadership and coordination for initiatives to scale up public and private investments in infrastructure (G20 2014). This initiative can make an important contribution towards drawing greater attention to infrastructure investments and overcoming fragmentation. However, to be consistent with achieving the SDGs, the Global Infrastructure Initiative and the Global Infrastructure Hub must pay greater attention to the need for *sustainable* infrastructure investments.
- **Asian Infrastructure Investment Bank and New Development Bank:** China and other emerging economies have made very promising announcements on funding infrastructure investments. In

⁶⁰ Of course, similar coherence checks should also be applied by national and sub-national governments to ensure coherence in national and local implementation frameworks.

⁶¹ The national and regional infrastructure teams and pipelines described under priority 1 above can further harmonize investment structures for infrastructure projects.

particular, the Asian Infrastructure Investment Bank and the New Development Bank recently announced by the BRICS countries promise to become important infrastructure investors. Along with regional infrastructure funds, such as the Silk Road and Maritime Silk Road, announced at the 2013 APEC Summit in Beijing, they will have tremendous opportunities for streamlining investment structures to overcome unnecessary fragmentation. We welcome broad participation in these new mechanisms which, if well designed, will complement other initiatives on infrastructure.

- **Global Infrastructure Facility (GIF):** The World Bank's GIF promises to (i) help improve the enabling environment for infrastructure investment and project definition (ii) support project preparation and investment feasibility; (iii) provide transaction support and financial structuring; and (iv) provide financial arrangement and credit enhancement (World Bank, 2014b). The GIF proposes to establish a broad-based partnership involving public and private investors in infrastructure projects. It is early days for the GIF, but the facility can make an important contribution to infrastructure financing in middle-income countries. It seems that more proactive approaches would be needed to get more projects in low-income countries off the ground.
- **Bilateral initiatives:** Several other initiatives exist to coordinate infrastructure investments from public and private sources. In particular, European Development Finance Institutions, such as DEG, FMO, PROPARCO, or the Danish Climate Investment Fund, have been at the forefront of increasing provider harmonization and coordination. All these efforts go into the right direction, but they remain sub-scale.

5. Effective recycling of bank capital for infrastructure investments

Banks are the main private financiers of infrastructure investments, but their ability to increase investments is curtailed by changes to the global rules (see priority 3 above), which discourage long-term investments, as well as a sub-scale secondary market for infrastructure projects. A more effective secondary market could draw in more infrastructure financing from institutional investors who typically do not take on planning, construction, and other risks for new infrastructure projects, but like to invest in operational facilities. It would also reduce banks' compliance costs for Basel III capital adequacy standards and allow them to recycle their capital more effectively.

To ensure effective recycling of bank capital, much more needs to be done to standardize infrastructure investments (priority 4) and pre-plan bond refinancing as part of initial infrastructure finance plans and national public investment systems (priority 1), strengthening de-risking tools from the MDBs (priority 2), and currency hedging instruments. Moreover, investment banks and multilateral finance institutions can do more to enhance the securitization of infrastructure investments according to the needs of institutional investors.

6. Deeper local saving pools for infrastructure investments at local, national, and regional levels

Most infrastructure finance is mobilized through bonds (sovereign, municipal, or corporate). Because of the high costs of managing long-term currency risks in most developing countries, infrastructure bonds tend to be required in the local currency of the project and must therefore originate from countries' local saving pools.

Developing countries, particularly in Africa, must therefore develop and deepen their local savings pools so that they can be used to finance infrastructure investments without resorting to Eurodollar financing. Fortunately, with the rising middle class in most developing countries the potential for saving pools denominated in local currencies increases rapidly. Where adequate national savings exist, governments can expand the domestic investor base by supporting the growth of domestic insurance and pension funds. They can also reduce market information asymmetries by promoting transparent market benchmarks and data.

International organizations, including MDBs, can support this process through (i) advice on institutions and regulations, (ii) credit enhancement to increase attractiveness of local-currency bond offerings, (iii) regional bond funds to increase scale, and (iv) their own issuing of local-currency bonds (World Bank 2014c).

5.10 The vital role of the World Bank's International Development Association (IDA)

The international Development Association (IDA), the World Bank's fund for the poorest countries, provides grants and concessional loans to IDA-eligible countries (Annex 1). The IDA offers high-quality development assistance since it is heavily focused on the poorest countries, provides large volumes of grants with high predictability over several years or highly concessional loans with long tenors and grace periods, offers flexibility to address recipients' priorities, and can disburse fairly rapidly (World Bank 2014d). The IDA is consistently ranked as one of the most transparent aid mechanisms (Publish What You Fund 2014). As a result, the IDA plays a central role in financing countries' social services and economic development priorities.

The IDA has played a vital role in supporting the MDGs and should be further strengthened in support of the SDGs. FfD needs to underline the IDA's role in support of sustainable development financing. The IDA itself should reflect on how it might deliver the most strategic value as part of the overall financing landscape for the SDGs.

One of the greatest benefits to developing countries is the IDA's ability to provide macro-economically significant resources against country-led programs, and this without any earmarking. This flexibility makes the IDA the instrument of choice to co-finance government priorities that cannot be co-financed through other bilateral or multilateral mechanisms. It might therefore seem contradictory to propose thematically-focused financing mechanisms when the IDA has been so successful as an un-earmarked pooled financing mechanism. However, a careful analysis shows that this is not the case.

Thematically-focused pooled financing mechanisms (like the GFATM or the proposed Global Fund for Education) and the IDA each play specific and complementary roles. Thematic mechanisms can help mobilize epistemic communities and partnerships around the challenges of scaling up public-private investments to achieve specific SDGs. Successful partnerships depend on sustained advocacy, metrics, back-castings, technology development, M&E, and so forth (section 4.3.1), which in turn requires a high degree of focus. Only thematic pooled financing mechanisms can provide such focus and promote sustained learning in specific areas.⁶²

⁶² Of course, such thematic mechanisms need to strike the right balance between breadth and depth. For example, the health sector clearly needs more broad-based funding for health systems to complement the highly successful vertical programs supported by Gavi and the GFATM.

The IDA, on the other hand, provides the flexibility that countries need in order to mobilize resources for (i) investment needs that are too country-specific for global funds, such as infrastructure or industrial development; and (ii) other SDG priorities that are underfunded. Through its flexibility, the IDA complements thematic pooled financing mechanisms. A successful SDG financing architecture will require a strong IDA and effective thematic funds in key areas.

5.11 Public-Private Technology Partnerships for the SDGs

As emphasized throughout this working paper, achieving the SDGs will require the rapid deployment of new sustainable technologies such as low-carbon energy and climate-resilient high-yield crops. In many cases, these technologies already exist but are under-utilized because of poverty or under-investment in public goods. In many other cases, however, the relevant technologies are still pre-commercial or not even yet developed at an experimental stage. In such areas, the global community needs to adopt strategies for ‘directed technological change’ through public-private partnerships to accomplish targeted technology breakthroughs.

5.11.1 The complex art of promoting new technologies

Technology is sometimes naively described as emerging from ‘blue-sky’ thinking in a curiosity-driven research process. While this has been true for some technologies in the past, it is just as true that key classes of technology have been consciously developed and promoted through public policies, often driven by military considerations but very often also by civilian needs, such as the 19th century imperative to increase food production in the face of rapid population growth. The list of modern technologies that were developed as a result of targeted policy efforts and financing supported by bespoke public-private partnerships is too vast to enumerate, but would include the following:

- Aviation and avionics
- Nuclear technologies (power, medicine, research, weaponry)
- Space sciences
- Radar
- Semiconductor technologies
- Integrated circuits
- Computer design and architecture
- The Internet
- Nanotechnology
- Molecular biology
- Genomics
- Green-revolution high-yield seeds
- Various vaccines
- HIV/AIDS medicines and diagnostics
- Malaria medicines and diagnostics
- Self-driving vehicles

This is just a sampling of a much larger list, but it makes the point that today’s technological capacities did not emerge through the tinkering of individual inventors, nor the work of heroic entrepreneurs and private companies alone, though they indeed played a role. Government stood resolutely behind many

breakthrough technologies in their early stages. In modern times, the US Government has played the most important role in this process for a range of innovation systems. The largest foundations, including the Rockefeller Foundation in the 20th century and the Gates Foundation in the 21st Century, have also had considerable influence, most importantly in the health and agricultural sciences.

The Breakthrough Institute (Jenkins *et al.* 2010) has compiled a vivid and non-technical description of how key technologies were developed, showing that even the iPhone could not have been developed by Apple without long-term public-private partnerships on technology development (see also Mazzucato 2013). Even the ‘shale gas revolution’ in the United States, which is widely attributed to private sector ingenuity, has its roots in public-private technology partnerships that started in the 1970s and without which hydraulic fracturing of shale would not have reached commercial viability in the early 21st century (Trembath *et al.* 2012).

The need for public-private technology development partnerships is a direct consequence of the ‘non-rival’ nature of knowledge goods (section 3.1). For-profit markets underprovide knowledge goods: either these goods are made freely available (such as with basic scientific knowledge) and therefore do not generate a return for private inventors, or they are held by temporary monopolists protected by patents, which in turn restricts their adoption and diffusion. Either way, the development and diffusion of technology is less than optimal, and the poor may be hurt the most. In particular, complex new technologies will be under-provided by markets. As a result, public (co-)financing is needed to help generate and diffuse new technologies. This will be especially important for sustainable development, since deep and rapid technological change will be the hallmark of success in achieving a sustainable-development trajectory. Global public financing will be needed to promote research and development, pilot new technologies, and promote their rapid diffusion to low-income countries.

5.11.2 Priority technology challenges for the SDGs

Achieving sustainable development will require many new technologies in key areas. Prominent examples highlighted in this working paper include:

- Improved crop varieties for climate resilience and resource efficiency
- Improved practices to increase resource efficiency in agriculture, livestock, and fisheries
- Low-carbon energy sources and systems, including energy storage
- Major advances in energy efficiency
- New vaccines, medicines, and diagnostics
- Information technologies for massive education and training at all levels
- Advanced monitoring and sensing systems for ecosystem management
- E-governance to support participation, transparency, and efficiency in governance

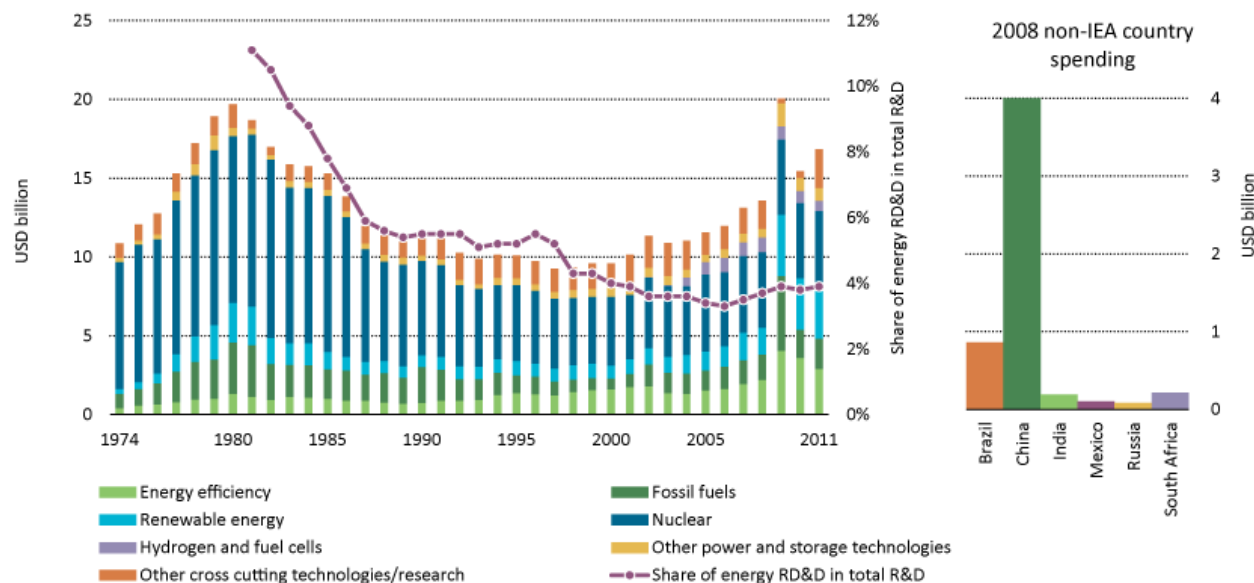
These technologies for the SDGs require targeted public-private partnerships for technology. They complement other kinds of market-driven innovation and technological upgrading. Both the targeted and market-driven technological changes contribute to long-term economic development. FfD should

focus in particular on the sustainable development technologies that require targeted investments and public-private partnerships.

5.11.3 The inadequacy of today's investments in new technologies

Before turning to how such public-private partnerships might be organized and financed, it is important to underscore the inadequacy of today's technology financing. It is sub-scale and does not prioritize its resources towards the technologies needed for sustainable development. Figure 8 shows public expenditure on energy R&D in member countries of the International Energy Agency (IEA). Energy R&D expenditure as a share of total R&D expenditure has fallen steadily since the 1980s and now accounts for a mere 4 percent of total spending. Trends for the United States, the single biggest investor in science and technology, are similar. Such paltry spending on energy R&D is incompatible with the depth of the transformation and the need for new technologies that staying within the 2°C limit requires (IDDRI and SDSN 2014). Moreover it is dwarfed by the estimated \$88 billion in public subsidies and incentives given each year to new fossil fuel exploration (Bast *et al.* 2014). Based on a careful review of clean energy R&D needs, the IEA (2010) estimates that current energy R&D expenditures of roughly \$10 billion will need to be increased by \$40-90 billion and that at least half of this investment gap would need to come from public sources.

