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Book

A fair share of climate finance? : the collective aspects of the New Collective Quantified Goal

Working paper

A fair share of climate finance?

The collective aspects of the New Collective Quantified Goal

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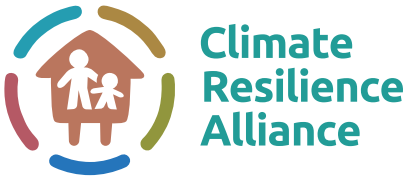

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The Alliance is powered by the Z Zurich Foundation. Find out more: www.ZCRAlliance.org

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Acronyms

ADB	Asian Development Bank
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
AOSIS	Alliance of Small Island States
BR	Biennial Report
CEB	Council of Europe Development Bank
CFU	Climate Funds Update
CO_2	Carbon dioxide
COP	Conference of the Parties
DAC	OECD Development Assistance Committee
EIB	European Investment Bank
EU	European Union
GDP	gross domestic product
GHG	greenhouse gas
GNI	gross national income
$GtCO_2$	gigatonnes of carbon dioxide
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IDB	Inter-American Development Bank
IFC	International Finance Corporation
LDC	least developed country
LMDCs	Like-Minded Developing Countries
MCF	multilateral climate fund
MDB	multilateral development bank
NATO	North Atlantic Treaty Organization
NCQG	New Collective Quantified Goal on Climate Finance
ND-GAIN	Notre Dame Global Adaptation Initiative
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
PPP	purchasing power parity

SIDS	small island developing states
tCO_2eq	tonnes of carbon dioxide equivalent
TED	technical expert dialogue
TJN	Tax Justice Network
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
WBG	World Bank Group

Executive Summary

2024 is a critical year for international climate finance. At the 29th Conference of the Parties (COP29) in November, three years of discussions on a 'New Collective Quantified Goal on Climate Finance' (NCQG) are to conclude. The last time a climate finance goal was set, it shaped expectations, targets and deliberations for 15 years. Against a backdrop of rising annual greenhouse gas emissions and increasingly frequent and severe climate impacts, the new goal needs to play a catalytic role for climate action.

Many elements of the NCQG are currently under consideration, including 'the "collective" aspects of implementation, whether burden-sharing or broadening the contributor base.'[1] Recognising that such aspects have represented one of the central challenges to delivery of the current $100 billion finance goal, and anticipating that this challenge would continue to exist in deliberations about its successor, ODI and the Zurich Climate Resilience Alliance (previously known as the Zurich Flood Resilience Alliance) have been exploring these two issues – 'burden-sharing and broadening the contributor base' – together for three years in our 'fair share' series (Colenbrander et al., 2021, 2022; Pettinotti et al., 2023) and complementary work (Colenbrander et al., 2023). In this 'NCQG edition' of our series, we present our updated findings in the hopes of supporting constructive deliberations over the critical months to come.

A burden-sharing arrangement among developed countries

The current goal of $100 billion a year is a collective commitment by developed countries. The collective nature of the goal has meant that individual developed countries are not accountable for a specific sum of money. This lack of individual accountability has potentially reduced the total amount of climate finance provided because developed countries are shielded from individual scrutiny. With no accountability for those that fall short of their fair share, there is little political incentive for other developed countries to be ambitious, as additional resources merely serve to fill the gap left by others rather than demonstrating solidarity or allowing them to burnish their own reputation. For this reason, many developing countries are calling for a burden-sharing arrangement among developed countries as part of the NCQG.

A burden-sharing mechanism would apportion responsibility for the relevant quantitative element of the new goal among developed countries. It could potentially improve predictability of flows if countries are held accountable individually and laggards therefore fulfil their obligations in a timelier manner. Such an arrangement would formally recognise the differentiated responsibilities and respective capabilities of developed countries – a heterogeneous group with diverse economic and population profiles and varying levels of cumulative and current emissions.

1 Section B, para. 46.e.v in FCCC/PA/CMA/2023/11.

While some might argue that it will not be politically feasible to agree on a burden-sharing arrangement, such an approach is not new in plurilateral and multilateral forums. The North Atlantic Treaty Organization has a cost-sharing agreement involving both a contribution to common funds and a commitment to domestic expenditure. The EU had an effort-sharing agreement related to greenhouse gas (GHG) emissions under the Kyoto Protocol. The UN also has a burden-sharing arrangement for its budget. All involve countries with different national circumstances seeking to voluntarily provide a common or global public good.

We propose three metrics that could be used in a burden-sharing arrangement within the NCQG:

- gross national income (GNI) as a proxy for ability to pay;
- cumulative territorial carbon dioxide (CO_2) emissions since 1990 as a proxy for historical responsibility for climate change; and
- population, to allocate equal responsibility for climate finance provision to persons living in each of these developed countries.

We develop a composite indicator comprising these three metrics, assigning each one equal weight. How much each developed country should contribute is presented in the second column from the left in Table ES1 when applied to the goal of $100 billion and contrasted with their contribution in 2022 and subsequent progress towards meeting their fair share. For the purposes of assessing each country's "fair share" of the current goal, we equate developed countries with Annex II countries, while recognising below that several Annex I countries now also voluntarily contribute to the annual $100 billion.

Twelve developed countries provided their fair share of international public climate finance in 2022: Norway, France, Luxembourg, Germany, Sweden, Denmark, Switzerland, Japan, the Netherlands, Austria, Belgium and Finland. Six of these countries have been consistently providing their fair share of the $100 billion goal since 2020, and meeting their obligations: Denmark, France, Germany, the Netherlands, Norway and Sweden.

Among those countries falling short of their fair share, all had increased the volume of climate finance provided compared with 2021 except Iceland. The growth of US climate finance is especially marked in absolute terms, with its provision increasing by over $5 billion compared with the previous year. Canada has seen the largest change in relative terms, increasing its climate finance provision by 21% year on year.

However, it should be noted that many countries provide a substantial proportion of their international climate finance as loans, sometimes at market rather than concessional rates (Kowalzig et al., 2024). Many countries that are performing well in Table ES1 would be making markedly less progress towards meeting their fair share if the finance provided was accounted on grant-equivalence terms, i.e. if it reflected their real fiscal effort.

Table ES1 Scorecard of progress towards developed (Annex II) countries' fair share of the $100 billion climate finance goal, 2022

Annex II country	Fair share of the $100 billion goal ($ billions)	Climate finance provided in 2022 ($ billions)	Progress towards fair share (%)
Norway	0.69	1.86	270%
France	5.26	11.37	216%
Luxembourg	0.09	0.16	180%
Germany	8.16	14.11	173%
Sweden	0.90	1.55	171%
Denmark	0.61	1.01	165%
Switzerland	0.93	1.33	143%
Japan	10.86	14.00	129%
Netherlands	1.75	2.24	128%
Austria	0.81	0.95	117%
Belgium	1.12	1.31	116%
Finland	0.54	0.56	103%
Italy	4.63	3.35	72%
Canada	4.33	3.12	72%
United Kingdom	5.80	3.93	68%
Iceland	0.04	0.02	62%
New Zealand	0.43	0.27	62%
Spain	3.41	1.96	58%
Ireland	0.54	0.30	55%
Australia	3.03	1.40	46%
Portugal	0.69	0.26	38%
United States	44.60	14.37	32%
Greece	0.77	0.23	29%

Note 1: Countries in darkest green are providing more than twice their fair share of climate finance. Those in light green are providing their fair share. Colours are thereafter in quartile increments: yellow for those paying 50–75% of their fair share and orange for those paying 25–50% of their fair share.

Note 2: The figures on climate finance provision in this table are based on data on climate-related development finance from the Creditor Reporting System of the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD DAC). Our figures may differ from national figures for two reasons. First, we attribute capital outflows from multilateral development banks to individual countries based on their shareholdings or voting power. Second, we attribute the European Union's climate finance to its member states.

Source: Authors' calculations using data from EU (2022), AfDB et al. (2023), Friedlingstein et al. (2023), OECD (2024a), CFU (2024) and World Bank (2023a; 2023b).

Table ES2 presents the climate finance contributions of those countries that are not obliged to provide international public climate finance, but have voluntarily chosen to contribute towards and report against, the $100 billion goal. Together, these countries contributed $1.3 billion in 2022. Most are countries that have joined the EU since 1992.

Table ES2 Non-Annex II developed countries' contributions to the $100 billion climate finance goal, 2022

Country	Total climate finance ($ million)	Country	Total climate finance ($ million)
Bulgaria	102.83	Lithuania	38.58
Croatia	57.65	Malta	15.58
Cyprus	27.49	Monaco	1.91
Czechia	182.37	Poland	401.07
Estonia	24.36	Romania	148.25
Hungary	177.78	Slovakia	83.95
Latvia	28.89	Slovenia	45.19
Liechtenstein	8.99	**Total**	**1,340.70**

Source: Authors' calculations using data from EU (2022), AfDB et al. (2023), CFU (2024) and OECD (2023b, 2024a; 2024b). List of non-Annex II countries that contribute and report under the $100 billion goral as per Table 6 in OECD (2024b).

Climate finance provision by other Parties

Since countries were categorised under the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, the world has changed significantly. Perhaps the most pertinent changes for climate finance negotiations are that many countries have achieved significant increases in their per capita income and/or have emitted per capita GHGs at an increased rate. Thus, many countries now arguably have much greater capabilities to provide and mobilise climate finance, and/or much greater responsibility for global warming. For this reason, many developed countries are calling for recognition of such changes for the purpose of climate finance provision, proposing a broader contributor base within the NCQG.

The NCQG offers an opportunity for a more nuanced differentiation among countries than the binaries of 'developed' and 'developing,' recognising the spectrum of national responsibilities, capabilities and circumstances that exist and in line with the spirit of self-determination of the Paris Agreement.

A constructive starting point would be to reassert continued climate finance obligations for developed countries and recognise the substantial volumes of climate finance that other Parties already provide voluntarily, but on which they do not necessarily report. The most significant source of such finance is through other Parties' subscriptions to the multilateral development banks (MDBs). (Data on bilateral climate finance flows are partial or absent since developing countries do not have an obligation to report on climate finance flows under the Paris Agreement.) Table ES3 presents a list of the 30 largest non-Annex II multilateral climate finance providers in 2022.

Table ES3 30 largest multilateral climate finance providers among non-Annex II countries in absolute terms, 2022

Country	Multilateral climate finance ($ millions)	Country	Multilateral climate finance ($ millions)
China	2,522	Iran	271
India	1,287	Philippines	270
Brazil	1,135	Malaysia	263
South Korea	1,130	Guatemala	250
Argentina	1,011	South Africa	239
Russia	919	Costa Rica	239
Mexico	836	Nicaragua	236
Saudi Arabia	728	Honduras	234
Indonesia	646	El Salvador	232
Venezuela	359	Thailand	219
Turkey	354	Taiwan	218
Colombia	338	Poland	215
Nigeria	291	Kuwait	202
Chile	281	Egypt	198
Pakistan	275	Algeria	178

Source: Authors' calculations using data from IBRD (2022), IDA (2022), IFC (2022), ADB (2023), AfDB (2023), AIIB (2023), CEB (2023), EBRD (2023), EIB (2023), IDB (2023), CFU (2024) and OECD (2024b).

