Introduction: climate finance

Climate finance refers to the financial resources mobilised to fund actions that mitigate and adapt to the impacts of climate change, including public climate finance commitments by developed countries under the UNFCCC, although a definition of the term ‘climate finance’ is yet to be agreed internationally. In the 2009 Copenhagen Accord (UNFCCC, 2010), and confirmed in the Cancun decision (UNFCCC, 2011) and Durban Platform (UNFCCC, 2012), developed countries pledged to deliver finance approaching USD 30 billion between 2010 and 2012. While contributor countries at the end of the fast-start finance period self-reported that these targets were exceeded (Nakhooda et al., 2013), the Paris Agreement (UNFCCC, 2015) reiterated that developed countries should take the lead in mobilising climate finance “from a wide variety of sources, instruments and channels” in a “progression beyond previous efforts”. The accompanying Conference of the Parties (COP) decision agreed to set a new collective goal by 2025 by scaling up from a floor of USD 100 billion pledged in Copenhagen to be reached annually by 2020 (UNFCCC, 2016a). Many countries have highlighted the need for scaled-up international support in implementing their National Adaptation Plans (NAPs) as well as increasing the ambition of their Nationally Determined Contributions (NDCs) (Hedger and Nakhooda, 2015). Ensuring that finance and investment is available to realise these goals will be the major challenge going forward (Bird, 2017). Developing countries have also made the case for finance to address loss and damage already occurring in their countries as a result of climate change (Richards and Schalatek, 2017).

A study commissioned by the French and Peruvian governments, in their respective capacities as Presidents of COP 21 and 20, concluded that USD 62 billion in public and private sources were directed to developing countries from developed countries in 2014 (OECD, 2015). This increased to USD 71 billion in 2017 and USD 79 billion in 2018 (OECD, 2019; OECD, 2020). It is notable that in this wider reading of climate-related funding a substantial part comes from the private sector and the additionality of public finance identified is unclear (i.e. how much of this represents effort over and above existing development finance commitments). Climate Finance Fundamentals (CFF) 1 presents a longer discussion of the principle of additionality. The second Biennial Assessment and Overview of Climate Finance Flows of the UNFCCC, released in November 2016, recorded USD 41 billion of public international finance flowing to developing countries in 2013–2014 (UNFCCC, 2016b). In 2018, the third Biennial Assessment recorded that this had reached USD 56 billion annually in the period 2015-2016 (UNFCCC, 2018). These figures remain relatively small, however, compared to global climate finance estimates that take into account all countries and both private and public finance of USD 579 billion a year in the 2017–2018 period (Buchner et al., 2019).

Figure 1 presents an overview of the global climate finance architecture, focusing particularly on public climate-related financing mechanisms. There are a number of channels through which climate finance flows, including through multilateral climate funds that are dedicated to addressing climate change. Several developed countries have also established climate finance initiatives...
Figure 1: Global climate finance architecture

**Contributors**
- Australia
- Canada
- EU
- France
- Spain
- UK
- Germany
- Japan
- Norway
- US
- Denmark
- Others
- Subnational

**Bilateral Institutions**
- CIFs*
- United States Agency for International Development
- International Climate Finance (UK)
- Norwegian Agency for Development Cooperation
- Export-Import Bank of the United States
- Others
- Green Climate Fund
- MDG Achievement Fund (implemented by UNDP)
- Partnership for Market Readiness
- Africa Climate Change Fund
- Ministry of Foreign Affairs (Japan)
- Clean Technology Fund (implemented through WB, ADB, AfDB, EBRD and IDB)
- Amazon Fund
- Joint Implementation (implemented under the Kyoto Protocol)
- Clean Development Mechanism (implemented under the Kyoto Protocol)
- Japan International Cooperation Agency
- World Bank
- Asian Development Bank
- Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung (Germany)
- GEF
- Nationally Appropriate Mitigation Action facility (UK, Germany, Denmark and the EC)
- Forest Carbon Partnership Facility
- Global Environment Facility
- Global Climate Change Initiative (US)
- Department of Foreign Affairs and Trade (Australia)
- Japan Bank of International Cooperation
- Department for International Development (UK)
- Scaling Up Renewable Energy Program for Low Income Countries (implemented through WB, ADB, AfDB, EBRD and IDB)
- International Fund for Agricultural Development
- Ministry of Foreign Affairs (Japan)
- scaling up Renewable Energy Program for Low Income Countries (implemented through WB, ADB, AfDB, EBRD and IDB)
- BMZ
- Kreditanstalt für Wiederaufbau (German development bank)
- Adaptation Fund (GEF acts as secretariat and WB as trustee)
- Global Climate Change Initiative (US)
- Department for Business, Energy & Industrial Strategy (UK)
- Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
- African Development Bank
- Climate Investment Funds (implemented through WB, ADB, AfDB, EBRD and IDB)
- Central African Forest Initiative
- Africa Risk Pool
- Maldives Climate Change
- United Nations Development Programme
- European Investment Bank
- Ministry of Foreign Affairs (Japan)
- Export-Import Bank of the United States
- Others
- Subnational

