Climate finance remains central to achieving low-carbon, climate resilient development. The global climate finance architecture is complex and always evolving. Funds flow through multilateral channels – both within and outside of the United Nations Framework Convention on Climate Change (UNFCCC) and Paris Agreement financial mechanisms – and increasingly through bilateral, as well as through regional and national climate change channels and funds. Monitoring the flows of climate finance is difficult, as there is no agreed definition of what constitutes climate finance or consistent accounting rules. The wide range of climate finance mechanisms continues to challenge coordination and defy cohesion. But efforts to increase inclusiveness and complementarity, as well as to simplify access, continue.

Introduction: climate finance

Climate finance refers to the financial resources mobilised and provided 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 with contributor countries at the end of the fast-start finance period self-reporting that these targets were exceeded (Nakhooda et al., 2013). The Paris Agreement (UNFCCC, 2015) reiterated that developed countries should take the lead in mobilising and providing 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 quantified goal by 2025 by scaling up from a floor of USD 100 billion pledged in Copenhagen to be reached annually by 2020 (UNFCCC, 2016a). Deliberations on this new climate finance goal were initiated at COP26 in Glasgow in 2021 with a focus on expanding the scale, scope and quality of climate finance provision in a way that is science- and needs-based. 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) (UNFCCC, 2021a).

Ensuring that adequate finance and investment is available to realise these goals remains 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 as the third climate finance pillar in addition to support for adaptation and mitigation (V20, 2022; hbs et al., 2021). In response, at COP27 parties decided to establish new funding arrangements for addressing loss and damage, including a Loss and Damage Fund (LDF) with core modalities negotiated throughout 2023 and approved at COP28 in Dubai.

A study commissioned by the French and Peruvian governments, in their respective capacities as Presidents of COP21 and 20, concluded that USD 62 billion in public and private sources were directed to developing countries in 2014 (OECD, 2015). This increased to USD 80.4 billion in 2018 and USD 83.3 billion in 2020 (OECD, 2021; OECD, 2022). For 2021, the OECD estimated USD 89.6 billion in total climate finance had been mobilised and provided by developed countries for developing countries; while growing, this is still substantially falling short of the developed country target of 100 billion that should have been reached already one year earlier by 2020 (OECD, 2023). 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 1 (CFF1) presents a longer discussion of the principle of additionality. The Biennial Assessment and Overview of Climate Finance Flows of the UNFCCC in its fifth edition released in 2022 reports climate-specific finance and core general funding provided by Annex II Parties to developing countries has grown from USD 42 billion of public international finance flowing to developing countries in 2013–2014, to USD 48 billion annually in the period 2015-2016, and USD 52 billion annually in the
period 2017–2018. For 2019–2020, USD 53 billion per year on average was provided (UNFCCC, 2022). These figures remain small, however, compared to various global climate finance estimates that take into account all countries and both private and public finance, ranging from USD 803 billion a year for the 2019–2020 period (UNFCCC, 2022) to USD 1.27 trillion annual climate finance flows for the 2021–2022 period (Buchner et al., 2023).

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 or are channelling climate finance through their bilateral development assistance institutions. Many developing countries have also set up regional and national funds and collaborative channels to receive climate finance. By December 2023, two global climate funds (the Green Climate Fund (GCF) and Adaptation Fund (AF)) had received USD 117 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 complementarity, 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 (GEF-7, 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 728 million. For the eighth replenishment period (GEF-8, 2022–2026), 29 donor governments pledged USD 5.33 billion but only USD 745 million is dedicated to the climate change focal area. As of December 2023, through the fourth, fifth, sixth, seventh and eighth Trust Fund, GEF had approved over 970 projects in the focal area of climate change amounting to USD 4.5 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 2023, the LDCF had approved USD 1.5 billion for 317 projects, with cash transfers to projects of USD 542 million, while the SCCF had approved USD 288 million for 74 projects, making cash transfers of USD 204 million.

Formally linked to the UNFCCC, the **Adaptation Fund (AF)** receives funding 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 the new carbon market mechanism developed under the Paris Agreement is being set up. Following agreement at COP26 in Glasgow, the AF will receive 5% of the share of proceeds from the sale of emissions credits under the new CDM-replacement mechanism (UNFCCC, 2021b). 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 1.8 billion, with total cash transfers to projects of USD 697 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. As the largest multilateral climate fund, it 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 for the period 2015-2018. (CFF 11 discusses the GCF and its replenishment process in more detail). The GCF’s first formal replenishment (GCF-1) had resulted in pledges from 34 contributors of funds amounting to USD 10 billion for the period 2020-2023, as well as a payment of USD 1 billion of the United States, which sat out GCF-1, still owed from the initial resource mobilisation period. The GCF’s ongoing second replenishment (GCF-2), which started in 2023, already exceeds this funding level with a total of USD 12.8 billion pledged by 31 countries for programming over the next four years (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 public and private sector national, regional and sub-national Implementing Entities. By December 2023, the implementing partner network of the GCF had grown to 121 Accredited Entities and the GCF had a portfolio of 243 active projects with USD 13.5 billion in GCF funding commitments for approved projects and USD 3.9 billion disbursed.