Table ES3 clearly demonstrates that many other Parties provide considerable volumes of climate finance to developing countries via their multilateral contributions to development banks and climate funds. The list of the top 30 non-Annex II multilateral providers includes former economies in transition, like Poland and Russia; countries that have achieved high-income status since 1992, like Chile, Kuwait, Saudi Arabia and South Korea; and middle-income countries with large populations, like Brazil, China, India, Indonesia, Mexico, Nigeria, the Philippines and Pakistan.

The climate finance contributions of other Parties become even more significant when considering that they are mostly based on estimates of their multilateral climate finance contributions alone, not any bilateral flows. Any analysis of international public climate finance is therefore likely to underestimate the contribution of other Parties that are very active in South–South cooperation, such as Brazil, China and some of the Gulf States.

The UNFCCC rests upon the principle of 'common but differentiated responsibilities and respective capabilities, and countries' social and economic conditions'. The Paris Agreement translated this into self-differentiation and national determination. A credible and equitable approach to climate finance provision needs to reflect both.

It is therefore possible to propose some metrics that could inform other Parties' decisions about voluntary climate finance provision, mobilisation and reporting, as well as advocacy and diplomacy concerning those decisions by non-state actors and other Parties. We propose two metrics that countries could use to assess their differentiated responsibilities and respective capabilities, for the purposes of self-differentiation, with respect to climate finance provision:

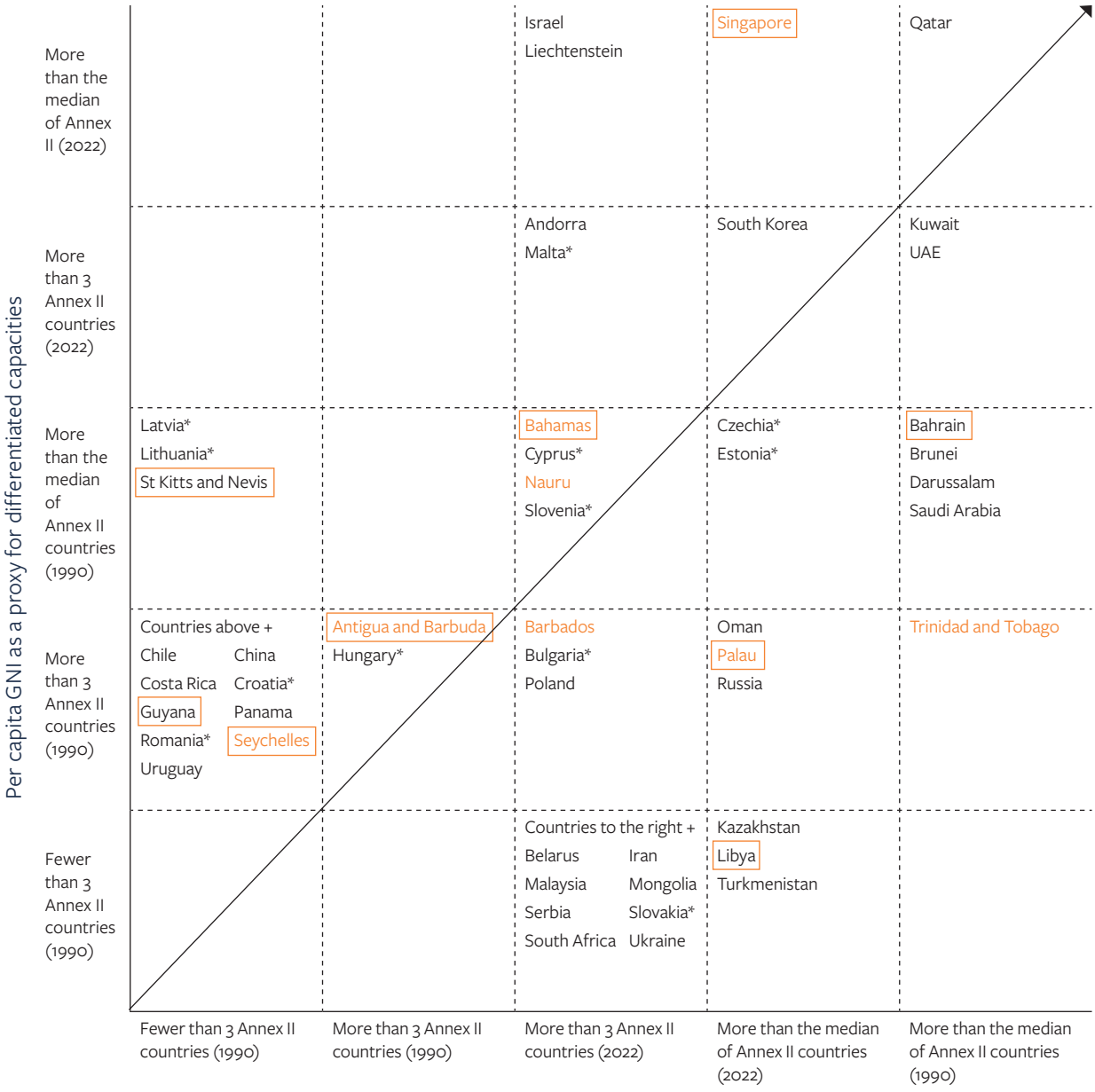
- Per capita GNI as a proxy for ability to pay; and
- per capita cumulative territorial CO_2 emissions as a proxy for historical responsibility for climate change.

We then propose a set of thresholds that countries can use to benchmark against those with obligations to provide climate finance. The results are presented in Figure ES1.

Qatar stands out most clearly as the country that should assess its own national circumstances and consider formally assuming responsibility and reporting for climate finance provision to developing countries under the UNFCCC, based on its responsibilities, capabilities and social and economic conditions. **Kuwait, Singapore** and **UAE** should also be considering at what point they will begin to systematically contribute and report climate finance, if benchmarked against current providers on either per capita incomes or emissions, while also considering their own vulnerabilities.

South Korea emerges as the next candidate for climate finance, based on our proposed metrics and thresholds: it has higher per capita incomes and emissions than at least three Annex II countries. However, South Korea already provides climate finance to developing countries to the tune of $3.3 billion a year via bilateral channels (which it reports via OECD DAC) and multilateral ones. At the moment, this climate finance does not count towards the $100 billion goal. Going forward, South Korea could opt to count and report its significant climate finance contributions towards the NCQG.

Figure ES1 Benchmarking non-Annex II countries based on per capita emissions and per capita incomes



Note 1: Thresholds are progressive from the least to the most stringent. In this sense, the diagram can be read from right to left and top to bottom where the next category includes the previous one. For example, countries listed as above the median of Annex II countries (1990) for emissions are also above the median of Annex II countries (2022). The arrow indicates increasing ability to pay and increasing responsibility for climate change.

Note 2: Countries in orange are recognised as particularly vulnerable within the UNFCCC regime, and include small island developing states (SIDS) and least developed countries (LDCs); countries in orange box ☐ are recognised as most vulnerable as per the vulnerability to climate change index of the Notre Dame Global Adaptation Initiative (ND-GAIN) in 2024. Countries with * are EU members that report to OECD against the $100 billion goal, implying voluntary identification for contribution.

Source: Authors using Gütschow et al. (2021) and World Bank (2024b; 2024c;). GNI per capita data were calculated from World Bank (2023a; b) for Liechtenstein (for 2021) and Turkmenistan. No data were available for Monaco.

If we examine the next thresholds, three of the countries in Figure ES1 that could be considered eligible are already contributing climate finance and – going one step beyond South Korea – voluntarily counting those contributions towards the current $100 billion goal (Czechia, Estonia, Liechtenstein, Malta and Slovenia). Two of the countries are SIDS and therefore recognised within the climate regime as particularly vulnerable to the physical impacts of climate change (Bahamas and Nauru).

Strikingly, China only clears the lowest threshold for per capita GNI; it does not clear the lowest threshold for per capita emissions. Nonetheless, the country provides significant volumes of international climate finance: its multilateral contributions alone reached $2.5 billion in 2022 and it is active in climate-related South-South cooperation as well.

All the countries in Figure ES1 already provide international climate finance, often in substantial volumes. The NCQG could improve the visibility of these contributions by introducing consistent transparency requirements regarding climate finance across all countries, providing reassurance to developed countries and demonstrating solidarity among developing countries. Consistent reporting would potentially increase the quantity and quality of international climate finance reaching developing countries in two ways. Developing countries will be given the reassurance that providing and mobilising climate finance is not a de facto admission of developed country status, which would incentivise more visibility for climate-related South–South cooperation. Meanwhile, developed countries will face lower domestic political and legal barriers to providing international public finance for climate action if it is clear that some countries on a par with developed countries in terms of emissions and economic capacity per capita are also contributing climate finance.

Conclusion

The NCQG offers an important opportunity to increase both the quantity and the quality of climate finance for developing countries, enabling more ambitious action in the face of the climate emergency. We hope this paper can support the articulation of the new climate finance goal by providing new evidence and ideas to address the collective aspects of the new goal.

1 Introduction

2024 is a critical year for international climate finance. At the 29th Conference of the Parties (COP29) in November, three years of discussions over a 'New Collective Quantified Goal on Climate Finance' (NCQG) are meant to conclude. The last time a climate finance goal was set, it shaped the United Nations climate agenda for 15 years.

The NCQG can be understood as the successor[2] to the $100 billion commitment made at COP15 in Copenhagen in 2009 that developed countries pledged to jointly provide and mobilise each year, from a wide variety of sources, for developing countries by 2020 (UNFCCC, 2009). At COP21 in Paris in 2015, developed countries agreed to extend this goal until 2025, at which point the NCQG would be established from a floor of $100 billion a year. Discussions over the NCQG started over two years ago at COP26 in Glasgow,[3] but there is much more to be done in the expert dialogues and meetings planned over the next months to successfully finalise the NCQG at COP29 in Baku.

Much of the work towards the NCQG has taken place against the failure by developed countries to meet the $100 billion goal in 2020 or 2021 (OECD, 2024b). In 2022, developed countries reported reaching their collective annual goal for the first time, providing and mobilising $115.9 billion (OECD, 2024b), which in nominal terms offsets the shortfall to the goal of $10.4 billion in 2021. Although, when accounting for the grant equivalence of the finance, Kowalzig et al. (2024) report the much lower figure of $35 billion for 2022.

While this progress in international climate finance is welcome, most developing countries continue to face a paucity of climate-related investment, constrained fiscal space and net outflows of private capital (Diwan and Harnoys-Vannier, 2024). The recent rise in sovereign debt is largely a consequence of the Covid-19 pandemic and a slow recovery, higher energy and food prices, much higher interest rates introduced in response to these inflationary shocks and a series of extreme weather events as climate change accelerates (UN Global Crisis Response Group, 2023). All these shocks and stresses have not merely put most countries off track to meet the Sustainable Development Goals but indeed pushed many into a deepening crisis of poverty and indebtedness (World Bank, 2024a).