**Implementing Agencies and Institutions**
- ADB
- African Development Bank
- AF
- Agence Française de Développement (French development agency)
- ADB
- Asian Development Bank
- BEIS
- Department for Business, Energy & Industrial Strategy (UK)
- BMZ
- Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung (German ministry of economic cooperation and development, Germany)
- BMZ
- Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung (German ministry of economic cooperation and development, Germany)
- CIDA
- Canadian International Development Agency
- DEFRA
- Department for Environment, Food and Rural Affairs (UK)
- DFAT
- Department of Foreign Affairs and Trade (Australia)
- DFC
- United States International Development Finance Corporation
- DFID
- Department for International Development (UK)
- EIB
- European Bank for Reconstruction and Development
- EIB
- European Investment Bank
- Ex-Im
- Export-Import Bank of the United States
- FAO
- Food and Agriculture Organization of the United Nations
- PFEM
- Fonds Français pour l’Environnement Mondial (French global environment facility)
- GIZ
- Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (German technical cooperation)
- IDB
- Inter-American Development Bank
- IFAD
- International Fund for Agricultural Development
- JICA
- Japan Bank of International Cooperation
- JICA
- Japan International Cooperation Agency
- KfW
- Kreditanstalt für Wiederaufbau (German development bank)
- MIES
- Mission Interministérielle de l’Efficacité de l’Energie et des Transports (inter-ministerial taskforce on climate change, France)
- MOFA
- Ministry of Foreign Affairs (Japan)
- NMFA
- Norwegian Ministry of Foreign Affairs
- NORAD
- Norwegian Agency for Development Cooperation
- UNDP
- United Nations Development Programme
- UNFCCC
- United Nations Framework Convention on Climate Change
- UN
- United Nations
- USAID
- United States Agency for International Development
- WB
- World Bank

**Multilateral Funds and Initiatives**
- AF
- Adaptation Fund (GEF acts as secretariat and WB as trustee)
- ACCF
- Africa Climate Change Fund
- AREI
- African Renewable Energy Initiative
- ASAP
- Adaptation for Smallholder Agriculture Programme
- CAFI
- Central African Forest Initiative
- CBFF
- Congo Basin Forest Fund (hosted by ADB)
- CDM
- Clean Development Mechanism (implemented under the Kyoto Protocol)
- CIF
- Climate Investment Funds (implemented through WB, ADB, ADB, EBRD and IIB)
- CTF
- Clean Technology Fund (implemented through WB, ADB, ADB, EBRD and IDB)
- FCDF
- Forest Carbon Partnership Facility
- FIP
- Forest Investment Program (implemented through WB, ADB, ADB, EBRD and IDB)
- GCCA
- Global Climate Change Alliance
- GCF
- Green Climate Fund
- GEF
- Global Environment Facility
- GEF
- Global Environment Facility
- GEEREF
- Global Energy Efficiency and Renewable Energy Fund (hosted by EIB)
- JI
- Joint Implementation (implemented under the Kyoto Protocol)
- LDCF
- Least Developed Countries Fund (hosted by the GEF)
- PAR
- Partnership for Market Readiness
- PPCR
- Pilot Program on Climate Resilience (implemented through WB, ADB, ADB, EBRD and IDB)
- SCFF
- Special Climate Change Fund (hosted by the GEF)
- SCF
- Strategic Climate Fund (implemented through WB, ADB, ADB, EBRD and IDB)
- SREP
- Scaling Up Renewable Energy Program for Low Income Countries (implemented through WB, ADB, ADB, EBRD and IDB)
- UN-REDD Programme
- United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation

