Delivering on Climate Finance in selected EU countries[*1]

Scientific Paper

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1. Introduction

In early 2020, the General Committee for Foreign Trade and Development Cooperation included the topic "International climate finance" on the 2020 Knowledge Agenda. In order to shed light on the development in this topical area, the Supervisory Group (SG) of the Dutch House of Representatives proposed to prepare a scientific factsheet presenting highlights on how the EU countries are delivering climate finance for supporting climate actions in developing countries.

Central questions

At the UN climate conference in Copenhagen in 2009, developed countries pledged to collectively mobilise USD100 billion in climate finance per year to developing countries by 2020. The EU countries including the Netherlands have been reporting on achievements of their share in the common climate finance target. This study aims to find more insights on these achievements and addresses the following questions:

- What is the design of climate finance in different countries and what differences and similarities exist as to how public and private funds are mobilised and spent? To what extent is it possible to get a good understanding of policy coherence?
- On which projects are the mobilised climate finance means spent?
- What are the effects and outcomes from public climate finance for the generation of private finance, in particular with respect to adaptation and mitigation?

Scoping

The study focused on climate finance activities of six European countries including France, Germany Netherlands, Sweden, Switzerland and the United Kingdom. These countries have been selected because of the accessibility of background information on their climate finance efforts.

In order to understand the differences between countries and systems properly, this study also takes stock of current definitions and criteria applied to enable such country comparisons (see also OECD (2020a-c). Key questions that should be addressed in such exercises are:

- How to define public and private funds;
- How to classify projects, in particular whether they are mitigation or adaptation related;
- How to define the available budget and sources as well as its spending on projects;
- How to understand the climate leverage effect related to private funds;
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[1] We thank Thomas Hos from the OECD for very helpful comments on an earlier draft.

Answers to these questions feed into how climate finance efforts could be assessed properly (see also section 2.3). Our study also looks into the role of the European Union, the EBRD and the EIB in the international climate finance activities of the indicated countries and in general. Finally, our quantitative analysis of the 6 countries is based on publicly available data from UNFCCC and OECD DAC. We explain this approach in more detail in section 2.

2. Climate Finance: definition and assessment

2.1 What is 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.[2] Providing climate finance is important for making progress towards the objective of the UNFCCC and the goals set out in the Paris Agreement. International Climate Finance is a commitment from developed countries to support developing countries to respond to the challenges and opportunities of climate change. This commitment is based on the principle of "common but differentiated responsibility and respective capabilities". In the frame of the UNFCCC negotiations such commitment has been set up under the Copenhagen Agreement where countries agreed to allocate annually USD100 billion year for climate finance in developing countries.

According to the UNFCCC definition, climate finance refers to the financial resources dedicated to adapting to and mitigating climate change in the context of financial flows to developing countries. The Parties to the Convention agreed on a definition of climate finance linked to the additionality principle promoted under the UNFCCC. In reaching the annual USD100 billion goal the Annex I countries[3] commit to provide '**new and additional financial resources**' for the 'full incremental costs' of addressing climate change in non-Annex I countries (UNFCCC, 2010). This implies that these resources should come in addition to the funding envisaged under the developed nations' official development aid (ODA) budgets.

Climate finance could exploit both **public** and **private** sources. The public development assistance is and will always to be key in financing development. However it is widely recognised that additional private resources need to be mobilised to unleash the potential of international financial flows. Therefore, in the Copenhagen Agreement developed countries included the private sector as a source of climate finance.

From a country perspective climate finance could be provided through different channels:

- *Bilateral channel*s are the dedicated national funds, overseas development aid (ODI) programmes in developed countries that disburse and/or manage grant or loans from this country to developing countries. Examples of institutions that bilateral finance channels are: Swedish International Development Authority (Sida), German Investment Corporation (DEG), NORFUND in Norway, Proparco in France, etc.
- *Multilateral channel*s include special international funds and financial institutions including regional development banks.
- *Export credits* provided by developed countries' official export credit agencies are presented as a separate channel category (e.g. in OECD statistics). This is because they do not qualify as official development finance due to their financial terms and conditions as well as trade-related aim. Nonetheless, in addition to supporting national exports and facilitating international trade, they can represent a source of climate finance when provided in sectors and for activities that are relevant to climate change mitigation and adaptation. As they are a smaller share of climate finance (at least for the moment,we excluded them from our analysis).

[2] UNFCCC, https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance

[3] Parties include the industrialized countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States.

- *publicly mobilised private finance* is commercial climate finance, including private sector finance that is mobilised by public finance, for instance through public-private partnerships or through concessional loans (blended finance[4]). UNFCCC agreements allow these types of finance to be reported by donor countries as their contribution*;*

Climate finances channelled from developed to developing countries can come in form of various instruments, including grants, loans, guarantees, equities, guarantees, etc, as presented in the box below:

Box: Climate finance instruments definitions

Key groups of instruments

- **Grants:** a sum of money that given for climate change activities but does not need to be repaid.
- **Concessional loans:** loans given for the purpose of addressing climate change, which are characterized with longer repayment terms and lower interest rates.
- **Non-concessional loans:** loans that are provided at a market-based interest rate for climate change activities.
- **Equity:** investment in projects forming a stake in a business or company.
- **Guarantees** (or development guarantees)**:** Legally binding agreements in which the guarantor agrees to pay (a part of) the amount due on a loan, equity or other instrument in the event of non-payment by the obligor or loss of value in case of investment. In the OECD reports, the term guarantee refers to both guarantees and insurance schemes.

Specific type of instruments used in the climate finance can include the following:

- ***Direct investment in companies*** refer to on-balance sheet investments in corporate entities, which are conducted without any intermediary and which typically consist of or can combine the following instruments/mechanisms: equity, mezzanine finance and senior loans.
- **Syndicated loans** are provided by a group of lenders (called a syndicate) who work together to provide funds for a single borrower.
- **Shares in collective investment vehicles** allow investors to pool their money and jointly invest in a portfolio of companies.
- **Credit lines** refers to a standing credit amount which can be drawn upon at any time, up to a specific amount and within a given period.
- **Simple co-financing arrangements** include various business or public-private partnerships, B2B programmes, business surveys, matching programmes, as well as result-based approaches
- **Project finance schemes in Special Purpose Vehicles (SPVs)** is a funding structure, by which all investors (or investors under a given investment threshold) are pooled together into a single entity.

Source: UNFCCC and OECD DAC

2.2 Monitoring Public and Private Climate Finance

Monitoring of these finances is important in tracking the fulfilment of country pledges towards the overall goal (See Table 1). There are two official systems for climate finance monitoring: one set up by UNFCCC based on own country reporting, and another one managed by OECD. A special section of the biennial reporting format adopted by the UNFCCC facilitates the provision of data concerning the financial support provided by the reporting country to developing countries. The OECD Development Assistance Committee

[4] The OECD defines blended finance as follows: the strategic use of development finance for mobilisation of additional finance towards sustainable development in developing countries (OECD 2016)

(DAC) has set up a system for tracking climate finances and making them internationally comparable. Both systems monitor climate finance flows through direct bilateral and multilateral channels.

There is some overlap between the two but also important differences. For example, the UNFCCC does not separately report on publicly mobilized private finance, whereas the OECD does. Also, the OECD calculates the multilateral contributions itself, whereas the UNFCCC receives information on the multilateral contributions from the countries' own reports (though sometimes the countries report these contributions based on the OECD calculations). Furthermore, UNFCCC focuses on Annex I countries and definition of low income countries applied under UN framework (provider perspective), while the OECD has a different geographical data breakdown (recipients perspective). High income countries like Chili, Oman and Bahrein are not considered as 'developing' by OECD. Third, both UNFCCC and OECD use same data, but allow for different categories that might sometimes overlap: i) CF projects (primary climate goal), ii) ODA projects (primary development goal), iii) overlap.

Table 1 Overview of the categories of finance considered in the official monitoring and reporting

Category	Coverage	Instruments	Reports / Data source
Bilateral public	Climate finance outflows from donor countries' bilateral development finance agencies and institutions	Grants, loans, equity investments	National Biennial reports to the UNFCCC (also used afterwards in the OECD statistics)
Multilateral public (attributed to developed countries)	Climate finance outflows from multilateral development banks and climate funds attributable to developed countries	Grants, loans, equity investments	Biennial reports to the UNFCCC; OECD DAC statistics (total multilateral outflows); Institutions' annual reports
Export credits	Climate-related export credits provided by developed countries' official export credit agencies, mostly for renewable energy	Export credit loans, guarantees, and insurance	OECD Export Credit Group statistics
Publicly mobilised private (attributed to developed countries)	Private finance mobilised by bilateral and multilateral public climate finance	Private finance mobilised by grants, loans, equity and developmental guarantees	OECD DAC statistics and complementary data submissions

Source: based on the OECD (2020c)

The climate change markers introduced at the 1992 Rio Earth Summit, referred to Rio markers, allow monitoring of allocation of funds to *mitigation, adaptation, cross-cutting* activities. There are three levels to the Rio markers and depending on the intention of a given project the climate expenditure is accounted with different shares following this scoring system[5]:

- Mitigation or adaptation as a principal objective (score 2),
- Mitigation of adaption as a significant objective (score 1) or
- Mitigation or adaptation is not the target at all (score 0).

The monitoring is then used to study whether public and private finance has been in line with the countries' pledges over the years. Special effort has been required in setting up the publicly mobilised private climate

[5] See Revised climate marker handbook_FINAL.pdf (oecd.org))

finance monitoring system which has been done by the OECD DAC Secretariat. While setting and testing the methodology the Secretariat has carried out a series of surveys since in 2013 in order to measure the amounts mobilised (by the public) from the private sector by such instruments as guarantees, syndicated loans, shares in collective investment vehicles, direct investment in companies, credit lines, simple co-financing arrangements and project finance schemes. The OECD DAC surveys is the main source for the private finance statistics both for countries and for multilateral channels. [6] [7]

It is worth mentioning that also a so-called *Climate Finance Landscape Method* for monitoring of the domestic and international climate finances has been developed by the think tank Climate Policy Initiative (CPI)[8]. Since 2011, the CPI has been publishing such global landscapes annually. In contrast to the UNFCCC and the OECD, CPI does not have its own reporting and statistics platform, but uses empirical data drawn from a wide range of primary and secondary sources to produce the landscapes. The CPI's definition of climate finance is similar to that of the UNFCCC and the OECD, with a focus on bi- and multilateral finance and also includes private funds. However, their approach also considers internal finance flows, not only the international flows, somehow accommodates household capital and seems to collect a lot more data (companies, government, households, etc). A few countries (Germany, France, Belgium, Poland, Czech Republic and Latvia) have been using this method in their analyses (Novikova et al, 2019).

2.3 How to assess climate finance spending?

In this paper we first provide a global overview of the developments in climate finance to sketch a broad picture. We subsequently focus more deeply on our target countries. Here we rely on the internationally coordinated approaches and data that the main bodies provide, i.e. data from the UNFCCC and OECD. It should be noted upfront, however, that some organisations raise concerns about the methods of the UNFCCC and OECD, for instance that loans cannot be considered as equal to grants because they must eventually be repaid. The argument here is that climate finance should not bring with it the burden of additional debt [9]. This is just one example of the fact that the exact definition of climate finance has become a political question, rather than a purely technical one (Novikova et al, 2019). Indeed, the political commitment of developed countries towards developing ones, as well as domestic commitments of the European Union (EU) and individual countries to spend a particular amount of money or a particular budget share on climate actions has contributed to this politicization of the definition.

To assess the different climate finance efforts of countries, this study asks the following questions:

- Is the amount of (public) finance committed also reached?
- Is the finance spent on the right purposes, i.e. according to the definition of those purposes?
- To what extent do the public funds also raise additional private funds ('leverage effect')?
- Are the additional means gathered and spent in a coherent way?

It should be noted that these questions basically relate to questions that are usually also addressed by Audit Commissions (e.g. Dutch Court of Auditors, 2020). Such questions can be answered with a clearly defined

[6] The biennial reports to UNFCCC do not record the private finance statistics in a systematic format and have no template for such statistics. Countries report on private finance in free and flexible style which does not allow cross country comparison.

