Climate Change-related Trust Funds at the Multilateral Development Banks

Final Report

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The analysis, results and recommendations in this study represent the opinion of the authors and are not necessarily representative of the position of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH or the Federal Ministry for Economic Cooperation and Development (BMZ).

Contents

Abbreviations

A6SF	Article 6 Support Facility
ABM	Adaptation Benefits Mechanism
ACCF	Africa Climate Change Fund
ACEF	Asian Clean Energy Fund
ACliFF	Asia-Pacific Climate Finance Fund
ACP	African, Caribbean, and Pacific
ACSP	Africa Carbon Support Program
ADB	Asian Development Bank
AF	Adaptation Fund
AfDB	African Development Bank
ANDF	Africa Nordic Development Fund
APCF	Asia Pacific Carbon Fund
APDRF	Asia Pacific Disaster Response Fund
AREF	Africa Renewable Energy Fund
ASEP	Access to Sustainable Energy Philippines
ASTAE	Asia Sustainable and Alternative Energy Program
BCCC	Brazil Cerrado Climate Change Mitigation Single-Donor Trust
BCCRF	Bangladesh Climate Change Resilience Fund
BETF	Bank-executed Trust Fund
BioCF	Bio-Carbon Fund
BMZ	Federal Ministry for Economic Cooperation and Development
BRF	Brazilian Rain Forest
C2F	Canadian Climate Fund for the Private Sector in the Americas
CAFI	Central African Forest Initiative Implementation Trust Fund
CBFF	Congo Basin Forest Fund
CBIT	Capacity Building Initiative for Transparency
CCC	Communication for Climate Change
CCF	Climate Change Fund
CCRIF	Central American and Caribbean Catastrophe Risk Insurance Program
CCS	Carbon Capture and Storage
CCSC	Climate Change Steering Committee
CCSF	Carbon Capture and Storage Fund
CCS-TF	Carbon Capture and Storage Trust Fund
CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
CDSF	Clim-dev Africa Fund
CEF	Clean Energy Fund
CEFPF	Clean Energy Financing Partnership Facility

CFATF	Carbon Finance Assist Trust Fund
CFPS	Canadian Climate Fund for the Private Sector in Asia
Ci-Dev	Carbon Initiative for Development
CIFs	Climate Investment Funds
CIMDTF	Climate Innovation Multi Donor Trust Fund
CMU	Country Management Unit
CO2	Carbon Dioxide
COPs	Conference of the Parties
CPAs	Component Project Activity
CPF	Carbon Partnership Facility – Prepaid Trust Fund
CPF-CF	Carbon Fund of the Carbon Partnership Facility
CREWS	Climate Risk and Early Warning Systems
CRLD	Climate Resilient and Low-Carbon Development
CTF	Clean Technology Fund
DAC	Development Assistance Committee
DCF	Danish Carbon Fund
DFI	Development Finance Vice Presidency
DMC	Developing Member Country
DNA	Designated National Authority
DPC	Development Partner Center
DPP	Disaster Protection Program
DPSP	Dedicated Private Sector Program
DREEERA	Danish Cooperation Fund for Renewable Energy and Energy Efficiency in Rural Areas
DRF	Disaster Risk Financing
DRFIP	Disaster Risk Finance and Insurance Program
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EAP	East Asia and Pacific Vice Presidency
EBRD	European Bank for Reconstruction and Development
ECR	External and Corporate Relations Vice Presidency
EE4U	Energy Efficiency Support Program for Ukraine
EEYCP	Trust Fund for Energy Efficiency and Youth Corps Program
EIB	European Investment Bank
ESMAP	Energy Sector Management Assistance Program
ESSD	Environmentally and Socially Sustainable Development
EU	European Union
FCF	Future Carbon Fund
FCPF	Forest Carbon Partnership Fund
FCPF-CF	Carbon Fund of the Forest Carbon Partnership Facility
FCPF-RF	Readiness Fund of the Forest Carbon Partnership Facility
FIAS	Facility for Investment Climate Advisory Services
FIF	Financial Intermediary Fund
FY	Financial Year

G20	Group of 20
G7	Group of Seven
G8	Group of Eight
GBP	British Pound Sterling
GCF	Green Climate Fund
GCRD	Promoting Africa's Green and Climate Resilient Development
GEF	Global Environment Facility
GESP	Global Energy Storage Program
GET	Green Energy Transition
GFDRR	Global Facility for Disaster Reduction and Recovery
GGE	Energy Vice Presidency
GGFRP	Gas Flaring Reduction Partnership
GGI	Infrastructure Vice Presidency
GG-KOR	Korea Green Growth Single-Donor Trust Fund
GGS	Sustainable Development Vice Presidency
GHG	Greenhouse Gas
GIIF	Global Index Insurance Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GPG	Global Public Good
GRiF	Global Risk Financing Facility
GRIF	Guyana REDD+ Investment Fund
HCM	Ho Chi Minh City Green Transport Development
HFC	Hydrofluorocarbon
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development
ICF	Italian Carbon Fund
ICSID	International Centre for Settlement of Investment Disputes
IDA	International Development Association
ID-SLM	Indonesia Sustainable Landscape Management
IDRMF	Integrated Disaster Risk Management Fund
IEG	Independent Evaluation Group
IFC	International Finance Corporation
ILWAC	Integrated Land and Water Management for Adaptation to Climate Variability and Change
IO	International Organization
JI	Joint Implementation
KfW	Kreditanstalt für Wiederaufbau
LAC	Latin America and the Caribbean
LAIF	Latin America Investment Facility
LDCF	Least Developed Countries Fund
LDC	Least Developed Country
LFL	Liberia Forest Landscape Single-Donor Trust Fund
MCC	Maldives Climate Change Multi-Donor Trust Fund
MCCF	Multilateral Carbon Credit Fund

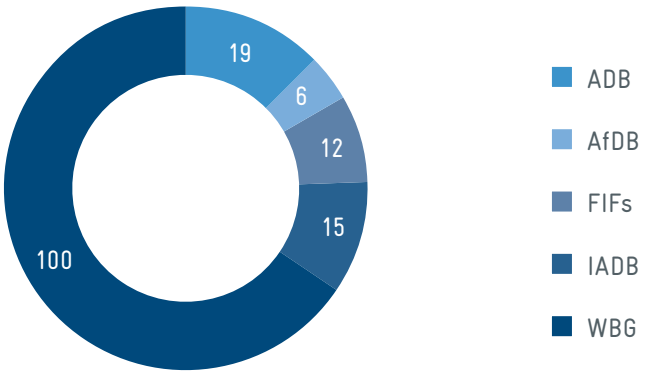
MDB	Multilateral Development Bank
MDRTF	Multi-Donor Disaster Prevention Fund
MDTF	Multi-Donor Trust Fund
MEA	Multilateral Environmental Agreement
MIGA	Multilateral Investment Guarantee Agency
MRV	Monitoring, Reporting and Verification
NACAP	Nitric Acid Climate Auctions Program
NDC SF	Nationally Determined Contributions Support Facility
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NL-CDM	IBRD/Netherlands Clean Development Mechanism (CDM) Facility
NPIF	Nagoya Protocol Implementation Fund
OC-SDP	Ordinary Capital – Strategic Development Program
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
PA	Paris Agreement
PAF	Pilot Auction Facility
PCF	Prototype Carbon Fund
PMI	Partnership for Market Implementation
PMR	Partnership for Market Readiness
PoA	Program of Activities
PPIAF-CC	Private-Public Infrastructure Advisory Facility – Climate Change
PROFOR	Multi Donor Trust Fund for Program for Forests
RDB	Regional Development Bank
REDD+	Reducing emissions from deforestation and forest degradation
REEP	Regional Energy Efficiency Programme
RERED	Bangladesh Rural Electrification and Renewable Energy Development
RETF	Recipient-executed Trust Fund
SCCF	Special Climate Change Fund
SCF	Strategic Climate Fund
SDG	Sustainable Development Goal
SDTF	Single-Donor Trust Fund
SECCI	Sustainable Energy and Climate Change Initiative
SEI	Sustainable Energy Initiative
SEFA	Sustainable Energy for Africa
SEFF	Sustainable Energy Financing Facilities
SEMED	Carbon Crediting Approach in Southern and Eastern Mediterranean Countries
SpCF	Spanish Carbon Fund
SRI	Sustainable Resource Initiative
SSA	Sub-Saharan Africa
TA	Technical Assistance
TCAF	Transformative Carbon Asset Facility
tCO2e	Tonnes of carbon dioxide equivalent

TF	Trust Fund
TURP	Tanzania Urban Resilience Program
UCCRTF	Urban Climate Change Resilience Trust Fund
UCF	Umbrella Carbon Facility
UEIF	Urban Environmental Infrastructure Fund
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	UN Office for Disaster Risk Reduction
UNEP	UN Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
V20	Vulnerable country group
WB	World Bank
WBG	World Bank Group
WMO	World Meteorological Organisation

Executive Summary

Many governments have set up Trust Funds (TFs) at Multilateral Development Banks (MDBs) to channel public finance for climate change mitigation and adaptation purposes. Especially at the World Bank Group (WBG), climate change-related TFs have proliferated; of 161 identified TFs, 105 are still active and account for about 12 % of all TFs that the WBG administers (excluding purely administrative internal TFs). If one combines TFs that cater for the same program, still 100 different programs can be identified (of which 65 are currently active). At the other MDBs, only a few dozen climate change-related TFs exist (Figure I). This study assesses the landscape of these TFs at the WBG, the African Development Bank (AfDB), the Asian Development Bank (ADB), and the Inter-American Development Bank (IADB) as of 30 June 2019 and provides recommendations how they could be reformed or consolidated.

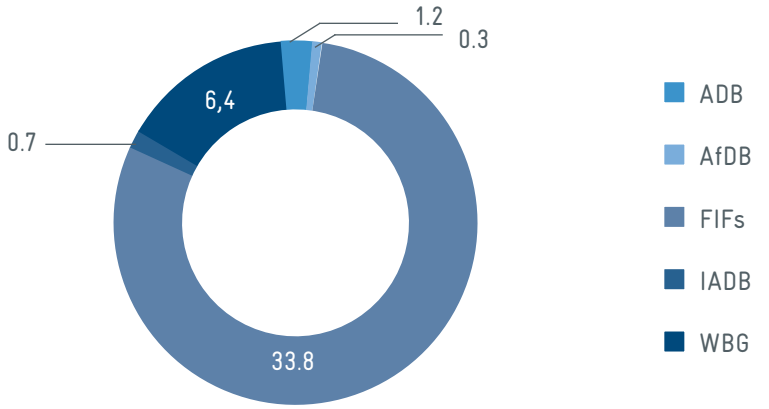
Figure I. Climate change-related TFs at different MDBs (programmatic approach, 1988-2019, active and closed)



Quantitative assessment of data on climate change-related TFs proved surprisingly difficult as the data shared by MDBs were incomplete and sometimes contained inconsistencies with publicly available information including data on contributions and disbursements. Our qualitative assessment is based on over 40 interviews with MDBs' staff, German government officials and implementers of TF supported activities.

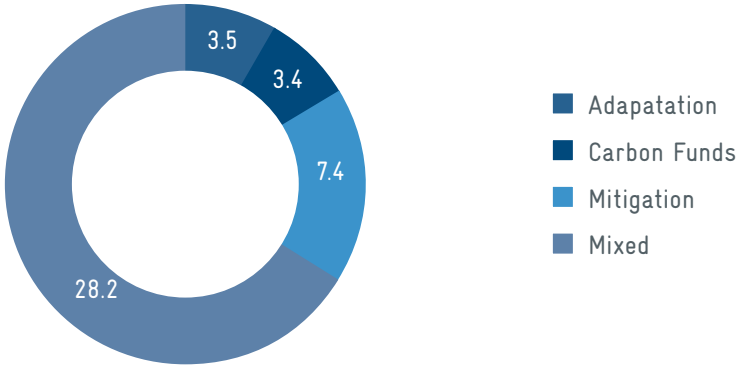
We differentiate between Financial Intermediary Funds (FIFs) which serve to collect donor contributions and redistribute funds to accredited agencies, and multi-/single donor TFs. Most of the 12 FIFs are official financial institutions under the United Nations Framework Convention on Climate Change (UNFCCC) administered by MDBs. The FIFs are much larger than the other TFs (Figure II) and involve much larger numbers of donors.

Figure II: Cumulative volume of active and closed funds allocated to FIFs and TFs at the various MDBs (1988–2019, in billion United States Dollar, USD)



Through a multi-layer procedure, we define ten thematic clusters in order to classify the TFs. Three clusters relate to carbon funds in the context of international market mechanisms, with the first cluster including funds to pioneer the Kyoto Mechanisms in the early 2000s, the second one focusing on bulk purchase of credits by industrialized countries to comply with their Kyoto targets, and the third one on operationalizing the new mechanisms under the Paris Agreement (PA). Four clusters cover mitigation – renewable energy, energy efficiency, forestry and multiple types of mitigation. Two clusters address disaster prevention and response and other forms of adaptation. One very large cluster covers mixed mitigation and adaptation activities. The large size of the latter is explained by the presence of very large FIFs that tackle both mitigation and adaptation.

Figure III. Volume of funds allocated to different thematic clusters (1988–2019, in billion USD)



The number of TFs increased rapidly between 2000 and 2009, with a slowdown of growth afterwards. If no new TFs are added in the future, the number of TFs would stabilize at about 50 % of current levels in the second half of the 2020s, as most MDB TFs are time-bound.

We see a potential for consolidation of those FIFs that are not UNFCCC institutions. Also, a large amount of fragmentation exists within the TF portfolio at the WBG. The Inter-American Development Bank (IADB) is special inasmuch it has an umbrella approach for its TFs that could serve as a model for other MDBs. Three case studies looked at the consolidation potential for WBG TFs on disaster risk, bulk purchase of Kyoto credits and development of innovative approaches to market mechanisms under the Paris Agreement. For the disaster-related funds, an umbrella approach is already applied and seems to function well. For the bulk purchase, many parallel funds with exactly the same purpose existed due to governments' hesitance to cooperate on an issue where national sovereignty was seen as crucial. In the context of the innovative approaches, several TFs had strongly differing thematic approaches and only a relatively small subset was prone to consolidation.

Umbrella TFs – like PROGREEN for forests – or a setting in which individual TFs are replaced by funding windows within a single TF for a given topic can reduce transaction costs on the side of the MDB as well as recipients, and also encourage communication and cooperation among members of individual sub-funds. However, the optimization of the institutional setting is a complex endeavor that requires more than a simple reduction in the number of TFs. As a first step, we suggest that responsibility for all TFs within one MDB is allocated to a central group of staff/unit, which would allow to identify suitable TFs to which new funding could be attached and reduce current incentives to create new TFs rather than considering existing options. MDBs should introduce regulation requiring operational teams to share their fundraising plans, so that MDB management could mitigate uncoordinated fundraising. We also propose an incentive-compatible fee structure for donors including differentiated fees depending on the strictness of earmarking, contribution size, and number of donors; and linking of fees to disbursements, with possible differentiation by the level of results achieved. In order to overcome the current lack of transparency, each MDB should set up a well-structured website presenting the different TFs, including a search function for different fields of activity.

On the donor side, we propose to enhance coordination by using replenishments, Steering Committee meetings, and informal channels to promote coordination and to reduce overlap in the mandates. Donors with highly fragmented portfolios should unilaterally consolidate their TF portfolios on the basis of periodic portfolio reviews in order to close dormant accounts, merge TFs and/or transfer them into existing umbrellas. A simple approach is to push for Multi-Donor Trust Funds (MDTFs) instead of Single-Donor Trust Funds (SDTFs).

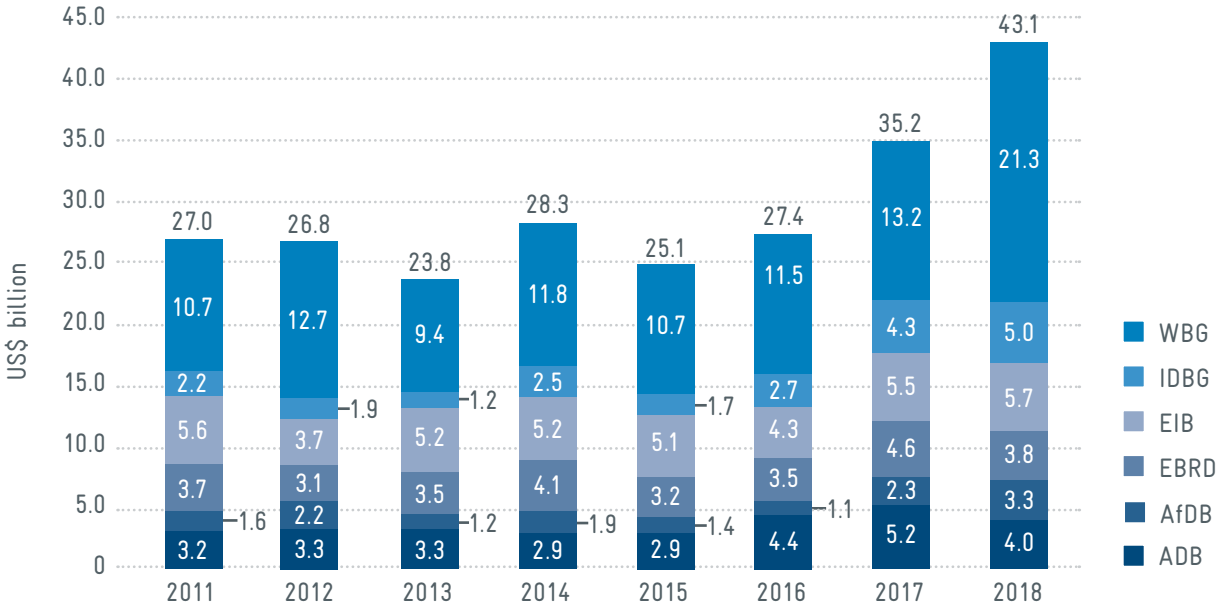
1 Introduction

1.1. Context

In order to reach the goal of the Paris Agreement (PA) to the UNFCCC to hold the increase in the global average temperature well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels as well as to adapt to climate change, significant amounts of international climate finance, i.e. financial flows from industrialized to developing countries are necessary. At the Copenhagen Conference of 2009, developed countries have committed to mobilize USD 100 billion per year in climate finance by 2020. This target has been reconfirmed by the Paris Conference in 2015.

There are many channels through which public climate finance can be provided, especially through MDBs. Collectively, the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the IADB, and the WBG committed USD 237 billion in public climate finance over the past eight years (Figure 1).[1]

Figure 1. Reported MDB climate finance commitments in 2011–18



Source: EBRD (2019, p.4)

This includes both upfront financing including equity, grants, loans, guarantees and ex-post payments, e.g. through the purchasing of carbon credits under international market mechanisms for climate change mitigation. Almost three quarters of total climate finance in 2018 were committed through investment loans, while the purchasing of carbon credits (result-based financing) represented only 6 % (EBRD 2019).

1 Note that climate finance reporting by MDBs is different from reporting under the UNFCCC.

TFs have been a key instrument to channel public climate finance through MDBs. They can engage in mitigation or adaptation project implementation or ancillary activities such as policy advice, technical support and capacity building in a variety of sectors. Some TFs have MDTFs, while others are based on contributions by SDTFs. So-called "carbon funds" have played an important role in MDB-led carbon market-related initiatives (or "carbon finance"). For example, early initiatives such as the WBG's Prototype Carbon Fund (PCF) launched in 2000 and the Netherlands-EBRD Carbon Fund launched in 2003 aimed at pioneering carbon markets by creating the initial demand for carbon credits and pilot the design of the Kyoto Mechanisms, i.e. the Clean Development Mechanism (CDM) and Joint Implementation (JI). Several of these initiatives had a specific geographical focus depending on MDBs' regions of operation. For example, the EIB/EBRD Multilateral Carbon Credit Fund (MCCF) focused on Central Europe and Central Asia, the ADB's Asia Pacific Carbon Fund (APCF) on the Asia-Pacific region, the IADB's MicroCarbon Development Fund on CDM Programs of Activities (PoAs) in Latin America and the Caribbean (LAC).

Examples for TFs addressing mitigation outside carbon finance include the Climate Investment Funds (CIFs), the largest funds outside of the operating entities of the financial mechanism of the UNFCCC. While the CIFs address the whole range of mitigation activities, other mitigation TFs focus on specific sectors. For example, the EBRD's Sustainable Energy Financing Facilities (SEFF) support the development of renewable energy-related mitigation projects in Central Europe, Central Asia and Northern Africa by providing technical assistance (TA) and on-lending of EBRD loans.

Several funds such as the Brazilian Rain Forest (BRF) Trust Fund focus on avoidance of deforestation – Reducing emissions from deforestation and forest degradation (REDD+).

The field of adaptation has seen a dynamic evolution. Many of the approaches now used in climate adaptation were previously developed in the field of disaster risk management. A key example of a TF in the field of disaster risk reduction (DRR) is the Global Facility for Disaster Reduction and Recovery (GFDRR).

Today, TFs at MDBs, particularly at the WBG[2], are numerous, with several funds with similar objectives inside the same MDB. Based on data provided by the WBG, this study identified 161 WBG TFs and 100 programs that are climate-related[3]. Of these, 105 TFs and 65 programs are currently active, 54 TFs and 35 programs are not active, while the status of two TFs is unknown. As 12 % of all active WBG TFs[4] are climate-change related, the proliferation of TFs is particularly strong in this thematic area. This leads to overlaps in the operation of these TFs, creating additional bureaucratic structures and costs that could be avoided with a better coordination among them.

MDBs and donors are aware of this issue. The WBG is now in its fourth phase of undergoing reform on TFs and in the second round of exploring possibilities for umbrella TFs. Responding to donor perceptions of portfolio fragmentation and lack of alignment – also voiced by Germany – the WBG management has made several propositions in the first stage, such as Umbrella Facilities. Member states had different opinions on these facilities but were overall supportive of them.

2 The WBG includes the World Bank (International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA)), the International Centre for Settlement of Investment Disputes (ICSID), the Multilateral Investment Guarantee Agency (MIGA) and IFC. Most TFs are hosted by the World Bank. In Section 3, where we discuss the role of the WBG in FIFs, it would be more appropriate to talk about the IBRD instead of the WBG, as IFC does not provide services to FIFs. For consistency, we prefer using WBG throughout the report but remind readers that the specific WBG institutions involved in TF management may differ across different TFs. IFC has few climate-related TFs that we discuss in a separate sub-section.

3 Some TFs are different accounts of the same program. Please see Section 2 for details.

4 There are around 780 IBRD/IDA TFs and 195 IFC TFs (WB 2019d). The share is calculated excluding purely administrative internal accounts.

1.2. Key concepts and definitions

Given that there is no universally accepted terminology related to TFs and climate change, we build our analysis on definitions provided by relevant international institutions but adjust those when this appears appropriate in the context of our study (see Table 2 below, adjustments in blue).

Table 2. Relevant definitions

Term	Definition
Trust Funds (TFs)	Independent legal entity and investment vehicle to help mobilizing, blending, and overseeing the collection and allocation of financial resources (United Nations Development Programme, UNDP, 2018). Some TFs may focus on delivering benefits related to the mitigation of or adaptation to climate change. TFs may be recipient executed (Recipient-executed Trust Fund – RETFs) or MDB executed (Bank-executed Trust Funds – BETFs) or both ("Hybrid TFs").
Climate Finance	Climate finance refers to local, national or transnational financing – drawn from public, private and alternative sources of financing – that seeks to support mitigation and adaptation actions that will address climate change (UNFCCC 2018).
Carbon Finance	Carbon finance as a subcomponent of climate finance is a generic term used for the revenue streams that can be generated by the sale of Greenhouse Gas (GHG) emission reduction credits (Independent Evaluation Group (IEG) 2017, 2018) under international carbon markets.
Carbon Funds	TFs that engage in carbon finance.
Financial Intermediary Funds (FIFs)	FIFs are financial arrangements that typically leverage a variety of public and private resources in support of international initiatives, enabling the international community to provide a direct and coordinated response to global priorities. FIFs are a distinct subset of TFs and have usually supported programs focused on the provision of global public goods (WB 2018a), such as responses to climate change. FIFs often involve complex financing and governance arrangements and aim to raise funds from multiple sources, both public and private. For the WBG, they imply new roles other than that of an implementing agency, such as trustee (financial management) and sometimes host of secretariat (program management) (see footnote 2).
Multilateral Development Banks (MDBs)	MDBs are supranational institutions set up by sovereign states, which are their shareholders. They have the common task of fostering economic and social progress in developing countries by financing projects, supporting investment and generating capital for the benefit of all global citizens. MDBs also play a major role on the international capital markets, where they raise the large volume of funds required to finance their loans (EIB 2018).
Regional Development Banks (RDBs)	RDBs are MDBs that provide financial and technical assistance for development in countries within their regions. Finance is allocated through low-interest loans and grants for a range of development sectors. The term Regional Development Bank (RDB) usually refers to four institutions: AfDB, ADB, EBRD, and IADB (Ottenhoff 2011).

1.3. Objectives

The main purpose of the study is to provide an analysis of climate change-related TFs at MDBs, their challenges and the way they could be improved in order to contribute to the current TF reform at the WBG and achieve strategic, effective and efficient deployment of climate finance. It focuses on four MDBs – WBG, ADB, AfDB, and IADB.

The study:

- Provides an overview of the MDB landscape of climate change-related TFs.
- Shows potential for reform/consolidation of these TFs.
- Gives recommendations for further engagement with the MDBs' climate change-related TFs.

1.4. Methodology

The methodology of the study includes three pillars: document review, data analysis, and interviews.

Document review: The study is based on a thorough desk review of relevant documents and websites by the WBG, other MDBs and other relevant institutions (e.g. Organization for Economic Co-operation and Development (OECD), UNFCCC, think tanks), as well as peer-reviewed scholarly publications.

Database analysis: The team requested access to the internal MDB databases on climate-related funding (including but not limited to TFs). An initial request for data was submitted to the WBG in December 2018, followed by requests to the other MDBs in April 2019. Table 3 describes the information from the MDBs' quantitative databases that the team was able to obtain and use. The period of analysis begins for each MDB in the year for which TF data are available and ends for all MDBs on 30 June 2019 (see also Notes to Table 5).

Table 3. Data types received from MDBs

	WBG	ADB	AfDB	IADB
Main trustees	✓	✓	✓	✓
Contribution data	✓	✓		
Disbursement data • Recipient-executed activities • MDB-executed activities	✓			

Notes:
"Main trustees": general information at the level of the TF such as start year, end year, legal instrument, geographic reach, thematic focus, execution modality, and total contributions.
"Contribution data": individual donor contributions along with the fiscal year of receipt.
"Disbursement data": all individual activities supported by a given TF including information on recipient country, sectors, themes, purposes, and disbursed amounts.
International Finance Corporation (IFC) provided a qualitative narrative of which of its TFs have climate-relevant activities.
We did not receive annual contribution data from the WBG but drew this data from AidFlows (AidFlows 2019).
No disaggregated data for WBG carbon funds was available due to data privacy arrangements governing these specific TFs.

Available data enabled us to undertake a mapping of all climate-related TFs at all analyzed MDBs and to obtain information on the overall amount of climate-related funding allocated through TFs. As detailed information on donor contributions were available only for two MDBs (WBG and ADB) and the 12 FIFs, our donor comparisons are somewhat biased as they necessarily omit two (smaller) MDBs (AfDB and IADB). Finally, our coverage of activity-level data is rather patchy, as only the WBG (specifically the IBRD) shared this data and only for activities executed by recipients. We were thus unable to analyze which climate-related TFs support the analytical work of WBG staff. As the costs for managing TFs are also billed to BETFs, we were unable to estimate the cost-effectiveness of TF contributions.[5]

Interviews: The findings from the desk review were complemented with targeted expert interviews from three main groups of stakeholders with different points of view and insights about how the TFs work and where they can be improved: bilateral donor agencies, MDBs, and recipient country activity implementers (please refer to Annex 2 for the approach to interviews and Annex 3 for the list of interviewees).

- *Bilateral donor agencies* represented by the German institutions in charge of climate-related TFs at MDBs.
- *MDBs* represented by professionals working in the MDBs and for different TFs within the same MDB with the main focus on the WBG. Interviews were chosen based on the short list of TFs for deeper analysis (see Section 4).
- *TF activity implementers in recipient countries and other experts* represented by consultants in charge of the implementation of a TF activity in a recipient country. Interviewees were chosen to represent different types of organizations (public and private) and different regions.

Case studies: To better understand the potential for TF consolidation, we also examined a selection of TFs in some more detail drawing on document analysis and interviews with stakeholders in the German government and the MDBs with a focus on the WBG. Case studies were selected using a combination of quantitative and qualitative approaches (see Section 4.2 for details).

The remainder of the study proceeds as follows. Section 2 presents a landscape of a broad range of TFs linked to climate change mitigation and adaptation identified through the data provided by MDBs as well as suggested mapping of TFs into thematic "clusters". Section 3 assesses the climate change-related TFs at the different MDBs. Section 4 analyses a sample sub-set of representative TFs from three "clusters" in more detail and discusses the potential for their reform and/or consolidation. Section 5 provides key recommendations and suggestions for reform. Section 6 concludes.

5 While RDBs seem not to have BETF-related data, the WBG was unable to share them due to confidentiality agreements with donors (specifically for carbon funds) and did not offer insight into its internal cost structures (see the World Bank's Access to Information Policy: https://policies.worldbank.org/sites/ppf3/PPFDocuments/Forms/DispPage.aspx?docid=3693).

2 Mapping of climate-related trust funds in MDBs

This section systematizes the various trust funds in climate finance – first applying an institutional perspective, which focuses on funding instruments and subsequently a thematic perspective, leading to clusters of TFs with a common theme.

2.1. The institutional place of trust funds in the international climate finance architecture

The international climate finance architecture is rather complex (Hoffmann 2011; Keohane and Victor 2011; Abbott 2012). It includes the following funding channels (see also Becault and Marx 2016) which include TFs to various extent:

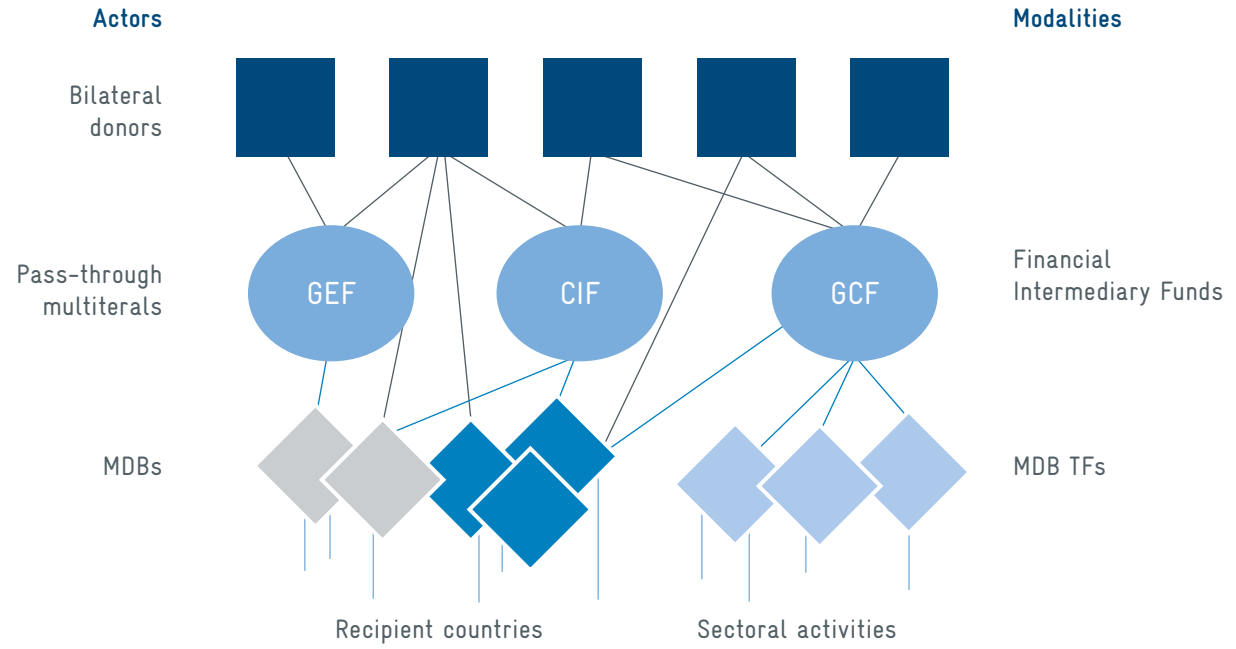
- Bilateral aid: donor governments directly supporting climate change-related activities in recipient countries.
- Multilateral aid to finance core resources of international organizations (IOs) with a mandate in climate change: these IOs include UN funds and programs like the UN Environment Program (UNEP), MDBs that fund concessional lending projects, but also treaty secretariats of Multilateral Environmental Agreements (MEAs). The latter operate special purpose TFs to support climate-related activities.
- Multilateral aid passed through FIFs (Reinsberg et al. 2015): these FIFs collect donor contributions and redistribute funds to a number of pre-admitted agencies. With regard to climate change, there are 12 FIFs; the Global Environment Facility (GEF) provides a well-known example (Bayer et al. 2013; Thompson and Graham 2015; Michaelowa et al. 2018), more recently the Green Climate Fund (GCF) has become the biggest of all climate change-related funds in terms of annual contributions (as of FY2017). The majority of these funds are official financial institutions under the UNFCCC whose administration is delegated to MDBs.[6] FIFs lack implementation capacities and therefore re-delegate funds to implementing IOs, such as the United Nations (UN) and the MDBs, but, in some cases, also national implementers (through a funding mode called "direct access").
- Bi- or multilateral aid directly or indirectly channeled through TFs: IOs may host and control TFs within their own administrative structures.[7]

The present study focuses on TFs, given their overall relevance in the sector, their tremendous growth over the past decade, and the associated problems that have arisen from this growth, specifically fragmentation of climate finance and related transaction costs. Figure 4 highlights where the two different types of TFs (FIFs and other trust funds) are situated within the institutional environment of international climate finance.

6 MDBs are uniquely positioned for such role as they can offer trustee services given their well-established fiduciary frameworks.