**Bilateral Funds and Initiatives**
- GCCI
- Global Climate Change Initiative (US)
- GCFF
- Global Climate Partnership Fund (Germany, UK and Denmark)
- ICF
- International Climate Finance (UK)
- IKI
- International Klimaschutzinitiative (International climate initiative, Germany)
- MDG-F
- MDG Achievement Fund (implemented by UNDP)
- NAMA Facility
- Nationally Appropriate Mitigation Action Facility (UK, Germany, Denmark and the EC)
- NICFI
- Norway’s International Climate Forest Initiative
- REM
- REDD + Early Movers (Germany and UK)
or are channelling climate finance through their bilateral development assistance institutions. Many developing countries have also set up regional and national funds and channels to receive climate finance. By December 2020, two global climate funds (the Green Climate Fund (GCF) and Adaptation Fund (AF)) had received USD 70 million in pledges from three subnational governments (Brussels, Wallonia and Flanders) and the cities of Quebec and Paris. The types of climate finance available vary from grants and concessional loans, to guarantees and private equity. The architecture has differing structures of governance, modalities and objectives. While the transparency of climate finance programmed through multilateral initiatives is increasing, detailed information on bilateral initiatives, regional and national funds is often less readily available.

A multitude of funding channels increases the options and therefore possibilities for recipient countries to access climate finance, and theoretically also the possibilities to provide funding complementarily, but it can also make the process more complicated. It becomes increasingly difficult to monitor, report and verify (MRV) climate finance, to coordinate a response, as well as to account for its effective and equitable use. There is opportunity, however, to draw lessons from the diversity about how best to structure climate finance to maximise impacts, and the environmental, gender equality and social co-benefits. The HBS Climate Funds Update (CFU) website seeks to track this intricate architecture. Climate Funds Update tracks operating entities of the UNFCCC, large multilateral climate funds that feature prominently in reporting to the UNFCCC and funds that have had a significant demonstration role. It does not track all climate funds or all channels of climate finance, due to available information as well as resource limitations.

**Multilateral channels for climate finance**

Multilateral climate finance initiatives often break from contributor country-dominated governance structures, typical in development finance institutions. This gives developing-country governments greater voice and representation in decision-making. Steps to increase inclusion and accountability in multilateral climate fund governance have been taken, including by creating a role for non-governmental stakeholders as observers to fund meetings, with varying degrees of active participation opportunities.

Established in 1991, the Global Environment Facility (GEF) is an operating entity of the financial mechanism of the UNFCCC, serving the same function for the Paris Agreement, with a long track record in environmental funding. It also serves as a financial mechanism for several other Conventions, including on biodiversity and desertification. Resources are allocated to target multiple focal areas, including climate change, according to the impact of dollars spent on environmental outcomes but also ensuring all developing countries have a share of the funding. For the sixth replenishment of the GEF (GEF-6, 2014–2018), 30 donor countries pledged USD 4.43 billion over all focal areas, of which USD 1.26 billion supported the climate change focal area. GEF-6 shifted the focus of its programming to targeting multiple focal areas including climate change, in thematic areas such as sustainable cities and land use and forests. For the seventh replenishment period (2019–2022), close to 30 countries pledged USD 4.1 billion for all five focal areas, with an increase in funding for biodiversity and land degradation, but a reduction in funding for climate change to USD 700 million, reflecting the growing role of the GCF. As of December 2020, through the fourth, fifth, sixth and seventh Trust Fund, GEF had approved over 834 projects in the focal area of climate change amounting to USD 4.1 billion.

The GEF also administers the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF) under the guidance of the UNFCCC COP. These funds support NAPs development and implementation, although largely through smaller scale projects (with a country ceiling for funding of USD 20 million). As of December 2020, the LDCF had approved USD 1.3 billion for 285 projects, with cash transfers to projects of USD 534 million, while the SCCF had approved USD 284 million for 72 projects, making cash transfers of USD 181 million.

Formally linked to the UNFCCC, the Adaptation Fund (AF) is financed through a 2% levy on the sale of emission credits from the Clean Development Mechanism (CDM) of the Kyoto Protocol. Now mandated to serve the Paris Agreement, a similar automated funding source from a new carbon market mechanism to be developed under the Paris Agreement is being considered. However, in times of low carbon prices, the AF is increasingly reliant on developed-country grant contributions to stay afloat. Operational since 2009, total financial inputs amount to USD 1,039 million, with total cash transfers to projects of USD 454 million. The AF pioneered direct access to climate finance for developing countries through accredited National Implementing Entities that are able to meet agreed fiduciary as well as environmental, social and gender standards, as opposed to working solely through UN agencies or multilateral development banks (MDBs) as multilateral implementing agencies.