Figure 8: Energy R&D expenditure in IEA and key non-IEA countries



Source: IEA (2013)

Similar mismatches between opportunities and the need for new technologies on the one hand and actual investments in technology development on the other exist in other SDG priority areas as well. For example, section 5.2 highlights the importance of mobilizing ICTs for education, which has so far largely been missed in international cooperation. In spite of rapid progress under the MDGs, important technology gaps also exist in the health sector (section 5.1.3).

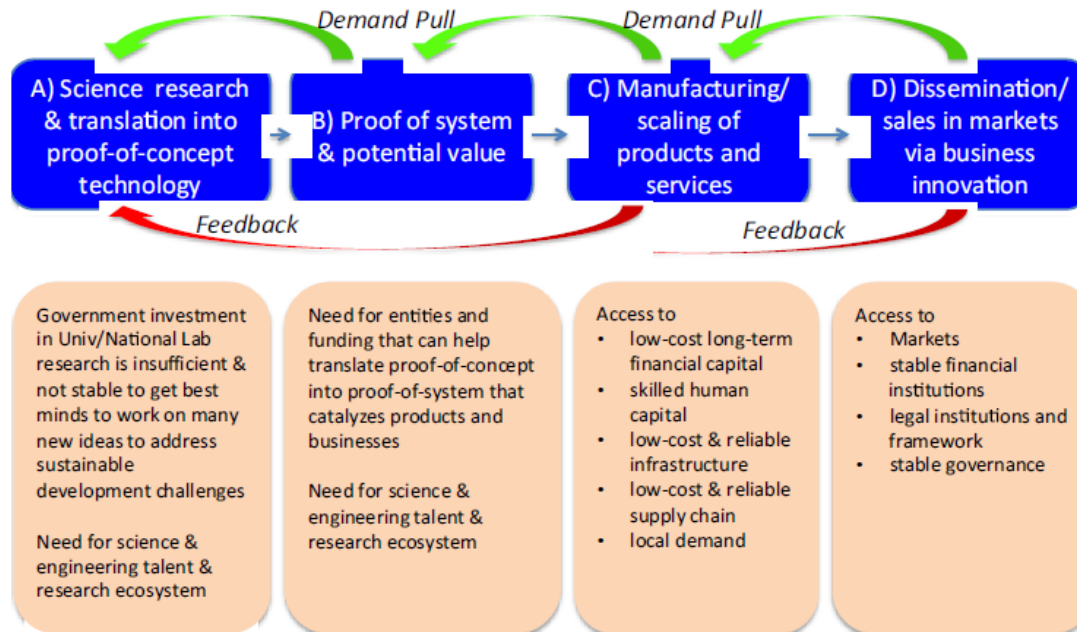
The global gap in R&D expenditure hides tremendous variation in R&D spending between countries. On a per-capita basis the difference in R&D investments between poorer countries and high-income countries can be as much as 2 to 3 orders of magnitude (NSF 2012).

Several international collaborative programs have been established to promote technology diffusion, but they suffer from two important weaknesses. First, existing programs tend to be sub-scale and underfunded. Second, they tend to focus mostly on the downstream side of the technology cycle, namely on exploration and creation of markets (Sagar and Majumdar 2014). In summary, the international architecture for technology development and diffusion is misaligned with the requirements of sustainable development. Unfortunately, the vital importance and complexity of technology development has received barely a mention in the report by the Intergovernmental Panel on Climate Change (IPCC 2014b, Revkin 2014).

5.11.4 Public-Private Technology Partnerships for technology development and diffusion

Innovation systems and the respective roles of private and public actors differ markedly across technology challenges and the maturity of each system (Mowery *et al.* 2010). Sagar and Majumdar (2014) describe the process of technology development from basic science to proof of system, manufacturing, and diffusion (Figure 9). Multiple feed-backs exist between the different stages, and each stage requires different types and volumes of funding. The funding transition from one stage to the next can create ‘valleys of death’ where promising technologies founder.

Figure 9: Stages of the technology cycle



Source: Sagar and Majumdar (2014)

Each investment partnership for the SDGs, but most notably the transition to low-carbon energy, sustainable agriculture, universal secondary education, and universal health coverage, will need dedicated Public-Private Partnerships for Technology (PPPTs) to achieve targeted breakthroughs in

technological performance. Contrary to the generally open-ended discovery process of science, such partnerships must be designed to address specific technology challenges and solve clearly defined problems. The difficulty in designing effective PPPTs lies in striking the right balance between goal-orientation and ensuring bottom-up innovation and creativity.

Such PPPTs can be organized around four key steps:

1. **Set bold goals for technologies and their adoption including interim milestones** to achieve the SDGs. Such goals should pay particular attention to the under-served needs of the poor, the natural environment, and other global public goods. Examples for such goals might include low-cost drought resistant maize by 2025 or zero tailpipe emission for light-duty vehicles by 2030.
2. **Identify the best modalities for public-private cooperation and cost-sharing** across all stakeholders (public, private, philanthropic, and others) for RDD&D in new technologies. Sagar and Majumdar (2014) identify three mechanisms: (i) project development partnerships, such as the Gavi-sponsored Meningitis Vaccine Project, which are akin to virtual R&D organizations, (ii) Advanced Research Project Agencies (ARPAs) modeled after the US Defense Advanced Research Project Agency (DARPA), which provide thought leadership, funding and stewardship of breakthrough technologies; and (iii) innovation prizes. Each public-private cooperation modality needs to determine how demonstration projects can be designed and funded.
3. **Organize and finance intellectual property** to give incentives for technological breakthroughs while respecting the urgency of access for all countries to the resulting technologies, including the poorest. Public finance will play an important role in making technologies more widely available, including through financing research that then stays in the public domain, as well as co-financing for licensing privately held technologies, particularly for developing countries. As described elsewhere in this section, the financing arrangements and modalities for technology diffusion need to be managed as an integral part of the public-private investment partnership for the SDGs.
4. **Ensure global monitoring and oversight of the PPPTs** that is ethical, transparent, and prudent.

Such technology development partnerships (sometimes referred to as product development partnerships) have been particularly successful in the health sector (section 4.2.4). As one example, the WHO (Kaplan *et al.* 2013) documents how well-designed product development partnerships can succeed in mobilizing the complementary expertise and resources of governments, business, science, CSOs, and philanthropic institutions in order to fill specific technology and product gaps.

The SDSN's Deep Decarbonization Pathways Project (SDSN and IDDRI 2014) is working with the World Business Council for Sustainable Development (WBCSD), the International Energy Agency (IEA), and the World Economic Forum to develop the prototypes for future PPPs for Low-Carbon Technology. These partnerships aim to define the priority technologies and performance targets that should be pursued by government and industry, with relevant timetables and milestones. Similar efforts should be organized in the other areas of concern, such as agriculture, health, and education.

6 Mobilizing resources for the SDGs: Public finance and private investments

All available analyses of financing needs converge on the finding that substantially more public and private finance is required across all dimensions of sustainable development (Table 2). Since public finance acts as a lever for private resources, particularly for long-term investments in infrastructure and public goods, the 2015 Conference on FfD must explain where new and additional sources of public finance will come from.

Domestic Budget Resources (DBR) will take precedence over international public finance, but International Development Finance (IDF), including ODA, other concessional public finance, Other Official Flows (OOF), and Private Finance Mobilized (PFM) through public resources will need to play an important role for the reasons explained in this working paper. We fully recognize the difficulty of raising additional tax resources, particularly given the fiscal constraints experienced by most developed countries, so creative answers will need to be developed. No stone can be left unturned in the quest for additional international public finance and opportunities to leverage more private financing.

6.1 Domestic Budget Revenues and efficient resource use

Under a post-2015 framework, there can be no ‘right’ to ODA or concessional climate finance unless a country is also mobilizing domestic resources within its means. Rapid economic growth in most developing countries has substantially increased DBR. Most of the absolute increase reflects growth in middle-income countries, though domestic public finance has also doubled in low-income countries (UN 2014). This trend should continue further, and it should be underpinned by clear standards and expectations for International Development Finance. However, OECD analysis (Atisophon *et al.* 2011) suggests that the greatest absolute potential for increased DBR is in upper-middle-income countries. The absolute volumes of additional DBR are limited in low and lower-middle-income countries.

6.1.1 Minimum standards for Domestic Budget Revenues

The SDSN (2013) has proposed that developing countries might be expected to raise at least 20 percent of GNI in domestic resources. This benchmark is consistent with standards referenced by UNDP (2010) that have also been cited by the IMF, OECD, UN, and World Bank (2011). Kharas and McArthur (2015) come to similar conclusions.

Countries’ ability to raise additional tax resources changes with income levels. For this reason we propose the following sliding-scale DBR benchmarks:

- For Least Developed Countries (LDCs): 18 percent of GNI.
- For other low-income countries (LICs): 20 percent of GNI.
- For lower-middle-income countries (LMICs): 22 percent of GNI.
- For upper-middle-income countries (UMICs): 24 percent of GNI.
- For high-income countries (HICs): at least 24 percent of GNI.

We underscore that these standards represent ‘stretch goals’ for many countries and may be too ambitious in some special situations, particularly in countries affected by conflict. Most countries will require time to achieve these benchmarks and should develop long-term strategies for doing so.

Providers of International Development Finance should discuss with recipient countries how they can support the gradual rise in DBR.

In many sectors, international minimum standards exist for DBR. Examples are the Abuja Targets in health and the Maputo targets for agriculture. These spending targets are important and can mobilize substantial additional resources if met. This is particularly so if these spending targets are embedded in a broader framework for shared responsibility, as embodied in the African Union Roadmap on Shared Responsibility and Global Solidarity for AIDS, TB and Malaria Response in Africa (AU 2012). However, the sum of existing sector targets for DBR may exceed the total resources that can reasonably be mobilized in some poor countries (Hagen-Zanker and McCord 2011), so a comprehensive approach to DBR is needed across all SDGs, as explained further below.

6.1.2 Strengthening DBR

The World Bank (2013a) and the Intergovernmental Committee of Experts on Sustainable Development Financing (UN 2014) provide a comprehensive summary of the steps countries can take to strengthen their DBR at the national level through raising additional revenues, cutting wasteful expenditure, and ensuring effective use of scarce resources. Given the widespread devolution of responsibilities for public expenditure and the rapid urbanization in many developing countries, DBR must also be strengthened at the sub-national level (see section 6.1.3 below). Since efforts to raise additional public revenues can have profound implications on countries' income distributions, countries should consider progressive taxation systems and other means to reduce inequalities.

The key priorities for strengthening DBR at the national level include:

Improve taxation capacity and tax compliance: Many countries must invest in strengthening systems to assess taxes, collect payments, and enforce compliance. This is an area where more and better international technical and financial support is needed, particularly in low-income and fragile countries. The OECD (2014a) points out that only 0.07 percent of ODA to fragile states is directed towards building accountable tax systems, even though these countries collect only 14 percent of their GNI in taxes.

Improve expenditure efficiency and address inefficient subsidy schemes: Governments around the world (not just in developing countries) need to strengthen expenditure and investment management, reform subsidy programs, and improve public procurement. UN (2014) highlights that in 2011, pre-tax energy subsidies amounted to \$480 billion, mainly in developing countries. While some of these subsidies provide important social safety nets for low-income households, there is scope for significant revenue generation through the phasing out of poorly targeted subsidy schemes. In making such changes to subsidy schemes, countries should consider the impact on inequality.

Open government data: Publicly accessible information on social service delivery, SDG outcomes, budgeting processes, expenditure management, and other government functions allows citizens and other stakeholders to follow money from resources to results, which can in turn increase the efficiency of public expenditure and reduce corruption. Uganda was famously able to increase the share of budgeted public expenditure reaching schools from 13 percent to over 90 percent by making information on budgets, disbursements, and results publicly accessible (Hubbard 2007). Many developed and developing countries should do more to open their government data at national and sub-national levels and to implement mandatory disclosure laws. The challenge of ensuring open government data is particularly acute in sub-Saharan Africa and the Middle East (IGB 2012).

Use natural resources effectively: Developing countries that are rich in natural resources need to harness sustainable streams of natural resource revenues and direct them towards poverty-reducing and growth-enhancing investments. Greater transparency in the allocation of natural resource concessions and the terms of contracts, as well as transparent accounting of all payments received by governments should be important priorities. Disclosing contracts, particularly biddable contracts, can increase DBR. For example, since Peru adopted a transparent public bidding system requiring disclosure of winning hydrocarbon contracts, there has been a consistent increase in royalty rates bid by the companies (Rosenblum and Maples 2009, Collier et al. 2013). Yet most natural resource companies operating in low-income countries are resident in another country, so international rules, including those on beneficial ownership, tax secrecy, abusive transfer pricing, and ‘publish what you pay,’ must be reformed as an urgent priority for FfD (section 6.2). FfD should support the Extractives Industry Transparency Initiative (EITI) to strengthen governments’ ability to collect greater natural resource revenues and manage them effectively.

Curb illicit financial flows: Weak national regulation and poor enforcement can encourage illicit financial flows, including through organized international crime, that are particularly detrimental to poor countries’ abilities to raise domestic resources. Just as in the case of natural resource use, international rules governing tax secrecy, simplified exchange of tax information, money laundering, and beneficial ownership must be reformed as a part of FfD in order to curb illicit financial flows (section 6.2).

