Forward-looking scenarios of climate finance provided and mobilised by developed countries in 2021-2025

Technical note

OECD

BETTER POLICIES FOR BETTER LIVES

Climate Finance and the USD 100 Billion Goal

Forward-looking Scenarios of Climate Finance Provided and Mobilised by Developed Countries in 2021-2025

TECHNICAL NOTE

OECD
BETTER POLICIES FOR BETTER LIVES

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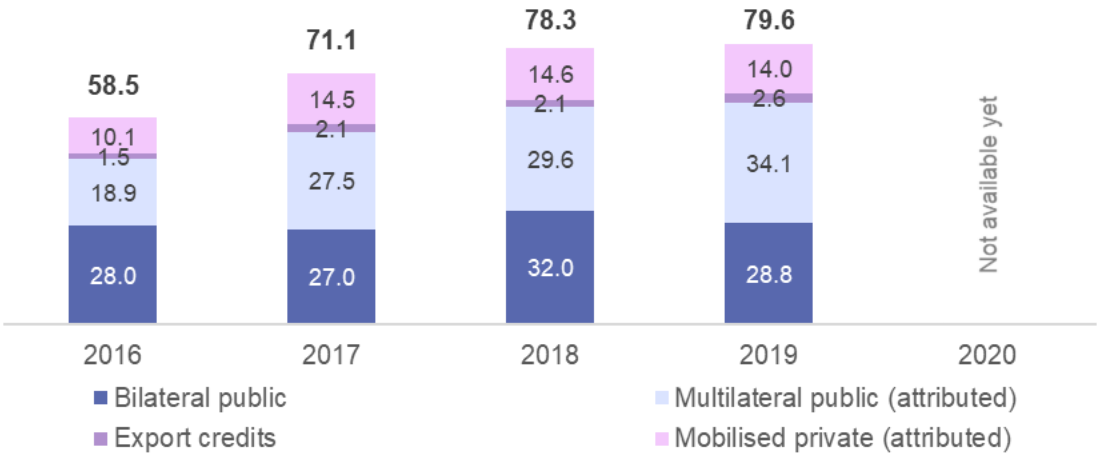
Context

At the 15th Conference of Parties (COP15) of the UNFCCC in Copenhagen in 2009, developed countries committed to a collective goal of mobilising USD 100 billion per year by 2020 for climate action in developing countries, in the context of meaningful mitigation actions and transparency on implementation. The goal was formalised at COP16 in Cancun (UNFCCC, 2010[1]) and was reiterated for 2020 and extended to 2025 at COP21 in Paris (UNFCCC, 2015[2]).

At the request of developed countries, the OECD has, since 2015, produced analyses of progress towards this goal (OECD, 2021[3]). It was also asked in 2016 to produce forward-looking projection for the year 2020 (OECD, 2016[4]). These analyses are based on a robust accounting framework, consistent with the outcome of the COP24 agreed by all Parties to the Paris Agreement, as regards the funding sources and financial instruments to account for financial resources provided and mobilised through public interventions (UNFCCC, 2019[5]). OECD figures capture four distinct components of climate finance provided and mobilised by developed countries: bilateral public climate finance, multilateral public climate finance (attributed to developed countries), climate-related officially supported export credits, and private finance mobilised by bilateral and multilateral public climate finance (attributed to developed countries).

Due to time lags in official reporting, data for 2020, the initial target year for the goal, will not be available before 2022. The most recent historical OECD figures indicate that climate finance provided and mobilised by developed countries reached USD 79.6 billion in 2019, up by only 2% from 2018 (Figure 1).