7 As we learned during our exchanges with MDB staff, respective terminology varies across MDBs. For example, the ADB (and AfDB) do not consider its implementing accounts under FIFs as "trust funds" and thus do not report on them separately. This practice is different at the WBG and IADB, which maintain TF accounts for these cases but which are disbursement-only accounts, while official donor contributions are recorded at the level of FIFs. For consistency reasons, we therefore do not report MDB TFs that are mere implementing accounts for FIFs.

Figure 4. The multi-layer architecture of trust funds



Notes:
Bilateral donors (first level) may provide funding to FIFs and/or MDB TFs. FIFs (second level) may channel funding to MDB TFs or directly to recipient countries and/or sectoral activities. MDBs (third level) may act as implementers to FIFs and/or hosts to MDB TFs that channel funds to recipient countries and/or sectoral activities. We disregard non-MDB implementers of FIFs in this figure.

As per the terms of reference, the study focuses on four MDBs – the WBG, ADB, AfDB, and IADB – as hosts of MDB TFs, implementers of FIFs, and – in the case of the WBG – as FIF trustee and hosts of secretariat.[8] The EBRD and EIB are not included in the detailed analysis and only a cursory review is therefore included in the Annex 5 and Annex 6 respectively. For the purpose of the study, the term "MDB TFs" refers to climate change-related TFs hosted by MDB excluding FIFs, unless stated otherwise.

The initial list of climate-related TFs at the MDBs was obtained by key word search on TF titles in the MDB annual reports and was further completed by the expert knowledge of consultants and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). The primary search was based on the following key words: climate; mitigation; green; ozone; carbon; emissions; environment; forest; clean technology; Kyoto; adaptation. Based on this analysis, the MDBs provided data for a subset of the TFs identified by us. In particular, data on carbon funds and funds of the IFC were not provided completely, as they are subject to their own disclosure policies. Therefore, these funds are included in the analysis but with a lesser quantitative detail.

In a second step, we then applied a pre-defined set of criteria to identify relevant TFs from this initial list. For the purpose of this study, we define a TF as *any financial facility supported by extra-budgetary donor contributions that supports specific (climate-related) purposes* (Droesse 2011). In particular, a TF is included in our dataset if it meets all of the following criteria:

8 For each FIF managed by an MDB, there are several TF accounts with the same name as the FIF for disbursement purposes. We therefore assign all TFs (including the FIFs) with the same title to the same program and consider the program level for analysis where appropriate, because interpreting the TFs of implementing IOs under the same FIF as separate TFs would be misleading.

- The TF receives its own external donor funding or is at least meant to do so (in other words – it does not just receive money as implementer, allocated to it from a higher-level TF)
- The TF is not an administrative account, interim fund, holding fund, or fee account (as these are all held internally by the host agency and do not receive donor funding)
- The definition includes facilities encompassing different sub-funds as long as the facility can receive own external donor funding
- The definition includes successive phases of TFs as separate TFs, no matter whether there was a substantive change in the activities foreseen

Applying these criteria led us to identify 216 climate-related TFs. The WBG is by far the most important host of TFs, with 161 TFs (of which 105 active) whose primary purpose is related to climate change. The other MDBs have fewer climate-related TFs, notably 22 TFs (21 active) at ADB, six (three active) at AfDB and 15 (14 active) at IADB. These numbers all exclude any FIF-related TFs (the 12 climate-related FIFs are a separate category). The full list of TFs considered in this study is presented in Annex 1.

MDB TFs sometimes form part of the same program. This is often for administrative reasons but also due to the time-bound nature of the TF instrument, which implies that a long-standing program may have several TFs corresponding to different funding phases. Another reason for the proliferation of TF accounts pertains to legal requirements by some donors which prevent them from commingling funds with other donors, which in turn requires the setup of a SDTF. To provide a more realistic picture of the ongoing activities, we therefore also report TF numbers at the program level where possible. To this end, we grouped the 161 WBG TFs into 100 programs using the names of the TFs, looking at annual reports, websites and taking into account outcomes from the interviews.[9] The other MDBs have fewer programs – ADB (19 programs), AfDB (6 programs), and IADB (15 programs) – but also fewer funds per program (in the case of AfDB and IADB the programs actually include only a single account). In terms of the size, the FIFs correspond to almost 80 % of all climate TFs volume, while among the MDB TFs, the WBG plays the leading role followed by ADB, IADB and AfDB (Table 5).

Table 5. Overview of climate-related FIFs and MDB TFs (active and closed)

Institution	Number of TFs	Number of programs	Size (million USD)
FIFs	12	12	33 777
WBG	161	100	6 358
ADB	22	19	1 216
IADB	15	15	726
AfDB	6	6	316
Total	**216**	**152**	**42 393**

Notes:
Numbers reflect complete records but are over different time periods, subject to data availability: FIFs (1991–2019), WBG TFs (1988–2019), ADB TFs (2001–2019), IADB TFs (1998–2019), AfDB TFs (2008–2019).

9 The numbers related to programs should therefore be only interpreted as indicative as this study could not systematically analyze each of the 161 TFs.

2.2. Identification of thematic clusters

From a *thematic* perspective, we categorize all climate-related TFs at all MDBs (including FIFs) based on an inductive approach. To obtain clusters, we scrutinized each TF to identify its primary purpose. These topic clusters allowed us to study hitherto unidentified interlinkages of climate-related activities across MDBs.

We identified four common content-related dimensions (corresponding to the columns "Relevance", "Broad theme", "Institution focus", and "Narrow theme" in Annex 1). We describe the different dimensions below including the related classification of TFs that we will provide.

The **first dimension** addresses the relevance of the TF in addressing climate change:

- High relevance: TFs with direct focus on climate change (e.g. carbon funds, whose goal is to support development of international market mechanisms for climate change mitigation and to generate emission credits that can be used under such mechanisms, or general climate change mitigation or adaptation funds linked to public climate finance provision, e.g. in the context of the GEF or the GCF). These TFs are labelled green in Annex 1.
- Medium relevance: TFs with indirect focus on climate change (e.g. renewable energy or energy efficiency funds, whose goal is to replace carbon-intensive economic activity with low-emission alternatives; these funds may generate co-benefits in other areas). These TFs are labelled yellow in Annex 1.

The **second dimension** distinguishes the focus area of TFs regarding the type of climate change-related intervention:

- Mitigation: TFs which seek to prevent climate change through reduction or avoidance of greenhouse gas emissions (e.g. Biocarbon Technical Assistance TF)
- Adaptation: TFs which seek to address/mitigate the impact of climate change (e.g. Pacific Catastrophe Risk Assessment and Financing Initiative MDTF)
- Climate Change (CC) general: TFs that address both mitigation and adaptation (e.g. GEF)

The **third dimension** refers to specific mechanisms and institutions of international climate policy:

- UNFCCC: TFs which serve as financial institution under the UNFCCC (e.g. GCF)
- BI/MULTI: MDB TFs (not FIFs) excluding carbon funds
- CIFs: FIFs which promote financing for activities with high potential to scale up (i.e. Strategic Climate Fund (SCF), Clean Technology Fund (CTF))
- Carbon Finance (carbon funds): TFs with focus on international market mechanisms for greenhouse gas mitigation (e.g. PCF)

The **fourth dimension** distinguishes 14 focus areas derived inductively from TF titles including awareness raising; carbon finance; carbon capture and storage; climate data provision; de-risking; energy efficiency; forestry; institutional support; disaster risk management; policy support; renewable energy; resilience; transport; and multiple.

Table 6 presents the overview of the number and size of TFs across the four dimensions introduced above including percentages of the total. It is worth noting the large concentration of funding volumes in a small number of TFs, particularly in those representing the UNFCCC financial mechanisms and the CIFs.

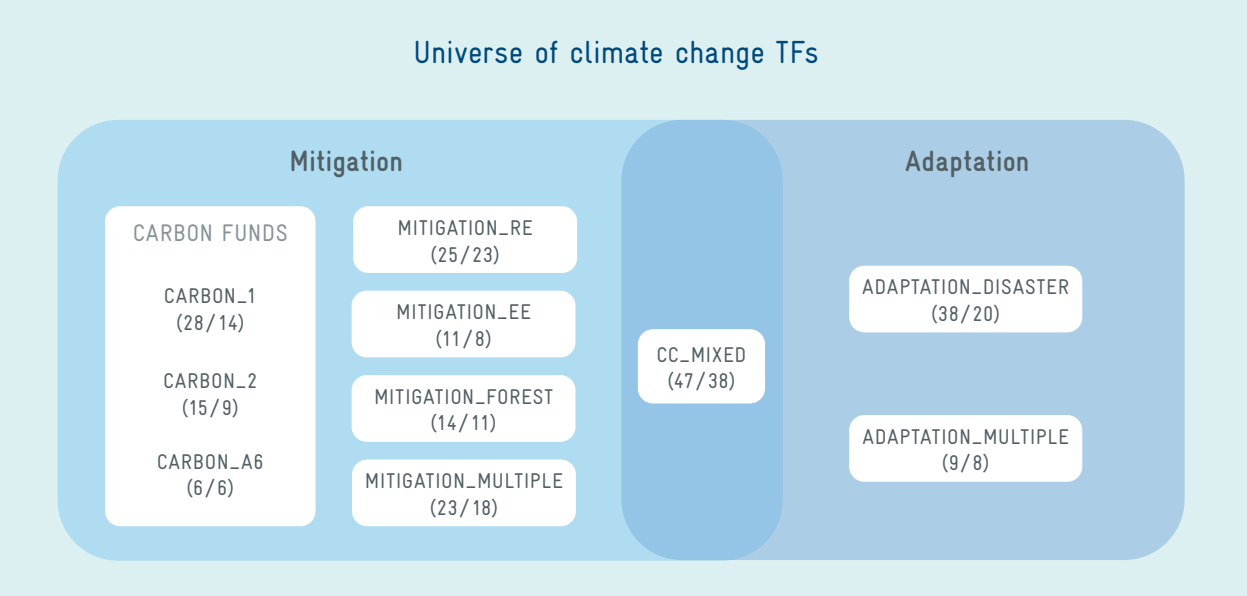
Table 6. Number and size of TFs across four dimensions

Label	Number of TFs	Share (number)	Size of TFs (million USD)	Share (size)
Dimension 1 – Relevance for addressing climate change				
Green (high)	109	50 %	39 825	94 %
Yellow (medium)	107	50 %	2 2568	6 %
Dimension 2 – Broad focus area				
CC general	45	21 %	26 751	63 %
Mitigation	124	57 %	12 137	29 %
Adaptation	47	22 %	3 505	8 %
Dimension 3 – Institutional focus				
UNFCCC	12	6 %	24 751	58 %
CIF	7	3 %	9 805	23 %
BI/MULTI	157	73 %	4 484	11 %
Carbon Finance (CF)	40	19 %	3 353	8 %
Dimension 4 – Narrow focus area				
Multiple	62	29 %	34 996	83 %
Carbon finance	37	17 %	3 005	7 %
Forestry	25	12 %	2 167	5 %
Disaster risk management	30	14 %	896	2 %
Renewable Energy	25	12 %	307	1 %
De-risking	4	2 %	261	1 %
Policy support	11	4 %	215	1 %
Resilience	2	1 %	188	0 %
CCS	2	1 %	118	0 %
Energy efficiency	11	5 %	82	0 %
Institutional support	1	0 %	68	0 %
Climate data provision	2	1 %	55	0 %
Awareness raising	2	1 %	18	0 %
Transport	2	1 %	18	0 %

Our next step was to develop mutually exclusive topic clusters with the goal to assign each TF to a unique cluster. We identified **ten pertinent clusters,** considering primarily their focus area but also their institutional role in the climate finance architecture. For example, while all carbon funds can be associated with a mitigation-based approach, they occupy a specific role in the overall regime and their sheer number further justifies establishment of a separate cluster. Carbon funds can in turn be divided into three sub-groups, based on their historically evolving roles in relation to climate-related international agreements: 1) pioneering the Kyoto mechanisms, 2) buying cheap Kyoto credits for compliance, 3) testing new approaches beyond Kyoto mechanisms.

These ten exclusive "clusters" of TFs are schematically presented in Figure 7 below.

Figure 7. Thematic clusters of climate-related trust funds in MDBs (active and closed)



Notes:
The numbers indicate the number of TFs and number of programs in each cluster.

- **ADAPTATION_DISASTER (20 programs, 38 TFs):** primary focus on disaster prevention and response;
- **ADAPTATION_MULTIPLE (8 programs, 9 TFs):** primary focus on adaptation activities other than disaster, e.g. water management
- **CARBON_1 (14 programs, 28 TFs):** pioneering carbon funds mainly set up to test and operationalize Kyoto market mechanisms in early 2000s;
- **CARBON_2 (9 programs, 15 TFs):** carbon funds mainly focused on bulk purchase of carbon credits for Kyoto compliance purposes;
- **CARBON_A6 (6 programs, 6 TFs):** funds that are relevant for the operationalization of new market mechanisms under Article 6 of the PA;
- **MITIGATION_RE (23 programs, 25 TFs):** funds primarily focused on renewable energy;
- **MITIGATION_EE (8 programs, 11 TFs):** funds primarily focused on energy efficiency;
- **MITIGATION_FOREST (11 programs, 14 TFs):** funds primarily focused on forestry activities;
- **MITIGATION_MULTIPLE (18 programs, 23 TFs):** funds focused on multiple mitigation activities, e.g. renewable energy and energy efficiency;

- **CC_MIXED (38 programs, 47 TFs):** funds that combine different mitigation and adaptation activities.

To give justice to the range of climate-related activities over the past decade, the above numbers also include TFs that are already closed as of 30 June 2019. In subsequent analyses, we will also provide snapshot views that only include TFs that were active as of 30 June 2019.

2.3. Overview of thematic clusters

Table 8 summarizes how the various TFs are distributed across the ten clusters, with CC_MIXED, followed by CARBON_1, and ADAPTATION_DISASTER being clusters with the largest number of TFs. This picture changes if we were to use funding volumes, where CC_MIXED accounts for about two thirds of all contributions. This is mainly because most FIFs, which are far bigger than MDB TFs, belong to this topic cluster. Table 8 also shows that the WBG is dominant in all areas of TF-related action on climate change. In addition, it is the only MDB that has been operating TFs in CARBON_2 and MITIGATION_EE. Aside three ADB TFs, the WBG is also the leading provider of TFs in MITIGATION_RE, with 25 TFs. Conversely, the areas in which all MDBs (and FIFs) are active include CC_MIXED, CARBON_1, and MITIGATION_MULTIPLE.

Table 8. Distribution of TFs across topic clusters (active and closed)

Cluster	Total No. of TFs	No. of FIFs	No. of WBG TFs	No. of ADB TFs	No. of AfDB TFs	No. of IADB TFs	Size of TFs (mUSD)	Cluster share in TF size
CC_MIXED	47	5	24	8	1	9	26 723	63 %
MITIGATION_MULTIPLE	23	1	14	6	1	1	6 607	16 %
CARBON_1	28	1	24	1	1	1	2 470	6 %
ADAPTATION_MULTIPLE	9	3	4	0	2	0	2 247	5 %
CARBON_2	15	0	15	0	0	0	1 759	4 %
ADAPTATION_DISASTER	38	1	32	4	0	1	1 258	3 %
CARBON_A6	6	1	2	3	0	0	574	1 %
MITIGATION_FOREST	14	0	10	0	1	3	472	1 %
MITIGATION_RE	25	0	25	0	0	0	201	0 %
MITIGATION_EE	11	0	11	0	0	0	82	0 %
TOTAL	216	12	161	22	6	15	42 393	100 %

Table 9 shows the top three TF programs in each cluster in terms of cumulative contributions. Here again we consider all TFs – active or not – and cumulative contributions since existence (FY1988-2018).

In ADAPTATION_DISASTER, the most significant program is the GFDRR, a USD 700 million umbrella program (see Section 4.3.2 for details). The second in the list is Urban Climate Change Resilience Trust Fund (UCCRTF) – an ADB MDTF to assist fast-growing cities in eight priority countries in Asia to reduce the risks poor and vulnerable people face from floods, storms, or droughts, by helping to better plan and design infrastructure to invest against these impacts. The TF supports climate change integration into city planning, implementation of both infrastructure projects and institutional interventions (USD 149 million). The third largest TF in this cluster is the WBG's now closed Multi Donor Trust Fund for Bangladesh Climate Change Resilience Fund (BCCRF). In ADAPTATION_MULTIPLE, the most important programs are three FIFs, the Least Developed Countries Fund (LDCF), the Adaptation Fund (AF), and the Special Climate Change Fund (SCCF).

Among the funds in CARBON_1, the top 3 TFs are all hosted by the WB; two of them belong to the Forest Carbon Partnership Fund (FCPF), and the third one is the Bio-Carbon Fund (BioCF). The sizes of carbon funds for bulk purchase of credits, belonging to CARBON_2 (see Section 4.3.1 for details) and newer-generation TFs in CARBON_A6 (see Section 4.3.3 for details), are significant, and again – at the exception of the ADB-managed Future Carbon Fund (FCF) – all TFs are WBG-hosted.

Turning to non-carbon mitigation clusters, MITIGATION_EE is the smallest of all clusters, again with only WBG TFs, as is the case in MITIGATION_RE with the Climate Innovation Multi Donor Trust Fund (CIMDTF), the Clean Energy Investment Framework MDTF (CEIF) and the EU/WB Access to Sustainable Energy Philippines (ASEP). MITIGATION_FOREST has been an area where earlier funding phased out so that the only significant active TF is the Liberia Forest Landscape Single-Donor Trust Fund (LFL) with USD 56 million. The three largest funds in MITIGATION_MULTIPLE comprise one FIF with the Clean Technology Fund (CTF), as well as the WBG's Energy Sector Management Assistance Program (ESMAP) and ADB's Clean Energy Fund (CEF).

CC_MIXED is the most sizeable category, given it is populated by large FIFs that mobilize tremendous amounts of funding – GEF, GCF and SCF (see Section 3.1 for details).

Table 9. Top three programs in each topic cluster across all host institutions.

Host institution	Program name	Number of TFs	Program status	Total cumulative contributions (1988–2018) (USD million)
ADAPTATION_DISASTER				
WBG	GFDRR	17	Active	701.9
ADB	UCCRTF	1	Active	149.4
WBG	BCCRF	1	Closed	130.3
ADAPTATION_MULTIPLE				
FIFs	LDCF	1	Active	1 314.2
FIFs	AF	4	Active	538.3
FIFs	SCCF	1	Active	351.2
CARBON_1				
WBG	FCPF-CF	2	Active	793.5
WBG	BioCF	4	Active	375.4

Host institution	Program name	Number of TFs	Program status	Total cumulative contributions (1988–2018) (USD million)
WBG	FCPF-RF	2	Active	343.5
CARBON_2				
WBG	UCF	2	Active	888.2
WBG	SpCF	2	Active	274.9
WBG	NL-CDM	2	Active	169.3
CARBON_A6				
WBG	TCAF	1	Active	212.2
ADB	FCF	1	Active	115.0
WBG	PMR	1	Active	103.4
MITIGATION_EE				
WBG	EEYCP	1	Active	48.8
WBG	GGFRP	2	Active	32.8
WBG	ESMAP*	1	Closed	0.3
MITIGATION_RE				
WBG	CIMDTF	1	Active	68.0
WBG	CEIF	1	Closed	40.2
WBG	ASEP	1	Active	33.0
MITIGATION_FOREST				
AfDB	CBFF	1	Closed	170.0
WBG	BRF	4	Closed	69.6
WBG	LFL	1	Active	55.8
MITIGATION_MULTIPLE				
FIFs	CTF	6	Active	5 712.9
WBG	ESMAP	2	Active	308.9
ADB	CEF	1	Active	122.0
CC_MIXED				
FIFs	GEF	1	Active	15 804.0

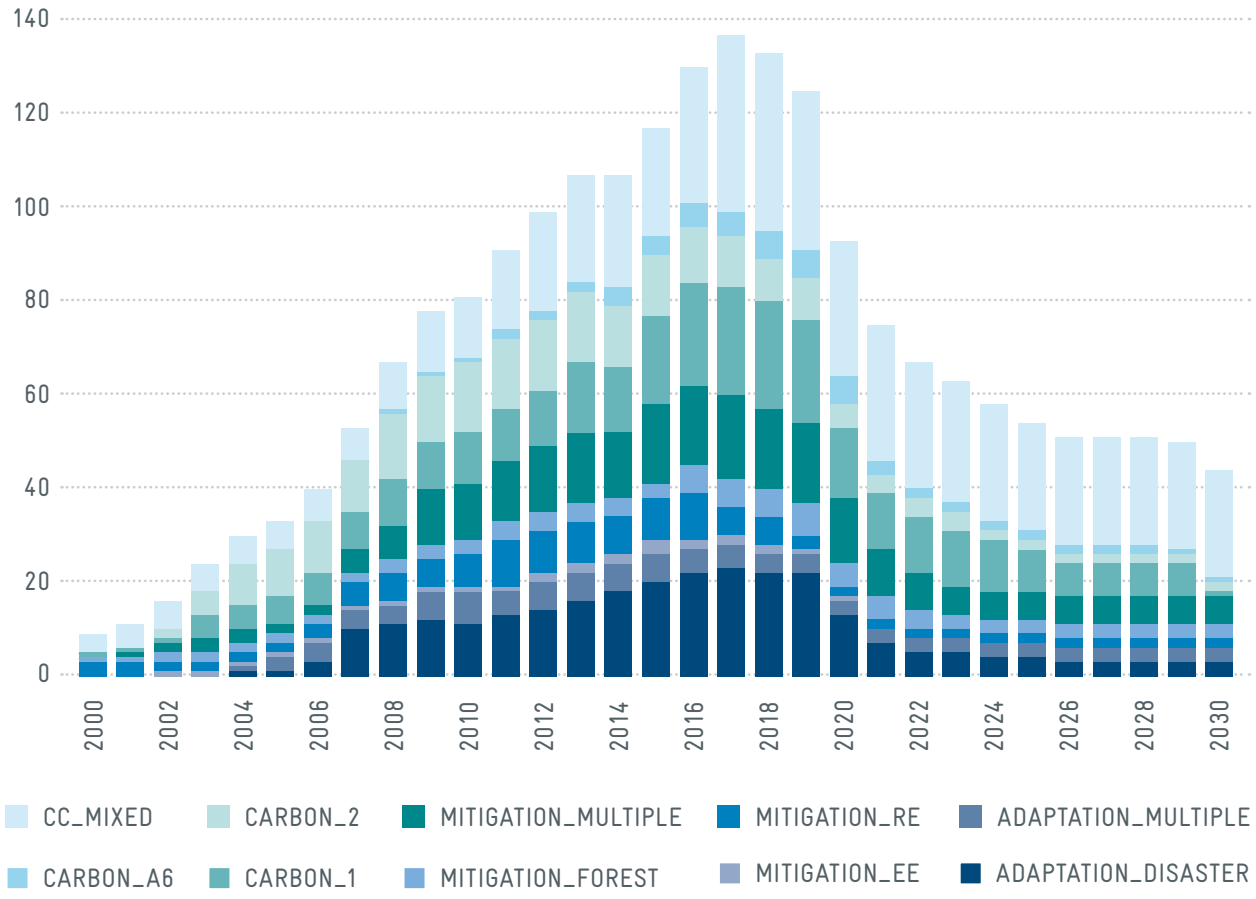
Host institution	Program name	Number of TFs	Program status	Total cumulative contributions (1988–2018) (USD million)
FIFs	GCF	1	Active	6 718.3
FIFs	SCF	1	Active	2 954.4

Notes:
A program may appear in several topic clusters and may then refer to different TFs. This is because the assignment to clusters is unique only at the TF level. For instance, ESMAP as a program contains three TFs covering two different topic clusters. Information on cumulative contributions is available for different time spans across MDBs (see subsequent chapters for details); therefore, the period 1988–2018 is the broadest possible coverage period. We would like to stress that some TFs report different numbers in distinct publications, here we use the numbers communicated to us by the MDBs.

Abbreviations that previously did not appear: FCPF-CF (Carbon Fund of the Forest Carbon Partnership Facility), FCPF-RF (Readiness Fund of the Forest Carbon Partnership Facility), UCF (Umbrella Carbon Facility), SpCF (Spanish Carbon Fund), NL-CDM (IBRD/Netherlands Clean Development Mechanism (CDM) Facility), TCAF (Transformative Carbon Asset Facility), PMR (Partnership for Market Readiness), EEYCP (Trust Fund for Energy Efficiency and Youth Corps Program), GGFRP (Global Gas Flaring Reduction Partnership), CBFF (Congo Basin Forest Fund), and BRF (Brazilian Rain Forest).

Finally, we look at the temporal evolution of the entire climate-related TF portfolio across all ten topic clusters. Based on information provided by the four MDBs, we not only know the number of currently active TFs (or related programs), but also how this number will evolve in the near future assuming that no new TFs are set up. Figure 10 plots the number of TFs active in each fiscal year indicated and across all FIFs and MDB TFs from FY 2000 onward. The figure is similar when using TF programs as underlying unit of analysis. We find that the number of TFs has been steadily increasing until 2017. Based on projected end dates, the number of currently existing funds will decline until 2025. This figure, however, does not include the potential inflow of new TFs from 2017 onwards, which cannot be predicted. It thus overestimates the actual reduction of TF numbers. Specifically, adaptation funding for disaster prevention, but also carbon funds will be closed in the next years. Overall, this indicates that TFs are time-bound instruments to channel climate finance. It is also evident that if donors had stopped all funding to TFs as of 2017, the perceived challenge of proliferating funds would be reduced, as there would only be about 45 TFs on climate change by 2030, a third of the historical high.

Figure 10. Number of active TFs in different fiscal years



Note:
Numbers don't include IFC TFs as closing dates were not available in all cases.

3 Analysis of climate-related trust funds at the MDBs

This section presents key characteristics of all climate-related TFs including FIFs and MDB TFs. As MDBs report on TFs in different ways, the analysis proceeds separately for different MDBs but we are able to draw cross-MDB comparisons using common thematic clusters of climate TFs. Due to missing data, summary statistics are based on varying numbers of observations.

3.1. Overview of thematic clusters

3.1.1. Overview of FIFs

FIFs are highly customized arrangements that often come into existence following high-level political decisions (e.g. Group of Seven (G7) / Group of Eight (G8) or Group of 20 (G20) summits and UNFCCC Conference of the Parties (COPs) to tackle sector-specific global challenges. As independently governed entities, FIFs provide a platform for multi-actor collaboration in support of global public goods. FIFs indeed are a popular choice for "partnership programs" – platforms for coordinated decision-making and large-scale implementation across a significant number of implementing entities (WB 2019a). This is especially relevant in the area of climate change, which requires concerted collective action at the global level. Certain FIFs are listed as official financial institutions under the UNFCCC, specifically all FIFs under the GEF, while others are facilities and not UNFCCC institutions. Table 11 below presents the 12 FIFs related to climate change along with their key characteristics.

Table 11. Climate change-related FIFs

Fund name	Institution under UNFCCC (Yes=1, No=0)	Trustee	Year established	Cumulative contributions (million USD)	Fund balance*	Cluster
GEF funds						
Global Environmental Facility (GEF)	1	TF069001	1991	17 122.0	3 782.5	CC_MIXED
Special Climate Change Fund (SCCF)	1	TF069002	2004	351.2	82.2	ADAPTATION_MULTIPLE
Least Developed Countries Fund (LDCF)	1	TF069004	2005	1 314.2	660.8	ADAPTATION_MULTIPLE
Nagoya Protocol Implementation Fund (NPIF)	1	TF069019	2011	16.1	2.2	CC_MIXED
Capacity Building Initiative for Transparency (CBIT)	1	TF069032	2016	55.6	54.1	CC_MIXED
CIFs						
Clean Technology Fund (CTF)	0	TF069011	2009	5 712.9	1 922.1	MITIGATION_MULTIPLE
Strategic Climate Fund (SCF)	0	TF069012	2009	2 954.4	1 884.3	CC_MIXED

Fund name	Institution under UNFCCC (Yes=1, No=0)	Trustee	Year established	Cumulative contributions (million USD)	Fund balance*	Cluster
Adaptation Fund (AF)	1	TF069013	2009	538.3	324.1	ADAPTATION_MULTIPLE
Guyana REDD+ Investment Fund (GRIF)	0	TF069017	2010	206.6	3.6	CARBON_1
Green Climate Fund (GCF)	1	TF069022	2012	6 718.3	6 255.3	CC_MIXED
Pilot Auction Facility (PAF) for Methane and Climate Change Mitigation	0	TF069026	2014	77.8	50.6	CARBON_A6
Climate Risk and Early Warning Systems (CREWS)	0	TF069031	2016	28.0	11.8	ADAPTATION_DISASTER

Sources:
All information is drawn from the database of main trustees (WB 2019b).
* This database did not include information on the NPIF, which was taken from the FIF database (WB 2019c) and from WB (2019f) instead. Since 2014, the NPIF is closed for new contributions but disburses its remaining fund balance. While GEF contribution data before FY 1999 is unavailable, see for cumulative contributions WB (2019d) and for funds balance data WB (2019e).

As Table 11 shows, half of all FIFs pursue multiple purposes related to climate change (CC_MIXED). Three FIFs support multiple adaptation purposes, and one FIF each supports mixed mitigation (MITIGATION_MULTIPLE), disaster prevention and response (ADAPTATION_DISASTER), innovative carbon finance (CARBON_1) and carbon markets under the PA (CARBON_A6). There are no dedicated FIFs for mitigation with an exclusive focus on renewable energy, energy efficiency, or forestry (except the carbon funds focused on forestry). In terms of funding volumes, the distribution is more unequal, with the bulk of funding going to the five FIFs in CC_MIXED (76 %), followed by multiple-purpose mitigation FIFs (17 %), and adaptation FIFs (7 %), while the small remainder is associated to the carbon clusters. Overall, at the end of FY19, climate change-related FIFs account for 34 % of all FIFs' cumulative funding (WB 2019d, 99). Their total fund balance represents around 65 % of the FIFs' funds held in trust (based on table 11 and WB 2019d, 100).

3.1.2. Governance of FIFs

FIFs are different from standard TFs in that they involve the WBG – as the only global MDB, with significant convening power and robust fiduciary frameworks – in additional roles (WB 2019a, 1) (see footnote 2):

- As **trustee,** the WBG is tasked with financial management of FIF resources; this role is always provided by the Development Finance Vice Presidency (DFI), separate from the sector units that implement the funds.
- Sometimes as **host of the secretariat,** the WBG provides legal personality and a range of other enabling program management functions, such as calls for proposals to identify suitable projects for implementation.
- The WBG – as all other MDBs – can be an **implementing agency,** specifically through the respective Global Practice (for a Bank-executed global activity) or regional Vice Presidency (for a recipient-executed activity).

In practice, these roles can be combined in different ways, reflecting different levels of involvement by the WBG. First, the WBG may provide only trustee services, while other IOs implement the funds according to their own operational rules and procedures. However, there is no climate-related FIF in which the WBG only serves as trustee. Second, the WBG may be both trustee and implementing IO (e.g. GCF). In most cases, it also hosts the secretariat (i.e. the only three FIFs with an external secretariat are the GCF, GRIF, and CREWS). Table 12 below provides an overview of the various governance functions of the WBG in all climate-related FIFs.

Table 12. WBG functions in climate-related FIFs

Fund name	#	Trustee	Secretariat	Implementing agency
GEF funds				
GEF	TF069001	1	1	1
LDCF	TF069004	1	1	1
SCCF	TF069002	1	1	1
NPIF	TF069019	1	1	1
CBIT	TF069032	1	1	1
AF	TF069013	1	0*	1
CIFs				
CTF	TF069011	1	1	1
SCF	TF069012	1	1	1
GRIF	TF069017	1	0	1
GCF	TF069022	1	0	1
PAF	TF069026	1	1	0
CREWS	TF069031	0	0**	1

Notes:
Yes=1, No=0. Additional governance roles refer to the formal representation of WBG entities in the FIF governing bodies. In all FIFs except GRIF, the WBG (through DFI) is observer by virtue of its trustee role. In some FIFs in which it is an implementing IO, it is a non-voting member (i.e. SCCF, CTF, SCF, and CREWS), whereas in others it is an implementing IO with observer status (i.e. GEF, LDCF, NPIF, and CBIT).
* The secretariat services for the AF are provided by the GEF. They are legally independent. While all GEF secretariat staff have contracts with the WBG, institutionally they are considered functionally independent.
** World Meteorological Organisation (WMO) hosts the CREWS secretariat, to which a WBG employee is seconded.
Source: WB (2019a, Annex I)

3.1.3. FIF portfolio

The FIF portfolio is highly diverse and the detailed governance modalities extend beyond the aforementioned general options. For example, FIF governing bodies always direct funding directly to implementing entities, without the WBG as trustee or the WBG as host to the FIF secretariat having direct supervision. In such case, each implementing IO applies its own operational procedures. This implies higher responsibility for donors in financial oversight and risk management (WB 2019a, 6).

As a whole, FIFs have become more sizeable, while their overall number has further increased. Figure 13 shows the top 5 FIFs in terms of total donor contributions over FY 2009–18. While the GEF is the largest fund (with about USD 6.9 billion), the GCF is no less important (USD 6.5 billion), followed by the two funds making up the CIFs (jointly about USD 8.6 billion) and the LDCF (USD 1.1 billion). The figure also shows differences across FIFs in terms of engagement by the top 5 donors – France, Germany, Japan, the United Kingdom (UK), and the United States – and the share of funding that is contributed by other official donors. Top donors in all FIFs are presented in Annex 4.

Figure 13. Top 5 FIFs and top 5 donors.