The last stretch of the NCQG deliberations in 2024 is a critical moment to restore trust, stimulate cooperation and unlock resources for climate action. Failure to reach an ambitious new goal risks leading to a failure to deliver the long-term term goals of the Paris Agreement. Against a backdrop

2 Technically, the $100 billion goal was not officially adopted text under the United Nations Framework Convention on Climate Change (UNFCCC) but an agreement struck at the COP by a group of countries (Schalatek et al., 2010).

3 Decision 9/CMA.3 para. 22.

of rising annual greenhouse gas emissions (UNEP, 2023) and increasingly frequent and severe climate impacts (IPCC, 2022), the new goal needs to be effective in playing a catalytic role for climate action.

Many elements of the NCQG are currently under consideration, including the timeframes; its target figure, called the 'quantum'; the structure of the goal; transparency; reporting and evaluation; sources of finance; and qualitative elements such as access, theme, geographic distribution and outcomes, as laid out in the 2023 report by the co-chairs of the ad hoc work programme.[4] While recognising the crucial importance of all these elements and the linkages among them, this paper focuses on the collective aspects of the NCQG. The 2023 report by the co-chairs notes the need for further discussion around 'the "collective" aspects of implementation, whether burden-sharing or broadening the contributor base'[5]; we have accordingly structured this working paper around these two issues.

Our focus on the collective aspects of the NCQG builds upon our work over the past three years. Since 2021, ODI and the Zurich Climate Resilience Alliance have jointly published an annual report evaluating which developed countries are paying their 'fair share' of climate finance (Colenbrander et al., 2021, 2022; Pettinotti et al., 2023). The 2022 edition of this series also explored how to operationalise a collective effort by benchmarking countries' historic responsibility for climate change and respective capabilities to provide more climate finance (Colenbrander et al., 2022). We extended this work by generating new evidence on the scale of climate finance provided by developing countries, most notably through their shareholdings in the multilateral development banks (MDBs) (Colenbrander et al., 2023). We have been examining the collective aspects of climate finance provision for several years, recognising that this was one of the central challenges to the delivery of the $100 billion goal and anticipating that it would likewise prove difficult in deliberations about its successor.

In the next section, we present our methods. We explain how we quantify the volume of climate finance each country provides, assign and assess developed countries' progress towards their fair share and identify quantitative thresholds that could be used to inform discussions about an expanded contributor base. We then share our findings. We first look at developed countries, presenting the 2022 results of our fair share methodology (Section 3) and then consider how the NCQG could enhance accountability for these climate finance providers via a burden-sharing arrangement (Section 4). We then turn to developing countries, presenting international climate-related multilateral finance flows from the 30 largest providers (Section 5) and offering data that other Parties could use to self-determine whether they have the differentiated responsibilities and respective capabilities to provide more climate finance, taking into account their vulnerabilities to climate change and other relevant national circumstances. In that final section, we reflect upon how the collective aspects of the NCQG need to serve its ultimate purpose: to increase

4 FCCC/PA/CMA/2023/11.
5 Section B, para. 46.e.v in FCCC/PA/CMA/2023/11.

the quantity and quality of international climate finance, particularly for the most vulnerable countries, in order to foster a spirit of solidarity and a more systemic approach to financing climate action in order to accelerate the achievement of the long-term goals of the Paris Agreement (Article 2).

The NCQG offers an important opportunity to increase both the quantity and the quality of climate finance for developing countries, enabling more ambitious action in the face of the climate emergency. We hope that the evidence laid out in this paper can support constructive discussions over the critical months to come.

2 Methods

2.1 Climate finance contributions

In this report, we have sought to quantify international climate finance flows from all countries. This is a challenging task because the United Nations Framework Convention on Climate Change (UNFCCC) does not require all countries to report climate-related financial flows, only the developed countries with an obligation to provide climate finance. Our findings for developing countries account only for multilateral contributions and are therefore partial, owing to the difficulty involved in collecting robust information on their bilateral climate finance provision.

Developed countries report how much they are providing in climate finance to the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD DAC) and to the UNFCCC in their Biennial Reports (BRs), soon to become Biennial Transparency Reports. The self-reporting model leads to considerable variation in how reporting countries define and measure climate finance.

In this report, we adapt the OECD DAC methodology to calculate the total commitment across bilateral and multilateral channels for each developed country in 2022. While our methodology is comparable with the OECD's, our estimates are likely to differ slightly because the OECD reports lack some of the methodological information required to replicate their approach in full to obtain matching estimates. We complement the OECD DAC database with data from the 2022 Joint Report on Multilateral Development Banks' Climate Finance (AfDB et al., 2023), and on climate funds from the Climate Funds Update (CFU) (2024).

We summarise our sources in Appendix 1 and our methodology in Appendix 2. For more details about our methodological choices, please see the previous edition of this series (Pettinotti et al., 2023).

Importantly, our appraisal focuses on the provision rather than the mobilisation of climate finance. Provision of climate finance typically refers to resources supplied by developed countries' governments – that is, public funds – whether as grants or loans. Mobilisation of climate finance typically refers to resources from private entities that become available as a result of contributors' activities, for example through guarantees or subordinate debt from public funds. In 2022, developed countries mobilised $21.9 billion of private climate finance, an increase of 52% on the previous year (OECD, 2024b). Our figures therefore understate developed countries' progress towards providing their fair share of climate finance, particularly for countries like the US that have a strong track record of mobilising private finance for climate action (OECD, 2023c).

2.2 Fair share index

We propose three metrics to assess each developed country's fair share of the climate finance goal:

- gross national income (GNI) in current 2022 US dollars as a proxy for ability to pay (World Bank, 2023a). GNI accounts for net receipts from all taxable residents in the territory (people and firms) and hence tracks closely with the taxpayer base that funds international public climate finance. This metric is for a given single year since climate finance is tied to a country's budget, which is disbursed yearly.
- **cumulative territorial carbon dioxide (CO_2) emissions between 1990 and 2022 as a proxy for historical responsibility for climate change** (Friedlingstein et al., 2023). We selected the cut-off date of 1990 to match the climate regime's use of '1990 emissions levels' at the adoption of the UNFCCC in 1992. This language has already been agreed, and garnered consensus for the Convention and the first commitment period under the Kyoto Protocol. However, it should be noted that greenhouse gases (GHGs) emitted before 1990 continue to contribute to climate impact to this day. Hence, this cut-off date is one that is in line with the language of the Convention rather than with the physical science on climate change.
- **population as of 2022,** to allocate equal responsibility for climate finance provision to persons living in each of these developed countries (World Bank, 2023b).

Appendix 4 presents the country-level data for these three different indicators. For more details on our methodology for apportioning responsibility for climate finance among developed countries, please see Pettinotti et al. (2023).

Using the three metrics above, we develop a composite indicator to determine each developed country's fair share of the climate finance goal. This composite indicator is an average of their share of developed countries' collective GNI, cumulative territorial emissions and population. In this indicator, each of the three metrics is assigned an equal weight. There is correlation between all three metrics, and that will be the case as long as countries have fossil fuel-intensive economies; the moment they accelerate deep decarbonisation and decouple economic development from emissions, the correlation will start to lessen. This can act as an incentive for rapid domestic decarbonisation and a subtle feedback loop rewarding ambition year on year.

The 2009 Copenhagen Accord and the 2015 Paris Agreement specify that 'developed countries' have an obligation to provide climate finance. However, there is no formal list of developed countries. The closest approximation are the Annexes established as part of the UNFCCC in 1992.[6] However, the world has changed significantly since then, with many countries that were then unequivocally

6 The UNFCCC originally divided countries into three main groups:
- Annex I Parties are members of the OECD in 1992 or countries with economies in transition (i.e. many former members of the Soviet Union). The European Community (now the EU) was included as a discrete entity. When the UNFCCC was established, these were considered the industrialised countries.
- Annex II Parties comprise the same list excluding those countries with economies in transition. Even if not an official UNFCCC grouping, 'non-Annex II countries' has become a shorthand for all Parties not included in Annex II.
- Non-Annex I Parties are all countries not included in Annex I. When the UNFCCC was established, these were considered to be mostly developing countries.

considered 'developing' or 'non-industrialised' having achieved tremendous economic gains, with a commensurate improvement in living standards and increase in emissions (Alayza, 2023). Many of these countries now voluntarily provide and mobilise climate finance towards the $100 billion goal.

We have not applied our fair share methodology to these non-Annex II countries, given that they have voluntarily contributed and reported their finance against the $100 billion goal. Rather, we have assumed that their contributions will be additional to the quantum pledged by the developed countries as of 2009. An important subject for discussion in the remaining meetings and technical expert dialogues (TEDs) of the *ad hoc* work programme is whether a burden-sharing arrangement adopted under the NCQG would apply going forward to countries that voluntarily self-identify as 'developed' for the purposes of climate finance provision and mobilisation.

2.3 Metrics to inform self-differentiation among other Parties

We propose two metrics to inform other Parties' self-differentiation with respect to provision of climate finance:

- cumulative territorial CO_2 emissions per capita over 1990–2022 as a proxy for a country's responsibility for our changed climate;
- GNI per capita in 2022 as a proxy for a country's economic resources and therefore ability to pay.

Data for territorial CO_2 emissions per capita and GNI per capita in current US dollars are taken from World Bank datasets (2024b; 2024c). We use the metrics on a per capita basis rather than in aggregate to average out wealth and emissions across each country's population. Using a unit rate enables greater comparability between countries than an aggregate figure.

We further propose that the country rankings on the indicators above be combined with thresholds to benchmark at which points countries may be encouraged to take stock of their national circumstances with regard to climate finance. We put forward a range of thresholds, noting that there are many ways to define equitable climate action and that the world's largest economies have a track record of adopting the least stringent interpretations of burden-sharing (Kartha et al., 2018; Robiou du Pont and Meinshausen, 2018). These thresholds are:

- the median of Annex II countries' performance against each of the two indicators above;
- the bottom third Annex II countries' performance against each of the two indicators above;
- the median of Annex II countries' per capita GNI in 1990 and per capita cumulative territorial emissions between 1850 and 1990;
- the bottom third Annex II countries' performance on per capita GNI in 1990 and per capita cumulative territorial emissions between 1850 and 1990.

Our data on cumulative territorial CO_2 emissions since 1850 are drawn from Gütschow et al. (2021). Our data on population and per capita GNI[7] in current US dollars in 1990 and 2022 are drawn from the World Bank (2023b, 2024b).

We include the first two thresholds on the premise that countries that are richer have emitted as much and/or are less vulnerable today than the median Annex II country (the first threshold), or even a subset of Annex II countries (the second threshold), and have equivalent responsibility and capability to provide climate finance. The section also includes the second two thresholds on the premise that, otherwise, the benchmarks for assuming responsibility for international climate finance provision are constantly moving, as national economies grow and countries' cumulative emissions increase. Particularly given the historical difficulties with respect to modifying the Annexes, it is feasible to argue that any country that is richer and/or more polluting than the median Annex II country in 1990 – when the Annexes were established – should take stock of its national circumstances with regard to its responsibilities and capabilities. The use of several thresholds serves to reflect the spectrum of national responsibilities and capabilities among other Parties, while recognising the range of other metrics that could potentially be used to inform self-differentiation.