[7] See the latest document on http://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/DAC-Methodologies-on-Mobilisation.pdf

[8] https://www.climatepolicyinitiative.org/the-topics/climate-finance-landscapes/

[9] E.g. see IISD (2010), ActAllianceEU (2020)

ultimate goal and if agreement exists on a set of definitions that determine what could labelled as climate finance and on what purposes it is spent. So a preliminary question for a country comparison assessment is whether and to what extent countries agree on such monitoring issues.

Another set of questions that is asked for by the Dutch General Committee for Foreign Trade and Development Cooperation relates to policy coherence and (cost) effectiveness, however. Relevant questions to be asked are:

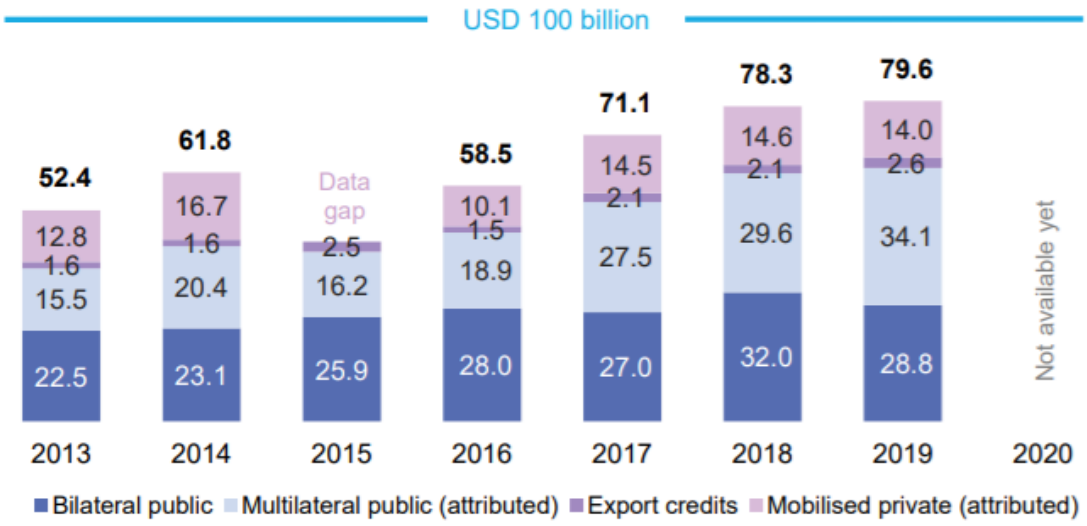
- What is the effectiveness measured as, for example, tons of CO_2 saved (in case of mitigation) or lives saved (in case of adaptation)?
- What relation exist between money spent and outcomes (such as the cost effectiveness ratio) and how does this relate to additionality issues?

Answers to such questions however, require an even deeper assessment such as those provided by Impact Assessments. Here one should preferably know much more about the projects involved and how they perform in terms of additionality for instance (Spratt, Ryan and Collins, 2012). We address all of these questions in section 5.

3. State of play of climate finance mobilisation worldwide

During the Copenhagen Conference in 2009 developed countries pledged to provide new and additional resources, including forestry and investments, close to **USD 30 billion for the period 2010 - 2012** and with balanced allocation between mitigation and adaptation. This collective commitment has come to be known as 'fast-start finance'. In the context of meaningful mitigation actions and transparency on implementation, developed countries also committed to a goal of mobilizing jointly **USD 100 billion dollars a year by 2020 t**o address the needs of developing countries. These funds should come from a wide variety of sources, including the private sector.

Figure 1: Climate finance provided and mobilised (2013-19, USD billion)



Source: OECD 2020c (based on Biennial Reports to the UNFCCC, OECD DAC statistics, OECD Export Credit Group statistics, as well as complementary reporting to the OECD)

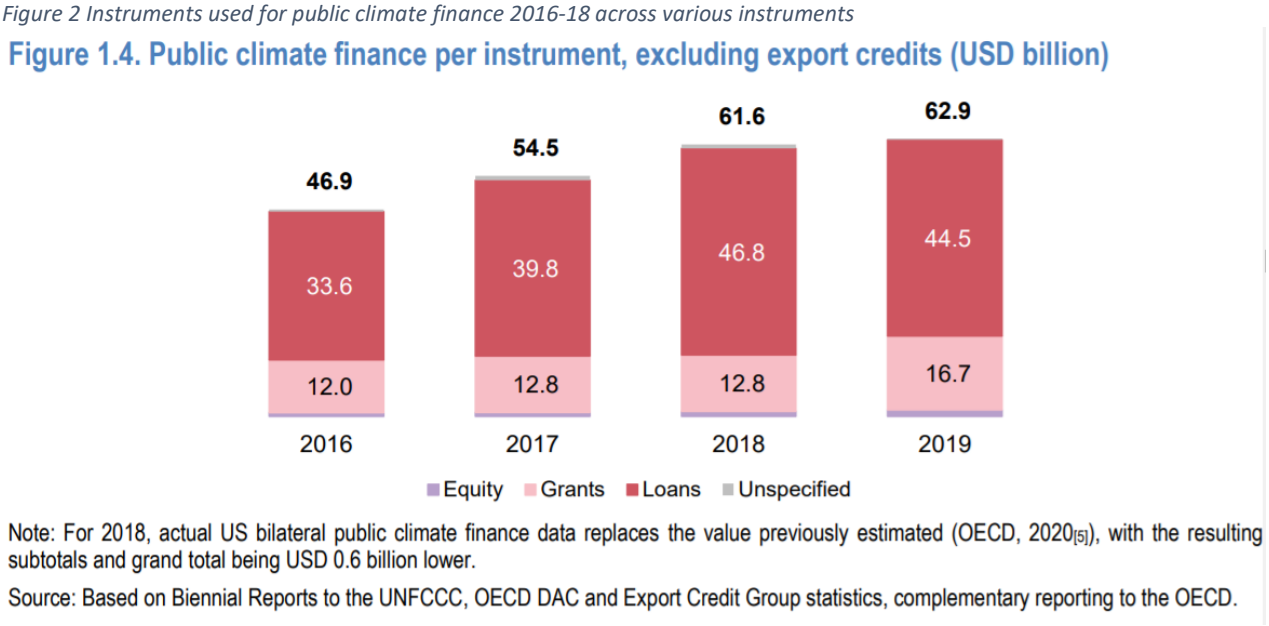
Figure 1 provides an overview throughout the period. According to the most recent inventory by the OECD (2020c) reporting on 2013-2019, since 2013, total climate finance provided and mobilised by developed countries has increased, reaching USD 79.6 billion in 2019. Over the period of 2016-19, for which the total volumes are comparable, climate finance grew by 22% between 2016 and 2017, by 11% between 2017 and 2018 and 2% between 2018 and 2019 [10] [11] Bilateral public money has always dominated the funding, although multilaterally provided funds have become more important over the years. In 2019, the latest year for which reliable data are available, bilateral, multilateral and publicly mobilised private capital are responsible for 37%, 42% and 18% of total funds.

When looking at the **financing instruments** used in **public climate finance** applied in 2016-19 about 73% of finances channelled were provided as loans and 26% as grants (based on Figure 2). In multilateral institutes' programmes the share of loans was 88%, while the share of grants was 9%. In very limited cases climate financing seems to takes the form of Equity or Guarantees.

[10] See OECD (2020c)

[11] While the figures presented for public climate finance (bilateral, multilateral, export credits) constitute a consistent year-on-year time series from 2013 to 2017, the grand totals (including mobilised private climate finance) for 2016 and 2017 are not directly comparable with those for 2013 and 2014. This is due to the implementation of enhanced measurement methodologies and a resulting gap in the time series for mobilised private finance in 2015.

Figure 2 Instruments used for public climate finance 2016-18 across various instruments

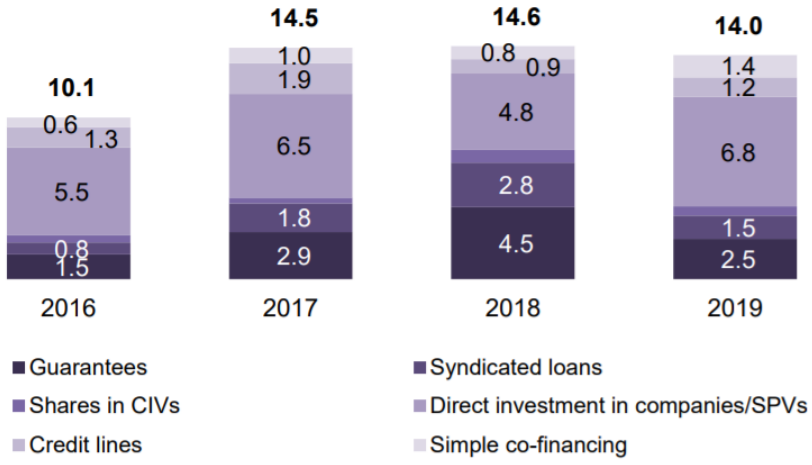


Note: For 2018, actual US bilateral public climate finance data replaces the value previously estimated (OECD, 2020[5]), with the resulting subtotals and grand total being USD 0.6 billion lower.

Source: Based on Biennial Reports to the UNFCCC, OECD DAC and Export Credit Group statistics, complementary reporting to the OECD.

In **private climate finance** the typology of instruments reported is different and more detailed. Figure 2 below demonstrates the trends during 2016-2019. The majority of private climate finance was mobilised through direct investment in companies or SPVs guarantees and syndicated loans . The share of private climate finance mobilised through guarantees and syndicated loans more than doubled from 2016 to 2018 but significantly dropped back in 2019 The share of private climate finance mobilised through direct investment in companies or SPVs has after a decline in 2018 increased by 2 bln USD in 2019 . The share of CIVs, and simple co-financing remained modest. Credit lines have been fluctuating between 0.9 and 1.9 bln USD over the 2016 an 2019

Figure 3 Private climate finance mobilised by instruments and year (2016-19, USD bilion)

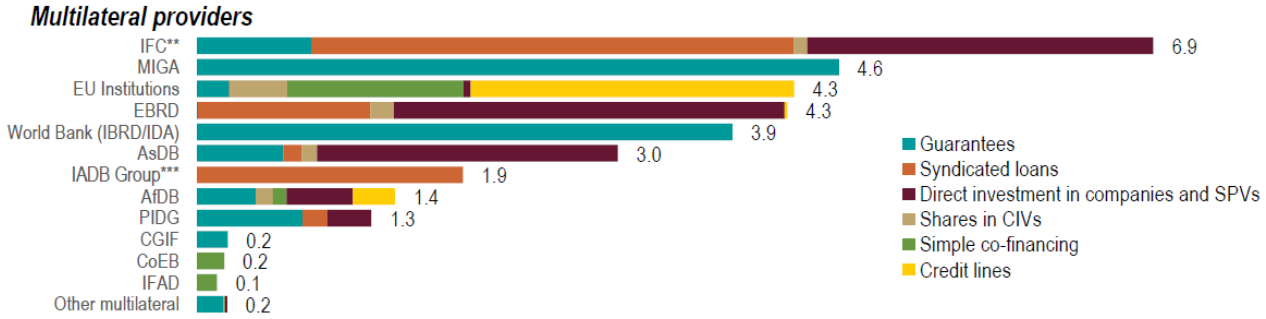


Source: OECD (2020c)

In 2017-18 around 75% (or 32.5 billion USD) of overall private finances have been mobilised and channelled via multilateral providers, while 25% (or 10.6 billion USD) have been channelled via bilateral providers. Among multilateral providers, IFC has managed the largest portfolio. Figure 3 below displays the amounts private finances mobilised in 2017-2018 by various multilateral institutions and shares of various

instruments in this amount. It is notable that portfolios across providers differ a lot, while the guarantees, direct investments + SVPs, and syndicate loans seem to be the largest instruments.

