OFFICIAL DEVELOPMENT FINANCE FOR INFRASTRUCTURE

SUPPORT BY MULTILATERAL AND BILATERAL DEVELOPMENT PARTNERS

OECD REPORT TO G20 FINANCE MINISTERS AND CENTRAL BANK GOVERNORS

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ABSTRACT

The main **objective** of this study is to offer an overall picture of support by multilateral and bilateral development partners to development country infrastructure. By presenting an overview of the scale, distribution, and modality of development co-operation for infrastructure, the report is expected to contribute to discussions and further research in international fora on how to fill the financing gap, particularly by mobilising the private sector. However, the report does not generally make assessments against development objectives nor provide policy recommendations.

The **methodology** mainly involved analysing the OECD Development Assistance Committee (DAC)'s Creditor Reporting System data on Official Development Finance (ODF) for the infrastructure sectors (water and sanitation, transport, energy, and communications). Desk research was also conducted on gaps in infrastructure financing as well as support by major development partners that do not report to the DAC at the activity level.

Key findings for 2013 include the following:

- Total infrastructure investments in developing countries amounted to roughly USD 1 trillion a year, of which more than half was financed by developing country governments and a third by the private sector.
- Official development partners generally financed 6-7% of infrastructure investments, which amounted to about USD 60 billion.
- Of the development partner financing, 46% was from bilaterals and 54% from multilaterals.
- Among development partners, China, India, Turkey and Arab partners provided about 13% of total official support for infrastructure through south-south development co-operation.
- Among those reporting to the DAC, the top 10 development partners, which included multilaterals, G7 countries and Korea, provided over 80% of ODF to infrastructure.
- Asia received half of ODF for infrastructure, Africa 28%, Americas 12% and Europe 10%.
- Lower Middle Income Countries received 43% of ODF to infrastructure, Upper Middle Income Countries 33%, and Low Income Countries 24%.
- Transport received 45% of ODF to infrastructure, followed by energy at 32%, water & sanitation at 19%, and communications at 4%.
- Support for green infrastructure was 37% of ODF to infrastructure.
- USD 34 billion was provided by development partners to support the enabling environment, both within infrastructure sectors and beyond for the general investment climate.
- Development Finance Institutions provided equity and loans of USD 5.9 billion to the private sector for infrastructure, mostly in UMICs.
- Development partners are also supporting Project Preparation Facilities, Project Facilitations Platforms and Blended Finance operations to leverage private investment for infrastructure.

End remarks. This report presents comprehensive and generally harmonised data on financing for infrastructure by official development partners, mostly based on annual disbursements. By giving an overview of infrastructure financing comparable with annual expenditures or financing requirements for infrastructure, the expectation is to facilitate discussions on a more effective use of scarce public funds in filling the large infrastructure gap, which is crucial for developing countries to achieve sustainable development.

ABBREVIATIONS

AfDB	African Development Bank
AFESD	Arab Fund for Economic and Social Development
AIIB	Asian Infrastructure Investment Bank
AsDB	Asian Development Bank
BADEA	Arab Bank for Economic Development in Africa
CDC	CDC Group
COFIDES	Compañía Española de Financiación del Desarrollo
DAC	Development Assistance Committee
DEG	Deutsche Investitions- und Entwicklungsgesellschaft mbH
DFI	Development Finance Institution
DWG	Development Working Group
EBRD	European Bank for Reconstruction and Development
ECA	Export Credit Agency
ECG	Export Credit Group
EDFI	European Development Finance Institutions
EIB	European Investment Bank
EU	European Union
FMO	Dutch Entrepreneurial Development Bank
G20	Group of Twenty
GNI	Gross National Income
GHG	Greenhouse gases
IADB	Inter-American Development Bank
IFC	International Finance Corporation
IFI	International Finance Institution
IFU	Danish Investment Fund for Developing Countries
IIWG	Investment and Infrastructure Working Group
IsDB	Islamic Development Bank
LICs	Low Income Countries
LMIC	Lower Middle Income Country
MDB	Multilateral Development Bank
NDB	New Development Bank
Norfund	Norwegian Investment Fund for Developing Countries
OECD	Organisation for Economic Co-operation and Development
ODA	Official Development Assistance
ODF	Official Development Finance
OFID	OPEC Fund for International Development
OOF	Other Official Flows
OPIC	Overseas Private Investment Corporation
PFI	Policy Framework for Investment
PPIAF	Public-Private Infrastructure Advisory Facility
PIDG	Private Infrastructure Development Group
PPP	Public Private Partnership
PROPARCO	Promotion et Participation pour la Coopération économique
SDGs	Sustainable Development Goals
SIMEST	Società italiana per le imprese all'estero
SOE	State-owned enterprise

TIKA	Turkish Development Co-operation Agency
UK	United Kingdom
UMIC	Upper Middle Income Country
USA	United States of America
USAID	United States Agency for International Development
USD	United States Dollar
WBG	World Bank Group

BACKGROUND AND INTRODUCTION

1. Infrastructure, such as water and sanitation, transport, energy and communications, is fundamental in achieving economic growth, poverty reduction and human development (Mwase and Yang, 2012; Agénor and Moreno-Dodson, 2006; Straub, 2008). This is all the more relevant as production systems are increasingly taking place across continents, which requires scaling up infrastructure to connect developing countries with global value chains that could spur their economic growth. However, with developing country populations expected to grow continuously in the decades ahead — and with high rates of urbanisation — there is wide recognition that current resources are insufficient to fill the infrastructure investment gaps of these countries.

2. Furthermore, the challenge will not only be supplying quantity, but also ensuring quality, as the threats posed by climate change necessitate the integration and promotion of low-carbon and climate-resilient technologies. This aspect is being highlighted in the drafting of the upcoming United Nation's Sustainable Developing Goals (SDGs) which point to the need of providing infrastructure that generates economic growth and human well-being, while mitigating and adapting to climate change. Ambitious goals are expected to be set that will require significant efforts from all relevant stakeholders, notably governments, development partners and the private sector.

3. In particular, with investment needs in infrastructure at the scale of trillions in the decades ahead, mobilising private resources represents an important avenue to finance the investment gap. Although expenditures from the public sector will remain key, private participation has the potential to maximise available resources as well as provide expertise and innovation for development. At the same time, given the intrinsic risks of infrastructure investments, tighter global financial regulation, and poor enabling environment in developing countries, innovative strategies need to be devised in order to boost the contribution of the private sector.

4. The Group of Twenty (G20) is therefore increasingly paying attention to leveraging more resources to finance infrastructure, including for developing countries, through the Investment and Infrastructure Working Group (IIWG) and the Development Working Group (DWG). Both groups have been exploring modalities to foster investment by addressing bottlenecks at the upstream and downstream levels. The IIWG has particularly focused on identifying strategies to leverage the significant resources of institutional investors, such as pension funds and sovereign wealth funds. The Turkish Presidency in 2015 is notably working on the enabling environment for private sector participation in infrastructure through the DWG, with a special focus on Low Income Developing Countries. Moreover, to reduce investment bottlenecks, the G20 Australian presidency in 2014 created the new Global Infrastructure Hub to act as a platform for mobilising public and private finance for infrastructure, including in developing countries.

5. To contribute to these global efforts, this report[1] maps and describes the activities of major development partners in financing infrastructure[2] of developing countries, namely Official Development Assistance (ODA)-eligible recipient countries. While it gives a general overview of their infrastructure financing, it also focuses on their development co-operation that concern mobilising private sector sources. The report includes data on the 50 major development partners that report to the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) at the

1. It updates the OECD Working Paper, Official Support for Private Sector Participation in Developing Country Infrastructure issued in July 2014 (see Miyamoto and Biousse 2014).

2. Infrastructure refers to the sectors 140 (water & sanitation), 210 (transport & storage), 220 (communications), and 230 (energy generation and supply) in the DAC Creditor Reporting System. See Technical Note Section I.A.

activity level and in a harmonised manner as well as estimates of emerging economies that are playing a key role in financing infrastructure of other developing countries. The data mainly focuses on Official Development Finance[3] (ODF) of 2013 by bilateral and multilateral[4] development partners, mostly in disbursements rather than commitments[5].

6. Section I provides an overview of investment needs, expenditures and financing gaps of developing country infrastructure, as well as total amounts and distributions of ODF for infrastructure. Section II describes development co-operation related to the enabling environment for private sector participation in infrastructure. Section III is on support to the private sector for infrastructure from Development Finance Institutions (DFIs)/ International Financial Institutions (IFIs). It also includes some relevant data on Export Credit Agencies (ECAs) although they are not part of development finance. Section IV focuses on the contribution of development partners to low-carbon and climate-resilient infrastructure. Section V gives a snapshot of some emerging economies providing development co-operation for infrastructure. Section VI concludes with some end remarks.

3. Official Development Finance consists of the sum of ODA and developmental Other Official Flows (OOF), i.e. concessional and non-concessional resources from bilateral and multilateral sources. Thus it only includes non-export-credit OOF. Since a large share of lending operations by MDBs is non-concessional (hence not ODA), ODF better represents the reality of support to infrastructure.

4. Multilateral development partners include the EU, a DAC member with its own sources of financing and budgetary authority, although it has a sui generis legal nature.

5. See Technical Note Section I.B.

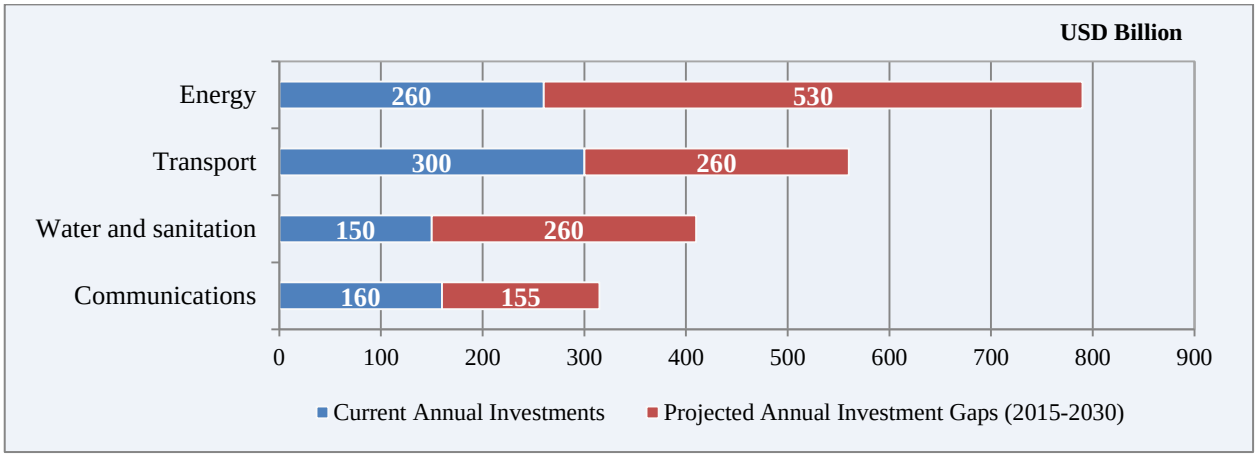
I. OVERVIEW OF INFRASTRUCTURE FINANCE

1. Current Investments and Projected Gaps in Infrastructure

Projected infrastructure needs require 2-3 times current investments, which are at USD 1 trillion per year.

7. Developing countries are facing difficulties in meeting their infrastructure needs as investment requirements are high and expected to increase further in the years ahead. Current infrastructure financing in developing countries is estimated to be roughly under United States Dollar (USD) 1 trillion per year (UNCTAD 2014). This figure includes financing from developing country governments, development partners and the private sector, both domestic and international. When disaggregated, approximately a third of the expenditures are for transport and energy, respectively, with the remaining third more or less equally split between water and sanitation and communications. However, to meet the upcoming SDGs, two to three times these amounts will be required annually up to 2030. Figure 1 presents the current level of annual financing and the projected investment gaps according to each infrastructure sector[6]. It shows that investment would need to increase particularly in energy.

Figure 1. Current Investments and Projected Gaps in Infrastructure



Source: Estimates based on UNCTAD (2014) World Investment Report (See Technical Note, Section I.C.)

Only 6-7% of infrastructure financing in developing countries comes from development partners.

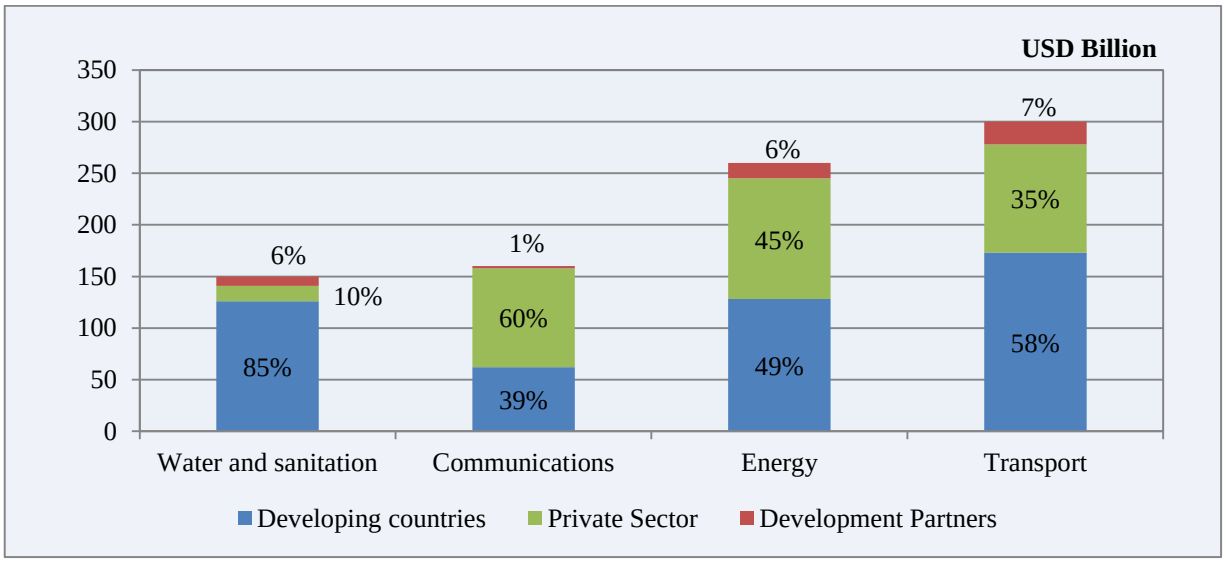
8. In terms of sources of finance, estimates indicate that in total, more than half of infrastructure finance is paid by developing country governments themselves. About a third of financing also comes from the private sector. The share of development partners collectively, on the other hand, is actually much lower at around 6-7% of the total. However, these proportions vary widely depending on the economic development of the recipient country and the specific characteristics of each infrastructure sector. For example, large and emerging economies rely much less on development partners than Low-Income Countries (LICs) which are more aid dependent (see Sy and Rakotondrazaka 2015). This means that the

6. This estimate excludes the investment required for climate change mitigation and adaptation.

importance of support by development partners in LICs would be greater than in middle income countries or large emerging economies.

9. In specific sectors, development partner financing is generally around 6-7% for water and sanitation, energy, and transport, but only 1% for communications, presumably due to weaker links to poverty reduction (see Kingombe 2011) and higher share of private sector financing (Figure 2). In fact, communication projects, which generally have predictable revenue streams, clear costs, and lower risks make this sector highly attractive for private investment (Gutman et al. 2015). Conversely, a high proportion of water and sanitation is paid by the developing country governments, with very low share of private financing. This could be due to the small business models, inefficient regulation and supervision of the water sector, as well the need for household tariffs to remain low, which are not conducive for financiers (Marin 2009).

Figure 2. Developing Country Infrastructure by Source of Finance



Source: OECD/DAC aid activity database (CRS), disbursements and estimates based on data from UNCTAD (2014) (See Technical Note, Section I.D)

2. Overall Development Partner Finance for Infrastructure

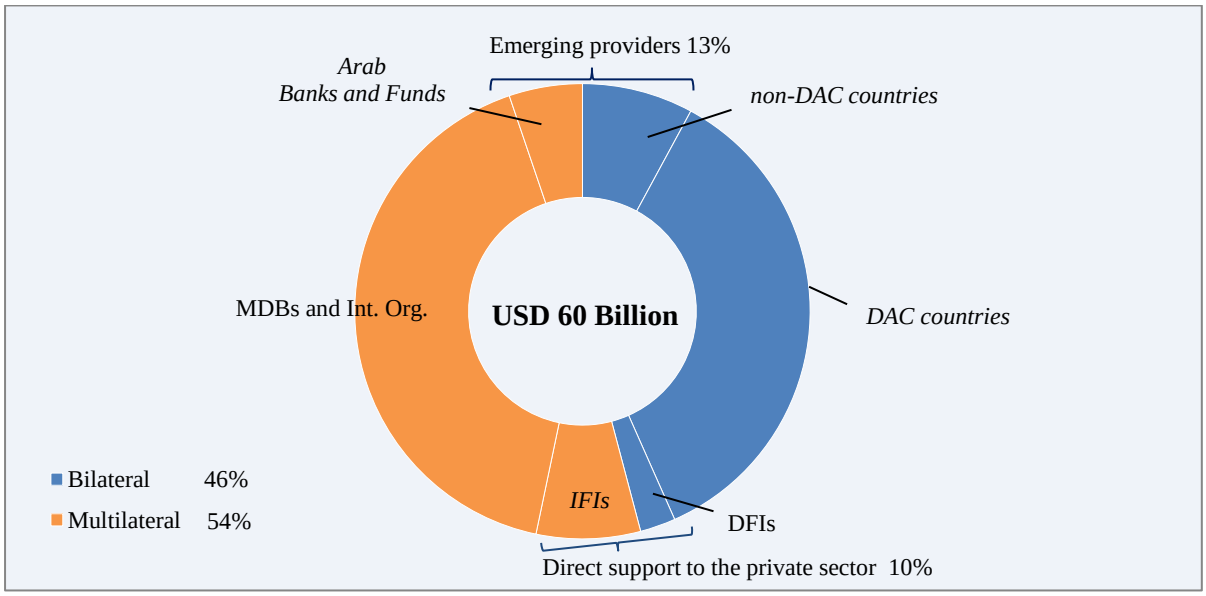
Support from development partners to infrastructure is estimated at USD 60 billion.

10. Official flows for development co-operation in infrastructure are estimated to be at around USD 60 billion in 2013 (see Figure 3) [7]. This figure includes data reported fully to the DAC by bilateral and multilateral development partners as well as estimates from some non-DAC countries (China, India, and Turkey). It also includes bilateral DFIs and multilateral IFIs—some of which report to the DAC while

7. Disaggregating this figure further, the vast majority of the financing (USD 55 billion) were disbursements by 50 development partners reporting to the DAC; 1 USD billion are estimates of amounts disbursed for infrastructure by some Development Finance Institutions (DFIs) that do not report to the DAC (see Section III); and 4 USD billion are estimates of official support provided by non-DAC countries that also do not report to the DAC at activity level or at all, such as India, China and Turkey (see Section IV). This figure does not include the amount of export credits that went to developing country infrastructure since these flows are not developmental (See Section III).

others do not. Based on the reporting and estimates, calculations show that 46% of official flows to infrastructure came from bilateral development partners and 54% from multilaterals.

Figure 3. Total Official Support for Development Co-operation in Infrastructure by Development Partners, 2013



Source: OECD/DAC aid activity database (CRS), disbursements and estimates (See Technical Note, Section I.E.)

ODF to infrastructure has been growing considerably, reaching about a third of all ODF to all sectors.

11. To provide a more detailed analysis of the characteristics of official support for development co-operation in infrastructure, the following part will exclusively consider ODF by the 50 development partners reporting to the DAC at the activity level[8], which totalled USD 55 billion in 2013. In terms of trends, the data show that disbursements for infrastructure have been growing considerably in the last years, both in absolute and relative terms, confirming its increasing importance in development co-operation. More specifically, ODF for infrastructure increased at a compounded annual growth rate of 13% in the period 2008-2013. In addition, the share of infrastructure within ODF to all sectors[9] also grew from 24% to 29%.

12. Regarding development partners, the main providers of ODF to infrastructure in 2013 were multilaterals, several G7 countries and Korea. The World Bank Group (WBG), which includes the International Finance Corporation (IFC), was by far the largest development partner, reaching almost USD 12 billion (Figure 4). Japan, Asian Development Bank (AsDB) and European Union (EU) institutions also disbursed significant amounts, ranging from USD 5 to 7 billion. Overall, ODF to infrastructure was concentrated among a few development partners, with the top 10 providing over 80% of the total.