National Development Banks: Finally, the Experts Committee on Sustainable Development Financing (UN 2014) also recommends that countries explore the contribution that national development banks could make towards mobilizing public and private resources and direct them towards investments in sustainable development. Such institutions can play a substantial role, particularly in larger middle-income countries that have significant domestic savings.

6.1.3 Resourcing sub-national governments including local authorities

The move from the MDGs to the SDGs and the greater focus on investments in infrastructure, resilience, and environmental sustainability increases the role that cities, local authorities and other sub-national governments must play in financing the post-2015 development agenda. Therefore, an important question is how sub-national governments can gain access to greater public resources – either through direct revenues or through transfers from the national government. Each country will pursue different strategies that respond to its national circumstances, but several core elements of fiscal decentralization can be identified (Ecological Sequestration Trust 2014).

Greater access to land-based revenues and value-added: Cities and local authorities can be granted parts of the land and real-estate value-added that is generated on their territory, in significant parts due to the public investments made by local authorities.. Land-based financing is particularly adapted to cities undergoing rapid demographic growth and economic transformation. Western cities largely financed their development in the 19th and 20th centuries through such means. Similarly, cities in China rely largely on land-based revenues and returns from the appreciation of real estate to finance their massive investments in infrastructure. Critically, such land-based revenues can be structured without requiring any direct transfers from national to sub-national governments.

Greater share of national taxes on income, consumption, or other activities: In many countries, local authorities receive a share of nationally collected value-added taxes (VAT) or taxation on incomes and company profits. For example, Morocco gives 30 percent of its VAT to local governments. Many other

countries resort to surcharges on personal income tax or local sales taxes that are channeled to local governments.

More efficient local taxation: Many local authorities already levy local taxes on a range of assets and value added, but the efficiency of these taxation systems is often low. Brazil, Chile, Colombia, and other countries have shown how various types of local taxes based on economic activities can be strengthened. Under an FfD framework, local authorities should reinforce local tax collection systems with help from national governments.

Increased access to debt instruments: Though technically not part of DBR, one of the biggest financing challenges for sub-national governments and local authorities concerns their access to loans and their ability to issue bonds. National development banks in many high- and upper-middle-income countries play a central role in developing debt instruments for local authorities, including support for municipal bond issuance. Yet, many developing countries lack effective national development banks, and MDBs that could help fill this gap are often unable to lend significantly to sub-national entities. Therefore, FfD should consider how regional and global facilities can increase access to debt finance for local authorities and other sub-national governments. This might involve a combination of national structures supported by national development banks, regional mechanisms with support from the regional development banks, and global mechanisms supported by MDBs and other international financial institutions.

6.2 International regulation and transparency to support DBR

International tax and secrecy havens, massive tax evasion, abusive transfer pricing, harmful tax competition, and corrupt natural resource deals significantly depress countries' ability to mobilize domestic resources (APP 2013, Collier et al. 2013, ONE 2014, Oxfam 2014, UN 2014, World Bank 2013a). ONE estimates that developing countries lose some \$1 trillion per year through illicit financial flows. Losses of similar magnitude are estimated by other sources cited in World Bank (2013a). Developing countries typically suffer the biggest impact on DBR, as documented by the IMF in the case of corporate tax competition (IMF 2014) or trade mis-invoicing (Baker et al. 2014). There can be no doubt that an FfD framework for achieving the SDGs and meeting the international climate objectives must address international rules on taxation, transfer pricing, and transparency.

Of particular importance for the poorest countries are widespread malpractices in the natural resource sector. Anonymous shell companies, trusts, other investment vehicles in offshore locations often hide beneficial owners, opening the door to corruption and defrauding the public purse. Opaque contract terms invite corruption and allow natural resource companies to abuse the better information and legal advice they have access to in comparison with host governments in poor countries.

Reforming the underlying rules is complex, but many international processes are already underway, such as the OECD's Action Plan on Base Erosion and Profit Shifting (BEPS) mandated by the G20 (OECD 2014f, 2014g). Yet, as described below, these processes are not sufficient to address the full set of reforms that developed and developing countries need in order to stop the race to the bottom on tax revenues from multinational corporations and wealthy individuals. In particular, the BEPS process does not involve developing countries as equal negotiation partners and therefore does not address many of the issues most pertinent to poor countries. Given the quasi-global scope of its rule-setting and its recent endorsement under the G20, the BEPS framework and process should be strengthened further,

but its governance must be expanded to give equal voice to developing countries that are not members of the G20.

While FfD will not substitute for any of these processes, it can and should adopt some core global norms. We highlight the following reforms drawing on APP (2013), OECD (2013b), ONE (2014), Oxfam (2014a):

Transparent beneficial ownership of companies, trusts, and other investment vehicles in all countries:

There is no serious, legitimate reason for hiding the true ownership of companies, trusts, or similar legal structures from the tax authorities, provided that essential safeguards on accessing confidential information are in place. Yet the practice is widespread, not only in offshore tax and secrecy havens but also in other developed and developing countries. Corporate structures and trusts whose ownership is unclear are often at the heart of murky natural resource deals, abusive transfer pricing, and corruption in developed and developing countries. As part of an FfD framework, countries must resolve that all countries, including their sovereign territories, should require that the beneficial ownership of all companies, trusts, and similar legal structures be transparent and publicly available in open data format. Failure by individual countries to comply with this basic standard should no longer be tolerated.

Reform of international tax governance: Two thirds of all cross-border business transactions take place between companies belonging to the same group. By artificially overpricing imports and underpricing exports, multinational companies can shift profits to countries with low or zero corporate taxes even if the source of the profits lies elsewhere. As a result, multinational companies pay as little as 5 percent in corporate tax, while smaller local companies pay as much as 30 percent (OECD 2013c). These practices may be legal, but they undermine public resource mobilization in rich and poor countries alike and tilt the playing field against smaller companies.⁶³ FfD should recognize this problem as critical for mobilizing public revenues and call on all countries to implement specific measures (APP 2013, Oxfam 2014a), such as:

- ***Full and equal participation of developing countries in the OECD/G20 BEPS process*** or the establishment of new multilateral processes in which developing countries can participate adequately;⁶⁴
- ***Mandatory country-by-country reports by multinational companies*** that detail the number of their employees, physical assets, sales, profits, and taxes (due and paid);
- ***Provisions allowing developing countries to withhold corporate taxes from companies operating in their jurisdiction*** – just like governments withhold individuals' income taxes.
- ***Increased technical support on international taxation and tax audits to developing countries***, including through the Tax Inspectors Without Borders launched by the OECD.

⁶³ An estimated 80 percent of illicit financial flows from developing countries are due to 'trade mispricing' (World Bank 2013a).

⁶⁴ The OECD's BPES involves only 34 countries and excludes some 150 developing countries. Unsurprisingly, it therefore focuses on the priorities of rich countries with hardly any attention paid to the extractives industries. Participation in this process would need to be broadened significantly or be complemented by a strengthened multilateral process, such as the UN Committee of Experts on International Cooperation in Tax Matters or 'UN Tax Committee' (Oxfam 2014).

Exchange of information among tax authorities and taxation of offshore assets: Significant progress has been made in requiring tax havens to share information on assets and taxes paid by non-resident or multi-national companies as well as individuals. As a result, the OECD Committee on Fiscal Affairs has discontinued its list of uncooperative tax havens. This work is now continued under the Global Forum on Transparency and Exchange of Information for Tax Purposes. The 'Global Tax Forum' has an interesting 'UN-style' governance structure: Membership is open to all countries that commit to implementing the international standards on transparency and exchange of information and participate in the peer review process. Though hosted at the OECD, all 126 member jurisdictions have an equal vote. The forum is currently chaired by South Africa with vice-chairs from Barbados, China, and Germany.

Since its launch as a global initiative in 2009, the Global Forum has seen a sharp improvement in the 'supply side' of international tax cooperation, with more jurisdictions responding to requests for exchange of information and response times falling rapidly. The 'demand side' has also improved, with many countries sharply increasing the number of exchange of information requests. Through its peer review mechanisms, the Global Forum monitors implementation of exchange of information standards. A small number of members (British Virgin Islands, Cyprus, Luxemburg, Seychelles) continue to be 'non-compliant,' with a substantially larger number of countries rated 'partially compliant' (OECD 2014j). FfD could request all countries to participate actively in the Global Tax Forum and to become fully compliant in the near future.

On 29 October 2014, over 50 countries signed an agreement to automatically exchange information on bank accounts among tax authorities. This agreement will make a critical contribution towards combating tax evasion and fraud. In addition, tax havens increasingly levy taxes on assets held in their jurisdiction, transferring parts of the revenue raised back to the governments where the individuals and companies reside.

Yet, there is an important snag: Developing countries often lack the capacity to participate in exchange-of-information agreements. For this reason, the Global Forum has launched an Africa Initiative to engage with African countries on tax transparency and exchange of information. The FfD process should explore opportunities for strengthening countries' capacity to participate in exchange of information programs, in order to combat tax evasion and fraud.

Publish what you pay: All large companies operating in developing countries – particularly in the extractives and natural resource sectors – should be required to publish contracts as well as all payments to government officials in every country they operate in. Several such standards are available, including for natural resource companies, and have been adopted by Canada, the EU, Norway, and the US. Other countries, including China, have indicated that they may be willing to comply (ONE 2014). Companies often require governments' approval to publish contracts and payments, so 'publish what you pay' should be included in the FfD process.

Open government data: Transparent and open government data on budgets, procurement, public expenditure, social service delivery, and SDG outcomes is the flipside of 'publish what you pay' for corporations (IBP 2012). FfD should anchor open government data and mandatory disclosure laws as critical components of a resource mobilization strategy and the 'data revolution' called for by the High-Level Panel on the Post-2015 Development Agenda (HLP 2013). See also sections 6.1 and 5.7 above.

Periodic review of key international rules and standards for consistency with achieving the SDGs:

International rules on taxation, business accounting, banking and insurance regulation, the exchange of information between governments, etc. are complex and will evolve in coming years. Moreover, some are governed by private entities that may not respond directly to governments. It will be neither possible nor desirable for FfD to monitor each process or to provide detailed technical guidance on how rules need to evolve to support financing for sustainable development. For this reason, we propose that FfD request the standard-setting bodies to report periodically on whether their rules are consistent with achieving the SDGs and staying within the internationally agreed limit of 2°C global temperature rise. These reports should be made public and submitted for review and approval to each body's board or equivalent governance body. If issues are found, the organization should recommend measures to be taken by its governing bodies to address the issues. Such 'consistency checks' could, for example, be requested from the IMF on financial standards, the Bank for International Settlement (BIS) on global standards for banking and insurance regulation, the International Accounting Standards Board on accounting practices – particularly in relation to transfer pricing, etc. (SDSN 2013, 2014).

Better enforcement: Some of these changes may be resisted by a small number of countries and companies that currently benefit from opaque rules at the expense of others. As early as 1998, the OECD proposed that member countries terminate their tax conventions with uncooperative tax havens (OECD 1998), but this proposal has since been dropped from official OECD reports. Given the detrimental impact of tax havens on financing for sustainable development, the FfD process might reconsider the original OECD recommendation as a standard that should apply in the 21st century. Without credible enforcement of minimal global standards, countries, rich and poor alike, will find it increasingly hard to mobilize the public resources they need to pursue sustainable development.

6.3 Reforming the aid system and mobilizing public and other concessional resources

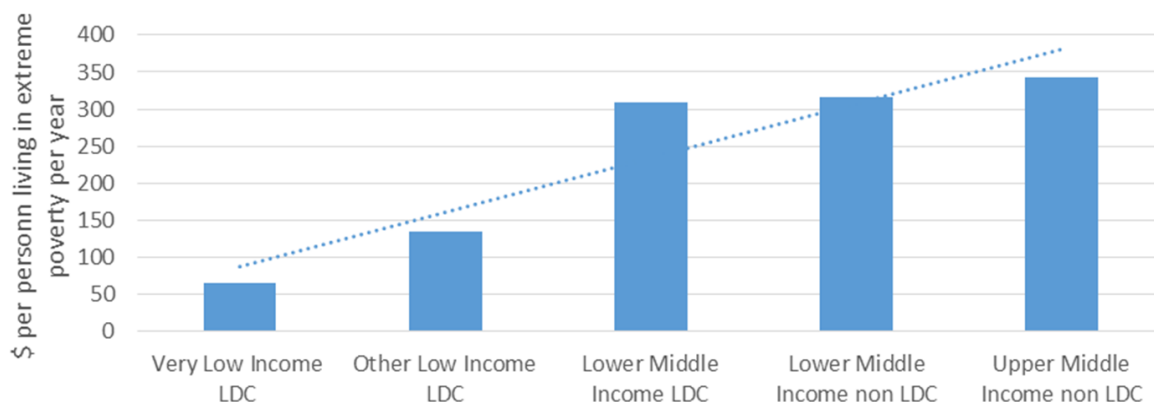
Significant public international development and climate finance will be needed to achieve the SDGs. There's no getting away from the simple truth that current resources are insufficient and must be increased. Clearly, the current macroeconomic and fiscal outlook in many developed countries is unfavorable towards significant increases in ODA. While these developed countries must meet their commitments over time, FfD should also broaden the provider base by including high-income countries that are not members of the DAC and by preparing upper-middle-income countries for their role as providers towards global public goods and the development priorities of poor countries. FfD also needs to set clear standards to improve the targeting of aid and to ensure that scarce public and concessional funds are used effectively. Moreover, every effort should be made to use innovative mechanisms for generating concessional finance and to mobilize philanthropy for the SDGs. We review practical steps towards mobilizing and targeting ODA in this section. Some of these steps are a continuation of the historic evolution of ODA (Hynes and Scott 2013) while others respond to new challenges. This section focuses on concessional international public finance. Practical recommendations for increasing OOF are outlined in Kharas *et al.* (2014).