Figure 1. Climate finance provided and mobilised by developed countries in 2016-19 (USD billion)



Note: Figures for 2020 will not be available before 2022 due to time lags in the reporting of the necessary official activity-level data.
Source: (OECD, 2021[3])

In this context, Canada and Germany have taken the lead, at the request of the incoming United Kingdom COP 26 Presidency and working with other developed countries, to develop a collective Delivery Plan to demonstrate how the USD 100 billion goal will be met. As input, the OECD was asked to conduct a supporting technical analysis of possible future levels of developed countries' public climate finance. This analysis is based on forward-looking public climate finance information provided by individual developed countries and multilateral development banks (MDBs) for the specific purpose of this exercise, as further explained in the section on Data sources and assumptions. Building on this analysis of public climate finance, and further assumptions relating to future levels of export credits and mobilised private finance, this technical note presents two scenarios for climate finance provided and mobilised by developed countries, in order to provide an indication of the year in which the USD 100 billion goal could be met.

Forward-looking scenarios of climate finance

This note presents two scenarios for future levels of climate finance provided and mobilised by developed countries for 2021-2025. These scenarios are grounded in a detailed OECD analysis of forward-looking public climate finance information submitted by developed countries and MDBs in connection with the Delivery Plan prepared by developed countries.

This forward-looking information on future levels of public climate finance varies greatly in level of precision, detail and implicit assumptions. Thus, as explained under Data sources and assumptions, a number of further analytical steps and assumptions were needed in order for the OECD to standardise - to the extent possible - the information and make it compatible with the accounting framework and scope of the USD 100 billion goal, including in order to avoid any double counting.

A very wide range of factors will have an impact, positive or negative, on future levels of public climate finance provided by developed countries. Some of these factors are partially within the control of public climate finance providers (e.g. legislative processes to approve budgetary expenditures); many less so (e.g. macroeconomic conditions, project pipelines in partner countries). Importantly, countries' public finance information over periods longer than budget or electoral cycles are also inherently uncertain. For MDBs, their own resources depend on future recapitalisations as well as, in some significant cases, on their ability to raise further funds from the capital markets, which in turn is dependent on each MDB's capital assets and will be affected by global financial conditions.

Further, future levels of climate finance are dependent on the ability of public finance interventions to mobilise private finance and, thus on the characteristics of public finance, e.g. in terms of thematic split, geographic destination and financial instrument. Information about the future composition of providers' portfolios is at best qualitative and indicative, in many cases unknown and difficult to predict beyond the current budget cycle of countries and existing project pipelines of development finance institutions.

Future levels of climate finance provided and mobilised by developed countries are, therefore, inherently uncertain, and this uncertainty is likely to grow over time. Furthermore, given the nature of this exercise, it is, not possible to assign meaningful probabilities to these uncertainties at an aggregate level. Scenarios reflecting these uncertainties, rather than probabilistic estimates are, therefore, the appropriate way to analyse the range of possible future outcomes. The two scenarios used in this analysis are summarised in Table 1. They provide two distinct storylines for the future levels of both public and mobilised private finance. While these illustrate a plausible range of possible outcomes, they may not capture the full range of possibilities, either on the up or the down-side.

Scenario 1 assumes that public finance is scaled up in line with the information provided by countries and MDBs, subject to OECD analysis and assumptions, including to avoid double counting (see Data sources and assumptions). This scenario then uses the minimum ratio of mobilised private to public climate finance observed in a given year during 2016-2019 to estimate the corresponding levels of mobilised private finance, maintaining this ratio constant over the 2021-2025 period.

Scenario 2 aims to illustrate the joint impact of several factors that may result in lower-than-targeted levels of climate finance. These include: (i) the potential near-term macroeconomic risks currently facing many developing countries; (ii) potential capacity constraints on scaling up project pipelines, exacerbated by the pandemic; and (iii) intended shifts in the composition of providers' portfolios. Compared to Scenario 1, this scenario combines relatively lower levels of public climate finance with a progressively decreasing ratio of mobilised private finance to public finance, as further explained under Data sources and assumptions.