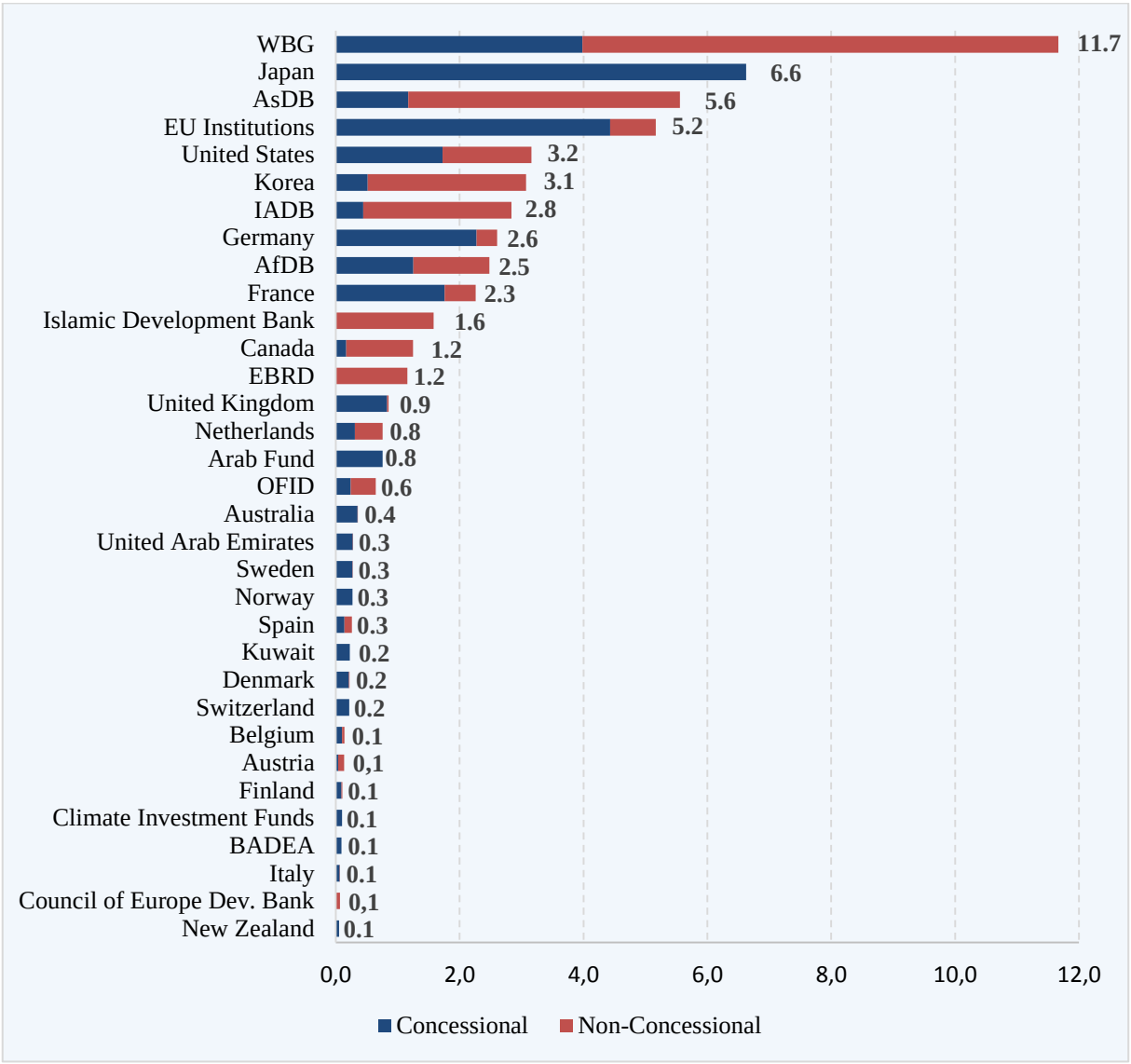
13. Of the USD 55 billion ODF to infrastructure reported to the DAC, slightly more than half (53%) was Official Development Assistance (ODA) and 47% was non-concessional financing. Disaggregated

8. This is because the harmonised reporting to the CRS provides a level of granularity that allows for a more detailed analysis whereas data from other sources does not.

9. This includes other sectors such as health, education, agriculture, and so on. However, contributions that are not targeted to a specific sector, e.g. balance-of-payments support, debt relief, emergency aid -called "non-sector allocable"- are not considered.

into instruments, 73% was provided in the form of loans, while grants made up 26%, and equity investments were 1%. Bilaterals collectively extended most of their financing as ODA since they have a commitment towards reaching a 0.7% ODA/ Gross National Income (GNI) ratio, although Korea, Canada, the Netherlands, and Austria disbursed more at non-concessional terms. On the other hand, the multilaterals—which naturally do not have an ODA/GNI ratio target—financed infrastructure mostly at non-concessional terms, particularly the European Bank for Reconstruction and Development (EBRD)[10].

Figure 4. ODF to Infrastructure by Development Partners, 2013



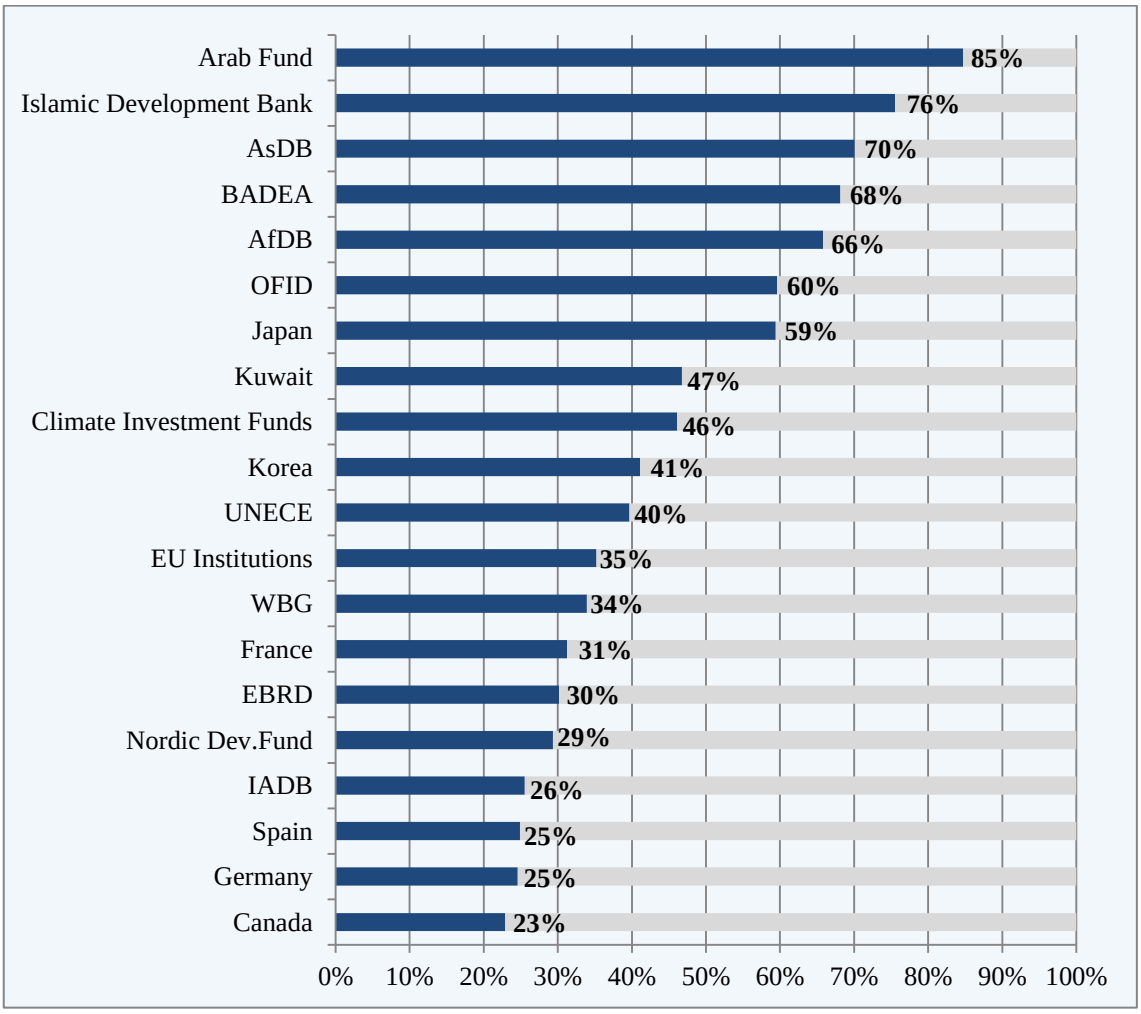
Source: OECD/DAC aid activity database (CRS), disbursements and estimates (See Technical Note, Section I.F.).
Note: WBG data include actual disbursements of IBRD and IDA as well as estimates of IFC disbursements to infrastructure. Estimates of disbursements for infrastructure from bilateral DFIs of Austria, Belgium, Denmark Finland, France, Germany, Italy, Netherlands, Norway, Portugal, Sweden, Switzerland, UK, and USA included in total ODF to infrastructure.

10. EBRD amounts include exclusively disbursements to ODA-eligible countries. However, if other countries, such as Russia and some Eastern European countries were taken into account, total disbursements to infrastructure would reach roughly EUR 2.1 billion.

Arab partners, some regional development banks, and Japan place high priority on infrastructure.

14. Many development partners had high shares of support for infrastructure among all sectors, indicating that infrastructure represents a priority in their development co-operation. In particular, several Arab development partners, AsDB, African Development Bank (AfDB), and Japan disbursed more than half of their ODF to infrastructure (Figure 5).

Figure 5. Share of Infrastructure in all ODF Sectors, 2013



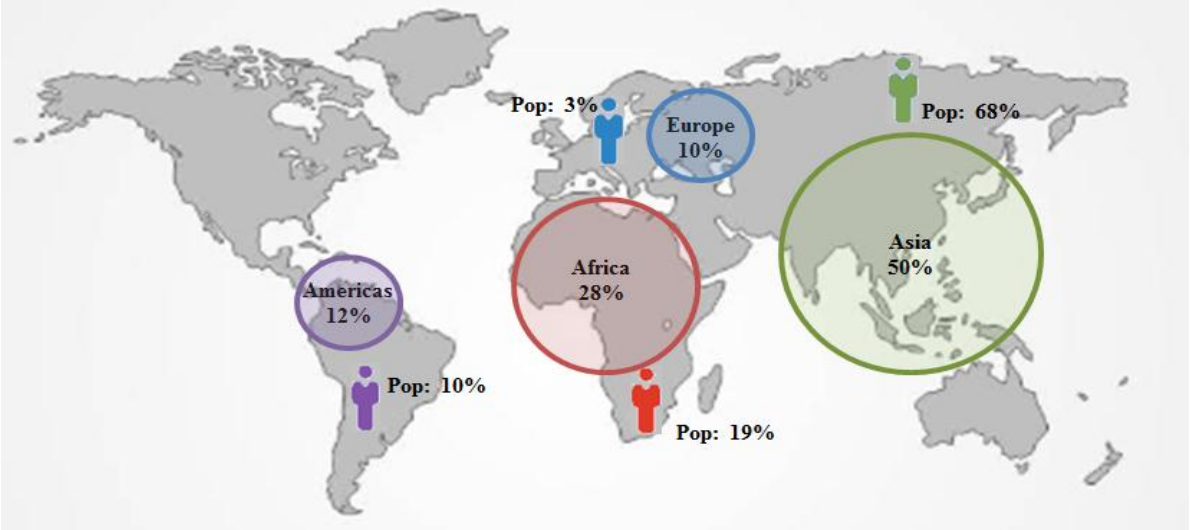
Source: OECD/DAC aid activity database (CRS), disbursements and estimates (See Technical Note, Section I.F.). Data for Islamic Development Bank (IsDB) is in commitments.
Note: WBG data include IFC estimated disbursements to infrastructure. Estimated disbursements for infrastructure from bilateral DFIs of Belgium, Denmark, Italy, Netherlands, and Spain included in total ODF to infrastructure.

3. Regional, Income Level, Recipient Country and Sectoral Distributions

While Asia was the largest recipient region of ODF to infrastructure, it received proportionally less than its share of population among developing countries.

15. Regional distribution of ODF for infrastructure in 2013 shows that half went to Asia and about a third (30%) to Africa[11]. Americas and Europe received significantly less at 14% and 9%, respectively (see Figure 6). Between the bilaterals and multilaterals, the former focused heavily towards Asia and Africa while the latter provided funding more evenly across the regions. In fact, the vast majority ODF for infrastructure to the Americas and to Europe came from multilateral development partners, including the EU. It is important to note, however, that if regional distribution of ODF to infrastructure is compared to each region's share of population among developing countries, Asia actually received proportionally less (i.e. 50% ODF vs. 68% population) whereas Africa, America and Europe received more (See Figure 6).

Figure 6. Regional Distribution of ODF for Infrastructure and Population, 2013



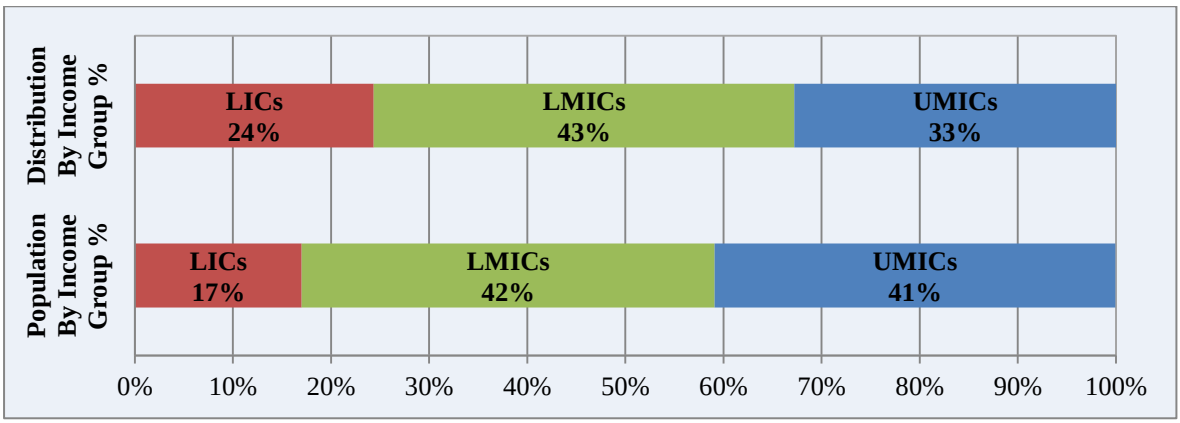
Source: OECD/DAC aid activity database (CRS), commitments

While LICs were the smallest recipient as a group, they received proportionally more than their share of population among developing countries.

16. In terms of income groups, the largest share of support was disbursed to Lower Middle Income Countries (LMICs) at 43%, followed by Upper Middle Income Countries (UMICs) at 33% (see Figure 7). LICs received the least at 24% of total ODF to infrastructure. However, LICs actually received more than their share of the total population of developing countries, which was 17%, while UMICs received less as their share of population was 41% and LMICs was more or less proportional. In other words, just examining the shares of ODF by region or income level does not enable straightforward assessments on whether the distributions are adequate or not. There may be other measures to compare with, such as the degree of financing gaps by region and income group that could be explored as well.

11. Regions have been defined from the following region groups in the DAC Creditor Reporting System: "Asia" includes 10007 (Asia), 10008 (Far East Asia), 10009 (South & Central Asia), 10011 (Middle East), 10012 (Oceania); "Americas" includes 10004 (America), 10005 (North & Central America), 10006 (South America); "Africa" includes 10001 (Africa), 10002 (North of Sahara), 10003 (South of Sahara), and Europe includes 10010 (Europe).

Figure 7. Income-Level Distribution of ODF for Infrastructure and Population, 2013

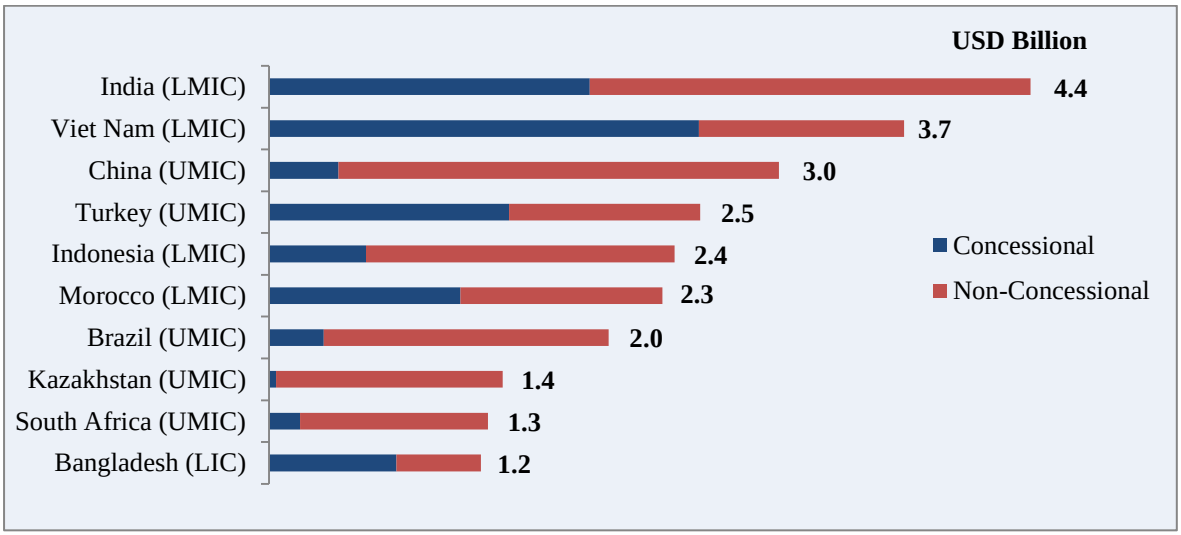


Source: OECD/DAC aid activity database (CRS), commitments.

Top recipients were mostly large emerging LMICs and UMICs.

17. In examining the country breakdown, top recipients were mostly large emerging LMICs and UMICs, which received a mixture of concessional and non-concessional finance (see Figure 8). Among these countries, China, Indonesia, Brazil, Kazakhstan, Mexico and South Africa received more non-concessional finance, while Vietnam had higher proportions of ODA. India, Turkey and Morocco had similar shares of concessional and non-concessional finance. The focus on these countries might be due to a combination of country investment needs, stable political environment and capacity of the countries to absorb and manage the financing. Some examples of country specific infrastructure projects are included in Box 1.

Figure 8. ODF to Infrastructure: Top Recipients, 2013



Source: OECD/DAC aid activity database (CRS), actual and estimated disbursements.

Note: Estimated ODF disbursements from IFC and IsDB are included for each recipient country. ODF disbursements to each recipient country from bilateral DFIs of Belgium, the Netherlands, Italy, Spain, as well as OOF disbursements for Denmark's DFI are not included. (see Technical Note, Section I.F.).

Box 1. Examples of Infrastructure Projects

Kazakhstan Section of Western Europe-Western China International Transit Corridor

The WBG, AsDB, Japan, EBRD, and Islamic Development Bank (IsDB) are co-financing the reconstruction of the 2 800 km Kazakhstan section of the Western Europe - Western China's international transit corridor. In addition to the reconstruction, project management consultants have been dispatched to assist the Committee for Roads within the Ministry of Transport and Communications in the management of activities, including the supervision of all safeguards and fiduciary aspects and the preparation of a road safety improvement plan. With an estimated project cost of USD 6.5 billion, it is expected to be completed in 2018 (WBG 2012).

Mozambique's Rehabilitation of Hydropower Stations

The rehabilitation of hydropower stations in Mavuzi and Chicamba aims to secure the electric supply of Mozambique in a cost efficient way by replacing generators, modernising control, safety and command systems, and supplying new transformers. One of the expected outcomes includes a 13% annual production increase of electricity, allowing the nation to better meet the continuous increase of electric demand (AFD 2014). Project costs totaled EUR 99 million, of which EUR 36 million was provided as a grant by Sweden, EUR 50 was provided by France in the form of a concessional loan, and a EUR 18 million non-concessional loan by Germany (Sweden MFA 2013).

Turkey's Broadband Roll-Out Eastern Regions

The European Investment Bank (EIB) has financed broadband telecommunication services in six Eastern regions of Turkey through the provision of a EUR 200 million loan to Turk Telecom, out of a total project cost of EUR 470 million. A guarantee agreement was also signed by a consortium of banks led by Societe Generale. The upgraded access network, with copper and fibre based technologies, will increase Turk Telekom's broadband penetration with the provision of high speed services to a wider extent in rural areas (EIB 2012).

Bangladesh's Karnaphuli Water Supply Project

The Karnaphuli Water Supply Project aims to provide safer water to the inhabitants of Chittagong. This is in line with Bangladesh's Sixth Five Year Plan, which has set the objective of ensuring safer water supply and the reduction of diarrhea and other waterborne diseases by 2015. Thus improvements are being made to the water supply facilities to increase access to an additional 650 000 people. The main activities of the project consist of setting up a water treatment plant, constructing one water intake plant, installing 38 kilometers of transmission pipeline and 505 kilometers of distribution pipeline. The Government of Bangladesh is financing USD 124 million while Japan is providing USD 462 million (JICA 2013).

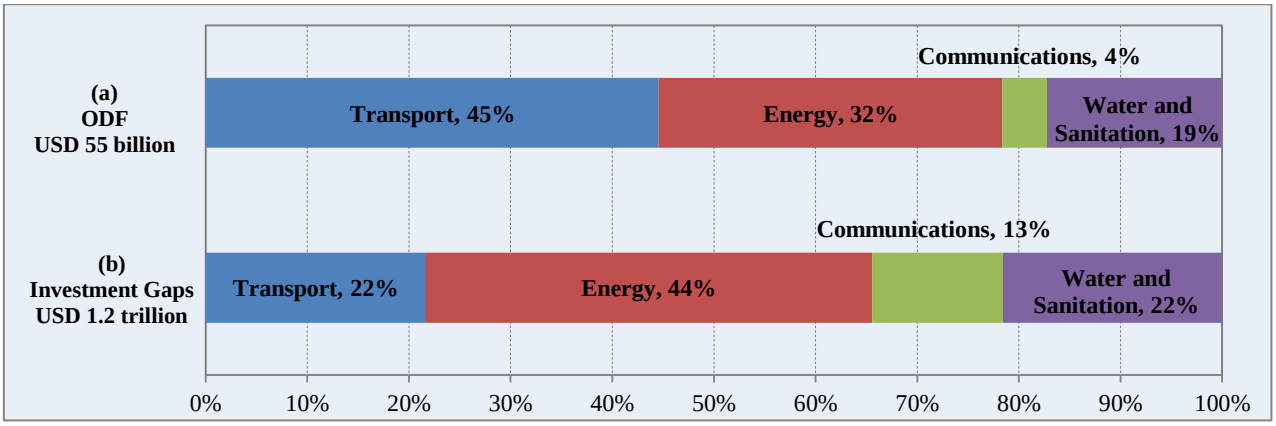
Panama's Canal Expansion Programme

The Inter-American Development Bank (IADB) provided a USD 400 million loan to the Government of Panama (GoP) to partially finance its USD 5 billion expansion programme of the Panama Canal. The expansion involves the construction of a new set of locks, which can handle twice as much cargo using 7% less water, and the deepening and widening of channels to facilitate the transit of large vessels which will increase trade (IADB 2015a).