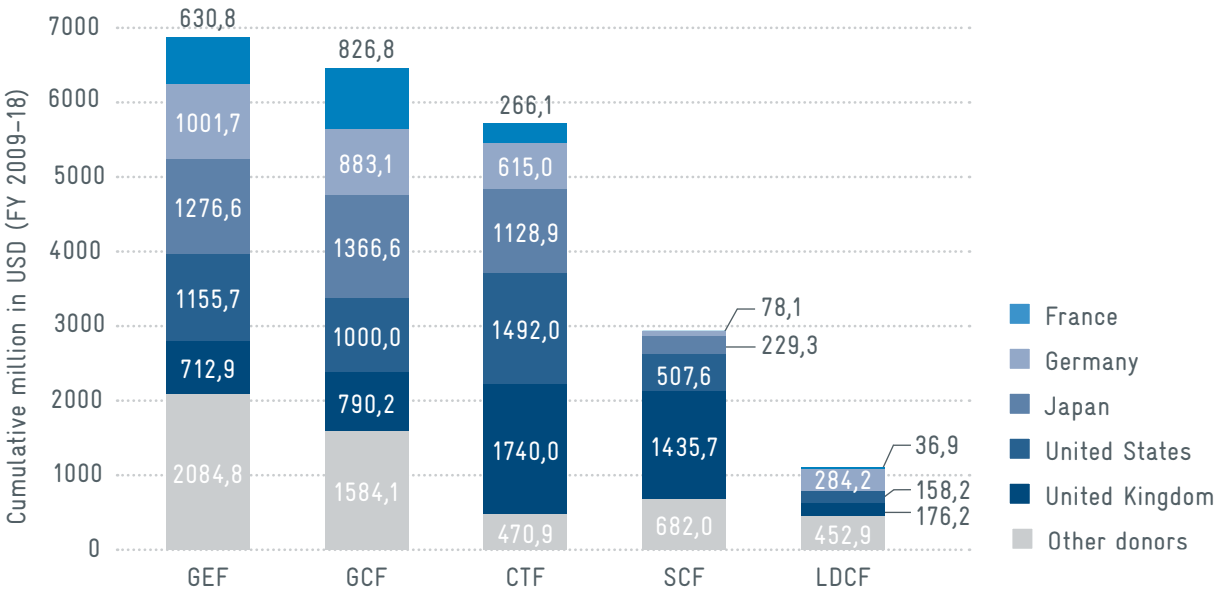
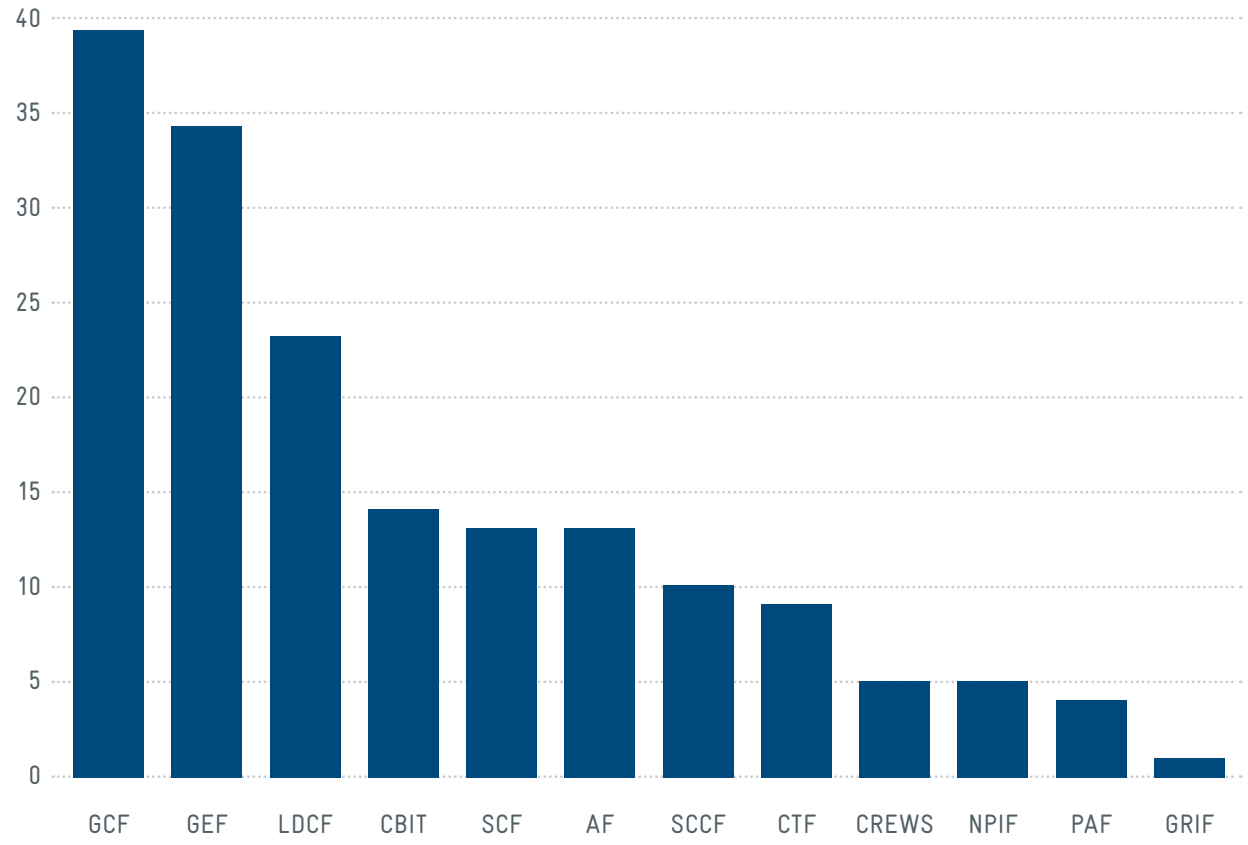


Figure 14 provides evidence that FIFs typically are highly multilateral platforms. Using the number of participating donors as a proxy for multilateralism, the most inclusive FIFs are the GCF (39 donors), the GEF (34 donors), and the LDCF (23 donors), while the remaining FIFs involve less than 15 donors. The GRIF, with just one donor, is a historical exception: it was created as a single-donor FIF with a Norwegian contribution (USD 250 million) for performance-based payments for avoided deforestation in Guyana (WB 2019a, 51).

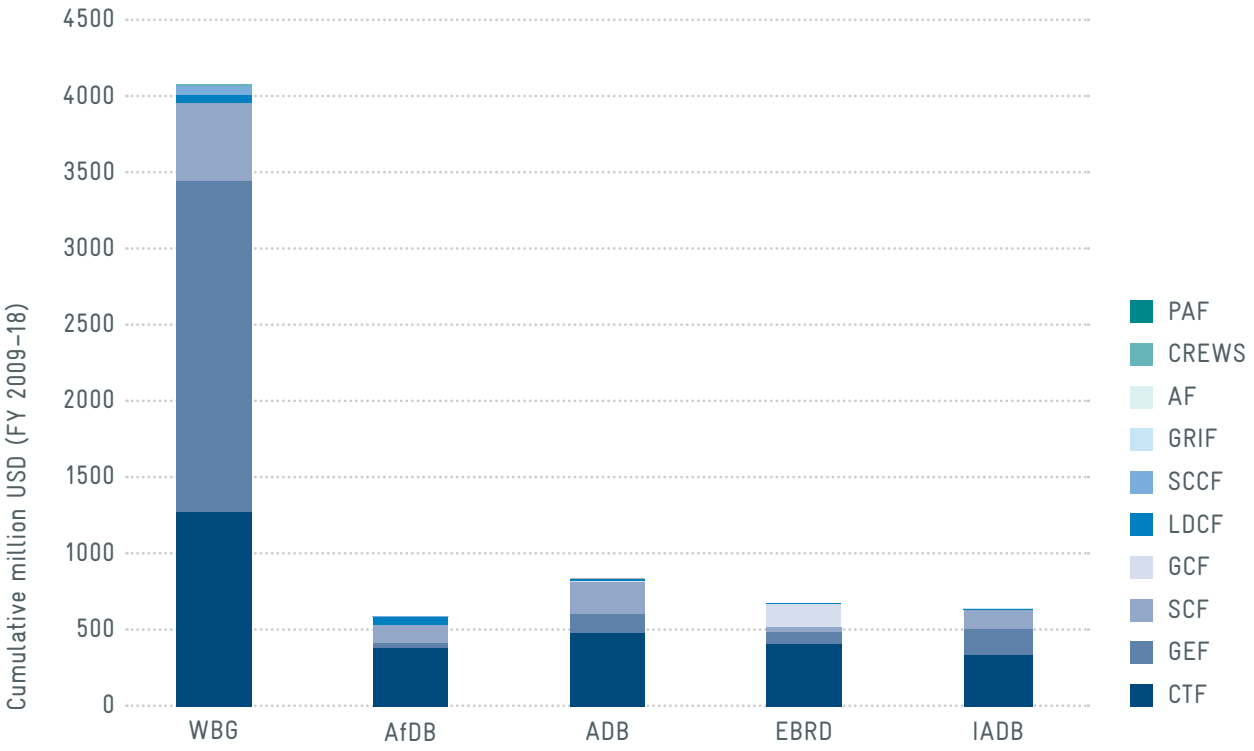
Figure 14. Number of donors in FIFs (over FY 2009–18)



A defining feature of FIFs is that they allow for several implementation partners.[10] To examine the patterns of delegation in FIF implementation, we analyzed disbursement data of all FIFs from FY 2009 to FY 2018. Figure 15 plots the aggregate project funding commitments to five MDBs by all relevant FIFs, showing that the WBG absorbs most of the funding (about USD 4 billion), and that this funding comes primarily from the GEF (USD 2.2 billion), but also from the CTF (USD 1.16 billion) and the SCF (USD 527 million). To some extent, this is unsurprising because GEF, CTF, GCF and SCF are also the largest FIFs overall. The second-largest MDB benefiting from FIFs is the ADB (USD 840 million in FY 2009–18) followed by EBRD (USD 680 million), IADB (USD 650 million), and AfDB (USD 600 million). Note that CBIT has not supported any MDB during FY 2009–18 and is thus omitted from the graph. PAF is recorded with no disbursements because it does not provide MDB finance in the classical sense but stimulates private sector financing for emission abatement through reverse-auction purchasing of carbon credits. To date, the PAF has conducted three auctions (two targeting methane abatement projects and one for nitric acid abatement projects) (WB 2019a, 52).

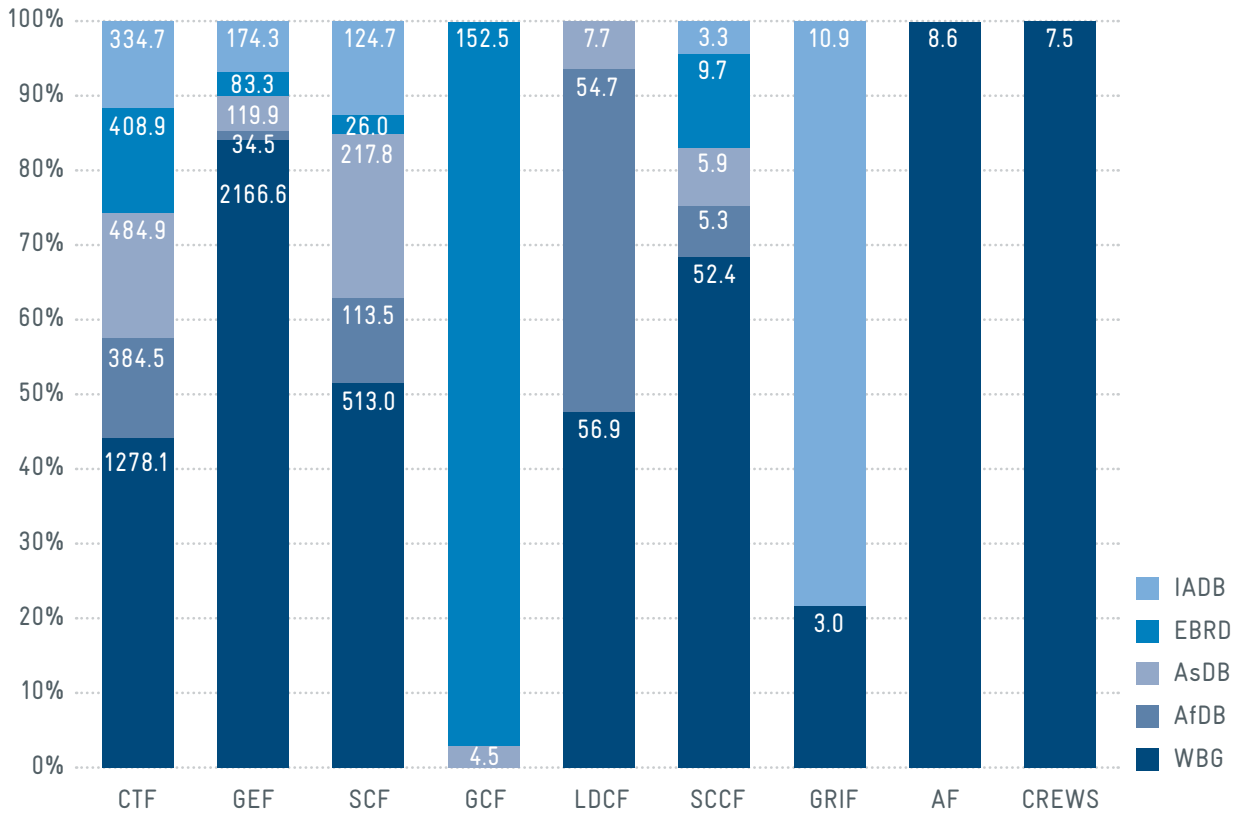
10 Other modalities are possible to achieve the same purpose – such as a "transfer-out agreement" – but FIFs are the most institutionalized modality for partnership facilities with several implementers (WB 2019a).

Figure 15. FIF funding to selected MDBs (FY 2009–18)



Comparing project volumes across FIFs, we find clear patterns of division of labor among implementing MDBs (see Figure 16). While funding seems relatively evenly distributed across MDBs in the CTF, the WB dominates project funding in the GEF, the SCCF, and to a lesser extent the SCF, while even accounting for all MDB-implemented projects (that were committed during FY 2009–18) for the AF and CREWS. Conversely, the AfDB is a similarly relevant implementer as the WB in the LDCF, which reflects the substantive orientation of this fund and the prevalence of Least Developed Countries (LDCs) in Africa. As of end of FY 2018, the EBRD was awarded the lion share of funding under the GCF, with the remainder being committed to the ADB. The WBG had not received funding from the GCF by this time, although more recent data from the GCF website (as of 30 June 2019) indicates that the WB is now third (after EBRD and UNDP) in value and second in number of approved GCF projects.

Figure 16. Distribution of project funding over MDBs for all FIFs (FY 2009–18)



Notes:
This graph only considers MDB implementers, thus ignoring other IOs such as the United Nations and implementers under "direct access." Numbers correspond to the value of implemented projects in FY 2009–18 (in USD million).

We further analyzed the characteristics of climate-related FIFs. In fact, all FIFs except NPIF operate without eligibility restrictions for specific income groups, fragility status, and funding concessionality (WB, 2019c). FIFs are highly flexible in that they do not only provide grant resources, but also loans (i.e. CTF, SCF, GCF, GEF), guarantees (i.e. CTF, SCF, and GEF), and equity (i.e. SCF, GCF, and GEF). The PAF deploys an auction model that does not fit any of these categories. This complexity is mirrored on the contribution side: Aside from official donor grants, which are the main source of funding for all FIFs, other sources of funding entail loans, capital (i.e. CTF, SCF, GCF), and certified emission reductions (i.e. AF) (WB 2019a, 39).

3.1.4. FIF landscape

In sum, FIFs have become sizeable platforms to channel public climate finance across the multilateral system. While their growth and increasing diversity potentially help address important gaps in the climate finance architecture – complementing the activities of MDBs at country level – these trends have also caused concerns, specifically at the WBG, which is in a more exposed position due to its significance as implementing IO but also its additional roles as FIF trustee and host of FIF secretariats that could be seen as leading to a conflict of interest. From a perspective of some WBG

interviewees, FIFs entail several challenges, both individually and at the portfolio level.

First, given that their number has increased from three active FIFs in FY 2008 to 12 in FY 2018, FIFs may be seen as a source of aid fragmentation, adding complexity for clients and implementing entities, and "diverting time and money dedicated to governance and administration" (WB 2019a, 7). At the same time, FIFs, and not least the GCF, were created with a view to aggregate donor efforts. The counterfactual scenario without new FIFs would therefore arguably have seen an even higher number of new aid initiatives. Second, FIFs are also at risk of being less aligned with core WBG mandates. This is because at the operational level, FIFs focus on global thematic priorities, while core WBG activities are decided at the country level (Reinsberg, 2017b). Furthermore, there are also limited de-facto opportunities of the WBG Executive Board – once it has approved a new FIF – to influence FIF operations on the ground (WB 2019a, 9). Third, the WBG also faces reputational risk in that its brand name may be associated with FIFs despite these being independently governed. This is particularly true where the WBG only provides limited trustee services, without possibilities of oversight through hosting the FIF secretariat. Fourth, the WBG is particularly skeptical toward direct-access funding, given the associated need for due diligence, which often does not outweigh the potential gains in effectiveness (WB 2019a, 17).

Nevertheless, several interviewees highlighted that having multiple FIFs may not be a major issue and may actually be useful as FIFs have very different purposes and are complementing each other.

For example, the **Adaptation Fund (AF)** was set up in 2007 to respond to the lack of adaptation finance available internationally. AF provided for three key innovative features:

- Funding through the share of proceeds from carbon credits, which worked well until prices collapsed in 2012 (these revenues used to be in the order of USD 100 million per year in the best days and crashed to only USD 5 million in the last years).
- First fund to allow direct access by countries that take ownership for project development throughout the project cycle. This model was emulated afterwards by GEF and GCF.
- The board consists of 2/3 developing country representatives, which is important due to the adaptation topic relevance for them.

AF is financing relatively small adaptation projects of less than USD 10 million. These are pilot investments that are meant to be replicable through other sources. For example, ten GCF adaptation projects build on AF projects. AF invests in pilots and if it works well, GCF can scale up (GCF projects are around USD 40–50 million). AF does not intend to move to larger projects as there is a continued demand for small demonstration projects. GCF then adds value for scaling up also by employing additional instruments, e.g. guarantees and equity, to foster transformational projects at larger scale. The case of AF demonstrates that some FIFs may perform a very specific function complementing others.

Under the **GEF** there are several TFs: GEF, SCCF, LDCF, CBIT, and NPIF. GEF is very different from traditional TFs as it is mandated by the UN process focused on supporting the implementation of UN conventions including the UNFCCC and the PA and helping recipient countries achieve these objectives. GEF was set up as a mechanism specifically designed to channel funds from developed countries to assist developing countries in addressing environmental challenges in the times when there were few such mechanisms.

The **CIFs** were established in 2008 by the WBG with surprising speed in the run-up to the Copenhagen Conference, not linked to a mandate by the UNFCCC. The CIFs comprise two funds: the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF), each individually raising funds with external donors. The CIFs were established to "provide a new business model to address gaps in the climate finance architecture and provide new and additional financing to complement existing bilateral and multilateral mechanisms. CTF and SCF also aim to promote international cooperation on climate change, to foster the environmental and social co-benefits of sustainable development, and to promote learning-by-doing." (Itad 2019). Some interviewees highlighted that one of the objectives of the CIFs was to shift internal resources of MDBs to climate-related investments by providing incentives to MDBs and client countries. The CIFs are therefore a mechanism dedicated to providing support to developing countries through MDBs while

transforming the MDBs themselves. According to one interviewee some of the WBG's major shifts on climate change can be attributed to the CIFs. CIFs also helped shift the agenda internationally through the convening power of MDBs.

Interestingly, the two CIFs have a sunset clause which has not yet been triggered. For the CTF it is specified as follows: "Recognizing that the establishment of the trust fund is not to prejudice the on-going UNFCCC deliberations regarding the future of the climate change regime, including its financial architecture, the CTF will take necessary steps to conclude its operations once a new financial architecture is effective. Specifically, the Trustee will not enter into any new agreement with donors for contributions to the trust fund once the agreement is effective. The Trust Fund Committee will decide the date on which it will cease making allocations from the outstanding balance of the Trust Fund" (Bhuiyan et al. 2014). The SCF contains an equivalent provision. Given that with the operationalization of the GCF the conditions for invoking the sunset clause seem to be fulfilled, the future of CIFs depends on how donors interpret the situation. CIF trust fund committees decided to postpone discussions on the sunset clause for an indefinite period of time.

Currently, the existing FIFs seem to be sufficient to channel funds and no new FIFs have therefore been created. According to the WBG interviewees, nine new FIF proposals in the past two years led to the creation of sub-programs under existing FIFs and new initiatives that are not TFs instead of the creation of new FIFs. For example, the Global Energy Storage Program (GESP), created under the CTF to promote battery storage, did not require the creation of new governance or TF agreements. The battery storage program was set up as a new phase of the Dedicated Private Sector Program (DPSP IV), created in the CTF in 2013–14.

In our view, the FIFs based on UNFCCC institutions cannot be consolidated, while for future non-UNFCCC FIFs consolidation should be attempted as far as possible along thematic lines.

3.2. World Bank Group

The WBG includes five institutions: the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), the IFC, the Multilateral Investment Guarantee Agency (MIGA) and the International Centre for Settlement of Investment Disputes (ICSID). Most TFs reviewed below belong to IBRD/IDA (i.e. the World Bank) while only 21 TFs belong to IFC[11]. MIGA and ICSID have no climate change TFs.

3.2.1. Overview of WBG climate TFs

Over the past two decades, concessional funding to address climate change via TFs – both indirectly from pass-through multilateral institutions and directly from TFs at IOs – has become increasingly important (Reinsberg et al. 2015). The WBG was among the first to venture into climate-related activities, following increased attention to environmental issues, in part due to pressure from major shareholders and environmental non-governmental organizations (NGOs) (Nielson and Tierney 2003; Gutner 2005; Weaver 2008). It started developing its climate portfolio through FIFs in the early 1990s starting with the GEF in 1993. It also started to mobilize finance from individual industrialized countries and through consultancy activities and institutionalized its climate-related work by creating the Carbon Finance Unit under the former Environmentally and Socially Sustainable Development (ESSD) Vice Presidency. In 1999 it set up the first true multi-donor carbon fund in form of the PCF which was followed by a flurry of further topic-specific multi

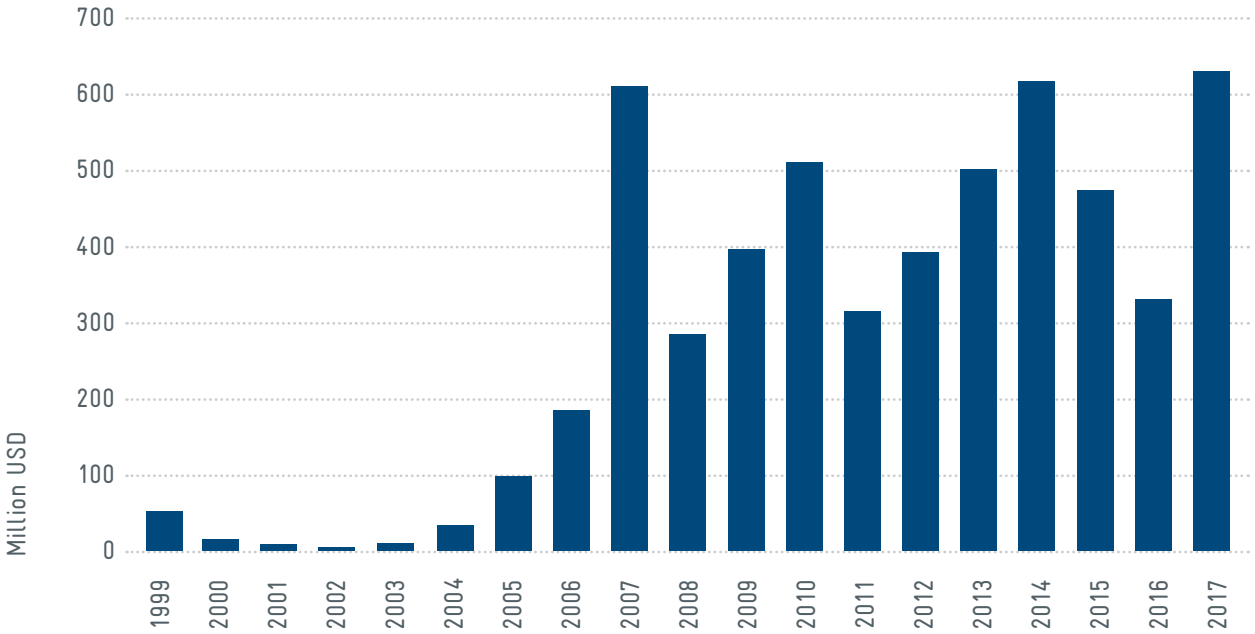
11 The IFC climate change TFs are listed in Annex 1 among the WBG TFs. Data reported in this section excludes IFC TFs as these were not provided due to confidentiality reasons.

and single donor TFs (MDTFs / SDTFs) after the take-off of the CDM from 2004 onwards (Michaelowa and Michaelowa 2011).

The WBG's experience with the GEF also led the UNFCCC Secretariat to allocate the administration of the emerging family of UNFCCC financial institutions as FIFs to the WBG after 2002, with the AF in 2006 and culminating in the GCF in 2010. The CIFs were established in 2008.

Total contributions to climate-related TFs excluding FIFs at the WBG took off in the mid-2000s to reach an average of USD 450 million between FY 2007 and FY 2017 (see Figure 17). This still is comparatively small given the total size of IDA operations (about USD 8 billion in contributions per year on average over the same period). However, this total TF amount excludes contributions to FIFs (as these are technically received at the FIF level), as well as the WBG-implemented projects under such FIFs (which are technically disbursements, not contributions). The figure is therefore best interpreted as the additional funding from donor governments to WBG TFs over and above the contributions from the 12 FIFs that are implemented by the WBG.

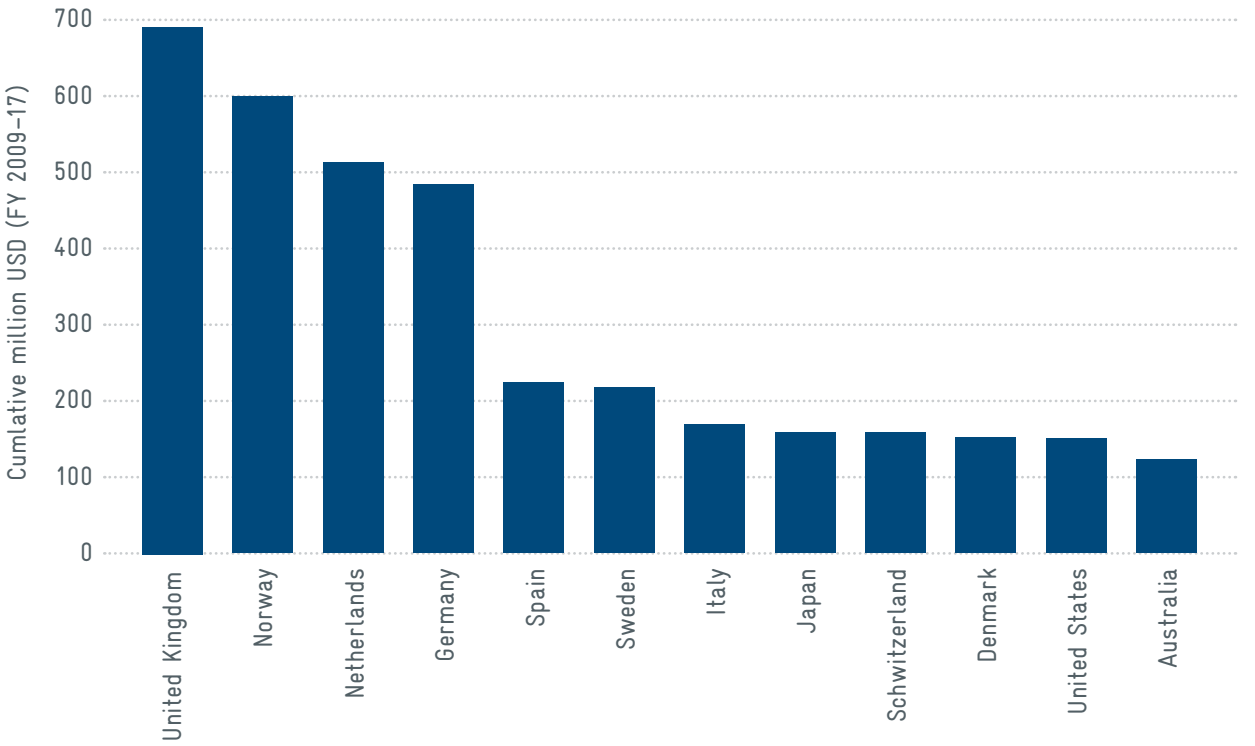
Figure 17. Total annual contributions to WBG climate change TFs (FY 1999–2017), excluding FIFs



From a historical perspective, the most important donors to WBG TFs on climate change in FY 2009–17 (Figure 18) were the United Kingdom (USD 700 million), Norway (USD 600 million), the Netherlands and Germany (both around USD 500 million), followed by Spain and Sweden (both about USD 200 million).[12]

12 When considering historical contributions to trust funds over FY 1999–2017, Spain leads the ranking with about USD 765 million, but the following ranks are unaffected.

Figure 18. Cumulative contributions to WBG climate change TFs (FY 2009–17).



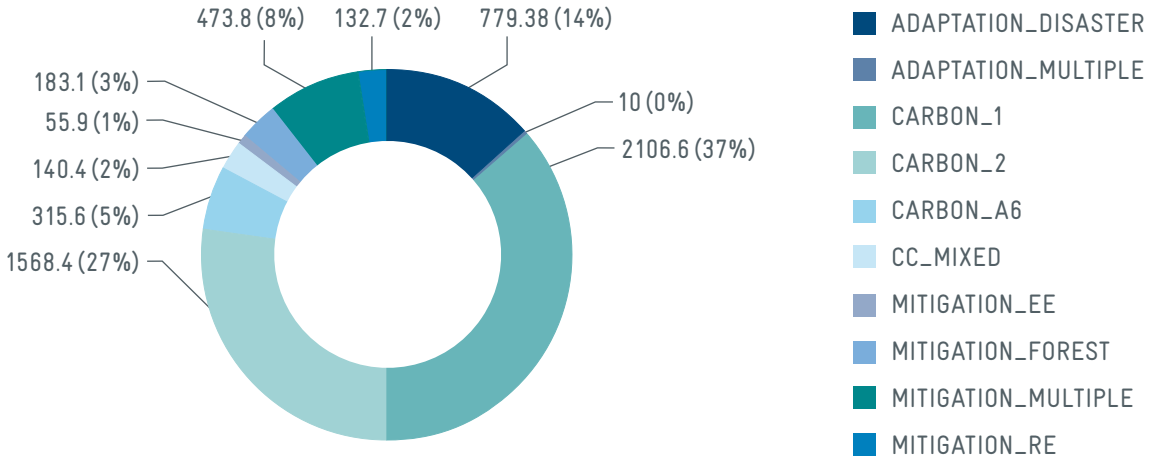
3.2.2. WBG climate TF portfolio

We now present a snapshot of the WBG TF portfolio on climate change as of 30 June 2019. In other words, we exclude TFs that were already closed by that date. This gives us a more accurate picture of the currently existing climate-related activities of the WBG and related TF features. The diversity of WBG activities on climate change – in part due to the entrepreneurship undertaken by its staff in the past – is reflected in the distribution of WBG TFs into the ten topic clusters. In total the WBG has 161 TFs along with 100 programs. Of these, there are 92 active TFs, along with 55 TF active programs.

While the WBG is the only MDB with TFs active in all clusters, it also focuses its activities on three clusters: CARBON_1 (22 TFs, 8 programs), CC_MIXED (16 TFs, 11 programs), and ADAPTATION_DISASTER (21 TFs, 9 programs). The next set of clusters has fewer than 10 TFs, including CARBON_2 (9 TFs, 7 programs), and MITIGATION_MULTIPLE (9 TFs, 6 programs). The remaining five clusters each have at most 5 TFs.

These differences are even more pronounced when considering funding volumes of active WBG TFs (Figure 19). Here the carbon funds together represent cumulative contributions of almost USD 4 billion, whereas the total fund size in ADAPTATION_DISASTER reaches almost USD 800 million. MITIGATION_MULTIPLE has around USD 500 million, and MITIGATION_FOREST about USD 180 million. The remaining clusters have funding volumes below USD 150 million each.

Figure 19. Distribution of active WBG TFs into topic clusters by volume (million USD)



We now identify the top trust-funded programs in each cluster, combining different TFs belonging to the same thematic initiative. Table 20 shows the top five programs (or fewer, if there are fewer) of WBG TFs in each thematic cluster, along with information on the number of active TFs in the program, the cumulative contributions (since existence) to the TFs that are active, the fund balance (as of 30 June 2019), the number of donors, whether Germany is engaged, and if so, with which amount and percentage of contributions.

For ADAPTATION_DISASTER, the GFDRR is the single largest initiative, with USD 750 cumulative million in contributions (USD 643 million in active TFs) and 19 donors. GFDRR is primarily a disaster risk management fund, but due to this focus it is highly relevant for adaptation. Other programs in this cluster have contributions of USD 50 million or less. Within ADAPTATION_MULTIPLE, only one genuine WBG program exists: the Integrated Land and Water Management for Adaptation to Climate Variability and Change (ILWAC) (USD 10 million, one donor). The other two programs in this category would be the implementing accounts under two FIFs, the AF and the CREWS, but which are omitted here.

The lead facility in CARBON_1 is the FCPF, which operates two funds, the Carbon Fund and the Readiness Fund. These TFs also attract the most donors (8 and 13 respectively). Other important programs include the BioCF, the BioCF+, and the PCF. In CARBON_2, the UCF is the dominant program, having received USD 888 million from two donors. In addition, there are the SpCF, Italian Carbon Fund (ICF), Carbon Fund of the Carbon Partnership Facility (CPF-CF), and Danish Carbon Fund (DCF), all with fewer donors. In the relatively new CARBON_A6 group, the TCAF is the largest program (USD 212 million, 5 donors), followed by PMR (USD 103 million, 12 donors).