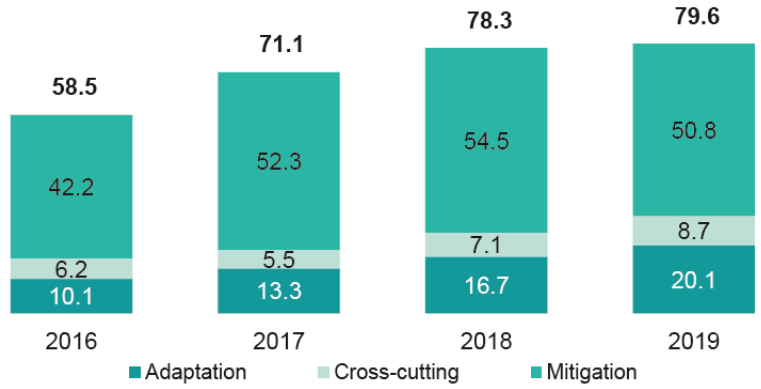
Figure 4 Private finances mobilised by multilateral providers, 2017-18, USD billion



Source: OECD DAC

Figure 4 shows a **thematic split** of developed countries' climate finance. Clearly the bulk of *public climate finance* (bilateral and multilateral attributable to developed countries combined) is for mitigation, of the overall amount throughout the years . The respective shares of finance for adaptation and crosscutting activities are around 20% and 8%, respectively. Adaptation finance grew annually from USD 10.1 billion in 2016 to USD 20.1 billion in 2019. Mitigation finance increased between 2016 and 2019 with an annual average growth of 15% but dropped by 7% in 2019 (3.7 bln USD) Finance for cross-cutting objectives after some dip in 2017 rose subsequently in 2018 and 2019, and reached USD 8.7 billion. Note that the gap in time series in 2015 for mobilised private finance results from the implementation of enhanced measurement methods. Data series exclude export credits (1-2 billion EUR).

Figure 4 Thematic split of public climate finance provided and privately mobilised (2013-19, USD billion)



Source: OECD (2020c)

Mitigation oriented climate finance streams are the largest in all types of finance channels as shown in Table 2 for the average of mobilised capital between 2016-2019. This trend is strong in publicly mobilised private finance, where 93% of resources go to climate change mitigation projects.

Table2 Allocation of climate finance provided and mobilised in 2016-2018 across instruments and themes (%)

	Climate Finance	Bilateral	Multilateral	Private	Total
1	Mitigation	65	67	93	72
2	Adaptation	20	28	3	19
3	Cross-Cutting	15	5	4	9
4	Total	100	100	100	100

Source: OECD (2020c) Based on Biennial Reports to the UNFCCC, OECD DAC and Export Credit Group statistics, complementary reporting to the OECD.

Table 3 below shows the **sectoral destinations** of climate finances raised in 2016-2018. It is striking that energy sectors (associated with climate change mitigation) attracts 60% of all private finance and over a quarter of funds of multilateral and bilateral institutes. Transport and storage is the second largest destination (18% in bilateral and 10% in multilateral funds). Around 10-11% of public finances and only 3% of private money go to agriculture, forestry and fishing sectors. Water and sanitation is slightly better covered in multilateral institutes programmes (15% of finances) than in other channels.

Table 3 Sectoral destination of climate finance provided and mobilised in 2016-18 in various economic sectors(%)

	sector	Bilateral	Multilateral	Private	Total
1	Agriculture, forestry and fishing	10	11	3	9
2	Banking and business services	3	6	7	5
3	Energy	24	29	60	34
4	Transport and storage	18	10	3	14
5	Water and sanitation	9	15	1	7
6	Other sectors	21	23	12	19
7	Unspecified	14	7	14	11
8	Total	100	100	100	100

Source: Source: OECD (2020c) Based on Biennial Reports to the UNFCCC, OECD DAC and Export Credit Group statistics, complementary reporting to the OECD.

As for the **geographic destinations**, Asian continents received the largest share (43%) of all raised in 2016-2018 climate finances (see Table 4). African continent was the second largest receiver (25% of all finances). Latin America received 17% of finances.

Table 4 Geographic destinations of the provided and mobilised in 2016-2018 climate finances (%)

	Regions	Bilateral	Multilateral	Private	Total
1	Africa	26	26	25	25
2	Americas	13	18	17	17
3	Asia	41	46	43	43
4	Europe	2	5	4	4
5	Oceania	1	1	1	1
6	Unspecified	17	4	10	10

Source: OECD (2020c) Based on Biennial Reports to the UNFCCC, OECD DAC and Export Credit Group statistics, complementary reporting to the OECD.

4. Climate finance design – cross country comparison

In this section we focus on some European countries to better understand differences across countries as to how they provide climate finance and how effective this is. We start with a country specific description of the organization of this process within each country and what potential differences exist in procedures to define climate finance. Next, we discuss several detailed characteristics of climate finance aspects such as own (public) finance commitment, spending purposes, and publicly raised private finance. We also provide some information on European institutions such as European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD).

4.1 Climate finance governance in targeted countries

France relies mainly on the French Development Agency group (French: AFD, and its private-sector subsidiary, PROPARCO), and on bilateral instruments dedicated, in part, to the climate stakes in developing countries, namely the French Facility for Global Environment (French: FFEM), the Fund for Private Sector Studies and Aid (French: FASEP) and subsidized and unsubsidized Treasury loans. Local agencies of the French Development Agency identify the projects and needs of recipient countries jointly with the partners and project developers provided by these countries. It also relies on the signature of funding contracts with national and local authorities in the countries where there is intervention.

In *Germany* most of the funds are made available through the bilateral development cooperation of the Federal Ministry for Economic Cooperation and Development (BMZ). KfW Development Bank acts on behalf of BMZ in managing climate finance for developing countries and introducing new finance instruments, and to mobilise private capital[12]. A smaller (but important) share of climate finance is provided by the International Climate Initiative (ICI / IKI)[13] of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). [14]

In the *Netherlands* several finance institutions work with climate finance. FMO is the Dutch entrepreneurial development bank. It invests in over 85 countries, supporting jobs and income generation. It has a broad portfolio of investment projects addressing various challenges in developing countries. In addressing climate challenge FMO invested €466 million in Green projects such as renewable energy projects, sustainable agriculture, forestry and Green credit lines. FMO's current portfolio resulted in a yearly estimated 1,578,000 tCO2e avoided GHG emissions.[15] With the participation of FMO, a so called Dutch Fund for Climate and Development (DFCD)[16] was set up in 2019 to enable private sector investment in projects aimed at climate adaptation and mitigation in developing countries. The Dutch Ministry of Foreign Affairs has made available €160 million to increase the resilience of communities and ecosystems most vulnerable to climate change. The DFCD is managed by a consortium of Climate Fund Managers (CFM), World Wide Fund for Nature Netherlands (WWF-NL) and SNV Netherlands Development Organisation, led by the Dutch Entrepreneurial Development Bank, FMO. Other notable climate finance vehicles in the

[12]https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Brosch%C3%BCren/2019_Herausforderung_Klimawandel_EN.pdf

[13] https://www.international-climate-initiative.com/en/?iki_lang=en

[14] https://www.germanclimatefinance.de/overview-climate-finance/

[15]https://annualreport.fmo.nl/2020/annual-report-2020/report-of-the-management-board/our-performance/higher-impact-portfolio/core-sdgs

[16] https://thedfcd.com/ also see https://www.government.nl/topics/development-cooperation/the-development-policy-of-the-netherlands/climate-change-and-development-cooperation

Netherlands are the Dutch Good Growth Fund (DGGF) and Fonds Duurzaam Water (FDW). DGGF launched in 2014, has 350 million euro impact fund promoting entrepreneurship and job creation in emerging markets and fragile countries[17] . FDW is a public-private partnership programme (PPPs) that supports water safety and water security in developing countries. Since 2012 it has allocated 150 million euro to support 42 PPP projects in 24 countries to address problems around drinking water and sanitation, efficient water use in agriculture, and integrated water management.[18] In terms of disbursement, most of the activities that are under the responsibility of Dutch embassies are single-country activities. This 'delegated budget' made up 23% of the total climate disbursement in 2016-2019.[19]

Sweden has not chosen to create a separate climate finance mechanism, but rather includes climate finance in its ODA. The majority of Swedish bilateral support is provided through Sida and includes support to bilateral, regional and global institutions and organisations (including so called 'multi-bi' support). The Ministry of Environment administered support to a number of strategic initiatives linked to the UNFCCC negotiations. The Swedish Energy Agency, the Swedish Environmental Protection Agency and the Swedish Meteorological and Hydrological Institute were also involved in important climate initiatives, programs and mechanisms, such as the Climate and Clean Air Coalition, and SIDS DOCK. The Swedish Program for International Climate Initiatives focuses on the Kyoto Protocol's flexible mechanism and contribution to the development of new market mechanisms under the Paris Agreement. The core mission of the program is to support the development of international climate cooperation, to achieve cost-effective greenhouse gas reductions and to contribute to sustainable development in developing countries.

In *Switzerland* three government entities – the Swiss Agency for Development and Cooperation, the Swiss State Secretariat for Economic Affairs, and the Swiss Federal Office for the Environment – have specific roles and dedicated budgets for international climate financing. They cooperate closely to ensure overall effectiveness and coherence of Swiss support for climate change activities in developing countries and countries in transition. Through its bilateral development cooperation Switzerland supports multiple climate change mitigation projects such as the Transformative Carbon Asset Facility, the Pilot Auction Facility for Methane and Climate Change Mitigation and Climate Investment Funds.

In the *United Kingdom (UK)* International Climate Finance (ICF) is Official Development Assistance (ODA) to support developing countries to respond to climate change. The ICF portfolio is delivered by three UK government departments: Department for International Development (DFID); Department for Business, Energy and Industrial Strategy (BEIS); and Department for Environment, Food and Rural Affairs (Defra).

4.2 Copenhagen pledges in targeted countries

As for our countries the pledges for the period 2015-2020 are summarized below in Table 5. It should be noted that the pledges are not uniformly defined by countries and therefore estimation of the per-capita figures are approximated in some cases. From this comparison we learn that pledges have clearly gone up over time varying from EUR 24 (Germany) to 90 (Sweden) in 2015 to EUR 50 (Germany) to EUR 98 (UK) in 2020. Some countries like the UK have already committed at increasing their effort to even much higher levels such as the UK which aims at EUR 193 in 2026.

[1717] https://www.pwc.nl/en/topics/sustainability/environmental-footprint-insights.html

[18] https://www.rvo.nl/subsidies-regelingen/fonds-duurzaam-water-fdw

[19] MFA 2021, IOB evaluation Funding commitments in transition Dutch climate finance for development 2016-2019

Table 5: Climate finance related pledges of the countries

Country	Pledges (EUR per year)	Per capita/ annually
France	3 billion EUR (2015) 5 billion EUR (in 2020)	45 EUR (2015) 75 EUR (2020)
Germany	2 billion EUR (2014) 4 billion EUR (in 2020) unofficial position: 10% of 100 billion USD	24 EUR (2014) 50 EUR (2020) 100 EUR (unofficial)
Netherlands	550 million EUR in 2016 1.25 billion EUR per year from 2020[20]	35 EUR (2016) 75 EUR (2020)
Sweden	In 2015 Sweden announced its intention to nearly double multilateral climate support in 2016. + 500mln EUR / year to Green Climate Fund. In 2019 Sweden committed to increase financial support to three major climate funding mechanisms	90 EUR (2015)
Switzerland	Considers its fair share 380-510 mill EUR[21]	45 EUR (2015)
UK	2015 pledge: provide £5.8 (6.46 EUR) billion in 2016-2020 2019 Pledge: double commitments/ reach £11.6 (12.9 billion in 2021-26	98 EUR (2020) 193 EUR (2026)

Source: https://unfccc.int/sites/default/files/resource/climate-finance-roadmap-to-us100-billion.pdf , https://unfccc.int/list-of-recent-climate-funding-announcements, biennial reports of countries to UNFCCC

4.3 Public and private climate finances and spending by target countries

This section presents the comparison in climate finance statistics across France, Germany, the Netherlands, Sweden, Switzerland and the UK. Table 7 below shows the country specific climate finances channelled via multilateral providers, bilateral providers and private finance mobilised in 2018. Despite being not the largest country, France has provided the largest amount, closely followed by Germany. The UK, another large state, has managed to mobilise less than half of what has been achieved by France and Germany. The Netherlands funded a remarkable EUR 1.53 bln which is above its target. This is due to attracting half of its finances from private sources.