6.3.1 Aid eligibility and targeting

Today's aid does not target the poorest countries that are most in need, even if one takes into account that two thirds of the world's extreme poor now live in middle-income countries. Figure 10 charts

country-programmable aid per person living in extreme poverty.⁶⁵ It shows that upper-middle-income countries receive 4-5 times as much ODA per person living in extreme poverty than the poorest countries whose GDP per capita is below \$500. Other available metrics to track aid allocation to countries all come to the same conclusion that poorer countries receive less aid in per-capita terms and relative to their needs (OECD 2014d, ONE 2014, Development Initiatives 2015).

Figure 10: Country-programmable ODA per person living in extreme poverty by country group



Source: Manuel (2014) based on OECD DAC data.

The share of ODA going to the LDCs has been declining since 2010, while aid to upper-middle-income countries has been rising (OECD 2014e). Available aid projections suggest that concessional loans to middle-income countries will rise, while aid to LDCs is expected to decrease further (ONE 2014). Since poorer countries have fewer domestic resources to invest in measures to end poverty, a rational allocation of aid should favor them. Such a rational allocation is needed if the world is to end extreme poverty by 2030.

ODA and concessional public climate finance are the most precious forms of international finance, since they can finance all manners of public goods. Unfortunately, ODA will continue to be scarce relative to demand for concessional finance, so FfD needs to consider clear standards for the *eligibility* and *targeting* of ODA. Eligibility criteria determine which countries, and which types of projects, can qualify for ODA and other forms of concessional international public finance, while targeting refers to how ODA should be prioritized among eligible countries and projects.

ODA eligibility

The Monterrey Consensus rightly follows the subsidiarity principle, whereby the primacy in financing development belongs to domestic resources. In addition to financing global public goods, ODA should only be mobilized if a country's resources are insufficient to meet spending needs. For this reason, eligibility for ODA should be determined at the country level and as a function of a country's ability to self-finance the necessary public investments. Since both DBR and countries' ability to mobilize funding from private sources are functions of per capita incomes, the latter should form the principal basis for determining eligibility and graduation criteria, with due consideration paid to countries' special needs.

⁶⁵ Country programmable aid excludes volatile aid, such as debt relief and humanitarian assistance. The chart also excludes very small countries and countries with less than 1 percent of extreme poor.

A commonly used shorthand form of grouping countries by their ability to mobilized domestic resources is the World Bank classification of GDP per capita, expressed in 2014 income scale in purchasing-power parity (Annex 1):

- High-income country (>\$12,746)
- Upper-middle-income country (\$4,126-\$12,745)
- Lower-middle-income country (\$1,046-\$4,125)
- Low-income country (<\$1,045)

Yet, income per capita is a crude measure that does not take into account other factors that might reduce a country's ability to raise domestic resources or creditworthiness. Examples include small-island status⁶⁶ and countries located in a region of political instability.

We therefore propose that eligibility for ODA grants – excluding technical assistance – be restricted to countries that are eligible for concessional lending from the International Development Association (IDA) at the World Bank. In 2014, all low-income countries as well as lower-middle-income countries with a GDP per capita of less than \$1,215 (expressed in purchasing power parity) qualified for IDA. In addition, the IDA category includes some countries with a higher per capita GDP that cannot borrow on non-concessional terms from the International Bank for Reconstruction and Development (IBRD), such as small-island economies and countries facing other challenges. Some IDA countries also qualify for IBRD lending. We propose to include these 'blend' countries among the countries eligible for ODA and concessional climate finance without any caveats, but note that a careful review of 'blend' countries is needed to ascertain which should retain general eligibility for ODA since some have a GNI per capita in excess of \$2500.

We further recognize and underscore that a World Bank lending criterion cannot and will not provide a long-term basis for an internationally agreed eligibility for ODA and ODA-C. We therefore propose that the Multilateral Development Finance Committee (MDFC), described further below, develop criteria that are independent from the lending standards of the World Bank or of any other MDB.

ODA for global public goods located in ODA-eligible countries fulfils a special need under the SDG agenda and should be independent of country eligibility criteria. Examples include climate change mitigation (section 5.7), technology development and diffusion (section 5.11), ecosystems and biodiversity (section 5.4), and pandemics, as in the case of Ebola in West Africa. An important focus of the FfD discussions must be on overcoming the artificial distinction between country-focused ODA and the financing of global public goods. Both may require concessional international (co-)financing, so International Development Finance should fill those financing gaps that cannot be closed through domestic or private resources. However, it is critical to retain ODA as a financing tool for developing countries: the public concessional financing for global public goods located in non-ODA eligible high-income countries (e.g. technology development) should be financed through OOF and domestic public finance, instead of scarce ODA. See section 3.8 for a complementary discussion of financing needs for global public goods.

ODA targeting

⁶⁶ Small-island economies have lower credit ratings owing to their small market size and therefore experience a higher cost of capital. They also tend to have higher costs for the delivery of social services and infrastructure.

Within the broad IDA band, a clear focus must be placed on the Least Developed Countries (LDCs – see Annex 1 for a grouping of countries). It is sometimes argued that current capacity constraints in the poorest recipient countries make it impossible to deliver adequate aid effectively, but this strikes us as an excuse for inaction. As demonstrated by health and other sectors, properly programmed aid can help build systems that, over time, can absorb rapidly growing volumes of external finance.

The long-standing commitment to provide between 0.15 and 0.20 percent of GNI in ODA to the LDCs remains unfulfilled for most providers today. The DAC Secretariat has recently proposed that every provider should allocate at least 50 percent of total aid to LDCs, against 32 percent of all ODA from DAC members in 2012 (OECD 2014e), but this proposal was not adopted at the 2014 DAC High-Level Meeting. The ICESDF broadly supports this target in its report (UN 2014). However, for some important providers, the 50 percent might be lower than the internationally agreed threshold of 0.15-0.20 percent of GNI. We therefore suggest that every provider should provide the higher of 0.15-0.20 percent of GNI or 50 percent of ODA to LDCs. Upper-middle-income countries should aim to provide at least 50 percent of their concessional international public finance towards LDCs (section 6.3.3).

A second dimension of targeting regards the types of investments ODA should support. As a general principle, we propose that ODA be targeted towards poverty eradication and public goods that directly support the achievement of the SDGs (section 3.8). We support the idea of explicit poverty markers in ODA reporting that make it possible to trace the ‘poverty focus’ of ODA spending.

How might ODA eligibility and targeting work?

The eligibility and graduation criteria might function as follows (important caveats are described below):

- **IDA-eligible countries** are eligible for ODA. This group covers a highly diverse set of countries ranging from extremely poor countries in conflict, such as Somalia and the Central African Republic, to stable lower-middle-income countries with substantial domestic resources, such as Ghana and Mongolia. So care should be taken to ensure that – contrary to the prevailing practice – the poorest countries that are most in need of concessional public finance receive the largest per capita allocations. **At least 50 percent of every provider’s ODA or 0.15-0.20 percent of GNI, whichever is higher, should go towards LDCs.**
- **Non-IDA eligible lower-middle-income countries** should not receive ODA in the form of grants except under special circumstances, such as countries affected by conflict, natural disasters, or other special needs such as high disease burdens. These countries should, however, remain eligible for technical assistance as well as loans from the MDBs, with interest rates that correspond to the borrowing rates of the high-income members of these institutions plus the cost of the additional administrative burden. In effect, the non-IDA lower-middle-income members receive a partial subsidy, not in the form of grant financing, but in the form of borrowing at a near risk-free market interest rate. Moreover, such financing can be accompanied by export and investment guarantees by national and international entities.
- **Upper-middle-income countries** have the means to finance the public investments needed for poverty alleviation and do not require ODA. Upon request, these countries should receive modest technical assistance to support them in achieving the SDGs. They should not benefit from subsidized MDB loans or subsidized contingency lending capacity (section 5.9). At the same time, these countries should prepare themselves to become providers to poorer countries

(section 6.3.3). As described in the caveats below, there may be exceptional circumstances under which these countries receive ODA, such as when a high infectious disease burden requires international supportive action.

- **High-income countries** should all provide ODA and climate finance, subject to the standards described in the next section. They are able to pay commercial rates for any technical assistance they may require.
- **Global public goods** should be financed according to their priority, including through ODA provided the ODA goes to a developing country, regardless of that country's income category. Global public goods in non-ODA eligible countries require financing through International Development Finance Flows.

A few important caveats and limitations are in order: First, while we believe that clear and transparent eligibility and graduation criteria are important to use scarce public finance effectively, we recognize the need for flexibility to respond to exceptional circumstances. In particular, one needs to avoid the abrupt discontinuation of ODA, which might have adverse consequences on public finances in some middle-income countries, particularly fragile lower-middle-income countries (Kharas et al. 2014).

Second, while IDA eligibility is a useful criterion, it describes a lending standard that is set for different purposes by the World Bank. Over time, ODA eligibility should therefore be defined independently from the World Bank or any other MDB. We propose that the Multilateral Development Finance Committee (MDFC) described further below develop such eligibility criteria for ODA.⁶⁷

Third, in some cases, modest grant funding should be made available to non-IDA middle-income countries to help address special needs of vulnerable populations or challenges that might pose a risk to neighboring countries, such as a high infectious disease burden. For example, the GFATM has been very successful in addressing infectious diseases in several high-income countries. It allocates some 17 percent of total resources (including 'incentive funding') from the latest replenishment round to countries with incomes in excess of \$2000 PPP per capita (calculated from GFATM 2014c). One reason for this relatively high allocation to non-IDA countries is that pooled financing mechanisms like the GFATM have a greater ability to work in middle-income countries. However, grant funding to upper-middle-income countries that have the domestic resources to finance the SDGs should be used sparingly and as a last resort to avoid problems of 'moral hazard' whereby domestic responsibilities are offloaded to the international community.

Fourth and as mentioned above, the proposed eligibility and graduation formula does not cover technical assistance, which should continue in all developing countries that request such assistance. Well-designed technical assistance can make important contributions in middle-income countries.

Finally, these graduation criteria do not imply an automatic provision of ODA and public development finance. Where private finance can replace public funding (e.g. for an infrastructure project), the former should usually take precedence. Likewise, recipient countries need to mobilize domestic resources and demonstrate that they can use incremental ODA and ODA-C effectively (section 6.1).

⁶⁷ A similar recommendation has been made by Evans (2014).

6.3.2 Honoring existing ODA commitments

High-income countries that are part of the DAC need to honor their existing commitments to provide 0.7 percent of GNI as ODA. Currently, DAC members provide 0.3 percent of GNI on average with only Denmark, Luxembourg, Norway, Sweden, and the UK reaching or exceeding the 0.7 percent threshold.⁶⁸ Notably, the highest share of ODA is provided by the United Arab Emirates, a non-DAC member who provided 1.25 percent of GNI in 2013 (OECD 2014d).

If all DAC members had reached the agreed 0.7 percent threshold in 2013 an additional \$184 billion would have been mobilized. At current DAC members' GNI, each ODA increase by 0.1 percentage points yields an additional \$45 billion per year. In the short term, the fiscal crisis in many high-income countries will make it difficult for this group of countries to achieve this target. Therefore, we propose that FfD adopt a medium-term target that each country cut by half the gap to 0.7 percent by 2020, at the latest. If countries that have already reached the ODA target stay at the same level, such a medium-term, halve-the-gap target would increase ODA by \$94 billion to some \$229 billion.

6.3.3 Expanding the provider base to include non-DAC countries

Opportunities for broadening the provider base, particularly for pooled financing mechanisms, are illustrated in Table 5: Providers to key pooled financing mechanisms. While most DAC members have contributed to one of the three pooled financing mechanisms reviewed in the table (GFATM, Gavi, and GEF-5), overall participation rates from non-DAC high-income countries are low. Given that many non-DAC high-income countries are relatively small, their modest volumes of aid come with relatively high transaction costs. This makes pooled financing mechanisms a particularly important and attractive disbursement channel.

A number of middle-income countries have participated in pooled financing mechanisms, which underscores their commitment to effective aid. However, the volumes of disbursements to pooled financing mechanisms have been modest in relation to most contributing middle-income countries' GNI. Finally, the table also underscores the important and growing contributions from private philanthropy for the health mechanisms.

Other high-income countries that are currently not part of the DAC (Annex 1) should contribute at the same level of concessional international public finance (expressed in percent of GNI) and with similar transparency as the members of the DAC. Such financing includes both ODA as well as concessional 'South-South Cooperation'.

There is simply no reason why high-income countries whose per capita GNI is much higher than that of some DAC members do not contribute their fair share. If all non-DAC high-income countries honored the same commitments as DAC members, they would contribute between \$22 billion (at 0.3 percent of 2013 GNI, i.e. the average performance of DAC members) and \$37 billion (at 0.7 percent of 2013 GNI) ODA disbursements for 2013 by the OECD DAC (calculated based on OECD 2014c).⁶⁹

⁶⁸ The Netherlands has been a long-standing provider of 0.7 percent but it has recently lowered its ODA. We sincerely hope that the country will return to the '0.7 percent club.'

⁶⁹ Note that some countries, such as the UAE already provide substantially more than 0.3 percent of GNI in ODA. Our calculations assume that every country achieve at least 0.3 or 0.7 percent, respectively, but that those countries that provide more financing today stay at their higher level.