Turning to mitigation clusters, two groups have less than five programs, notably MITIGATION_EE, with the EEYCP (USD 49 million, one donor) and the GGFRP (USD 7 million, 5 donors); and MITIGATION_RE, with CIMDTF (USD 68 million, 4 donors), Access to Sustainable Energy Philippines (ASEP) (USD 33 million), Asia Sustainable and Alternative Energy Program (ASTAE) (USD 24 million, 3 donors), and Bangladesh Rural Electrification and Renewable Energy Development (RERED) (USD 7 million, one donor). MITIGATION_FOREST has five programs with active TFs, notably Central African Forest Initiative Implementation Trust Fund (CAFI) (USD 113 million, 4 TFs), LFL (USD 56 million, one donor), Multi Donor Trust Fund for Program for Forests (PROFOR) (USD 51 million, 7 donors), Indonesia Sustainable Landscape Management (ID-SLM) (USD 33 million, 2 donors), Brazil Cerrado Climate Change Mitigation Single-Donor Trust (BCCC) (USD 16 million, one donor). MITIGATION_MULTIPLE

includes more than five programs, but the lead program is ESMAP (USD 309 million, 12 donors). This is followed by Korea Green Growth TF (GG-KOR) (USD 88 million, a Korean SDTF), Carbon Capture and Storage Trust Fund (USD 47 million, 2 donors), the Private-Public Infrastructure Advisory Facility – Climate Change (PPIAF-CC) (USD 12 million, 3 donors), and Ho Chi Minh City Green Transport Development (HCM) (USD 12 million, one donor).

Finally, the category CC_MIXED entails 11 programs overall, with the five biggest ones being the Nationally Determined Contributions Support Facility (NDC-SF) TF supported by Germany's Federal Ministry for Economic Cooperation and Development (BMZ) (USD 61 million), Africa Nordic Development Fund (ANDF) (USD 38 million), Communication for Climate Change (CCC) (USD 18 million, 2 donors), Maldives Climate Change Multi-Donor Trust Fund (MCC) (USD 15 million, one donor), and Promoting Africa's Green and Climate Resilient Development (GCRD) (USD 14 million).

Table 20. Top five programs of WBG TFs in each thematic cluster (as of June 30 2019)

Program name	Number of active TFs	Cumulative contributions to these active TFs (in USD million)	Total fund balance (in USD million)	Maximum number of contributing donors	Germany is donor (Yes=1, No=0)	German contribution (2009–18, in USD million)	%
ADAPTATION_DISASTER							
GFDRR	12	643	113	19	1	164	25.5
CCRIF	2	51	12	2	1	29	0.0
TURP	1	38	0	1	0		
DPP	1	14	3	–	0		
GIIF	1	12	–	–	1	N.d.	N.d.
ADAPTATION_MULTIPLE							
ILWAC	1	10	0	1	0		
CARBON_1							
FCPF-CF	2	794	760	8	1	321	40.5
BioCF	7	375	239	6	0		
FCPF-RF	2	344	50	13	1	106	31.0
PCF	5	210	22	6	0		
BioCF+	7	139	30	1	1	41	29.7
CARBON_2							
UCF	2	888	33	2	0		
SpCF	3	275	16	1	0		
ICF	2	163	18	1	0		
CPF-CF	1	109	56	4	0		
DCF	2	91	17	1	0		

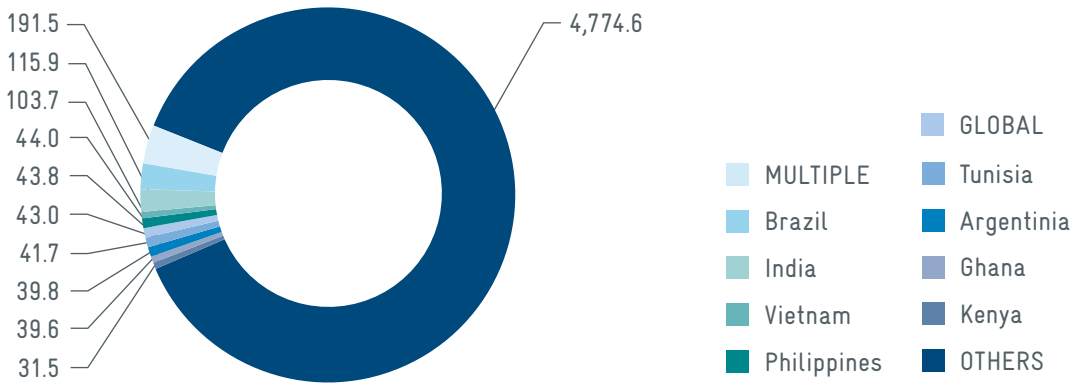
Program name	Number of active TFs	Cumulative contributions to these active TFs (in USD million)	Total fund balance (in USD million)	Maximum number of contributing donors	Germany is donor (Yes=1, No=0)	German contribution (2009–18, in USD million)	%
CARBON_A6							
TCAF	2	212	195	5	1	4	1.9
PMR	1	103	15	12	1	13	12.8
MITIGATION_EE							
EEYCP	1	49	2	1	0		
GGFRP	1	7	2	5	0		
MITIGATION_RE							
CIMDTF	1	68	1	4	0		
ASEP	1	33	0	–	0		
ASTAE	1	24	0	3	0		
RERED	2	7	1	1	0		
MITIGATION_FOREST							
CAFI	4	113	11	–	0		
LFL	1	56	9	1	0		
PROFOR	1	51	1	7	1	2	3.1
ID-SLM	1	33	5	2	0		
BCCC	1	16	0	1	0		
MITIGATION_MULTIPLE							
ESMAP	2	309	94	12	1	19	6.0
GG-KOR	2	87	3	1	0		
CCS-TF	1	47	39	2	0		
PPIAF-CC	2	12	2	3	0		
HCM	1	12	6	1	0		
CC_MIXED							
NDC-SF	2	61	15	1	1	61	100.0
ANDF	2	38	0	–	0		

Program name	Number of active TFs	Cumulative contributions to these active TFs (in USD million)	Total fund balance (in USD million)	Maximum number of contributing donors	Germany is donor (Yes=1, No=0)	German contribution (2009–18, in USD million)	%
CCC	2	18	2	2	1	1	4.6
MCC	1	15	0	1	0		
GCRD	1	14	3	–	0		

Notes:
The table excludes WBG-implemented FIF project accounts, and TFs without contribution information. Abbreviations that previously did not appear: CCRIF stands for Central American and Caribbean Catastrophe Risk Insurance Program, TURP stands for Tanzania Urban Resilience Program, DPP is the Disaster Protection Program, GIIF is the Global Index Insurance Facility, GG-KOR is the Corea Green Growth Single-Donor Trust Fund.

In terms of recipients, the WBG TF portfolio on climate change is highly diverse. Figure 21 identifies the top ten recipients of all active WBG TFs on climate change in FY 2009-18. The figure includes TFs in which the WBG is the implementing IO under a FIF account, given that these are disbursing accounts. The largest single beneficiary type is "multiple countries" (USD 192 million, 283 projects), which tends to reflect the transnational nature of environmental problems. The most important single countries are Brazil (USD 116 million, 91 projects) and India (USD 104 million, 77 projects), after which funding volumes drop markedly and cover a wider range of countries in South East Asia, Latin America, and Africa. "Global activities" that are not allocable to any geographic region make up a considerable funding share, too (USD 43 million, 74 projects).

Figure 21. Funding shares of top ten recipients of WBG TF disbursements (2009-18, in million USD), including FIFs



Notes:
"Others" refers to the combined amount of all individual countries with disbursement shares below that of Kenya. "Multiple" includes several countries, which typically refers to regional projects. "Global" refers to activities at global scale that cannot be linked to individual countries or for which no disaggregated information is available, GG-KOR is the Corea Green Growth Single-Donor Trust Fund.

Comparing WBG TFs to FIFs based on some key features available from the database of main TFs (WB, 2019c) we note, that WBG TFs are smaller. The cumulative signed contributions of the average WBG TFs is USD 62 million, with a fund balance of USD 17 million as of 30 June 2019. In contrast, FIFs, reach an average cumulative signed contribution of USD 1796 million and an average fund balance is USD 1037 million, 30 respectively 60 times bigger. This suggests that FIFs – despite having existed for the same time than WBG TFs – are a separate "league". FIFs are larger because they tend to have more donors, even though the proportion of MDTFs in WBG TFs has increased over time. Whereas the total fund balance of the climate change-related FIFs accounts for 65 % of all FIFs' funds in trust, the respective share for the TFs is 16 % at the end of FY19 (based on WB 2019b and WB 2019d, 33).

According to Table 22, nearly two-thirds of the active WBG TFs are (legal) MDTFs, but all FIFs are MDTFs. Also, more than three-quarters of the active WBG TFs have global scope. Only few TFs are free-standing, whereby the donor(s) directly support an individual activity. WBG TFs are now overwhelmingly programmatic TFs, in which the WBG first receives donor funding for broadly defined purposes before allocating such funding to concrete projects under an internal allocation mechanism. Donor influence in such TFs is limited to strategic guidance in a steering committee that meets periodically, for example once a year.

Turning to the disbursement side, we first distinguish two types of execution modalities. Table 22 shows that roughly one-third are BETFs, which support the economic and sector work and technical assistance carried out by WBG staff. The remainder are hybrid TFs, which – in addition to BETFs – contain recipient-executed TF grants for activities that the recipient government supervises at the country level. Ultimately, the distinction between RETF and BETF can only be made at the activity level, but the WBG was unable to share activity-level BETF data, which is why we only know the number of pure BETFs. Nonetheless, we have information on eligibility criteria for specific groups of client countries. In particular, only a tiny number of climate-related WBG TF support is formally restricted to fragile states. In practice, however, these states might benefit more than these numbers suggest because a fund without eligibility restriction can engage everywhere. In the same vein, over 80 % of the TFs are not earmarked for specific income groups. Among the remainder, only seven TFs exclusively focus on IBRD-only borrowers and five on IDA-only countries, and three TFs support "blended" countries.

Table 22. Characteristics of active WBG TFs

Criterion	Number of TFs		Volume of TFs* (million USD)	
Number of donors (legal instrument)				
SDTFs	29	32 %	763.7	13 %
MDTFs	63	68 %	5 002.2	87 %
Program use				
programmatic	83	90 %	5 599.0	97 %
free-standing	9	10 %	166.9	3 %
Geography				
non-global	27	29 %	526.5	9 %
global	65	71 %	5 239.4	91 %
Execution type				
recipient-executed only	0	0 %	0.0	0 %

Criterion	Number of TFs		Volume of TFs* (million USD)	
Bank-executed only	33	36 %	1 618.0	28 %
hybrid	59	64 %	4 147.9	72 %
Special country status				
non-fragile	87	95 %	5 627.4	98 %
fragile	5	5 %	138.5	2 %
Country eligibility				
IBRD-only	7	8 %	154.0	3 %
IDA-only	5	5 %	116.1	2 %
blended	3	3 %	26.3	0 %
none	77	84 %	5 469.5	95 %

Notes:
* Size of TFs, total cumulative contributions

3.2.3. Fee structure

A recurrent topic of debate is the fee structure of TFs. Historically, TFs started off as highly customized arrangements in which the WBG and the donor(s) negotiated fees for every new agreement. The WBG has increasingly standardized its TF fee structures over the past few years, with the goal of reducing transaction costs while attempting to recover the full operational cost of WBG TFs (IEG 2011). The WBG is currently reviewing its cost recovery policy, but internal discussions are at an early stage.

Between the 2007 TF reform and 2016, when the current cost recovery policy was set in place, most WBG (IBRD/IDA)-administered TFs have fallen under one of two fee arrangements: (1) a "standard" fee model for "small" co-financing TFs and pure BETFs consisting of a 5 % fee on any contribution and a one-off setup fee of USD 35,000; and (2) a "customized" fee model for all other TFs which combines a 2 % management fee and a contribution to the estimated cost of the WBG units that implement the TF activities, which can be charged up to either a fixed amount or a percentage of the fund size, as specified in the administrative agreement.

From 2016 onward, under the new (standardized) cost recovery policy, TF fees are no longer charged at TF setup but charged as the TF implements its activities. For RETFs, the WBG (IBRD/IDA) charges a fee on cumulative amounts committed to grant recipients (WB 2018a, p. xvi). Fee percentages decrease as committed amounts increase according to a staggered fee schedule.[13] For BETFs, the WBG charges the so-called "indirect share", which is currently set at 17 % of WBG personnel costs for staff and consultants at the disbursement stage.

As the climate TF portfolio entails funds which were established before 2016, a rather complex picture of fee models emerges. In principle, TFs may entail the following fee components. One component is a one-off setup fee (USD 35,000). It applied to small co-financing TFs and pure BETFs under the "standard agreement". The second component is a fee on contributions to cover TF management costs. This fee could either be *fixed* (a defined amount of currency – not used by any climate-related TF that is currently active), or *variable* (a fixed percentage that is deduced from any contribution). Variable fees differ across TFs, which is the result of their substantive mandates and

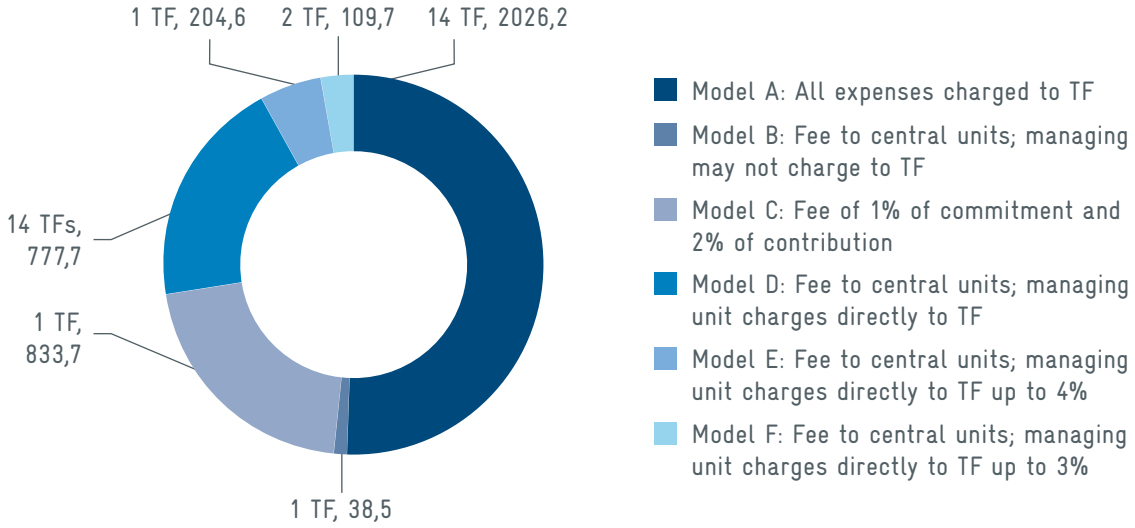
13 5 % on the first USD 50 million, 4 % on the next USD 450 million, 3 % on the next USD 500 million, and 2 % on any further amount.

historical factors. Under the standard agreement, the variable fee was 5 %, distributed between the TF managing unit and the implementing unit. Under customized agreements, fees consisted of a flat fee for the TF managing unit (typically 2 %, but our data also include cases with 1 %, 5 %, and 5.5 %) and a contribution to the operational cost of implementing units, up to either a fixed currency amount or a percentage of implementing costs.

Due to confidentiality issues, we did not obtain data on the detailed fee structures for all relevant TFs. Therefore, we cannot calculate effective fee rates across all TFs. Yet, for TFs managed by the Carbon Finance unit, we were able to obtain detailed data on the internal fee income distribution. This is only a small subset of the climate-related WBG TFs, but it is the most important set of TFs subject to the customized fee arrangement, where most of the variation in fees is located.

Figure 23 shows the distribution of fee usage structures for carbon funds, excluding fee accounts and prepaid accounts that only hold donor contributions pending transfer to regular TF accounts. The latter two types of TF accounts do not impose fees. The largest volumes of funds with available data are subject to fee model A (i.e. all expenses charged to the TF, subject to restrictions imposed by legal agreements), although an equal number of TFs applies fee model D (i.e. fee goes to central units; managing unit charges directly to the TF[14]; 14 TFs). Only one TF was found in each of the following categories: B (i.e. fee goes to central units; managing unit may not charge directly to the TF), C (i.e. fee is 1 % of commitment and 2 % of contribution), and E (like D, but only up to 4 % chargeable by managing unit). Lastly, two TFs exist in category F (like D, but only up to 3 % chargeable by managing unit).

Figure 23. Fee structure of carbon funds (by funding volume, USD million)



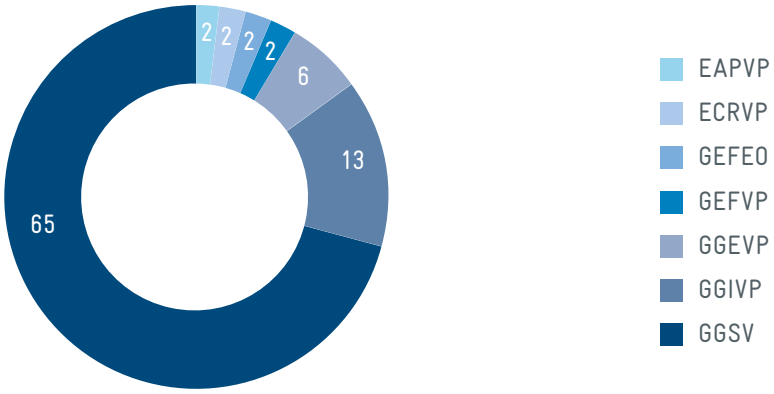
Notes:
Percentages in pie chart refer to TF sizes in USD. Number of TFs given textually.

14 Model D is different from the models E and F because there is no ceiling on managing-unit charges – model D thus is the most generous in terms of eligible costs among D, E, and F.

3.2.4. Governance

Excluding IFC and MIGA TFs (further discussed below), we see that climate-related TFs are predominantly managed by the Sustainable Development Vice Presidency (GGS) (Figure 24); it hosts 65 TFs representing cumulative contributions of over USD 5 billion. GGS is followed by GGI (Infrastructure and Public-Private Partnerships) with 13 TFs and USD 507 million in cumulative contributions. A small number of TFs is managed by regional Vice Presidencies, for example the Indonesia Sustainable Landscape Management MDTF, hosted by East Asia and Pacific Vice Presidency (EAP), and thematic global practices, for instance Energy Vice Presidency (GGE) (Energy). Another important WB department is the Development Finance Vice Presidency (DFI), which holds the corporate accounts associated with climate FIFs, which are administrative TFs, for instance to receive implementation fees (and thus not included here).

Figure 24. Host departments of all active WBG TFs on climate change



Notes:
ECR corresponds to External and Corporate Relations Vice Presidency, GEFEO is the GEF Evaluation Office, GEFVP stands for GEF Vice Presidency.

3.2.5. International Finance Corporation

The IFC Advisory Services portfolio – funded by IFC TFs, own contributions, and advisory clients – totaled USD 1.5 billion as of 30 June 2018. FY18 program expenditures with clients were USD 273 million, with a strong focus in strategic priority areas of IDA (57 %), fragile and conflict situations (19 %) and climate change (27 %). (IFC 2018, pp. 65, 79) IFC thus supports the strategic focus of the WBG as a whole, helping address challenges such as infrastructure needs, urbanization, and climate change, specifically in middle-income countries (IFC 2018).

IFC operates about 195 TFs, whose total lifetime contributions were about USD 2.5 billion and the fund balance as of 30 June 2018 was about USD 500 million. IFC TFs support advisory services and certain IFC investment programs in the form of blended finance.

For IFC, climate change is one of the key strategic priorities for its investments and advisory activities. The climate change theme is broad and can be tackled from different angles, either as part of a dedicated climate trust fund or integrated into industry or region

focused trust fund. We identified 21 climate change-related TFs at IFC, of which a total of 13 were active by the end of FY19 (listed among the WBG TFs in Annex 1). German contributions to IFC TFs are limited, focusing on the European Union (EU) neighborhood and the Compact with Africa. As of April 30, 2019, there were six active IFC TFs funded by Germany, of which only one – the Energy Efficiency Support Program for Ukraine (EE4U MDTF) (TF073063) – is fully focused on climate change. The EE4U MDTF helps Ukraine to renovate the Ukrainian housing stock with a view to increase energy efficiency, lessen the dependence on energy imports, and reduce carbon dioxide (CO_2) emissions.

3.3. Asian Development Bank

ADB has established TFs and concluded financing agreements with financing partners to support its strategies on poverty reduction, social development, and climate change. In addition to hosting its own TFs, ADB implements climate-related activities under the GEF, including the LDCF and SCCF, the GCF, and the two CIFs, which it manages jointly with other CIF implementing MDBs (Droesse 2011, p. 326). ADB has launched various initiatives to address key environmental problems in its region and to combat climate change globally. Table 25 below provides an overview of all climate-related ADB TFs (22 of which 21 are active) along with key characteristics. Germany contributes to three of these TFs – the Article 6 Support Facility (A6SF, see section 4.3.3 for details), Cities Development Initiative for Asia Trust Fund (CDIA TF), and the **Asia-Pacific Climate Finance Fund (ACliFF).** The latter is an MDTF, but Germany remains the only contributor so far. ACliFF was established in 2017 to support the development and implementation of innovative financial risk management products that can help unlock capital for climate investments and improve resilience to the impact of climate change.

Table 25. Climate-related ADB TFs (2001–2019)

ADB TF name	Start year	TF is active (Yes=1, No=0)	MDTF (Yes=1, No=0)	Cumulative contributions (million USD)	German contributions (million USD)	Number of donors	Thematic cluster
Article 6 Support Facility (A6SF)	2018	1	1	4.0	1.5	2	CARBON_A6
Asia Pacific Carbon Fund (APCF)	2006	0	1	151.0		–	CARBON_1
Asia-Pacific Climate Finance Fund (ACliFF)	2017	1	1	33.3	33.3	1	CC_MIXED
Asia Pacific Disaster Response Fund (APDRF)	2009	1	0	60.0		–	ADAPTATION_ DISASTER
Asian Clean Energy Fund (ACEF)	2008	1	0	55.7		1	MITIGATION_ MULTIPLE
Clean Energy Financing Partnership Facility (CEFPF)	2007	1	1	–		–	MITIGATION_ MULTIPLE

ADB TF name	Start year	TF is active (Yes=1, No=0)	MDTF (Yes=1, No=0)	Cumulative contributions (million USD)	German contributions (million USD)	Number of donors	Thematic cluster
Canadian Climate Fund for the Private Sector in Asia(CFPS)	2013	1	0	227.3		1	CC_MIXED
Carbon Capture and Storage Fund (CCSF)	2009	1	1	70.9		2	MITIGATION_ MULTIPLE
Clean Energy Fund (CEF)	2007	1	1	122.0		5	MITIGATION_ MULTIPLE
Canadian Cooperation Fund for Climate Change (CCC)	2001	1	0	3.5		1	CC_MIXED
Canadian Climate Fund for the Private Sector in Asia II (CFPS2)	2017	1	0	149.5		1	CC-MIXED
Cities Development Initiative for Asia Trust Fund (CDIATF)	2017	1	1	6.3	2.2	3	CC_MIXED
Climate Change Fund (CCF)	2008	1	1	74.0		ADB	CC_MIXED
Danish Cooperation Fund for Renewable Energy and Energy Efficiency in Rural Areas (DREEERA)	2001	1	0	3.6		1	MITIGATION_ MULTIPLE
Danish Cooperation Fund for Renewable Energy and Energy Efficiency in Rural Areas (DREEERA2)	2006	1	0	3.5		1	MITIGATION_ MULTIPLE
Future Carbon Fund (FCF)	2008	1	1	115.0		4*	CARBON_A6
High Level Technology Fund (HLTF)	2017	1	0	39.4		1	CC_MIXED
Integrated Disaster Risk Management Fund (IDRMF)	2013	1	0	9.0		1	ADAPTATION_ DISASTER
Ireland Trust Fund for Building Climate Change and Disaster Resilience in Small Island Developing States (BCCDR)	2019	1	0	13.5		1	ADAPTATION_ DISASTER

ADB TF name	Start year	TF is active (Yes=1, No=0)	MDTF (Yes=1, No=0)	Cumulative contributions (million USD)	German contributions (million USD)	Number of donors	Thematic cluster
Japan Fund for the Joint Crediting Mechanism (JFJCM)	2014	1	0	61.8		1	CARBON_A6
Urban Climate Change Resilience Trust Fund (UCCRTF)	2013	1	1	149.4		3*	ADAPTATION_ DISASTER
Urban Environmental Infrastructure Fund (UEIF)	2009	1	1	21.5		1	CC_MIXED

Notes:
Cumulative contributions reflect the 2001-19 period. *The FCF also has two non-sovereign donors, ENECO and POSCO. UCCRTF also has the Rockefeller Foundation as donor.

ADB has been playing an important role in mobilizing carbon finance through carbon funds under its Carbon Market Program designed to incentivize investments in GHG reduction activities in Asia and the Pacific. In the area of carbon finance, ADB hosted the Carbon Market Initiative – an innovative financing scheme to support the development of clean energy, energy efficiency, and GHG abatement in Asia and the Pacific that were eligible under the CDM of the Kyoto Protocol. The (now closed) **Asia Pacific Carbon Fund** was established in 2006 as an ADB TF to pre-purchase carbon credits generated prior to 2013 from high quality CDM projects in its developing member countries in Asia and the Pacific. The **Future Carbon Fund (FCF),** established by ADB in 2008, supports GHG emission reduction efforts in Asia and the Pacific by providing carbon finance through the pre-purchase of carbon credits from 2013 to 2020. This fund will assume greater significance under the prevailing transitory phase for the international carbon markets. It thus offers an opportunity to take long-term action on climate change (Droesse 2011, p. 326). In 2018, the ADB established the **Article 6 Support Facility (A6SF)** which will provide technical, capacity building and policy development support to ADB's Developing Member Countries (DMCs) to help them to identify, develop and pilot mitigation actions under the framework of Article 6 of the PA.

The most important mechanism in the area of mitigation-related activities is the **Clean Energy Financing Partnership Facility (CEFPF).** Established in 2007, its aims have been to improve energy security and mitigate climate change through increased use of clean energy. The CEFPF provides for framework agreements to be concluded with partners for co-financing, knowledge and risk-sharing (through credit enhancements or performance guarantees), and other forms of assistance, for instance to pilot innovative mechanisms to further develop clean energy solutions (Droesse 2011, p. 323). CEFPF comprises four clean energy trust funds: (1) the multi-donor Clean Energy Fund (CEF) supported by Australia, Norway, Spain, Sweden, and the United Kingdom; (2) the Asian Clean Energy Fund (ACEF), funded by Japan; (3) the Carbon Capture and Storage Fund (CCSF), supported by the United Kingdom and Global Carbon Capture and Storage Institute; and (4) the Canadian Climate Fund for the Private Sector in Asia (CFPS). These are all stand-alone TFs, with their own respective implementation guidelines. And yet, being under an umbrella structure, the TFs share the same clean energy targets detailed in a unified Design and Monitoring Framework, which outlines the planned performance of the CEFPF. It defines the objectives and targets, guides management in reviewing applications, and helps monitor facility performance.

The CEFPF is an interesting case because it fundamentally differs from the umbrella concept developed at the WBG. Whereas umbrellas seek to become the sole recipient of donor contributions in a given sector – replacing the TFs that belong to them – the facility concept preserves the autonomy of such TFs and complements them through a loose coordination mechanism to monitor activities and review performance.

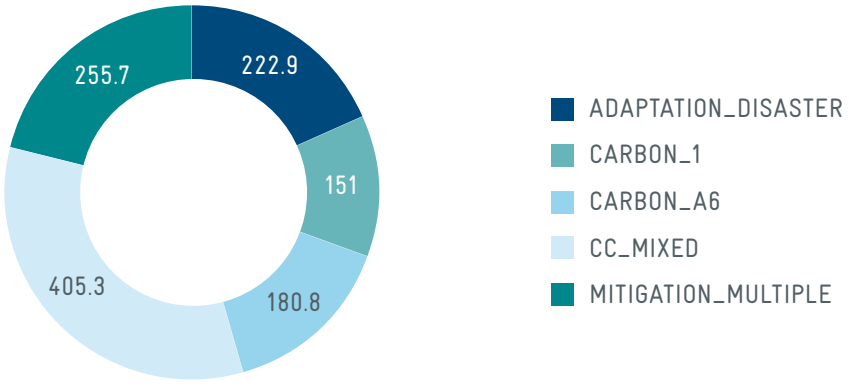
There is no expectation that donors can only contribute to the CEFPF. And yet, as with umbrellas, CEFPF hosts an annual consultation meeting with its donors to enable them to discuss the annual work program.

To support activities beyond mitigation, the ADB created the **Climate Change Fund (CCF)** in 2008, supporting technical assistance activities, grant components of investment projects, and any other activities agreed between donors and ADB. The CCF was established by ADB as a special fund, with an initial allocation of USD 40 million from ADB's ordinary capital resources (OCR). The CCF complements the CEFPF and "expands the resources available to address climate change in a more holistic program that provides financing for activities in mitigation and adaptation." It also complements the CIFs, designed to support low-carbon and climate-resilient development through scaled-up financing and jointly managed by the ADB, AfDB, EBRD, IADB, and the WBG. The CCF is a key mechanism to pool resources within ADB to address climate change through technical assistance and grant components of investment projects (Volz et al. 2015).

The CCF is guided by a steering committee which provides strategic direction, and approves policies, procedures, and membership of the working groups, for the operation of CCF. The two technical working groups (adaptation and land use, and clean energy) review and make recommendations on activities/projects for CCF support, as well as make policy and procedural recommendations to the steering committee. CCF may accept and administer contributions from bilateral, multilateral, and individual sources to the CCF. External contributors will provide oversight and review fund progress, administrative matters, annual work programs, and strategic directions. The initial USD 40 million allocated to the CCF had been fully allocated to 41 projects already by 2009 (Droesse 2011, 326).

A glance at the ADB TFs portfolio confirms that ADB is active in several thematic clusters in relation to climate change (Figure 26). CC_MIXED is the largest cluster, supported by eight TFs (seven programs) and accumulating USD 405 million over FY 2001-19. MITIGATION_MULTIPLE, which includes the CEFPF, CCSF, and DREEERA (I/II). follows with cumulative contributions of USD 256 million in six TFs (four programs). ADAPTATION_DISASTER has been receiving USD 223 million in four TFs (four programs). The CARBON_A6 cluster, supported by three TFs, has mobilized USD 181 million, followed by CARBON_1, which currently does not have any active TFs but received historical contributions of USD 151 million through the Asia Pacific Carbon Fund.

Figure 26. Distribution of ADB TFs (active and inactive) into topic clusters (2001-2019, in million USD)



Notes:
All TFs under CARBON_1 are no longer active and the respective contributions need to be excluded for a snapshot view of currently active topic clusters at ADB. The figure also excludes any co-financing contributions from FIFs.

According to the interviewees, ADB TFs may be tailor-made depending on donor preferences. While ADB has TF procedures in place that are standardized, each TF has implementation guidelines, so there is room for accommodating donor preferences. For example, in ACliFF Germany currently is the only donor and therefore has a strong influence, for instance with regard to project selection. When setting up a new TF, ADB checks that there is no similar fund in order to ensure that there is no duplication or unnecessary competition for similar projects.

The service fee usually is 5 % of the amount disbursed for TA. For grant components of loan projects, the service fee is 5 % for grants up to USD 5 million, or 2 % with a minimum of USD 250,000 (whichever is higher) for grants above USD 5 million.

3.4. African Development Bank

The AfDB has six climate-related TFs of which three are active (see Table 27). The Africa Climate Change Fund (ACCF) is supported by Germany (AfDB 2019) although the data on TFs received from the AfDB shows no German contributions to AfDB TFs.

Table 27. Climate-related AfDB TFs (since 2008, based on data made available)

TF name	Start year	TF is active (Yes=1, No=0)	MDTF	Cumulative contributions (million USD)	Thematic cluster
Adaptation Benefit Mechanism (ABM)	N.d.	0	N.d.	N.d.	ADAPTATION_MULTIPLE
Africa Carbon Support Program (ACSP)	N.d.	0	N.d.	N.d.	CARBON_1
African Climate Change Fund (ACCF)	2014	1	1	12.7	CC_MIXED
Clim-dev Africa Fund (CDSF)	2010	1	1	27.1	ADAPTATION_MULTIPLE
Congo Basin Forest Fund (CBFF)	2008	0	1	170.0	MITIGATION_FOREST
Sustainable Energy for Africa (SEFA)	2011	1	1	106.0	MITIGATION_MULTIPLE

In the theme CARBON_1, the AfDB launched the **African Carbon Support Program (ACSP)** in 2010 with the aim of assisting its regional member countries to access carbon finance. More specifically its objectives were to assist in the development of appropriate project preparation documentations under the CDM, to support the development of regional grid emission factor(s), and to support project owners to successfully commercialize the carbon potential of projects. The ACSP successfully contributed to increase awareness and know-how on the CDM on a number of stakeholders such as AfDB staff, national agencies and private project owners. This goal has been achieved through the delivery of TA, training and capacity building activities for member countries. For example, the ACSP provided capacity building for Designated National Authorities (DNAs) officials in member countries, with workshops held in Mali, Botswana and Burkina Faso. The TF was closed following the prolonged crisis on the CDM market (AfDB n.d.).

In MITIGATION_MULTIPLE, AfDB established the **Sustainable Energy for Africa (SEFA)** initiative in 2011. This Pan-African program mainly supports the renewable energy sector. It has three financing windows: project preparation, equity investments – through the Africa Renewable Energy Fund (AREF) – and enabling environment support. The average project size is about USD 1 million, taking at least 3 years for project preparation and at least one year for fund structuring. Initiated as a SDTF in 2011, SEFA eventually became a MDTF in 2013, with Denmark, the United Kingdom, Norway, and the United States ("Power Africa") as participating donors. Of the USD 106 million paid-in contributions to date, SEFA disbursed USD 45 million. SEFA is now in the process of being converted into a special fund to launch its next phase (SEFA 2.0).

In the area of ADAPTATION_MULTIPLE, AfDB operates the **Clim-dev Africa Fund (CDSF)** and has developed the **Adaptation Benefit Mechanism (ABM).** The CDSF was established in 2010 as a MDTF and attracted total contributions of USD 27 million. The fund supports operations in the following three main areas:

- Generation and wide dissemination of reliable and high-quality climate information in Africa;
- Capacity enhancement of policy makers and policy support institutions to integrate climate change information into development programs; and
- Implementation of pilot adaptation practices that demonstrate the value of mainstreaming climate information into development.

The ABM has not become operational yet but was developed theoretically by the AfDB in collaboration with governments from several African countries and various stakeholders. In the intergovernmental climate change negotiations under the UNFCCC, ABM is part of the discussions on Article 6.8 of the PA on non-market-based approaches. ABM is considered a non-market-based approach, because no international transfer of mitigation outcomes is envisaged.