*Table 7 Country **specific climate finance channels** in 2018 (in billion USD)*

	Country	Bilateral	Multilateral	Private	Climate Finance
1	France	5.29	0.72	2.14	8.15
2	Germany	7.03	0.46	0.45	7.94
3	Netherlands	0.42	0.24	0.87	1.53
4	Sweden	0.50	0.18	0.18	0.86
5	Switzerland	0.34	0.11	0.07	0.53
6	UK	1.27	0.29	1.03	2.59

[20] Dutch Court if Auditors report

[21] The report describing the target and the various measures to meet it you can find here in French: https://www.parlament.ch/centers/eparl/curia/2015/20153798/Bericht%20BR%20F.pdf.Also see https://www.germanclimatefinance.de/2020/07/23/is-switzerland-making-an-appropriate-contribution-to-international-climate-finance/

Source: UNFCC reports for bilateral and multilateral country data, and the OECD datafile supporting the OECD statistical brochure on the "Amounts mobilised from the private sector by official development finance interventions". Climate Finance is the sum of Bilateral plus Mualtilaterl plus Private.

Note: some countries (such as Germany and Switzerland) report part of their publicly mobilised private climate finance as Bilateral public data while capital raised by the Dutch development bank FMO is included whereas its own publicly provided capital is not included. .

Table 8 below shows the **financing instruments** used in allocation of **bilateral public finances** across countries applied in 2018. Grants and loans were the most common instruments applied in disbursement of the finances, in particular in France and Germany. For all countries but France and Germany, grants were the largest or the only instruments of finance provision. Equity tends to be used only on a smaller scale.

*Table 8 Allocation of **bilateral public climate** finance 2018 across various instruments and countries (bln USD)*

	country	Equity	Grant	Loan	Other	Total
1	France	0.00	0.18	4.62	0.49	5.29
2	Germany	0.04	3.00	3.45	0.55	7.04
3	Netherlands	0.00	0.43	0.00	0.00	0.43
4	Sweden	0.00	0.50	0.00	0.00	0.50
5	Switzerland	0.00	0.23	0.00	0.11	0.34
6	UK	0.12	1.12	0.03	0.00	1.27
7	Total	0.16	5.46	8.10	1.14	

Source: UNFCCC reports

Note: the aggregates do not include the publicly mobilised private climate finance from the OECD and they only apply to bilateral public climate finance.

The spread for **multilateral public finance** very much depends on the institution through which the finance is allocated (see Figure 3 before). Overall, guarantees seem to dominate, however, followed by direct investment and syndicated loans. Data for each country are not available. But OECD2020c (p 14-15) has a section showing aggregated % of attribution of multilateral finance to all groups of developed countries.

Table 9 provides the data on **private climate finance** mobilised in 2018 and its allocation across various **instruments** in the selected countries. It appears that all countries but Switzerland, use a diverse set of instruments in disbursing mobilised private finances.

*Table 9 **Publicly mobilised private climate finance** by instruments in 2018 – cross country comparison (bln USD)*

	instrument	France	Germany	Netherlands	Sweden	Switzerland	UK
1	Credit lines	0.89	0.19	0.28			
2	Direct investment in companies/SPVs	0.34	0.16	0.27	0.01		0.21
3	Guarantees	0.33			0.09		0.08
4	Shares in CIVs	0.28	0.06	0.04	0.03	0.07	0.45
5	Simple co-financing		0.00	0.02	0.04		0.29
6	Syndicated loans	0.31	0.03	0.26	0.01		
7	Total	2.14	0.45	0.87	0.18	0.07	1.03

Source: OECD datafile supporting the OECD statistical brochure on the "Amounts mobilised from the private sector by official development finance interventions".

In the **thematic** allocation statistics, France and Germany spend most of their public climate finances on mitigations focused projects, while Sweden and the Netherlands spent the largest share on cross-cutting activities, with adaptation projects being second. UK and Switzerland try to keep balanced allocation across channels.

*Table 10 Thematic split of the total **bilateral and multilateral** public climate finance in all countries in 2018 (USD billion)*

	Country	Mitigation	Adaptation	Cross-cutting	Total
1	France	2.89	1.23	1.88	6.01
2	Germany	4.22	1.54	1.73	7.49
3	Netherlands	0.08	0.21	0.36	0.65
4	Sweden	0.12	0.27	0.30	0.68
5	Switzerland	0.17	0.14	0.15	0.45
6	UK	0.65	0.61	0.29	1.56

Source: UNFCCC reports; these aggregates (multilateral and bilateral public climate finance) do not include the publicly mobilised private climate finance.

Table 11 below shows the **sectoral destinations** of climate finances mobilised from **bilateral public** sources. Interestingly, substantial differences exist among the countries. While some countries, like the Netherlands and the UK more or less reflect the overall picture of all Annex I countries with lots of flows going to energy and agriculture (see Table 4), others such as France or Germany show a different allocation. While the focus in France is on 'banking and business services', Germany spents quite a large sum in 'other sectors' and leaves, just like Sweden, the largest sum 'unspecified'. Energy sector, which is very prominent in the aggregate statistics presented before, seems to be less important for these countries.

Note that such decomposition could be made for **multilateral funds** because such data are not accessible for research or the general public.

*Table 11 Allocation of **bilateral public** climate finance mobilised in 2018 in various economic sectors (bln USD)*

	sector	France	Germany	Netherlands	Sweden	Switzerland	UK
1	Agriculture, forestry and fishing	0.64	0.40	0.10	0.07	0.00	0.22
2	Banking and business services	1.17	0.26	0.02			0.08
3	Energy	0.88	1.44	0.08	0.06	0.01	0.25
4	Transport and storage	0.80	0.12	0.00		0.07	0.02
5	Water and sanitation	0.83	0.72	0.07	0.07	0.00	0.05
6	Other sectors	0.97	1.74	0.17	0.01	0.26	0.65
7	Unspecified		2.35	0.00	0.29		
8	Total	5.29	7.04	0.43	0.50	0.34	1.27

Source: UNFCCC biennial reports. This sectoral data is only for bilateral public finance.

It looks like the **sectoral diversity** of destinations is wider for **private finances**. Unfortunately, some countries like the Netherlands seem to lack a good reporting to say which sectors get publicly raised private finance as the category 'unspecified' is largest for those countries. For those countries that do report a sector that generate quite some funding is the energy sector. The banking sector is another prominent sector as a destination for private climate finance. This might relate to governments providing funds to a

private bank which in turn uses the money for spending on climate.[22] 'Other sectors' category is also significant, especially for France, Sweden and the UK. Agriculture is seen as an important sector but is less generously financed by private money.

*Table 12 Allocation of **publicly mobilised private** climate finance provided 2018, in various economic sectors (bln USD)*

	sector	France	Germany	Netherlands	Sweden	Switzerland	UK
1	Agriculture, forestry and fishing	0.08	0.00		0.03		0.02
2	Banking and business services	0.76	0.08	0.17	0.02		0.05
3	Energy	0.06	0.15		0.03		0.28
4	Transport and Storage	0.13					
5	Water and sanitation	0.03					0.00
6	Other sectors	0.57	0.05		0.06	0.03	0.23
7	Unspecified	0.51	0.17	0.71	0.05	0.05	0.45
8	Total	2.14	0.45	0.87	0.18	0.07	1.03

Source: OECD datafile supporting the OECD statistical brochure on the "Amounts mobilised from the private sector by official development finance interventions". This sectoral data is only for publicly mobilised private climate finance.

As for the **geographic destinations of the publicly mobilised private climate finance**, the African continent seems to be a priority for France, Sweden and the UK. Asian and American continents are also important. It is not possible to show further breakdowns on the characteristics of the recipient countries such as those provided in Dutch reporting (Dutch Auditing Commission, 2020).

*Table 13 Geographic destinations of the **publicly mobilised private** climate finance across countries in 2018 (bln USD)*

	Regions	France	Germany	Netherlands	Sweden	Switzerland	UK
1	Africa	1.08	0.11	0.21	0.11	0.04	0.49
2	America	0.38	0.07	0.20	0.01	0.03	0.02
3	Asia	0.26	0.24	0.12	0.06	0.00	0.27
4	Europe	0.10	0.03	0.23	0.00		
5	Oceania						
6	Unspecified	0.31	0.01	0.12		0.00	0.25
7	Total	2.14	0.45	0.87	0.18	0.07	1.03

Source: OECD datafile supporting the OECD statistical brochure on the "Amounts mobilised from the private sector by official development finance interventions". This sectoral data is **only for publicly mobilised private climate finance**.

4.4 Multilateral action through EU institutions: EIB and EBRD

Two major multilateral organizations that play an important role in climate finance are the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD). Both are multilateral financial institution whose shareholders are the EU member states in case of EIB, and the EU institutions and 69 countries in case of the EBRD (see also section 3). It is important to understand that both the EIB and the ERBD finance generally fund only half of a project while the other part is supplied by private investors. The public share is raised also by the EIB raises on the capital market, via e.g. bonds.

[22] Note that if this sectoral allocation only relates to private banks, funds provided to banks that have a majority of public shares, like the Dutch FMO or are even state owned bank might not show up under this category,

European governments generally only provide the capital (equity) to help raise the money on the capital market.

The European Investment Bank (EIB) mission is to fund infrastructure projects in Europe. Although about 90 percent of projects financed by the EIB are based in EU member countries, the bank does fund projects in about 150 other countries—non-EU South-eastern European countries, Mediterranean partner countries, ACP countries, Asian and Latin American countries, the members of the Eastern Partnership and Russia.

The EIB defines itself as the EU's climate bank with "the mission to play a leading role in mobilising the finance needed to keep global warming below 2˚C, aiming for 1.5˚C". Since 2012, the EIB has provided €170 billion of finance supporting over €600 billion of investment in projects that reduce emissions, help countries adapt to the impacts of climate change and contribute to achieving environmental sustainability goals. This makes the EIB one of the world's largest multilateral providers of finance for projects supporting these objectives.

Last year the EIB set the aim to support €1 trillion of investments in climate action and environmental sustainability in the critical decade from 2021 to 2030, as well as gradually increase the share of its financing dedicated to climate action and environmental sustainability to reach 50% of its operations in 2025. In 2019 the EIB allocated 31% of its lending portfolio to low-carbon and climate-resilient actions in developed and developing countries. In support of the Paris Agreement, the EIB is also committed to increasing its lending for action in developing countries to 35% of total lending by 2020. In 2019, EIB used around 18% of its lending in low- and middle-income countries.

The European Bank for Reconstruction and Development (EBRD) initially focused on the countries of the former Eastern bloc, but expanded to support development in more than 30 countries from Central Europe to Central Asia. EBRD is increasing its focus on green economy financing. It launched its Green Economy Transition (GET) approach in 2015, under which it aims to dedicate 40 per cent of its annual investments to climate finance by 2020, compared with an average of around 25 per cent in the previous five years. The GET uses the full range of the EBRD's financial instruments, including direct EBRD financing and syndication in the form of private, non-sovereign and sovereign guaranteed loans, direct equity, equity funds and Green Energy Financing Facilities and Sustainable Energy Financing Facilities.

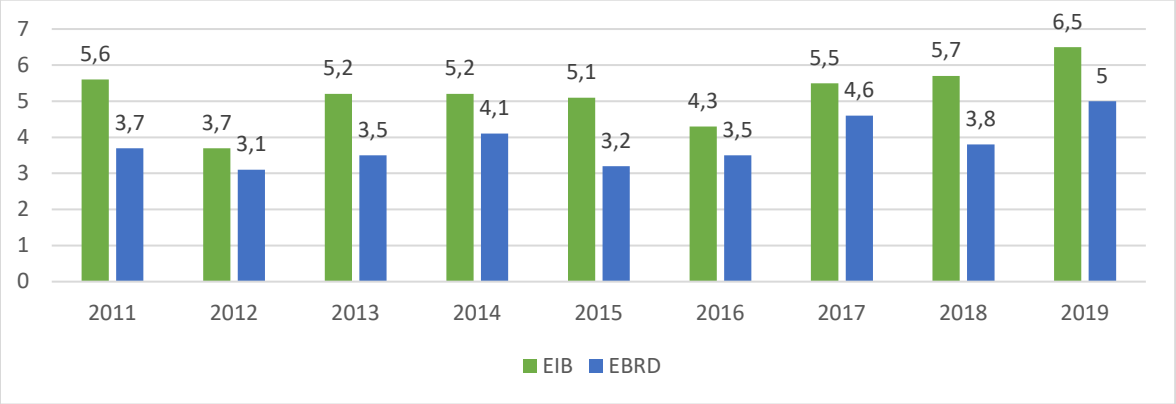
The EBRD uses a private sector investment model to reducing carbon emissions with energy efficiency and renewable energy projects while also promoting the transfer of green technology to its regions. It has a Finance and Technology Transfer Centre for Climate Change that supports climate technology transfer to countries in transition.