The Green Climate Fund (GCF) of the UNFCCC was agreed at the Durban COP and became fully operational with its first projects approved at the end of 2015. Like the GEF, it serves as an operating entity of the financial mechanism of both the UNFCCC and the Paris Agreement and receives guidance by the COP. It is expected to become the primary channel through which international public climate finance will flow over time and is intended to fund the paradigm shift towards climate-resilient and low-carbon development in developing countries with a country-driven approach, and a commitment to a 50:50 balanced allocation of finance to adaptation and mitigation. The initial resource mobilisation process for the GCF raised USD 10.3 billion. However, the failure by the United States to fulfil USD 2 billion of its USD 3 billion contribution agreement, in addition to exchange-rate fluctuations, means that only USD 7.1 billion were ultimately available (CFF 11 discusses the GCF and its first formal replenishment process in more detail). By November 2020, the GCF’s first formal replenishment (GCF-1) had resulted in pledges from 31 contributors of funds amounting to USD 9.9 billion (see briefing CFF 11 for a full list of pledges).
Developing countries can access the GCF both through MDBs, international commercial banks and UN agencies, as well as directly through accredited National, Regional and Sub-National Implementing Entities. By November 2020, the implementing partner network of the GCF had grown to 103 Accredited Entities and the GCF had approved a total of 159 projects with USD 7.3 billion in GCF funding commitments for approved projects and USD 1.4 billion disbursed.

At COP 16, the Standing Committee on Finance was established under the UNFCCC to assist the COP in meeting the objectives of the Financial Mechanism of the Convention. The Standing Committee on Finance has been tasked with, among other things, preparing a biennial assessment of climate finance flows, the fourth of which will be published in 2021 and will detail flows from 2017–2018.

A substantial volume of climate finance has been channelled through institutions that are not directly under the guidance of the UNFCCC COP.

The Climate Investment Funds (CIFs) established in 2008 are administered by the World Bank, but operate in partnership with regional development banks including the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD) and the Inter-American Development Bank (IDB). The CIFs finance programmatic interventions in selected developing countries, with the objective of improving understanding of how public finance is best deployed at scale to assist transformation of development trajectories. The CIFs have a total pledge of USD 8 billion. They include a Clean Technology Fund (CTF) with USD 5.4 billion in contributions and USD 1.72 billion in cash transfers to projects to date, and a Strategic Climate Fund (SCF), with USD 2.65 billion in contributions and USD 975 million in cash transfers to projects as of December 2020. The SCF is composed of the Pilot Program for Climate Resilience (PPCR), the Forest Investment Program (FIP), and the Scaling Up Renewable Energy Program in Low Income Countries (SREP). While the CIFs had a sunset clause that would come into effect when a global architecture was in place – commonly understood to be the operationalisation of the GCF – in 2019 this clause was once again revisited and this time indefinitely postponed, opening the door to a possible recapitalisation of the CIFs.

Multilateral development banks (MDBs) play a prominent role in delivering multilateral climate finance, with climate finance commitments of USD 61.6 billion made in 2019 alone (EBRD et al., 2020). Many have incorporated climate change considerations into their core lending and operations, and most MDBs now also administer climate finance initiatives with a regional or thematic scope. The World Bank’s carbon finance unit has established the Forest Carbon Partnership Facility (FCPF) to explore how carbon market revenues could be harnessed to reduce emissions from deforestation and forest degradation, forest conservation, sustainable forest management and the enhancement of forest carbon stocks (REDD+). It also manages the Partnership for Market Readiness (PMR), aimed at helping developing countries establish market-based mechanisms to respond to climate change and the BioCarbon Fund, which is a public-private partnership that mobilises finance for sequestration or conservation of carbon in the land use sector. The European Investment Bank administers the European Union’s (EU) Global Energy Efficiency and Renewable Energy Fund (GEEREF). The African Development Bank also finances enhanced climate finance readiness in African countries through the German-funded Africa Climate Change Fund (ACCF), whose first projects were approved in 2015. The African Development Bank is also the Trustee for the Africa Renewable Energy Initiative (AREI) and will house the AREI Trust Fund with expected USD 10 billion in resources.

Both MDBs and UN agencies act as implementing entities for the GEF, SCCF, LDCF, AF and the GCF. Like MDBs, UN agencies commonly take on the role of administrator and/or intermediary of climate finance. The UN-REDD Programme, made operational in 2008, brings together the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP) and the Food and Agriculture Organization of the United Nations (FAO) to support REDD+ activities, with the governance structure giving representatives of civil society and Indigenous Peoples’ organisations a formal voice. The International Fund for Agriculture and Development (IFAD) administers the Adaptation for Smallholder Agriculture Programme (ASAP) that supports smallholder farmers in scaling up climate change adaptation in rural development programmes.