Table 5: Providers to key pooled financing mechanisms

Mechanism	GFATM (2011-2013)	Gavi (2011-2013)	GEF-5
Providers who are members of the DAC	Australia, Belgium, Canada, Denmark, European Commission, Finland, France, Germany, Japan, Korea (Republic of), Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States	Australia, Canada, Denmark, European Commission (EC), France, Germany, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Republic of Korea, Spain, Sweden, United Kingdom, United States of America	Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Republic of, Luxemburg, Netherlands, New Zealand, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States
Non-DAC government	Brunei Darussalam, China, Georgia, India, Kuwait, Liechtenstein, Malaysia, Namibia, Romania, Russia, Rwanda, Saudi Arabia, South Africa, Thailand, Tunisia	Brazil, India, OPEC Fund for International Development (OFID), Russia, South Africa, United Arab Emirates	Brazil, China, Czech Republic, India, Mexico, Nigeria, Pakistan, Russian Federation, South Africa
Private philanthropy	Bill and Melinda Gates Foundation, Communitas Foundation, UNITAID, Anglo American plc., Bank of America (RED), BHP Billiton, Chevron Corporation, Comic Relief, Ecobank, Idol Gives Back, Gift From Africa, M·A·C AIDS Fund, (PRODUCT) RED™ and Partners, Tahir Foundation, Takeda Pharmaceutical, Vale, The United Nations Foundation, Hottokenai Campaign (G-CAP Coalition Japan), LMI (Lutheran Malaria Initiative), United Methodist Church	Absolute Return for Kids (ARK), The A&A Foundation, Anglo American plc, Bill and Melinda Gates Foundation, Children’s Investment Fund Foundation , Comic Relief, Dutch Postcode Lottery , ELMA Vaccines and Immunization Foundation, JP Morgan, La Caixa Foundation, LDS Charities, Lions Club International (LCIF), Prudential, Statoil	none

Sources: GFATM lists providers who have contributed during 2011-2013 (GFATM 2014a); Gavi lists providers who have contributed during 2011-2013 (Gavi 2014b); GEF-5 lists providers who have contributed to the fifth replenishment round of the GEF (GEF 2014b)

Most upper-middle-income countries (Annex 1) are also providing rapidly growing volumes of public development finance, often referred to as South-South Cooperation. As the World Bank (2013a) underscores, Brazil, China, and other upper-middle-income countries play an important role, particularly in Africa and in sectors that do not receive adequate funding from traditional DAC providers. Emerging providers support investments in transport and power infrastructure that have made important contributions to the recent growth spurts in many African countries. We are very hopeful that the Asian Infrastructure Investment Bank and the New Development Bank recently announced by the BRICS countries will provide much-needed financing at scale to infrastructure and other project types across low-income and lower-middle-income countries.

FfD should establish as a principle that every upper-middle-income country contribute a fair share in international public financing towards the shared SDGs, in preparation for these countries becoming high-income countries themselves. We propose that a minimum threshold of 0.1 percent of GNI be established for concessional international public finance, which corresponds to \$20 billion in

development finance using 2013 GNI. Note that only a share of this financing would be incremental, since Brazil, China, India, and Thailand provided an estimated \$3.6 billion in net concessional public financing during 2011, which is equivalent to some 0.03 percent of their GNI (OECD 2013a). Such a standard would be particularly important for China, which may become a high-income country in 2020, some ten years before the target date for the achievement of the SDGs.

Yet, increasing and common aid commitments from non-DAC countries and philanthropies must go hand in hand with more transparent reporting. Today, there is little verifiable reporting available on ODA and South-South Cooperation from non-DAC countries, which contributes to a sense among some analysts that this financing may be of insufficient quality and transparency. Similarly, private philanthropists should follow the example of Gates Foundation, which reports its giving using DAC standards (see also section 6.3.7).

We recognize that for many reasons, many non-OECD provider countries may not sign up to the DAC, which they regard as an OECD-governed institution. IATI has filled some of the gaps by involving a broader range of stakeholders. Still, we see an important case for a new Multilateral Development Finance Committee (MDFC) that shares governance among all provider countries, both OECD and non-OECD providers, as well as recipient-country governments and other stakeholders. Such a new mechanism should be a major outcome of FfD and is described in section 6.3.7.

6.3.4 Mobilizing private philanthropy: a Giving Pledge for the SDGs

Another important source of grant funding comes from private giving, which in some accounts (Hudson Institute, 2013) has been estimated to be \$60-70 billion per year or nearly half of official ODA disbursed by all DAC members. While this high number is somewhat doubtful, and probably inflated, the actual sums are no doubt significant. According to these estimates, the US dominates philanthropic giving to developing countries with \$39 billion transferred in 2010 (Hudson Institute 2013, World Bank 2013a). Efforts must be increased to include these private flows in reporting on international aid.

Warren Buffet and Bill and Melinda Gates announced the Giving Pledge in 2012, aiming to convince billionaires to donate at least half their net wealth for charitable causes including development aid. The Giving Pledge has since secured some 127 pledges from 12 countries. It does not disclose the volume of funding raised, but it has been estimated at over \$250 billion.

According to Wealth-X (2014) there were 2,325 billionaires worldwide in early 2014 owning some \$7.3 trillion in assets. If half the world's billionaires signed the Giving Pledge and donated half their wealth, this would yield around \$1.8 trillion in assets. Assuming further that only 20 percent of these billionaires commit their wealth to achieving the SDGs, this would yield an annual flow of \$18 billion in perpetuity at a 5 percent annual payout. These numbers could be significantly higher if other ultra-high-net-worth individuals owning less than \$1 billion in assets are included.

The key point is that private wealth can make a very substantial contribution towards financing the SDGs, particularly if funders consider creative ways of investing for greatest impact. Just like Bill and Melinda Gates have used flexible and results-based funding to support a vibrant ecosystem of advocacy and research institutions in health, other major philanthropists could do the same in education, water and sanitation, biodiversity, or other public-private investment challenges (section 7.2).

A central principle of giving for the SDGs should be to support existing institutions where possible. Signatories of the Giving Pledge could be encouraged to channel their resources through the major multilateral pooled financing mechanisms that will be at the center of successful goal-based public-private investment partnerships for the SDGs. Alternatively, they can scale up efforts of other successful philanthropies – just like Warren Buffet decided to channel his giving through the Gates Foundation.

As one inspiring example, Dr. Tahir of Indonesia has donated \$65 million to the GFATM and is now mobilizing Indonesian philanthropists to contribute to the Indonesia Health Fund, which aims to raise \$100 million for health programs in the country. Similarly, Patrice Motsepe of South Africa has announced a significant contribution to (RED), and GFATM is launching campaigns for high-net-worth individuals in Viet Nam, India, the Philippines, and the Arab world (GFATM, personal communication).

6.3.5 Innovative mechanisms for mobilizing concessional financing

Several new innovative mechanisms for mobilizing greater volumes of concessional financing have been explored by the Landau commission (Landau 2004), the High-level Advisory Group on Climate Change Financing (UN 2010), and many others (UN 2014). Many different mechanisms have been proposed, including taxes on key sectors (e.g. aviation, maritime shipping), taxing tobacco use (Gates 2011), lotteries, financial transaction taxes, taxing assets held in offshore tax havens, voluntary contributions, payments for ecosystem services, or various forms of leveraging public balance sheets, such as the creation of additional IMF Special Drawing Rights. Yet, today the potential of innovative resource mobilization mechanisms remains largely untapped. They mobilize \$2 billion per year – a significant amount but one that pales in comparison with total ODA of \$127 billion in 2012 (OECD 2014d).

Two headline categories of innovative mechanisms for resource mobilization stand out as having the greatest potential: (i) direct or indirect taxes on greenhouse gas emissions and key emitting sectors; and (ii) financial transaction taxes. We discuss the former in section 6.3.6 and focus here on financial transaction taxes. Other innovative mechanisms can make important contributions towards raising resources for specific uses, but they will play a marginal role in the overall picture of development finance.

The discussion of financial transaction taxes has a long history. Following the 2008 financial crisis a growing number of economists believe that such taxes may be feasible on a regional or national basis, and that they could contribute to the stability of the financial system while mobilizing substantial resources. Naturally, other economists disagree with these assertions. This working paper is not the place to discuss whether financial transaction taxes can increase the stability of the financial system, so we focus on their revenue-generating potential.

The EU is currently discussing the introduction of a small levy on financial transactions among 11 of its members (including France, Germany, Italy and Spain), and has postponed its decision to January 2016 for reaching an agreement. The first phase of this tax would see a levy of 0.1 percent (some suggest up to 0.5 percent) applied to transactions in shares, and a much lower rate (less than 0.01 percent and adjusted by type of asset and maturity) applied to certain categories of derivatives. Further phases of the tax would extend the levy to bonds and other derivatives. The EU Commission estimates that a broad-based tax may generate some €34 billion per year for national governments, and the French Government has suggested that a portion of this should be devoted to providing climate finance and ODA. Based on this example, it seems reasonable to assume that a financial transaction tax introduced in key markets might generate some \$50 billion annually in ODA or concessional climate finance flows.

Of course, the actual sums could be much higher if all countries adopted such a tax, but this seems unlikely at present.

6.3.6 Mobilizing official Climate Finance

Developed countries have pledged \$100bn in additional climate finance by 2020 and cumulative fast-start finance of \$30bn from 2010 through to 2012. According to their own reporting, developed countries have exceeded the fast-start climate finance goal by some \$5bn, but much of this finance was neither new nor additional. Some 80 percent of fast-start finance was also reported as ODA (Nakhouda et al. 2013), thus undermining the notion that climate finance would be additional to development finance. As reported by CPI (2013), overall climate finance flows flat-lined in 2012 at some \$358 billion – far below even the most conservative estimates of investment needs.

The FfD process – in coordination with the UNFCCC negotiations – will need to identify how additional official climate finance of some \$100 billion annually can be mobilized and leverage additional private investment flows (enabled of course by supportive policies including an adequate ‘price on carbon’ – section 5.8). Such climate finance needs to co-finance adaptation measures for which there is no market, RDD&D for clean technologies, and developing countries’ efforts on mitigation and adaptation. Unless substantial volumes of additional climate finance are mobilized, it is difficult to see how a global agreement to achieve 2°C can be reached or implemented.

Currently, climate finance negotiations in the UNFCCC have yet to converge on transparent standards for levying climate finance. We believe that an assessment-based approach for mobilizing climate finance should be considered, even though this is not aligned with the bottom-up pledging rounds for climate finance and contributions to the GCF that are currently pursued under the UNFCCC. The motivation for an assessment-based approach are threefold: (i) curbing climate change is a global public good that requires fair and transparent resource mobilization in order to reduce the risk of free riding; (ii) an assessment-based approach can consider the large differences within the groups of developed and developing countries, and (iii) the distribution of per GDP as well as per capita greenhouse gas emissions is likely to change substantially in coming decades. A dynamic assessment formula provides a clear and transparent framework for periodically updating countries’ contributions to climate finance.

An assessment-based resource mobilization model for climate finance, and the GCF in particular, could be based on a country’s per capita level of income (suitably adjusted for special needs) and its greenhouse gas emissions. The combination of these two criteria will help ensure that all countries contribute towards climate change mitigation and adaptation based on their ability to pay and their contributions towards global emissions. Financing would then be determined through annual ‘assessed contributions’ using the following formula:

$$\text{Assessed climate finance contribution} = \text{GDP Factor} \times \text{CO}_2 \text{ Emissions} \times \text{CO}_2 \text{ Assessment Rate}$$

As discussed in section, IDA eligibility provides a useful expansion of a straight GDP factor since it takes into account countries’ special needs.⁷⁰ Using such an expanded definition, the *GDP Factor* (as of 2014) might be as follows:

⁷⁰ As explained above, a World Bank lending criterion will not provide a long-term basis for determining ODA eligibility or the proposed assessment formula. We propose that the Multilateral Development Finance Committee

- High-income country (>\$12,746): 1.0
- Upper-middle-income country (\$4,126-\$12,745): 0.5
- Non-IDA lower-middle-income country (\$1,046-\$4,125): 0.10
- Low-income country (<\$1,045) and IDA lower-middle-income countries: 0.0

The *Assessment Rate* is expressed in \$/ton of CO₂. If one assumes for illustration that some \$33 billion would need to be raised every year in public concessional financing, then the appropriate level of assessment is some \$2 per ton of CO₂ emission at today's levels of greenhouse gas emissions. The assessment rate could be fixed every five years to produce the targeted funding stream. Of course, the values of these parameters are illustrative only and can be revised as necessary.

We propose that resource mobilization be based on consumption-based estimates of greenhouse gas emissions, which assign greenhouse gas emissions related to the export and import of products to the country where the goods are consumed. Such consumption-based estimates probably provide a truer picture of a country's carbon footprint by shifting a larger share of the financing to countries that import commodities and energy-intensive products. See Sachs and Schmidt-Traub (2013) for an illustration of how such an assessment might work. Practically, such an assessed contribution could be collected in the form of a carbon levy from the fossil fuel industry (akin to levies on cigarettes imposed on the tobacco sector). Alternatively, they could be financed out of a country's general tax revenues.

The dramatic fall in oil prices observed over the last twelve months provides a tremendous opportunity for introducing carbon levies. SDSN (2015b) suggests that high-income countries use this opportunity to scale back fossil-fuel subsidies and introduce dedicated carbon pricing mechanisms that can mobilize resources for domestic mitigation and adaptation efforts as well as – crucially – establish a recurrent resource mobilization channel for ODA-C and the GCF in particular. Even if the volumes of GCF funding mobilized through such means are modest at first, establishing such resource mobilization mechanisms will send a powerful signal the countries are serious about mobilizing long-term climate finance. Moreover, the introduction of fossil fuel levies to support the GCF will establish a precedent that other countries can be encouraged to follow, and – once in place – the resource mobilization can be increased in line with needs by adjusting the tax rates.