Figure 5 demonstrates **climate finance commitments** in low-income and middle-income economies of EIB and EBRD over the years.[23] While the amounts have been fluctuating over the years, one can read a slight trend into this with some increases in the last years, especially 2019. In 2019 the EIB and the EBRD committed 21 billion and 5 billion USD respectively in total for climate finance. Within these, the low-income and middle-income economies statistics show that over 2/3 of the EBRD climate finances goes to developing counties, while only 2,5 billion USD out of 21,6 bln USD of EIB finances are channelled to

[23] Note that the categories 'developing countries' in the UNFCCC frame is not entirely similar to the categories 'low-income and middle-income economies' used by the EIB and EBRD.

developing countries. In case of both institutions, the dominating share (over 85%) of financing is disbursed on climate change mitigation projects.

Figure 5 Climate finance commitments by EIB and EBRD in developing economies for 2011-19 (in billion USD) [1]



Note 1: We understand that all the data we use from the Multilateral Development Banks is public climate finance, but this graph also includes private climate finance or basically all the money that the MDBs raised on the capital market.

Source: Joint Report on Multilateral Development Banks' Climate Finance, 2020

Table 14 presents the actual allocation of finance from both bank accounts for 2019. When comparing the commitments of both banks with their actual allocation it becomes clear that the actual funds lag strongly behind both institutions. Where the EIB committed USD 6.5 bln their actual funds disbursed was only USD 2.6 bln., while these figures were USD 5.0 bln. committed versus USD 3.9 bln disbursed funds by the EBRD.

Table 14 Actual EIB and EBRD climate finance flows by themes and country group destinations, 2019 (in million USD)

Destination	Theme	For low-income and middle-income economies	For high-income economies	**Total**
	Adaptation	387	584	971
EIB	Mitigation	3,170	17,517	20,687
	Total	**2,558**	**18,100**	**21,658**
	Adaptation	569	13	582
EBRD	Mitigation	3,354	1,066	4,420
	Total	**3,923**	**1,079**	**5,002**

Note 1: In past editions of the Joint Report on Multilateral Development Banks' Climate Finance, for the years 2011-18, EIB climate finance figures were restricted to developing and emerging economies in transition where other MDBs were operating and did not include other economies where only the EIB was operating and supported climate action

Source: Joint Report on Multilateral Development Banks' Climate Finance, 2020

5. Assessment

As mentioned in section 2.3 assessment of differences of climate finance efforts between countries requires answers to a set of questions which will be the subject of this section. Answering these questions requires a deeper understanding of the way in which such efforts are taken within each country properly. Countries strongly differ in their cultures as to how they monitor public finance in general and more specific expenditures such as climate finance in particular. In the first subsection we start with an assessment of the general monitoring issues before comparing peculiarities of the different countries that we have studied in particular. Next, in section 5.2, we discuss questions related to the auditing exercise in order to get a deeper understanding of which country finances what. We pay somewhat more attention to the leverage issue in section 5.3. Finally we turn to issues as policy coherence and effectiveness in sections 5.4 to 5.6.

5.1 General monitoring issues

5.1.1 Issues around public climate finance monitoring

Public climate finance has been at the core of the monitoring of the delivery of USD 100 billion commitment. Since the Copenhagen Agreement, there was work towards a clear definition of climate finance that would help in monitoring countries. UNFCCC and in particular the OECD have succeeded in setting up a a consistent as possible monitoring framework to estimate climate finance channelled from developed countries to developing countries for mitigation and adaptation measure along such components as bilateral public climate finance, multilateral public climate finance, and publicly supported climate-related export credits.[24]

However, a few concerns persisted with the definitions of climate finance, largely relevant to public finance. One of the concerns has been the "**additionality**" issue. From the early days of the Copenhagen agreement the developing countries insisted that the pledges be 'new and additional' because they were concerned that aid would otherwise be diverted away from crucial needs such as health care, education, agriculture and safety. Assessing the additionality of funds is even more difficult, because it is quite likely the case that substantial overlap exists between climate change projects and typical development aid. Particularly in the case of adaptation projects, many of the actions taken to prepare for climate impacts are identical to those many countries have been putting into practice for years (e.g. shifting from drought-sensitive crops, building irrigation systems, moving wells away from salty groundwater. Etc.). Distinguishing between old 'development and new 'mitigation projects' counted under Copenhagen to reduce carbon emissions was also said to be difficult. For instance, are new instances of these same projects suddenly promoted because of climate change therefore new and additional? (IIED 2010; European Parliament, 2012).

Also the European Commission (EC) took steps to come to a common definition *within the EU* and asked all Member States to declare their pledges and the definition for additionality they applied. However, the answers were very diverse and the only obvious trend was that 'good ODA performers' opt for options that imply strictly rising ODA or even are above the 0.7 % target (European Parliament. 2012). Currently only a few countries such as Sweden refer to ODA shares in the overall context of developing aid and climate finance. But in most cases the additionality and novelty is hardly clearly discussed in the climate finance

[24] Note that DAC work on mobilisation feeds into International Task Force TOSSD which also includes countries like RSA, Costa Rica, Nigeria, Indonesia, Brazil etc. DAC data collections is an integral part of wider collections on ODA and other flows to developing countries.

reports. The Netherlands, for instance, does not make a difference in their reporting and claim that all climate finance is just part of their ODA budget.

Another concern that has been repeatedly raised is the deployment of **grants vs. loans** in climate finance from developed to developing countries. From the very start of the Copenhagen Accord it was unclear whether the promised new climate finance includes mostly grants, or also a major fraction of loans. EU climate finance consists of grants, loans and equity investments. Including loans, however, is controversial, and each party to the UN Framework Convention on Climate Change, among them the EU, can decide to report its own mix of climate finance instruments, with some choosing not to report loans. If the decision is taken to also report loans, as the EU institutions have done, than ideally there needs to be a measure of the 'gift' portion of that loan in order to compare grants with loans. Unlike grants, loans must be repaid at some stage, and this also bears with it interest. Therefore it is suggested that non-concessional loans should not be reported as grant equivalent. Only the 'grant equivalent' of concessional loans should be reported which is in line with new OECD reporting guidelines (ActAllianceEU 2020).

Finally, there have been concerns that the volume of climate finance might be further stretched if **financial flows from carbon trading**, such as through the Clean Development Mechanism (CDM) of the Kyoto Protocol, are included. However, buying carbon credits from developing countries cannot be seen as triggering additional emission reductions overall, as those credits are used to comply with carbon targets that developed countries are setting themselves. Future mechanisms in the carbon market may be even more prone to double counting if they are not internationally administered and if national governments. (IIED 2010)

5.1.2 Issues around the disclosure of information by multilateral banks

A further complication could be seen with some multilateral development banks which are the largest public donors. In case of their co-finance climate programs we would have liked to present more detailed information on their mobilized private capital. Although the MDBs report to the OECD DAC statistics on their outflows and private mobilisation, the OECD cannot disclose their mobilisation data as that is considered too risky by some MDBs at this point of time. MDBs only agree on specific analytical outputs for which the data can be used. This is one of the reasons that we could not report on their activities in more detail. Work is on-going in a dedicated working group of DAC members, the OECD and the MDBs to overcome these confidentiality constraints. It would be very useful if multilateral development finance providers would report more explicitly on their activities, not only on climate finance but also on their ODA activities.

5.1.3 Issues around the private climate finance

Despite extensive effort in improving the methodology there are persisting challenges associated with measuring mobilised private finance. Since 2010 the OECD has been working on reporting methodologies and the latest set of methods/reporting guidance was approved by the DAC in 2019 (OECD DAC, 2019). In particular, OECD DAC reached agreement for measuring seven different financial instruments which are used to mobilise private finance. Even though the OECD DAC methodologies should be considered as the final methodologies, some components in the *report instructions* remain multi-interpretable and some components are difficult to match with the actual structure of certain public programmes.

Therefore the OECD DAC Working Party on Development Finance Statistics (WP-STAT) continues reviewing and expanding reporting instructions. Aside from improving the reporting instructions, WP-STAT is continuously working on methodologies to measure more indirect "catalytic effects" of public

interventions, such as grants for policy support, technical assistance and feed-in-tariffs development. It is, however, recognised that it is very difficult to measure the catalytic effect statistically and that the results are susceptible to double-counting (Trinomics, 2020).

5.1.4 Differences in country specific reporting

The definitions of public and private climate finance have been converging across countries due to the unified monitoring system imposed by UNFCCC and OECD. Indeed, the procedures developed over the past years have provided specific criteria for countries to report on their financing instruments (UNFCCC, 2020 and OECD 2020). Therefore **country reporting on public climate finance is in principle well aligned** with the templates provided by the UNFCCC in the Biennial report, as well as in the OECD DAC reports. However, we noted that some country reports may suffer from caveats. For instance, we discovered that Germany in the public funding streams also reports publicly mobilised funds. This is the money that KfW or DEG raise on the capital market (basically, borrowing via bonds or similar) and that Germany reports in the UNFCCC reporting as public climate finance.[25] Furthermore, data on the Netherlands do not seem to take the public support to FMO into account, whereas their role in raising private capital is included. FMO is not directly responsible for bilateral flows nor is it a multilateral bank. FMO is mainly active in supporting specific projects to developing countries, including climate related projects on mitigation and adaptation, while the state owns 51% of its capital.

Furthermore, many countries have been taking individual initiatives on more detailed **analysis of publicly mobilised private climate initiatives**. Although these approaches have been largely aligned with the OECD DAC methodology, some countries offer adjustments of specific instruments such as the UK). Other countries launch dedicated studies that focus on inventorying a broader selection of international programmes and initiatives (e.g in the Netherlands, Belgium) while other countries focus on the largest institutions channelling ODA. At the same time Germany and France have been also producing national climate finding landscape where the scoping of climate finance instruments is slightly different.

Box: Examples of specificities of climate finance reporting

According to BMZ [26], currently, **Germany** only reports on climate finance mobilised from private funds in the areas for which reporting methods have already been agreed. KfW and DEG apply the instrument-specific DAC methodology. The reporting on publicly provided private climate finance seems incomplete in so far as there are many other options for mobilising funds that are not taken into account. The German government is currently working to establish internationally agreed criteria for taking climate finance delivered through Federal guarantees (Euler Hermes) into account. From the reporting year 2017 onwards, BMZ has also published grant equivalents of its development loans with a view to measuring the degree of concessionality of these development loans transparently and more precisely than has been done in the past. The grant equivalents are given an arithmetical value for accounting purposes. The value is calculated on the basis of each grant element (a percentage that indicates the concessionality level of the loan), the volume of the market funds and the Rio markers for each

[25] See Germany´s Fourth Biennial Report on Climate Change under the United Nations Framework Convention on Climate Change 2020.

[26] http://www.bmz.de/en/issues/klimaschutz/climate-finance/index.html#:~:text=Germany's%20contribution%20to%20international%20climate,the%20consequences%20of%20climate%20change .

intervention. This is in line with the rules agreed for ODA (official development assistance) by the OECD Development Assistance Committee (DAC).

In the **Netherlands** [Discuss FMO+some specific funds like climate mitigation and adaptation funds] FMO is one of the largest DFIs in the world with annual commitments around EUR 2 billion, approximately 25% (???) of which is for climate.

Sweden has an Ordinance for Financing of Development Loans and Guarantees for Development Cooperation. This provides opportunities to expand and leverage available resources for development by linking public measures with market finance. Guarantees stimulate mobilisation of both private and public capital, including partner countries' domestic capital. Sida helps lenders deal with risks by insuring eligible projects against losses relating to the different market risks. A common set-up is that Sida covers part of the loss if the borrower fails to repay the loan to the bank. Sida's guarantees are based on a set of simple key principles and conditions: additionality, risk-sharing, risk reflecting premium to be charged and that it should be non-distortionary. In 2018, Sida had guarantees to climate-relevant initiatives with a total guarantee volume of approximately 4.4 billion SEK, mobilising about 14 billion SEK (1 USD = 8.693 SEK). Note that part of the mobilised capital is provided by Development Finance Institutions (DFIs) that are partly or fully owned by public entities." In 2018, Swedfund made the investments and helped mobilise 31.6 mill EUR . (The World Bank definition of mobilized capital is used).