Bilateral channels for climate finance

A significant share of public climate finance is spent bilaterally and administered largely through existing development agencies, although a number of countries have also set up special bilateral climate funds. There is limited transparency and consistency in reporting of some bilateral finance for climate change, however, with countries self-classifying and self-reporting climate-related financial flows without a common reporting format or independent verification. The 2018 Biennial Assessment reported that USD 31.7 billion annually in 2015–2016 was provided by developed to developing countries bilaterally, in addition to that spent through climate funds and development finance institutions (UNFCCC, 2018). An annual average of USD 30.3 billion in climate-related official development assistance (ODA) was reported to the Organisation for Economic Cooperation and Development’s Development Assistance Committee (OECD DAC) in the same year.

Germany’s Internationale Klimaschutzinitiative (IKI, international climate initiative) has provided over USD 4 billion for more than 730 mitigation, adaptation, and REDD+ projects since its establishment in 2008. The initiative is innovatively funded partly through the sale of national tradable emission certificates, providing finance that is largely additional to existing development finance commitments (BMU, 2020).

The Government of the United Kingdom has committed GBP 5.8 billion to its International Climate Finance (ICF) from 2016 through to 2021. In 2019, it announced a doubling of its investments to help developing countries to combat climate change in the period 2021–2026 to GBP 11.6 billion. The UK channels a substantial share through
dedicated multilateral funds, including the CIFs and the GCF. Together with Germany, Denmark and the European Commission (EC), the UK also contributes to the NAMA Facility that supports nationally appropriate mitigation actions (NAMAs) in developing countries and emerging economies that want to implement ambitious mitigation measures. Germany, the UK and Denmark also support the Global Climate Partnership Fund (GCPF), managed by the Bundesministerium für Umwelt, Naturschutz und Nukleare Sicherheit (BMU, German federal ministry for the environment, nature conservation and nuclear safety) and Kreditanstalt für Wiederaufbau (KfW, German Development Bank), that focuses on renewable energy and energy efficiency through public–private partnership. Germany and the UK also support the REDD+ Early Movers Programme (REM).

Norway’s International Climate and Forest Initiative (NICFI) has pledged USD 350 million each year since 2008 through bilateral partnerships, multilateral channels and civil society. Sizeable pledges have been made for REDD+ activities in Brazil, Indonesia, Tanzania, and Guyana.

Regional and national channels and climate change funds

Several developing countries have established regional and national channels and funds with a variety of forms and functions, resourced through international finance and/or domestic budget allocations and the domestic private sector. The Indonesian Climate Change Trust Fund was one of the first of these institutions to be established. Brazil’s Amazon Fund, administered by the Banco Nacional de Desenvolvimento Econômico e Social (BNDES, Brazilian national development bank), is the largest national climate fund, with a commitment of more than USD 1.2 billion from Norway and Germany. However, the operation of the fund and delivery of the commitments has been called into question since President Bolsonaro came into power in Brazil. There are also national climate change funds in Bangladesh, Benin, Cambodia, Ethiopia, Guyana, the Maldives, Mali, Mexico, the Philippines, Rwanda and South Africa. Additional countries have proposed national climate funds in their climate change strategies and action plans. In many cases the UNDP acted as the initial administrator of national funds, increasing donor trust that good fiduciary standards will be met, but many countries are now passing these tasks on to national institutions. Data on capitalisation of national climate change funds, however, is not consistently available.

National climate change funds attracted early interest, largely because they were established with independent governance structures that met high levels of transparency and inclusiveness and could channel finance quickly to projects suited to national circumstances that were aligned with national priorities. Working through coordinated national systems could also improve transaction efficiency. In practice, however, the impact of national trust funds on strengthening national ownership and coordination remains to be seen, and the sums of finance that these funds have raised are often modest. At the same time, many developing countries are beginning to incorporate climate risk into their national fiscal frameworks and are monitoring climate-related expenditure.

The Caribbean Catastrophic Risk Insurance Facility (CCRIF) was established in 2007 through support of the World Bank and other development partners but is now also funded by premiums from developing countries. A 16 member-country risk pool, the CCRIF offers parametric insurance. Similarly, the African Risk Capacity (ARC) offers index insurance against drought as a specialised agency of the African Union (AU).
References and further reading


Climate Funds Update: www.climatefundsupdate.org


Endnotes
2. Note the committee is an oversight mechanism rather than a fund.