Table 1. Overview of the two forward-looking scenarios

	Public climate finance	Export credits	Mobilised private finance
Scenario 1	Based on countries and multilateral development banks fully delivering on their intended climate finance commitments, in terms of both volume and timing	Both scenarios assume flat volumes based on 2019 levels	Assumes a constant ratio of private to public climate finance throughout the period, based on the minimum annual ratio observed over 2016-2019. The effect of increasing shares of finance for activities that may not mobilise much private finance (e.g. finance for adaptation, capacity building, as grants, to LDCs/SIDS) is offset by a continuous improvement in the rate of mobilisation for activities that do have significant private finance mobilisation potential.
Scenario 2	Delays in scaling up climate finance due to a wide range of factors, e.g. macroeconomic conditions, capacity constraints		Assumes a lower and declining ratio of private to public climate finance over the period relative to 2016-2019. This is the net result of increasing levels of public finance, shifting portfolio composition and no or very limited increase in the rate of mobilisation for activities that do have significant private finance mobilisation potential.

On the basis of these two scenarios, Table 2 presents levels of total climate finance provided and mobilised by developed countries in 2021-2025. The two scenarios yield numbers that are above USD 100 billion from 2023 onwards. It is important to note that there is increasing uncertainty associated with the figures the further forward in time, for the reasons discussed above. However, in the context of the present analysis, it is assumed that, while the level of future public climate finance starts lower under Scenario 2 than under Scenario 1, it almost reaches the same level under both scenarios at the end of the period, i.e. by 2025. This means that, in both scenarios, public climate finance provided by bilateral and multilateral providers converges over time towards their stated intentions, pledges and targets, albeit with some delays under Scenario 2. The difference between the public finance numbers in both scenarios, therefore, shrinks over time, while the difference between the mobilised private finance numbers grows.

Table 2. Indicative composition of future ranges of climate finance provided and mobilised by developed countries based on two forward-looking scenarios (USD billion)

	Component	2021	2022	2023	2024	2025
Scenario 1	Public finance	70.5	77.7	85.3	91.1	94.5
	Export credits	2.6				
	Private finance mobilised	15.2	16.7	18.4	19.6	20.4
	Total	**88**	**97**	**106**	**113**	**117**
Scenario 2	Public finance	66.5	74.6	82.5	89.3	94.0
	Export credits	2.6				
	Private finance mobilised	14.0	15.0	16.0	16.5	16.6
	Total	**83**	**92**	**101**	**108**	**113**

Note: The components may not precisely add to the totals because of rounding. Future levels of climate finance are inherently uncertain. The scenarios presented here aim to reflect and illustrate such uncertainty. However, these scenarios may not span the full range of possible outcomes in a given year.
Source: OECD analysis of developed countries' and multilateral development banks forward looking stated intentions, pledges, or targets subject to assumptions, including to avoid double counting (see Table 1 and the Data sources and assumptions section).

Data sources and assumptions

Public finance

In the context of preparing the developed countries' Delivery Plan, Canada, Germany and Sweden requested relevant countries and MDBs to provide country or organisation-specific information on their expected climate finance for developing countries. This was reported via a questionnaire, which requested information on levels of future public climate finance over the period 2021-2025, as well as further clarifications regarding the scope and expected characteristics of such intended future finance.

In most cases, the forward-looking information provided in the questionnaires reflect stated intentions, pledges or targets by individual countries and MDBs. For countries, in a few cases, this includes new targets or pledges, which are to be announced shortly after the release of the present note. In such cases, the OECD requested and received ministerial-level written corroboration of the figures. Overall, the information was provided to the OECD for the specific purpose of producing an aggregate-level analysis. For this reason, this note does not provide information at a country- and institution-level.

Questionnaires were returned by:

- For bilateral public climate finance: Australia, Austria, Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States.[1] In addition to information on levels of future bilateral public climate finance, the questionnaires provided by countries included similar information on future inflows to multilateral climate funds, most notably the Green Climate Fund (GCF), the Global Environment Facility (GEF), the Climate Investment Funds (CIF)[2] and the Adaptation Fund (AF).
- The European Union;
- For multilateral public climate finance from MDBs: African Development Bank, Asian Development Bank, Asian Infrastructure Investment Bank, Caribbean Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, World Bank Group.[3]

In practice, the level of detail of the information provided varied significantly. Some questionnaires included year-by-year figures, others an aggregate volume over multiple years, while others indicated that such forward-looking information was at this stage not available. As a result, a number of analytical steps and methodological assumptions were needed, as summarised in Table 3.