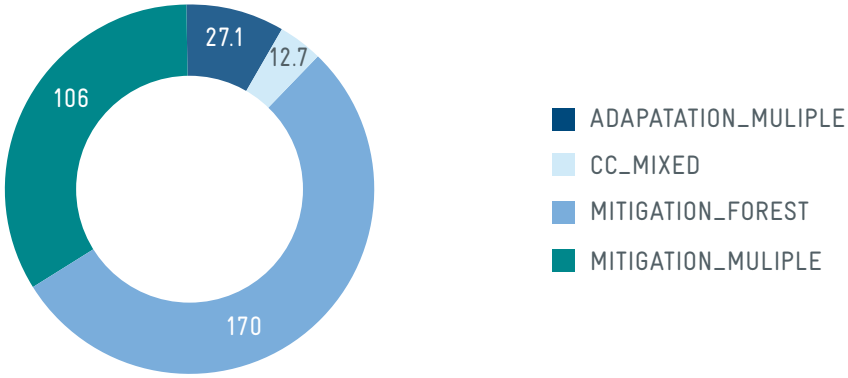
The **African Climate Change Fund (ACCF)** launched in 2014 is the youngest AfDB TF and contributes to the CC_MIXED theme. It is a multi-donor trust fund whose governance structure comprises a Technical Committee made up of relevant Bank departments, and an Oversight Committee which includes the AfDB and the donors. The contributions come from Germany (€ 4.7 million), Italy (€ 4.7 million) and Flanders, Belgium (€ 2 million) (AfDB, 2019). The TF is administered by a Secretariat, hosted by the AfDB's department of Climate Change and Green Growth. The key objectives of the ACCF are:

- Assist African countries to access larger amounts of climate finance and use funds provided more effectively;
- Help African countries to account for climate change in their growth strategies and policies, by means of upstream diagnostics and providing technical assistance;
- Provide capacity-building on topics of climate change and green growth for African countries and stakeholders at national and regional levels.

Finally, the **Congo Basin Forest Fund (CBFF)** which is the AfDB TF associated with MIGITATION_FOREST, was active until 2015. It was set up in 2008 and benefitted from initial contributions of Norway and the UK in the magnitude of USD 175 million as well as from Canada with USD 19 million in 2013 (IDEV 2018).

While the forestry theme historically occupied a large share in the AfDB's TF activities (Figure 28), it appears that new themes are now becoming more prominent after the closure of the CBFF, notably mitigation not focused on specific sectors and adaptation. Building on previous experiences with the carbon markets and CDM project development, the AfDB foresees its role as evolving towards expansion of the carbon finance operations beyond the CDM, to explore opportunities under the new market mechanism that will eventually supersede the CDM. The AfDB is also very active in developing new mechanisms to attract private investments in adaptation, such as the Adaptation Benefit Mechanism. The experience of the AfDB demonstrates how TFs can be used for pioneering such innovative approaches.

Figure 28. Distribution of AfDB TFs (active and inactive) into thematic clusters (since 2008, in million USD)



AfDB has different reporting structures for different funds. AfDB aims at standardizing the reporting process in the future to align individual TFs. Donors often ask for more information than contracted to provide, which may lead to capacity issues. Fees are negotiated for each TF and depend very much on the size of the fund.

Historically, AfDB charged a minimum 5 % fee to defray the costs of administering its TFs. According to the AfDB's Operations Evaluations Department (OED) (2013) review, this flat fee often did not cover actual expenses in administering technical co-operation funds. AfDB management therefore agreed for a need to review cost structures and a dedicated task force recommended establishing a new fee structure consisting of a one-off setup fee of USD 35,000 (for MDTFs) and a 5 % administrative fee on funds under management. An AfDB staff member confirmed that current policy was a minimum of 5 % administration fee.

3.5. Inter-American Development Bank

The IADB operates 15 climate-related TFs of which 14 are active (see Table 29). Germany contributes to only one IADB TF – the Sustainable Energy and Climate Change Initiative (SECCI). Differently from other MDBs, all TFs at the IADB are managed by a single group. Team leaders are not allowed to submit proposals to individual TFs, unlike in the other MDBs. Instead they submit proposals to a single window. There is a pre-screening filter that defines the focus topic (climate, poverty, etc.). The proposal is then reviewed by a committee that consists of all TF managers and the most appropriate TF is selected. An eligibility committee consisting of general sustainable development managers reviews the proposal's alignment with the country priorities and needs. This system allows to identify synergies and avoid duplication. Proposals are thus vetted against the IADB strategy, country priorities and funding sources. The interviewees confirmed that this approach allows to create the right incentives and reduce potential conflicts of interest. Moreover, the relationship is not exclusive: in cases when it makes sense several TFs may fund one activity. Sometimes similar proposals come up and the system allows to identify duplicates and sometimes put them together. The minutes of the review meetings are available on the IADB's Intranet, so it is a very transparent system.

Table 29. Climate-related IADB TFs (1998-2019)

IADB TF name	Start year	TF is active	MDTF	Cumulative contributions (million USD)	German contributions (million USD)	Number of donors	Thematic cluster
Biodiversity/ Natural Capital Lab	2018	1	1	25			MITIGATION_ FOREST
Canadian Climate Fund for the Private Sector in the Americas (C2F)	2012	1	0	249.5		1	CC_MIXED
Colombia Sostenible	2016	1	1	21.7		3	CC_MIXED
Emerging and Sustainable Cities	2011	1	1	14.3		3	CC_MIXED
European Commis-sion's LAIF Grant to Climate Change and Water & Sanitation	2013	1	0	16.4		1	CC_MIXED
French Climate Fund for Latin America and the Caribbean	2018	1	0	5.5		1	CC_MIXED
Mangroves Habitat Fund	–	0	0	–		–	MITIGATION_ FOREST
Multi-Donor Disaster Prevention Trust Fund (MDRTF)	2007	1	1	16.9		4	ADAPTATION_ DISASTER
NDC Pipeline Accelerator	2017	1	1	17.1		2	CC_MIXED
Ordinary Capital – Strategic Development Program (OC-SDP) for Sustainability	2016	1	–	207.7		IADB	CC_MIXED
Portuguese Technical Cooperation Fund	1998	1	0	2.8		1	CC-MIXED
Sustainable Energy and Climate Change Initiative (SECCI)	2007	1	1	55.3	20.07	8	MITIGATION_ MULTIPLE
UK Low Carbon Agriculture to Avoid Deforestation Fund	2019	1	0	22.3		1	MITIGATION_ FOREST
UK Sustainable Infrastructure Program	2017	1	0	68.9		1	CC_MIXED
United Kingdom Blue Carbon Fund	2019	1	0	2.4		1	CARBON_1

Overall, IADB TFs cover five thematic clusters (Figure 30). The largest cluster is CC_MIXED, which includes nine TFs (nine programs). The largest one is the **Canadian Climate Fund for the Private Sector in the Americas (C2F),** which is a long-standing partnership between Canada and the IADB to mobilize private finance for climate change (USD 250 million since 2012). Of comparable size in CC_MIXED is the **Ordinary Capital – Strategic Development Program (OC-SDP) for Sustainability** program (USD 208 million), an umbrella fund established in 2016 to support various dimensions of sustainability, including disaster prevention, emergency assistance, food security, biodiversity and ecosystem services, sustainable cities program, and sustainable energy and climate change. It is financed wholly from IADB's net income and not open to external donor contributions. Another sizeable program in CC_MIXED is the **UK Sustainable Infrastructure Program** (USD 69 million), whose role is to accelerate the implementation of the NDCs in LAC countries by catalyzing and mobilizing strategic private sector investments in sustainable low-carbon infrastructure. The remaining TFs in CC_MIXED are relatively minor in terms of contribution size (below USD 25 million), including **Colombia Sostenible, NDC Pipeline Accelerator, the EC's Latin America Investment Facility (LAIF) grant to Water and Sanitation, Emerging and Sustainable Cities, the French Climate Fund for LAC, and the Portuguese TC Fund.**

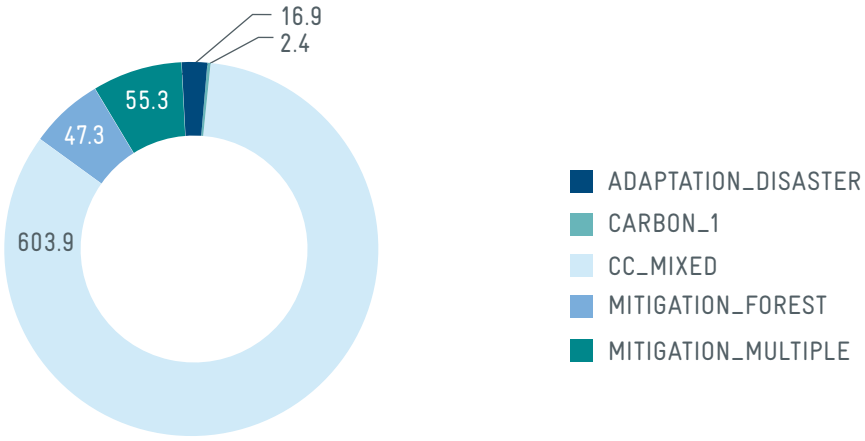
Underlying the second-ranked MITIGATION_MULTIPLE cluster is the **SECCI**. Established in 2007, it provides grant funding for multiple mitigation-related areas. These include Sustainable Infrastructure (public-private partnerships that mobilize domestic capital markets and green infrastructure); Sustainable Energy Markets and Innovation (large-scale deployment of renewable sources of power, near-market-ready entry of power generation technologies, and efforts to reduce barriers for related private-sector investment); Sustainable Transport (low-carbon transportation systems and related technologies and energy efficiency of transport technologies); carbon sinks (reduce emissions associated with land-use change, such as forestation but also land regeneration and agriculture emission reduction). There is also an adaptation component, focusing on climate risks and the testing of adaptation measures in water supply, coastal zones, marine areas, agriculture, and forests. SECCI is the most inclusive of all active IADB TFs, with support from 8 donors (including Germany, whose contribution share is about 36 %). SECCI allows for national experts to be seconded to the program.

MITIGATION_FOREST is another important theme in the IADB TF portfolio. In addition to the now-closed **Mangroves Habitat Fund** (for which no information was available), this theme is supported by two active recent TFs: the **Biodiversity/Natural Capital Lab** (USD 25 million) and the **UK Low Carbon Agriculture to Avoid Deforestation Fund** (USD 22 million).

The topic cluster ADAPTATION_DISASTER is supported by the **Multi-Donor Disaster Prevention Fund (MDRTF).** Established in 2007, it attracted cumulative contributions of USD 17 million from four donors, notably Canada, Japan, Korea, and Spain, while having disbursed USD 15.5 million thus far. All LAC countries are eligible to apply, but project support is capped at USD 1 million. In addition to grant funding, the MDRTF can also finance investment projects.

Finally, IADB hosts one genuine TF in the CARBON_1 cluster: the **UK Blue Carbon Fund,** established in 2019, to mobilize strategic public and private sector investments in thematic areas such as sustainable fisheries, sustainable aquaculture, coastal zone management, coastal protection solutions, payment for ecosystem services, eco-tourism, and marine protected areas. The TF seeks to promote the sustainable management of mangrove forests and accelerate sustainable development in LAC countries with key mangrove ecosystems.

Figure 30. Distribution of IADB TFs into thematic clusters (1998-2019, in million USD)



In terms of TF reporting the IADB interviewees highlighted three key levels of reporting:

- Annual report by April 30 for every TF is a standardized report with the narrative, success stories and financials.
- Web-based platform where the status, financials, projects, etc. can be seen almost in real time.
- TF-specific evaluation/reporting requirements that are donor-driven. Different donors require different reporting frequencies. Some request more quantitative result frameworks, while others prefer narratives. Expectations and requirements of donors are very different which changes the nature of reporting. IADB tries to keep it as standardized as possible since it is resource-intensive.

Overall, reporting should be focused on monitoring and evaluation rather than on communication in order to maximize learning. The reporting workload must be covered by the TF administrative fee. IADB TFs operate various fee models. The modal administrative fee is 5 % on contributions (13 out of 32 TFs). Some TFs charge "9 %–9.5 %" (3 out of 32), while the remaining TFs have adopted fully customized fee structures (with fee percentages between 1.75 % and 11 %, or fixed USD amounts, staggered fees, and one special (confidential) fee arrangements with Japan in an MDTF.

4 Potential for reform and consolidation

This section looks at the potential for TF reform and consolidation. Focusing primarily on the WBG, the section starts with a general appraisal of challenges and opportunities for TF reform, based on our interviews with key TF stakeholders. We identify two general dimensions of TF reforms. The first refers to "good practices" in managing individual TFs with the aim to increase the relevance, effectiveness, and efficiency of climate change-related TFs (see also Herrmann et al. 2014). The second takes a portfolio perspective to identify potential overlaps in the climate finance architecture. While our mapping exercise (Section 2) and review of TFs in MDBs (Section 3) provide a general idea of areas which are addressed through several TFs versus areas which lack such support, we now draw on detailed case studies of three sample groups of TFs, which provide insights into non-quantifiable information relating to the strategic position of a TF in the climate finance architecture, the underlying procedures for internal management and collaboration with external partners (including donor countries but also other implementing MDBs), and forward-looking policy discussions around TF priorities.

4.1. Good practices in individual TF management

4.1.1. Success criteria for climate change-related TFs

The success of climate-related TFs can be measured along multiple dimensions. Stakeholders agreed that first and foremost, success should be linked to the climate change-related outcome of TF activities. Where this is not possible, measuring climate change-related policy output is a second-best alternative. Another dimension relates to inputs, specifically financial goals. The cost-effectiveness of the TF instrument is a final criterion.

(1) Climate change-related outcomes (mitigation / adaptation): Outcome metrics are not widespread but if they are adopted, the most commonly used is reduced GHG emissions. For example, carbon funds are directly linked to GHG emissions reductions through carbon credits. Stakeholders said that more work would be necessary to operationalize climate change-related outcomes. A key challenge is to attribute the causal impact of the TF on climate outcomes, which ultimately involves a counterfactual analysis (given that alternative mechanisms could have been available that might have produced similar outcomes). Considering these challenges, stakeholders have turned to output metrics as a second-best alternative.

(2) Climate policy outputs: Climate-related TFs can help advance climate policy at two levels. First, climate-related TFs have mainstreamed climate issues into WBG operations – essentially re-orienting WBG activities toward climate change. While many have contributed to this goal, the CIFs are most widely recognized as having transformed the MDB business. Second, these TFs also support the development of climate policies at the country level. A case in point are the NDC Support Facility and the PMR at the WBG, the NDC Pipeline Accelerator at IADB, and the CBIT.

(3) Financial goals reflect the input side of success. In this regard, the FIFs are a cornerstone in achieving the collective financing goal of USD 100 billion for climate change until 2020. Another financial goal is to mobilize private-sector funding for climate-related activities. For example, discussions within the GCF about including private-sector co-financing as a success criterion are pending.

(4) Management costs of TFs: Fee models for climate change-related TFs have become increasingly similar across MDBs. A quantitative comparison of average fees nonetheless is difficult as the fee modalities are qualitatively different across institutions. For example, recipient-executed WBG TFs under the new standardized rules charge a 5 % fee on disbursements. The same holds for most ADB TFs, and to some extent to IADB TFs, although we found higher fees in several customized arrangements. AfDB charges 5 % but on assets under management, which means that effective fees are

likely higher than those on contributions. From a donor perspective, TFs may thus appear to be an efficient mechanism for outsourcing delivery of development projects. However, a large unknown are the shadow costs at home, which no donor currently measures. More research would be necessary to assess the full economic cost of TF instruments compared to relevant alternatives.

4.1.2. Success factors and challenges along the TF lifecycle

In this section, we identify good practices regarding the setup, governance, and implementation of climate change-related TFs with a view to contribute to the success of such funds. Given the relatively small number of TFs at the RDBs, our conclusions are based on stakeholder experiences with WBG TFs.

Setup of TFs

Given the increased sensitivity to portfolio fragmentation and stricter requirements to create new funds, creating new WBG TFs has become more difficult. If after a joint review of existing options stakeholders conclude that there is a need for a new climate-related TF, there are several key lessons to consider in order to avoid the creation of additional administrative burdens.

(1) Channeling through existing structures: New TFs have increasingly been established as so-called "windows" under the umbrella of existing TFs. An example is the GESP program on battery storage, established as a fourth phase of the DPSP under the CTF. The use of a well-established vehicle had advantages over creating an entirely new structure. These examples show that demands for new TFs can be ever more easily accommodated with the existing ecosystem of climate-related TFs because this system has become more diversified while developing well-established governance mechanisms. The constraint is to educate decision-makers about what is available and what are the legal options for further developing existing structures.

(2) Finding the niche: New TFs need to avoid duplication of existing TFs and have a clear mission. TF objectives, TF result metrics, and relevance to country needs must be apparent. In the context of climate-related TFs, TFs that focus on mitigation impacts seem most relevant, for example the PAF, which uses a results-based payment mechanism for future carbon credits, competitively allocated via auctions. Another positive example is the PMR, which has a clear capacity-building mandate, helping countries to introduce CO_2 markets. Its effectiveness is measured by the number of countries that have accomplished this goal. The PMR has been evaluated and found to have achieved good results in its nine years of existence (Ipsos MORI and SQ Consult, 2018). The PMR also catered to country needs, not least by giving countries a say in the choice of projects, though projects are initially approved by the donors. In moving forward, given the growing membership of the PMR, this participative approach will no longer be practicable. Moreover, donors will de-emphasize market readiness and emphasize emission reductions in the results framework, thereby seeking stronger links to the NDCs. This also shows that governance structures must be sufficiently flexible to accommodate (endogenously) evolving priorities in order to be effective.

(3) Providing incentives to overcome "siloization": A final aspect is the extent to which the TF incentivizes inter-organizational cooperation and coordination with other funds. In this regard, FIFs are the role model, as they were designed to promote inter-MDB collaboration. Conversely, mechanisms for promoting intra-MDB coordination across different units are insufficient. For example, the 2018 PMR evaluation criticized the lack of integration of the work of the carbon TFs into the general work of the WBG. It further suggested improving cooperation in two ways. First, country management units should be better informed which TFs provide money for analysis that IDA does not cover. Second, internal knowledge management would need to be improved so that WBG staff were more aware of the importance of climate change for achieving other SDGs. The WBG should learn from successful cases of cross-unit collaboration. A case in point is the PMR in Chile, which effectively used the excellent contacts of the country unit for Chile to raise awareness for PMR.

(4) Ensuring buy-in at all fronts: TFs will be successful if there is political buy-in at three levels. First, senior management within both donor and MDB

administrations must support TF initiatives and make a long-term commitment, as did the WBG president in the case of the Carbon Finance Unit. Donors can do their part by making it attractive for the MDBs to be engaged in climate-related TFs. This is the case particularly in the CIFs (where only MDBs are eligible implementers), but less so in the GCF (whose set of implementers is broader and related administrative burdens are much higher for the WBG trustee). Second, TFs are also more successful if they are connected to a political process that can create the critical momentum for change (while also increasing the visibility for the donor). A case in point is the GFDRR. The GFDRR has become the focal platform for disaster reduction efforts. It is linked to the Sendai Framework for Disaster Risk Reduction (2015–2030), a policy framework developed at the UN Office for Disaster Risk Reduction (UNDRR) with seven targets and four priorities of action. UNDRR has observer status in the GFDRR that is the principal funding mechanisms for these priorities. Third, donors leading a new initiative must secure buy-in from other donors. Although donors legally establish MDTFs, they sometimes remain the only actual donors. There are many ways to draw in other contributors. Some climate TFs, like the NDC Support Facility, are attached to a broader partnership, which provides a forum to mobilize new supporters. Other options to mobilize donors may include informal discussions at key events (such as the Annual Meetings, the WBG Trust Fund Forum, and UN climate summits) and in the Steering Committees of other TFs.

Governance

(1) Ensuring adequate resourcing: Two types of resources can contribute to success with respect to steering TFs toward desirable outcomes and thus their overall success. First, financial resources – the scale of operations – are less important for the overall success of a TF but increase the weight of a donor. Second, human resources – the amount of time that staff devote to the TF partnership – are positively related to TF success. WBG staff also welcome active donor involvement, in terms of both financial resources, intellectual leadership, and technical capacity (for instance in the review of project proposals). Examples of active donor involvement mentioned by WBG staff include PMR, CTF, GFDRR, and some carbon funds. Where donors mobilized the human resources needed to actively supervise and steer the TF, they could achieve tangible results even with limited financial contributions. However, this would require a human resource commitment on the donor side, which may clash with other objectives such as the desire to reduce domestic administrative capacities.

(2) Promoting stakeholder coordination: Donors are advised to be actively engaged in donor coordination, for example in the GCF where it is essential – given the more politicized nature of the fund – that OECD/Development Assistance Committee (DAC) donors speak with a united voice. In the CCRIF, for example, donors meet more often than the scheduled two annual meetings, depending on need. While this is time-consuming for stakeholders, it also is an opportunity to learn about priorities of other donors and enhance mutual understanding. Donors also need to be engaged with TF secretariats. Effectiveness was low where response time was long, for instance because the issue was not a priority for the TF manager who also managed a bigger TF at the same time, or where donor staff was unable to even identify counterparts in the WBG. Active engagement with TF secretariats also holds promise to allow for better integrating TF support with bilateral assistance, especially for recipient-executed activities. A WBG official said that the partnerships with some donors were successful but capacity was an issue. In the AF, an area for improvement mentioned was the better interlocking between AF and bilateral implementing agencies. Finally, coordination with other TFs is increasingly important in an expanding ecosystem of climate-related TFs. It is deemed particularly relevant where duplication risks to undermine effectiveness, for example for technical assistance. Donors can do their part to manage duplication informally through overlapping membership in relevant TF Steering Committees, where they can work to ensure that TFs carve out their respective niche, without duplicating tasks; a more formal strategy – especially used for FIFs – is through cooperation agreements among the biggest four FIFs – AF, CIFs, GCF, and the GEF, in all of which most G7 donors are involved. A final strategy is to exploit opportunities emerging from past work in related TFs. In the new NDC Support Facility, established alongside the PA, beneficiary countries articulate a demand for NDC policy support vis-à-vis Country Management Units (CMUs).

(3) Using micro-management wisely: In general, donors are not involved in the choice of TF-supported activities. Exceptions are the PMR and other carbon funds (i. e. CPF, Ci-Dev, TCAF) where donors are involved operationally through the collective approval of country proposals. WBG interviewees consistently (and independently) highlighted the added value of inputs from some donors that are on top of technical issues. Donors can ensure meaningful input by adequate staffing, as the volume of documents to review for meetings can be large so that sharing the burden of work among a team of donor staff is essential. The WBG also welcomes donor leadership in politically sensitive contexts. For example, the Global Risk Financing Facility (GRiF) (see Section 4.3.2.) is considered to be politically sensitive by WBG interviewees as it can involve subsidies for insurance premia on a recipient country level, and thus there is a grant by grant review by Germany and the UK.

IFC interviewees stressed high levels of trust from donors but also reported certain challenges, such as achieving a balance between high granularity of information in donor reporting and high efficiency in TF operations. In some cases, IFC donors may want detailed and narrowly defined work plans, to be followed meticulously, while IFC needs maneuvering space, such as the possibility to shift funds to other countries, given the particularity of working with the private sector that can be unpredictable. IFC also strives at maximizing climate mitigation impact by working in the middle-income countries, with some donors focusing increasingly on low-income countries. There may thus be a trade-off between harmonizing climate mitigation outcomes and geographical coverage of development aid.[15]

Implementation and results

(1) Co-implementation of TF activities: The WBG does not allow donor agencies to engage in TFs as implementing agencies. The only exception to this rule is the GCF, governed outside WBG rules, in which bilateral aid institutions are official implementing agencies. Ultimately, whether or not implementers other than the WBG are allowed under WBG TFs must be negotiated. For example, in the case of the PMR, the TF allows non-WBG implementing agencies, as requested by the partner country. In a country with strong UNDP presence, it might make sense to delegate project implementation to UNDP, whereas in others – as the case of Cote d'Ivoire illustrates – bringing in the WBG might catalyze follow-up investments. In this case, the WBG invested USD 0.5 million through the PMR but ultimately mobilized USD 200 million.

(2) Exploring the benefits of secondments: Some thematic contexts may benefit from donor secondments, especially where donor staff have unique expertise that may benefit the host MDB. The secondee may also serve as pivot between donor administration and MDB administration, thereby helping improve the flow of information. Secondment is more likely to occur in smaller TFs that fly under the radar of political attention, at the WBG for instance the Climate Resilient and Low-Carbon Development MDTF and CCRIF, and at IADB the SECCI. Overall, secondments provide a good example of a more general lesson that additional degrees of flexibility in TF agreements may bring effectiveness advantages, but these must be balanced against efficiency losses implied by customization.

(3) Monitoring, results, and evaluation: Stakeholders wished for further improvements on how MDBs monitor and report on results, despite a general satisfaction with reporting in climate-related TFs. One official suggested better differentiation between inputs, outputs, and outcomes, stating that WBG reporting was focused too much on inputs. The official was also critical about the anecdotal nature of results reporting and its high level of aggregation. Similarly, officials perceived a lack of evidence on the degree to which TF support helped reducing emissions. This "attribution gap" was particularly salient for awareness-raising activities, raising questions about value for money. In contrast, the PMR is a climate-related TF whose climate impact was understood clearly. Beyond impacts, stakeholders found it even more difficult to understand the incremental costs of TFs and whether such costs would be acceptable given ultimate impacts.

In sum, we now know which engagement practices are likely to foster more successful climate change-related TFs. Evidence suggests that clear objectives, political buy-in, stakeholder coordination, and adequate

15 This issue was also raised by some IBRD and IADB interviewees.

resources are crucial in this regard. WBG staff also prefer less prescriptive approaches by donors. Donors should set clear expectations but otherwise not tightly earmark their contributions – or ask for customized reporting. Through extending its operational rules on TFs, the WBG has sought to institutionalize some of the good practices in TF management. However, there are still idiosyncratic factors such as the quality of the relationships between stakeholders at both ends which can affect the success of TFs. Therefore, it is important that stakeholders work together to further improve the institutional environment in which sustainable TF partnerships can thrive, for instance by reducing staff turnover and promoting intra-institutional learning.

4.2. Key considerations for reducing portfolio fragmentation

Fragmentation refers to the multiplicity of climate-related TFs in the aid architecture as well as within individual MDBs (specifically the WBG), each with their own governance structures, decision-making processes, and results reporting. This multiplicity increases the risk of duplication as well as coordination costs. There is therefore an *a priori* belief that curbing fragmentation is beneficial for the effectiveness and efficiency of climate action through TFs. This section first explains these considerations in greater detail before discussing arguments against curbing fragmentation and associated challenges of implementing portfolio reforms.

4.2.1. Why fragmentation is harmful

Most interviewees at the WBG attested that the TF portfolio is too fragmented, with potential inefficiencies and unexploited synergies as a result. The top decile of the IBRD/IDA TFs (not only climate) hold 75 % of the total money allocated to all TFs (WB 2018a) – i.e. there is a long tail in the fund size distribution. The main issue is thus the multiplicity of small funds. According to WBG staff, even the WBG Executive Board was not fully aware of the size of the TF portfolio and the number of climate-related TFs.

The fragmentation of the WBG TF portfolio poses problems for efficiency. Each small TF requires dedicated administration and needs to produce regular reports, generating substantial costs. The web portal for donors of the WBG contains spreadsheets for each TF and there is a risk of mistakes and confusion in entering data. Currently there is only the Development Partner Center (DPC) where donors can check what TFs they are paying to, but the data presented there is often incomplete and may contain errors.

From an effectiveness standpoint, one key consequence of TF portfolio fragmentation is its negative impact on beneficiaries. Anecdotal evidence corroborated by some interviews strongly suggests that the multitude of TFs is a problem for countries – in order to understand the widely differing rules of access to all these funds, they need massive human capacity. Thus, recipients may have difficulties identifying appropriate TFs and also having sufficient capacity to follow all the rules to access the funds. If an overarching TF was set up, all communication between recipients and TFs could be undertaken in a centralized fashion and recipients would have to follow only one set of proposal submission rules.

In sum, according to views expressed mostly by WBG staff, current levels of fragmentation appear to be unjustified even considering the diversity of climate-related issues. Proponents of curbing fragmentation argue that too many TFs exist primarily because donors are concerned with loss of control, loss of visibility, and costs of coordination. Especially the recent growth in the number of FIFs would give rise to concern, given the permanence of these funds and their different business processes which increased transaction costs for the WBG (WB 2019a).

4.2.2. Challenges to curbing fragmentation

The challenges to curbing fragmentation are twofold: one is that there are theoretical arguments against reducing fragmentation that are hard to disprove; the other is that while stakeholders agree that fragmentation may undermine TF success, it is extremely hard to come by and efforts to stem it may be too costly to follow through. We discuss each of these challenges in detail below.

The theoretical case against curbing fragmentation

Diverse goals require diverse instruments. As climate change is a complex issue, a variety of instruments is necessary to address it. Many climate-related TFs at the time of their creation responded to clear gaps in the climate finance architecture. For example, in the absence of alternative instruments, donors created the FCPF to pilot a new instrument to support REDD activities. While the AF successfully piloted adaptation issues (projects below USD 10 million), the GCF goes beyond that by scaling up support (projects of around USD 50 million), by allowing "direct access" for recipient countries, and by supporting transformational change in developing countries. In the area of mitigation more specifically, some TFs like the Carbon Initiative for Development (CiDev) and TCAF only pilot new initiatives while others mainstream them. In the area of climate risk insurance, despite a number of existing initiatives, there was a gap in terms of enabling countries to use climate risk insurance which led to the InsuResilience initiative. More generally, donors may cultivate several similar TFs as a political hedging strategy. A single large TF might become stalled due to a political conflict on its governance, whereas a set of different TFs is more resilient to attempts of one country to stall their operations.

The debate about having an adequate set of instruments at hand touches upon the broader point of the role of TFs in the business model of MDBs. While MDB's core business is investment lending, they often use TFs to complement it. Climate change-related TFs at MDBs are used to (1) pilot activities in new areas that lending cannot address, mobilize knowledge and push the international agenda; (2) provide the required technical assistance to countries; and (3) catalyze private capital through a new emerging generation of TFs that deploy concessional finance and that connect to regular lending operations. This provides incentives for countries to deploy more resources in climate finance since they gain access to lower-cost capital.

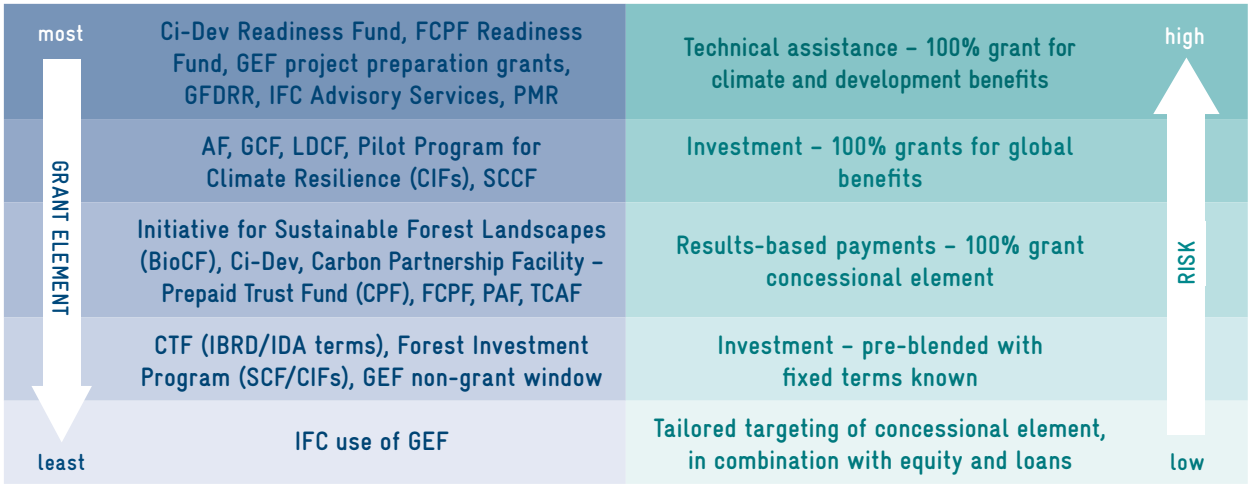
TFs are thus often seen as complementary tools to standard bi- and multilateral public climate finance to explore new topics or fields of activity that do not receive priority or enough attention from the perspective of certain donors. Hence, they are typically driven by donors that are interested in specific thematic activities at a given point in time. Donors have an interest in setting up a TF if they think that an MDB is better suited than themselves to achieve related aims, e.g. catalyzing carbon finance or blending various sources of finance such as core MDB funding directed at development with climate finance directed at mitigation/adaptation. Moreover, MDBs often propose TFs to their donors as a means to pilot innovations that do not have a space in the classical operations, like Ci-Dev and TCAF.

In the context of MDB projects, concessional funding is scarce and often used in combination with other funding to target specific barriers impeding project viability. This is the case for instance for technical assistance, pilot activities, and activities with broad-based benefits (such as global analytical work). Grant funding is also indispensable where capital costs are high due to the high-risk nature of a project and where rates of return on investments are low.

Most climate change-related TFs use grant funding, but some also use loans. Our data do not allow us to quantify the relative importance of these funding modalities, but we can categorize funds according to whether they primarily use grants or loans. It is key to note that funding modalities are inherently linked to the level of project risk (Figure 31) – while grant funding allows for greater risks, loans must manage risks more carefully, which may create tensions between several donors supporting different funding modalities under a common governance framework, as in the case of the CTF. Importantly for the fragmentation debate, the implication is that the proliferation of new funds is

partly the result of limitations with existing TFs; for example, a donor wishing to provide loans cannot use the SCF where such funding instrument is not available at present, but also not the CTF, which accepts loans but does not offer full flexibility in the direction of new programs (i.e. the GESP is a recent exception).