6.3.7 Improved reporting and monitoring of International Development Finance flows

Transparency and effective monitoring are central to ensure that commitments to mobilize resources are honored, and to build the trust that is needed for the international partnership to achieve the SDGs and the climate objectives. While there have been significant improvements in the way aid and climate finance are monitored – notably thanks to the work of the OECD DAC, the IMF/World Bank, the Aid Transparency Initiative (IATI), and numerous CSOs, including CPI for climate finance and DATA for ODA – today's monitoring and reporting systems for public international finance are deficient in six ways described below. Reporting on international private flows is even more difficult and spotty (CPI 2013, UNCTAD 2014). FfD should therefore consider how to strengthen and expand reporting on International Development Finance flows, for the benefit of all countries.

(MDFC) described further below develop criteria that are independent from the lending standards of the World Bank or any other MDB.

1. Insufficient transparency and major gaps in the monitoring of aid and concessional financing

Efforts by the OECD DAC combined with the launch of the International Aid Transparency Initiative (IATI) in 2008 have led to a step-change in the availability of timely, forward-looking and comprehensive data on aid. Since 2011, nearly 300 organizations have published information in IATI's common, open data format including bilateral providers, multilateral institutions, national and international CSOs, philanthropic foundations and development finance institutions.⁷¹ Yet, transparency is not improving fast enough, and to date only a minority of providers is on track to fully meet their IATI commitments agreed upon at the 2011 Busan High-Level Forum on Aid Effectiveness. The 2014 Aid Transparency Index shows that many providers – particularly bilateral ones – still have poor or very poor aid transparency (Publish What You Fund 2014). Under FfD, all providers should fully implement IATI. The IATI principles should also be extended to the monitoring of climate finance, where monitoring systems tend to be much less effective and transparent than for ODA (see below).

While South-South Cooperation, including aid from non-DAC high-income and upper-middle-income countries, is expanding, data from emerging providers is at best patchy. The need for South-South Cooperation providers to “continue to improve the availability of information on the scope, results and impacts of their cooperation actions” was noted in the consensus communiqué from the High-Level Meeting of the Global Partnership for Effective Development Co-operation (GPEDC 2014) held in Mexico. Although some non-DAC providers provide data to the DAC, others voice concerns about joining DAC mechanisms that are dominated by ‘traditional providers.’ The DAC is working with non-DAC providers to improve reporting (any provider of aid is invited to participate in the DAC Working Party on Development Finance Statistics), but better systems are needed. One option is to expand the work of the DAC to cover non-DAC providers, another is to further develop the IATI standard to fully capture South-South Cooperation, and a third would be to create a new Multilateral Development Finance Committee (MDFC) that works with the UNFCCC and builds on the DAC and IATI, but has a broader governance model to address the needs of non-traditional providers (see below).

2. Unclear and potentially self-serving standards on what to count as aid

Since today's definition and reporting on public international finance are provider-led, it is not surprising that despite valiant efforts by the DAC secretariat, today's aid reporting comprises categories that should perhaps not be included under ‘aid.’ Examples include some flows that are essentially commercial in nature; some military and security-related expenditure; spending on refugees in developed countries; imputed costs for students from developing countries studying in provider countries when there is no expectation that these students will return to their countries of origin; the accounting of debt relief at face value; or the non-consideration of debt repayments from countries that have graduated from ODA. Moreover, significant shares of ODA are double counted as ‘climate finance’, which undermines the spirit of the Cancun agreement. On the flipside, current definitions of ODA are seen as discouraging the use of risk-mitigation instruments described in section 5.9.2.

⁷¹ Available at <http://www.iatiregistry.org/>. A major challenge for IATI remains to make its data available in easily accessible forms – currently it takes deep expertise and significant effort to translate the IATI data in policy messages.

These issues of definition and additionality of ODA, as well as the counting of other official non-ODA flows, have been raised repeatedly by the DAC Secretariat, which has proposed ways to address them (OECD 2014b, 2014f, 2014h, and Solheim 2014).⁷² The 2014 DAC High-Level Meeting adopted a number of recommendations and principles, including (i) counting only the grant element of development finance as ODA; (ii) clearer standards for assessing concessionality of loans; and (iii) a complementary measure of Total Official Support for Sustainable Development. These are significant reforms, but more must be done in the run-up to FfD to improve the standards for what counts as aid – drawing *inter alia* on the emerging IATI standards for official flows.

3. Unclear standards on what to count as climate finance

Data on climate finance from developed countries is collected through the same system as ODA using the DAC's 'Rio Markers' to identify climate finance.⁷³ Unfortunately, common, transparent definitions of the 'additionality' of climate finance largely do not exist.⁷⁴ As a result, few recipient countries trust providers' assertions that they are on track towards meeting their climate finance commitments.

Care must be taken in defining additionality since many climate projects offer significant socio-economic benefits beyond reducing greenhouse gas emissions or adapting to climate change. In other words, climate finance is broader than just financing climate change mitigation or adaptation. It is therefore important that definitions of additionality for climate finance agreed under the UNFCCC do not adopt a narrow view on how the resources can be spent since this might divert funding from highly meritorious initiatives that have non-climate co-benefits. So, even though climate finance operates under the responsibility of the UNFCCC, it is important to coordinate standards for reporting and additionality with ODA standards in order to increase coherence and avoid double-counting. We discuss the question of climate finance additionality in detail in section 5.8.2.

4. Insufficient recipient reporting

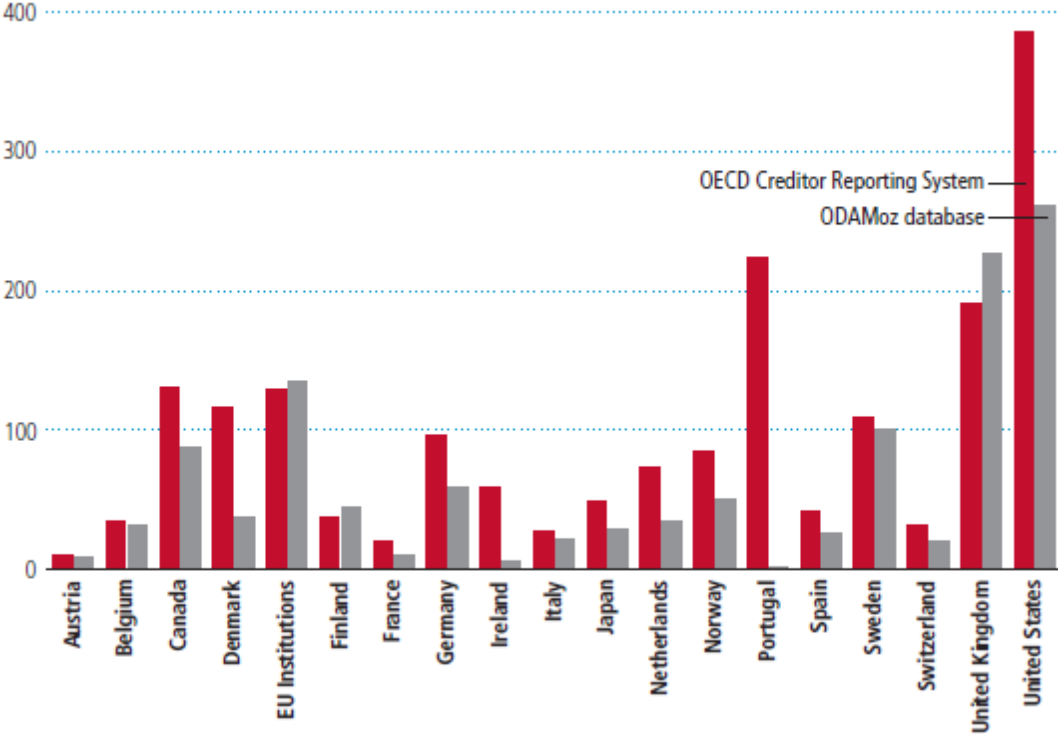
Today's monitoring of aid and climate finance flows depends on reporting from aid providers and should be complemented by systematic recipient reporting. Since aid can be provided to many different actors (governments, CSOs, consulting companies, etc.) and in different forms, most developing countries cannot quantify aid flows, and we do not really know exactly how much aid is transferred to developing countries (Development Initiatives 2013). Where recipient countries have conducted detailed assessments of ODA, their numbers often do not match the provider reporting provided through the DAC (Figure 11).

⁷² Erik Solheim (2014), the chair of the OECD DAC, has identified four main necessary shifts in ODA reporting: (i) scoring only the grant element of loans and other financial instruments as ODA, as opposed to their full face value; (ii) using a more appropriate discount rate for calculating the grant element (as opposed to the current 10 percent rate); (iii) standardizing the reporting of 'in-provider' components of ODA to improve their legitimacy, transparency and comparability, thereby addressing criticisms of 'phantom ODA'; and (iv) channelling an increased share of ODA to the countries most in need and counter the trend of declining ODA levels to LDCs.

⁷³ The DAC's ENVIRONET and the Working Party on Development Finance Statistics (WP-STAT) are working to improve the coverage and quality of DAC statistics as an input into the UNFCCC. Updated data is scheduled to become available in December 2015 at <http://oe.cd/RM>.

⁷⁴ ODI (Nakhoda *et al.* 2013) note that among the five largest contributors to fast-start climate finance only Germany has proposed a definition of additionality for its contribution.

Figure 11: Aid reported by providers for Mozambique exceeds aid recorded as received in Mozambique (both on and off budget) by 50 percent on average (in \$ million, 2011)



Source: Development Initiatives (2013)

Genuine ‘double entry’ bookkeeping by providers and recipients alike will help identify such discrepancies in reporting; help address issues of aid fragmentation, provider coordination, and predictability of aid commitments; promote a dialogue on what to count as aid; and improve the public financial management in recipient countries. Similar questions of recipient reporting will also need to be addressed for climate finance under the UNFCCC.

To the extent possible, such recipient reporting should be based on existing systems to minimize transaction costs. Promising candidates are national Aid Management Systems (AIMS) that capture incoming flows in most recipient countries.⁷⁵ Yet, AIMS currently rely on the manual input of data provided in-country by providers. This data is often not supplied in a timely manner and tends to be too insufficiently forward-looking to support recipient budget and planning processes. IATI has successfully piloted automated data exchange with AIMS. Such automatic import of IATI data into national systems should eliminate the current discrepancies between provider and recipient systems.

5. No effective monitoring of financing commitments made by provider countries

⁷⁵ Another potential platform is d-portal (www.d-portal.org) that was recently established by Development Initiatives to aggregate data from IATI and the DAC Creditor Reporting System.

With the exception of the important contributions made by leading CSOs, there is no systematic follow-through on commitments made to raise ODA or climate finance. For example, developed countries have made significant pledges to raise ODA and climate finance, including at the Monterrey Conference on Financing for Development (UN 2002), the Gleneagles, L'Aguila and many other G8 summits, the 2009 UNFCCC Conference of the Parties in Copenhagen, and numerous other fora. The discrepancy between such financing commitments and actual disbursements is high, and no formal system exists to raise alarm when commitments are not honored.

6. Inadequate tracking of private finance

In spite of the importance of private finance in financing the SDGs (see also section 6.4 below), data and standards for tracking private financial flows, particularly Private Funds Mobilized (PFM) through official resources (section 3.1), are poor. The OECD DAC has recently started some technical work on possible standards for defining and tracking PFM (OECD 2014k).⁷⁶ This work remains at an early stage, but it forms a promising basis to develop global standards for tracking PFM – ideally under the proposed Multilateral Development Finance Committee (MDFC).

An important FfD deliverable: Improved reporting and accountability of IDF

As part of the 'data revolution' for the SDGs, FfD should commit to a major effort on the reporting of International Development Finance to address the six shortcomings identified above. Building on the work of the UNFCCC, the DAC, and the IATI, a Multilateral Development Finance Committee (MDFC) should be considered. Such a mechanism would build on existing data collection mechanisms and share governance among all provider countries, both OECD and non-OECD. In particular, it should (i) establish clear standards for reporting and additionality of ODA, ODA-C, other concessional international public finance, Other Official Flows (OOF), Private Finance Mobilized (PFM), and other development finance flows; (ii) consolidate data on International Development Finance flows from all major official and non-official providers, as well as recipient countries; (iii) inventory assessments of investment needs to achieve the SDGs at national, regional, and global levels, and determine the adequacy of resource flows to meet these investment needs; and (iv) track and monitor financing commitments made at international conferences towards pooled financing mechanisms, emergency appeals, etc. Such a Multilateral Development Finance Committee should be a major outcome of FfD.

6.4 Mobilizing private finance for sustainable development

While the MDGs focused primarily on public investment needs for ending extreme poverty, the SDGs pursue a broader agenda that includes investments in sustainable agriculture, infrastructure, urban development, climate change mitigation, and other areas that can be substantially, and in some cases overwhelmingly, financed through private means. Overall, the bulk of financing for sustainable development can, and therefore should, originate from private sources (Table 2).