Almost half of infrastructure ODF is directed towards transport and a third to the energy sector.

18. In terms of sector allocation, Figure 9(a) shows that roughly half (45%) ODF to infrastructure went to transport in 2013. This was followed by energy at about a third (32%), with the rest mainly channelled to water and sanitation (19%). ODF to communications amounted to only 4% of the total amount, which corresponds to the low share of development partner financing among the different types of financial stakeholders shown in Figure 2. Within energy, renewable energy sources, such as hydro, wind, solar, geothermal and biomass projects, represented almost two thirds of total (64%) financing for power generation, whereas non-renewables made up 36%.

Figure 9. Sectoral Distribution of ODF for Infrastructure vs Investment Gaps in Infrastructure, 2013



Source: OECD/DAC aid activity database (CRS), commitments and UNCTAD 2014. (See Technical Note, Section I.C.)

19. In comparing sectoral distribution of ODF to infrastructure with total investment gaps in the respective sectors, Figure 9(a) and Figures 9(b) show that the shares of ODF to energy (32%) and communications (4%) are less than their shares of projected investment gaps[12] (energy 44% and communications 13%). In contrast, the share of ODF for transport (45%) is much higher than the share of projected investment gap for the sector (22%). However, as energy and communications are areas that attract relatively more private investment than transport and water and sanitation, these sectors may require smaller amounts of ODF. In fact, energy receives the largest share of ODF provided directly to the private sector (see Section III for support to the private sector).

12. Projected investment gaps are estimates made by UNCTAD. See Figure 1.

II. ENABLING ENVIRONMENT FOR PRIVATE SECTOR PARTICIPATION IN INFRASTRUCTURE

1. Overview of the Enabling Environment for Infrastructure

Development partners support the enabling environment, both for the general investment climate and within infrastructure sectors.

20. The enabling environment for infrastructure is the set of policies, rules, institutions and services facilitating private sector participation in infrastructure development. The upstream aspects generally deal with policy support and capacity building of government officials and other civil servants. On the other hand, the downstream dimension relate to the development, financing and implementation of bankable projects, particularly through provision of financial products and advisory services.

21. In recent years, the policy discourse on developing country infrastructure has increasingly focused on creating the enabling environment to mobilise private finance. In this context, several initiatives have emerged to assess the enabling environment, such as the WBG's Doing Business Indicators, the World Economic Forum's Global Competitiveness Index and The Economist Intelligence Unit's Infrascope. The G20 is also working on this topic, collaborating closely with the OECD on understanding the role institutional investors in financing the infrastructure gap (see Box 2). In addition, the G20 DWG is in the process of developing a set of indicators for assessing the enabling environment for infrastructure.

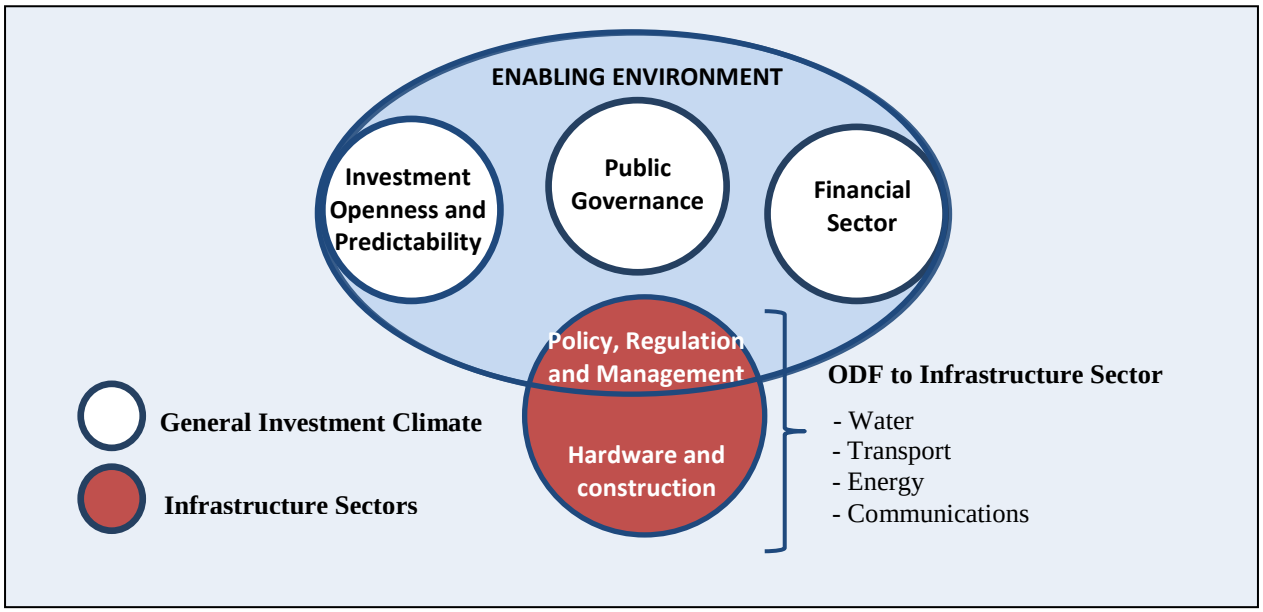
Box 2 – Long-Term Investment by Institutional Investors

Long-term institutional investors—such as pension funds, insurance companies, and mutual funds—could be an important source of finance for infrastructure as they hold significant resources, estimated at USD 85 trillion in assets in 2012 (Della Croce and Yermo, 2013). At the same time, their investment in infrastructure is limited, particularly in developing countries. However, given stock markets volatility and low-interest rates, infrastructure projects could provide institutional investors with long-term inflation-protected returns. For this reason and to meet the growing financing needs for infrastructure, development partners are increasingly looking towards tapping into these sources of finance.

The OECD has collaborated extensively with the G20 through the G20/OECD Task Force on Institutional Investors and Long-term Financing on understanding the policy dimensions of these investors. As a result of this collaboration, the G20/OECD High-Level Principles on Long-Term Investment Financing by Institutional Investors were presented and endorsed in St Petersburg in September 2013. The Principles represent a reference tool that aim to help policy makers design a policy and regulatory framework which encourages long-term investment from institutional investors, including for infrastructure**.**

22. In order to examine support by development partners to the enabling environment in infrastructure, this report uses the OECD Policy Framework for Investment (PFI) as a reference tool (see OECD 2015a). The PFI is a checklist to guide policy and institutional reforms that could improve the enabling environment to facilitate private investment. Drawing from its infrastructure chapter, this report identifies two overarching categories, namely: (i) the general investment climate and (ii) the investment climate within infrastructure sectors. In further breaking down the categories, (i) includes areas such as Investment Openness and Predictability, Public Governance and Financial Sector, which are outside the infrastructure sectors. As for (ii), it includes policy, regulation and management within the specific infrastructure sectors of water and sanitation, transport, energy, and communications (see Figure 10). This excludes "hard infrastructure", i.e., financing construction and provision of hardware. The following section will provide descriptions of the activities by development partners in supporting the enabling environment according to the categories explained above.

Figure 10. Diagram of Development Partner Support to the Enabling Environment for Infrastructure



2. Categories of the Enabling Environment

A. General Investment Climate

23. General investment climate is the part of the enabling environment that directly or indirectly affects investment in all the infrastructure sectors. It includes the following sub-categories: (i) Investment Policy Openness and Predictability; (ii) Financial Sector; and (iii) Public Governance.

(i) Investment Policy Openness and Predictability

24. Development partners provide significant assistance to developing countries to devise and establish policy and regulatory frameworks that are conducive for investment, particularly around dispute settlement mechanisms and rules that protect investor rights. The rationale behind these interventions is that private participation in infrastructure requires stable market-based policy frameworks anchored in the rule of law (OECD 2015a). Furthermore, once favourable investment regimes are in place, investors expect that undue public interference and changes in regulatory configurations will not affect the capacity of the investment to deliver a steady and low-risk return. This is a crucial aspect for prospective investors as infrastructure investments involve long-term payback periods.

25. Development co-operation related to investment openness focuses on assisting host governments in reducing barriers to competition, such as: streamlining business registration procedures; implementing sound labour law regimes; and strengthening the corporate governance of state-owned enterprises (SOEs). To enhance predictability in the investment climate, assistance to legal and judicial development has been provided, which encompass: improving contract enforcement; developing legal and technical frameworks for the administration of property rights; increasing efficiency and fairness in commercial dispute resolutions; and creating alternative dispute settlement mechanisms. Furthermore, development partners provide direct support to the private sector to boost productivity and to build capacity in business management.

(ii) Financial Sector

26. A vibrant and sound financial market is fundamental in facilitating investments in infrastructure. In particular, for the smooth functioning of the economy, a financial regulatory system with efficient and independent agencies that enables financial institutions and intermediaries to support infrastructure projects is needed. However, high investment costs for construction, underdeveloped local capital markets and the lack of the capacity and scale of financing or managing complex and capital-intensive projects make local financial institutions in many developing countries—particularly LICs—unsuitable investors.

27. Development partners thus try to contribute to the improvement of the financial sector at both the upstream and downstream levels. At the upstream level, support is provided for capacity building in national policy and regulatory reform, with the aim of developing sound capital markets as well as banking and insurance supervisory agencies. At the downstream level, development partners are helping reinforce financial institutions in supporting and managing projects, including in infrastructure. This involves the adoption of sound risk management practices as well as advanced technology and payment systems. Assistance is also provided at the transaction level for infrastructure investment facilities as well as banking institutions that on-lend to infrastructure project developers. Many of these are small- and medium-sized companies in the field of energy efficiency or renewable energy.

(iii) Public Governance

28. Poor public governance due to lack of administrative capacity and resources can be detrimental for the enabling environment. For example, deficiencies in project identification and preparation, awarding processes, and budget and fiscal monitoring by procurement bodies and PPP units, can reduce prospects for investment (Schmidt-Traub and Sachs 2015). This is all the more applicable for PPPs carried out via complex financial arrangements between local governmental authorities and private sector actors that require significant administrative and technical capacity. Furthermore, corruption can undermine the effective functioning of public administration by obstructing the efficient allocation of public finance for infrastructure, particularly with regards to procurement and other awarding processes.

29. Therefore, public governance has been one of the main areas addressed by development partners. Assistance involved enhancing public administrative capacity or procedures that directly or indirectly affect the preparation and smooth operation of infrastructure projects. They have been offered at both the national and sub-national levels, often in establishing transparent and competitive procurement processes as well as budgeting and public financial management. They aim to ensure efficient and effective service delivery, often through promoting private participation in infrastructure through the use of PPPs. Other types of assistance concern implementing anti-corruption reforms or creating anti-corruption commissions and other oversight bodies to promote good governance and accountability.

Box 2. Examples of Projects Supporting the Enabling Environment for General Investment Climate

Investment Openness and Predictability: Building a Reliable Investment Climate in Kenya

The United Kingdom (UK) is providing 14 million British Pounds to help improve the environment for businesses and economic development in Kenya. To date, the project has supported the Government of Kenya in launching a new Business Environment Delivery Unit to streamline the issuing of construction permits and business licenses. The Kenya National Electronic Single Window System has also been established to speed up clearance of exports and imports. Furthermore, the UK has helped strengthen the capacity of the PPP Unit and the Competition Authority of Kenya. As a result, national PPP regulations have been approved by Parliament and the investment policy has been updated to facilitate increased Foreign Direct Investment into Kenya (DFID 2013).

Financial Sector: Serbia's Sustainable Energy Direct Financing Facility

In Serbia, the EBRD has provided a EUR 10 million loan to Komercijalna Banka for on-lending to private and municipal borrowers through the Western Balkans Sustainable Energy Direct Financing Facility (Melohina 2014). The aim of the loan is to support energy efficiency projects in commercial building and industrial sectors, as well as small renewable energy and energy conservation projects in companies and municipal buildings. With this financing, the EBRD aims to raise awareness on the benefits of energy conservation and to help overcome existing market barriers to sustainable energy investments through the provision of longer-term funding (EBRD 2013).

Public Governance: Philippines' Strengthening Public Private Partnership Programme

The goal of this technical assistance programme is to boost private sector participation and investment in infrastructure in the Philippines through capacity building of the PPP systems. Specifically, consultants were dispatched to the PPP Center of the National Economic and Development Authority to: strengthen PPP legal and regulatory frameworks; institutionalise best practices in project appraisal, risk assessment, and bidding processes; and help create a modern, web-based PPP management information system. The programme also established a facility to prepare bankable PPP projects for competitive bidding. As of 2012, nine PPP projects have been approved. The total budget of USD 51 million is grant-financed by AsDB, Australia, and Canada (AsDB 2012).

B. Enabling Environment within Infrastructure Sectors

30. In addition to bottlenecks in the general investment climate, impediments within the four infrastructure sectors of water, transport, energy, and communications may also hinder private investment. With high entry costs and considerable public interest, infrastructure industries have a natural tendency to degenerate into monopolies or concentrated markets with low levels of competition. Some sectors face more obstacles than others. For instance, energy and communications are able to attract more private sector participation as they are excludable goods where fees can be easily charged (Spratt and Collins 2012). Conversely, the water sector is not conducive for private financing since - as a fundamental good for livelihood - public interest is high and price has to be low (Marin 2009). In consequence, national policy and regulatory frameworks need to take the particular features of the infrastructure market into consideration to attract private sector participation.

31. Main measures include liberalising infrastructure industries and subjecting the related markets to appropriate commercial pressures (OECD 2015). Higher competition should be coupled with prices that balance attractive cost-recovery mechanisms for the private sector while serving the public interest in developing quality infrastructure at reasonable prices (ibid.). Furthermore, particularly for public utilities such as electricity, gas, water and sewage, the establishment of independent regulatory agencies is crucial for undertaking appropriate tariff-setting and supervisory oversight.

32. In this context, development partners have supported institutional capacity building within the infrastructure sectors to enhance market access and competition, which could directly boost incentives for private investment. Examples include supporting municipalities to build capacity in sustainable use and management of water resources, including developing an updated and more appropriate tariff system in order to improve cost recovery, while also maintaining affordability. Other projects have supported the

reform of public enterprises in the telecommunications, transport, and energy sectors, by strengthening regulatory authorities, financial and operational restructuring of SOEs, and facilitating the government's divestiture from public enterprises. Moreover, some programmes are aimed at ensuring a transparent national or sub-national regulatory framework and better inter-ministerial co-ordination for enhanced competition within the particular sector (see Box 3 for examples of projects).

Box 3. PPIAF and Examples of Projects Supporting the Enabling Environment for Infrastructure Sectors

Public-Private Infrastructure Advisory Facility (PPIAF)

PPIAF is a trust fund financed by bilateral and multilateral development partners and hosted at the World Bank to help developing country governments create the enabling environment conducive for PPPs in infrastructure. The sectors targeted by the fund are energy, water and sanitation, transportation, telecommunications and irrigation. Two thirds of its funds are directed to LICs and half to Africa. PPIAF activities mainly consist of upstream technical assistance in support of policies, laws, regulations, and institutions, even though the fund also provides project preparation services to facilitate private participation in specific transactions. Its operations are structured around three strategic pillars (i.e. universal access, climate change, facilitating urbanisation) and four cross-cutting themes (i.e. sub-national finance, fragile states, regional integration, and capacity building). Examples of projects supported by PPIAF include the Dakar-Diamniadio Toll Highway Project where the fund supported the establishment and implementation of the legal and institutional framework in the transport sector in Senegal (see Annex Case II).

Costa Rica's Sustainable Urban Mobility for Greater San Jose Metropolitan Area

The objective of this project is to support the Government of Costa Rica in their goal towards becoming carbon neutral by 2021 through the production of studies and the implementation of policies to reduce greenhouse gases (GHG) in the Greater San Jose Metropolitan area. This includes research on the impact of increased bike lanes, developing strategies to implement transport and land use policies, particularly to reduce vehicle use and CO2 emissions (IADB 2015b). The total cost of this project is USD 3 million, with IADB providing USD 2 million and additional financing of USD 1 million provided by the Global Environment Facility (GEF 2014).

Mediterranean Region New Approaches to Telecommunications Policy

The EU has provided assistance to regulatory authorities across 10 North African and Middle Eastern countries through the New Approaches to Telecommunications Policy (NATP) Programme. It aims to help host countries liberalise their telecommunication markets and to align with EU regulation. Therefore, it assists regulatory authorities in the host countries with the legislative and institutional design of telecommunication policy through workshops, study visits and conferences. The NATP has established the Euro-Mediterranean Regulators Group (EMERG), a platform to facilitate co-operation among the telecommunication regulators and to share best practices for a more harmonised and predictable regulatory environment. A total of EUR 7 million for the Programme was provided in the form of grants (EC 2004, EC 2005, EC 2009).

Tanzania's Integrated Water, Sanitation and Hygiene Programme (iWASH)

The iWASH Programme aims to improve water supply, sanitation, and hygiene services in rural areas and small towns in Tanzania, targeting the public and private sectors, as well as communities. By working with the Ministry of Water and Irrigation and regional authorities, iWASH seeks to improve policy and regulations to expand service delivery and treatment. It also helps to set appropriate tariffs that recover costs while addressing affordability and access issues. Furthermore, the Programme encourages the provision of infrastructure hardware by local businesses and empowers communities to improve their access to the services. The USD 15 million Programme is funded by United States Agency for International Development (USAID), with complementary support from the Water and Development Alliance partnership between USAID and The Coca Cola Company (USAID 2012, 2013).

China 's Energy Policy and Energy Efficiency

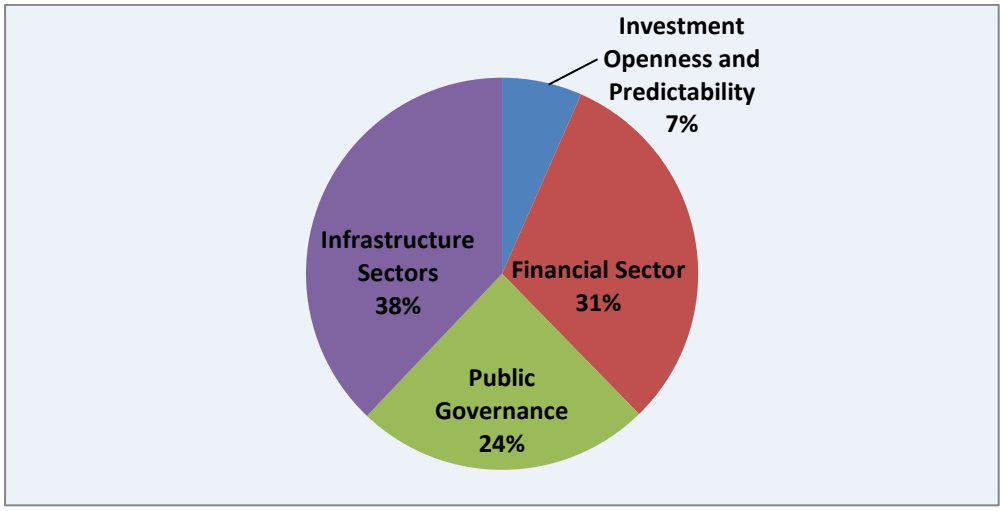
This project supported key institutions in creating energy policies at the national and subnational levels to increase financial resources and energy efficiency. With a USD 10 million grant, it dispatched German experts working in business, policy, research and consultancy to assist Chinese partners in the sustainable utilisation of energy in China's industrial sector. The project helped develop new energy consumption standards for energy-intensive industrial sectors and brought together coal production plants to facilitate more efficient use and processing of by-products. It also carried out training for energy auditors and energy managers at the State Grid Corporation of China so that they can provide advice independently within and for the company in the future (GIZ 2015).

3. ODF for the Enabling Environment

Financing for the enabling environment amounted to USD 34 billion in 2013, mostly towards the general investment climate.

33. By using the PFI as a benchmark, development partners that report to the DAC contributed significant ODF to the enabling environment, reaching roughly USD 34 billion in 2013[13], which was somewhat less than ODF spent for physical infrastructure (USD 42 billion). About two thirds of this amount (62%) was directed to help improve the general investment climate –the financial sector (31%), public governance (24%), and investment policy openness and predictability (7%)–which are not part of ODF for infrastructure (see Figure 10). Slightly more than a third (38%) was directed to support policy development and capacity building of the infrastructure sectors. Within the four infrastructure sectors, the distribution was more or less similar to that of the overall infrastructure ODF (i.e. high for energy and transport, low for communications and water and sanitation).

Figure 11. ODF to the Enabling Environment for Infrastructure, 2013



Source: OECD/DAC aid activity database (CRS), commitments.

34. Top development partners contributing ODF to the enabling environment in absolute amounts were also generally the same as for overall infrastructure ODF shown in Figure 4. However, among these, IADB, the UK, EBRD, WBG, Germany and the United States of America (USA) devoted high shares[14] for the enabling environment. This is in contrast with those that allocated high shares for infrastructure in general, e.g. Arab development partners, AsDB and AfDB (see Figure 5), which devoted significantly more resources to the hardware of infrastructure instead of the enabling environment. As for the regional, income-level and country distributions of the enabling environment, these were also not remarkably different from the allocation of the overall ODF for infrastructure. One notable point, however, is that the financial sector of UMICs received a relatively high share of support compared to other income-levels, which is presumably due to their comparatively developed capital markets and financial institutions as well as better prospects in raising private financing.

13. See Technical Notes, Section II.A for DAC CRS purpose codes designated as enabling environment for infrastructure and Section II.B for IsDB and IFC enabling environment estimates.

14. See Technical Note, Section II. C for calculation of share of ODF to enabling environment for infrastructure.

III. SUPPORT TO THE PRIVATE SECTOR

1. Development Finance Institutions and International Financial Institutions

A. Characteristics of DFIs and IFIs

DFIs/IFIs provide equity, loans, guarantees and technical assistance to the private sector to mobilise resources for infrastructure.

35. In addition to assisting governments, development partners directly support the private sector to mobilise financial resources for infrastructure. This assistance is mainly provided by DFIs and multilateral IFIs which offer financial or technical support to the private sector for activities with a developmental purpose. Given the rising need to mobilise private resources for development, the interest towards DFIs/IFIs has been growing – a trend being accentuated in the aftermath of the global financial crisis.