[1] Other countries included in OECD assessments of actual progress towards the USD 100 billion goal (see Table 2 in (OECD, 2021[3])), for which no information was collected or received, are included assuming flat volumes using the level in the most recent year, i.e. 2019, as explained in Table 3. These include: Bulgaria, Croatia, Cyprus, Czech Republic, Greece, Latvia, Liechtenstein, Lithuania, Malta, Monaco, Poland, Portugal and Romania.

[2] The CIF did provide a questionnaire but, to ensure methodological consistency with how other multilateral climate funds are reflected, the analysis only considered information about inflows to the CIF received from countries.

[3] Other multilateral development banks included in OECD assessments of actual progress towards the USD 100 billion goal, for which no information was collected or received, are included assuming flat volumes using the level in the most recent year, i.e. 2019, as explained in Table 3. These include: Council of Europe Development Bank, Development Bank of Latin America.

Table 3. Assumptions and analytical steps applied to public climate finance forward-looking information received from countries and MDBs

Scope	Main assumptions
Developed countries and MDBs	If information was not provided/unavailable, volumes are assumed flat based on the most recent year for which data is available, i.e. 2019
	Multi-year figures are divided pro rata, implying an equal distribution over the years
	For targeted increases by a given year, the absolute or relative increase is assumed to be progressive over the years covered to reach the total increase in the final year
	Figures provided are all assumed to be in nominal values, like the USD 100 billion goal
	Use of the OECD Development Assistance Committee Creditor Reporting System annual average exchange rate for 2020 for information provided in another currency than USD
Developed countries specifically	For countries that included export credits in their questionnaire, 2016-2019 data were used as a basis for excluding such export credits from bilateral public climate finance
MDBs specifically	Annual growth rates indicated for future finance are applied to the historic data reported by MDBs to the OECD Development Assistance Committee on a standardised basis (commitments per calendar year)
	The share attributable to developed countries' from each MDB's outflows is assumed constant based on the shares calculated in 2018 (see Table 2.2 in (OECD, 2021[3]))
	The share of UNFCCC non-Annex I and/or ODA-eligible recipient countries in individual MDBs' total climate finance outflows is assumed constant
Multilateral climate funds specifically	Assume a one calendar year delay between inflows to the funds (information reported by countries in their questionnaires) and outflows from these same funds

As outlined in Table 1, the estimates of future developed countries' public climate finance included under Scenario 1 stem directly from the combination of information provided by countries and MDBs subject to assumptions and analytical steps. The levels of public climate finance included under Scenario 2 take the public climate finance levels from Scenario 1 as a basis, but are adjusted to reflect potential delays in turning these intentions into commitments to specific projects. This adjustment is assumed to be larger the more rapid the intended scale-up of climate finance is from one year to the next. The initial difference in public finance between the two scenarios in 2021 is calibrated using the historic 2013-2019 public climate finance data: it is set at about twice the standard error for the starting value from a regression analysis of the 2013-2019 public finance values over time. There is also near-term uncertainty due to the ongoing pandemic and its aftermath. As a result, the level of public climate finance under Scenario 2 deviates the most from Scenario 1 in 2021 and then gradually converges towards the level of public climate finance under Scenario 1.

Export credits

Only very few countries provided forward-looking information for climate-related export credits in their questionnaires. Evidence to date suggests that overall volumes remain relatively small, with little to no growth on average over 2013-2019 (OECD, 2021[3]). Further, as outlined in (OECD, 2016[4]), export credits are primarily driven by demand and are, as a result, difficult to predict. On that basis, annual volumes are assumed to remain flat based on 2019 data (i.e. USD 2.6 billion) under both Scenarios 1 and 2.