Switzerland reports the publicly mobilised private climate finance as part of the UNFCCC reporting in the category "other". Furthermore, within the UNFCCC reporting, only bilateral private climate finance is considered by Switzerland, as it is argued that multilaterally mobilised private climate finance is too difficult to measure. (i) to ensure that only finance mobilised by developed country governments is counted towards the 100 billion US dollars goal, (ii) that, where multiple actors are involved, the resulting finance is only counted once in tracking the progress, and (iii) to ensure that the reporting framework encourages and incentivises the most effective use of climate finance.

In **the UK** publicly mobilised private finance measured under this indicator is from non-public sources such as banks (but not multilateral or regional development banks), private companies, pension funds, nongovernmental organisations, Clean Development Mechanism financing[27], voluntary carbon credit market, insurance companies, private savings, family money, entrepreneurs' own capital and sovereign wealth funds. It includes all types of finance such as equity, debt and guarantees.

5.2 Commitments instruments and spending

Our data allow us to compare pledges across countries with their actual spending (see Table 15). Using the pledges for 2020 we observe that some countries clearly perform better than their pledge. In particular countries such as France, Germany and the Netherland show already higher funds raised in 2018 than pledged for 2020, while others seem to lag behind, such as Sweden and the UK. Note however that these are also the countries with the highest pledges.

[27] The Clean Development Mechanism (CDM) is a way to finance emissions mitigation projects by selling certified emission reductions, or CERs. For further information, see https://cdm.unfccc.int/ .

Table 15: Climate finance related pledges of the countries

	Pledges 2020	Climate Finance Generated 2018	Total spending 2018
	Euro/ capita	Euro/ capita	Billion Euro
France	75	126	8.15
Germany	50	96	7.94
Netherlands	75	89	1.53
Sweden	90	84	0.86
Switzerland	45	62	0.53
UK	98	39	2,59

Source: own computations based on pledges (see Table 6) and UNFCCC reports

However, it is important to take the underlying structure of climate finances into account as we have observed quite different ways of reporting for these countries. First of all, the shares of the various climate finance channels in the overall climate finance pool vary across countries (see Table 16). In all countries except the Netherlands the share of bilateral finances is substantial. Germany even sources 88% of its climate finances via bilateral providers, while other countries have provided only 50% to 65%. At the same time private finance appears to be very significant (57%) in the Netherlands, while it is also rather high in the UK (close to 40%). Comparisons are not easy however, as we notified before that Germany and Switzerland report some publicly mobilised private climate finance as bilateral public data, France spends a lot of its bilateral funding through banks which may also indicate that private funding is involved here (see Table 11) and the Netherlands counts private capital mobilised by FMO as part of its publicly raised private capital while its support to FMO is not included. Finally, the share of multilateral finances in these six countries range from 5% (Germany) to 21% in Sweden and Switzerland.

Table 16 Share of various funding channels in total climate finance (2018, %)

	Country	Bilateral	Multilateral	Private	Total
1	France	65	9	26	100
2	Germany	89	6	6	100
3	Netherlands	27	16	57	100
4	Sweden	58	21	21	100
5	Switzerland	65	21	14	100
6	UK	49	11	40	100

See Table 7 for absolute numbers and sources

Again, looking at the composition of **climate finance instruments** (see also section 4.3 for the absolute numbers) the countries reveal very different profiles.[28] Table 17 below shows that 88-100% of Swedish, Dutch and UK **public bilateral** climate finances consist of grants. In France only a very small portion of its public bilateral climate finances was used as grants while 87% was used as loans. Instead Germany and Switzerland use a very high portion of its bilateral capital as loans which might be less surprising if we one recalls that much of its publicly raised climate finance also consists of privately mobilised capital. So instead of being a reflection of real differences this might be the result of differences in monitoring strategies.

[28] See also Tables 8-13 for sources used to tabulate the relative data in this section.

*Table 17 Shares of various instruments in **bilateral public** climate finances of countries (2018, %)*

	country	Equity	Grant	Loan	Other	Total
1	France	0	3	87	9	100
2	Germany	1	43	49	8	100
3	Netherlands	0	100	0	0	100
4	Sweden	0	100	0	0	100
5	Switzerland	1	66	0	33	100
6	UK	9	88	2	0	100

See Table 8 for absolute numbers and sources

The observation in section 4.3 that countries applied a diversity of instruments. In **private finance mobilisation** is confirmed when looking at shares (see Table 18). Switzerland was the only country that did not use a diversified portfolio and allocated all private climate finances via shares in collective investments vehicles (CIVs). UK also seems to have higher preference for shares in CIVs (used for 44% of private finances). France, Germany and the Netherlands, deployed 32% to 42% via credit lines. Direct investment was also preferred in these countries and the UK for 16% to 36% of private climate finances. Sweden channelled 52% of its private finances via guarantees. Netherlands was also prominent in using syndicate loans (30%) in comparison to other countries.

*Table 18 Shares of various instruments in **publicly mobilised private climate finance** of countries (2018, %)*

	instrument	France	Germany	Netherlands	Sweden	Switzerland	UK
1	Credit lines	42	42	32	0	0	0
2	Direct investment in companies/SPVs	16	36	31	4	0	20
3	Guarantees	15	0	0	52	0	8
4	Shares in CIVs	13	14	5	15	100	44
5	Simple co-financing	0	1	2	21	0	28
6	Syndicated loans	14	7	30	8	0	0
7	Total	100	100	100	100	100	100

See Table 9 for absolute numbers and sources

By using shares Tables 19-22 more or less confirm the earlier observations on the **thematic** split, **sectoral** diversity and **geographic** split in section 4.3. Table 19 shows that a climate change mitigation focus is dominant in climate finance in Germany (56%) and is rather high in France too (48%). Mitigation and adaptation focus seem to be balanced (42% and 39%) in British climate finance just like Switzerland. Sweden and the Netherlands allocated comparatively higher share of climate finance to cross cutting and adaptation projects.

*Table 19 Country-specific shares of in the total **bilateral and multilateral** public climate finance (2018, %)*

	Country	Mitigation	Adaptation	Cross-cutting	Total
1	France	48	21	31	100
2	Germany	56	21	23	100
3	Netherlands	12	32	55	100
4	Sweden	17	39	43	100
5	Switzerland	37	30	33	100
6	UK	42	39	19	100

See Table 10 for absolute numbers and sources; note that publicly mobilised private climate finance is not included.

Table 20 and 21 confirm the patterns for sectoral destination already observed for the absolute amounts from bilateral public sources (Table 11) and publicly generated private sources (Table 12) in 2018 even more clearly.[29] For bilateral public climate finance sources Germany, Netherlands, Sweden and UK focus strongly focus on energy, water and agriculture, while France has a wide spread in its portfolio. Germany and Sweden do not specify a large part of their destination for public funds, while the Netherlands, Switzerland and the UK leave much of their privately mobilised finances unspecified. Among the defined sectors, energy and banking seem to attract more climate finances, especially in France and Germany.

*Table 20 Country specific **bilateral public** climate finance shares channelled to economic sectors (2018, %)*

	sector	France	Germany	Netherlands	Sweden	Switzerland	UK
1	Agriculture, forestry and fishing	12	6	23	14	1	17
2	Banking and business services	22	4	4	0	0	7
3	Energy	17	20	18	12	3	20
4	Transport and storage	15	2	1	0	20	2
5	Water and sanitation	16	10	16	14	0	4
6	Other sectors	18	25	39	2	76	51
7	Unspecified	0	33	0	58	0	0
8	Total	100	100	100	100	100	100

See Table 11 for absolute numbers and sources

*Table 21 Country specific **publicly mobilised private** climate finance shares channelled to economic sectors(2018, %)*

	sector	France	Germany	Netherlands	Sweden	Switzerland	UK
1	Agriculture, forestry and fishing	4	0	0	16	0	2
2	Banking and business services	36	17	19	9	0	4
3	Energy	3	34	0	14	0	28
4	Transport and Storage	6	0	0	0	0	0
5	Water and sanitation	1	0	0	0	0	0
6	Other sectors	27	12	0	33	35	22
7	Unspecified	24	37	81	27	65	44
8	Total	100	100	100	100	100	100

[29] Note, again, that such a decomposition cannot be made for the finances spent by the multilateral development banks.

See Table 12 for absolute numbers and sources

Finally, Table 22 confirms the differences in geographic specialisation of each country's private finance streams. France, Sweden, UK and Switzerland have been more active in Africa, while Germany is more active in Asia. Latin America is another main destination point for Swiss private climate finance and 35% of Swedish private climate finance is channelled to Asia. The Netherlands has the widest portfolio across Asia, Latin America, Asia and even European transition economies. Oceania is not outreached.

*Table 22 Allocations of **publicly mobilised** private finance mobilised in six European countries across destinations (2018, %)*

	Regions	France	Germany	Netherlands	Sweden	Switzerland	UK
1	Africa	50	23	24	59	55	48
2	America	18	15	22	6	43	2
3	Asia	12	52	14	35	0	27
4	Europe	5	7	26	0	0	0
5	Oceania	0	0	0	0	0	0
6	Unspecified	15	2	14	0	3	24
7	Total	100	100	100	100	100	100

See Table 13 for absolute numbers and sources

5.3 Leverage of publicly mobilised private finance

An important discussion in climate finance is to what extent public money has potential to mobilise a certain sum of private capital. The idea to exploit public money to expand and leverage available resources for development by linking public measures with market finance is very attractive of course. For the same amount of public funds one would be able to channel much more funds to those projects that are in need to reach climate targets. In other words, using this 'leverage' means that more funds become available cheaply and easily. Moreover, for some projects, like infrastructure or energy provision, one might even expect that private funding would be more efficient than public funding. Moreover, public funding is by far more constraint in volume than private funding.

Looking at the previous indicators we were able to compute comparable ratios for private relative to public funds for our six countries. These ratios obviously depend on the value and trustworthiness of the underlying (absolute) data as collected by OECD DAC in particular. The ratios we could compute based on the data provided by the OECD DAC suggest that the Netherlands in particular appears as an outlier. For each euro of public money the Dutch programs would also raise EUR 134 private funds, which is what a ratio of 134% implies. This is not only double the amount of the second best performer, the UK, with its 65%, but also way above other, more project based estimations (e.g. OECD, 2016). This certainly raises questions such as how this leverage ratio has been computed (see also Dutch Court of Auditors, 2020). [30] A first step to a better understanding of the Dutch case would be a more balanced representation of the

[30] Also both the Dutch Court of Auditors (2019 and 2020) and Dutch Parliament have raised questions about the leverage ratio. According to the Dutch Court of Auditors the Dutch government uses a leverage ratio of 42% (see Dutch Court of Auditors, 2020, p.X). Within the time frame of this study, however, we have not been able to document how precisely the leverage ratio has been computed (see also Trinomics, 2020, for further explanations of their assessments on which the Dutch figure seems to be based).

FMO data in both the public and private component.[31] These widely divergent indicators suggest that countries still differ a lot as to how they report their efforts, even for countries that are relatively highly committed to the UNFCCC goals. Moreover, this finding

Table 24 Publicly mobilised private climate finance as a share (in %) of public climate finance (2018)

Country	Private/Public
France	36
Germany	6
Netherlands	134
Sweden	26
Switzerland	16
UK	66

Source: UNFCC reports for multilateral and bilateral data country data, and the OECD data file supporting the OECD statistical brochure on the "Amounts mobilised from the private sector by official development finance interventions".

Furthermore, there are also concerns as to how productive private capital is in the case of climate finance *projects*. There are, roughly, two channels through which public money can mobilise private money. The first is *guarantees* or insurance. If a private investor is unsure about his or her returns, then guarantees or insurance can take some of this risk and tilt the project towards a favourable cost-benefit analysis. For this reason, public funding is increasingly being used to insure or guarantee private climate finance. The advantage of this approach is that the public funds only need to be available in case a project fails, but do not necessarily need to be disbursed.