36. Institutionally, bilateral DFIs can be fully or partly owned by national governments, located under ministries charged with development co-operation, bilateral aid agencies or, more rarely, non-development ministries. Alternatively, some of them are autonomous from the government. Examples of bilateral DFIs are CDC Group of UK (CDC), German Investment and Development Corporation (DEG), Netherlands Development Finance Company (FMO), Overseas Private Investment Corporation (OPIC) of USA, and Promotion et Participation pour la Coopération économique (PROPARCO) of France. Some DFIs are mandated to support national companies, while others target developing country private sector.

37. For multilateral IFIs, private sector operations are generally undertaken by: specific departments, divisions or arms (e.g. AfDB, AsDB, IADB); legally and financially independent institutions within overarching organisations (e.g. IFC, Multilateral Investment Guarantee Agency); or by various departments as part of mainstreaming support to the private sector (EBRD). In addition to DFIs/IFIs, several countries have created special programmes within existing institutions providing similar types of support to the private sector: e.g. Canada's Public-Private Partnerships for Development within the Department of Foreign Affairs, Trade and Development, Japan's Private Sector Investment Finance within Japan International Co-operation Agency.

38. DFIs/IFIs generally mitigate risks, real or perceived, of private-led investment for development undertaken at commercial or quasi-commercial terms. In fact, an analysis of the risk profile of infrastructure investments shows that mobilisation of private finance for infrastructure is particularly exposed to significant risks, both project specific and related to the general investment climate of the country (see Section II). In spite of lower competition than with other types of investment assets - partially due to the scale and public goods nature - infrastructure projects are characterised by large sunk costs, exposure to regulatory changes, limited product diversification and long-term payback periods on capital investments that can significantly impact operating incomes (Rothballer 2011). For these reasons, obtaining sufficient private financing is a challenge, particularly for the construction phase which is associated with high completion risks.

39. In particular, DFI/IFIs try to compensate for the lack of financial resources and remove investment bottlenecks through advisory services (e.g. project preparation facilities), co-financing (e.g. equity and debt), and risk mitigation finance (e.g. guarantees). The support provided is therefore catalytic insofar as these institutions contribute to the development, financing and implementation of infrastructure projects with private sector participation. By offering project preparation services, DFIs/IFIs help private partners in devising bankable projects that are able to generate risk-adjusted returns as well as positive development impact. Furthermore, they reassure private investors by directly investing in

infrastructure through equity participation, while simultaneously providing robust expertise throughout the whole project cycle. DFIs/IFIs have higher levels of liquidity than commercial banks due to large amounts of paid-in capital, tax exemptions on dividends and corporate profit, AAA institutional credit rating and an implicit state guarantee (te Welde and Warner 2007).

Hard evidence of DFI/IFI additionality is scarce, mainly due to confidentiality of commercial activities.

40. To examine DFI/IFI additionality, several impact dimensions need to be taken into consideration. They include: project design (i.e. development of bankable projects by providing technical assistance); mobilisation of private finance; demonstration effect (i.e. evidence-base created for enticing further investment in the sector); and policy change (i.e. design and implementation of investment climate reforms through support) (Spratt and Ryan-Collins 2012). However, research points out that hard evidence to assess additionality is scarce, although overall, available data point to DFIs/IFIs generating more financial additionality in poorer countries and/or in sectors that are less commercially viable (ibid.). This is possibly due to the private sector's reluctance to invest in these countries and sectors without DFI/IFI support.

41. This lack of evidence can be attributed to the particular nature of DFIs/IFIs as institutions dealing with projects with commercial dimensions. In fact, supporting the private sector and their commercial activities quite often entails levels of confidentiality that reduce the information flow related to the projects, although some DFIs/IFIs are more transparent than others. Issues of transparency can be even more problematic as an increasingly common practice of certain DFIs/IFIs is to support financial intermediaries, such as private equity funds, in turn investing in infrastructure projects (Geary 2015). While this practice has the advantage of directing financing to investment vehicles that have robust experience in participating in infrastructure development, obtaining information on the impact of the project is even harder as the chain of intermediation is extended.

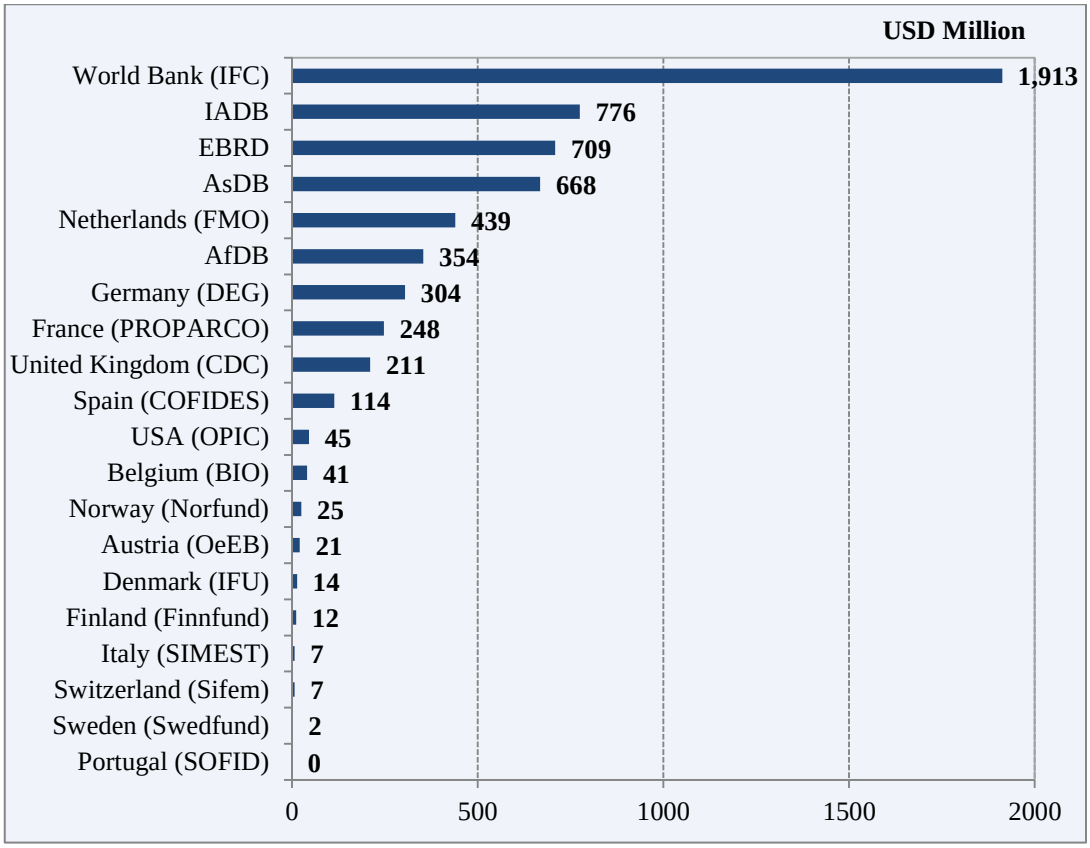
B. ODF for Infrastructure by DFIs and IFIs

DFIs/IFIs disbursed an estimated 5.9 USD billion to the private sector for infrastructure.

42. In 2013, total ODF directly disbursed to the private sector for infrastructure by DFIs/IFIs is estimated at 5.9 USD billion[15]. Of this amount, the IFIs disbursed around 71% – led unrivalled by IFC which provided USD 1.9 billion, followed by IADB, EBRD, and AsDB (see Figure 11). Major bilateral DFIs included FMO, DEG, and PROPARCO.

15. See Technical Notes, Section III for estimates of disbursements for infrastructure from DFI's/IFI's that do not report a sectoral breakdown to the DAC or do not report at all.

Figure 12. ODF to Infrastructure from Development Finance Institutions, 2013



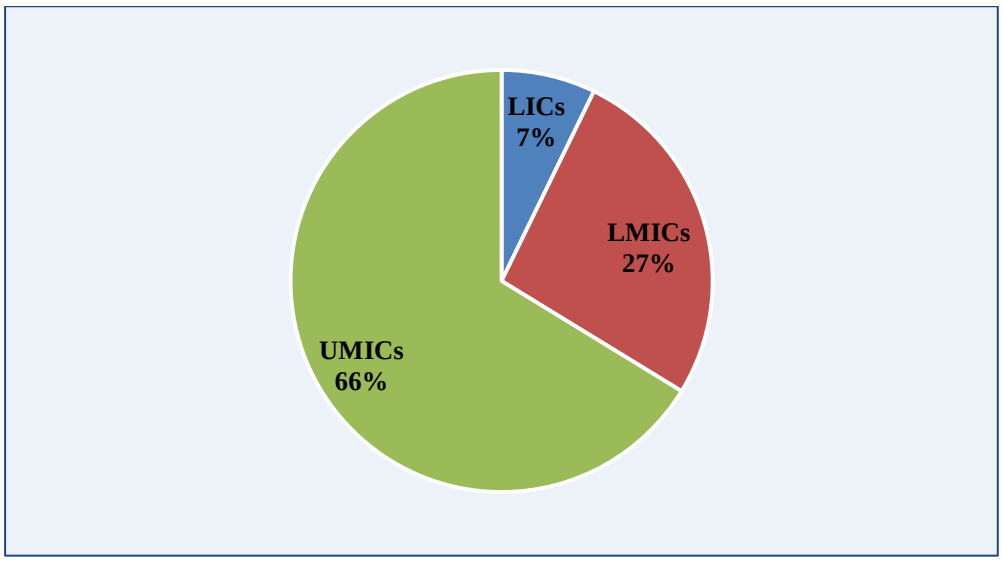
Source: OECD DAC aid activity database (CRS), disbursements and estimates (See Technical Notes, Section III)

Significant DFI/IFI financing for infrastructure is directed towards UMICs and energy, which raises the question of additionality.

43. According to data by DFIs/IFIs that report to the DAC, in 2013, the Americas received the largest share of total ODF (35%), followed by Asia with a comparable amount (33%). Africa (14%) and Europe (18%) received the remaining third. If the overall regional distribution of ODF for infrastructure (see Figure 6) is taken as a benchmark, the data show that DFIs/IFIs have focused more on the Americas and to some extent Europe and less on Asia and Africa.

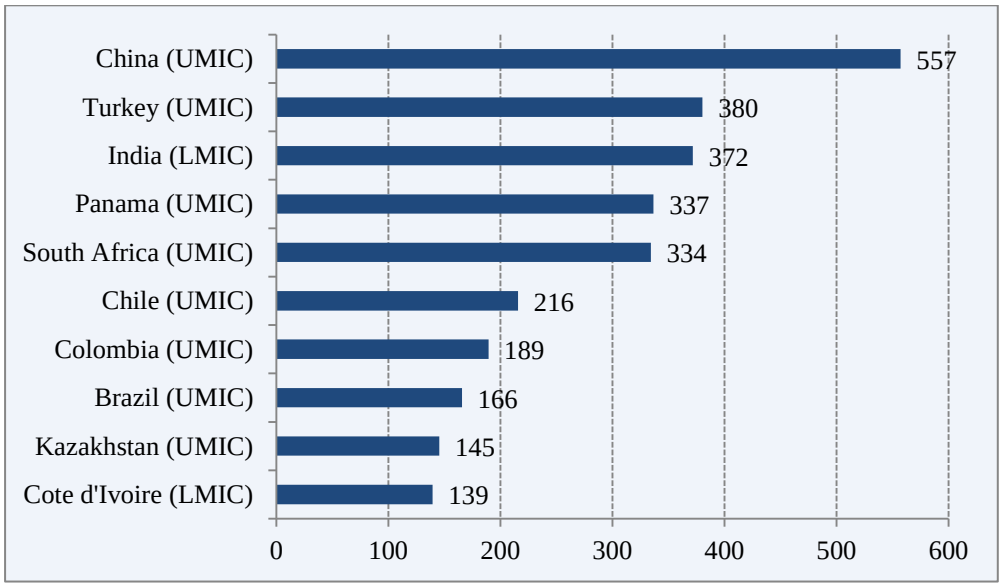
44. In terms of income groups, it is noteworthy that a vast majority (66%) of the projects were in UMICs and only 7% in LICs (see Figure 13). Such a concentration on UMICs is presumably due to the better enabling environment and returns for private investment in countries with higher economic performance. The top recipient countries of DFI/IFI support to infrastructure included China, Turkey, India and Brazil (see Figure 14)— which are large emerging economies and have the highest levels of private sector participation in infrastructure in the developing world (Kasper and Jett 2014). This raises the question of additionality of official support for development co-operation (i.e. whether the private investment would not have happened if it were not for the support) since the scale and the performance of financial and economic sectors are relatively developed in these countries.

Figure 13. Income Level Distribution of ODF by DFI/IFIs to the Private Sector for Infrastructure, 2013



Source: OECD/DAC aid activity database (CRS), commitments
Note: Includes data on IFC, IADB, EBRD, AsDB, AfDB, DEG, CDC, OPIC, Norfund, FinnFund, Swedfund, and SOFID. See Technical Note Section III.B.

Figure 14. ODF for Infrastructure: Top DFIs/IFIs recipients, 2013

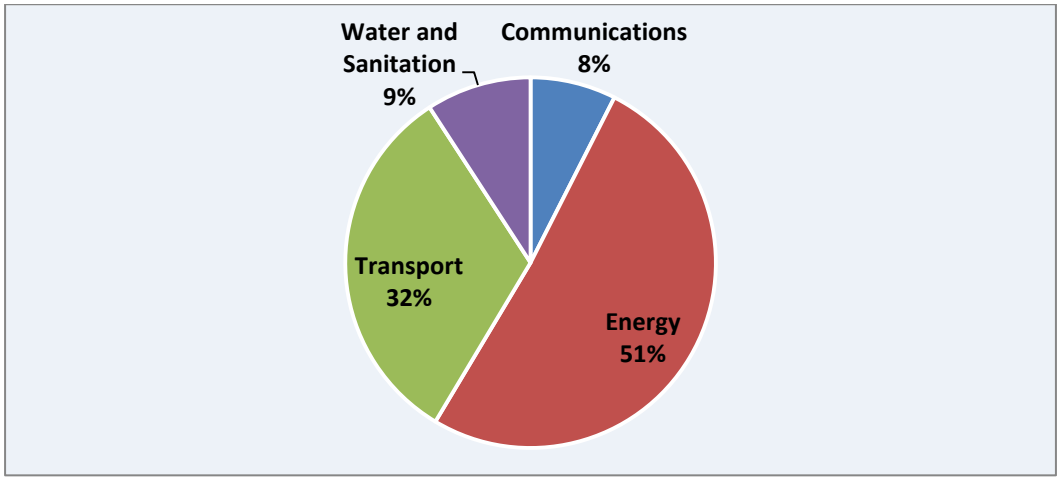


Source: OECD/DAC aid activity database (CRS), disbursements and estimates (See Technical Notes).
Notes: Includes receipts from IFC, IADB, EBRD, AsDB, AfDB, DEG, CDC, OPIC, Norfund, FinnFund, Swedfund, and SOFID. See Technical Note Section III.B.

45. In terms of sectoral distribution, over half (56%) of support by DFIs/IFIs went to energy, followed by transport at 27%, water and sanitation at 9% and communication 8%. A comparison with the overall distribution of ODF for infrastructure (see Figure 9a) shows that DFIs/IFIs focus more on energy and less on transport and water and sanitation. Again, as energy is a sector where the private investment is relatively high (See Figure 2 in Section 1), the question of additionality of DFIs/IFIs in trying to leverage from this sector at the aggregate level may arise. At the same time, this significant focus on energy could

be justified since the need of financing in this sector is higher than the others in order to meet the SDGs in 2030 (see Figure 1 in Section I). Furthermore, of ODF allocated by DFIs/IFIs to power generation, a large majority (83%) was provided for renewable energy projects. The data suggest that DFIs/IFIs focused more on renewables than development co-operation agencies supporting infrastructure (see Section I).

Figure 15. Sectoral Distribution of ODF to Infrastructure from DFIs/IFIs, 2013



Source: OECD/DAC aid activity database (CRS), commitments.
Note: Includes data on IFC, IADB, EBRD, AsDB, AfDB, DEG, CDC, OPIC, Norfund, FinnFund, Swedfund, and SOFID. See Technical Note Section III.B.

C. Mobilising private sector finance through DFIs/IFIs

46. Determining how much is mobilised from the private sector is often a complex exercise. Specifically on measuring financial support of DFIs/IFIs, the DAC is currently carrying out work to develop a methodology to measure the amounts mobilised from the private sector through ODF interventions. The results of this work, expected to become available by the end of 2015, will entail setting up a database to record the leveraging effect of private-sector instruments, which hitherto has not been reliably or uniformly measured in international statistical systems. The standardisation will encourage more visibility and transparency regarding the use of these instruments, which in turn will permit evidence-based analyses of their leveraging potential, and greater understanding about how the use of instruments can be optimised (OECD 2014a).

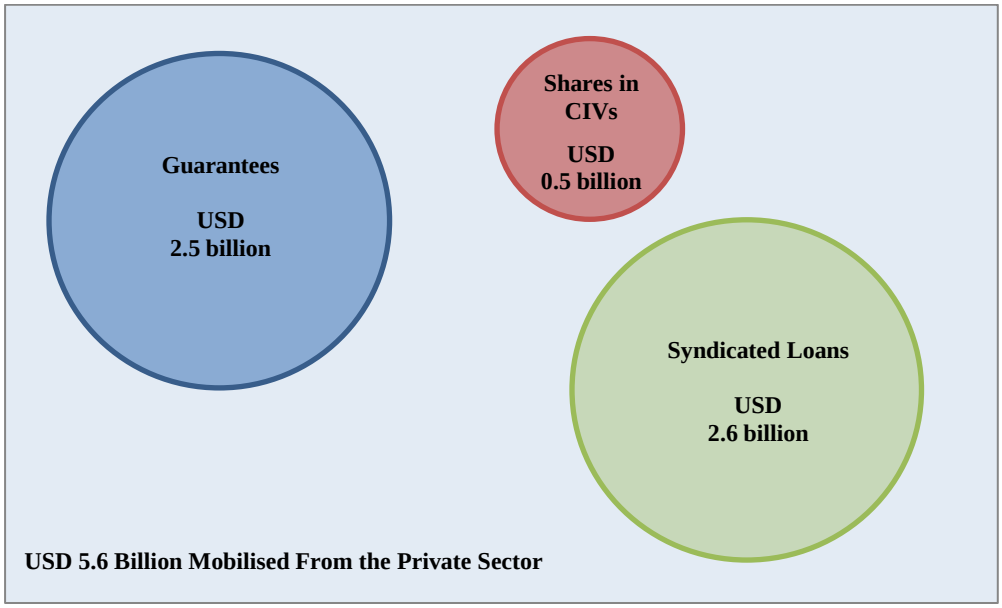
47. As part of this work, a survey was conducted to measure private sector financing mobilised between 2012 and 2014 as a result of ODF interventions through syndicated loans, guarantees and shares in collective investment vehicles (CIVs)[16]. While the data remain to be completed by a few institutions, preliminary results of this survey suggest that these instruments mobilised on average USD 5.6 billion annually for infrastructure from the private sector (see Figure 16)[17]. This amount has been mainly mobilised through guarantees (USD 2.5 billion) and syndicated loans (USD 2.6 billion) with shares in CIVs mobilising a smaller portion (USD 0.5 billion). The distributions of financing mobilised from the

16. Surveys on other leveraging instruments such as direct equities, mezzanine finance, credit lines, concessional loans and grants will be carried out subsequently.

17. As the set of DFIs/IFI and the related data in this Survey is not the same as the ones used for the analysis in sub-section B above, the findings are not comparable.

private sector for infrastructure follow a very similar pattern with those of DFIs/IFIs, i.e. highest in Asia and America, UMICs and energy.

Figure 16. Private Finance Mobilised by DFI/IFIs for Infrastructure, 2012-2014 (annual average)



Source: 2015 OECD DAC Survey on Amounts Mobilised from the Private Sector by Official Development Finance Interventions

48. However, DFI/IFI interventions are sometimes coupled with support to the public sector by other development partners for policy reforms, which are vital in the decision making of the private sector to invest (see Annex). Therefore, attributing mobilisation of private resources only to DFIs/IFIs and specific instruments may be debatable. Furthermore, evidence shows that mobilising effect of their intervention may be limited in some circumstances. For instance, in the Dakar-Diamniadio Toll Highway project in Senegal (See Annex: Case II) DFIs provided 26% of project funding and mobilised 17% from the private sector (ratio of 1:0.7). In the Gigawatt Solar Power Plant in Rwanda (See Annex: Case I) the ratio is even lower with DFIs providing 91% of project funding and only mobilising 9% from the private sector (ratio of 1:0.1). For this reason, further examination of cases, including in Asia and the Americas, would provide more insight, as several factors may account for varying levels of private participation in infrastructure.

2. Initiatives Supporting Private Finance Mobilisation to infrastructure

Project Preparation Facilities, Project Facilitation Platforms and Blended Finance operations are measures used by development partners to attract private investment for infrastructure.

49. A number of initiatives which aim at mobilising private finance for infrastructure are gaining traction. The objective of these initiatives from the public sector is to tap into resources of the private sector by: (i) facilitating the design of bankable projects; (ii) creating platforms for deal matching of projects between public and private financers; and (iii) providing finance for blending operations. The following describes each category.

- Project Preparation Facilities (PPFs) are generally grant-financed instruments created to streamline the preparation of infrastructure projects thus increasing their quantity and their quality. It is estimated that the cost of PPFs for complex PPPs in infrastructure is between 5% and 10% of total project costs (MDB working group on infrastructure, 2011). PPFs can be multiregional and

multisectoral or focus on specific regions and sectors, normally hosted by multilaterals, although some bilaterals create their own PPFs to support their domestic companies. Examples are the Asia Pacific PPF (hosted by the AsDB); the NEPAD Infrastructure PPF (hosted by the African Union) and the Infrastructure PPF (hosted by the EBRD).