We emphasise that the data presented are meant to provide comparison points for countries' self-differentiation and national determination when deciding whether to provide climate finance.

For more details on our methodology for informing self-differentiation of other Parties for the purposes of climate finance provision, please see Colenbrander et al. (2023).

7 We selected the indicator that uses the Atlas method, which smooths out exchange rate fluctuations over a three-year average and limits spikes in data points year on year. Further, GNI calculated by the World Bank using the Atlas method is also the indicator the Bank uses for its country income classification. See details in World Bank (2024d).

3 Which developed countries fell short of providing their fair share of climate finance in 2022?

Table 1 ranks the Annex II developed countries based on their progress towards or beyond provision of their fair share of the $100 billion goal, based exclusively on international public finance flows.

Table 1 Scorecard of progress towards developed (Annex II) countries' fair share of the $100 billion climate finance goal, 2022

Annex II country	Fair share of the $100 billion goal ($ billions)	Climate finance provided in 2022 ($ billions)	Progress towards fair share (%)
Norway	0.69	1.86	270%
France	5.26	11.37	216%
Luxembourg	0.09	0.16	180%
Germany	8.16	14.11	173%
Sweden	0.90	1.55	171%
Denmark	0.61	1.01	165%
Switzerland	0.93	1.33	143%
Japan	10.86	14.00	129%
Netherlands	1.75	2.24	128%
Austria	0.81	0.95	117%
Belgium	1.12	1.31	116%
Finland	0.54	0.56	103%
Italy	4.63	3.35	72%
Canada	4.33	3.12	72%
United Kingdom	5.80	3.93	68%
Iceland	0.04	0.02	62%
New Zealand	0.43	0.27	62%
Spain	3.41	1.96	58%
Ireland	0.54	0.30	55%
Australia	3.03	1.40	46%
Portugal	0.69	0.26	38%
United States	44.60	14.37	32%
Greece	0.77	0.23	29%

Note 1: Countries in darkest green are providing more than twice their fair share of climate finance. Those in light green are providing their fair share. Colours are thereafter in quartile increments: yellow for those paying 50–75% of their fair share and orange for those paying 25–50% of their fair share.
Note 2: The figures on climate finance provision in this table are based on data on climate-related development finance from the Creditor Reporting System of the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD DAC). Our figures may differ from national figures for two reasons. First, we attribute capital outflows from multilateral development banks to individual countries based on their shareholdings or voting power. Second, we attribute the European Union's climate finance to its member states.
Source: Authors' calculations using data from EU (2022), AfDB et al. (2023), Friedlingstein et al. (2023), OECD (2024a), CFU (2024) and World Bank (2023a; 2023b).

Twelve developed countries provided their fair share of international climate finance in 2022: Norway, France, Luxembourg, Germany Sweden, Denmark, Switzerland, Japan, the Netherlands, Austria, Belgium and Finland.

Six of these countries have consistently provided their fair share of the $100 billion goal since 2020, and should therefore be particularly commended: Denmark, France, Germany, the Netherlands, Norway and Sweden. Luxembourg and Switzerland joined their ranks in 2021. This year, Austria, Belgium and Finland are also providing their fair share of the $100 billion. Japan is once again providing its fair share of climate finance, having met this goal in 2020 before dropping out of the top ranks in 2021.

Among those countries falling short of providing their fair share, all have increased the volume of climate finance they are providing since 2021 except Iceland. The growth of US climate finance is especially marked in absolute terms, with its provision increasing by over $5 billion compared with the previous year. Canada has seen the largest change in relative terms, increasing its climate finance provision by 21% year on year.

Table 2 presents the climate finance contributions of countries that are not obliged to provide international climate finance, but have voluntarily chosen to contribute towards, and report against, the $100 billion goal. (The list is drawn from Annex A in OECD, 2015). Most are members of the EU and part of the Annex I category. Together, these countries contributed $1.3 billion in 2022.

Table 2 Non-Annex II developed countries' contributions to the $100 billion climate finance goal, 2022

Country	Total climate finance ($ million)	Country	Total climate finance ($ million)
Bulgaria	102.83	Lithuania	38.58
Croatia	57.65	Malta	15.58
Cyprus	27.49	Monaco	1.91
Czechia	182.37	Poland	401.07
Estonia	24.36	Romania	148.25
Hungary	177.78	Slovakia	83.95
Latvia	28.89	Slovenia	45.19
Liechtenstein	8.99	**Total**	**1,340.70**

Source: Authors' calculations using data from EU (2022), AfDB et al. (2023), CFU (2024) and OECD (2023b, 2024a; 2024b). List of non-Annex II countries that contribute and report under the $100 billion goral as per Table 6 in OECD (2024b).

4 A burden-sharing arrangement

4.1 Why might the NCQG include a burden-sharing arrangement?

The current annual $100 billion climate finance goal is a collective commitment by developed countries. Its collective nature has meant individual developed countries are not accountable for a specific sum of money. This lack of individual accountability has potentially reduced the total amount of climate finance provided because developed countries are shielded from individual scrutiny. With no accountability for those that fall short of their fair share, there is little political incentive for other developed countries to be ambitious, as additional resources merely serve to fill the gap left by others rather than demonstrating solidarity or allowing them to burnish their own reputation.

The inclusion of a burden-sharing arrangement among developed countries could therefore potentially strengthen the NCQG by enabling greater accountability and trust among Parties (Pettinotti and Cao, 2023). A burden-sharing mechanism would apportion responsibility for the relevant quantitative element of the new goal among developed countries. It could also potentially improve the predictability of flows if countries are held accountable individually and laggards therefore fulfil their obligations in a timelier manner. Such an arrangement would formally recognise the differentiated responsibilities and respective capabilities among developed countries – a heterogeneous group with diverse economic and population profiles and varying levels of cumulative and current emissions.

Many developing countries have recently called for such an arrangement to enhance accountability among developed countries. the Alliance of Small Island States (AOSIS),[8] the Arab Group,[9] Group SUR (Argentina, Brazil, Paraguay and Uruguay),[10] India,[11] Kenya and Zambia on behalf of the African Group of Negotiators[12] and the Like-Minded Developing Countries (LMDCs)[13] all called for a burden-sharing mechanism. The summary of TED9 prepared by the co-chairs identifies the option of 'developing criteria for burden-sharing arrangements among developed countries to facilitate predictability, transparency and accountability' (UNFCCC, 2024).

The idea of such an arrangement would not be new in the climate regime. Already, in the 1992 Convention, Article 4.3 on commitments to provide financial resources states:

8 June and August 2024 submissions.
9 June and August 2024 submissions.
10 August 2024 submission.
11 February 2023 submission to the co-chairs.
12 May 2023 and August 2024 submissions.
13 August 2024 submission.

> The developed country Parties... shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties... The implementation of these commitments shall take into account the importance of appropriate burden sharing among the developed country Parties.

Later on, at COP7 in Marrakesh in 2001, Decision 7/CP.7, para. 1(d) on funding under the Convention states:

> [The COP] decides that:... d. Appropriate modalities for burden sharing among the Parties included in Annex II need to be developed.

But to date, such arrangement has not been pursued.

4.2 Are there precedents for a burden-sharing arrangement?

There are precedents for a burden-sharing arrangement in other multilateral governance arrangements. Three major ones stand out: the North Atlantic Treaty Organization (NATO) cost-sharing agreement, the UN budget cost share and the EU effort-sharing agreement related to GHG emissions under the Kyoto Protocol. All are burden-sharing agreements that include countries with different national circumstances that seek to voluntarily provide a common or global public good.

The NATO burden-sharing arrangement is structured around two tiers. One uses a formula loosely proportional to member countries' GNI for the alliance's 'common funds'; the other tier is a flat-rate commitment by all member countries to spend at least 2% of their gross domestic product (GDP) as 'indirect funding' to the alliance by maintaining domestic readiness (NATO, 2023, 2024). The flat-rate commitment is critical to the credibility of the NATO alliance: without armed forces at the ready, the alliance cannot perform its purpose of providing mutual defence and collective security. Similarly, in the climate space, there is a need for common funds (international climate finance under Article 9) to enable climate action in developing countries, particularly the most vulnerable, although this is dwarfed by domestic spending to reduce emissions and advance climate-resilient development.

The UN has a burden-sharing arrangement in place for its budget. which is 'apportioned broadly[14] according to capacity to pay' (UN, 2024a) and is based on GNI with a few adjustments related to minimum (0.001%) and maximum (22%) contributions, including a maximum share for least developed countries (LDCs) capped at 0.01%.[15] The minimum and maximum bound share for some specific countries may be a useful arrangement to apply to a burden-sharing mechanism in the climate regime.

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14 Using a multi-year statistical average for GNI, adjusting excessive fluctuations in currency conversion rates. See A/RES/76/238 for detail.

15 A/RES/76/238.

The EU's burden-sharing arrangement for emission reductions under the Kyoto Protocol is a 'triptych' approach based on countries' emissions from the power sector, hard-to-abate sectors (e.g. aviation, cement, chemicals and iron and steel) and domestic sectors (comprising the residential, commercial, transportation, light industry and agriculture sectors) to capture differences among members. Similar to the UN mechanism, the EU one also specifies that, for its members whose GDP per capita is less than 75% of the EU average, burden-sharing will occur at a later point in time. This is the only burden-sharing mechanism based on a technical approach – that is, emission reduction targets are based on emissions from these three categories (Phylipsen et al., 1998).

4.3 What metrics might be used in a burden-sharing arrangement?

Over the past five years, many people have put forward possible indicators to assess how the burden of international climate finance should be distributed, in what we call each country's 'fair share.' Most of these proposals adopt some combination of emissions, income and population, although they vary the unit rate (e.g. per capita or in absolute terms), or use different ways of measuring the same issue (e.g. CO_2 or GHG emissions, territorial or trade-adjusted emissions and GNI or GDP (see Egli and Stünzi, 2019; Bos and Thwaites, 2021; Beynon, 2023; CAT Tracker, 2024). Broadly, these various metrics when applied to the same set of Annex II countries return results within a similar range.

There is some basis within the climate regime for using an indicator on emissions as part of a burden-sharing mechanism. The preamble of the UNFCCC in para. 3 notes:

> ... that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs.

This text could arguably justify the use of cumulative or annual emissions on a per capita basis, as a proxy for common but differentiated responsibilities among countries.

The basis for including an indicator on income as part of a burden-sharing mechanism is less explicit. However, there is a basis for including an indicator that serves as a proxy for each country's 'respective capabilities and their social and economic conditions' (para. 6 of the Convention). The scholars cited above have used GNI and GDP to this end, whether on an absolute or a per capita basis.