At COP27, parties decided to establish new funding arrangements for addressing loss and damage, including a Loss and Damage Fund (LDF). The new fund’s core modalities were negotiated throughout 2023 (Schalatek, 2023) and its governing instrument was approved at COP28 in Dubai, with 18 countries and the European Commission pledging an initial USD 661 million (UNFCCC, 2024). Supported by an interim secretariat, the new LDF Board in 2024 will work to quickly detail the fund’s operational policies and funding procedures. The LDF joins the GCF and GEF as an operating entity of the financial mechanism of both the UNFCCC and the Paris Agreement and will receive guidance from the COP. Its purpose is to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and noneconomic loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events.

At COP16, 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 fifth of which was published in 2022 and details the finance flows from 2019-2020 (UNFCCC, 2022).

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 10.8 billion. They include a Clean Technology Fund (CTF) with now USD 8 billion in contributions and USD 2.05 billion in cash transfers to projects to date, and a Strategic Climate Fund (SCF), with USD 2.68 billion in contributions and USD 1.49 billion in cash transfers to projects as of December 2023. 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 recapitalisation of the CIFs. The CIFs have also established the Accelerating Coal Transition program (ACT), that will act in a number of coal-reliant developing countries, while ACT and CIF is a key partner in South Africa’s Just Energy Transition Programme (see below).

Multilateral development banks (MDBs) play a prominent role in delivering multilateral climate finance, with climate finance commitments of USD 48.7 billion made in 2022 alone (EIB et al., 2023). 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 and provides 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 houses the AREI Trust Fund with expected USD 10 billion in resources.
Both MDBs and UN agencies act as implementing entities for the BEF, 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-relevant financial flows without a common reporting format or independent verification. The 2022 Biennial Assessment reported that USD 31.6 billion annually in 2019–2020 was provided by developed to developing countries bilaterally, in addition to that spent through climate funds and development finance institutions (UNFCCC, 2022). An annual average of USD 39 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 a total of almost EUR 6 billion for more than 950 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 (BMUV, 2023).

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, Nukleare Sicherheit und Verbraucherschutz (BMUV, German federal ministry for the environment, nature conservation, nuclear safety and consumer protection) 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). Germany is also the main contributor to the new Global Shield against Climate Risk (Global Shield) initiative with Canada, France, the USA, Denmark and other developed countries also pledging support to provide financial protection and risk insurance for loss and damage in climate vulnerable countries (BMZ, 2022).

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 countries such as Brazil, Indonesia, Tanzania, and Guyana.

Joint bilateral cooperation has also made way for a number of Just Energy Transition Partnerships (JETPs). These country platforms see a number of advanced economies come together with a finance offer for the rapid and equitable decarbonisation in a middle-income country (though they remain largely undefined and highly country-specific (Hadley et al., 2022)). The first JETP was announced at COP26 in 2021 in South Africa, promising USD 8.5 billion in programmatic support, while at COP27 a JETP was launched in Indonesia, with USD 20 billion earmarked to support its transition to clean electricity. Additionally, the Vietnam JETP was announced in December 2022 with initial funding of USD 15.5 billion for the period 2023–2028. In June 2023, a JETP with Senegal for initially EUR 2.5 billion over 3-5 years was announced. JETPs with India and the Philippines are expected to follow; notably each JETP has differing international partners.

**Regional, national and country-collaborative climate change funds and channels**

Several developing countries and country groups 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 USD 1.92 billion from Norway, Germany, Switzerland, Denmark, the European Commission and the United States. The operation of the fund and delivery of the commitments, which stalled under Brazil’s former President Bolsonaro, has been revived under the new Brazilian President Lula da Silva. 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 trust by contributors 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.

Regional cooperation and coalitions of particularly vulnerable states are also generating climate finance flows. 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 23 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). These parametric insurance models are and have been replicated in other regions.

More recently, the Climate Vulnerable Forum (CVF) and Vulnerable 20 Group of the Ministers of Finance of the CVF – a South-South collaboration platform created in 2009 – created a CVF and V20 Joint Multi Donor Fund. The fund is supported by public and philanthropic contributions and was established in 2020 as a voluntary financial and implementation tool focused on increasing South-South climate cooperation among the 58 members of the CVF and V20. The fund is also linked to the activities of the Global Shield initiative to address loss and damage jointly announced by the Group of Seven (G7) and V20 at COP27.

References and further reading


Climate Funds Update: www.climatefundsupdate.org
Endnotes

1. www.climatefundsupdate.org

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

3. This figure includes the USD 2.2 billion investment program for Accelerating Coal Transition (ACT). The ACT with South Africa, India, Indonesia, the Dominican Republic, North Macedonia and the Philippines selected to be the first beneficiaries, is supported by financial pledges from the United States, United Kingdom, Germany, Canada, and Denmark.

References and further reading


The Climate Finance Fundamentals are based on Climate Funds Update data and up to 2021 also available in 3. This figure includes the USD 2.2 billion investment program for Accelerating Coal Transition (ACT). The ACT with South Africa, India, Indonesia, the Dominican Republic, North Macedonia and the Philippines selected to be the first beneficiaries, is supported by financial pledges from the United States, United Kingdom, Germany, Canada, and Denmark.