- Project Facilitation Platforms aim at bringing together financiers, host countries, aid agencies and DFIs/IFIs, with the view to facilitate structuring and co-financing of infrastructure projects by harnessing capital and expertise from both the public and the private sectors. These platforms are generally hosted by MDBs and intergovernmental institutions. They include the G20 Global Infrastructure Hub, the World Bank's Global Infrastructure Facility, and the newly created World Economic Forum/OECD Sustainable Development Investment Partnership. Some platforms do not provide direct financial support to projects, while others do, such as the AfDB's Africa 50 Infrastructure Fund.

- Blended Finance is defined as the complementary use of grants (or grant-equivalent instruments) and non-grant financing from private and/or public sources to provide financing on terms that would make projects financially viable and/or financial sustainable (Mustapha et al. 2014). By injecting grant financing to commercial projects, the aim of blended finance is to create favorable conditions that crowd-in private investment. Blending facilities may combine grants from aid agencies with long-term financing in the form of loans or equity by DFIs and private financers (see Box 4). Some blended finance instruments include output-base aid (OBA), which is the provision of grant-subsidies tied to the compliance with the delivery of specific services such as electricity and water and sanitation for poor people (Miyamoto and Biousse 2014; Mustapha et al. 2014).

Box 4. Blending Operations of the European Union with DFIs/IFIs

The European Union has developed several tools for financing infrastructure in association with DFIs/IFIs, including the regional investment blending facilities and several trust funds (e.g. Bêkou Trust Fund for Central African Republic). EU blending consists of mixing grants from the European Commission with debt and equity from European DFIs/IFIs. Since 2007, EU provided EUR 2 billion of grants to blending facilities that leveraged total of EUR 43 billion from public and private sources. The majority of projects were in energy, transport and water and sanitation. For 2014-2020, the EU is planning to increase the blending operations to leverage up to EUR 100 billion from additional public and private sources.

3. Export Credits

ECA commitments for infrastructure in LICs was at USD 924 million.

50. The majority of DAC countries have ECAs—often supervised by the Trade or Finance Ministries— that support exports of domestic enterprises through credit, insurance and guarantee. However, as ECAs do not usually have development-related objectives, their financing to developing country infrastructure is not part of ODF amounts considered in this report. At the same time, their activities significantly impact developing country infrastructure. For example, ECAs support domestic enterprises to export to developing countries wind turbines, power plant machineries, water pipe systems, telecommunication equipment, and so on (see Table 1).

51. ECAs are different from DFIs as their main objective is to support exports of domestic companies instead of development and they do not generally engage in project design. However, the distinction between the two types of institutions is blurred when bilateral DFIs mainly support their

domestic enterprises with credits and guarantees. Therefore, in order to maximise development impact and to ensure policy coherence for development - which OECD countries have committed to[18] - the division of role and co-ordination between DFIs and ECAs in financing developing country infrastructure could be further examined[19].

52. Data collected by the OECD Trade Committee's Working Party on Export Credits and Credit Guarantees (ECG) shows that in 2013, USD 924 million was committed by bilateral DAC countries for infrastructure in LICs, excluding non-fixed assets such as aircrafts, ships, vehicles, etc. Data on disbursements are not available, but they are usually lower than commitments. To put this in perspective, the USD 924 million ECA commitments for infrastructure in LICs was equivalent to 12% of bilateral DAC country ODF commitments to infrastructure for LICs in 2013. Individual project commitments varied widely, ranging from USD 3 million to USD 360 million.

53. ECA activities involving LICs are subject to an agreement on sustainable lending practices. This is in addition to the Arrangement on Officially Supported Export Credits that provide a framework for a level playing field among ECA operations globally[20]. The Sustainable Lending guidelines stipulate that export credits for public buyers and publicly guaranteed buyers in LICs should generate net positive economic returns, foster sustainable development by avoiding unproductive expenditures, preserve debt sustainability and support good governance and transparency (OECD, 2008). The adherence to these principles by members of the ECG is monitored biannually by its Secretariat.

54. In addition, members of the ECG are discussing a phase out of ECA financing for coal plants as part of a larger effort to end public financing for fossil fuels and high carbon projects. According to data compiled by the Natural Resources Defense Council, ECAs from OECD countries were responsible for 58% of public support, or roughly USD 5 billion per year, for coal plant projects globally between 2007 and 2013 (NGO Briefing 2014). For over a year, the OECD has attempted to reach an agreement on the phase out of export credits for coal plants, facing opposition from several countries experiencing industry pressure to resist limits on coal finance. The ECG aims to reach an accord before the UN Conference on Climate Change in December 2015.

18. OECD Declaration on Policy Coherence for Development (2008). See http://www.oecd.org/pcd/ministerialdeclarationonpolicycoherencefordevelopment.htm.

19. See European International Contractors' background paper on "Modernising the definition of ODA" of March 2014, available at http://eic-federation.eu/media/uploads/newsletter/2014_3_mar/eic_background_paper_oecd-dac_modernising-oda-definition.pdf.

20. Arrangement on Export Credits please see: http://www.oecd.org/tad/xcred/arrangement.htm.

Table 1. Examples of ECA Infrastructure Projects in LICs, 2012-2013 (Commitments)

Reporting Country	Buyer Country	Project Name	Project Description	Sector
USA	Honduras	Cerro De Hula Wind Farm (Phase 2)	wind turbines, ancillary services - Engineering and Procurement Contract	Energy
Finland	Zambia	NECL Power Plant	delivery and erection of generating sets to a heavy fuel oil power plant	Energy
Belgium	Sri Lanka	Expanding Etislata Sri Lanka Network	telecom equipment	Communications
France	Ghana	Substation Reliability and Enhancement Project (Phase 1)	Upgrade and enhancement of operational reliability of Ghana Grid Company's equipment by replacing obsolete and faulty components at 9 substations	Energy
Portugal	Mozambique	Road N260 Road Rehabilitation Project	road rehabilitations project	Transport
Spain	Sri Lanka	Grater Ratnapura Water Supply Scheme	water treatment plant of 27000 m3/day of capacity including water pipes system, engineering, tanks, vehicles and machinery	Water and Sanitation
UK	Sri Lanka	Regional Bridge Programme (Phase 2)	design, build, fabricate, supply, install and commission up to 104 bridges of varying types	Transport
Turkey	Ghana	Akim Oda, Akwatia and Winneba Water Supply Project	water intake structures, treatment plant, pumping stations, transmission line, storage unit and the network to transfer water to final user	Water and Sanitation
Sweden	Ghana	Airtel (Ghana) Network Expansion 2013	deliveries and installation of telecommunications equipment	Communications
Austria	Kenya	Kindaruma Power Station 2012	electromechanical equipment, hydropower plant	Energy
Germany	Bangladesh	Ashuganj South 450 MW Combined Cycle Power Plant	power stations burning fossil fuels	Energy
Denmark	Mozambique	Electrification in Mozambique	installation of high voltage power lines and transformer stations	Energy

IV. SUPPORT TO GREEN INFRASTRUCTURE

Thirty-seven percent of ODF to infrastructure is for mitigating GHG emissions and adapting to a changing climate.

55. Over the next decade, developing countries face the challenge of reducing poverty while responding to the growing threat of climate change. This means that a transition to a greener development trajectory is necessary in order to ensure that future development is sustainable. However, when compared to business as usual, the incremental cost of delivering mitigation and adaptation infrastructure from 2015 to 2030 is estimated to be relatively low, i.e. in the order of 5% of the investment requirements for new and upgraded infrastructure (GCEC 2014).

56. In order to meet this additional cost, significant changes in the way investment is made in infrastructure will be required. Here, while development partners can only finance a fraction of infrastructure needs - including the transition to green growth - they can play an important role. This includes supporting the 'greening' of existing and new infrastructure, creating enabling conditions to mobilise private sector investment in green infrastructure[21], and de-risking green investment at the transaction level (see Box 5).

57. To better understand the climate-related activities of development partners, the DAC has worked over a number of years to capture climate-related development co-operation in its statistical system. If one examines bilateral ODA[22] (concessional finance), there is a general trend towards a 'greening' of infrastructure in recent years. This is evident as the share of bilateral ODA to green infrastructure in all ODA to infrastructure increased seven percentage points between 2010 and 2013. Overall, slightly more than a third (37%) of bilateral and multilateral ODF to infrastructure was green[23]. Breaking this down, the vast majority (78%) of projects aimed to reduce GHG emissions (i.e. climate change mitigation), and only a small portion of financing (18%) was for adaptation or for both mitigation and adaptation (4%).

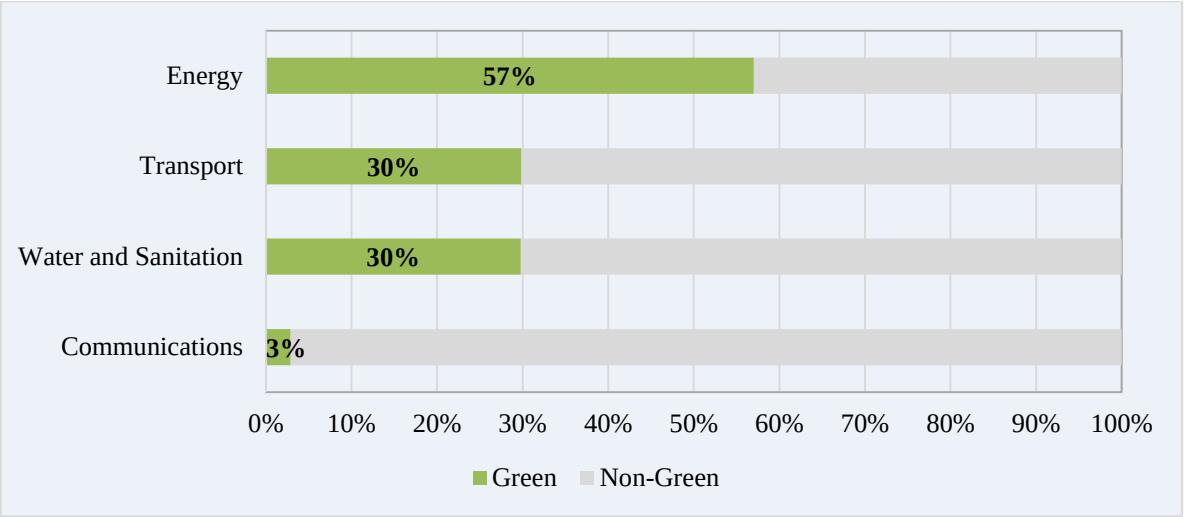
58. In terms of sector allocation of absolute amounts, there was more financing for green energy than green transport, despite the higher ODF for transport overall. In examining the share of green infrastructure within the respective sectors, 57% of ODF to energy was green, which mostly concerned renewable energy (see Figure 15). In contrast, only 30% of financing for transport could be considered green, mostly supporting railway development projects and sustainable urban transport systems (e.g. metro projects). Within ODF for water and sanitation, 30% was green, mainly consisting of large projects that addressed climate change adaptation, including flood and drought management and disaster risk reduction.

21. This paper defines green infrastructure as projects within infrastructure sectors that aim to either mitigate GHG emissions and/or support adaptation to a changing climate. Infrastructure investment that also addresses other environmental objectives such as reducing pollution, minimizing impacts on biodiversity and addressing resource utilization have not been included here due to the availability and coverage of existing data.

22. Coverage of bilateral non-concessional data is incomplete. See Technical Notes Section IV.A.

23. Financing for green infrastructure in 2013 consists of ODA commitments from bilateral development partners and ODF commitments from multilateral institutions. See Technical Notes Section IV.A. and B.

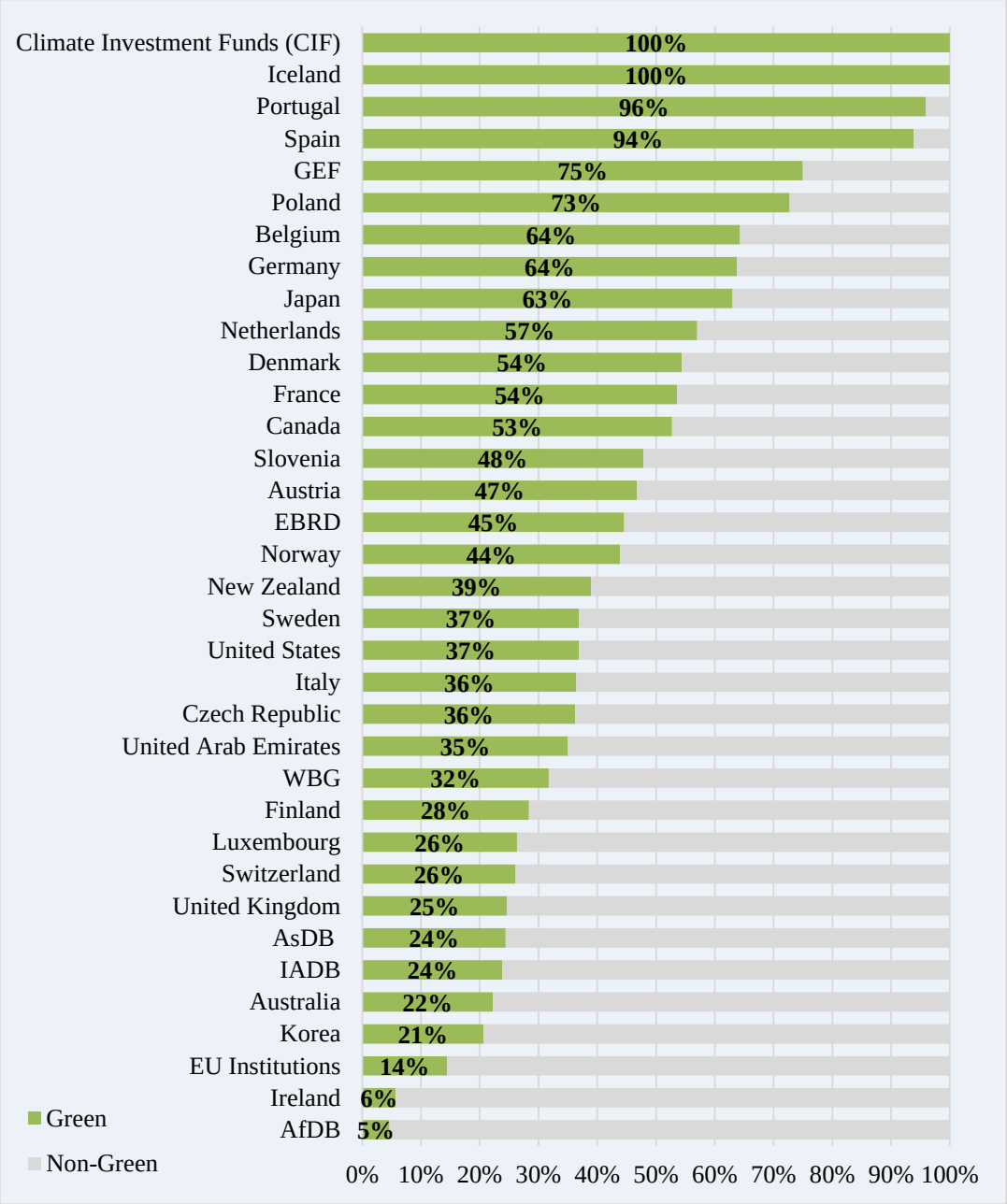
Figure 15: Share of Green Infrastructure by Sector, 2013



Source: OECD/DAC aid activity database (CRS), commitments.
Note: Figure only includes the institutions reporting climate data to the DAC. See Technical Notes Section IV A. and B.

59. Similar to the pattern shown for overall ODF for infrastructure, G7 countries and multilateral agencies committed the largest absolute amounts in financing for green infrastructure in 2013. However, if the share of green infrastructure within ODF for infrastructure is taken into account, the picture is different (see Chart 16). Bilateral development partners have higher shares of green infrastructure than multilaterals, reaching about 50% of their total ODF for infrastructure. Some of the smaller bilateral development partners have relatively greener portfolios. For example, Iceland, Portugal, Spain and Poland have spent between 73% and 100% of their ODF for infrastructure on green projects. In particular, Iceland and Portugal financed projects promoting the use of renewable energy, particularly in geothermal resources and solar power, respectively, while the large majority of Spain's financing was allocated towards water and sanitation. Overall, multilaterals —except for the Climate Investment Funds and the Global Environment Facility—have particularly low shares of green infrastructure, reaching on average 25% of their ODF for infrastructure. For instance, AfDB and EU institutions, which are top development partners for overall infrastructure, have relatively low shares of green infrastructure ranging from 5% to 14%.

Figure 16. Shares of ODF to Green Infrastructure by Development Partner, 2013



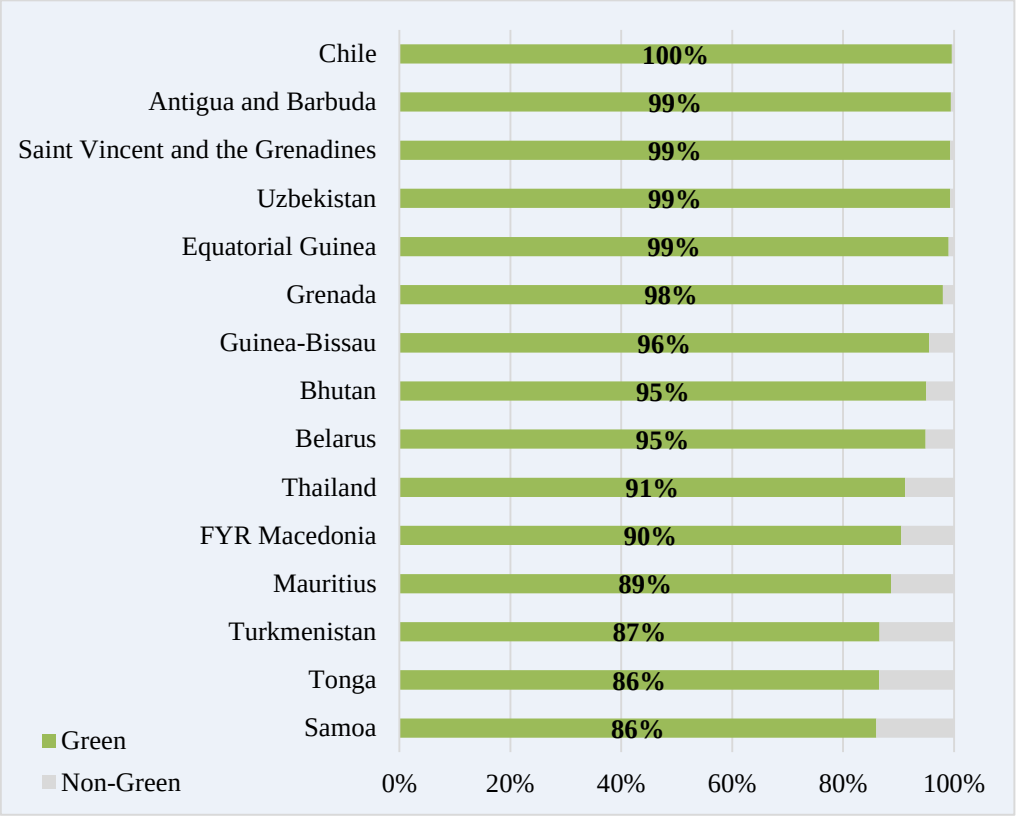
Source: OECD/DAC aid activity database (CRS), commitments.
Note: Figure only includes the institutions reporting climate data to the DAC. See Technical Notes Section IV A. and B.

60. The regional distribution of green infrastructure in absolute amounts was more or less similar to the overall ODF for infrastructure in 2013. However, of their respective ODF to infrastructure, Asia (44%) and Americas (39%) had the largest proportion of green infrastructure while Africa (30%) and Europe had the smallest (27%). Across income groups, the share of financing for green infrastructure out of their respective ODF to infrastructure was more or less similar, between 32% and 39%.

61. Within green infrastructure, 24% of ODF for green infrastructure was related to climate change adaptation in LICs with the share decreasing to 19% in LMICs and to 10% in UMICs. In other words, lower income groups tend to have higher shares of climate change adaptation finance than higher income groups. This reflects widespread recognition that lower income groups are more vulnerable to climate risks (WBG 2013a) due to several reasons: (i) locations in geographical zones with high climate risks; (ii) higher reliance on agriculture (Fankhauser and McDermott 2014); and (iii) lack of institutional capacity and financial availability to deal with climate change adaptation (Tol and Yohe, 2007, Brooks et al., 2005, Barr et al., 2010 in Fankhauser and McDermott 2013). On the other hand, the average share related to climate change mitigation over all green infrastructure increases with the income-level, i.e. 71% in LICs, 79% in LMICs, and 88% in UMICs. This pattern can be explained by the fact that developing countries with higher income are larger GHG emitters from energy and transport (Edenhofer et al., 2014).

62. Some of the top ten recipients of overall infrastructure (see Figure 8) were also top recipients of green infrastructure in absolute terms. However, small recipients of overall infrastructure, in particular small island states as well as Chile, Uzbekistan, and Equatorial Guinea, had high shares of green infrastructure within their respective ODF to infrastructure (see Figure 17). Conversely, most of the top recipient countries of overall ODF for infrastructure had relatively small proportions of green infrastructure within their respective receipts of ODF to infrastructure, with the exception of South Africa, Kazakhstan, and India.

Figure 17. Share of ODF to Green Infrastructure by Recipient Country, 2013



Source: OECD/DAC aid activity database (CRS), commitments.
Note: Figure only receipts from institutions reporting climate data to the DAC. See Technical Notes Section IV A. and B.

Box 5: Examples of Finance for Green Infrastructure

Bangladesh's Coastal Embankments Improvement Project
The Coastal Embankments Improvement Project is building infrastructure required to protect coastal communities in Bangladesh from frequent storm surges expected as a result of climate change. Project activities include: upgrading 600 kilometers of embankments in six coastal districts; building cyclone shelters; and strengthen early warning systems in the target communities. It is expected to protect 760 000 people directly and provide wider benefits to 8.5 million people through agriculture development and employment. The project cost is estimated at USD 400 million, of which USD 375 million is a concessional loan from the World Bank and USD 25 million is a grant from the Climate Investment Funds (WBG 2013b).