Regardless of the choice of indicators – emissions or income or a combination of both – it should be noted that these two indicators are correlated given the fossil fuel dependence of economies.

In addition to identifying specific indicators, some burden-sharing arrangements in the literature propose a feedback loop that acts as an incentive for developed countries to accelerate their

energy transition. A country that commits to ambitious emission reductions domestically would see its fair share of international climate finance provision adjusted (Egli and Stunzi, 2019; CAT Tracker, 2024). However, such a loop relies on commitments, which can be problematic given that not all developed countries have met past commitments, and noting the lack of trust more generally in climate relations at this time. It could also be argued that, as economies decarbonise domestically, such a feedback loop will be reflected in declining national emissions.

All the criteria proposed across this literature are transparent but normative. They reflect slightly different perceptions of what national responsibilities, capabilities and circumstances are relevant for burden differentiation, and how they can be measured. The authors' technical choices have significant political, fiscal and financial implications. Any metrics under consideration as part of a burden-sharing arrangement should therefore be subject to public scrutiny and political negotiations among Parties, potentially as part of the NCQG deliberation process.

5 Climate finance provision by other Parties

5.1 Does the developed/developing dichotomy introduced in 2009 for the $100 billion goal still hold?

Since countries were categorised into Annexes under the UNFCCC in 1992, the world has changed significantly. Perhaps the most pertinent changes for climate finance negotiations are that many non-Annex II countries have achieved significant increases in per capita incomes and/or have emitted GHGs at an increased rate. Thus, many countries now have much greater capabilities to provide and mobilise climate finance, and/or much greater responsibility for global warming (Alayza, 2023).

Based on these developments, there have been calls from developed countries for additional countries to join the 'contributor base' for climate finance. Such calls have come from Australia,[16] Canada,[17] Belgium, Hungary and Sweden on behalf of the EU,[18] Japan,[19] New Zealand,[20] Norway,[21] Switzerland on its own[22] and on behalf of the Environmental Integrity Group (Georgia, Liechtenstein, Monaco, Mexico, South Korea and Switzerland)[23] and the US.[24]

However, in the context of climate finance, the legitimate question of how and when individual countries assume new responsibilities under the climate regime (Depledge, 2009) has been made difficult by the failure of developed countries to deliver the $100 billion goal in 2020 or 2021. Developed countries reached this target two years late (OECD, 2024b) but continue to face criticisms for the high share of loans: the real fiscal effort is much smaller, as evidenced by grant-equivalent estimates such as Kowalzig et al. (2024). Developed countries officially reported having provided and mobilised $115.9 billion in 2022 (OECD, 2024b) but polarisation and mistrust remain high (Skounti and Erzini Vernoit, 2024). Discussions about the contributor base have consequently been perceived as an attempt by developed countries to evade their obligations and curtail ambition. Such perceptions have been fuelled by the fact that the US, which has repeatedly

16 February 2024 submission.
17 September 2023 and September 2024 submissions.
18 February 2023, January 2024 and September 2024 submissions.
19 February 2024 submission
20 May 2024 submission
21 February 2024 submission (described as 'discussions on contributors').
22 August 2024 submission.
23 March 2022 submission.
24 Most recently in March and August 2024.

failed to provide its fair share of the $100 billion (Pettinotti et al., 2023), has been the most vocal about expanding the contributor base, repeating the argument when Parties meet and in written submissions under the NCQG process.

The language of 'contributor base' frequently used by developed countries has no legal basis in the UNFCCC or the Paris Agreement. The Convention is underpinned by the Annexes, while the Paris Agreement uses the language of 'developed' and 'developing' with some subtle differentiation (Pauw et al., 2019). However, it is important to recognise that these terms do not map neatly on to the Annexes. In particular, the former economies in transition – members of Annex I but not Annex II – now occupy a grey space between 'developed countries' that explicitly have obligations for providing and reporting climate finance and 'developing countries' that are eligible for international support for climate action. Such economies have obligations to report but not provide.

Mechanisms for countries to move between categories within the UNFCCC have never successfully concluded, and few country classifications have formally changed. There are no legal options within the climate regime to require countries to 'graduate' from developing to developed country status, and, to date, no non-Annex II country has formally graduated to Annex II and formally assumed obligations for climate finance provision within the UNFCCC system (although several EU countries voluntarily contribute and report to the OECD towards the $100 billion goal, as detailed in Section 3). Moreover, India on behalf of the LMDCs[25] and Saudia Arabia on behalf of the Arab Group[26] state that the NCQG has no mandate to address the issue of contributors to the goal because it has never been cited in a previous decision.

In this context, the discussion is not about whether an individual country is developed or developing but whether the NCQG can create a space for a more nuanced differentiation among countries than the binaries of 'developed' and 'developing,' given the profound changes in the global economy and associated patterns of emissions over the past 30 years. A burden-sharing mechanism as proposed in Section 4 offers a means to do this for developed countries; a more nuanced approach to climate finance providers offers a similar means to recognise increasing differentiation among developing countries, particularly the significant economic development achieved by a subset of developing countries with commensurate impacts upon their emissions. In other words, the NCQG could create space to recognise the spectrum of national responsibilities, capabilities and circumstances that exist.

25 May 2023 submission.
26 May 2023 submission.

Box 1 A proposal for a new category of "non-developed countries"

In this report, we use the term 'other Parties' or 'other Party country' in line with Articles 9.2, 9.5, 9.7 and 13.9 of the Paris Agreement, which describe the voluntary provision and communication of financial support.

The term 'other Parties' is used to distinguish developed country Parties with obligations for climate finance provision from all other Parties. However, the use of the term 'other Parties' can imply that there are countries that are not obliged to provide climate finance that are not necessarily in the category of 'developing countries'.

We propose that this could be formalised within the NCQG by introducing a new category of 'non-developed countries' or 'non-developed Parties'. Such terms would clearly demarcate a group of countries that do not have obligations to provide climate finance (unlike developed countries) but do not have the eligibility to receive climate finance (unlike developing countries). The category of 'non-developed countries' would provide a transition path for many of the countries in Figure 1 that are not yet ready to assume greater responsibilities within the climate regime, but recognise their increased capacities and improved social and economic conditions since the Convention was established in 1992.

Currently, the term 'other Parties' is only used in the Paris Agreement in conjunction with the voluntary provision and communication of financial support. The terms 'non-developed countries' or 'non-developed Parties' could likewise be deployed only in the context of the NCQG or for all matters relating to financial support, should this prove necessary to making progress on the contentious collective aspects of the new goal.

5.2 How much climate finance do other Parties countries provide?

Although they have no obligations to provide climate finance under the UNFCCC, many other Parties provide considerable volumes of international public finance for climate action in developing countries through their contributions to multilateral development banks and climate funds (MDBs and MCFs). Table 3 presents a list of the 30 largest non-Annex II multilateral climate finance providers in 2022.

Table 3 30 largest multilateral climate finance providers among non-Annex II countries in absolute terms, 2022

Country	Multilateral climate finance ($ millions)	Country	Multilateral climate finance ($ millions)
China	2,522	Iran	271
India	1,287	Philippines	270
Brazil	1,135	Malaysia	263
South Korea	1,130	Guatemala	250
Argentina	1,011	South Africa	239
Russia	919	Costa Rica	239
Mexico	836	Nicaragua	236
Saudi Arabia	728	Honduras	234
Indonesia	646	El Salvador	232
Venezuela	359	Thailand	219
Turkey	354	Taiwan	218
Colombia	338	Poland	215
Nigeria	291	Kuwait	202
Chile	281	Egypt	198
Pakistan	275	Algeria	178

Source: Authors' calculations using data from IBRD (2022), IDA (2022), IFC (2022), ADB (2023), AfDB (2023), AIIB (2023), CEB (2023), EBRD (2023), EIB (2023), IDB (2023), CFU (2024) and OECD (2024b).

Table 3 clearly demonstrates that many other Parties countries provide considerable volumes of climate finance to developing countries via their multilateral contributions. The list of the top 30 non-Annex II multilateral providers includes former economies in transition, like Poland and Russia; countries that have achieved high-income status since 1992, like Chile, Kuwait, Saudi Arabia and South Korea; and middle-income countries with large populations, like Brazil, China, India, Indonesia, Mexico, Nigeria and Pakistan. When their contributions are via development banks, they are often a function of their economies rather than a statement regarding climate finance, unlike when they are made to climate funds.

The climate finance contributions of other Parties become even more significant when we consider that they are mostly based on estimates of their multilateral climate finance contributions alone, not any bilateral flows, and are consequently likely to be underestimates. Currently, data on bilateral climate finance flows are available from the 2020 BRs for only 37 out of the 43 Annex I countries.

The OECD DAC provides complementary data on climate-related official development assistance (ODA) for a handful of other countries that have joined the OECD DAC since 1992. The only non-Annex I country in this group is South Korea, which provided $2.2 billion in bilateral climate finance in 2022 in addition to the $1.1 billion it provided via multilateral channels. For a small number of countries, researchers have independently sought to quantify bilateral climate-related finance flows. Tsang et al. (2023), for example, find that China spent an average of $1.4 billion a year on climate-related projects in other developing countries between 2013 and 2017, the latest year for which data were available. The results underscore that bilateral flows of climate-related finance are significant.

At a global level, however, the lack of recent data precludes a comprehensive assessment of other Parties bilateral financial support to enable developing countries to address climate change. Any analysis of international public climate finance is therefore likely to underestimate the contribution of other countries that are very active in bilateral South–South cooperation, such as Brazil or the Gulf States.

Estimated data on multilateral climate finance provision for all 182 non-Annex II countries are presented in Appendix 5.

5.3 What metrics can inform other Parties' self-differentiation regarding climate finance provision and mobilisation?

The UNFCCC rests upon the principle of common but differentiated responsibilities and respective capabilities, and countries' social and economic conditions. The Paris Agreement rests upon self-differentiation and national determination. A credible and equitable approach to climate finance provision needs to reflect both. It is therefore possible to propose some metrics that might inform other Parties' decisions about voluntary climate finance provision and mobilisation, as well as advocacy and diplomacy concerning those decisions by non-state actors and other Parties.

A wide range of quantitative and qualitative metrics could be chosen to indicate a country's differentiated responsibility, respective capabilities or national circumstances. Hence, discussions about which countries could be encouraged to provide climate finance need to be sensitive to each metric's potential limitations in capturing national circumstances. Some possibilities could include:

- proxies for countries' respective capabilities (e.g. GNI, GDP, foreign direct investment)
- proxies for countries' differentiated responsibilities (e.g. level of CO_2 or GHG emissions, territorial or trade-adjusted emissions)
- proxies for social and economic conditions (e.g. debt levels or servicing costs, trade dependencies, climate vulnerabilities).