Figure 31. Classification of TFs according to the use of the grants and level of risk



Note:
Adapted from WB (2016)

In sum, the theoretical argument against curbing fragmentation is that limitations in existing TFs prevent stakeholders from addressing burgeoning climate-related challenges comprehensively, which creates a need for a new TF to fill the niche. Once there is a significant number of TFs, there is also value in cultivating an ecosystem of funds which can mitigate risks of political deadlock and whose competitive interactions could enhance efficiency (rather than reduce it – as skeptics fear).

The challenge of feasibility

TF portfolio consolidation is a good idea in theory but requires a lot of discipline in practice. Donor officials said it was not their task to control fragmentation by exercising self-restraint but for donors *collectively* to alter the rules to prevent it. However, this is difficult, as donors face a collective action dilemma. There are also vested interests on the MDB staff side, as well as legal hurdles and cost considerations that may reduce the appetite to vigorously address fragmentation.

(1) Political economy challenges in donor countries: Donor countries face challenges at three levels. At the highest political level, the "announcement logic" – the need for policy-makers to underpin their commitment with a new fund – can lead to fragmentation. At the level of development policy-making, every donor has different demands in terms of specific sectors, themes, and geographies. WBG interviewees highlighted that the high level of TF portfolio fragmentation in the WBG is due to diverse donor interests. Donor agencies see TFs as vehicles to foster support and additional budgets from political institutions like parliaments compared to traditional Official Development Assistance (ODA). Whether such political attention requires over 100 different climate TFs – as opposed to a more manageable number – appears to be questionable

though. Another reason for TF engagement is related to pressure by the OECD's DAC and the 2005 Paris Declaration on Aid Effectiveness requiring donors to reduce the number of bilateral recipient countries. This leads these donors to use TFs as an opportunity to indirectly continue the cooperation with recipients that are "lost" in this concentration process. At the operational level, donors need to report to their taxpayers on how TF money has been used. Donors sometimes complained about lack of transparency in WBG TFs. Some donors, like Germany in the NDC SF, address this challenge through close cooperation with the WBG, notably through secondment. Such operational arrangements may indeed help donors reduce levels of procedural earmarking while continuing to be able to report back to domestic constituencies.

(2) Political economy challenges in MDB bureaucracies: Especially at the WBG, senior management has adopted several efficiency-enhancing measures through its TF reform process (further described below) to incentivize larger contributions with fewer earmarks, including minimum contribution thresholds, minimum number of donors, sunset clauses, and window options. An important aspect also is the advice of WBG staff (primarily through DFI) guiding donors to existing options before contemplating new funds. In reality, however, some of these measures are blunt and may be subverted. For instance, minimum thresholds – while disadvantaging small donors – may set incentives for MDB staff to use (yet) unregulated instruments for similar operational purposes, such as reimbursable advisory services (RAS), thus merely shifting the locus of the problem of too many isolated activities. MDB staff also opposes consolidation of TFs when this is in the interest of recipient countries, which may prefer facilities tailored to country circumstances, even though efficiency would dictate a global facility.

(3) Legal hurdles: TFs may not be merged as their activities are not compatible with each other. For example, CIFs and carbon funds differ in their generic funding approach – the former provide upfront finance whereas the latter only result-based finance. This could however be resolved by setting up two windows under one TF. Another example of a legal obstacle is that most climate-related FIFs have their own governing bodies underpinned by provisions of the UNFCCC and thus could only be consolidated if there is consensus among Parties to the Convention.

(4) Consolidation itself is (too) costly: The recent "spring cleaning" of Sweden shows that consolidation is possible. Sweden managed to reduce its number of TFs from 127 to 82 in 2019, foremost by closing dormant accounts and merging sub-accounts. What gets neglected though is the staff time on both sides that went into this exercise. It is questionable if actual cost savings warranted this effort, although there are some benefits that are only symbolic.

In sum, these considerations suggest that attempts to reduce the fragmentation of TF portfolios is fraught with challenges. There is a fundamental difference of interests between donors and the MDBs, with the latter seeing TFs as vehicles to support its core business, and the former looking for distinct activities outside MDB core activities. Ultimately, the question of how much aggregation is desirable and possible needs to be determined within close consultation between both sides, ideally with additional input from ultimate beneficiaries. As is evident from our analysis of the WBG TF reform process (see Section 4.4), these discussions are ongoing.

4.3. In-depth analysis of fragmentation and potential for consolidation

To understand the relevance of the different arguments listed above and explore possibilities for TF consolidation, we examined a selection of TFs in some more detail drawing on document analysis and interviews with stakeholders in the German government and the MDBs with a focus on the WBG.

4.3.1. Selection of the sample TFs for analysis

This section describes our methodology to identify the sample of TFs for these specific case studies. To choose our cases from our "universe" of 216 TFs at the different MDBs (Annex 1), we applied a combination of quantitative and qualitative criteria. As we had detailed disbursement data available for a subset of climate TFs at the WBG, we could leverage a quantitative criterion to help inform the case selection for WBG TFs. This was important because the qualitative criteria alone would not be enough to choose from the >150 WBG TFs in an objective way. We thus developed a quantitative measure – a so-called "similarity score" – which was designed particularly to identify similar WBG TFs based on their disbursement profiles. Our presumption was that the efficiency gain from consolidation of highly similar TFs would be greater than that from consolidating less similar ones. Box 1 outlines the methodology for calculating the similarity scores.

Box 1. Similarity score methodology

We considered three dimensions of similarity. The first captures 19 broadly defined sectors of intervention (Annex 7) that are part of a broader list of sectors defined by the WBG whose funding shares in any given project add up to 100 %. The second captures another 21 action types (Annex 7) which again are part of a list of themes that add up to another 100 %. We took these directly from the WBG's classification system of TF activities. The third dimension covers all 120 countries that ever received funding from WBG climate change-related TFs.

For any climate change-related TF, we calculated similarity scores with all other climate change-related TFs by drawing on the complete lists of projects that each TF supported and calculating similarity scores on all three dimensions. A pair of TFs was considered most similar if it disbursed the same share of its funds on the same sets of sectors, action types and recipients. Conversely, they were considered as very different when the shares diverged strongly on all three dimensions. Let us consider only the country dimension for a simple example. Then if TF A disbursed USD 100 million in Bangladesh and USD 100 million in Vietnam, but TF B only spent USD 40 million in Vietnam, then the similarity over recipients of these two funds would be the **cosine similarity** of the two following vectors: A=(50 %, 50 %), B=(0 %, 100 %), Similarity(A, B)=0.71.[16] When considering all three dimensions, we obtain three similarity scores, for which we calculated the simple average to obtain the final similarity score: Similarity(A, B)=1/3*[Similarity1(A, B)+Similarity2(A, B)+Similarity3(A, B)].[17]

If the database did not include any projects for a given fund, its similarity measures are missing. In fact, we could only perform 1235 pairwise comparisons[18], given the available data on disbursements that needed to be matched onto the TF information. Specifically, we were unable to obtain disbursement information for the carbon funds – a relatively large set of TFs; these TFs required a qualitative approach to case selection drawing on our expert knowledge.

16 The cosine similarity is a standard measure to calculate the similarity of two vectors in the n-dimensional space and is defined as (A' B) / (||A||*||B||), where A and B are column vectors, and || || is the norm of a vector. The dimensionality of the vector is given by the number of non-zero disbursement shares in the combined portfolio of both funds.

17 Dimensionality of the vector is given by the number of non-zero disbursement shares in the combined portfolio of both funds. If no information was available on a specific dimension, we did not include it in the overall average similarity score.

18 In principle, there are 44,521 pairwise comparisons. Missing observations therefore are a limitation of our quantitative approach. However, not all comparisons are a priori relevant, for instance because the funds are in different clusters. Nonetheless, we address the lack of data by making the similarity score only one criterion to guide our case selection.

Having calculated similarity scores for all feasible combinations of WBG climate change-related TFs, we scrutinized more closely the pairs of funds with extremely high similarity scores, as we would expect the highest potential for consolidation among those TFs. Hence, TFs with higher similarity scores (typically to be found within the same thematic cluster) would be given a higher priority in our overall case selection.

Given the central purpose of our study being the identification of potential overlaps in climate-related support (primarily within MDBs but also across them), a necessary condition was a sufficient number of programs /TFs in a dedicated thematic cluster. In a similar vein, we considered the dynamic evolution of the TF portfolio within a given thematic cluster, focusing on those areas which can reasonably be expected to grow further in the near future (such as for example ADAPTATION_DISASTER), rather than those where TFs would naturally come to their end of life under a business-as-usual scenario (e.g. MITIGATION_FOREST where many TFs have already closed). While these were important considerations, we also sought to cover a broad range of TFs to ensure that our recommendations would not only apply to a small subset of climate change-related TFs. Finally, we also considered whether Germany participated in the TF (which was not a necessary condition for case selection but we wanted to ensure that Germany indeed participated in most TFs), and whether there were potential issues in the "division of labor" with respect to TF management on the German side.

Based on the qualitative and quantitative criteria discussed above, we selected sub-sets of TFs for case studies. A total of ten TFs from clusters ADAPTATION_DISASTER and CARBON_A6 were chosen for deeper analysis. In addition, we selected the cluster CARBON_2 for a general qualitative analysis to better understand the proliferation of carbon funds for Kyoto credit purchase. The following sections provide the analysis of the above sets of climate change-related TFs.

4.3.2. First sample: adaptation/disaster TFs

This sub-section analyzes the six selected TFs within the cluster ADAPTATION_DISASTER:

- Multi Donor Trust Fund for Mainstreaming Disaster and Climate Risk Management in Developing Countries
- EU – African, Caribbean, and Pacific (ACP) Region Disaster Reduction Partnership Trust Fund
- Japan-WB Program for Mainstreaming Disaster Risk Management in Developing Countries
- InsuResilience Climate Risk Financing and Insurance Program MDTF (under GRiF)
- Global Partnership on Disaster Risk Financing (DRF) Analytics
- Disaster Protection Program

Except for the Disaster Protection Program, the TFs in this cluster are all under the GFDRR, which is a program and a secretariat that was established in 2006 by multiple countries including Germany, Japan and the US and other organisations such as the UNDRR and the WB. Its mission is to "facilitate implementation of the Sendai Framework for Disaster Risk Reduction and to contribute to the achievement of the Sustainable Development Goals (SDGs) and the Paris Agreement, by ensuring that all development policies, plans, and investments – including post-disaster reconstruction – are designed to minimize disaster risks and build the resilience of people and economies to climate change" (GFDRR 2018, p. xv).

The GFDRR has managed so far a total funding of USD 730 million from a set of 17 individual TFs including eight MDTFs and nine SDTFs, of which six are active, respectively (Table 32). GFDRR grants receive funding from development partners, contribute to the main GFDRR MDTF with SDTFs Japan, USAID, and Australia that operate closely aligned with the MDTF, plus a set of single donor trust funds financed by the European Union, and an associated number of special programs, which include the GRiF, the City Resilience Program, and the Canada Caribbean Resilience Program. The CREWS Initiative is a FIF which has the WB and the GFDRR as

implementing partners. The total portfolio of GFDRR's activities includes nearly 400 active grants supporting 136 countries. The largest share of active financing is determined for global activities (26 %) followed by projects in Sub-Saharan Africa (SSA) (23 %), East Asia and Pacific (15 %), Europe and Central Asia (12 %), South Asia (11 %), Latin America and Caribbean (10 %) and the Middle East and North Africa (3 %) (GFDRR 2018).

Table 32. TFs that have been or are under the GFDRR umbrella (since 2006, including active and not active TFs)

Name	WB#	MDTF/ SDTF	Start date	End date	Active (Yes=1, No=0)	Size (million USD)
Australian Trust Fund for Mainstreaming Disaster Reduction of the GFDRR	TF070807	SDTF	2007	2016	0	10.8
Callable Funds for the Standby Recovery Financing Facility of the GFDRR	TF070868	MDTF	2007	2017	0	35.8
EU – ACP Region Disaster Reduction Partnership Trust Fund	TF071630	SDTF	2011	2020	1	98.6
GFDRR Trust Fund for Mainstreaming Disaster Risk Management in Developing Countries	TF072622	MDTF	2016	2021	1	42.7
GFDRR Trust Fund for Mainstreaming Disaster Risk Management in Developing Countries	TF072896	SDTF	2017	2021	1	3.0
GFDRR Trust Fund for Mainstreaming Disaster Risk Management in the Indo – Pacific Region	TF072835	SDTF	2017	2021	1	9.2
Global Partnership on DRF Analytics	TF072535	SDTF	2015	2020	1	6.7
Global Risk Financing Facility (GRiF)	TF072858	MDTF	2017	2022	1	31.2
Japan Trust Fund for Mainstreaming Disaster Reduction Initiative of the GFDRR	TF070809	SDTF	2007	2016	0	6.0
Japan-WB Program for Mainstreaming Disaster Risk Management in Developing Countries	TF072129	SDTF	2013	2013	1	95.0
Multi Donor Trust Fund for Mainstreaming Disaster and Climate Risk Management in Developing Countries	TF072236	MDTF	2014	2020	1	81.5
Multi Donor Trust Fund for Mainstreaming Disaster and Climate Risk Management inDeveloping Countries	TF072584	MDTF	2016	2020	1	44.1
Multi Donor Trust Fund for Mainstreaming Disaster Reduction Initiative of the GFDRR	TF070611	MDTF	2006	2017	1	199.2
Serbia National Disaster Risk Management Program SDTF	TF072528	SDTF	2015	2020	1	6.8

Name	WB#	MDTF/ SDTF	Start date	End date	Active (Yes=1, No=0)	Size (million USD)
South-South Cooperation for Mainstreaming Disaster Reduction Multi Donor Trust Fund under the GFDRR	TF070952	MDTF	2007	2016	0	1.5
Spanish Trust Fund for Mainstreaming Disaster Reduction Initiative of the GFDRR	TF070806	SDTF	2007	2016	0	5.1
Standby Recovery Financing Facility of the GFDRR	TF070948	MDTF	2007	2017	1	24.7

GFDRR supports the Sendai Framework for Disaster Risk Reduction and the UNDRR in advocating for policy change to achieve these objectives.

A lot of work has been done to improve monitoring and evaluation processes of the GFDRR. In the annual report there is monitoring against specific indicators such as: how many hazard exposure and risk data sets are developed, how many people are trained on the topic, how many cities and national policymakers have designed investments informed by knowledge produced by GFDRR, number of beneficiaries to the shock response system. One interviewee highlighted that the multiplicity of TFs under the GFDRR umbrella actually helps in terms of reporting, because it allows to get more granular information reflecting the focus of each TF, and that the GFDRR is also aiming at the alignment with commitments made through IDA on crisis risk and response. For example, the GFDRR uses a matrix on how many countries implemented DRR policies. Moreover, IDA and IBRD commitments become priorities for country directors in terms of the lending portfolio and there is therefore a good level of alignment.

GFDRR handles well the multiplicity of TFs which are not driven by the WBG but by donors' priorities. Certain donors may need to have a SDTF that sits next to the main GFDRR MDTF due to their special funding priorities or administrative requirements. GFDRR SDTFs are usually less flexible than the GFDRR MDTF.

According to the interviews the main **GFDRR MDTF** allows to:

- Be demand-driven and respond to country needs quickly as the MDTF is the most flexible among the TFs in that cluster.
- Fund analytical work, which over the years drives major policy shifts. Examples of the analytical work include the "Unbreakable" report on the resilience to natural disasters, the "Shock Waves" report on impacts of climate change on poverty and the "Lifelines" report on resilient infrastructure.
- Have partnerships with actors outside the traditional development actors: universities, private companies, technology providers, etc.
- Allows rapid response and provides grants very quickly, particularly for rapid assessment of impact following disasters, and to help mobilize WBG teams to respond quickly to government requests for assistance following an event.

The GFDRR's MDTF objective is manifold. First, it aims at supporting developing countries in mainstreaming disaster and climate risk management into national development priorities, supporting a vision of a world where resilient societies manage and adapt to ever-changing disaster and climate risk, and where the human and economic cost of disasters is reduced. Last year's activities supported or initiated by GFDRR included grants to support governments working in i) using science and innovation in disaster risk management, ii) promoting resilient infrastructure, iii) scaling

up engagements for city resilience, iv) strengthening hydromet services and early warning systems, v) deepening financial protection through disaster risk financing and insurance, vi) building social resilience, vii) deepening engagements in resilience to climate change and viii) enabling resilient recovery.

Two of the selected TFs are SDTFs by the EU and Japan respectively. The **ACP-EU Natural Disaster Risk Reduction Program** was launched in 2011 by the EU and the ACP Group of States. The program helps with the prevention and mitigation of disasters, resilience building and recovery support by supporting governments and stakeholders "in integrating multi-sectoral and multi-hazard risk management approaches into national/regional development planning" (GFDRR 2018, 38). In total, the program has implemented over 100 projects in more than 40 countries and committed USD 5.5 million in 13 grants last year, supporting over 30 countries in resilience-building activities. One example is the ACP–EU Building Disaster Resilience in SSA Program, which "helps build the resilience of countries and communities against the impacts of natural disasters by strengthening the Disaster Risk Management (DRM) capacity of Regional Economic Communities and supporting the development of multi-risk financing strategies" (GFDRR 2018, 38). Other examples build on the expanded collaboration with the EU and include Serbia National Disaster Risk Management Program (USD 6.5 million), the DRF Analytics (USD 6.4 million) (see below) and the European Union–South Asia Capacity Building for Disaster Risk Management Program (USD 11 million) (GFDRR 2018).

Another SDTF managed by GFDRR is the **Japan-WB Program for Mainstreaming Disaster Risk Management in Developing Countries,** which was launched in 2014. It is funded by a USD 100 million contribution from Japan and "supports developing countries in integrating DRM into national development planning and investment programs through WB country strategies and operations, and in connecting Japanese and global expertise in DRM with developing country counterparts" (GFDRR 2018, 40). In total, the program comprises 54 projects in 55 countries and examples include projects on i. a. flood forecasting in Ghana, seismic resilience enhancement for subway developments in Peru and Ecuador or workshops on, e. g. enhancing dam safety and hydromet services in Afghanistan. Last year's new grants valued over USD 15 million, enabled projects in 14 countries with activities addressing various natural hazards (GFDRR 2018).

The GRiF has its roots in the **InsuResilience Partnership** which was established in 2015 when Germany chaired the G7. Chancellor Merkel set up the "Climate Risk Insurance Initiative" in order to bring an additional 400 million people under climate risk insurance. Germany got engaged due to a high priority of the adaptation theme and the high visibility due to the G7 summit and subsequent UNFCCC COP21 in Paris. The InsuResilience Global Partnership, which was officially launched at the UNFCCC COP23 in Bonn in 2017 and is hosted by GIZ, brings together G20 countries in partnership with the V20 (vulnerable) nations, as well as civil society, IOs, the private sector, and academia (InsuResilience 2019a). Since the launch, more than 40 diverse partners have signed the Joint Statement and become members and more than 70 diverse partners have expressed their support for the Global Partnership (InsuResilience 2019c). "The Partnership seeks to amplify the impact of ongoing initiatives, develop new climate and disaster risk finance and insurance solutions to help meet growing needs in developing countries, and ensure risk financing is well integrated within a broader dialogue on disaster risk management and humanitarian financing – including in-country systems" (InsuResilience 2019a).

The **InsuResilience Climate Risk Financing and Insurance Program MDTF** was established in 2017 by BMZ at the WBG as one vehicle to implement the initiative. In 2018, Germany (BMZ), the UK (DFID) and the WBG launched the **GRiF MDTF** to scale up financing for pre-arranged financial solutions, and the funds in the aforementioned InsuResilience MDTF were transferred into the GRiF MDTF, which is jointly managed by the WBG's Finance, Competitiveness and Innovation Global Practice and GFDRR. GRiF's goal is to increase the financial resilience of poor and

vulnerable people in developing countries against natural disasters and boost their capacity to meet post-disaster funding needs sustainably. It aims to achieve this objective by developing and implementing insurance solutions to increase the financial response capacity of governments and strengthen the domestic catastrophe insurance markets. The GRiF MDTF finances four types of activities: analytical work, technical assistance, cost-sharing of market-based risk transfer solutions, monitoring and evaluation activities (InsuResilience 2019d).

The **Global Partnership on DRF Analytics** was established by a USD 6.4 million contribution from the EU in 2015 and has been managed by the GFDRR and implemented by the WBG's Finance, Competitiveness and Innovation Global Practice, specifically the Disaster Risk Financing and Insurance Program (GFDRR 2018). It aims at enabling (sub-)national governments and development partners to have access to improved tools and well-communicated technical information to support them with risk-informed decisions in disaster risk finance and increase the financial resilience of countries against natural disasters (GFDRR 2019). The project expects to catalyze the uptake of innovative risk identification, assessment, and financing tools within the development policy frameworks and agenda of several middle-income and low-income countries (DRFIP n. d.). Example of co-financed activities include the development of tools for informed DRF policy decision for agriculture insurance programs and support of the DRF for Resilient Livelihoods program (InsuResilience 2019b).

The secretariat function of the GFDRR manages the resources of the associated trust funds in a coherent way, including the process of establishing work plans, allocating resources, and managing grants to operational teams. The secretariat aims at balancing the supply of funding and donors' priorities with demands coming from client countries, as voiced through operational teams working in those countries. The secretariat is staffed with technical experts who provide quality control and review of grants and financing decisions, while also contributing to global partnerships and leading analytical work and the production of knowledge products. The secretariat thus looks at grant applications and matches them with the most suitable TF, which works well. This approach is somewhat similar to that of the IADB (see Section 3.5). In sum, GFDRR thus already operates as an umbrella and the WBG TF reform therefore looks very closely at GFDRR as a best practice model for umbrellas to achieve efficiency.

The **Disaster Protection Program,** a USD 14.5 million SDTF that started in 2017, seems to have only a very limited degree of activity to date, as no specific reports are available. The only publicly available mention of its action is that it has co-funded a Centre for Disaster Protection in London in 2017 and has a co-located office there (InsuResilience 2018, 23). The Disaster Protection Program is part of the Disaster Risk Financing and Insurance Program (DRFIP), a joint initiative by the WBG's Finance, Competitiveness and Innovation Global Practice and the GFDRR, established in 2010 to improve the financial resilience of governments, businesses, and households against natural disasters. It would be an excellent candidate for merging into the GFDRR.

4.3.3. Second sample: TFs relevant for Article 6 of the Paris Agreement

This sub-section analyzes the four selected TFs within the cluster CARBON_A6:

- Pilot Auction Facility for Methane and Climate Change Mitigation (PAF)
- Transformative Carbon Asset Facility (TCAF)
- Partnership for Market Readiness (PMR)
- ADB Article 6 Support Facility (A6SF)

The **PAF** was launched in 2013, thus well before the PA. It is a results-based payment mechanism which sets a floor price for future carbon credits in the form of a tradeable put option, competitively allocated via auctions, in order to target CDM methane projects, which were at the risk of discontinuation. The PAF implemented three auctions between July 2015 and January 2017 allocating contracts to twelve, nine and five bidders for a total of 20.6 million tons of carbon

dioxide equivalent (tCO_2e). PAF reports its results in a highly transparent manner. Due to the universally acclaimed success of PAF, a new **Nitric Acid Climate Auctions Program (NACAP)** has been set up in 2019 on the same model. However, it is integrated into the PAF umbrella, thus not furthering portfolio fragmentation.

In 2015, the WBG set up the **TCAF** that has the aim to develop pilot activities for up-scaled crediting under the Paris Mechanisms. This facility wants to credit policy measures, such as removal of fossil fuel subsidies and energy efficiency standards. It aims to acquire carbon credits worth USD 50 million per pilot activity; in contrast to past carbon funds of the WBG the activities must be linked to a larger WBG loan. However, the WBG has not been able to mobilize the initially desired USD 500 million of funding and thus had to start the initiative with less than half of this budget, funded by Germany, Norway, Sweden, Switzerland and the UK. It also took the WBG more than two years to agree on the first pilot activity, an energy efficiency program for household appliances in Indian cities, out of originally nine (Climate Cent Foundation 2018).

In contrast to the carbon funds of the early 2000s, we conceive TCAF operations as extremely opaque – TCAF has a public website (https://tcaf.worldbank.org/) but neither an annual report nor a publicly available activity pipeline. TCAF's methodological work to date has also been carried out behind closed doors. A single discussion paper on methodological principles has been published recently (WB 2018b), but it is much less detailed than the methodologies developed by WBG TFs under the CDM.

The **PMR** was created already in 2010. It is currently the only international initiative explicitly aiming at fostering the development of domestic market mechanisms. These markets also generate demand for credits from international market mechanisms. The PMR targets 19 middle-income countries, while low-income countries are not covered by the program. The PMR brings together policymakers and public and private entities to share information on design of domestic carbon pricing such as a carbon tax or emission trading scheme and enhance readiness for introduction of such instruments. Results of the PMR have been mixed to date, with only a few of the covered countries actually introducing market instruments. For example, in Chile the PMR played a crucial role in creating space for the discussion on carbon pricing, capacity building of local actors and establishing a stakeholder consultation process that eventually led to the introduction of the carbon tax. At the same time, many country programs under PMR have been seriously delayed or been oriented towards side issues such as monitoring systems. While PMR will end in December 2020, there will be a successor program (Partnership for Market Implementation, PMI) with three windows: customized support, additional readiness work and implementation.

ADB launched its **A6SF** in 2018 to identify, develop, and pilot mitigation actions under Article 6 in ADB member countries and provide capacity building, technical and policy development support for the government institutions that are to administer Article 6 activities. The facility is supported by Germany and Sweden. So far, the facility has just started its activities and its results cannot be assessed.

In sum, two of the four TFs assessed cover a specific thematic niche in the context of the development of new market mechanisms; the PAF and the TCAF are unique in the international landscape of Article 6 piloting. The upcoming PMI could nicely be combined with the mitigation components of the NDC Support Facility which was set up as an MDTF in 2016 but so far is only funded by Germany, as both pursue the aim to mobilize mitigation in the context of national strategies. The ADB TF has a broad remit and could easily be combined with other broad bilateral Article 6 support activities, e. g. from Sweden and Japan. The scale of the initiatives varies widely which has an impact on their effectiveness. The small size of the ADB initiative means that it will face high fixed transaction costs.

In terms of the future role of TFs in carbon markets, it was highlighted by one of the interviewees that because of how Article 6 is designed, there seems to be less multilateral dynamic and more bilateral focus. Back in the Kyoto days, donors went to the WBG because it would have access to projects. However, in the new context a lot of engagement is required with host countries' governments. Project approval becomes more important and will probably be more complicated than under the CDM. In this light, TFs may not be

needed for bilateral transactions, but may be useful to facilitate host country government engagement, as the WBG often has stronger relations with these governments than single donor governments, and also to support capacity building in host countries' governments.

Another interviewee highlighted that the WBG is an "extremely expensive intermediary" and that donors are now better positioned to engage directly in Article 6 activities as they have accumulated experience compared to the early Kyoto days.

4.3.4. Third sample: carbon funds aimed at bulk purchase of credits

This sub-section provides a general qualitative analysis of the cluster CARBON_2. The cluster includes the following programs undertaken by the WBG:

- Carbon Partnership Facility
- Danish Carbon Fund (DCF)
- Italian Carbon Fund (ICF)
- IFC-Netherlands CDM Facility
- Netherlands CDM Facility
- Netherlands European Carbon Facility
- Spanish Carbon Fund (SpCF)
- Umbrella Carbon Facility (UCF)
- WB/EIB Carbon Fund

Five of these TFs were SDTFs set up by governments (Denmark, Italy, Netherlands, Spain) in 2002 to 2005 to rapidly buy CDM credits as cheaply as possible, and partly to support the private sector in the development and origination of carbon projects. All of them were quite large, e.g. SpCF (USD 194 million), Italian Carbon Fund (USD 163 million) and DCF (USD 91 million). In contrast to the TFs under CARBON_1 (see Section 2.3), information on these SDTFs was not published, arguably as it was a highly competitive market that also included private sector companies. As each country wanted to ensure its own compliance with the Kyoto emissions targets and did not want to depend on other countries regarding the selection of projects, it had no interest to collaborate with other countries, even if content-wise, all these funds were very similar and could have been easily combined.

The **UCF Tranche 1,** the largest carbon market TF (888 million USD), was set up specifically to reap the financial benefits from Hydrofluorocarbons (HFC)-23 reduction projects. These projects were financially extremely attractive because very small financial investments could trigger huge emission reductions. An early mover in South Korea in 2003 triggered a frantic search for such opportunities, most of which were located in China and India. The WBG pushed away a number of governments and private companies trying to buy HFC-23 credits from Chinese projects and rapidly set up the UCF in order to collect funding from private CDM credit buyers to engage in a massive HFC-23 CDM credit purchase contract (WB 2006); private carbon credit brokers like Natsource scrambled to become members of the UCF (Rosenzweig 2016, 74). In August 2006, the UCF spent USD 737.6 million to buy 129.3 million credits from two Chinese HFC-23 projects (WB 2011). Even if a second purpose of the UCF was to support China to set up the CDM Funds, so that part of the windfall to these companies could be directed to sustainable development in China, the UCF was an approach akin to carbon funds operated by private banks, and it is debatable if it should ever have been sent as a TF using public funding.

The **Carbon Partnership Facility** set up in 2009 supported programmatic approaches in sectors and technologies so far sidelined by the Kyoto Mechanisms. This specific purpose made it unique among WBG TFs, even if later it could have been combined with the Ci-Dev TF which also focused on programmatic activities. The WB explored this possibility but abandoned it, because this would have implied a complete overhaul of CPF's complex governance structure.

The other, multilateral funds all pursued specific topics and thus their consolidation would not have generated relevant benefits.

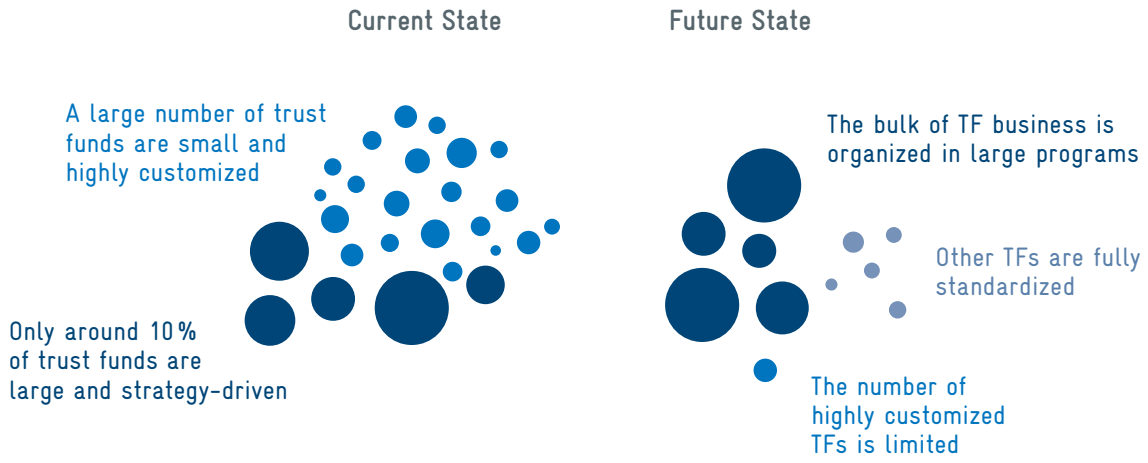
4.4. Ongoing WBG TF reform and umbrella TFs

4.4.1. TF reform

The WBG's current round of the TF reform aims to "strengthen the link between funding and strategic priorities and to improve efficiencies". The main idea behind the WBG TF reform is to structure the future WBG TF portfolio under fewer and larger "umbrellas" (Figure 33). It is expected that all Global Practices and Regions would have a limited number of programs to support their highest priorities to channel most TF resources. Activities not fitting into these large programs can still be supported through individual TFs that would however be highly standardized (WB 2018d).

The TF reform aims at having a clear alignment of objectives of all stakeholders from the beginning of umbrellas. For example, this may be achieved through a system where business units send fundraising initiative notes to DFI and then there is an internal mechanism on how WBG and donor teams align the TF with their objectives. Fundraising plans would then be shared with all business units, which creates visibility of all fundraising initiatives and gives an opportunity to see duplicates/similar activities and avoid creation of similar TFs. Sometimes it is not just multiple business units in the WBG trying to do similar things but also different donors trying to do the same with different units, which will also be addressed. Internal and external screening is thus important not to create duplicates. DFI has a role in strategic fundraising and also signing off new TFs but cannot take over the coordination completely and probably cannot become a "clearing focal point". The "optimal level of TF aggregation" question still remains to be answered by business units. The conversation must take place at top management level, e.g. Vice Presidencies will be more and more accountable of the TF portfolio.

Figure 33. Vision of the WBG TF reform



Source:
WB (2018c, 2)

The WBG TF reform is being implemented as an iterative process. The pilot phase of rolling out new instruments began in the second half of 2018 in order to test the designs of umbrella programs. The final decisions on the design of umbrellas and the beginning of their rollout were scheduled for mid-2019 (WB 2018c).

Overall, there is a commitment to curb proliferation of TFs in the WBG, although there are no quantitative objectives with regards to the number of TFs. As an illustration to this commitment, interviewees indicated that there were nine proposals for new FIFs in the past two years and they were all redirected into other instruments. At the IFC the reform also aims to have fewer TFs in the future, larger and more flexible ones.

4.4.2. TF umbrellas

WBG staff suggested that the WBG as an institution should expedite its efforts toward implementing umbrellas because proliferation of TFs would continue if the current bottom-up approaches were to be maintained. There should thus be a top-down strategic element in the climate finance architecture. According to the WBG interviewees, new TF umbrellas would strike a "sweet spot" in the level of TF aggregation – between being theme-specific but not too fragmented. One non-WBG interviewee agreed that granularity of TFs can stop at big topics, such as mitigation, adaptation and technology transfer and not go into more specific areas, which is happening in the existing TFs.

However, there must be a differentiation between the existing TFs and future TFs. Some of the existing TFs can be "retro-fitted", e. g. GFDRR or the NDC Partnership. There is no one size fits all umbrella structure, however, there will be more synergies and alignment if there is a convening structure. For example, it was suggested that in adaptation and resilience, TFs were competitive and bringing them into a single structure would therefore be counter-productive.

The WBG has already created two TFs under the new umbrella 2.0 model in the area of environment: PROBLUE (water and oceans) and PROGREEN (forests and landscapes). A third one, PROCLEAN (air quality) is under development. The bank thus attempts to find a common denominator for different TFs, so donors would contribute to these and not create their own TFs in order to generate synergies.