The world has ample saving – estimated at \$22 trillion per year with a stock of financial assets of some \$218 trillion (UN 2014) – and liquidity to finance the private investments in the SDGs. Yet, private financing remains vastly insufficient. A central question for FfD is therefore how global saving can be translated into the long-term private investments that the world needs in the pursuit of sustainable

⁷⁶ Recent DAC publications on this topic are available here: <http://www.oecd.org/dac/stats/mobilisation-effect-of-public-development-finance.htm>.

development. In essence, this will require that sufficient sustainable investment opportunities become available with a risk-return profile that is more attractive than the return for other ‘unsustainable’ investments. So far, this working paper has made a few overarching points regarding private financing that should frame an FfD framework:

1. **Public and private financing are complements:** As described in section 3.1, there is limited substitutability between private and public finance for core SDG investment needs in most market economies. This point is sometimes overlooked when discussions on development and climate finance juxtapose the very large private flows with relatively modest public investments. In line with the IECSD (UN 2014), we emphasize that where private investments can achieve the same or better outcomes than public investments at a lower cost, they should have primacy over public finance. In this sense, the estimates of financing needs summarized in sections 3.22 and 3.3 represent the maximum shares of private investment that appear compatible with achieving the SDG objectives.
2. **Public/private financing mixes must be considered separately for each sector and bespoke investment partnerships:** As illustrated in section 5, each major SDG investment area requires careful organization through bespoke public-private investment partnerships. Lessons from large-scale infrastructure finance cannot be applied directly to education or even access to basic infrastructure services, such as water supply, sanitation, or electricity micro-grids. Each public-private investment partnership also requires a supporting ‘ecosystem’ for advocacy, monitoring and evaluation, technology benchmarking, and so forth (section 4). The share of private finance varies substantially from one investment area to the next, depending on the nature of the goods and services that must be provided (see also section 3).
3. **Public finance is often a prerequisite for mobilizing private finance:** Many factors are important in mobilizing private finance, as discussed further in this section, but one salient feature of SDG investments is that they often require some public financing in order to raise (or ‘leverage’) private investments. For example, international infrastructure investments require a range of financial guarantees, upfront investments, and first-loss tranches to become viable for private investors (section 5.9). Agriculture and the transformation of energy systems require public investments in improved technologies (sections 5.5 and 5.10). Gavi has successfully used concessional financing to create new and commercially viable vaccine markets (sections 4.2.2 and 5.1). A successful FfD framework therefore needs to explain where such public co-funding will come from and how it can be organized at local, national, regional, and global levels. Otherwise, business will not be able to do its job.
4. **Poorer countries can mobilize less private financing:** The poorer a country the more difficult it is to mobilize private (co-)financing for SDG investment needs. Poorer countries have more poor people who cannot pay for essential services (e.g. toll roads). They also have smaller balance sheets and therefore less private and public capacity to take on debt. Poor countries also lack many of the essential public goods that are indispensable for a functioning and competitive industry, so private investors tend to stay away. And some poor countries face additional challenges due to an unfavorable climate, adverse geography, a politically unstable neighborhood, or other factors that require targeted public investments and policies to be overcome. These countries therefore need more ODA and OOF.

At least three additional changes are required to better translate global saving into private investments in sustainable development.⁷⁷

6.4.1 The importance of sound national policy frameworks and international rules

Private investors cannot invest in countries and sectors where national policy and regulatory frameworks are inadequate to generate sufficient returns with a commensurate level of risk. For example, investments in energy generation infrastructure require clear and credible long-term policy frameworks for power purchase agreements and the management of the power grid. Similarly, high levels of corruption, poor contract enforcement, an unreliable judiciary, and other policy or regulatory failures will undermine the potential for mobilizing private financing.

Shifting private investments towards energy efficiency or low-carbon power generation will require policies that correct market failures by imposing the social cost of greenhouse gas emissions on projects and users of fossil fuel (section 5.8). When such price signals are either too low, too volatile, or too short-term – as occurred for example under the EU Emissions Trading Scheme – then the weighted average cost of capital for sustainable energy investments will be too high relative to more polluting alternatives. The results will be higher investments in polluting projects and industries.

In addition to domestic institutions and policy frameworks, international rules and standards, including for trade, intellectual property rights, banking and insurance regulation, accounting standards, etc. must be made consistent with the objective of achieving the SDGs. As one example, today's global standards for banking and insurance regulation (Basel III and Solvency II) were designed with the single overarching objective to increase the stability of the financial system. Financial stability is unquestionably critical, but the resulting rules framework is widely seen as penalizing direct investments in long-term infrastructure and other projects that the world so urgently needs (Spencer and Stevenson 2013).

As highlighted in section 5.9, the FfD agenda therefore needs to propose 'coherence checks' to ensure that global rules for banking and insurance regulation are coherent with mobilizing the private finance needed to achieve the SDGs. Where inconsistencies exist, they need to be flagged in publicly available reports so that the rule-setting bodies can consider how to strike a better balance between the different and sometimes competing needs. Similar coherence checks need to be conducted for other global rules, including but not limited to trade regimes, intellectual property standards, accounting standards, and corporate reporting and disclosure standards.

We emphasize that such coherence checks must be universal and apply to every country – regardless of its level of income. Similarly, global rules should be framed universally to address all countries, building on the lessons of existing global mechanisms. Examples include the IMF whose financial surveillance applies to all countries (though concerns have been raised that the IMF applies its standards differently to different countries); UN Peacekeeping efforts that do not distinguish between the income level of a country; and the human rights agenda and its mechanisms. Other global rule-setting processes, such as

⁷⁷ We cannot cover these important issues in detail, so we refer below to more detailed frameworks and policy recommendations developed by others. The recently launched UNEP Inquiry into the Design of a Sustainable Financial System (UNEP 2014a, 2015) also provides detailed recommendations on how private finance can be mobilized for and better aligned with the long-term objectives of sustainable development (see also UN Global Compact 2014 and UNCTAD 2014).

BEPS or Basel III, and their coherence checks must be rethought in line with the global post-2015 development agenda.

6.4.2 The role of capital markets

Capital markets are the engine room of modern economies and therefore central to sustainable development. They mobilize, allocate, and price capital; they price risks and provide risk coverage. Capital markets issue and trade bonds for corporations and sovereigns, they raise capital for equities, and they trade in derivatives and a range of risk-management tools. Since they confirm (partial) ownership of listed companies, they are also a critical mechanism to influence corporate practices. The trouble is that today's capital markets are blind to the needs and challenges of sustainable development, as explained powerfully in a recently released report by the insurance company Aviva (Waygood 2014).

Today's capital markets do not 'price in' climate change and they do not raise the volumes of long-term capital that are required for public-private investment partnerships in the SDGs. In the words of Aviva, capital markets misprice sustainability issues, so that unsustainable companies have a lower cost of capital than sustainable ones. This results in a massive misallocation of capital towards investments and activities that do not support sustainable development.

Two central types of market failures stand out and are in need of correction through improved rules:⁷⁸ First, capital markets are poorly informed when it comes to sustainable development and are subject to multiple externalities. They do not internalize the environmental and social costs on companies' profit and loss statements, such as deforestation, greenhouse gas emission, depletion of fisheries, freshwater pollution or overuse, and a range of other challenges. Capital markets also lack essential information about sustainable development from companies. For example, the growth in companies reporting on basic sustainability indicators is slowing (CK Capital 2013).

As a result, markets misallocate capital on a tremendous scale. There are no easy fixes for this first set of challenges. Possible solutions advanced in the Aviva report include:

- Promote integrated financial regulation that integrates sustainable development into the mandates of supervisory agencies, listing rules, and financial stability;
- Ensure that all asset owners with more than \$1 billion under management publish a report to their beneficial owners on how they have integrated sustainable development considerations into their investment management agreements;
- Require integrated reporting by companies, investments banks, stock exchanges, asset managers, investment consultants, asset owners, and proxy voting agencies on a mandatory comply or explain basis. For example, every listed oil company should explain the implications of the agreed 2°C limit in the rise of average global temperatures on its operations and balance sheet.

⁷⁸ This discussion follows broadly Waygood (2014).

Second, capital markets are excessively short-termist. Companies and investment managers are evaluated on a quarterly basis – sometimes even more frequently. Most investment managers declare that using a longer time horizon to make business decisions would positively affect corporate performance, but a majority also report that the pressure to generate short-term results was *increasing* (Barton and Wiseman 2014). This focus on short-term results feeds through the entire financial industry so that investment analysts barely look at long-term trends and “investment behavior by fund managers is more akin to speculation than genuine ownership” (Waygood 2014). The excessive focus on short-term results undermines long-term investments. Possible solutions include abolishing quarterly reporting and evaluation cycles of companies and investment managers.

Another important solution to short-termism and the overall information deficit on sustainable development lies in developing national SDG capital-raising plans that outline how much money can be raised via infrastructure investment, project finance, corporate debt, foreign direct investment, equity investment, as well as sovereign and MDB debt. Of course, capital markets cannot and must not be ‘planned’; they should continue to facilitate vast numbers of individual transactions between providers and takers of capital. Yet, capital-raising plans are necessary to (i) provide information on (desired) long-term trends to analysts, investment managers, and other actors in the capital markets; and (ii) help governments understand how incentives can be better aligned with the investment needs of the SDGs.

FfD cannot legislate for capital markets, but it must acknowledge their importance for sustainable development. We urge member states to consider the carefully crafted recommendations in the Aviva report, and the work of the UNEP Inquiry into the Design of a Sustainable Financial System, as important input into the outcome document for the 2015 conference in Addis.

6.4.3 Financial innovation, creativity, and leadership

Clearly, governments and regulators must ensure that incentives in capital markets are aligned with sustainable development, but the transformation towards sustainable development cannot occur without corporate leadership and innovation. The Climate Leaders’ Summit organized by UN Secretary-General Ban Ki-moon in September 2014 showcased substantial financial innovation in green bonds, insurance products, stock market indices that are better aligned with sustainable development, and many other areas (UNEP 2014b, KPMG 2015). Finance for Resilience (FiRe) was launched in 2013 to identify innovative ideas that can mobilize at least \$1 billion per year in a short period of time. A first round of finalists was identified in 2014 and others are in preparation.

Such results-focused creativity will be a critical driver of success, even if it cannot substitute for public leadership on aligning rules and incentives. Interestingly, many of the most promising ideas advanced by FiRe and similar initiatives are public-private partnerships in their own right. So once again, we are dealing with challenges that require carefully calibrated, blended responses from the public and private sectors.

7 Delivering on the Financing Sustainable Development agenda

As this working paper has argued, the world needs effective public-private partnerships to achieve the SDGs and to stay within 2°C. Each partnership requires organization and leadership. The United Nations organizations and the Secretary-General can play critical roles in agenda setting and mobilization. They need to work with business groups, such as the UN Global Compact, World Business Council for Sustainable Development, International Chamber of Commerce, Global Reporting Initiative, and civil society.

Financing is the glue that holds the agenda together and provides the means to achieve ambitious goals. Therefore, FfD is central to the success of the SDGs and the climate agenda. We need an integrated approach to development and climate finance that encompasses the public and private sectors.

7.1 The political economy of aid and climate finance

Before turning to specific recommendations that FfD might adopt, this section briefly reviews the global political economy of aid and climate finance. All countries and actors will need to contribute to FfD to meet the SDGs and achieve the climate objectives to be agreed under the UNFCCC. This will require compromise and concessions from all parties. Taken on their own some of the proposals in this working paper will prove unpopular with particular groups of countries or actors. Yet they form part of an overall financing framework for sustainable development that is balanced and will require bold commitments from everyone:

- **High-income countries (DAC members)** need to honor the commitments on International Development Finance that they have made in the past, including ODA and climate finance, and ensure that high-quality ODA goes to the neediest countries with maximum efficiency and minimal transaction costs. As this working paper argues, this will require much greater use of pooled disbursement mechanisms, such as the GFATM, that have been shown to deliver better results.
- **Non-DAC high-income countries** should have essentially the same obligations as DAC members with regards to providing adequate, high-quality, and transparent climate and development financing.
- **Middle-income countries** are asked to play a new role. Upper-middle-income countries will themselves become aid providers rather than recipients, albeit on a smaller scale than the high-income countries.
- **Low-income countries and other IDA-eligible countries** need to strengthen DBR and the policy environment. They should accept full accountability for the effective use of resources.
- **Multi- and bi-lateral provider agencies** need to focus their concessional financing towards the low-income and other IDA-eligible countries, with a special emphasis on the poorest countries. For example, they need not provide grant support to middle-income countries still battling to end pockets of extreme poverty. The host countries can take on this challenge largely or fully themselves.

- **The private sector** has an important role to play in leveraging public resources and as the principal financier of the transformation to sustainable development. Attention is needed to ensure that the private sector's contribution does not lead to excessive transaction costs or simply offloads risks to public financing agencies.

A viable financing framework for the post-2015 agenda will require strong commitments and a willingness to compromise. Such shared problem solving is required in an interconnected world where some challenges can only be met through international cooperation and official co-financing. In the end, an effective system for development and climate finance will make everyone better off even if some of the required compromises may be politically difficult.