While this approach seems, a priori, the cheapest for the government, it is subject to significant problems such as adverse selection or moral hazard. Adverse selection occurs if the guarantees or the insurance allows more low-quality projects to become financed, leading to a larger deadweight loss to society as these projects are less likely to yield the desired outcomes. Moral hazard occurs if guarantees or insurance induce project leads to undertake less effort as they know that the project is insured. Hence, helping to finance projects via guarantees or insurance can potentially lead to larger ex post costs, or more variable costs, and more failed projects.

The other channel is that public funds help attract *private funds in joint projects*. For example, projects by the EIB tend to use on average half of its own funds and the rest of the projects' costs are market-based bond financed. In this case there is a private-public partnership. Although tempting to believe, even in such cases adverse selection and moral hazard do not disappear (Dewatripont and Tirole, 1994). Such projects still require considerable knowledge of project risks and require complex distributions of risk allocation across the participating partners. At the same, if governments provide climate finance in the form of a grant this money should normally also be spent in a given budget year. Such incentives might induce selection of bad projects in order to spend the money. Although one is likely to believe that such risk might be better managed by a (public) bank than by a bureaucracy, this might not always be true and very much depends on the type of project involved (Peterson and Skovgaard, 2019).

Further questions arise whether the public funding is necessary to mobilise the private funds, or whether it even displaced other private funds. For example, the EIB tends to predominantly invest in projects that

[31] For example in the case of France, both the AFD, Proparco and other investments and the private finance that is mobilised by them are compared. The leverage ratio is then lower of course, but clearly far more correct

otherwise would not receive funding. Once significant amounts of climate finance are, however, channelled to developing countries, then it is not straightforward to assess whether a project would have been financed without the help of public funds, especially if the project originates with the entity that provides the public funds.

In this respect, a distinction between private direct mobilisation and private indirect mobilisation would be useful, but difficult to implement. Private direct mobilisation applies if there is clear evidence that the funds provided by the public entity had an active involvement in the mobilisation of finance through its financial instruments and operations. Private indirect mobilisation means that private finance is provided to the public entity's project, but that there was no attempt by the public entity to raise this money. However, it is not easy to assess the causality underlying the contribution of the private funds.

A final problem exists when private funding is mobilised not at the bilateral level but at the multilateral level, e.g. through the EIB or ERBD. In this case there would be a risk of double counting if countries themselves would (also) claim to have raised the same private climate finance. This problem, however, is avoided by the OECD DAC reporting, as here the OECD takes a country's contribution as a share of its contribution to the multilateral entity times the share of the multilateral climate finance. This might nevertheless be a problem in the UNFCCC biennial reports as these are provided by the countries themselves. Here there are, to our knowledge, currently no clear criteria yet that help avoid potential problems of double counting.

Noting all these issues with calculating leverage above, the OECD has provided estimates based on 2011-13 data of the leverage of bilateral and multilateral funding (]OECD 2016). The estimates suggest that publicly mobilised private climate finance consists of a leverage ratio of roughly 10-13 which is much lower then the ratios reported for the 6 countries we have studied in more detail (see Table 24). In another contribution the OECD estimates, based on 2011-13 data, that the leverage ratio is somewhere between 2-9, meaning that 1 EUR public money is able to mobilise between 2-9 EUR private money (Jachnik, R. and V. Raynaud, 2015). These calculations were based on energy-related projects. Within this report the authors themselves suggest that these estimates are likely to be highly inaccurate.

5.4 Internal and external policy coherence

The Articles 4.3 and 4.5 of the UNFCCC Convention suggest that Annex I developed countries provide "new and additional" financial resources to aid developing countries. An investment is additional if it does not replace another investment that would otherwise have been undertaken (in the same domain). A common definition is that an investment conforms to the additionality principle if it represents a deviation from a BAU scenario. Additionality in the climate finance domain can then be understood as finances that are undertaken by the developed countries which are additional to those that the developed countries would have anyway provided to the developing countries.

The problem is that a large amount of climate finance comes from funding that originally was intended as Official Development Aid (ODA). However, if funds that were originally targeted to alleviate poverty through ODA then get diverted to climate finance, then these funds would not be additional. Furthermore, if ODA funds that were already directed towards financing mitigation actions then get reclassified as climate finance, then these funds are not additional as well as they would have fulfilled that purpose even without being relabeled as climate finance.

One issue is that we are unaware of any baseline estimates for project-based ODA, meaning that it is impossible to know the share of finances from ODA that were intended to be spent on climate-related

issues before climate financing became an important topic. For this reason it is virtually impossible to assess whether climate finance is additional or not. Countries often claim that, since governments vote on the amount of new ODA funding directed towards climate-related issues every year, then one can argue that any climate financing is additional. But this is not true, as this could have also happened in the baseline scenario. There are essentially two solutions.

Firstly, either a country develops a baseline scenario and denotes any deviations (in this case increased climate finance) from this as additional climate finance. Here the challenge is to define a consistent and correct baseline. A second, simpler option is that any climate-related finances that were originally directed towards ODA are not viewed as additional climate finance. While this is retrospectively possible it is difficult to do this for future finance decisions.

To analyse **additionality, external coherence and added value** of national climate finance, it is helpful to check the different relevant indicators for developing aid. Table 23 shows that most countries spent about 0,55% of their Gross Domestic Product to national overseas development aid (ODA). Only France spent considerably less while Sweden two times as much. Interestingly, France has the highest spending rate on Climate Finance relative to GDP and even per capita compared to the other countries, in particular compared to Switzerland and the UK.

Table 23 Funding channels as a percentage share of country's main indicators (2018)

	Country	ODA/GDP (in %)	CF/GDP (in %)	CF/ODA (in %)	CF/Population
1	France	0.39	0.26	67.13	121.7
2	Germany	0.55	0.18	31.78	95.73
3	Netherlands	0.57	0.15	27.02	88.74
4	Sweden	1.10	0.16	14.39	84.89
5	Switzerland	0.50	0.09	16.95	61.72
6	UK	0.62	0.08	13.32	38.93

Source: UNFCC reports for multilateral and bilateral data country data, and the OECD data file supporting the OECD statistical brochure on the "Amounts mobilised from the private sector by official development finance interventions". The Climate Finance (CF) data comes Table 7, last column. The Official Development Aid (ODA) data, the population (Population) and the GDP (GDP) data are taken from the OECD statistical reporting.

With respect to the additionality issue we have observed two extreme positions. While some countries claim that climate finance should be on top of ODA (e.g. Sweden), others allow for full crowding out (e.g. Netherlands). As it remains largely unclear which position each country takes in this respect, a first approach would be to assume full crowding out., and compare the ratio of climate finance over the ODA.[32] As Table 22 shows, France has by far the highest ratio of Climate Finance over ODA among the six countries, although its ratio over GDP is much smaller than in other countries. The opposite picture is seen with Sweden, which has the highest ratio of climate finance over GDP and not very high ratio over ODA. This proves Sweden's high commitment in climate finance, while also showing high commitments in ODA. Both Germany and the Netherlands are in the same intermediate range for their ratio of climate finance over

[32] One way to get a better understanding of how much climate finance substitutes for ODA is a comparison of both channels over time. We leave this analysis for future research.

ODA and ODA over GDP. For the Netherlands we can conclude that– apart from the publicly mobilised private finance – 27% of their developing assistance is focused directly on climate finance these days.

Box: Climate Fairshares and international finance and technology transfer

This box explains a view on climate fairshares based on a methodology by Friends of the Earth EWNI, Jubilee South Asia Pacific Movement on Debt and Development, Stockholm Environment Institute, Ecoquity and the Institute for Governance & Sustainable Development. According to this Climate Fairshares (www.climatefairshares.org) tool one could calculate how much effort each country must undertake if we are to avoid catastrophic climate change in a fair and just way. The tool calculates the share of each country on GHG emission reduction target, and how much the world should receive from the country to support global level effort. The transfers necessary to fulfil global fair-shares of climate effort will involve finance, technology and capacity building. These efforts are recalculated into USD to allow for easier comparison. The numbers generated for each country, as either a provider or receiver of international finance, is determined by converting the non-domestic mitigation effort (either that done internationally by the rich industrialized countries, or that done domestically with provision of resources in countries in the South) into USD. The fair share indicators for the sample of six countries is presented below. Per capita estimates have been added to it.

Country	Year relevant for share effort target	Fair share effort bln. USD	Fair share effort, bln. EUR	Fair share effort per capita,EUR
France	*in 2025*	51.02	42.5	761
	in 2030	65.34	54.4	975
Germany	*in 2025*	72.25	60.2	870
	in 2030.	91.81	76.5	1106
Netherlands	*in 2025*	17.1	14.2	994
	in 2030.	21.63	18	1257
Sweden	*in 2025*	11.29	9.4	1103
	in 2030	14.02	11.7	1370
Switzerland	*in 2025*	14.82	12.3	1744
	in 2030	17.99	15	2116
UK	*in 2025*	49.81	41.5	747
	in 2030	64.54	53.8	968

The figures used to illustrate the scale of finance and technology transfer necessary in the graphs are purely illustrative. They are not intended to be prescriptive or suggestive of the necessary priorities for the transfer of those resources. Nor does their inclusion indicate an endorsement of the approaches used or promoted by their source institutions.
The tool has been prepared by Friends of the Earth EWNI and Jubilee South Asia Pacific Movement on Debt and Development based on work by the Stockholm Environment Institute, Ecoquity and IGSD

Source: based on data from www.climatefairshares.org

Also, other studies looked into the role of climate finance in overall development policy. For instance, Climate Alliance EU analysed climate finance reporting of EU member states for the years 2014 and 2016 and compared their climate finance/Gross National Income (GNI) ratios (see ClimateAllianceEU,2018). This approach is inspired by similar calculations of development aid (ODA). The agreed UN target for ODA states that developed countries should devote 0.7% of GNI to ODA, while there is no agreed target for climate finance allocations. The ranking of top ten EU Member States in this study contains all six countries analysed in this report.

5.5 Impact and effectiveness of the climate finance

In allocating their international climate finances the countries apply rather diverse approaches and frameworks in monitoring the impacts of their funding streams. The monitoring is done at the level of the bilateral finance institutes that are set up to manage the climate finance programmes. Some countries (DE, FR, SE, CH) apply a generic impact monitoring system applied for all ODA programmes and get assessment only through ex-post evaluation exercise. Such frameworks address impact along the traditional programme and project evaluation framework, and look into achievement of objectives and a wider set of impacts. Qualitative analysis is very dominant in this approach and where possible quantitative indicators are applied.

In addition to the traditional impact evaluation approach, some countries (NL, UK) have been adopting more systematic approach in monitoring of climate related impact. It is also notable that a clear Key Performance Indicators (KPIs) system has been applied only in the UK and in the Netherlands. There KPIs guide monitoring and reporting projects and climate finance programmes. In the Netherlands this system is a part of the overall development aid monitoring system coordinated by the MFA. In the UK all ICF programmes are expected to report progress using at least one of the KPIs. Targets along these indicators are applied in UK and since 2019 in the dedicated climate finance initiative of the NL.

At the moment the traditional monitoring and evaluation systems evaluate the efficiency of the climate finance projects only in ex-post evaluation exercises. Definition of impact, including the effectiveness is subject to the methodology adopted in each programme or institute. Lack of aggregate and universally applied impact indicators does not allow to compare the effectiveness of the climate finance across countries. However, enhancement of the systematic monitoring, and improved definition of impact indicators that has been increasingly discussed across countries is likely to allow such analysis in the future.

Box: Monitoring and assessment of impact in national climate finance programmes

In **Germany** climate finance programmes the impact monitoring seems to be adopted by each bilateral institute while following overall principles. E.g. In GIZ development aid evaluation policy recognises the complexity of the issues including the interlinkages among e.g. climate change, environmental degradation with poverty, human right, social disintegration, migration, etc. However it is not clear how this is translated into practical measurements and indicators system that allows to see the impact of projects, including climate finance projects. KfW as part of its ex-post evaluation has an impact scoring system for all projects in all areas where some indicators are universal (relevance, effectiveness, efficiency etc) and some are adjusted to the sectoral topic of the project, e.g. environmental projects also have indicator "environment and climate impact" which can be multidimensional and measured differently across projects.