Istanbul's Metro Extension
The French Agency for Development (AFD) is working with the Metropolitan Municipality of Istanbul to integrate the city's metro into its wider public transport system as a way of increasing mobility and reducing GHGs. The project will extend a metro line by an additional five kilometres to connect to a new multimodal station, which will form the hub for rail, tram and metro lines. The project is estimated to cost EUR 524 million, of which AFD has contributed a loan of EUR 45 million. As metro systems have a lower carbon footprint per unit distance travelled when compared with other forms of urban transport, such as personal cars or buses, the project will reduce significant amount of CO2 (AFD 2013).

Ouarzazate Solar Power Plant in Morocco
The Ouarzazate solar power plant in Morocco is one of the world's largest plants using concentrated solar power technology. The first phase of this PPP project with the Morocco Agency for Solar Energy (MASEN) cost around USD 800 million. It was supported through loans from WBG, EIB, AFD, AfDB, KfW, and Climate Investment Funds, among others. The final plant will have a capacity of 500MW and is expected to avoid 240,000 tonnes of CO2 per year (WBG 2011).

Climate Proofing Community Infrastructure in Samoa
This project builds on the reconstruction efforts of the Government of Samoa after Cyclone Evan by protecting community infrastructure and assets from future extreme weather events. It is funded by a USD 12 million grant to Samoa from the Global Environment Facility (GEF), implemented through the United Nations Development Program. The project is also expected to integrate climate change adaptation considerations into sector plans and to strengthen government and local institutions to implement and monitor adaptation efforts (UNDP 2014).

63. Overall, as only 37% of ODF to infrastructure is allocated to low-carbon and climate-resilient projects, there is more scope for development partners to support developing countries in the transition towards green growth. In particular, further efforts towards greening the transport sector can be made in view of the rapid urbanisation of developing countries. Since ODF can contribute only a small portion of the financing gap in infrastructure, it is crucial that development partners maximise their support towards making development sustainable through financing greener infrastructure.

V. EMERGING COUNTRIES AND INSTITUTIONS PROVIDING DEVELOPMENT CO-OPERATION FOR INFRASTRUCTURE

Emerging economies such as China, India, Turkey, and Arab partners are estimated to account for 13% of development co-operation for infrastructure.

64. As shown in Section I, several large emerging economies are receiving significant support for infrastructure from development partners (see Figure 8). At the same time, some of these, such as China, India, Turkey and Arab countries are becoming important partners in providing considerable resources to infrastructure of other developing countries. In fact, the estimated total amount of bilateral and multilateral development co-operation provided by these development partners combined in 2013 was USD 7.8 billion or 13% of total official support for development co-operation in infrastructure.

65. Therefore, in order to provide a more comprehensive picture of development co-operation for infrastructure, this Section captures the support of these countries through bilateral and multilateral channels. However, except for those reported by the Arab partners, the figures provided are estimates based on data from the respective country's official documents or other sources, and thus are not entirely comparable with DAC data. Furthermore, this Section introduces two emerging MDBs, i.e. the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB) that have been established to mainly finance infrastructure in developing countries.

1. People's Republic of China

66. China assists other developing countries within the framework of South-South co-operation, which emphasises respect for national sovereignty as well as solidarity and equality among partners (Tortora, 2011). The country has significantly expanded its development co-operation over the past years, with annual disbursements for all sectors estimated at USD 4.8 billion in 2013, according to the official figures of the People's Republic of China State Council Information Office (SCIO) (SCIO 2014). Africa and Asia have been the two largest recipient regions of China's overall development co-operation.

67. The composition of China's development co-operation has undergone a major shift in recent years, with concessional loans now making up the majority of China's aid financing, growing from 29% in 2009 to 56% on average in 2010-2012. At the same time, the share of zero-interest loans decreased from 30% to 8% and the share of grants also decreased from 41% to 36% in the same period. (SCIO 2011, 2014).

68. Economic infrastructure remains a core component of China's development co-operation. Disbursements to infrastructure have been increasing, reaching average annual flows of USD 2.2 billion in the period 2010-2012, or about 45% of total Chinese development co-operation (SCIO 2014), although this excludes water and sanitation, which is included under public facilities [24]. Between 2010 and 2012, China completed 185 large and medium sized infrastructure projects[25], mostly financed through grants and zero-interest loans by Ex-Im Bank[26]. China Development Bank also provides significant financing to developing countries, but it is not for development purposes, and details are unavailable.

24. Author's calculations based on SCIO 2014. See Technical Notes for details.

25. This is a calculation based on SCIO 2014, and includes the number of projects in water and sanitation.

26 Communication by Chinese Government to the DAC Secretariat of 24 August 2015.

69. Infrastructure projects have particularly been directed towards low-income African countries (Gutman, J. et al. 2015, Kaplinsky 2013, Foster and Briceño-Garmendia 2009, ICA 2013). Examples of large infrastructure projects include the Bui Hydropower Station in Ghana, financed through a concessional loan of USD 270 million and a commercial loan of USD 292 million by China's Ex-Im Bank. Another project is the construction of the Thika Highway connecting Kenya's capital Nairobi to its economic hub Thika, to which Ex-Im Bank provided USD 100 million (AfDB 2012).

70. China is also a major recipient country of ODF for infrastructure from other development partners. In fact, in 2013, it was the third largest recipient at roughly 3 USD billion (see Figure 8 in Section 1 and Figure 18 below). The vast majority of this financing (86%) was non-concessional loans, mainly from AsDB, WBG, Korea and Germany. Half the total was targeted to transport, while a quarter was for water and sanitation. China was also the largest recipient of DFI/IFI finance for infrastructure in 2013 (see Figure 12).

2. India

71. India has also become one of the major development partners in South-South co-operation. Its strategy is to harness the country's comparative advantage in technology, industrial agriculture, education, and communications to support projects that may be overlooked by traditional and other emerging development partners (Taraporevala and Mullen 2013). The approach is also in line with its foreign policy stance of non-interference in the internal affairs of partner countries, thereby limiting the attachment of policy conditions to its co-operation (OECD 2012b).

72. India's main instruments in development co-operation include grant-in-aid projects, loans, technical assistance, and lines of credit (LoCs). The Development Partnership Administration, created in the Ministry of External Affairs in January 2012, manages India's grant-in-aid, loans, and training programmes for developing countries. These programmes are primarily directed towards its neighbouring countries, mainly Bangladesh, Bhutan, Nepal, Myanmar, and Sri Lanka. Furthermore, LoCs with a development objective raised from capital markets by the Exim Bank of India, an ECA, are becoming increasingly important for development co-operation, in addition to promoting India's international trade with other countries. Launched as part of the 2004 Indian Development and Economic Assistance Scheme (IDEAS), Exim Bank LoCs are overseen by the Ministry of Finance.

73. India's development co-operation for infrastructure is considerable, estimated at USD 1.3 billion for 2014. This amount is from both the budget of the Development Partnership Administration at USD 1 billion and LoCs provided by the Exim Bank at around USD 319 million. For the Development Partnership Administration, economic infrastructure corresponded to 65% of total support allocated to developing countries in that year (India MEA 2015). Most of this support (roughly 83%) went to the energy sector, primarily financing hydroelectric projects in Bhutan. However, as India imports power from Bhutan, projects such as the Dagachhu hydropower plant are mainly to promote power export to India (Acharya 2010). The remaining amount was mainly directed to transport projects in Nepal and Myanmar. Of the LoCs, 46% of total amounts were disbursed to infrastructure in 2014[27].

74. India was also the top recipient for infrastructure ODF by other development partners at USD 4.5 billion in 2013 (see Figure 8 in Section 1 and Figure 18 below), which was mostly (60%) non-concessional financing. Main providers of ODF were Japan, AsDB, WBG and USA. In terms of

27. Estimates for total disbursements of LoCs to infrastructure are based off of figures reported in the Ministry of Finance outcome budget (MoF 2015), EXIM Bank official report (EIBI 2011), and IDCR estimates of sector distribution (IDCR 2015). See Technical Notes for details.

sectoral distribution, transport was 45% of total amounts, energy was 42%, and water and sanitation was 13%. India was also the third top recipient for DFIs/IFIs finance for infrastructure in 2013 (see Figure 13).

3. Turkey

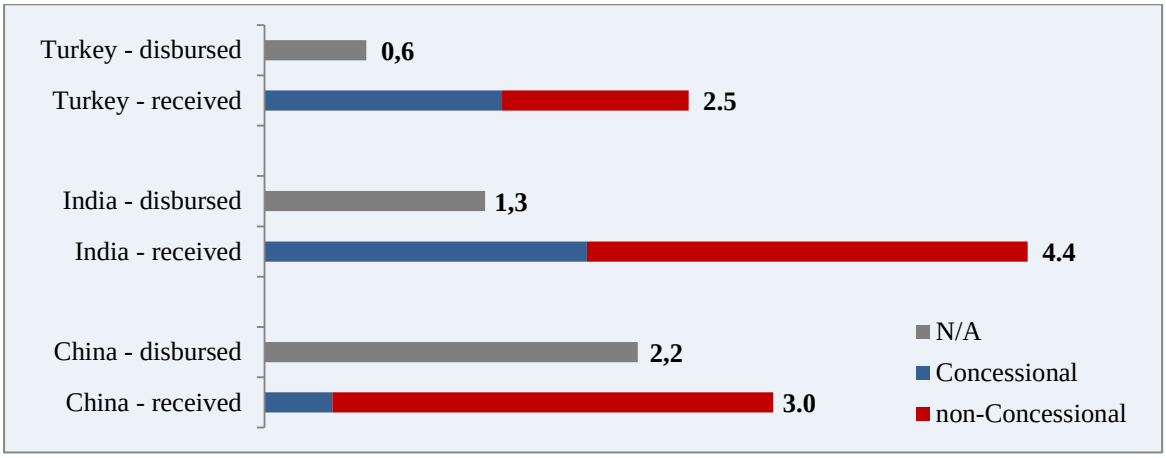
75. Turkey's development co-operation is seen as a part of foreign policy, which is implemented by various Turkish public institutions (Turkey MFA 2015). Activities are currently concentrated in the Middle East, Africa, South and Central Asia, Balkans and East Europe. In 2013, the main recipients of Turkish development co-operation were Syria, Egypt, Kyrgyz Republic, Somalia, and Afghanistan. Turkey's bilateral ODF amounted to USD 3.2 billion in 2013, an increase of almost a third from 2012-levels (OECD 2015b). Contributing to its stated role as a mediator in regional conflicts, the largest share of Turkey's bilateral aid in 2013 was allocated in the form of humanitarian assistance, a significant portion of which was used to maintain its "open-door policy" for Syrian refugees displaced by the nation's civil war.

76. Turkey's bilateral development co-operation is primarily focused on social infrastructure and services, particularly in education, health, and governance (Turkey MFA 2015, TIKA 2013a). Nevertheless, Turkey's total disbursements for economic infrastructure were approximately 600 USD million in 2013[28], which is a relatively large amount compared to other development partners. Most of this amount (USD 500 million) was a loan installment provided to Egypt as budget support for infrastructure. Large infrastructure projects include the construction of the Pul-e-Sokhta-Darulaman Palace Road and the Darya Khan Bridge in Afghanistan, which TIKA financed entirely for USD 11 million and USD 18 million respectively, as well as the West African Access to Clean Drinking Water Programme to drill water wells in Burkina Faso, Mali, Niger, Senegal, Guinea-Bissau, Guinea, Gambia, Ghana, Benin and Togo.

77. Turkey was also the fourth largest recipient country of ODF to infrastructure by other development partners (see Figure 8 and Figure 18) at about USD 2.5 billion, both through concessional (44%) and non-concessional finance (56%). Half of the total was provided by EU institutions, with the remaining by Japan, WBG, Korea, Germany and France. Slightly more than half was in transport (51%), 23% in energy, and 20% in communications. Turkey was also the second largest recipient for DFI/IFI disbursements in infrastructure (see Figure 13).

28. Amounts of Turkish official support to infrastructure were provided by the Turkish government through email correspondence.

Figure 18. Official Support for Development Co-operation in Infrastructure by Emerging Country Disbursed and Received



Source: OECD/DAC aid activity database (CRS), disbursements, SCIO 2014, EIBI 2011, India MEA 2015, India MoF 2015, Turkish government.
Note: See Technical Notes for estimates on China and India.

4. Arab Development Partners

78. The Arab development partners have increasingly been involved in development co-operation in infrastructure. The work of these partners is streamlined by the Co-ordination Group, an umbrella organization whose members includes Arab Fund for Economic and Social Development, Arab Bank for Economic Development in Africa, IsDB, Kuwait Fund for Economic Development, OPEC Fund for International Development; the Abu Dhabi Fund for Development[29]; and Saudi Fund for Development (SDF)[30]. Originally created to support Arab countries, the Co-ordination Group has broadened its reach to a wider range of developing countries across Asia, Africa, and in Europe. The Group aims to assist poorer countries to achieve their economic and social development objectives, holding a development philosophy that is strongly rooted in South-South solidarity as it recognises the important role that emerging countries can play in regional development and knowledge sharing (ACGI 2011).

79. At an aggregate level, these Arab partners provided approximately USD 3.7 billion of ODF for infrastructure in 2013[31], mostly in the form of concessional loans and technical assistance. Energy and transport together made up over 80% of ODF for infrastructure, with the remaining 20% allocated predominantly towards water and sanitation. In terms of regional distribution, Africa received half of all ODF to infrastructure, with largest recipients being North African countries including Morocco, Egypt, and Tunisia. Asia received almost 40%, to which Jordan, Uzbekistan, and Bangladesh received the most support. The remaining 10% was allocated largely to Europe, with Turkey being the largest recipient, followed by Albania. The allocated share of ODF was relatively balanced across income groups, with UMICs receiving 37%, LMICs receiving 33% and LICs receiving 30%.

29. The UAE is reported as a country in the CRS data, however we have only taken development co-operation figures reported by the Abu Dhabi Fund for Development

30. Most of the data used for measuring official support to infrastructure from main Arab development partners is from the CRS as only data for the SDF have been retrieved from secondary sources.

31. Estimates for SDF are for 2012 and based on commitments reported in the SDF 2012 Annual Report, and estimates for IsDB in 2013 are based on figures reported in its 2013 Annual Report. See Technical Notes for details.

5. Asian Infrastructure Investment Bank and New Development Bank

80. In order to provide additional financing for infrastructure, emerging countries have spearheaded the creation of new multilateral institutions such as the AIIB and the NDB. Both of these institutions are seen as complementary to existing MDBs, such as WBG and AsDB.

81. The AIIB's focus is to support general infrastructure needs in the Asia region. Currently, more than 50 countries have joined as founding members, including Australia, Germany, France, Netherlands, Sweden, Switzerland, and the UK, to mention a few. It is expected to begin operations later in 2015 with USD 100 billion in capital.

82. The NDB, on the other hand, has been created by Brazil, Russia, China, India and South Africa (BRICS) to primarily fund infrastructure and development projects in the BRICs and other developing countries. With an initial capital of USD 50 billion, the annual lending size is yet to be decided by its Board. While membership is open to all countries, currently they consist mainly of the five BRICS countries.

VI. END REMARKS

83. This report acknowledged that infrastructure investments in developing countries need to be scaled up significantly—two to three times—to meet the SDGs. Although development co-operation is playing a role to fill the financing gap, leveraging financial resources from the private sector will become increasingly important. Therefore, development partners are placing great effort in allocating resources to the enabling environment in addition to financing hard infrastructure. They are also directly supporting the private sector through financial instruments and public-private initiatives to leverage investment for infrastructure. However, promoting private investment should not be an end in itself, but a means to support inclusive and climate-compatible growth.

84. The report presented an overview of the scale, distribution, and modality of development co-operation for infrastructure. It did not attempt to make judgments regarding whether the collective or individual development partner distributions were appropriate against development objectives. This is because assessing allocations against factors such as the degree of infrastructure needs, population size, level of economic development, availability of and ability to raise private financing, and so on for each country, region, income-level or sector, would require separate in-depth analyses.

85. Instead, the objective of the report was to facilitate discussions and research elsewhere, such as the G20 IIWG and DWG, GIH or other international fora regarding how to unlock private investment for developing country infrastructure. Comprehensive and harmonised annual disbursement data on infrastructure by development partners are necessary in order to better understand annual expenditures or financing requirements for infrastructure. However these data are rare, as opposed to many multi-year commitment figures. By providing such data, the expectation is to contribute to a reflection on a more effective use of scarce public funds in filling the large infrastructure gap, which is crucial for developing countries to achieve sustainable development.

ANNEX: CASE STUDIES OF LEVERAGING PRIVATE INVESTMENT FOR INFRASTRUCTURE

I. The Gigawatt Solar Plant in Rwanda[32]

86. The Gigawatt Solar Plant energy project consisted of the development, negotiation, financing, construction and operation of an 8.5 MW solar photovoltaic power plant in Rwanda, the largest in Africa outside South Africa and Mauritius. The project was financed by two private investors, Gigawatt Global (GWG) and Scatec Solar, and various development partners, including OPIC under the U.S. Power Africa initiative, the Energy and Environment Partnership (EEP) Programme (co-financed by Finland, the UK, and Austria), FMO, Norwegian Investment Fund for Developing Countries (Norfund), KLP Norfund and the Private Infrastructure Development Group (PIDG). The project took only a year and a half from the start of negotiations (February 2013) through signing of Power Purchasing Agreement (PPA) and financial close to interconnection (July 2014).

87. One of the key reasons Gigawatt Global chose to do business in Rwanda was the country's good enabling environment, which included an existing Independent Power Producer framework, rule of law concerning land use, as well as the Rwanda Development Board, which facilitated company registrations and acted as a one-stop-shop to negotiate with multiple ministries. Other business environment factors also appealed to the private actors, such as the country's political stability, low corruption, the existence of a strong local partner which had land to offer for the plant, and the Government of Rwanda's commitment to a Development Strategy for the electricity sector, including renewables. Most importantly, there was a compelling business case: 110 MW of energy, 40% of which came from diesel, for a population of 12 million people.

88. The collaboration between the private actors and development partners helped the project to reach financial close within a short period. OPIC, under the Power Africa initiative's US-African Clean Energy Financing Facility (ACEF), joined with the EPP Programme to provide grants at a crucial early stage, covering project preparation costs which included legal fees associated with drafting loan and security documentation for the project's financing and PPA negotiations. Norton Rose Fulbright, a law firm with previous experience in Rwanda, provided legal assistance to negotiate the PPA, land lease, as well as the equity and debt financing and Engineering, Procurement, and Construction and O&M contracts. DFIs provided senior debt, mezzanine loan, and equity, amounting to more than USD 21 million. Furthermore, EAIF and FMO were able to act quickly as they capitalised on their experience working together on a previous energy project in Rwanda. Scatec Solar - the engineering, procurement, construction, operation and maintenance company - also had a significant equity stake, which helped align incentives. As a result of the collaboration among these stakeholders, the energy project matured to receive project financing and is now providing power to Rwanda's national grid.

89. While the DFIs played a significant role in mobilising financing from the private sector, the equity raised amounted to 9% of total project costs, which was relatively small (See Table A). At the same time, there were significant development impacts of the project, such as: provision of 6% more electricity generation capacity to the country's national grid, sufficient to power over 15,000 households; creation of 300-350 local jobs during the construction phase; training on solar plant construction as well as health and safety standards that could lead to the development of sub-industries; reform of the tax code, which will reduce ambiguity for future investors; and a demonstration effect, which encourages other developers to invest.

32. For full report and more details, see OECD 2014b and OECD 2015c.

Table A: Distribution of Project Preparation Costs		
Institution	Type	Amount (USD)
Energy and Environment Partnership (Finland, Austria, UK)	Grant	310,000
US-ACEF (OPIC)	Grant	400,000
Gigawatt	Own resources	N/A

	Table B:Distribution of Finance for the Gigawatt Solar Plant Project			
	Institution	Nature	Amount (USD million)	Share of total
Development Partners	FMO	Senior loan	8.9	38%
	PIDG (EAIF)	Senior loan	8.9	38%
	Norfund	Mezzanine Loan	2.4	10%
	Norfund	Equity	1.4	6%
	Norfund KLP Investments[33]			
	Subtotal Development Partners		**21.6**	**91%**
Private Sector	Scatec Solar	Equity	1.5	6%
	Gigawatt Global	Equity	0.6	3%
	Subtotal Private Sector		**2.1**	**9%**
Total Construction Costs			**23.7**	**100%**

II. Dakar-Diamniadio Toll Highway Project[34]

90. The Dakar-Diamniadio Toll Highway Project was a PPP project in Senegal that consisted of the design, construction and operation of a portion of a 32 km highway linking the cities of Dakar and Diamniado. The project was financed by the Government of Senegal (GoS), the PPIAF, the WBG, France's Agence Française de Developpement (AFD), AfDB, the West African Development Bank (WADB), CBAO Bank, and a consortium of private companies.

91. Several factors were key in attracting private investment. The GoS demonstrated strong political commitment by issuing a growth strategy emphasising the importance of road infrastructure and by fully funding the first section of the road from its own budget. It also created a conducive enabling environment by establishing the *Agence pour la Promotion des Investissement et Grand Travaux* (APIX), an agency to design investment policies and promote private investment in large infrastructure projects. Furthermore, with the support of PPIAF, the GoS developed a transparent and predictable procurement system for PPPs.

33. Norfund KLP Investments is a joint venture between Norfund and KLP, a Norwegian mutual insurance company. Therefore, it is not strictly a public development partner.

34. For full report and more details, see OECD 2014c.

92. A co-ordinated approach to support Senegal in carrying out the project preparation contributed to bringing together a financing package for the PPP project. The feasibility studies were funded by the GoS and WBG, which helped the government to realise that an investment subsidy was needed to attract potential private sponsors. Thus, official development partners, notably AFD and AfDB, provided sovereign concessional loans to the GoS to finance this subsidy. The IFC was the lead arranger of private debt financing from the private arms of AfDB and WADB, which helped mobilise equity finance from a consortium of companies led by Eiffage, a French construction company. CBAO, a private, Senegalese bank, was crowded-in last by providing a commercial loan.