7.2 Opportunities for leadership in the run-up to FfD 2015

Success will not come alone from a successful Addis Ababa Accord. It will also require leadership from individuals, business, civil society organizations, and of course governments. Fortunately, several opportunities exist for motivated leaders to take the initiative in the run-up to the 2015 Financing for Development Conference. Here are some examples:

- **One or more provider governments** can take the initiative to launch a multilateral Global Fund for Education building on the Global Partnership for Education. Such a commitment will not necessarily require substantial additional resources since many larger providers can mobilize the resources by reprioritizing their aid. A well-designed and adequately resourced Global Fund for Education will go a long way towards filling the gaps that exist in the education sector and can galvanize major progress. It would become a sign of outstanding international leadership from high-income or upper-middle-income countries. Similar opportunities exist in health, smallholder agriculture and nutrition, water and sanitation, energy access, etc.
- **Major philanthropists** should study how Bill and Melinda Gates helped transform the health sector by financing an ecosystem of data-driven CSOs and research teams that drove advocacy and accountability in the health sector. The Gates Foundation has also provided the initial funding for Gavi, which then rose to become a major provider of access to vaccines in the developing world. The question now is who can provide the leadership in education, oceans, smallholder agriculture, or other high-priority investments that Bill and Melinda Gates provided in health.
- **Local authorities and mayors** can announce new initiatives for mobilizing cities and local governments around the challenges of FfD, including mechanisms for municipal infrastructure finance.
- **The United Nations** should
 - Help fill gaps in available needs assessments for the SDGs;
 - Support efforts to develop a Multilateral Development Finance Committee (MDFC) to oversee development assistance flows, building on the DAC and IATI, but incorporating non-OECD members and striving for a multi-stakeholder governance;
 - Consider how to reform global institutions to support the financing of the SDGs. For example, the OECD can propose a unilateral extension of BEPS to LDCs. The World Bank could invest in large-scale Infrastructure Project Preparation Facilities. The New

Development Bank can become a major player in providing long-term infrastructure finance around the world.

Many other opportunities exist for bold leadership by international organizations in driving progress and should be seized during early 2015.

- **Business** can show leadership by helping structure Public-Private Technology Partnerships to develop and deliver the technologies the world needs in order to achieve sustainable development.
- **Civil society** leadership and advocacy for bold initiatives, support for effective monitoring and evaluation, and policy advice will be crucial for a successful FfD agenda. The experience of the GFATM demonstrates how strong and equal participation by civil society can strengthen the effectiveness of goal-based investments. For this reason, civil society should be included in the FfD process and subsequent implementation.
- **The science community, including Future Earth**, can step forward to provide the knowledge that countries need in order to make the long-term transformations to sustainable development. This includes metrics for tracking progress towards sustainable development.
- **Universities**, including business schools offering a Masters of Business Administration, can commit themselves to the SDGs to train the next generation of sustainable development finance leaders.

Each of these steps is imminently feasible and can make a tremendous contribution towards a successful FfD conference and achieving the SDGs.

7.3 Recommendations for Financing Sustainable Development 2015

Here, we present list of twelve priority commitments that could be made at FfD 2015:

1. **Adopt indicative financing needs – public and private – and estimates of International Development Finance needs** (including ODA and climate finance), as outlined tentatively in Table 2 (p.30). Commit to improving the needs assessment to guide the implementation of FfD by filling gaps and incorporating lessons from implementations. Reaffirm the importance of ODA and concessional climate finance for meeting these objectives in low-income countries and for global public goods – since such funds are hardest to raise and will leverage tremendous private resources.
2. **Adopt clear standards for Domestic Budget Revenues (DBR)** that respond to countries' needs and ability to raise resources. We propose the following minimum standards:
 - For Least Developed Countries (LDCs): 18 percent of GNI
 - For other low-income countries (LICs): 20 percent of GNI
 - For lower-middle-income countries (LMICs): 22 percent of GNI
 - For upper-middle-income countries (UMICs): 24 percent of GNI
 - For high-income countries (HICs): at least 24 percent of GNI

DBR should be directed towards the SDGs, including internationally-agreed sectoral spending targets such as Abuja on health, Dakar and Muscat on education, and Maputo on agriculture. Countries should also consider fiscal decentralization standards to strengthen the mobilization of local and sub-national DBR.

3. **Recognize the central role of pooled financing mechanisms in building goal-based public-private investment partnerships**, in many – though not all – priority investment areas for the SDGs. Agree that these mechanisms should provide roughly half of all multilateral ODA in the respective sector. Commit to the following priority initiatives and scale back other non-essential financing mechanisms to reduce fragmentation, duplication, and overlaps:
 - Building on the GPE and the experience of health financing mechanisms, launch a **Global Fund for Education** aiming to disburse \$15 billion per year by 2020.
 - Expand the GFATM and/or Gavi into a **Global Fund for Health** to provide financing at scale for health systems strengthening. This fund will require some \$15 billion per year by 2015.
 - Expand IFAD (or possibly the GAFSP) to become the **Global Fund for Smallholder Agriculture and Nutrition** aiming to disburse some \$10 billion by 2020.
 - Strengthen the **Global Environment Facility** to perhaps \$6 billion per year and commit that a substantial share – perhaps 20 percent – of the \$100 billion in additional climate finance is channeled through the **Green Climate Fund**.
 - Recognize the critical role played by the **International Development Association (IDA)** in providing flexible funding to poor countries and consider ways to strengthen IDA further.
 - Explore how financing in other areas (energy access, water and sanitation, rural infrastructure, etc.) can be strengthened and how all providers (including private philanthropy) can contribute to them.

4. **Promote long-term investments in infrastructure around:**
 - **National Public Investment Systems and Infrastructure Project Preparation Facilities** to support the development of early-stage projects at local, national, and regional levels.
 - **Effective global, regional, and national subsidy and investment risk-mitigation mechanisms**, including a strengthened and expanded MIGA.
 - **Reviews of financial and insurance standards (Basel III and Solvency II) to promote long-term investments**, including through annual reports on whether global rules are consistent with countries achieving the SDGs and long-term climate objectives agreed under the UNFCCC.
 - **Harmonized infrastructure investment platforms and an effective secondary market**, to facilitate direct infrastructure investments from institutional investors.
 - **Deeper local saving pools and banking systems** to mobilize greater volumes of domestic financing for local infrastructure investments.

5. **Ensure that capital markets can provide long-term finance for infrastructure and other sustainable development finance needs.** *Inter alia* FfD may resolve to:
 - Make integrated reporting from companies and asset managers a global standard.
 - Address excessive short-termism in capital markets.

6. **Adopt clear standards and targets for additional ODA and other forms of international public, concessional finance.**
 - All high-income countries that are members of the OECD DAC recommit to increasing their ODA to 0.7 percent of GNI. By 2020 each provider country should at least halve the gap to 0.7 percent of GNI and reach the target by 2025.
 - All non-DAC high-income countries should commit to the same quantitative objectives as the DAC members, including halving the gap by 2020 and reaching the full target no later than 2025.
 - Upper-middle-income countries will soon become high-income countries and should therefore commit at least 0.1 percent of GNI in development assistance.

7. **Agree to transparent eligibility criteria for ODA and other public international flows.** We propose the following standards:
 - ODA should be focused on low-income and other IDA-eligible countries. Each provider should provide at least 0.15-0.2 percent of GNI or 50 percent of ODA to LDCs, whichever is higher.
 - Non-IDA lower-middle-income countries will be eligible for low-interest loans and technical assistance, but should not receive any grant assistance or concessional loans. To avoid abrupt disturbances to public finances, aid to these countries should be phased out gradually once they graduate from IDA (Annex 1). The rule should be applied flexibly to support lower-middle-income countries in special situations (e.g. experiencing major natural disasters or conflict). Specific priority challenges (e.g. high infectious disease burden) should also qualify for targeted ODA.
 - Upper-middle-income countries should gradually become providers themselves aiming to provide at least 0.1 percent of GNI in ODA. In the interim, they may be eligible for technical assistance.

8. **Encourage individual holders of large wealth to sign the Giving Pledge and donate a significant share of their net worth to achieving the SDGs,** particularly through specialized SDG global funds. Such investments might further focus on a particular sector or investments in the wealth holder's own country.

9. **Commit to providing at least \$100 billion in additional climate finance from developed countries** by 2020, roughly mobilized as 1/3 ODA for climate (ODA-C), 1/3 non-concessional public finance (OOF-C), and 1/3 Private Finance Mobilized (PFM) through official finance. Adopt the principle of assessed contributions based on the principle that polluters pay graded by countries' ability to pay. High-income countries should use the opportunity provided by the recent sharp fall in oil prices to introduce domestic fossil fuel levies that can in part mobilize funding for the Green Climate Fund and ODA-C more generally. Even small volumes of resource mobilization will send a powerful signal that countries are serious about providing long-term financing for the GCF.

10. **Reform international regulation and ensure transparency to support DBR**, by adopting the following principles and ensuring their enforcement:
 - Transparent beneficial ownership of companies, trusts, and other investment vehicles in open data format;
 - Fair transfer pricing regimes and taxation of multinational companies;
 - Exchange of information among tax authorities and taxation of offshore assets;
 - Publish what you pay;
 - Open government data including mandatory disclosure laws and the EITI; and
 - Periodic review of key international rules and standards for consistency with achieving the SDGs.
 - Expansion of the Base Erosion and Profit Shifting (BEPS) initiative to address the needs of all developing countries

11. **Launch Public-Private Partnerships for key sustainable development technologies to prepare technology roadmaps and promote technology development.** A focus should be on describing how technologies can be developed and deployed with particular attention to facilitating and financing diffusion to all developing countries technologies.

12. **Launch a new Multilateral Development Finance Committee (MDFC)** – working with the UNFCCC and building on the OECD-DAC and IATI – to provide a transparent, multilateral forum for monitoring all International Development Finance flows, including ODA, OOF, and PFM.

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Annex 1. Country categories

High income		Upper-middle income		Lower-middle income		Low income	
				Non-IDA eligible	IDA eligible	Non-IDA eligible	
Andorra	Kuwait	Angola [°]	Palau	Armenia	Bhutan [°]	Afghanistan [°]	Korea, Dem Rep.
Antigua and Barbuda	Latvia	Albania	Panama	Egypt, Arab Rep.	Bolivia	Bangladesh [°]	
Aruba	Liechtenstein	Algeria	Peru	El Salvador	Cabo Verde	Benin [°]	
Australia*	Lithuania	American Samoa	Romania	Georgia	Cameroon	Burkina Faso [°]	
Austria*	Luxembourg**	Argentina	Serbia	Guatemala	Congo, Rep.	Burundi [°]	
Bahamas, The	Macao SAR, China	Azerbaijan	Seychelles	India	Côte d'Ivoire	Cambodia [°]	
Bahrain	Malta	Belarus	South Africa	Indonesia	Djibouti [°]	Central African Republic [°]	
Barbados	Monaco	Belize	St. Lucia ⁱ	Morocco	Ghana	Chad [°]	
Belgium*	Netherlands*	Bosnia and Herzegovina	St. Vincent and the Grenadines ⁱ	Paraguay	Guyana	Comoros [°]	
Bermuda	New Caledonia	Botswana	Suriname	Philippines	Honduras	Congo, Dem. Rep. [°]	
Brunei Darussalam	New Zealand*	Brazil	Thailand	Swaziland	Kiribati [°]	Eritrea [°]	
Canada*	Northern Mariana Islands	Bulgaria	Tonga ⁱ	Syrian Arab Republic	Kosovo	Ethiopia [°]	
Cayman Islands	Norway**	China	Tunisia	Ukraine	Kyrgyz Republic	Gambia, The [°]	
Channel Islands	Oman	Colombia	Turkey	West Bank and Gaza	Lao PDR [°]	Guinea [°]	
Chile	Poland*	Costa Rica	Turkmenistan		Lesotho [°]	Guinea-Bissau [°]	
Croatia	Portugal*	Cuba	Tuvalu [°]		Mauritania [°]	Haiti [°]	
Curaçao	Puerto Rico	Dominica ⁱ	Venezuela, RB		Micronesia, Fed. Sts.	Kenya	
Cyprus	Qatar	Dominican Republic			Moldova	Liberia [°]	
Czech Republic*	Russian Federation	Ecuador			Mongolia	Madagascar [°]	
Denmark**	San Marino	Fiji			Nicaragua	Malawi [°]	
Estonia	Saudi Arabia	Gabon			Nigeria	Mali [°]	
Equatorial Guinea	Singapore	Grenada ⁱ			Pakistan	Mozambique [°]	
Faeroe Islands	Sint Maarten	Hungary			Papua New Guinea	Myanmar [°]	
Finland*	Slovak Republic*	Iran, Islamic Rep.			Samoa	Nepal [°]	
France*	Slovenia*	Iraq			São Tomé and Príncipe [°]	Niger [°]	
French Polynesia	Spain*	Jamaica			Senegal [°]	Rwanda [°]	
Germany*	St. Kitts and Nevis	Jordan			Solomon Islands [°]	Sierra Leone [°]	
Greece*	St. Martin	Kazakhstan			South Sudan [°]	Somalia [°]	
Greenland	Sweden**	Lebanon			Sri Lanka	Tajikistan	
Guam	Switzerland*	Libya			Sudan [°]	Tanzania [°]	
Hong Kong SAR, China	Trinidad and Tobago	Macedonia, FYR			Timor-Leste [°]	Togo [°]	
Iceland*	Turks and Caicos Islands	Malaysia			Uzbekistan	Uganda [°]	
Ireland*	United Arab Emirates	Maldives ⁱ			Vanuatu	Zimbabwe	
Isle of Man	United Kingdom**	Marshall Islands ⁱ			Vietnam		
Israel	United States*	Mauritius			Yemen, Rep. [°]		
Italy*	Uruguay	Mexico			Zambia [°]		
Japan*	Virgin Islands (U.S.)	Montenegro					
Korea, Rep.*		Namibia					

* Denotes OECD DAC member, ** Denotes OECD DAC member providing at least 0.7 percent of GNI in ODA, ° denotes Least Developed Country ⁱ Denotes country benefiting from the small island economy exception: small islands (with less than 1.5 million people, significant vulnerability due to size and geography, and very limited credit-worthiness and financing options) have been granted exceptions in maintaining their IDA eligibility. Sources: OECD, World Bank, United Nations