There is no internationally agreed understanding of which quantitative or qualitative indicators might embody the principle of common but differentiated responsibilities and respective capabilities (Klinsky et al., 2017). It is unlikely that countries would reach a consensus on indicators

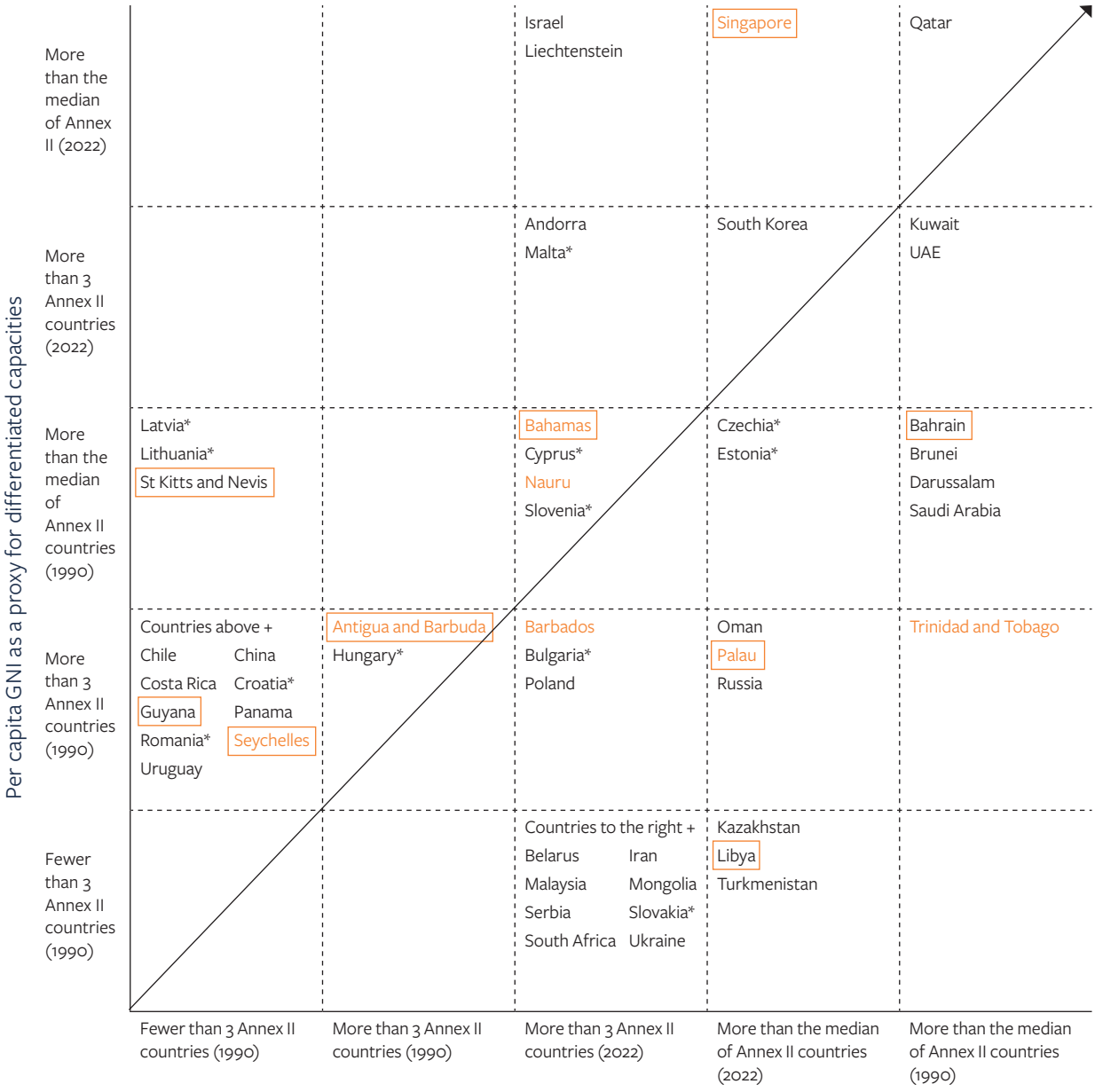
and thresholds, given that each will have incentives and disincentives to adopt each one, and given the rooting of the Paris Agreement in self-determination. Hence, the analysis we propose is designed to support Parties' self-differentiation and own decision-making on their climate finance provision.

5.4 Which other Parties might be encouraged to take stock of their national circumstances regarding climate finance?

Figure 1 presents all countries that have more responsibility for climate change (using our proposed proxy of cumulative territorial CO_2 emissions per capita) and/or greater capacity to provide climate finance (using our proposed proxy of GNI per capita) than at least three Annex II countries as of 1990.

Countries that become wealthier relative to Annex II countries will move up the figure; countries that become more polluting relative to Annex II countries will move to the right of the figure. Countries in the upper righthand corner have greater responsibilities and capabilities, based on our proposed metrics.

Figure 1 Benchmarking non-Annex II countries based on per capita emissions and per capita incomes



Note 1: Thresholds are progressive from the least to the most stringent. In this sense, the diagram can be read from right to left and top to bottom where the next category includes the previous one. For example, countries listed as above the median of Annex II countries (1990) for emissions are also above the median of Annex II countries (2022). The arrow indicates increasing ability to pay and increasing responsibility for climate change.

Note 2: Countries in orange are recognised as particularly vulnerable within the UNFCCC regime, and include small island developing states (SIDS) and least developed countries (LDCs); countries in orange box ▭ are recognised as most vulnerable as per the vulnerability to climate change index of the Notre Dame Global Adaptation Initiative (ND-GAIN) in 2024. Countries with * are EU members that report to OECD against the $100 billion goal, implying voluntary identification for contribution.

Source: Authors using Gütschow et al. (2021) and World Bank (2024b; 2024c;). GNI per capita data were calculated from World Bank (2023a; b) for Liechtenstein (for 2021) and Turkmenistan. No data were available for Monaco.

Most of the countries that appear in Figure 1 fall into one or more of the following categories:

- coal, oil and gas producers, which would have emitted to meet global fossil fuel demand (Bahrain, Brunei Darussalam, Guyana, Iran, Kuwait, Libya, Malaysia, Oman, Qatar, Saudi Arabia, South Africa, Trinidad and Tobago, UAE)
- countries that have joined the OECD since 1992, often on the basis of successful economic diversification or industrialisation (Chile, Costa Rica, Israel, South Korea)
- 'tax havens' – that is, countries with low tax regimes and high levels of financial secrecy for corporates and individuals[27] (Andorra, Bahamas, Cyprus, Liechtenstein, Panama, Seychelles, St Kitts and Nevis), which all score high on GNI per capita given the basis of their economic composition and small population
- SIDS (Antigua and Barbuda, Barbados, Palau, Seychelles, Singapore, St Kitts and Nevis, Trinidad and Tobago), which are recognised as particularly vulnerable to climate change within the UNFCCC regime due to shared challenges such as remote geographies, narrow resource bases, small populations and high exposure to the physical impacts of climate change;
- Annex I countries that were part of the former Soviet Union, where the state financially backed the development of carbon-intensive industries such as iron and steel, mining or petrochemicals (Belarus, Bulgaria, Croatia, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Mongolia, Romania, Serbia, Slovakia, Slovenia, Turkmenistan, Ukraine)
- countries that have become EU members since 1992 (Bulgaria, Croatia, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Romania, Slovakia, Slovenia)
- countries that are high-income in 2022 as per the World Bank classification (Guyana, Palau, Panama, Uruguay).

Qatar stands out most clearly as the country that should start a national conversation about whether or not it should formally assume responsibility for climate finance provision to developing countries under the UNFCCC, based on its responsibilities, capabilities and social and economic conditions. Its per capita income and per capita emissions are higher than the median Annex II country today. As highlighted in Section 5.2, all countries provide climate finance; while Qatar does not register among the top 30 multilateral non-Annex II providers, the country pledged $100 million to SIDS and LDCs in 2019 to be disbursed via its then newly established Qatar Fund for Development (MoFA, 2020). A $100 million pledge for SIDS was announced in 2024 (UN, 2024), but it is unclear if this is the same pledge or an additional one.

Singapore also has higher per capita incomes than the median Annex II countries, and per capita emissions higher than those of at least three Annex II countries. The converse is true for **Kuwait** and **UAE**. Based on our proposed metrics, these countries should likewise be recognising their

27 As per the 2021 Corporate Tax Haven Index in 2021 and the Financial Secrecy Index 2022 by the Tax Justice Network (TJN, 2024a, 2024b).

increased capabilities and responsibilities, against the backdrop of their own vulnerabilities and circumstances, and be discussing at what point they will assume responsibility for climate finance provision within the UNFCCC.

All of the countries above provide climate finance through multilateral channels, overwhelmingly through their MDB subscriptions. The questions that they should be asking themselves, therefore, are 1) whether to commit to providing bilateral climate finance going forward and 2) whether to report on their bilateral and multilateral climate finance provision through their Biennial Transparency Reports. While the countries above do have high incomes and emissions, it is important to acknowledge their vulnerability to climate-related risks. Singapore is one of the SIDS and therefore faces high exposure to physical climate impacts such as storm surge and sea-level rise. The three Gulf economies are heavily dependent on oil and gas and therefore face high exposure to low-carbon transition risks.

South Korea emerges as the next candidate for a nationally led determination regarding climate finance provision, based on our proposed metrics and thresholds: it has higher per capita incomes and emissions than at least three Annex II countries. However, the country already provides climate finance to developing countries to the tune of $3.3 billion a year via bilateral channels (which it reports via the OECD DAC) and multilateral ones. At the moment, this climate finance does not count towards the $100 billion goal. Going forward, South Korea could opt to count its significant climate finance contributions towards the NCQG.

After these five countries, the picture becomes a little more convoluted. Three of the countries in Figure 1 that could be considered eligible based on our next thresholds are already providing climate finance and – going one step beyond South Korea – voluntarily[28] counting those contributions towards the current $100 billion goal (Czechia, Estonia, Liechtenstein, Malta and Slovenia). Two of the countries are SIDS and therefore recognised within the climate regime as particularly vulnerable to the physical impacts of climate change (Bahamas and Nauru). A nuanced differentiation calls for taking into account the inherent vulnerability those countries face, which result from conditions that will not change over time: there is no graduation out of SIDS status, in contrast to (for example) Least Developed Countries (LDCs). Three of the countries are particularly dependent on fossil fuel production and exportation and therefore exposed to low-carbon transition risks (Bahrain, Brunei Darussalam and Saudi Arabia).

Strikingly, China only clears the lowest threshold for per capita GNI; it does not clear even the lowest threshold for per capita emissions. Nonetheless, the country provides significant volumes of international climate finance: its multilateral contributions alone reached $2.5 billion in 2022 (see Table 3) and it is active in climate-related South-South cooperation as well (Tsang et al., 2024).

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28 As per OECD (2015: Annex A)

Box 2 How do our results compare to those of other studies?

The choice of metrics, their unit, thresholds and their cut-off timeframes all have implications as to which countries compare with the responsibilities and capabilities of Annex II countries.