Private finance mobilised

Amounts of private finance mobilised by bilateral and multilateral public climate finance fluctuate (Figure 1). Further as explained in (OECD, 2016[4]) and illustrated empirically in (Ang, Röttgers and Burli, 2017[6]) and (Haščič et al., 2015[7]) for renewable energy, private finance is influenced by many factors, including policy environments in developing countries and general macroeconomic conditions. The composition of future public climate finance portfolios also plays an important role, notably in terms of thematic (mitigation and adaptation), instrument (grant, loan, equity, guarantee), geographical and sectoral characteristics.

As a result, it is very challenging and uncertain for individual institutions and providers to anticipate and quantify how much private finance they may mobilise in the future. In turn, any aggregate forward-looking figures, such as the ones presented in Table 2, should not be considered as probabilistic forecasts, but rather as illustrating a range of potential future outcomes that are themselves dependent on actions and decisions by developed countries, multilateral providers, as well as development partners.

In this context the OECD considered two assumptions that result in the use of distinct ratios of private finance mobilisation per unit of developed country public climate finance provided (Table 4).

- The first assumes a constant ratio based on the minimum annual ratio observed over 2016-2019, which, in both 2016 and 2019, corresponds to 0.22 unit of mobilised private finance per unit of public climate finance. This ratio is applied to the estimates of public climate finance under Scenario 1. Using a constant ratio assumes that the effect of increasing shares of finance for activities that may not mobilise much private finance (e.g. finance for adaptation, capacity building, as grants, to LDCs/SIDS) is offset by a continuous improvement in the rate of mobilisation for activities that have significant private finance mobilisation potential.
- The second assumes a decreasing ratio over time as the composition of public climate finance portfolios progressively changes towards a larger share of activities with low to no private finance mobilisation potential, notably finance for climate adaptation, capacity building, as grants, for LDCs/SIDS. The starting ratio in 2021 (0.21) is set at a lightly lower level than the one observed in the last available year (0.22 in 2019) to reflect more difficult macroeconomic conditions in some developing countries. The ratio then decreases year-on-year based on the combined effect of (i) increasing the share of activities that may not mobilise significant amounts of private finance, while (ii) maintaining a constant rate in the mobilisation of private finance for that share of the portfolio that has the potential to do so. These ratios are applied to the “delayed” public finance levels under Scenario 2.

Table 4. Assumptions for private to public climate finance average mobilisation ratios

	2021	2022	2023	2024	2025
Scenario 1: constant ratio based on minimum annual ratio observed during the period 2016-2019	0.220				
Scenario 2: decreasing year-on-year ratio	0.210	0.202	0.193	0.185	0.177
Assumed % of activities with low private finance mobilisation potential in public climate finance portfolios	30%	35%	40%	45%	50%

Note: The ratios presented represent indicative averages in the specific context of private finance mobilised by developed countries public climate finance for developing countries. As such, they should neither be applied to a different analytical scope nor considered as representative of private finance mobilisation rates for specific public finance instruments and projects in individual country or sectoral contexts.

As explained in (OECD, 2016[4]), the use of private to public finance ratios comes with both embedded assumptions as well as potential limitations, thereby further calling for a careful and cautious use of the forward-looking mobilised private finance figures presented in Table 2. The following elements are important to keep in mind:

- Private to public finance ratios are sensitive to the underlying method for calculating amounts of private finance mobilised. The ratios used here are derived from detailed attribution methods developed under the OECD Development Assistance Committee (OECD, 2020[8]) to take into account the role of all public actors involved and to avoid double counting. As a result, the ratios are significantly lower than ratios that may be calculated by individual public finance institutions or for specific projects based on total (i.e. unattributed) private finance involved.
- The use of ratios as performance measures can create unintended incentives, e.g. encourage public finance to be provided primarily to countries and activities likely to allow the maximisation of such ratios. This might lead to increased “efficiency” in terms of use of fewer public resources needed to mobilise private investment. But it could also result in decreased “effectiveness”, as these resources might not be invested in countries or activities most in need. Thus, amounts of private finance mobilised by public actors (and ratios derived on that basis) should not, in themselves, be interpreted as indicators of effective and transformational climate action.

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