At the origin of **PROBLUE** there was a conscious decision by the management of the Environment Practice to better structure the TF portfolio. There is a growing interest in oceans, so if no action is taken now tomorrow there would be multiple TFs addressing different ocean issues. By putting together several like-minded donors and making a global proposal that would include all related topics the WBG was able to attract their attention. Some donors still want to have special rules (non-binding earmarking preferences) and there are ways of doing it without creating new TFs. However, more recently some important donors decided not to demand such special rules and let the WBG allocate funds where it makes more sense given the demand. PROBLUE focuses on four key areas:

- The management of sustainable fisheries and aquaculture
- Addressing threats posed to ocean health by marine pollution, including litter and plastics, from marine or land-based sources
- The sustainable development of key oceanic sectors such as tourism, maritime transport and off-shore renewable energy
- Building government capacity to manage marine resources, including nature-based infrastructure such as mangroves, in an integrated way to deliver more and long-lasting benefits to countries and communities

PROGREEN, the Global Partnership for Sustainable and Resilient Landscapes, is set up as a WBG MDTF aimed at tackling biodiversity, forestry and land issues. PROGREEN has three priority areas:

- Management of forests and land-based ecosystems
- Management of land-use changes from agriculture
- Management of landscapes

In the climate change area, umbrellas are in the stage of development. According to WBG staff, a new umbrella on innovative climate finance will probably host carbon funds. One of the challenges for result-based funds was that they were driven by donors (proliferation of carbon funds, see Section 4.3.4. above). This may have made sense in the beginning of carbon markets under the Kyoto Protocol, but based on accumulated experience there could be several buckets: nature-based solutions, programmatic approach[19] (out of Ci-Dev), policy approach (TCAF), new innovation approaches (with smaller amounts of liquidity). Programmatic, policy and nature-based approaches will be priority, increasingly moving away from a project-by-project approach.

19 Program of Activities (PoAs), a framework that allows implementing an unlimited number of usually small single Component Project Activities (CPAs) under one registered PoA. This framework aims at reducing the transaction costs – particularly for small-scale distributed emissions reduction activities, such as for example efficient cooking stoves or efficient lighting solutions, and large-scale renewable energy activities.

5 Discussion and recommendations

This section draws together the various strands of our analysis while integrating further evidence from our stakeholder interviews and our expert knowledge that has not been presented in detail in previous sections. We first identify the key issues regarding the potential for consolidation in the portfolio of climate-related TFs and the possibilities for managing such TFs more efficiently. We then formulate actionable recommendations for both the MDBs and bilateral donors, notably Germany.

5.1. Key issues regarding trust fund consolidation, costs and benefits

TFs have become an important vehicle for anchoring climate-related activities in the work of MDBs. Most stakeholders would agree that the sheer number of climate-related TFs is significant. But what is the right number of TFs? Under which conditions does it make sense to have different TFs? Is it simply the number of TFs which drives the effectiveness of climate finance and resource efficiency or which other factors need to be considered in this context? In the debate about the optimal design of the climate finance architecture, there is a tendency to focus on the number of TFs as the primary target of reform. Yet, our quantitative analysis of similarities along with the different stakeholder interviews clearly shows that this is not the right way to pose the question. Much depends upon the specific conditions under which TFs have been set up. Hence differentiation is required, just as in the broader context of development aid where donor fragmentation was also shown to be a much less generalizable problem than often believed (Gehring et al. 2017).

Looking at the three clusters within which we carried out our in-depth analysis we found that despite their strong similarities, the adaptation/disaster TFs seem to be structured in an efficient way given their set up under the umbrella of the GFDRR. This structure seems to provide an adequate balance between flexibility, and the common structures that facilitate synergies and reduce transaction cost. In contrast, among the carbon funds, we identified a number of TFs whose independent co-existence appears rather questionable. Such doubts come up even for some funds with considerable financial volumes, notably the carbon funds oriented towards the bulk purchase of credits that proliferated in the 2000s. For these TFs, from the very beginning even the intent for collaboration between donors does not seem to have existed, as they were set up to reap financial benefits for individual donors thereby fueling the parallel development of a number of similar SDTFs. Yet other problems became visible in the context of the Bank-driven set-up of the UCF in which the individual donor interests were well-bundled, but only because the WBG made use of its preferred access to the relevant host governments to impose itself as a broker of the HFC-23 reduction projects that could provide large volumes of emission credits at relatively low prices.

Leaving aside the rather special case of the UCF, in which the costs for the WBG were primarily reputational and overall costs were related to the WBG crowding out private sector providers and thus inhibiting market competition, the main type of costs driven by the multiplicity of TFs are transaction costs. As the above examples show, these costs can be significantly reduced through appropriate structures like umbrella TFs or even a different setting in which individual TFs are replaced by funding windows within a single TF for a given topic. While the latter certainly carries the smallest administrative burden for the MDBs, it only accommodates individual donors' specific wishes for thematic specialization within a fund but cannot accommodate different procedural requirements. In this context, the individual donors' administrative cost to change procedural requirements must also be taken into account. For certain donors, such as the EU, they may be prohibitively high, so that the decision whether

or not to accept an additional SDTF for this donor should depend on how important it is for the overall goal of the existing cluster of funds to include this donor. One argument in this context is certainly the size of the financial contribution this donor will provide for the common cause. Finally, transaction costs also need to be considered at the level of the recipient. In this context, it appears plausible to us that a functioning umbrella structure may serve the purpose of minimizing transaction costs at the recipient level just as well as a single TF.

Efficiency has to consider not just the costs, but also the benefits. One of the major benefits of TFs arises from networking and shared experience among the participating donors of the TF as well as between the individual donors and the MDB. At first glance, it seems that the benefits of shared experience among TF donors can be reaped only by MDTFs, but some successful cases suggest that a well-functioning umbrella structure may also encourage communication and cooperation among members of individual sub-funds, including aligned SDTFs. Hence umbrella TFs may be useful, both in terms of reducing cost and in terms of ensuring some relevant benefits of the TF model.

As our interviews reveal, bilateral donors also consider their increase in influence as another potential benefit of TFs. This increase in influence can occur at various levels. First, donors may seek leadership (or at least a strong weight) within a TF, so that they can ensure that the TFs follow their preferences in which case the input of other donors can be considered as leverage for their agenda. This can be reached by focusing on a limited number of TFs and by not spreading one's funding too thinly. Obviously, this model only works if not all donors have the same ambition. If there is aligned commitment among donors, this may yield TFs intended to become MDTFs but eventually ending as independent and unconnected (de-facto) SDTFs, i. e. the worst case in terms of the criteria discussed previously.

Through TFs, bilateral donors also seek influence over the MDB, either jointly or individually. Through voluntary funding of specific thematic areas, the focus of MDB operations can be affected. Clearly, the whole climate change agenda would have much less weight in the WBG's list of priorities if it were not for the instrument of climate change-related TFs. Of course, the backside of this is that, in the long run, such influence may undermine the legitimacy of the MDBs and their official decision-making bodies – unless these bodies themselves take a more active role and request from the donor community which kinds of TFs they would like to see to complement operational activities. The situation is similar when individual donors use TFs as a means to gain privileged access to the MDB through secondments. As a means of exchange of experience and mutual learning, this may well be beneficial for both the MDB and the individual donor concerned, but MDBs need to be careful to avoid the impression of favoritism which can lead to reputational damage.

Donor effort coordinated through an MDTF may increase donor influence on recipients and foster program implementation in the desired way. This is an argument that is typically advanced as well for donor coordination and against aid fragmentation more generally. However, there are also similar trade-offs. While a unified approach gives more power to the donors, it takes away the power from the beneficiaries. Considering the paradigm of empowerment, true partnership, and also recipient government ownership, this may be problematic. Finally, some competition generally spurs innovative ideas, which should be beneficial for development overall.

What this discussion emphasizes is that the optimization of the institutional setting is a complex endeavor that requires more than a simple reduction in the number of TFs. Furthermore, the assessment of what is optimal clearly depends on the individual perspective. It is thus not surprising that we encountered different views on what is desirable. Our interviews show that particularly MDB stakeholders are concerned about fragmentation while views among donor representatives were more diverse. Some believe an "ecosystem of funds" can address specific activities along the project cycle and can foster innovation through healthy competition where there is no best approach yet. The other side contends that there are too many funds that make it impossible for recipients to navigate

the range of options and for senior management to exercise effective oversight. Activity implementers expressed mixed views in that respect and in most cases were not aware of such level of TF proliferation.

Some additional factors limit the possibility to draw unambiguous conclusions from our analysis. Notably, while there is a lot of discussion about costs, we have had no access to concrete estimations of transaction costs or other administrative costs for either the MDBs, the bilateral donors, or the recipients. Hence, we have to base our assessment on general perceptions and anecdotal evidence about where they are high, intermediate or low.

Against this background, the recommendations we derive from our work will focus on cases were such assessments by our interview partners have been relatively consensual or where they can be directly deduced from the limited qualitative and quantitative evidence.

5.2. Recommendations for MDBs, especially the WBG

As clarified above, despite the extremely high number of TFs, notably at the WBG, our recommendation for MDBs is not to reduce the number of funds at all cost, or not to create any new ones. Rather, we focus on A) how to organize existing TFs in an efficient way by creating a coherent system of climate change-related TFs, and on B) how to improve the selection and integration of new ones into this system.

A) Organizing existing funds in an efficient way and thus keeping administration costs as low as possible while reaping the benefits of donor cooperation is a key issue also discussed in the WBG's TF reform. In many ways, the results of our study confirm the directions already taken in this respect, notably regarding the benefits of an umbrella structure. In addition, the model of a central responsible unit as practiced at the IADB could be usefully adopted – possibly in a somewhat adjusted form – by other MDBs.

Recommendation 1: Entrust responsibility for all TFs to a central group of staff/unit within the MDB

At the IADB all TFs are managed by a single group of staff. At the AfDB the relatively small number of TFs does not require such a dedicated unit at the moment, but the Bank is considering establishing it should the number of TFs increase in the future. While for the huge number of TFs such as in the case of the WBG, full management by one unit will not be possible, a single unit could still be entrusted with the overall responsibility for coordinating all TFs. This would ensure the consistency of the goals of the TFs with the MDB's overall strategies, be responsible for internal resource allocation to the funds and for stronger coordination among units and ensure internal and external transparency about the TFs within the organization. In this role it could also make propositions about closures and mergers of TFs and about the creation of umbrella funds. Such a central responsible unit can help mitigate the risk that TFs fly under the radar of central management and simply duplicate activities of other TFs or follow practices that may be harmful to the reputation of the MDB as a whole.

Recommendation 2: Find appropriate umbrella solutions

Umbrellas strike a balance between donors' demand for control and MDB management's demand for standardization. All TFs under an umbrella are governed by the same overarching strategy and their administrative schedules for donor meetings, results reporting, and related processes are aligned. In addition, umbrella TF secretariats play a coordinating role in resource allocation (regarding both, demand by potential beneficiaries and supply by individual donors). If a responsible central unit exists, the umbrella TFs could take a subsidiary role in a two-level structure. Albeit

often focusing on global themes, umbrella TFs seek close alignment with country assistance strategies. A best-practice example of an established umbrella is the GFDRR. It is a family of TFs with an important MDTF at its core, and with an active secretariat that contributes to aligning the fund with beneficiary priorities and MDB country strategies. We would recommend to integrate all disaster protection TFs into the GFDRR. Overall, umbrellas seem to accommodate interests from all sides. As the key funds in their respective sectors, they ensure scale of operations and visibility to donors, while not eliminating the possibility for additional TFs in concession to the need for flexibility and experimentation on emergent issues.

Most stakeholders agree that the current system involves too many small TFs and that some aggregation is generally a good idea. However, the debate about the right "level of aggregation" and the optimal size of the umbrella structures is still ongoing. In the climate area, the ten clusters suggested in this study can serve as the first basis for considering potential umbrella structures, as this level of aggregation seem to be comparable to that of the new umbrellas PROBLUE and PROGREEN. Concretely, based on our analysis the following four thematic clusters can be considered for future umbrellas:

- Carbon funds aimed at operationalizing and supporting markets under the PA
- Disaster and adaptation funds
- Mitigation funds focused on the energy sector, including industry and transport
- Mitigation funds focused on forestry and land use

Recommendation 3: Consider separate windows within TFs

While the necessity to establish SDTFs as a complement to existing MDTFs may arise in some cases to accommodate procedural needs of individual donors, in other cases simply opening a specific window within an existing TF may suffice. This is notably the case when donors require earmarking that goes beyond the specific goals of the fund. While such a narrow earmarking is generally not allowed in TFs there may be reasons to accommodate the donor anyway, e. g. to allow reporting to the Parliament. In such cases, the window-option seems to generate a lesser administrative burden than a separate SDTF. Furthermore, the donor can be fully integrated in the exchange within the TF. Adopting separate windows within TFs along with umbrella funds and a central unit would generate a three-level organizational structure that should facilitate the overview of the full system of TFs even in an organization with a large number of TFs like the WBG.

Recommendation 4: Generate financial incentives for cooperation within MDTFs

To induce donors to select TFs that generate little administrative cost and high benefits, MDBs could use fee structures that incentivize contributions to MDTFs rather than setting up SDTFs, and hence more flexible, i. e. less-earmarked funding. Elements of an incentive-compatible fee structure for donors include differentiated fees depending on the strictness of earmarking, contribution size, and number of donors. To set the right incentives for MDB staff, fees should not be deduced from contributions, but rather from disbursements, with possible differentiation by the level of results achieved (Reinsberg 2017a). MDBs could also incentivize TFs in specific areas in which they see high complementarity to existing activities or strong need to develop and pioneer innovative approaches, such as for the new market mechanisms under Article 6 of the Paris Agreement, encouraging initiatives like previously, the successful work of the PCF, or new approaches such as the ABM of the AfDB.

B) Improving the selection and integration of new TFs is similarly important as the organization of existing funds. We again recommend some institutional measures that may help to ensure that TFs are selected were the benefits of cooperation are highest, while the costs are relatively low. Some of the structures suggested above will also be helpful in this context.

Recommendation 5: Generate greater transparency about already existing funds and funds under consideration

Knowledge about existing funds is notoriously bad, even within the MDBs, but also among donors as well as activity implementers, as our interviews demonstrated. As we saw in this study, data on financial flows and contributors is not made public and handed out upon request even to MDB shareholders only reluctantly and in an incomplete form. Even the most basic information like a simple list of all active TFs and their basic activities is not available for all MDBs, and notably not for the WBG where the need for transparency is greatest given the large number of funds. We believe that this goes against the WBG's own transparency paradigm and may affect its legitimacy and reputation. For potential donors a well-structured website presenting the different funds, ideally augmented by a search function for different fields of activity, could be a useful entry point and might avoid proposals that duplicate already existing activities. If, in addition, planned initiatives could also be presented, this may even become a platform on which groups of like-minded donors (including possible non-state donors) could form to jointly support certain goals.

Recommendation 6: Increase the efficiency of fundraising

Beyond further transparency that can improve the proposals received in the first place, the MDBs' internal rules and incentive structures need to be adjusted. Currently, incentives to create new TFs rather than considering existing options exist on both the donor and the MDB side. On the donor side, new TFs often come about from a well-identified sector need, but without much effort to identify existing options or to consult with central departments at MDBs that should have the overview. On the MDB side, individual departments may also happily endorse new opportunities without further consultation. To avoid such uncoordinated processes, the central unit suggested under recommendation 1 should also have the responsibility to formally accept or reject all new TF proposals. Ensuring that all proposals go through a single unit would guarantee that suitable existing funds could be identified if they exist, or at least suitable umbrella funds to which a new TF could possibly be attached. More generally, MDBs could introduce regulation requiring operational teams to share their fundraising plans, so that MDB management could mitigate uncoordinated fundraising – a rule that the WBG is already implementing as a result of its most recent TF reform phase. MDBs can also develop further their internal rules regarding requirements for minimum financial volumes, minimum numbers of contributing donors, and default "sunset clauses".

5.3. Recommendations for bilateral donors

Many of the recommendations for bilateral donors simply mirror the recommendations for MDBs and therefore do not require much further discussion. In their role as MDB shareholder, donors can simply push for the relevant reforms within the MDBs. At the same time, in their role as TF contributors, they should themselves abide by some general rules that will facilitate the consolidation of TFs in the future.

Recommendation 7: Use available information about existing TFs and consult higher-level MDB management

When contemplating new TFs, donors should take a "portfolio approach" that assesses the value-added of a TF against existing initiatives. Efforts must be made to inquire about existing options; discussions with a single sector or country unit is not sufficient, even if this unit shows high interest as a possible manager of the fund.

Recommendation 8: Avoid complex procedural and thematic preferences whenever possible

Bilateral donors should show the highest possible level of flexibility to facilitate the task of MDBs to build appropriate donor clusters in the form of MDTFs or at least under umbrella structures. If narrow geographical, sectoral or activity type preferences cannot be avoided, consider a new window rather than a new fund.

Recommendation 9: Support coordination among donors

TFs at MDBs should not be misused by donors to serve their own vested interests through the backdoor of the multilateral system. Rather, donors should actively seek to use them as an instrument for further cooperation and exchange, and thus coordinate on common-interest topics and joint MDTFs, rather than SDTFs.

Recommendation 10: Support coordination among TFs

For an ecosystem of TFs to effectively address complex climate change-related challenges, all relevant TFs must work together. Coordination becomes more important as the number of TFs increases. But most TFs do not formally coordinate their activities, and if they do, this is based on informal stakeholder coordination. Donors can further enhance coordination by using replenishments, Steering Committee meetings, and informal channels to promote coordination and to reduce overlap in the mandates of climate change-related TFs.

Recommendation 11: Conduct regular "spring cleaning" exercises

Individual donors can unilaterally consolidate their TF portfolios on the basis of periodic portfolio reviews to identify – jointly with MDBs – "low-hanging fruits" by closing dormant accounts, merging TFs within the portfolio, and transferring TFs into existing umbrellas. For example, Sweden has recently undertaken a "spring-cleaning" exercise which helped reduce the number of TFs in its portfolio, with the benefit that information about ongoing relevant TF support has become more accessible to decision-makers. Given that portfolio consolidation eats up administrative resources, it is only to be recommended for donors with highly fragmented TF portfolios.

Recommendation 12: Increase transparency about MDB TFs

Not only MDBs but also donors need to collect systematic data on climate-related TFs and share it widely within their own agencies and with the general public and ensure that it is not lost over time due to staff turnover. The lack of transparency around existing climate-related TFs also impairs the accountability of MDBs toward general public. Specifically, obtaining reliable data on TFs that is comparable across institutions remains a formidable challenge and has also affected the present study.

Recommendation 13: Monitor the development of TFs at the MDBs

Based on the request for increased MDB transparency about existing and planned TFs, donors as MDB shareholders should also monitor the overall development of these funds to prevent reputational risks for the institution. These can arise notably when individual units push their own agendas in areas where their mandate may be questionable (as in the case of the UCF where the WBG essentially blocked market access for players not willing to channel their funds through this TF). This should be avoided in the future. In contrast, innovative piloting activities could be encouraged.

6 Conclusion

Trust funds have become an increasingly popular instrument for channeling climate finance to multilateral institutions, whether through FIFs or MDB TFs. From a donor perspective, FIFs emanate from global political processes and allow to address climate challenges at a scale, while including relevant stakeholders in their governance structures and fostering collaboration among implementing agencies. Furthermore, donors use MDB TFs to target specific sub-issues without a commitment for long-term funding and thus they are an opportunity to respond to changing political needs in the donor country and emergent needs in the partner countries.

For the MDBs, TFs provide a mechanism to collect extra-budgetary grant resources, outside their core lending business, to grow their operations and improve the effectiveness of lending projects, for instance by financing project preparation, project supervision, and technical assistance. TF grants can also reduce the effective interest to be paid on loans, thus making it more attractive for countries to take up new loans, especially for interventions in climate change that produce global public goods. Finally, the TF instrument also is ideally-suited to channel non-lending assistance, such as grants, guarantees, equity, and insurance – all of which are relevant in the climate sector.

Furthered by institutional incentives on all sides to initiate new TFs, the number of climate change-related TFs has grown tremendously over the past decade. Consequently, concerns have grown, particularly among senior MDB management, about there being too many TFs, with potential adverse effects on efficiency and effectiveness. Our report shows, however, that the TF growth is not tantamount to detrimental fragmentation, which is the result of poor practice rather than sheer numbers alone, although a larger number of TFs amplifies it. Indeed, a large number of TFs may be desirable as it may create an ecosystem of funds to fill gaps and provide wholesale support along the project cycle, provided that proper coordination takes place across funds. Coordination between MDB departments – specifically global thematic units and country managing units – is key to success. However, we do find areas where strong overlaps and fragmentation exist such as carbon funds, due to competing donor interests to access carbon credits rapidly and cheaply. In the context of the new carbon markets under the Paris Agreement, a repetition of this experience should not take place.

Curbing fragmentation is also about finding the right balance between legitimate demand by donors to steer MDB activities and the quest for efficiency through standardization in TF instruments. In general, there is a difference between SDTFs, small MDTFs, and large MDTFs: SDTFs maximize control for the donor but defy efficiency gains as SDTFs imply tailored administrative arrangements. As MDBs recognize the need for some donors to at times use SDTFs, they nonetheless attempt to rein in their centrifugal effects, for instance by bringing them under an umbrella structure. Taking a program-based approach that covers sets of TFs is the most promising way to reorganize the ever-expanding universe of TFs. Stakeholders should therefore support efforts to establish umbrella facilities at MDBs. In addition, establishing responsible central units within each MDB (such as it already exists at the IADB) could achieve great benefits in terms of coordination and transparency within and beyond the organization.

While this study confirms that the current climate change-related TF portfolio is fragmented and requires consolidation, further in-depth analysis into costs and benefits of different umbrella structures and different "levels of aggregation" is required for proposing an "ideal" TF landscape. Our study identified four clusters which can serve as the first basis for considering potential umbrella structures. The level of aggregation in these clusters is similar to what existing pilots such as the new WBG umbrellas PROBLUE and PROGREEN have already envisaged.

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8 Annexes

8.1. Annex 1: Climate change-related trust funds in MDBs (based on data provided by MDBs)

FIFs

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
ADAPTATION FUND	AF	Green	Adaptation	UNFCCC	Multiple	ADAPTATION_ MULTIPLE	538,3	MDTF	2009	2020	Active
CAPACITY-BUILDING INITIATIVE FOR TRANSPARENCY FUND	CBIT	Green	Mitigation	BI/MULTI	Policy support	CC_MIXED	55,6	MDTF	2016	2024	Active
CLEAN TECHNOLOGY FUND	CTF	Green	Mitigation	CIF	Multiple	MITIGATION_ MULTIPLE	5 712,9	MDTF	2009	2049	Active
CLIMATE RISK AND EARLY WARNING SYSTEMS INITIATIVE	CREWS	Green	Adaptation	BI/MULTI	Climate data provision	ADAPTATION_ DISASTER	28,0	MDTF	2016	2026	Active
GLOBAL ENVIRONMENT FACILITY	GEF	Green	CC general	UNFCCC	Multiple	CC_MIXED	15 804,0	MDTF	1991		Active
GREEN CLIMATE FUND	GCF	Green	CC general	UNFCCC	Multiple	CC_MIXED	6 718,3	MDTF	2012	2019	Active
GUYANA REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (REDD+)	GRIF	Green	Mitigation	BI/MULTI	Forestry	CARBON_1	206,6	MDTF	2010	2021	Active
LEAST DEVELOPED COUNTRIES FUND	LDCF	Green	Adaptation	UNFCCC	Multiple	ADAPTATION_ MULTIPLE	1 314,2	MDTF	2005		Active
NAGOYA PROTOCOL IMPLEMENTATION FUND	NPIF	Green	CC general	UNFCCC	Multiple	CC_MIXED	16,1	MDTF	2011		Active
PILOT AUCTION FACILITY FOR METHANE AND CLIMATE CHANGE MITIGATION	PAF	Green	Mitigation	CF	Carbon finance	CARBON_A6	77,8	MDTF	2014	2022	Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
SPECIAL CLIMATE CHANGE FUND	SCCF	Green	Adaptation	UNFCCC	Multiple	ADAPTATION MULTIPLE	351,2	MDTF	2004		Active
STRATEGIC CLIMATE FUND	SCF	Green	CC general	CIF	Multiple	CC_MIXED	2 954,4	MDTF	2009	2049	Active

ADB TFs

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Article 6 Support Facility	A6SF	Green	Mitigation	CF	Carbon finance	CARBON_A6	4.0	MDTF	2018	2021	Active
Asia Pacific Carbon Fund	APCF	Green	Mitigation	CF	Carbon finance	CARBON_1	152.8	MDTF	2006	2014	Closed
Asia Pacific Disaster Response Fund	APDRF	Yellow	Adaptation	BI/MULTI	Humanitarian relief	ADAPTATION_ DISASTER	80,0	SDTF	2009		Active
Asian Clean Energy Fund	ACEF	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_ MULTIPLE	55.7	SDTF	2008		Active
Asia-Pacific Climate Finance Fund	ACliFF	Green	CC general	BI/MULTI	Derisking	CC_MIXED	33.3	MDTF	2017		Active
Canadian Climate Fund for the Private Sector in Asia	CFPS	Green	CC general	BI/MULTI	Derisking	CC_MIXED	80.7	SDTF	2013	2037	Active
Canadian Climate Fund for the Private Sector in Asia	CFPS2	Green	CC general	BI/MULTI	Derisking	CC_MIXED	149.5	SDTF	2017	2023	Active
Canadian Cooperation Fund for Climate Change	CCC	Green	CC general	BI/MULTI	Policy support	CC_MIXED	3.5	SDTF	2001	2020	Active
Carbon Capture and Storage Fund	CCSF	Green	Mitigation	BI/MULTI	CCS	MITIGATION_ MULTIPLE	70.9	MDTF	2009	2021	Active
Cities Development Initiative for Asia Trust Fund	CDIA TF	Green	CC general	BI/MULTI	Policy support	CC_MIXED	9.1	MDTF	2017		Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Clean Energy Financing Partnership Facility	CEFPF	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_ MULTIPLE		MDTF	2007		Active
Clean Energy Fund	CEF	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_ MULTIPLE	131.0	MDTF	2007		Active
Climate Change Fund	CCF-ADB	Green	CC general	BI/MULTI	Multiple	CC_MIXED	74.0	MDTF	2008		Active
Danish Cooperation Fund for Renewable Energy and Energy Efficiency in Rural Areas	DCREEEA	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_ MULTIPLE	3.6	SDTF	2001	2020	Active
Second Danish Cooperation Fund for Renewable Energy and Energy Efficiency in Rural Areas	DCREEEA2	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_ MULTIPLE	3.5	SDTF	2006	2020	Active
Future Carbon Fund	FCF	Green	Mitigation	CF	Carbon finance	CARBON_A6	115.0	MDTF	2008	2021	Active
High Level Technology Fund	HLTF	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	54.5	MDTF	2017		Active
Integrated Disaster Risk Management Fund	IDRMF	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	9.7	SDTF	2013		Active
Ireland Trust Fund for Building Climate Change and Disaster Resilience in Small Island Developing States	BCCDR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	13.5	SDTF	2019	2024	Active
Japan Fund for the Joint Crediting Mechanism	JFJCM	Green	Mitigation	CF	Carbon finance	CARBON_A6	71.1	SDTF	2014		Active
Urban Climate Change Resilience Trust Fund	UCCRTF	Green	Adaptation	BI/MULTI	Resilience	ADAPTATION_ DISASTER	149.4	MDTF	2013	2013	Active
Urban Environmental Infrastructure Fund	UEIF	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	21.5	MDTF	2009		Active

AfDB TFs

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Adaptation Benefit Mechanism	ABM	Green	Adaptation	BI/MULTI	Policy support	ADAPTATION_MULTIPLE		N/A			in development
Africa Carbon Support Program	ACSP	Green	Mitigation	BI/MULTI	Carbon finance	CARBON_1		N/A			Closed
Africa Climate Change Fund	ACCF	Green	CC general	BI/MULTI	Multiple	CC_MIXED	12.7	MDTF	2014		Active
Clim-dev Africa Fund	CDSF	Green	Adaptation	BI/MULTI	Climate data provision	ADAPTATION_MULTIPLE	27.1	MDTF	2010		Active
Congo Basin Forest Fund	CBFF	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_FOREST	170.0	MDTF	2008	2015	Closed
Sustainable Energy for Africa	SEFA	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_MULTIPLE	106.0	MDTF	2011		Active

IADB TFs

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Biodiversity/Natural Capital Lab	NCL	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_FOREST	25.0	MDTF	2018		Active
Canadian Climate Fund for the Private Sector in the Americas (C2F)	CCFPS	Green	CC general	BI/MULTI	Multiple	CC_MIXED	249.5	SDTF	2012		Active
Colombia Sostenible	CoSo	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	21.7	MDTF	2016		Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Emerging and Sustainable Cities	ESC	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	14.3	MDTF	2011		Active
European Commission's LAIF Grant to Climate Change and Water & Sanitation	ECLAIF	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	16.4	SDTF	2013		Active
French Climate Fund for Latin America and the Caribbean	FCFLAC	Green	CC general	BI/MULTI	Multiple	CC_MIXED	5.5	SDTF	2018		Active
Mangroves Habitat Fund	MHF	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_FOREST		SDTF			Closed
Multi-Donor Disaster Prevention Trust Fund	MDRTF	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	16.9	MDTF	2007		Active
NDC Pipeline Accelerator	ACL	Green	Mitigation	BI/MULTI	Policy support	CC_MIXED	17.1	MDTF	2017		Active
Ordinary Capital-Strategy Development Program for Sustainability 2	OC-SDP	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	207.7	N/A	2016		Active
Portuguese Technical Cooperation Fund	PTCF	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	2.8	SDTF	1998		Active
Sustainable Energy and Climate Change Initiative	SECCI	Green	CC general	BI/MULTI	Multiple	MITIGATION_MULTIPLE	55.3	MDTF	2007		Active
UK Low Carbon Agriculture to Avoid Deforestation Fund	LCAADPR	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_FOREST	22.3	SDTF	2019		Active
UK Sustainable Infrastructure Program	UKSIP	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	68.9	SDTF	2017		Active
United Kingdom Blue Carbon Fund	UKBCF	Green	Mitigation	CF	Carbon finance	CARBON_1	2.4	SDTF	2019		Active

WBG TFs*

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Advisory Services for the Clean Energy Access Program relating to the Sustainability Business Innovator Facility	AS-CEAP	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE					Active
Africa Nordic Development Fund Climate Change Program	ANDF	Green	CC general	BI/MULTI	Multiple	CC_MIXED	22.5	SDTF	2011	2022	Active
Africa Nordic Development Fund Climate Change Program	ANDF	Green	CC general	BI/MULTI	Multiple	CC_MIXED	16.0	SDTF	2017	2025	Active
African Rural and Renewable Energy Initiative	AFFREI	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	0.2	SDTF	2000		Closed
Asia Sustainable and Alternative Energy Program	ASTAE	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	24.2	MDTF	2011	2017	Active
Australian Trust Fund for Mainstreaming Disaster Reduction of the Global Facility for Disaster Reduction and Recovery	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	10.8	SDTF	2007	2016	Closed
Balkans Renewable Energy Program	BREP	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE					Closed
Bangladesh Rural Electrification and Renewable Energy Development II	RERED	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	6.4	SDTF	2012	2019	Active
Bangladesh Rural Electrification and Renewable Energy Development II	RERED	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	1.1	SDTF	2016	2019	Active
BioCarbon Fund	BioCF	Green	Mitigation	CF	Forestry	CARBON_1	53.8	MDTF	2003	2020	Active
BioCarbon Technical Assistance Trust Fund	BioCF	Green	Mitigation	CF	Forestry	CARBON_1	86.9	MDTF	2003	2020	Active

* IFC TFs are shaded in blue.