The International Climate Protection Initiative (IKI) of the German Ministry of Enviro (BMU) applies monitoring and reporting system including standard indicators which measure direct and long-term effects of both the individual projects and the overall IKI program via aggregation. In addition to the project-specific indicators, each project also reports on six overarching standard indicators:

- Reduction indicator: Reduction in greenhouse gas emissions and increase in carbon storage (as tonnes of carbon dioxide equivalent) in the project/programme area.
- Person indicator: Number of people the project directly assists with adaptation to climate change impacts or ecosystem conservation.
- Ecosystem indicator: Ecosystem area (in hectares/km coast) that is improved or protected by the project's activities.
- Policy indicator: Number of new or improved policy frameworks for managing climate change and/or conserving biodiversity.

- Institution indicator: Number of new or improved institutionalised structures or processes for managing climate change and/or conserving biodiversity.
- Methods indicator: Number of new or improved methodological tools for managing climate change and conserving biodiversity

Importantly already at the project application stage the proposal needs to predefine potential impact along these indicators.

In the **Netherlands**, support for climate action is part of development cooperation[33]. The Ministry of Foreign Affairs is overseeing this and reports the impact along several indicators, where the most important ones are:

- number of people receiving access to renewable energy
- forest areas under sustainable management
- number of farms with increased resilience to climate change
- number of people benefiting from improved water management

In addition, in climate finance, poverty is another important criterion in selecting the finance destination. The poorest countries are prioritised, especially in adaptation-oriented projects. Also, gender is an important cross-cutting issue in climate actions as climate action is most effective when it builds on the capacities and addresses the needs as well as the vulnerabilities of both genders[34] .

Launched in December 2019 the Dutch Fund for Climate and Development (DFCD) focuses on a set of high impact investment themes within the four Rio Markers (Biodiversity, Desertification, Climate change mitigation, Climate change adaptation). The Key Performance Indicators applied by DFCD in monitoring the impact of its programme include:

- size of farmland sustainable managed (target 100,000 ha)
- size of forest and wetland sustainably managed (100,000 ha)
- private finance mobilised in mln EUR (target 500,000 EUR)
- n of beneficiaries / people who benefited from projects (13,5 mln people)
- reduced GHG emissions in tCO2 (40 mln tons)
- n of people provided with access to drinking water (12,5 mln people)

Sweden climate finances are largely managed by SIDA an national overseas development agency, via "Climate Change Initiative" (CCI) launched in 2009. The following basic principles guiding the CCI allocations and design have been applied:

- P1 The funds reserved for adaptation interventions should go primarily to the poorest countries.
- P2 The Swedish contributions should have a tangible added value.
- P3 Contributions should work towards the implementation of the Paris agenda principles on aid effectiveness.
- P4 Consideration should be taken to the ongoing international climate negotiations regarding timing and choice of channels.
- P5 The allocation should reflect the ongoing work of the Commission on Climate Change and Development (CCCD).
- P6 Sustainable adaptation to climate change requires that the climate perspective is integrated into the countries' own development strategies. Central areas are water-and land-use in urban as well as rural areas.
- P7 A proportion of the Swedish contributions should focus on disaster risk reduction as an integral part of climate adaptation.

The ex-post evaluation of the CCI 2009-2012 programme[35] done in 2020 points out at less structured documentation for outcomes and impact. It concluded that In terms of the programming and implementation of the CCI, the principles-based approach had a significant role to play, especially in securing objectivity and less bureaucracy, championing of the country ownership, gender, adaptation capacities, social transfer and safety net

[33] https://www.dutchdevelopmentresults.nl/theme/climate

[34] Fourth Biennial report of The Netherlands to the UNFCCC:

[35] https://eba.se/wp-content/uploads/2020/04/Evaluation-of-the-Swedish-Climate-Change-Initiative-2009-2012-2.pdf

building, focus on risks rather than response, multi-level governance. It is necessary to note that the positive impact is not uniformly achieved in this programme.

Switzerland conducts project evaluations as part of its regular monitoring and evaluation of our development cooperation project portfolio. The Global Programme Climate Change and Environment[36] of the Swiss Agency for Development and Cooperation SDC consists of four components, each targeting specific outcomes[37] and set of indicators, which are also linked to specific SDGs:

- Component 1: Climate and environment policy and planning
  - Outcome 1: The normative multilateral climate policy process (UNFCCC) is ambitious, fair and safeguards the needs and interests of the most vulnerable countries.
  - Outcome 2: Resources for global climate change mitigation and adaptation are mobilized and invested effectively and efficiently, considering the needs of the most vulnerable countries.
  - Outcome 3: National and sub-national development policies and plans account for climate change and environmental risks.
- Component 2: Low-emission development:
  - Outcome 1: Clean energy is increasingly used, energy is used more efficiently, and energy access is enhanced.
  - Outcome 2: Air pollution is reduced with particular focus on urban areas, resulting in improved health.
  - Outcome 3: Land and water pollution is reduced, avoiding natural resources degradation.
- Component 3: Climate-resilient development and sustainable natural resource management
  - Outcome 1: Climate resilience of communities is increased resulting in reduced impacts of climate change.
  - Outcome 2: The management and use of water resources is improved to ensure water availability under a changing climate.
  - Outcome 3: Forests, mountains and other ecosystems are sustainably managed and are more resilient to climate change.
- Transversal component: Climate Change and Environment in Development Cooperation
  - Outcome 1: Climate change and environment aspects are increasingly integrated into development cooperation strategies, programmes and projects

This framework has been adopted for 2017-2020 programme and report on the indicators has not been launched yet. [38]

In the **UK**, achievements from the portfolio of ICF investments are reported against six key performance indicators (KPI):

- KPI 1 Number of people supported to cope with the effects of climate change
- KPI 2 Number of people with improved access to clean energy
- KPI 6 Greenhouse gas emissions reduced or avoided (tCO2e)
- KPI 7 Level of installed capacity of clean energy (MW)
- KPI 11 Volume of public finance mobilised for climate change purposes (£), and
- KPI 12 Volume of private finance mobilised for climate change purposes (£).

[36] https://www.eda.admin.ch/deza/en/home/themes-sdc/climate-change.html

[37] Strategic Framework 2017–2020: SDC Global Programme Climate Change (GPCC) (admin.ch) https://www.eda.admin.ch/dam/deza/en/documents/themen/klimawandel/broschuere-climate-change-2017_EN.pdf

[38] A general description Swiss evaluation policies here: https://www.eda.admin.ch/deza/en/home/results-impact/wirkungsmessung/evaluation.html
The last full impact and effectiveness evaluation of the entire climate portfolio was conducted in 2014 and looked at the Swiss climate projects from 2000-2012: https://www.eda.admin.ch/eda/en/fdfa/fdfa/publikationen/alle-publikationen.html/content/publikationen/en/deza/wirkungsberichte/wirkungsbericht-2014-klimawandel

The international climate finance programmes are expected to report progress using at least one of Key Performance Indicators (KPIs). Achieved and expected results are collected annually, using a web-based platform. One-hundred-and-forty-eight programmes from DFID, BEIS and Defra contributed to these results in 2020. Where the UK cofunds a programme with other donors, only 'UK-attributed' ICF results are included in proportion to the UK's donor share.[39]

6. Conclusions – Key messages

Based on the results and discussion above we draw some particular conclusions for Netherlands. Netherlands pledged to provide annually 1.25 billion USD for climate finance to developing countries by 2020. The latest available data that is at our disposal show that Netherlands total climate finance to developing nations is 1.53 billion USD (in 2018). This suggests, if the current contributions continue annually as they are, then Netherlands will have achieved in providing the pledged climate finance. However, this contribution still falls short of what is considered as a fair share of the total of 100 bn USD.

However, according to the current data provided by the Netherlands to the UNFCCC and the evaluation by the OECD DAC nearly 60% of this climate finance comes from publicly mobilised private channels. This report has pointed at some potential issues in the way the Netherlands reports it is climate finance efforts. In particular, it would be helpful to better understand how the funds provided for FMO and other specific finance vehicles (such as MASSIF, DGGF, DFCD, FDW) have been reported. This may very well explain some of our findings such as the 100% grants in bilateral funding, the very large share of cross-cutting climate finance and the very high leverage ratio.

Apart from these monitoring issues and taking the figures as we observed them in the data serious, we have some concerns about the reliance by the Netherlands on publicly mobilised private channels. Such funds have some drawbacks as well and might even be inferior to public climate finance. If we only count the public climate finance that Netherlands provides, then this covers just 40% of its climate finance, while a large part is also channelled through Multilateral Development Banks and for which it is not always clear to what extent funds are not simply loans at market interest rates. Again, for reasons discussed below, we argue that public climate finance should be favoured to publicly mobilised climate finance wherever possible. This would require a substantial further effort on the part of public authorities in Netherlands.

We also observed in the data that the Netherlands spends slightly more than 55% of its climate finance on cross-cutting. This suggests that underlying projects would have both aspects of mitigation and adaptation, but we cannot be entirely sure due to the upstream reporting issue. Anyway and in addition, 32% of the finances go to adaptation. Here the Netherlands might consider to invest more into mitigation efforts. One result in the academic climate change literature is that, when given the choice, then mitigation should be favoured over adaptation (Schumacher, 2019), because a euro invested in mitigation helps the whole world (by reducing the extent of climate change which affects everyone), while a euro invested in adaptation only helps a smaller local group (by reducing the impact of climate change). Thus, globally speaking, Netherlands would do better to invest into climate finance projects that are directly towards mitigation.

One other problem is that public information on the sectors that are targeted by Dutch publicly mobilised private climate finance (including the funds provided to MDB's) is not easily available for external parties.

[39] https://www.gov.uk/government/publications/uk-climate-finance-results

The information provided suggests that over 80% of these climate finance projects are unclassified, while roughly 20% are targeted to the banking or business sector. While we have no direct opinion as to whether one or another sector should be favoured, it would be useful to assess carefully whether there is some reason for the fact that 20% of the finances go to the banking or business sector, and to investigate where the other 80% are allocated. Also our data show that Dutch climate finance is somewhat evenly spread across the continents. Interestingly, 25% of the climate finance is allocated within poorer regions in Europe. It could be worthwhile to check whether this part of Dutch climate finance is spent on the right set of countries and may perhaps be more beneficially allocated to least developed countries. Related to this is the question to what extent public bilateral finance has been provided in grant form. Our findings that this would be 100% seems misleading given the prominent role of the FMO. However, we do believe that providing grants to very poor countries that may also be extra sensitive to climate change makes a lot of sense and we hope that this will continue to be the case also in the future.

This study has also given rise to some open, more general questions. Firstly, we have noticed that some countries include publicly mobilised private climate finance in their UNFCCC reports on bilateral climate finance (Germany and Switzerland). As far as we understand, this category should only include public climate finance. Other countries do not clearly inform as to what components are exactly included (e.g. UK). We are, therefore, wondering how far this may lead to double counting when comparing with the OECD data. Indeed, the OECD data uses the bilateral data that the countries provide to the UNFCCC. In addition, the OECD then estimates (or obtains information on) the publicly mobilised private climate finance.

Secondly, there are some countries, such as Germany, or some multilateral institutions such as the EIB, who add stretch the category “mobilised public” climate finance. This is money for projects that is raised on the capital market. Hence, this money in fact is private money that has been mobilised by public funds. We do not see a substantial difference between the categories “mobilised public” climate finance and “publicly mobilised private” climate finance. It seems to us that some countries use the “mobilised public” category to artificially inflate their public climate finance. This is something that requires clarification.

Thirdly, when analysing some projects in more detail categorisation as either adaptation or mitigation projects seems somewhat farfetched. It seems to us that it is especially easy to use the Rio Marker “Adaptation” in order to classify a project as climate relevant, while it has seemingly little to do with climate issues. We would strongly urge that the criteria for classifying climate finance are applied more strictly.

Finally, it is clear that overall public climate finance falls short of reaching the commitment that the developed countries made to support climate finance in the developing world. For this reason the developed countries placed, during the past years, a significant emphasis on raising private climate finance. However, a major concern from our side is the increased focus on publicly mobilised climate finance to reach the 100 billion USD target. In particular, there is a crucial difference between public climate finance and private climate finance. Most public climate finance comes in the form of a grant, which is money that the developing countries do not need to return to the donor countries. In contrast to this, while there is a lack of data for this, private climate finance is likely to come often in the form of a loan of some sort, which means that at some point it must be repaid. For this reason private climate finance is less often used for education or administration, as this is not immediately profit generating.

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