For example, when selecting emissions and GNI in aggregate rather than per capita, the top 20 climate finance providers include China, Russia, South Korea, Saudi Arabia, Taiwan, Poland, the United Arab Emirates, and Mexico (Beynon and Wickstead, 2024). These results are profoundly different from our per capita approach that brings all countries to the same common unit rate for comparability and that attributes equal responsibility to those living in a country. On the other hand, Pauw et al. (2024) use a qualitative approach to identify potential additional providers based on commitments, responsibilities, capabilities, institutional affiliation and willingness. Their list of plausible candidates overlaps with ours, including Eastern European countries, Gulf States, Russia, South Korea, Türkiye and Monaco.

Within the UNFCCC process, a submission to the NCQG co-chairs by Switzerland[29] proposes two options, if countries:

- are among the 10 largest current emitters and have a purchasing power parity (PPP)-adjusted GNI per capita of more than $22,000 and/or
- have cumulative past and current emissions per capita of at least 250 tCO_2eq and a PPP-adjusted GNI per capita of more than $40,000.

The first set of metrics and thresholds returns first Saudi Arabia then Russia; the second set surfaces first Israel, South Korea, then, Czechia and Saudi Arabia, as per our calculations using per capita with purchasing power parity in constant 2021 international dollars (World Bank, 2024) and accounting for past emissions since 1990. Both sets of countries are in line with the top right corner of Figure 1 but, in the absence of a more detailed proposition regarding timeframes and exact units,[30] comparability with our results is limited.

The Paris Agreement encourages self-differentiation, which means that the indicators and thresholds proposed above should support countries to assess their evolving positions and roles within the climate regime. Many of other Parties in Figure 1 already provide substantial amounts of international public climate finance or climate-related 'South–South cooperation,' not because they are obliged to do so but in the spirit of solidarity or pursuit of national interest

29 Available at https://unfccc.int/sites/default/files/resource/MAHWP3_Written_Inputs_Switzerland.pdf
30 The World Bank, for example, offers two units for PPP: in constant 2021 international dollars or in current international dollars.

(Colenbrander et al., 2023). The success of the NCQG, and indeed the achievement of the long-term goals of the Paris Agreement, depends on finding further opportunities to encourage such international cooperation.

5.5 How to recognise climate finance provision by other Parties?

Given the backdrop of distrust and scepticism, we underscore that the NCQG needs to be underpinned by reassurances from developed countries of their continued obligation to provide adequate and predictable international public finance and to take the lead on the mobilisation of other finance. A burden-sharing arrangement, whereby each developed country is responsible for a specific proportion of the quantum, as proposed in Section 4, would give credence to such reassurances.

Thereafter, and in line with both the principle of common but differentiated responsibilities and respective capabilities, and that of national determination, we suggest the NCQG could make progress on the long-intractable question of which additional countries should consider contributing climate finance.

The NCQG could introduce consistent transparency requirements regarding climate finance across all countries. As evidenced in the previous section, most developing countries already provide climate finance via their subscriptions to the MDBs; many intentionally provide additional climate finance either bilaterally or via the MCFs (see Table 3). Countries that have contributed significant amounts should get recognition for their contribution, bringing to the fore that other Parties have been providing climate finance for years. The NCQG could increase the visibility of these contributions, and the ambition and solidarity expressed in them, through extending reporting requirements to all countries. Technical and financial support could be extended to support developing countries in the preparation of their reporting as needed.

Greater transparency would potentially increase the quantity and quality of international climate finance, reaching developing countries in two ways. Developing countries will be given the reassurances that providing and mobilising climate finance is not a *de facto* admission of developed country status, which would incentivise more visibility for climate-related South–South cooperation. Meanwhile, developed countries will face lower domestic political and legal barriers to providing international public finance for climate action if it is clear that some developing countries on a par with developed countries in terms of emissions and economic capacity are also contributing climate finance.

6 Conclusion

The collective aspects of the NCQG call for a more nuanced approach to countries' self-differentiation. The new goal offers an opportunity for a more nuanced differentiation between all countries and between countries grouped in the same category of 'developed' and 'developing.' We offer evidence to support two ways to operationalise this differentiation, which should be first and foremost nationally led, in the spirit of the Paris Agreement.

First, a burden-sharing arrangement among developed countries that have the obligation to provide climate finance would recognise the differences among this set of countries. It would allow for a more nuanced differentiation, whereby large emitters and economies with large populations are not held to the same amount as those that have emitted less, with smaller economies and populations.

Applying our fair share indicator as a burden-sharing arrangement to the countries currently providing climate finance towards the $100 billion goal, we find that, in 2022, 11 countries out of 23 did not contribute their fair share of the $100 billion. The US accounted for the majority of the shortfall in absolute terms. Australia, Canada and the UK should also step up to close the climate finance gap. The fair share method highlights how burden-sharing can improve individual country accountability to support more predictable delivery, while recognising differences within this country grouping.

Second, the question of who should contribute climate finance going forward is another collective aspect of the NCQG that has created tensions to date. We offer evidence to support other Parties' self-differentiation regarding climate finance. Qatar stands out most clearly as the country that should assess its own national circumstances with regard to climate finance; arguably, Kuwait, Singapore and UAE should also do so in parallel. Given that all other Parties already contribute climate finance via their multilateral contributions and some do more via their bilateral channels, the NCQG could recognise these efforts via consistent reporting for all countries.

The NCQG offers an important opportunity to increase both the quantity and the quality of climate finance for developing countries, enabling more ambitious action in the face of the climate emergency. We hope this paper supports the articulation of the new climate finance goal by providing new evidence and ideas to address the collective aspects of the new goal.

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Appendix 1 Data used to estimate climate-related finance

Table A1 Annex II countries' coefficients applied to Rio markers data to compile climate finance data for the UNFCCC

	Coefficient countries apply to Rio markers data to compile climate finance for the UNFCCC as reported in OECD (2023b)		Calculated significant coefficient for countries reporting on a case-by-case basis or that did not report to OECD
Annex II countries	**Rio Marker 2 principal coefficient**	**Rio Marker 1 significant coefficient**	**Ratio of UNFCCC BR5 2020 to climate finance over OECD 2020 climate ODA**
Australia	100%	Case by case	15%
Austria	100%	50%	
Belgium	100%	Case by case	26%
Canada	100%	30%	
Denmark	100%	50%	
EU institutions (excluding EIB)	100%	40%	
Finland	Not reported	Not reported	28%
France	Case by case	Case by case	78%
Germany	100%	50%	
Greece	100%	40%	
Iceland	Not reported	Not reported	76%
Ireland	100%	40%	
Italy	100%	40%	
Japan	100%	50%	
Luxembourg*	Not reported	Not reported	2015%
Netherlands	100%	40%	
New Zealand	100%	30%	
Norway	100%	40%	
Portugal	Not reported	Not reported	94%
Spain	100%	50%	
Sweden	100%	40%	
Switzerland	100%	50%	
United Kingdom	Case by case	Case by case	51%
United States	Case by case	Case by case	97%

Note: * We use the 2021 climate-related ODA reported by Luxembourg instead of applying a calculated coefficient. This is because Luxembourg reported a higher number in its BR5 than it did to the OECD DAC. This is unusual compared with all other Annex II countries, and we suspect there may be issues with the reporting. However, we cannot confirm or verify this owing to lack of information, as these numbers are self-reported.

Source: OECD 2023a, 2024a, 2024b and the 5th Biennial Reports to the UNFCCC.

Table A2 Apportioning the EU's climate finance contribution

Annex II	EU country	EU budget share 2022
Yes	Austria	2.54%
Yes	Belgium	3.54%
	Bulgaria	0.49%
	Croatia	0.41%
	Cyprus	0.16%
	Czechia	1.63%
Yes	Denmark	2.16%
	Estonia	0.23%
Yes	Finland	1.80%
Yes	France	18.76%
Yes	Germany	23.88%
Yes	Greece	1.30%
	Hungary	1.15%
Yes	Ireland	2.17%
Yes	Italy	13.03%
	Latvia	0.24%
	Lithuania	0.37%
Yes	Luxembourg	0.33%
	Malta	0.10%
Yes	Netherlands	4.70%
	Poland	4.18%
Yes	Portugal	1.68%
	Romania	1.71%
	Slovakia	0.71%
	Slovenia	0.36%
Yes	Spain	9.32%
Yes	Sweden	3.07%
Total Annex II countries		89.53%

Source: EU (2022)

Table A3 Apportioning MDB capital outflows

	Share of MDB total capital subscription/voting power							
	EBRD	WBG	AfDB	ADB	EIB	AIIB	IBD	CEB
Australia	1.0%	2.0%		5.8%		3.8%		
Austria	2.3%	0.8%	0.4%	0.3%	2.6%	0.5%	0.2%	
Belgium	2.3%	1.9%	0.6%	0.3%	5.2%	0.3%	0.3%	3.0%
Canada	3.4%	3.8%	3.9%	5.2%		1.0%	4.0%	
Denmark	1.2%	0.8%	1.1%	0.3%	2.6%	0.4%	0.2%	1.6%
Finland	1.3%	0.6%	0.5%	0.3%	1.5%	0.3%	0.2%	1.3%
France	8.6%	4.9%	3.7%	2.3%	18.8%	3.5%	1.9%	16.7%
Germany	8.6%	5.5%	4.1%	4.3%	18.8%	4.6%	1.9%	16.7%
Greece	0.7%	0.3%			1.4%	0.0%		3.0%
Iceland	0.1%	0.0%				0.0%		0.2%
Ireland	0.3%	0.1%	0.8%	0.3%	0.7%	0.1%		0.9%
Italy	8.6%	3.3%	2.4%	1.8%	18.8%	2.7%	2.0%	16.7%
Japan	8.6%	8.6%	5.4%	15.6%			5.0%	
Luxembourg	0.2%	0.1%	0.2%	0.3%	0.1%	0.1%		0.6%
Netherlands	2.5%	2.3%	0.9%		5.2%	1.1%	0.2%	3.6%
New Zealand	0.0%	0.2%		1.5%		0.5%		
Norway	1.3%	0.7%	1.2%	0.3%		0.6%	0.2%	1.3%
Portugal	0.4%	0.3%	0.2%	0.3%	0.9%	0.1%	0.1%	2.5%
Spain	3.4%	1.7%	1.1%	0.3%	11.3%	1.8%	2.0%	10.9%
Sweden	2.3%	1.1%	1.5%	0.3%	3.5%	0.6%	0.3%	2.5%
Switzerland	2.3%	1.8%	1.4%	0.6%		0.7%	0.5%	1.0%
United Kingdom	8.6%	4.9%	1.9%	2.0%		3.2%	1.0%	
United States	10.1%	20.4%	6.5%	15.6%			30.7%	
Total developed countries	78.2%	66.1%	37.8%	58.1%	91.3%	25.9%	50.5%	82.6%

Source: IBRD (2022), IDA (2022), IFC (2022), ADB (2023), AfDB (2023), AIIB (2023), CEB (2023), EIB (2023) and IDB (2023)

Appendix 2 Methods used to estimate climate-related finance

Bilateral contributions

We calculate developed countries' bilateral contributions based on the volume of climate-related ODA that they report to the OECD DAC. Providers measure their climate finance using Rio markers to tag ODA that has climate change as a 'principal' or 'significant' objective, or that does not have climate as an objective at all. They then apply a coefficient to any ODA tagged with a climate Rio marker. Most providers apply a coefficient of 100% to ODA with climate as a principal objective and one of 40–50% to ODA with climate as a significant objective (OECD, 2023b). We use the latest coefficients that providers reported applying to their own data as per OECD (2023b). For countries using more detailed methodologies, such as case-by-case coefficients, we apply a coefficient of 100% for projects tagged as having climate change as a principal objective. We use an average climate coefficient obtained from the ratio of a country's climate finance as reported to the UNFCCC in 2020 divided by the total amount that the country reported to the OECD DAC in 2020. We use 2020 figures because these are most recent data available from countries' BRs to the UNFCCC.