Table C: Distribution of Project Preparation Costs		
Institution	Type	Amount (USD million)
Government of Senegal	N/A	N/A
PPIAF	Grant	0.25
World Bank (Project Preparation Fund)	Grant	1.25
World Bank - IDA (Private Investment Promotion Project)	Concessional Loan	N/A

Table D: Distribution of the Road Construction Costs			
Institution	Nature	Amount (USD million)	Share of total
a. Government of Senegal	**Government Budget**	**54**	**19%**
b. Official Development partners		**176**	**64%**
	Sovereign Loans	**105**	**38%**
AFD	Concessional Loan	37	13%
AfDB (African Development Fund)	Concessional Loan	67	24%
	Non-Sovereign Loans	**72**	**26%**
World Bank - IFC	Non-concessional Loan	27	10%
AfDB (Private Arm)	Non-concessional Loan	16	6%
West African Development Bank	Non-concessional Loan	29	10%
c. Private Sector	**Equity and Non-sovereign Loan**	**48**	**17%**
Concessionaire (SENAC)	Equtiy	40	14%
CBAO Group Attijariwafa Bank	Non-concessional Loan	8	3%
Total Construction Costs of PPP		**278**	**100%**

93. In terms of determining how financing was leveraged from the private sector, one might say that the non-sovereign lending by the development partners of 26% was able to leverage the 17% from the private sector (ratio of 1:0.7). However, one could also say that the sovereign loans by the AFD and AfDB of 38% were crucial in getting the private sector involved; thus the sovereign and non-sovereign lending of 64% was able to leverage the 17% of private investment (ratio of 1: 0.3). Either way, the amount leveraged from the private sector did not surpass the amounts provided by the official development partners.

94. At the same time, the development impact of this project includes: the significant reduction in road congestion and travel time; the adoption of new institutional and regulatory frameworks to improve the business enabling environment; and strengthened institutional capacity of APIX. The GoS has also taken advantage of the construction of the road to upgrade Pikine Irrégulier Sud, an urban area in the surroundings of Dakar, whose works are expected to be completed by the end of 2016.

TECHNICAL NOTES

Section I. Overview of Infrastructure Finance

A. CRS Sectors for Infrastructure

ODF (see Footnote 3) data by development partners which report to the DAC are taken from the OECD/DAC aid activity database (CRS). For infrastructure, the following CRS sectors have been used: Water and Sanitation (140), Transport and storage (210), Communications (220), and Energy (230)

B. Report Usage of ODF Disbursements and Commitments

Absolute amounts of ODF in this report are in disbursements and not in commitments. The reason is that commitments are recorded in total only in the particular year they are signed. Once the commitment has been reported, it is not repeated again in subsequent years, although it may be spent over several years. Therefore, the amount may be recorded as zero for the particular project the following years even though the activities and financing would be on-going. Furthermore, since different projects usually have different years of planned disbursements, aggregates of committed amounts would be an accumulation of projects with different number of years of implementation. As such, disbursements are more comparable with annual expenditure figures, for example, annual infrastructure spending, gross national income (GNI), and so on.

However, some development partners do not report in disbursements. For these development partners, the absolute amounts for disbursements are estimated. The way they have been estimated is explained individually below. At the same time, all development partners reporting to the DAC at activity level report in commitments. For this reason, percentages measuring distributions such as ODF for infrastructure by region (Figure 6), income-group (Figure 7) and sector (Figure 9) are based on commitments.

C. Projected Annual Infrastructure Investment Gaps, 2015 – 2013 (Figure 1)

Projected annual infrastructure investment gaps for each infrastructure sector are calculated based on projections made by UNCTAD in its 2014 World Investment Report. To illustrate the investment need for achieving the infrastructure-related objectives of the upcoming SDGs, UNCTAD has made projections of the infrastructure investment in developing countries. UNCTAD, using a meta-analytic approach by combining estimates made by a number of studies and analyses, provides a projected range to estimate the investment gap in each infrastructure sector. Projected annual investment gaps for each infrastructure sector in Figure 1 are based on the average of the range included in UNCTAD's report. The investment gaps include only capital expenditures, leaving out operating expenditure.

D. Estimated Distribution of Developing Country Infrastructure by Source of Finance (Figure 2)

Estimates of total current investment in each infrastructure sector in developing countries are taken directly from the UNCTAD 2014 World Investment Report. The UNCTAD's report also provided a range for the level of private sector participation in each infrastructure sector. Therefore, the percentage of private sector participation in Figure 2 is based on the average of this range. On the other hand, the estimated share of finance provided by development partners in each sector was calculated using CRS data. The remaining portion of current investment is attributed to the infrastructure expenditures of developing country governments.

E. Total Official Support to Infrastructure by Development Partners Categories (Figure 3)

Figure 3 is based on actual disbursements of development partners reporting to the DAC at activity level as well as estimates of disbursements of those that do not report fully to the DAC or at all. Of the USD 60 billion, USD 51 billion are actual disbursements reported to the DAC in the CRS. The remaining USD 9 billion include estimates for IsDB, IFC, FMO, BIO, IFU, SIMEST, COFIDES, China, India and Turkey, explained below in this section and in Technical note of Section V.

F. Estimates for development partners in Figure 4 and 5.

1. Estimates for Islamic Development Bank's disbursements in 2013

IsDB only reports commitments at the activity level in the CRS database. IsDB's total disbursement to infrastructure in 2013 is taken from its 2013 Annual Report, reported as USD 1.58 billion (IsDB 2013). This figure corresponds only to IsDB's Ordinary Capital Resources and is considered non-concessional. This amount is used in Figure 4.

2. Estimates for IFC disbursements in 2013:

IFC does not report its annual disbursements at the activity level in the CRS database. However, it reports its total disbursements for all sectors combined in DAC2b table. In 2013, total IFC disbursements were USD 6.7 billion. Since the share of infrastructure in total commitments reported to the DAC in the CRS was 28%, this percentage is applied to the total disbursements of USD 6.7 billion to obtain the estimate of IFC's disbursements for infrastructure. This amount corresponds to USD 1.9 billion. It was added to the WBG's sum in Figure 4, which also includes disbursements by IBRD and IDA.

3. Estimates for FMO disbursements in 2013:

a) **FMO total disbursements** – FMO's disbursement figures are not reported in the CRS database. FMO's total disbursement in 2013 is estimated based on figures in its 2013 Annual Report. Total disbursements is estimated to be USD 1.48 billion, calculated as the sum of loans extended to the private sector (USD 1.24 billion or EUR 934.90 million), loans guaranteed by the State (USD 24.78 million or EUR 18.66 million), and equity purchases and contributions (USD 216.10 million or EUR 162.74 million) (FMO 2013, pg 95-97). This estimate is added to Netherland's total ODF for all sectors, used in Figure 5.

b) **FMO total disbursements for infrastructure** – To estimate total disbursements for infrastructure, the share of FMO's portfolio in infrastructure, which is approximately 30% as reported in the 2013 EDFI Annual Report (EDFI 2013, p. 30), is multiplied by total disbursements in 2013, as estimated in 3a). Total disbursements for infrastructure is estimated at USD 0.45 billion. This estimate is added to the Netherland's total ODF for infrastructure in Figure 4 and Figure 5.

4. Estimates for Belgium BIO disbursements in 2013

a) **BIO total disbursements to the private sector**– total disbursements to the private sector in 2013 as reported in the CRS (USD 189.68 million).

b) BIO total disbursements to the private sector for infrastrelgium's BIO does not provide a sector breakdown at the activity level in the CRS database. Thus, to estimate disbursements for infrastructure in 2013, the share of BIO's portfolio in infrastructure, which is approximately 22% as reported in the 2013 EDFI Annual Report (EDFI 2013, pg 20), is multiplied by total disbursements to the private sector in 2013 as reported in the CRS (USD 189.68 million). Total

disbursements for infrastructure is estimated at USD 40.94 million. This estimate is added to Belgium's ODF for infrastructure in Figure 4 and Figure 5.

5. Estimates for Denmark IFU disbursements to the private sector for infrastructure in 2013

Denmark's IFU reports a sector breakdown for only ODA in the CRS, capturing only a small portion of its total disbursements to infrastructure. To estimate total disbursements for infrastructure, the share of IFU's portfolio in infrastructure, which is approximately 17% as reported in the 2013 EDFI Annual Report (EDFI 2013, pg 32), is multiplied by total disbursements for to the private sector in 2013 as reported in the CRS (USD 81.92 million). Total disbursements for infrastructure is estimated at USD 13.7 million. This estimate is added to Denmark's ODF for infrastructure in Figure 4 and Figure 5.

6. Estimates for Italy's SIMEST disbursements in 2013

a) SIMEST total disbursements to the private sector– SIMEST does not report figures in the CRS. To estimate total disbursements to the private sector, the USD 117.6 million or EUR 88.6 million worth of "equity investments acquired" in 2013, as reported in its cash flow statements in its 2013 Annual Report (SIMEST 2013, pg 101), is used as a proxy. This is likely overestimates disbursements as it also includes SIMEST activities in non-developing countries. This estimate is added to Italy's total ODF for all sectors, used in Figure 5.

b) SIMEST total disbursements to the private sector for infrastructure – To estimate total disbursements for infrastructure, the share of SIMEST's portfolio in infrastructure, which is approximately 6% as reported in the 2013 EDFI Annual Report (EDFI 2013, pg 32), is multiplied by total estimated disbursements for to the private sector in 2013 as estimated in 7a). Total disbursements for infrastructure is estimated at USD 13.7 million. This estimate is added to Italy's ODF for infrastructure in Figure 4 and Figure 5.

7. Estimates for Spain's COFIDES disbursements in 2013

a) COFIDES total disbursements to the private sector– COFIDES does not report figures in the CRS. Total disbursements to the private sector amounts to USD 278.4 million or EUR 209.7 million, as reported in its 2013 Annual Report (COFIDES 2013, p. 33) . This figure is added to Spain's total ODF for all sectors, used in Figure 5.

b) COFIDES total disbursements to the private sector for infrastructure – To estimate total disbursements for infrastructure, the share of COFIDES' portfolio in infrastructure, which is approximately 41% as reported in the 2013 EDFI Annual Report (EDFI 2013, p. 24), is multiplied by total disbursements to the private sector in 2013 as calculated in 8a). Total disbursements for infrastructure is estimated at USD 113.8 million. This estimate is added to Spain's ODF for infrastructure in Figure 4 and Figure 5.

Section II. Enabling Environment for Private Sector Participation in Infrastructure (Figure 11)

A. CRS codes classified as "enabling environment":

Investment Openness and Predictability

- 15130: Legal and judicial development
- 25010: Business support services and institutions
- 25020: Privatisation

Public Governance

- 15110: Public sector policy and administrative management
- 15111: Public finance management
- 15112: Decentralisation and support to subnational government
- 15113: Anti-corruption organizations and institutions

Financial Sector

- 24010: Financial policy and administrative management
- 24030: Formal sector financial intermediaries

Policy, Regulation, and Managemnet of Infrastructure Sectors

- 14010: Water sector policy and administrative management
- 14081: Education/training in water supply and sanitation
- 21010: Transport policy and administrative management
- 21081: Education and training in transport and storage
- 22010: Communications policy and administrative management
- 23010: Energy policy and administrative management

Projects were filtered by hand in order to remove projects unrelated to the enabling environment for infrastructure.

B. Estimates for IsDB and IFC disbursements for infrastructure enabling environment

1. Estimates for IsDB

IsDB's disbursements for infrastructure were estimated by multiplying its total disbursements (see Technical Notes Section I.E.1a) by its ratio of commitments to the enabling environment as a share of total commitments (to all sectors).

2. Estimates for IFC disbursements for infrastructure enabling environment:

IFC's disbursements for infrastructure were estimated by multiplying its total disbursements (see Technical Notes Section 1.E.2a) by its ratio of commitments to the enabling environment as a share of total commitments (to all sectors).

C. Calculating development partner share of ODF to infrastructure for enabling environment

The share of ODF to enabling environment is calculated as the total of all enabling environment categories as a share of all enabling environment categories and the hardware and construction in all four infrastructure sectors ("hard infrastructure"):

Section III. Support to the Private Sector

A. DFI/IFI Disbursements to the private sector for infrastructure

1. Estimates for IFC disbursements in 2013

a) **IFC disbursements to the private sector for infrastructure– See Note 2b. Estimates used Figure 11.**

b) **IFC disbursements for infrastructure to each of its recipient countries –** IFC disbursements to each country calculated by using the share of commitments to each country multiplied by IFC's estimated total disbursement to infrastructure (See Note 2b). Estimates used in Figure 14.

2. AsDB disbursements to the private sector for infrastructure in 2013

Total disbursements of USD 668 million provided by AsDB's Strategy and Policy Department.

3. Estimates for Inter-American Development Bank disbursements and commitments in 2013

a) **IADB disbursements to the private sector for infrastructure** – IADB did not separately report its disbursements or commitments to the private sector in 2013, though it has done so for previous reporting years. As such, IADB's disbursements to the private sector for infrastructure in 2013 were calculated by aggregating all disbursements for outstanding projects in 2013 that were reported as allocations to the private sector in previous years. IADB disbursements to the private sector for infrastructure amounted to USD 775.5 million in 2013. Estimates used in Figure 11.

b) **IADB commitments to the private sector for infrastructure–** As sectoral, regional, and income distributions in this report use commitment data, and IADB did not separately report its commitments to the private sector in 2013, estimates of its commitments to the private sector for infrastructure were made by taking the 2012 sectoral, regional, and income distributions of commitments to the private sector for infrastructure, and applying these to 2013 total commitments. In 2013, it is estimated that USD 347.5 million was committed to energy, USD 116.6 million to transport, and USD 0.75 million to communications, and USD 0.70 to water and sanitation. In terms of income distribution, USD 374.0 million was committed to UMICs and USD 0.8 million was committed to LMICs. The total USD 465.6 million estimated commitments in 2013 were allocated to the Americas. Estimates used in Figure 12 and Figure 14.

4. FMO total disbursements to the private sector for infrastructure – See Note 3b). This estimate is used in Figure 11.

5. Estimates for Belgium BIO disbursements to the private sector for infrastructure in 2013 – See Note 4). Estimate used in Figure 11.

6. Estimates for Denmark IFU disbursements to the private sector for infrastructure in 2013 – See Note 5). Estimate used in Figure 11.

7. Estimates for Italy's SIMEST disbursements to the private sector for infrastructure in 2013 – See note 6b). Estimate used in Figure 11.

8. Estimates for Spain's COFIDES disbursements to the private sector for infrastructure in 2013– See note 7b). Estimate used in Figure 11.

9. Estimates for Austria's OeEB disbursements to the private sector for infrastructure in 2013

To estimate total disbursements for infrastructure, the share of OeEB'S portfolio in infrastructure, which is approximately 15% as reported in the 2013 EDFI Annual Report (EDFI 2013, pg 36), is multiplied by total disbursements to the private sector in 2013 as reported in the CRS (USD 133.2 million). Total disbursements for infrastructure are estimated at USD 20.2 million. Estimate used in Figure 11.

10. France's PROPARCO disbursements to the private sector for infrastructure in 2013

Total disbursements of USD 248 million (EUR 187 million) were provided by AFD's Département Finances et Comptabilité (DFC) through email correspondence on 21 July 2015.

B. Largest Recipients, Income and Sectoral Distribution of DFI/IFI flows to the private sector for infrastructure in 2013 (Figure 13, 14 and 15).

Figures 13, 14, and 15 show the income distribution, the largest recipients, and sectoral distribution of DFI/IFI flows to the private sector for infrastructure. Bilateral DFIs of Belgium (BIO), France (PROPARCO), Italy (SIMEST), Netherlands (FMO), and Spain (COFIDES) are not included as they do not report as separate agencies in the CRS database. While the bilateral DFIs of Austria (OeEB) and Denmark (IFU) are reported in the CRS as separate agencies, since most or all flows are not broken down by sector, they are also not included in these figures.

C. Amounts mobilised from the private sector

The amounts reported are taken from the *2015 OECD DAC Survey on Amounts Mobilised from the Private Sector by Official Development Finance Interventions*, which provides amounts mobilised from the private sector through guarantees, syndicated loans and shares in CIVs between 2012 and 2014. However, all development finance institutions/agencies do not report mobilised amounts across all years. As such, in this report, aggregate, annual amounts mobilised are calculated by summing the average annual amount mobilised by each institution/agency.

See also: http://www.oecd.org/dac/stats/mobilisation-effect-of-public-development-finance.htm

Section IV. Support to Green Infrastructure

Analyses in this Section are based on climate-related development finance data from the OECD DAC CRS database for 2013.

A. Accounting for bilateral development partners

Bilateral data includes projects screened using the Rio Marker approach as having climate change as a "principal" or "significant" objective. The former includes activities which have climate change adaptation or mitigation as one of the principal reasons being undertaken i.e. the activity would not have been undertaken in without this objective. The latter includes activities for which climate change adaptation or mitigation is an important aspect, but is not one of the principal drivers of the design of the project or programme. Rio-marked data for both climate change mitigation and adaptation are available for flows from 2010 and onwards.

Coverage of ODA commitments from bilaterals development partners is generally complete, though data gaps still exist for some bilateral development partners. Data on Other Official Flows from bilateral agencies, however, are incomplete, with only four DAC members reporting non-concessional climate-related development finance to date. Thus, for this section of the report, only ODA commitment data is analysed for bilaterals partners.

The Rio Marker approach allows for an approximate quantification of aid flows that target climate objectives, as it does not provide the exact share of aid activity expenditure that contributes to climate change adaptation or mitigation provided bilateral partners. As this report takes projects where climate change is either a principle or a significant objective, the figures provided in this section for bilateral development partners should be considered as an upper bound estimate of climate-change-related aid.

1. **Australia green infrastructure commitments:** Only includes flows from the Department of Foreign Affairs and Trade (OECD 2015c).

2. **Austria green infrastructure commitments:** Only includes flows from main agency ADA (OECD 2015c).

3. **Iceland, Ireland, Luxembourg, and Portugal green infrastructure commitments:** Country climate data reporting is based on disbursements data so commitment data equals disbursement data (OECD 2015c).

4. **EU Institutions green infrastructure commitments:** EU institutions flows in this report incorporate flows from EIB. Other than EIB, only flows from DG DEVCO and DG ELARG are captured (OECD 2015c). EU institutions reports as a bilateral development partner in the CRS database and thus uses the Rio Marker approach (See Section IV.A.), but is considered a multilateral development partner in this report.

For more information on the OECD climate markers, please refer to the Handbook for OECD Climate Markers available at http://www.oecd.org/dac/stats/48785310.pdf

B. Accounting for multilateral development partners

The DAC has been collaborating with multilateral and regional development banks over a number of years to capture climate-related data from multilateral development partners in its statistical system. First data on climate-related multilateral flows is available for flows reported in

2013. Multilateral climate finance data includes reporting from 9 multilateral development partners: i.e. the African Development Bank (AfDB), the Asian Development Bank (AsDB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank (IADB), the World Bank (WB) and the International Finance Corporation (IFC), the Global Environment Facility, and the Adaptation Fund.

Multilateral partners report using a climate-related component approach, where the share of aid activity expenditure that contributes to climate change adaptation or mitigation is identifiable. As many multilateral partners only began reporting on climate components either in 2014 or 2015, there are still gaps within the data, i.e. projects that are climate-related but have not been marked. As reporting becomes more standardised over time, it is expected that coverage will become more complete.

1. **Non-standard filers:** AfDB, AsDB, and EIB report their climate data to the DAC in a stand-alone file ("non-standard" filers). Some projects have not been incorporated into the CRS database at this time. Thus, in order to ensure consistency with the rest of the data in this paper, some climate-related projects from these non-standard filers were excluded, due to their not being included in the wider CRS database at the time the analyses were conducted.

2. **Climate Investment Funds green infrastructure commitments:** Climate data reporting is based on disbursements data so commitment data equals disbursement data. Data on commitments have not yet been reported.

3. **AsDB green infrastructure commitments:** Climate data reporting only captures flows from AsDB Special Funds. Therefore, in this section of the report, only flows from AsDB Special funds are taken into account.

For an outline of the treatment and coverage of multilateral climate data, please see a technical note on the treatment of climate-related multilateral flows in DAC statistics available at http://www.oecd.org/dac/stats/documentupload/RD%2016%20-%20Treatment%20of%20green%20multilater%20flows%20in%20OECD%20DAC%20statistics.pdf

Section V. Emerging Countries Providing Development Co-operation for Infrastructure

Estimates for China's development co-operation for infrastructure in 2013

According to China's 2014 White Paper on Foreign Aid, from 2010 to 2012 the country's foreign aid amounted to US$ 14.41 billion (SCIO 2014). This puts China's average annual foreign aid at US$ 4.8 billion over this time period. Additionally, the White Paper shows that 44.8%, the bulk of Chinese foreign aid, was allocated to economic infrastructure projects (not including water and sanitation projects). Therefore, China's annual development co-operation for infrastructure is estimated at USD 2.2 billion. This includes concessional loans provided by the EXIM-bank. Estimate used in Figure 3 and Figure 18.

Estimates for India's development co-operation for infrastructure in 2013

India's development co-operation is estimated at USD 1.3 billion. An estimated USD 1.0 billion is provided by the Development Partnership Administration, calculated by aggregating amounts budgeted for each infrastructure project as reported in the Ministry of External Affairs 2014-2015 Outcome Budget. The budget for infrastructure projects amounted to 6,031.9 crores, or USD 1.0 billion. Estimate used in Figure 3 and Figure 18.