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
BioCFplus Initiative for Sustainable Forest Landscapes – BMUB Single-Donor Trust Fund	BioCF+	Green	Mitigation	CF	Carbon finance	CARBON_1	41.3	SDTF	2015	2030	Active
BioCFplus Initiative for Sustainable Forest Landscapes – Business, Energy and Industrial Strategy Trust Fund	BioCF+	Green	Mitigation	CF	Carbon finance	CARBON_1	12.6	SDTF	2017	2030	Active
BioCFplus Initiative for Sustainable Forest Landscapes – Department for Environment, Food and Rural Affairs Trust Fund	BioCF+	Green	Mitigation	CF	Carbon finance	CARBON_1	18.1	SDTF	2017	2030	Active
BioCFplus Initiative for Sustainable Forest Landscapes – Ministry of Climate and Environment Single-Donor Trust Fund	BioCF+	Green	Mitigation	CF	Carbon finance	CARBON_1	18.0	SDTF	2015	2030	Active
BioCFplus Initiative for Sustainable Forest Landscapes – USDOS Single-Donor Trust Fund	BioCF+	Green	Mitigation	CF	Carbon finance	CARBON_1	36.5	SDTF	2015	2030	Active
BioCFplus Reduce Carbon Emissions from Deforestation and Degradation (REDD+) Readiness Support Multi-Donor Trust Fund	BioCF+	Green	Mitigation	CF	Carbon finance	CARBON_1	9.8	MDTF	2015	2020	Active
BioCFplus Technical Assistance and Capacity Building Fund	BioCF+	Green	Mitigation	CF	Forestry	CARBON_1	2.6	MDTF	2015	2020	Active
Brazil Cerrado Climate Change Mitigation Single-Donor Trust	BCCC	Green	Mitigation	BI/MULTI	Forestry	MITIGATION_FOREST	15.6	SDTF	2011	2018	Active
Brazilian Rain Forest – Canadian Grant	BRF	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_FOREST	0.2	SDTF	1992	1993	Closed

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Brazilian Rain Forest – Canadian Grant II	BRF	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_ FOREST	0.3	SDTF	1992	1993	Closed
Brazilian Rain Forest Trust Fund	BRF	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_ FOREST	7.3		2009		
Brazilian Rain Forest Trust Fund	BRF	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_ FOREST	69.1	MDTF	1992		Closed
Callable Funds for the Standby Recovery Financing Facility of the Global Facility for Disaster Reduction and Recovery	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	35.8	MDTF	2007	2017	Closed
Carbon Asset Development Fund (CADF) Multi Donor Trust Fund	CADF	Green	Mitigation	CF	Carbon finance	CARBON_2	13.4	MDTF	2008	2024	Active
Carbon Capture and Storage Trust Fund	CCS-TF	Green	Mitigation	BI/MULTI	CCS	MITIGATION_ MULTIPLE	47.1	MDTF	2009	2023	Active
Carbon Finance Assist Trust Fund	CFATF	Green	Mitigation	CF	Carbon finance	CARBON_1	38.5	MDTF	2005	2019	Active
Carbon Finance Assist Trust Fund	CFATF	Green	Mitigation	CF	Carbon finance	CARBON_1	7.1	MDTF	2016	2019	Active
Carbon Fund of the Carbon Partnership Facility	CPF-CF	Green	Mitigation	CF	Carbon finance	CARBON_2	109.2	MDTF	2008	2024	Active
Carbon Fund of the Forest Carbon Partnership Facility	FCPF-CF	Green	Mitigation	CF	Forestry	CARBON_1	593.0	MDTF	2008	2026	Active
Carbon Fund of the Forest Carbon Partnership Facility	FCPF-CF	Green	Mitigation	CF	Forestry	CARBON_1	200.5	MDTF	2016	2026	Active
Carbon Initiative for Development Carbon Fund	Ci-Dev	Green	Mitigation	CF	Carbon finance	CARBON_1	85.5	MDTF	2013	2025	Active
Carbon Initiative for Development Readiness Fund	Ci-Dev	Green	Mitigation	CF	Carbon finance	CARBON_1	24.2	MDTF	2013	2025	Active
Central African Forest Initiative Implementation Trust Fund	CAFI	Green	Mitigation	BI/MULTI	Forestry	MITIGATION_ FOREST	28.2	SDTF	2016	2023	Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Central American and Caribbean Catastrophe Risk Insurance Program	CCRIF	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	23.9	MDTF	2014	2020	Active
Central American and Caribbean Catastrophe Risk Insurance Program	CCRIF	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	27.4	MDTF	2016	2020	Active
China Utility-Based Energy Efficiency Finance Program	UBEEFP	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE					Closed
China Utility-Based Energy Efficiency Finance Program Trust Fund	UBEEFP	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE					Closed
Climate Change Advisory Services relating to the Facility for Sustainable Business Advisory Services (SBAS)	CCAS	Green	CC general	BI/MULTI	Multiple	CC_MIXED					Closed
Climate Change Partnership Program	CCPP	Green	CC general	BI/MULTI	Multiple	CC_MIXED					Active
Climate Change Technology Investment Index	CCTII	Green	Mitigation	BI/MULTI	Policy support	MITIGATION_ MULTIPLE	0.3	SDTF	2009	2014	Closed
Climate Innovation Multi Donor Trust Fund	CIMDTF	Green	CC general	BI/MULTI	Policy support	CC_MIXED	1.2	MDTF	2018	2020	Active
Climate Innovation Multi-Donor Trust Fund	CIMDTF	Green	CC general	BI/MULTI	Institutional support	MITIGATION_RE	68.0	MDTF	2011	2020	Active
Climate Investment Funds Partnership Forum	CIF	Green	Mitigation	CIF	Multiple	CC_MIXED	0.3	MDTF	2012	2049	Active
Climate Resilient and Low-Carbon Development MDTF	CRLD	Green	CC general	BI/MULTI	Multiple	CC_MIXED	4.2	MDTF	2014	2019	Active
Co-financing Kiribati Adaptation Project Implementation Phase II	KAP	Green	Adaptation	BI/MULTI	Multiple	ADAPTATION_ MULTIPLE	1.1	SDTF	2006	2011	Closed

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Co-financing Kiribati Adaptation Project Phase II	KAP	Green	Adaptation	BI/MULTI	Multiple	ADAPTATION_MULTIPLE	2.8	SDTF	2005	2011	Closed
Communication for Climate Change	CCC	Green	CC general	BI/MULTI	Awareness raising	CC_MIXED	16.7	MDTF	2008	2020	Active
Community Development Carbon Fund	CDCF	Green	Mitigation	CF	Carbon finance	CARBON_1	93.0	MDTF	2003	2020	Active
Community Development Carbon Fund Technical Assistance	CDCF	Green	Mitigation	CF	Carbon finance	CARBON_1	0.9	MDTF	2003	2020	Active
Danish Carbon Fund	DCF	Green	Mitigation	CF	Carbon finance	CARBON_2	90.5	MDTF	2004	2020	Active
Disaster Management Fund	DMF	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	3.8	MDTF	2012	2018	Active
Disaster Protection Program	DRFIP	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	14.5	SDTF	2017	2021	Active
Disaster Risk Financing and Insurance Multi Donor Trust Fund	DRFIP	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	6.8	MDTF	2011	2017	Closed
Energy Efficiency and Power Development Research	EEPDR	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE	0.1	SDTF	1993	1994	Closed
Energy Efficiency and Renewable Energy Services	EEREA	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_MULTIPLE	0.3	SDTF	2003	2005	Closed
Energy Efficiency Support Program for Ukraine – EE4U Multi Donor Trust Fund	EE4U	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE					Active
Energy Sector Management Assistance Program	ESMAP	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_MULTIPLE	178.3	MDTF	2009	2020	Active
Energy Sector Management Assistance Program Multi Donor Fund	ESMAP	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_MULTIPLE	130.6	MDTF	2015	2023	Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
ESMAP/Energy Efficiency TA Project	ESMAP	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE	0.3	SDTF	1994	1998	Closed
EU/WB Access to Sustainable Energy Philippines	ASEP	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	33.0	SDTF	2015	2019	Active
European Union (EU) – African, Caribbean, and Pacific (ACP) Region Disaster Reduction Partnership Trust Fund	DRPTF	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	98.6	SDTF	2011	2020	Active
Financial Mechanisms for Climate Change – Canada TA	FMCC	Green	CC general	BI/MULTI	Derisking	CC_MIXED					Active
Financial Mechanisms for Climate Change Facility	FMCC	Green	CC general	BI/MULTI	Multiple	CC_MIXED					Active
First Tranche of the Umbrella Carbon Facility	UCF	Green	Mitigation	CF	Carbon finance	CARBON_2	833.7	MDTF	2005	2018	Active
Geothermal Development in Indonesia: Technical Assistance for Capacity Building Trust Fund	GDI	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	7.4	SDTF	2011	2017	Closed
Geothermal Power Support Program	GPSP	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	2.7	SDTF	2008	2012	Closed
Global Environment Facility – Norwegian Co-financing Arrangement	GEF	Yellow	CC general	UNFCCC	Multiple	CC_MIXED	4.3	SDTF	1993		Closed
Global Environment Facility Secretariat Budget Trust Fund	GEF	Yellow	CC general	UNFCCC	Multiple	CC_MIXED	0.6	MDTF	2002		Active
Global Environment Facility Voluntary Fund	GEF	Yellow	CC general	UNFCCC	Multiple	CC_MIXED	1.8	MDTF	1995		Active
Global Environmental Facility Public-Private Sector Partnership Fund	PPSPF	Yellow	CC general	UNFCCC	Multiple	CC_MIXED					Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Global Facility for Disaster Reduction and Recovery	GFDRR	Yellow	Adaptation		Disaster risk management	ADAPTATION_ DISASTER	42.7	MDTF	2016	2021	Active
Global Facility for Disaster Reduction and Recovery Trust Fund for Mainstreaming Disaster Risk Management in Developing Countries	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	3.0	SDTF	2017	2021	Active
Global Facility for Disaster Reduction and Recovery Trust Fund for Mainstreaming Disaster Risk Management in the Indo-Pacific Region	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	9.2	SDTF	2017	2021	Active
Global Gas Flaring Reduction Partnership	GGFRP	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE	7.1	MDTF	2015	2019	Active
Global Index Insurance Facility	GIIF	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	11.9	MDTF	2017	2021	Active
Global Partnership on Disaster Risk Financing Analytics	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	6.7	SDTF	2015	2020	Active
Green Bond Technical Assistance Program (Supporting Emerging Green One- Amundi Planet SICAV-SIF)	GBTA	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_ MULTIPLE					Active
Ho Chi Minh City Green Transport Development	HCM	Yellow	Mitigation	BI/MULTI	Transport	MITIGATION_ MULTIPLE	12.0	SDTF	2015	2021	Active
IBRD/Netherlands Clean Development Mechanism Facility – Euro Trust Fund	NL-CDM	Green	Mitigation	CF	Carbon finance	CARBON_2	153.8	SDTF	2002	2017	Closed
IBRD/Netherlands Clean Development Mechanism Facility – U.S. Dollar Trust Fund	NL-CDM	Green	Mitigation	CF	Carbon finance	CARBON_2	15.5	SDTF	2002	2016	Closed
IBRD/Netherlands European Carbon Facility	NL-ECF	Green	Mitigation	CF	Carbon finance	CARBON_2					

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
IBRD/Netherlands European Carbon Facility – Euro Trust Fund	NL-ECF	Green	Mitigation	CF	Carbon finance	CARBON_2	17.2	SDTF	2004	2014	Closed
IBRD/Netherlands European Carbon Facility – U.S. Dollar Trust Fund	NL-ECF	Green	Mitigation	CF	Carbon finance	CARBON_2	4.0	SDTF	2004	2014	Closed
IFC/Netherlands European Carbon Facility Trust – Euro Trust	NL-ECF	Green	Mitigation	CF	Carbon finance	CARBON_2					Closed
Indian Renewable Resources Development Project	IREDA	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	0.0	SDTF	1988	1996	Closed
Indonesia REDD Support Facility	ID-RSF	Green	Mitigation	BI/MULTI	Forestry	CARBON_1	3.1	MDTF	2013	2017	Closed
Indonesia Sustainable Landscape Management (IDSLM) Multi-Donor Trust Fund	ID-SLM	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_FOREST	32.5	MDTF	2016	2022	Active
Indonesia Sustainable Urbanization	ID-SUN	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	13.4	MDTF	2016	2019	Active
InsuResilience MDTF/ Global Risk Financing Facility (GRiF)	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	31.2	MDTF	2017	2022	Active
Integrated Land and Water Management for Adaptation to Climate Variability and Change (ILWAC)	ILWM	Green	Adaptation	BI/MULTI	Multiple	ADAPTATION_MULTIPLE	10.0	SDTF	2009	2018	Active
Italian Carbon Fund	ICF	Green	Mitigation	CF	Carbon finance	CARBON_2	162.5	MDTF	2003	2020	Active
Japan Trust Fund for Mainstreaming Disaster Reduction Initiative of the Global Facility for Disaster Reduction and Recovery	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	6.0	SDTF	2007	2016	Closed

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Japan-World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	95.0	SDTF	2013	2020	Active
Korea Green Growth Single-Donor Trust Fund	GG-KOR	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_ MULTIPLE	39.5	SDTF	2012	2021	Active
Korea Green Growth Trust Fund	GG-KOR	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_ MULTIPLE	48.0	SDTF	2015	2021	Active
Liberia Forest Landscape Single-Donor Trust Fund	LFL	Green	Mitigation	BI/MULTI	Forestry	MITIGATION_ FOREST	55.8	SDTF	2016	2020	Active
Lighting India – Clean Energy Access Program	CEAP	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE					Closed
Low-Carbon/Green Special Economic Zones Program under the Facility for Investment Climate Advisory Services	FIAS	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_ MULTIPLE					Closed
Maldives Climate Change Multi-Donor Trust Fund	MCC	Green	CC general	BI/MULTI	Multiple	CC_MIXED	14.7	MDTF	2009	2018	Active
Multi Donor Trust Fund for Addressing Climate Change in the Middle East and North Africa (MENA) Region	CC-ME-NA	Green	CC general	BI/MULTI	Multiple	CC_MIXED	3.9	MDTF	2008	2015	Closed
Multi Donor Trust Fund for Bangladesh Climate Change Resilience Fund	BCCRF	Green	Adaptation	BI/MULTI	Multiple	ADAPTATION_ DISASTER	130.3	MDTF	2008	2017	Closed
Multi Donor Trust Fund for Clean Energy Investment Framework	CEIF	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	40.2	MDTF	2007	2014	Closed
Multi Donor Trust Fund for Communication for Climate Change	CCC	Green	CC general	BI/MULTI	Awareness raising	CC_MIXED	1.6	MDTF	2017	2025	Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Multi Donor Trust Fund for Financing of the Global Gas Flaring Reduction Partnership	GGFRP	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE	25.7	MDTF	2002	2016	Closed
Multi Donor Trust Fund for Mainstreaming Disaster and Climate Risk Management in Developing Countries	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	81.5	MDTF	2014	2020	Active
Multi Donor Trust Fund for Mainstreaming Disaster and Climate Risk Management in Developing Countries	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	44.1	MDTF	2016	2020	Active
Multi Donor Trust Fund for Mainstreaming Disaster Reduction Initiative of the Global Facility for Disaster Reduction and Recovery	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	199.2	MDTF	2006	2017	Active
Multi Donor Trust Fund for Program for Forests	PROFOR	Green	Mitigation	BI/MULTI	Forestry	MITIGATION_ FOREST	51.0	MDTF	2002	2020	Active
Multi-Donor Trust Fund for Economics of Adaptation to Climate Change	EACC	Green	Adaptation	BI/MULTI	Policy support	ADAPTATION_ DISASTER	1.8	MDTF	2009	2010	Closed
Multi-donor Trust Fund for the Africa Climate Change Program	ACCP	Green	CC general	BI/MULTI	Multiple	CC_MIXED	9.3	MDTF	2012	2018	Active
National Adaptation Project in Vanuatu	NAP-VT	Green	Adaptation	BI/MULTI	Multiple	ADAPTATION_ MULTIPLE	2.4	SDTF	2012	2016	Closed
Nationally Determined Contributions Support Facility	NDC-SF	Green	Mitigation	BI/MULTI	Policy support	CC_MIXED	22.1	MDTF	2016	2019	Active
Netherlands IFC Partnership Program – Renewable Energy Program	NL-REP	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE					Active
Nigeria Off Grid Solar Market Development and Finance Program	NOGSMD	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE					Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Pacific Disaster Risk Financing and Insurance Multi Donor Trust Fund	PDRFI	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_DISASTER	5.7	MDTF	2011	2016	Closed
Partnership for Market Readiness Multi Donor Trust Fund	PMR	Green	Mitigation	BI/MULTI	Policy support	CARBON_A6	103.4	MDTF	2011	2021	Active
Pilot Program to Conserve Rain Forest	PPCRF	Yellow	Mitigation	BI/MULTI	Forestry	MITIGATION_FOREST	1.8	SDTF	1992	1995	Closed
Promoting Africa's Green and Climate Resilient Development Trust Fund	GCRD	Yellow	CC general	BI/MULTI	Multiple	CC_MIXED	14.0	SDTF	2017	2022	Active
Prototype Carbon Fund	PCF	Green	Mitigation	CF	Carbon finance	CARBON_1	206.1	MDTF	2000	2024	Active
Public-Private Infrastructure Advisory Facility Integrating Climate Change Agenda with Public Private Partnerships (PPPs) Program	PPIAF-CC	Green	Mitigation	BI/MULTI	Multiple	MITIGATION_MULTIPLE	2.9	MDTF	2017	2022	Active
Public-Private Infrastructure Advisory Facility (PPIAF) Integrating Climate Change Agenda with Public Private Partnerships Program	PPIAF-CC	Green	Mitigation	BI/MULTI	Multiple	MITIGATION_MULTIPLE	9.3	MDTF	2008	2022	Active
Readiness Fund of the Forest Carbon Partnership Facility	FCPF-RF	Green	Mitigation	CF	Forestry	CARBON_1	315.5	MDTF	2008	2021	Active
Readiness Fund of the Forest Carbon Partnership Facility	FCPF-RF	Green	Mitigation	CF	Forestry	CARBON_1	28.0	MDTF	2017	2021	Active
Reduce Carbon Emissions from Deforestation and Degradation Plus (REDD+) Support Facility	REDD+	Green	Mitigation	BI/MULTI	Forestry	CARBON_1	0.3	MDTF	2016	2017	Closed
Renewable Energy Advisory Services Program for Africa	REASP	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE					Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Renewable Energy and Rural Electricity Access Project	REREA	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	6.0	SDTF	2007	2012	Closed
Renewable Energy Support – WB/GEF Strategic Partnership Development	RES	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	0.5	SDTF	1999	2002	Closed
Renewable Resource and Regional Development Project	RRRD	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	0.1	SDTF	1996	2000	Closed
Renewable Resource and Regional Development Project	RRRD	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	0.3	SDTF	1996	1999	Closed
Saint Lucia Disaster Vulnerability Reduction Project – European Development Fund Trust Fund	EDF-LC	Yellow	Adaptation	BI/MULTI	Multiple	ADAPTATION_ DISASTER	7.0	SDTF	2016	2020	Active
Saint Vincent and the Grenadines Regional Disaster Vulnerability Reduction Project – European Development Fund Trust Fund	EDF-SV	Yellow	Adaptation	BI/MULTI	Multiple	ADAPTATION_ DISASTER	7.3	SDTF	2016	2019	Active
Scaling Up Greenhouse Gas Mitigation in Asia: Support to ASI	ASI	Green	Mitigation	BI/MULTI	Multiple	MITIGATION_ MULTIPLE	3.0	SDTF	2002	2006	Closed
Scaling Utility Scale Solar Photovoltaics (PV) in Sub-Saharan Africa	PVSSA	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE					Active
Second Tranche of the BioCarbon Fund	BioCF	Green	Mitigation	CF	Carbon finance	CARBON_1	30.1	MDTF	2007	2020	Active
Second Tranche of the Spanish Carbon Fund	SpCF	Green	Mitigation	CF	Carbon finance	CARBON_2	81.0	MDTF	2008	2021	Active
Second Tranche of the Umbrella Carbon Facility	UCF	Green	Mitigation	CF	Carbon finance	CARBON_2	54.5	MDTF	2010	2020	Active

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Serbia National Disaster Risk Management Program SDTF	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	6.8	SDTF	2015	2020	Active
South Asia Clean Energy Austria – World Bank Partnership	SACE	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_RE	3.9	SDTF	2011	2017	Closed
Southeast Asia Disaster Risk Insurance Facility	SEADRIF	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	2.7	MDTF	2017	2022	Active
South-South Cooperation for Mainstreaming Disaster Reduction Multi Donor Trust Fund under the Global Facility for Disaster Reduction	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	1.5	MDTF	2007	2016	Closed
Spanish Carbon Fund	SpCF	Green	Mitigation	CF	Carbon finance	CARBON_2	193.9	MDTF	2004	2020	Active
Spanish Trust Fund for Mainstreaming Disaster Reduction Initiative of the Global Facilityor Disaster Reduction and Recovery	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	5.1	SDTF	2007	2016	Closed
Special Initiative of the Global Environment Facility	GEF	Yellow	CC general	UNFCCC	Multiple	CC_MIXED	0.4	MDTF	2016	2020	Active
Special Initiative of the Global Environment Facility Evaluation Office	GEF	Yellow	CC general	UNFCCC	Multiple	CC_MIXED	1.6	MDTF	2006	2020	Active
Standby Recovery Financing Facility of the Global Facility for Disaster Reduction and Recovery	GFDRR	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	24.7	MDTF	2007	2017	Active
Supporting Low Carbon Energy Sector Transition in Srilanka	SLCEST	Yellow	Mitigation	BI/MULTI	Multiple	MITIGATION_RE					Active
Sustainable Energy Management Project – Burkina Faso	SEMP	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	2.4	SDTF	1996		Closed

TF name	Program	Relevance for CC	Broad theme	Institution focus	Narrow theme	Cluster	Size (mUSD cumulative)	MDTF / SDTF	Start date	End date	Active / closed
Sustainable Logistics (SUSLOG)	SUSLOG	Yellow	Mitigation	BI/MULTI	Transport	MITIGATION_ MULTIPLE	6.1	MDTF	2013	2018	Active
Tanzania Urban Resilience Program	TURP	Green	Adaptation	BI/MULTI	Resilience	ADAPTATION_ DISASTER	38.2	SDTF	2016	2021	Active
The Development of a National Green Building Code (GBC) in Colombia	GBC	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE					Closed
The World Bank/European Investment Bank (EIB) Carbon Fund	EIB-CF	Green	Mitigation	CF	Carbon finance	CARBON_2	29.7	MDTF	2006	2018	Active
Third Tranche of the BioCarbon Fund (BioCFT3)	BioCF	Green	Mitigation	CF	Forestry	CARBON_1	204.6	MDTF	2012	2030	Active
Transformative Carbon Asset Facility	TCAF	Green	Mitigation	CF	Carbon finance	CARBON_A6	212.2	MDTF	2016	2029	Active
Trust Fund for Asia Sustainable and Alternative Energy	ASAE	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	2.0	SDTF	2006	2011	Closed
Trust Fund for Energy Efficiency and Youth Corps Program	EEYCP	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE	48.8	SDTF	2012	2021	Active
Trust Fund for Europe and Central Asia (ECA) Climate Change Risk Mitigation Measures	ECAC-CRM	Green	Adaptation	BI/MULTI	Multiple	ADAPTATION_ DISASTER	0.3	SDTF	2004	2009	Closed
Ukraine Energy Efficiency Program	EE4U	Yellow	Mitigation	BI/MULTI	Energy efficiency	MITIGATION_EE					Active
Vietnam Climate Change Partnership Trust Fund	VN-FS	Green	CC general	BI/MULTI	Policy support	CC_MIXED	4.2	SDTF	2011	2014	Closed
Vietnam Natural Disaster Risk Management Project	VN-FS	Yellow	Adaptation	BI/MULTI	Disaster risk management	ADAPTATION_ DISASTER	6.5	SDTF	2006	2011	Closed
Vietnam Renewable Energy Development Project	VN-FS	Yellow	Mitigation	BI/MULTI	Renewable Energy	MITIGATION_RE	2.4	SDTF	2010	2017	Closed

8.2. Annex 2: Approach to expert interviews

Donors	MDBs	TF activity implementer in recipient countries
Common questions/topics		
• General opinion on the coordination and management of the specific TF. • Deficiencies observed throughout the implementation of TF activities. • Areas of improvement/preliminary recommendations. • Appropriateness of communication channels (reaction time, consistency of feedback etc.). • Overlapping areas with other TFs. • Administrative process, what is working and what is not. • Key performance indicators (KPI) of the project for each specific stakeholder, are they aligned? • Importance/relevance of the TF's business model. • Which indicators are preferred to assess effectiveness of TFs?		
Specific questions/Topics Involvement of the donors in the implementation of the funds. Alignment with TF management regarding donor country's goals. Coordination between donors/ MDBs and activity implementers. Donors' visibility in the activities. Governance of the activities. Identification of challenges and speed of remediation. Overall effectiveness of the TF.	**Specific questions/Topics** Coordination practices between the different "Programme" teams inside the MDB. The vision of the Fund is aligned to the MDB's mission. Coordination between the administrative processes of the TF. Challenges in the specific regions where the TF is active. Overall performance of the TF.	**Specific questions/Topics** Support given by the MDBs on the implementation of the activities. How many activities are being developed by the same TF and MDB in your country/is there any coordination of those activities. Efficiency in the administrative process. Pressure from the MDBs to disburse the funds. Performance of the activities compared to the targets.

8.3. Annex 3: List of interviewees

WBG interviewees:

- Chizuru Aoki – WB GEF Secretariat
- Filippo Berardi – WB GEF Secretariat
- Nadja Bleiber – Advisor to the German Executive Director
- Ana Elisa Bucher – NDC Support Facility
- Julie Dana – Adaptation/Disaster TFs
- Mafalda Duarte – Manager, CIFs
- Marius Kaiser – NDC support facility
- Julia Lessina – Head, IFC Trust Funds
- Patrick Luternauer – IFC Partnerships & Multilateral Engagement
- Olivier Mahul – Practice Manager, Crisis and Disaster Risk Finance
- Mikko Ollikainen – WB AF Secretariat
- Neeraj Prasad – PMR
- Brice Quesnel – Trust Funds and Partner Relations, Development Finance
- Dirk Reinermann – Trust Funds and Partner Relations, Development Finance
- Marc Sadler – Practice Manager, Climate Funds Management
- Hugh Searight – Operations Officer, CIFs
- Zhihong Zhang – WB CIF Secretariat

RDB interviewees:

- Virender Kumar Duggal – ADB
- Daniel Hincapie-Salazar – IADB
- Esmyra Javier – ADB
- Vitoria Lima de Moraes – IADB
- Gareth Phillips – AfDB

Activity implementers in recipient countries:

- Jorund Buen – Differ, Norway
- Sandra Greiner – Climate Focus, Netherlands (former WB)
- Ken Newcombe – C Quest Capital, US (and former head of Prototype Carbon Fund, World Bank)
- Randall Spalding-Fecher – Carbon Limits, Norway
- Massamba Thioye – UNFCCC CDM
- Nicolas Westenenk – Ministry of Environment, Chile

German interviewees:

- Malin Ahlberg – BMU
- Frank Fass-Metz – BMZ
- Sebastian Forsch – BMZ
- Thomas Forth – BMU
- Simon Hagemann – BMZ
- Nicolas von Kalm – BMZ
- Claudia Keller – BMU
- Martin Kipping – BMZ
- Orsola Lussignoli – BMZ
- Achim Neumann – KfW
- Lydia Ondraczek – BMU
- Claudia Schütt – BMZ
- Ursula Stiegler – GIZ
- Sebastian Wienges – GIZ
- Arndt Wierheim – KfW

8.4. Annex 4: Top 5 FIF contributors (2009–18)

GEF		GCF		CTF		SCF		LDCF		AF	
JPN	1276.6	JPN	1366.6	GBR	1740.0	GBR	1435.7	DEU	284.2	DEU	283.1
USA	1155.7	USA	1000.0	USA	1492.0	USA	507.6	GBR	176.2	SWE	108.5
DEU	1001.7	DEU	883.1	JPN	1128.9	NOR	280.3	USA	158.2	ESP	57.1
GBR	712.9	FRA	826.8	DEU	615.0	JPN	229.3	BEL	115.0	BEL	24.8
FRA	630.8	GBR	790.2	FRA	266.1	CAN	83.9	SWE	111.4	ITA	16.4
SCCF		**PAF**		**GRIF**		**CBIT**		**CREWS**		**NPIF**	
DEU	115.0	DEU	42.8	NOR	69.8	GBR	14.0	FRA	16.7	JPN	12.2
USA	50.0	USA	15.0	GBR	0.0	DEU	10.6	DEU	3.1	FRA	1.2
BEL	41.2	SWE	11.8	USA	0.0	USA	9.9	AUS	3.0	CHE	1.1
NOR	25.9	CHE	2.5	JPN	0.0	JPN	5.0	NLD	2.3	NOR	1.0
FIN	14.9	GBR	0.0	DEU	0.0	ITA	4.3	LUX	1.1	GBR	0.5

8.5. Annex 5: Climate Change TFs at the European Bank for Reconstruction and Development

The EBRD was one of the early movers in carbon finance and started managing a USD 35 million carbon fund from the government of the Netherlands in 2003. The fund aimed at purchasing credits generated by JI activities in Central and Eastern Europe. The fund aimed at contracting between 0.25 and 1.5 million tCO_2 per project or portfolio of projects. The Fund could provide up to 50% of the contract value as upfront finance, while the remaining 50% would be paid at delivery of credits. Eligible projects activities included: renewable energy projects (e.g. solar, biomass, wind, geothermal) energy efficiency projects – either on the supply or demand side – that reduce consumption of fossil fuels, recovery and utilization of methane from, for example, waste landfills and wastewater treatment, and switching to fuels with lesser GHG intensity (e.g. from coal to natural gas).

In 2006, jointly with the European Investment Bank (EIB), the EBRD launched the Multilateral Carbon Credit Fund (MCCF) bringing together sovereign participants and also the private sector, to purchase emission reduction credits from JI activities located from Central Europe to Central Asia. The fund totaled USD 208.5 million in commitments from the participants (EBRD 2010). It explored transactions under of Assigned Amount Units (AAUs) under Article 17 of the Kyoto Protocol through the Green Investment Scheme, under which selling countries use the revenues from the transaction of AAUs to support other climate-friendly investments. These activities resulted in transactions in Poland (with Spain for USD 25 million and Ireland for USD 15 million) and Slovakia (with Spain, generating USD 40 million revenues used under the Slovakian Sustainable Energy Financing Facility). The EBRD also supported the development of the Green Investment Scheme, providing capacity building to countries, and, with support from the Netherlands, it financed the preparation of the Manual for Sale and Purchase of AAUs under a Green Investment Scheme with the goal of helping countries in contract negotiation and structuring transactions of AAUs.

In 2006, the EBRD launched the Sustainable Energy Initiative (SEI) focusing on energy efficiency and sustainable energy investments, together with adaptation activities. Among the focus areas identified, SEI included also "Carbon Market development" to mobilize investments in mitigation projects. The SEI continued its operations until 2015 and the main goals were to scale up investments in sustainable energy and also to improve the business environment and remove existing barriers to market development. The MCCF has also operated within the SEI. In 2013 the Sustainable Resource Initiative (SRI) was introduced, and sustainable energy investments were still financed through the SEI. Since 2015, SEI/SRI have been superseded by the Green Energy Transition (GET) initiative which expanded the scope of the SEI/SRI including also technology transfer. Until 2015, the SEI supported 1,080 projects for EUR 19.5 billion of EBRD financing and EUR 106.9 billion of cumulative total project value. In 2015, investments under SEI/SRI reached 30% of the total EBRD business (Afanasenko 2016). The SEI included, besides investments in projects, also two other components: technical assistance (i.e. project assessments, feasibility studies, energy audits, risk assessments) and policy dialogues (working with governments to address market failures and create an enabling environment to scale up green investments).

One of the most important elements of the SEI is the creation of the so-called Sustainable Energy Financing Facilities (SEFFs): these facilities provide credit lines to the local banks, together with technical support, which then provide lending to small and medium enterprises for the implementation of EE and small renewable energy projects. Although not necessarily connected to the carbon markets, the SEFFs created a network of over 100 financial institutions, about USD 500 million finance per year and over 6 million tCO_2 reduced

annually. The SEFFs, also under the SRI, served to support the Policy Dialogue components between EBRD and national governments on the enhancement of the required regulatory and institutional framework, as well as identification of barriers to scaling up climate investments, including also carbon markets. The SEFFs provided support to project owners on the identification of opportunities for mitigation projects, support in project development and related documentation, baseline identification, and training on Monitoring, Reporting and Verification (MRV) requirements. In addition, EBRD also provided carbon finance support on a broader level (i.e. at national level) to regulators and law-makers to identify and implement appropriate regulatory frameworks that can effectively stimulate and support mitigation investments. While the main topics under the policy dialogue are very close and at times overlapping, activities are not necessarily targeting carbon markets development (e.g. legislation on energy efficiency in public building in the Russian Federation). In June 2012, the EBRD established the Regional Energy Efficiency Programme (REEP), one of the successors of SEFF.

The EBRD's program "Carbon Crediting Approach in Southern and Eastern Mediterranean Countries (SEMED)" comprises a series of market-based programs to reduce carbon emissions. These programs are comprehensive packages that include policy dialogue, technical assistance, carbon pricing for GHG emission reduction projects and associated results-based payments. More specifically the EBRD's SEMED includes:

- Developing, implementing and purchasing carbon credits from a carbon credit up-scaled CDM based approach in the renewable energy sector.
- Contributing to and supporting the carbon market development by reviewing the carbon market options, including domestic use of carbon credits and development of local capacity, in particular in the area of MRV and in the management of large emission reduction mechanisms.
- Contributing to a further development of up-scaled CDM based carbon credit instruments, such as PoAs or new mechanisms according to the latest international climate policy developments.

The EBRD thus provided a comprehensive package of carbon finance and carbon finance-related support measures, including financing, capacity building and policy dialogue. Moreover, over time the EBRD developed a broader strategy to support the low-carbon energy transition in its region of operation integrating its carbon finance activities and other support mechanisms.

8.6 Annex 6: Climate Change TFs at the European Investment Bank

The EIB puts a strong emphasis on climate change mitigation and adaptation in its activities. The EIB's current climate strategy was launched in 2015 and committed the EIB to mobilize finance for projects to keep global warming well below 2 °C. In this light, the EIB is committed to lending at least 25 % annually to climate action activities. For developing countries, the Bank aims to increase its lending for climate action to 35 % by 2020 (EIB 2018).

The EIB operates multiple TFs some of which are focused on climate change, for example FEMIP Trust Fund and Luxembourg-EIB Climate Finance Platform (EIB 2019).

Launched in 2005, the FEMIP Trust Fund (FTF) has received over EUR 66 million in contributions for capacity building, upstream studies, technical assistance, and risk capital operations in the southern Mediterranean partner countries. This includes a GBP 15 million grant from the United Kingdom for CAMENA – a separate, climate action-focused window. The FTF supports sustainable projects in the following sectors: finance and MSMEs, infrastructure, the environment and human capital, and research, development and innovation.

The Luxembourg Climate Finance Platform was unveiled in late 2016 at the COP23 climate summit in Bonn. The Luxembourg government is allocating EUR 30 million, which will be used to catalyze private sector investment in climate action projects around the world.

8.7. Annex 7: Sectors and themes used for similarity analysis

CC sectors among WBG-pre defined sectors of intervention:

"accesstoenergy","adaptation","biodiversity","coastalzonemanagement","disasterpreparedness","disasterriskreduction","disasterresponseandrecovery","disasterriskfinance","energyefficiency","energypoliciesreform","floodanddroughtriskmanagement","foodsecurity","forestspoliciesandinstitutions","landscapemanagement","greengrowth","mitigation","publictransport","urbanplanning","watershedmanagement"

CC action types:

"aviation","energyefficiencyinheatandpower","energytransmissionanddistributio","floodprotection","forestry","othertransportation","otheragriculturefishingandforest","otherwatersupplysanitationandwas","irrigationanddrainage","publicadministrationagriculturef","publicadministrationtransportati","publicadministrationwatersanitat","publicadministrationenergyandext","renewableenergy","renewableenergybiomass","renewableenergygeothermal","renewableenergyhydro","renewableenergysolar","renewableenergywind","urbantransport","wastemanagement"

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