India's government also backs EXIM-bank LoCs as part of its development co-operation strategy. Total disbursements for LoCs during the 2014-2015 fiscal year were 880 million USD (India MoF 2015). However, only LoCs backed by the government are considered concessional in India whereas the other LoCs are export oriented and thus non-concessional (EIBI 2011). Data provided by the Exim Bank in 2011 help estimate the volume of concessional LoCs as a share of outstanding loans that are backed by the government (ibid.) out of the total volume of LoCs in 2014 (India MoF 2015). Based on this calculation, approximately 86% of LoCs are supported by the government. Applying this ratio to the 880 million USD LoCs disbursed in 2014-2015 (as mentioned in the 2014-2015 MoF Outcome budget), it can be estimated that 760 million USD equivalent LoCs were disbursed in 2014-2015. According to IDCR estimates of sector distribution over the period 2004-2013 (IDCR 2015), approximately 46% of this amount was allocated to infrastructure. As such, it can be estimated that 350 million USD has been disbursed for infrastructure through LoCs in the 2014-2015 fiscal year.

Estimates for Saudi Development Fund disbursements to infrastructure in 2012

SFD's most recent annual report is its 2012 Annual Report, which lists total commitments at a project level. As a proxy for SFD's disbursements to infrastructure, this report calculates uses the average annual commitment amount of each infrastructure project (dividing by the project's loan term, and then aggregate the average annual commitment amounts for all infrastructure projects).

BIBLIOGRAPHY

ACGI (Arab Coordination Group Institutions) (2011), *Statement of Resolve of the Arab Funds of The Coordination Group*, 4th High Level Forum on Aid Effectiveness, 29 Nov – 1 Dec 2011, Busan, Korea, http://www.adfd.ae/Documents/2011-11-02_Busan_Statement_of_Resolve.pdf.

Acharya, J. (2010), *Dagachhu Hydropower Project: First Cross-Border Clean Development Mechanism Initiative*, CDM Project Brief, Asian Development Bank, September 2010, http://www.adb.org/sites/default/files/publication/29066/cdm-project-brief-dagachhu.pdf.

AFD (The French Agency for Development) (2013), *AFD Supports Sustainable Transport in Istanbul*, 21 January 2013, http://www.afd.fr/webdav/shared/PORTAILS/PAYS/TURQUIE/PAGE%20D'ACCUEIL/CTR1033_Istanbul_PRESS_RELEASE_01-2013.pdf

AFD (2014), *Rehabilitaiton of Mavuzi and Chicamba Hydropower Stations*, http://www.afd.fr/lang/en/home/pays/afrique/geo-afr/mozambique/projets-mz/infra/energie2/Mavuzi-Chicamba_1.

AfDB (African Development Bank) (2012), *AfDB-Funded Thika Superhighway: A Masterpiece for East Africa "A National Pride" - President Mwai Kibaki*, 9 September 2012, http://www.afdb.org/en/news-and-events/article/afdb-funded-thika-superhighway-a-masterpiece-for-east-africa-a-national-pride-president-mwai-kibaki-9986/.

Agénor PR and Moreno-Dodson B (2006), *Public Infrastructure and Growth: New Channels and Policy Implications*, World Bank Policy Research Working Paper 4064, http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2006/11/08/000016406_20061108161655/Rendered/PDF/wps4064.pdf.

AsDB (2012), *Philippines: Strengthening Public-Private Partnerships in the Philippines*, Asian Development Bank, December 2012, http://www.adb.org/sites/default/files/project-document/75470/45515-001-phi-mcs.pdf.

Barr, R., S. Fankhauser and K. Hamilton (2010). "Adaptation Investments: A Resource Allocation Framework", in: *Mitigation and Adaptation Strategies for Global Change*, 15(8): 843-858, http://www.oecd.org/env/cc/48351202.pdf.

Brooks, N., N. Adger and M. Kelly (2005). "The determinants of vulnerability and adaptive capacity at the national level and the implications for adaptation", in: *Global Environmental Change* 15: 151-163, http://www.sciencedirect.com/science/article/pii/S0959378004000913

COFIDES (Spanish Development Finance Company) (2013), *2013 Annual Report*, http://www.cofides.es/ficheros/Informes/2013_Annual_Report.pdf.

DFID (United Kingdom Department for International Development) (2013), *Business Case and Summary – Building a Reliable Investment Climate in Kenya (BRICK)*, March 2013, http://devtracker.dfid.gov.uk/projects/GB-1-203348/documents/.

EBRD (European Bank for Reconstruction and Development) (2013), *Western Balkans Sustainable Energy Financing Facility II*, May 2013, http://www.ebrd.com/documents/comms-and-bis/western-balkans-sustainable-energy-financing-facility-ii.pdf.

EC (European Commission) (2004), *MEDA: over €700 million in 2004 to support the EU's Mediterranean partners*, Press Release Database, Brussels, 26 November 2004, http://europa.eu/rapid/press-release_MEMO-04-276_en.htm.

EC (2005), *Euro-Mediterranean Partnership and MEDA Regional Activities, European Commission, Euromed*, Euromed Information Notes, June 2005, http://www.emwis.org/overview/fol101997/fol221357/infonotes_200506-en.pdf/download/1/infonotes_200506-en.pdf.

EC (2009), "Service procurement notice for 'New Approaches in Telecommunications Policy III (NATP III)'- ENPI South, Announced, European Commission", Euromed, 31 March 2009, http://www.enpi-info.eu/mainmed.php?id_type=4&id=18286.

Edenhofer O., R. Pichs-Madruga, Y. Sokona, S. Kadner, J. C. Minx, S. Brunner, S. Agrawala, G. Baiocchi, I. A. Bashmakov, G. Blanco, J. Broome, T. Bruckner, M. Bustamante, L. Clarke, M. Conte Grand, F. Creutzig, X. Cruz-Núñez, S. Dhakal, N. K. Dubash, P. Eickemeier, E. Farahani, M. Fischedick, M. Fleurbaey, R. Gerlagh, L. Gómez-Echeverri, S. Gupta, J. Harnisch, K. Jiang, F. Jotzo, S. Kartha, S. Klasen, C. Kolstad, V. Krey, H. Kunreuther, O. Lucon, O. Masera, Y. Mulugetta, R. B. Norgaard, A. Patt, N. H. Ravindranath, K. Riahi, J. Roy, A. Sagar, R. Schaeffer, S. Schlömer, K. C. Seto, K. Seyboth, R. Sims, P. Smith, E. Somanathan, R. Stavins, C. von Stechow, T. Sterner, T. Sugiyama, S. Suh, D. Ürge-Vorsatz, K. Urama, A. Venables, D. G. Victor, E.Weber, D. Zhou, J. Zou, and T. Zwickel, 2014: Technical Summary. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J. C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_technical-summary.pdf.

EDFI (European Development Finance Institutions) (2013), *EDFI Annual Report*, www.edfi.be/component/downloads/downloads/106.html.

EIB (European Investment Bank) (2012), *Broadband Rural Areas*, 29 November 2012, http://www.eib.org/projects/pipeline/2012/20120311.htm.

EIBI (Export Import Bank of India) (2011), *Indian Lines of Credit: an Instrument to Enhance Indian-African Partnership*, http://www.indiainbusiness.nic.in/trade/presentation_loc/exim.pdf.

European Parliament (2014), *Financing for Development Post-2015: Improving the Contribution of Private Finance*, http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/433848/EXPO-DEVE_ET(2014)433848_EN.pdf.

FMO (Dutch Entrepreneurial Development Bank) (2013), *FMO Full Annual Report & Accounts 2013*, http://annualreport2013.fmo.nl/.

Foster, V.and Briceno-Garmendia, C. (2009), *Africa's Infrastructure: A Time for Transformation*, Africa Development Forum Series, Washington, DC: World Bank Group, http://documents.worldbank.org/curated/en/2009/01/11487313/africas-infrastructure-time-transformation.

Freemantle, S. and Stevens, J. (2010), Economic Strategy, "BRIC and Africa: New partnership poised to grow Africa's commercial infrastructure," Standard Bank, South Africa, 15 October, 2010.

Fankhauser, M. and McDermott, T.K.J (2014). *Understanding the adaptation deficit: why are poor countries more vulnerable to climate events than rich countries?,* Centre for Climate Change Economics and Policy Working Paper No. 150. Grantham Research Institute on Climate Change and the Environment Working Paper No. 134, http://ac.els-cdn.com/S0959378014000806/1-s2.0-S0959378014000806-main.pdf?_tid=566c112a-2b09-11e5-a955-00000aacb35f&acdnat=1436975661_03bb4eec13d64413cc76bacff65358f6

GEF (Global Environment Facility) (2014), *Request for MSP Approval Sustainable Urban Mobility Program for San Jose, Costa Rica, CR-T1110*, January 2013, http://www.thegef.org/gef/sites/thegef.org/files/gef_prj_docs/GEFProjectDocuments/Climate%20Change/Costa%20Rica%20-%20(5838)%20-%20Sustainable%20Urban%20Mobility%20Program%20for%20San%20Jose/MSP_request_signed1.pdf.

GCEC (The Global Commission on the Economy and Climate) (2014), *Better Growth, Better Climate: The New Climate Economy Report*, http://2014.newclimateeconomy.report/wp-content/uploads/2014/08/NCE_Chapter6_Finance.pdf.

Geary, K. (2015), *The Suffering of Others*, OXFAM, https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/ib-suffering-of-others-international-finance-corporation-020415-en.pdf.

GIZ (German Corporation for International Cooperation) (2015), *Energy policy and energy efficiency*, 12 June 2015, http://www.giz.de/en/worldwide/15622.html.

Gutman, J. et al. (2015*). Financing African Infrastructure: Can the World Deliver?* Brookings Institutions, http://www.brookings.edu/~/media/Research/Files/Reports/2015/03/financing-african-infrastructure-gutman-sy-chattopadhyay/AGIFinancingAfricanInfrastructure_FinalWebv2.pdf?la=en.

IADB (Inter-American Development Bank) (2015a), *Project Abstract: Panama Canal Expansion Program*, http://www.iadb.org/en/projects/project-description-title,1303.html?id=pn-l1032.

IADB (2015b), *Sustainable Urban Mobility Program for San Jose Costa Rica Technical Co-operation Document, CR-T1119*, http://www.iadb.org/en/projects/project-description-title,1303.html?id=CR-T1119.

ICA (Infrastructure Consortium for Africa) (2013), *Infrastructure Financing Trends in Africa: ICA Annual Report 2012*. Tunis, Tunisia: Infrastructure Consortium for Africa Secretariat, African Development Bank, http://www.icafrica.org/fileadmin/documents/Annual_Reports/ICA%20_AnnualReport%202012.pdf.

IDCR (Indian Development Cooperation Research) (2015), *Trends in Indian Development Assistance in the Energy Sector*, News Brief no. 4, 1st February, 2015, http://idcr.cprindia.org/blog/trends-indian-development-assistance-energy-sector.

India MEA (Ministry of External Affairs, Government of India) (2015), *Outcome Budget 2014-2015*, http://mea.gov.in/Uploads/PublicationDocs/23954_MEA_Outcome_Budget_ENG_2014-15.pdf.

India MoF (Ministry of Finance, Government of India) (2015). *Outcome Budget 2014-2015*, http://finmin.nic.in/reports/OutcomeBudget2014_15.pdf.

IsDB (Islamic Development Bank) (2013), *Annual Report 1434H (2013)*, http://www.isdb.org/irj/go/km/docs/documents/IDBDevelopments/Internet/English/IDB/CM/Publications/Annual_Reports/39th/AnnualReport39.pdf.

JICA (Japan International Cooperation Agency) (2013), *Signing of Japanese ODA Loan Agreement with the People's Republic of Bangladesh*, Press Release, 11 March 2013, http://www.jica.go.jp/english/news/press/2012/130311_02.html.

Kaplinsky, R. (2013) *Infrastructure Development within the Context of Africa's Cooperation with New and Emerging Development Partners*. Report prepared for the UN Office of the Special Advisor on Africa, New York: United Nations. Available at http://www.nepad.org/sites/default/files/Role%20of%20Emerging%20Partners%20in%20Infrastructure%20Development.pdf.

Kasper, H. and Jett, A.N (2014), *H1 2014 Global PPI Update*, World Bank Group, Public Private Partnership Group, http://ppi.worldbank.org/~/media/GIAWB/PPI/Documents/Global-Notes/Global2014-PPI-Update.pdf.

Kingombe, C.K.M. (2011), *Mapping the new infrastructure financing landscape*, Overseas Development Institute, http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/6311.pdf.

Marin, P., (2009), *Public-Private Partnerships for Urban Water Utilities A Review of Experiences in Developing Countries*, The World Bank Group, Washington DC, https://openknowledge.worldbank.org/bitstream/handle/10986/2703/530170PUB0Tren101Official0Use0Only1.pdf?sequence=6.

Melohina, V. (2014), *EBRD boosts energy efficiency in Serbia*, European Bank for Reconstruction and Development, 13 November 2014, http://www.ebrd.com/news/2014/ebrd-boosts-energy-efficiency-in-serbia.html.

Miyamoto, K. and Biousse, K. (2014), *Official Support for Private Sector Participation in Developing Country Infrastructure*, Organisation for Economic Co-operation and Development, Development Co-operation Directorate, Working Papers No. 19. July 2014, http://dx.doi.org/10.1787/5jz14cd40nf0-en.

Mwase N and Yang Y (2012), BRICs' Philosophies for Development Financing and Their Implications for LICs, IMF Working Paper WP/12/74, https://www.imf.org/external/pubs/ft/wp/2012/wp1274.pdf.

NGO Briefing (2014), *Ending fossil fuel support: the way forward NGO recommendations for OECD countries on their Export Credit Agencies*, http://bankwatch.org/sites/default/files/Briefing-OECD-ECAs-coal-27May2014.pdf.

OECD (Organisation for Economic Co-operation and Development) (2012a), *Mapping Support for Africa's Infrastructure Investment*, http://www.oecd.org/daf/inv/investment-policy/MappingReportWeb.pdf.

OECD (2012b), *Trade-Related South-South Co-operation: India*, Policy Dialogue on Aid for Trade, 2012, http://www.oecd.org/dac/aft/South-South_India.pdf.

OECD (2014a), *Background paper: A first international standard for measuring the leveraging effect of private-sector instruments*, Organisation for Economic Co-operation and Development, DAC High Level Meeting, OECD Conference Centre, Paris, 15-16 December 2014, http://www.oecd.org/dac/DACHLM2014%20A%20first%20international%20standard%20for%20measuring%20the%20leveraging%20effect%20of%20private-sector%20instruments.pdf.

OECD (2014b), *Case Study on Support for Private Sector Investment in Infrastructure: Gigawatt Solar Plant in Rwanda*, [DCD/WKP(2014)3/REV1].

OECD (2014c), *Donor support to public-private partnerships: The case of the Dakar-Diamniadio Toll Highway Project*, [COM/DAF/INV/DCD/DAC(2014)4].

OECD (2015a), Policy Framework for Investment 2015 Edition, http://www.oecd.org/daf/inv/investment-policy/Policy-Framework-for-Investment-2015-CMIN2015-5.pdf.

OECD (2015b), *Turkey's Official Development Assistance*, http://www.oecd.org/dac/stats/turkeys-official-development-assistanceoda.htm

OECD (2015c), *Summary Record of the Advisory Group on Investment and Development of the 19th March 2015* [COM/DAF/INV/DCD/DAC/M(2015)1].

Rothballer, C. (2011), *Infrastructure Investment Characteristics: Risk, Regulation, and Inflation Hedging*, Technisce Universitat Munchen. https://mediatum.ub.tum.de/doc/1106559/1106559.pdf.

Schmidt-Traub, G. and Sachs, J.D. (2015), *Financing Sustainable Development: Implementing the SDGs through Effective Investment Strategies and Partnerships*, Working Paper, Sustainable Development Solutions Networks, available at http://unsdsn.org/wp-content/uploads/2015/04/150408-SDSN-Financing-Sustainable-Development-Paper.pdf

SCIO (The People's Republic of China State Council Information Office) (2011), *China's Foreign Aid*, April 2011, Beijing, http://news.xinhuanet.com/english2010/china/2011-04/21/c_13839683.htm.

SCIO (The People's Republic of China State Council Information Office) (2014), *China's Foreign Aid (2014)*, July 2014, Beijing, http://news.xinhuanet.com/english/china/2014-07/10/c_133474011.htm.

SDF (Saudi Fund for Development) (2012). *2012 Annual Report*, http://www.sfd.gov.sa/cs/groups/public/documents/document/mdaw/mjuy/~edisp/121-37-3703-document-252051.pdf.

SIMEST (Società Italiana per le Imprese all'estero) (2013), *2013 Annual Report*, http://www.cdp.it/annual-report/en/2013/management-report/gruppo/composizione/simest.html.

Spratt, S. and Collins, L.R. (2012), *Development Finance Institutions and Infrastructure: A Systematic Review of Evidence for Development Additionality*, Private Infrastructure Development Group, Institute of Development Studies & Engineers Against Poverty, January 2012, https://www.ids.ac.uk/files/dmfile/2012IDS-PIDGSystematicReviewFinal.pdf.

Straub, S. (2008). *Infrastructure and Growth in Developing Countries: Recent Advances and Research Challenges*, Policy Research Working Paper 4460, the World Bank Group, Washington, D.C, http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2008/01/03/000158349_20080103082911/Rendered/PDF/wps4460.pdf

Sweden MFA (Ministry of Foreign Affairs, Government of Sweden) (2013), Speech by Ulla Andren, Ambassador of Sweden and Mozambique, Maputo, 17 May 2013, http://www.swedenabroad.com/ImageVaultFiles/id_10831/cf_347/Speech_by_the_Ambassador_of_Sweden_-_Chicamba_and_.PDF.

Sy, A. and Rakotondrazaka, F.M (2015), *Private Capital Flows, Official Development Assistance, and Remittances to Africa: Who Gets What?* The Brookings Institution, Global Economy and Development, Policy Paper 2015-2, May 2015, http://www.brookings.edu/~/media/Research/Files/Papers/2015/05/official-development-assistance-africa-sy-rakotondrazaka/Private-Capital-Flowswebv3.pdf?la=en.

Taraporevala, P. and Mullen, R. (2013) *India–Africa Brief: Courting Africa through Economic Diplomacy*, Indian Development Cooperation, Research Policy Brief, New Delhi: Centre for Policy Research, http://idcr.cprindia.org/blog/india-africa-brief.

te Welde, W., D. and Warne, M. (2007) *Use of subsidies by Development Finance Institutions in the infrastructure sector*, Overseas Development Institute, London, http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/604.pdf.

Tol, R.S.J. and G.W. Yohe (2007), *The Weakest Link Hypothesis for Adaptive Capacity: An Empirical Test*, Global Environmental Change, 17: 218-227, http://ac.els-cdn.com/S0959378006000689/1-s2.0-S0959378006000689-main.pdf?_tid=902a68e4-2b09-11e5-8126-00000aacb361&acdnat=1436975757_22faf20384118a5690fca1e319f2bcd3

Tortora, P. (2011), *Common Ground between South-South and North-South Co-operation Principles*, OECD Development Co-operation Issue Brief, OECD Publishing, Paris, www.oecd.org/dac/stats/49245423.pdf.

Turkey MFA (Ministry of Foreign Affairs, Government of Turkey) (2015), http://www.mfa.gov.tr/turkey_s-development-cooperation.en.mfa.

UNCTAD (United Nations Conference on Trade and Development) (2014) *World Investment Report*, United Nations Publications, http://unctad.org/en/PublicationsLibrary/wir2014_en.pdf.

UNDP (United Nations Development Programme) (2014), *Economy-wide integration to climate change adaptation and disaster risk management and reduction to reduce climate vulnerability of communities in Samoa*, http://www.undp.org/content/dam/samoa/docs/Factsheets/UNDP_WS_Economy-WideProjectBrief.pdf.

USAID (United States Agency for International Development) (2012), *Tanzania Integrated Water, Sanitation and Hygiene Program (iWASH)*, Global Water for Sustainability Program, 2 August 2012, http://www.globalwaters.net/wp-content/uploads/2012/02/August-21-NEW-iWASH-brief.pdf.

USAID (2013), *Performance Evaluation for the Integrated Water, Sanitation and Hygiene (iWASH) Program: Final Report*, United States Agency for International Development, November 2013 http://pdf.usaid.gov/pdf_docs/pa00jm6x.pdf.

Wolf, C. et al. (2013), *China's Foreign Aid and Government-Sponsored Investment Activities*, RAND National Defense Research Institute, http://www.rand.org/content/dam/rand/pubs/research_reports/RR100/RR118/RAND_RR118.pdf.

TIKA (Turkish Cooperation and Coordination Agency) (2013a), *2013 Annual Report*, http://www.tika.gov.tr/upload/publication/TIKA%20ANNUAL%20REPORT%202013.pdf

TIKA (Turkish Cooperation and Coordination Agency) (2013b). *Turkish Development Assistance 2013*, http://www.tika.gov.tr/upload/publication/KYR_FRAE_2013_uyg9.pdf.

WBG (World Bank Group) (2011), *World Bank Supports Morocco's Bold Solar Power Plans*, 17 November 2011, http://www.worldbank.org/en/news/press-release/2011/11/17/world-bank-supports-moroccos-bold-solar-power-plans

WBG (2012), *Restructuring Paper on a Proposed Project Restructuring of the South-West Roads Project: Western Europe-Western China International Transit Corridor (CAREC 1B & 6B) Project to the Republic of Kazakhstan*, Central Asia Country Unit, 7 May 2012, http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/12/000356161_20120612011449/Rendered/PDF/640440PJPR0P090Official0Use0Only090.pdf.

WBG (2013a), *Turn Down the Heat. Climate Extremes, Regional Impacts, and the Case for Resilience*. World Bank Group, Washington DC, http://www.worldbank.org/content/dam/Worldbank/document/Full_Report_Vol_2_Turn_Down_The_Heat_%20Climate_Extremes_Regional_Impacts_Case_for_Resilience_Print%20version_FINAL.pdf.

WBG (2013b), *Bangladesh Received $400 Million to Rehabilitate 600km Embankments in Coastal Districts*, 1 October 2013, http://www.worldbank.org/en/news/press-release/2013/10/01/bangladesh-receives-400-million-to-rehabilitate-600km-embankments-in-coastal-districts.