For members of the EU, we adjust their bilateral provision according to their contribution to the EU budget. The EU bilateral climate-related ODA reported to the OECD DAC is the sum of the bilateral commitments of all EU institutions.[31] We attribute this climate finance back to the relevant member state in proportion to their contribution to the EU budget in 2022 (EU, 2022). The European Investment Bank's contribution is not included in this estimate to avoid double-counting, as the EIB's climate finance is included in the MDBs' contribution.

As detailed above, developing countries are not required to report on their climate finance provision and mobilisation within the UNFCCC. Only developed countries (i.e. Annex I countries) are required to do so. However, these developed countries are required to submit BRs to UNFCC only every two years, with the latest (fifth) such BRs covering data for the years 2019 and 2020. There are therefore gaps in bilateral self-reported data for both developed and developing countries for years beyond 2020. Alternatively, the OECD annually tracks climate finance provided and mobilised by developed countries. However, developing countries and some Annex I countries are not members of the OECD (let alone the smaller group, the OECD DAC) and they do not have obligation to report climate finance data to the OECD or using the OECD methodology of Rio markers. For these reasons, recent data on bilateral climate finance flows from most non-Annex II countries are fragmented or unavailable.

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31 The European Commission and the European Development Fund.

Multilateral contributions

We consider two major multilateral channels in this report: MDBs and MCFs. We adopt different methods for aggregating the data given that the relevant climate finance data are available from different sources and in different formats.

For MDBs, we use the 2022 climate outflows as jointly reported by the MDBs (AfDB et al., 2023). The joint report provides us with data on climate finance provision and mobilisation by eight global and regional MDBs: the African Development Bank (AfDB), Asian Development Bank (ADB), Asian Infrastructure Investment Bank (AIIB), Council of Europe Development Bank (CEB), European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB), Inter-American Development Bank (IDB) and World Bank (WB). This is the first time the CEB has participated in the MDBs' joint report on climate finance. We do not include any climate finance from the Islamic Development Bank and the New Development Bank because no developed countries make capital contributions. Some smaller regional MDBs are also not included, such as the Nordic Development Fund and the Caribbean Development Bank, as they do not report collectively and consistently with the larger development banks. Finance flows from trust funds and special purpose vehicles managed by MDBs are not included as these are counted in countries' bilateral reports.

We then attribute MDBs' climate finance outflows back to developed countries based on their capital subscription to each MDB. Their capital subscription is a combination of 'paid-in capital' and 'callable capital.' Where MDBs do not report on capital subscriptions, we use share of voting power instead. (See Appendix 3 for each country's share of capital subscription or voting power in each MDB.) Data on countries' capital subscriptions or voting power are taken from the MDBs' reference annual or financial report (IBRD, 2022; IDA, 2022; IFC, 2022; ADB, 2023; AfDB, 2023; AIIB, 2023; CEB, 2023; EBRD, 2023; EIB, 2023; IDB, 2023).

Our process has two fundamental differences from that the OECD uses. First, the OECD estimates flows from the concessional and non-concessional parts of the MDBs separately. Lacking data to replicate this, we bundle the two arms of the MDBs together. Second, the OECD treats callable capital of the non-concessional parts of MDBs with caution, applying it only to developed countries whose credit rating is A or above. We do not use credit ratings in our assessment of the capital subscription shares.

The second multilateral channel through which developed countries contribute and report their provision is MCFs. Similar to the approach we adopt for MDBs, we calculate MCFs' climate finance outflows and attribute them back to each individual country. We source the data on MCF outflows from the CFU (2024). This database aggregates financial pledges and deposits to 23 global and regional climate funds and project approvals and disbursement by year.

To estimate developed countries' climate finance contribution through the MCFs in 2022, we first calculate what share of cumulative pledges each country made to each MCF. We then use these shares to attribute yearly approved spend in each MCF back to the individual country. This methodology differs slightly from our approach with MDBs because the CFU does not track pledges made to MCFs per year, but rather records aggregate pledges to each climate fund since its establishment. We exclude invested income, EU contribution, sales of certified emission reductions and private sector investment, as trying to attribute these to each individual country would require additional information on their composition.

Appendix 3 Metrics for apportioning responsibility for the climate finance goal, 2022

	Gross national income (2022)		Cumulative CO_2 emissions (1990–2022)		Population (2022)		Fair share of quantitative climate finance goal based on a composite index (%)	Fair share of quantitative climate finance goal based on a composite index ($ billions)
	($ trillions)	Share (%)	$GtCO_2$	Share (%)	Millions	Share (%)		
Australia	1.63	3	12.09	3	26.01	3	3	3.03
Austria	0.47	1	2.24	1	9.04	1	1	0.81
Belgium	0.59	1	3.78	1	11.69	1	1	1.12
Canada	2.13	4	17.91	5	38.93	4	4	4.33
Denmark	0.41	1	1.64	0	5.90	1	1	0.61
Finland	0.29	1	1.83	1	5.56	1	1	0.54
France	2.83	5	12.33	3	67.97	7	5	5.26
Germany	4.24	8	28.25	8	83.80	9	8	8.16
Greece	0.22	0	2.95	1	10.43	1	1	0.77
Iceland	0.03	0	0.10	0	0.38	0	0	0.04
Ireland	0.38	1	1.33	0	5.13	1	1	0.54
Italy	2.07	4	13.98	4	58.94	6	5	4.63
Japan	4.52	8	40.08	11	125.12	13	11	10.86
Luxembourg	0.05	0	0.33	0	0.65	0	0	0.09
Netherlands	1.00	2	5.52	2	17.70	2	2	1.75
New Zealand	0.24	0	1.10	0	5.12	1	0	0.43
Norway	0.60	1	1.39	0	5.46	1	1	0.69
Portugal	0.25	0	1.81	1	10.41	1	1	0.69
Spain	1.42	3	9.30	3	47.78	5	3	3.41
Sweden	0.61	1	1.69	0	10.49	1	1	0.90
Switzerland	0.80	1	1.39	0	8.78	1	1	0.93
United Kingdom	3.10	6	16.73	5	66.97	7	6	5.80
United States	25.98	48	182.82	51	333.29	35	45	44.60
Total developed countries	53.87	100	360.59	100	955.54	100	100	100

Source: Authors using Friedlingstein et al. (2023) and World Bank (2024b, 2024c)

Appendix 4 Multilateral climate finance provision by other Parties, 2022

Country	$ million
China	2,522.48
India	1,286.73
Brazil	1,134.76
South Korea	1,130.32
Argentina	1,011.24
Russian Federation	918.63
Mexico	835.76
Saudi Arabia	727.86
Indonesia	645.70
Venezuela	358.58
Turkey	353.95
Colombia	338.08
Nigeria	290.80
Chile	280.78
Pakistan	274.70
Iran	270.64
Philippines	269.78
Malaysia	263.34
Guatemala	250.32
South Africa	238.69
Costa Rica	238.60
Nicaragua	235.91
Honduras	233.51
El Salvador	231.80
Thailand	218.87
Taiwan	217.84
Poland	215.43
Kuwait	201.53
Egypt	198.48
Algeria	177.95
Peru	164.22

Country	$ million
Dominican Republic	162.47
Bangladesh	141.12
Panama	137.15
Morocco	132.67
Ukraine	129.07
Hungary	129.04
Kazakhstan	113.39
Czech Republic	108.41
Israel	107.25
Libya	107.01
Uruguay	101.51
Singapore	93.07
Côte d'Ivoire	89.43
Sri Lanka	88.02
Uzbekistan	85.58
Bulgaria	82.25
Bolivia	76.85
UAE	76.70
Romania	76.43
Viet Nam	72.17
Myanmar	66.07
Ecuador	64.38
Jamaica	63.12
Azerbaijan	59.31
Ghana	54.96
Zimbabwe	53.23
Trinidad and Tobago	52.39
Slovak Republic	52.26
Congo, Democratic Republic of	52.19
Zambia	49.12
Kenya	46.61

Country	$ million
Georgia	45.62
Serbia	45.23
Angola	45.11
Belarus	41.27
Tunisia	40.55
Croatia	40.43
Paraguay	40.40
Brunei Darussalam	40.36
Haiti	39.24
Senegal	37.58
Ethiopia	37.27
Armenia	35.44
Cameroon	32.03
Kyrgyz Republic	31.31
Tajikistan	31.03
Slovenia	27.11
Madagascar	26.95
Iraq	26.09
Qatar	25.88
Bahamas	23.60
Tanzania	23.19
Mauritius	22.92
Guyana	22.36
Nepal	21.84
Turkmenistan	21.67
Papua New Guinea	20.90
Lithuania	20.79
Cyprus	20.77
Oman	20.04
Jordan	20.00
Guinea	19.17
Botswana	19.04
Mozambique	18.72
Latvia	18.71

Country	$ million
Namibia	18.44
Belize	18.31
Malawi	17.72
Moldova	17.36
Burkina Faso	16.99
Mali	16.69
Sudan	16.30
Syrian Arab Republic	16.15
South Sudan	15.67
Barbados	15.35
Yemen, Republic of	14.89
Estonia	14.50
Gabon	14.50
Uganda	14.34
Bahrain	14.10
Cuba	14.05
Fiji	13.93
Benin	13.61
Togo	13.61
Bosnia and Herzegovina	13.26
Congo, Republic of	13.21
Rwanda	12.34
Albania	12.19
Niger	11.61
Kosovo	11.50
Malta	11.38
Burundi	10.79
Mauritania	9.66
Cambodia	9.13
Sierra Leone	8.83
Suriname	8.66
Lesotho	8.40
Lebanon	8.30
Chad	8.00

Country	$ million
Afghanistan	7.95
Mongolia	7.92
Montenegro	7.59
Liberia	7.48
Gambia	7.35
Central African Republic	7.13
North Macedonia	6.83
Samoa	6.47
Timor-Leste	6.33
Eswatini	6.10
São Tomé and Príncipe	5.92
Equatorial Guinea	5.88
Cabo Verde	5.81
Bhutan	5.66
Tonga	5.55
Vanuatu	5.51
Djibouti	5.46
Solomon Islands	5.25
Eritrea	4.85
Somalia	4.73
Kiribati	4.71
St. Lucia	4.66
Dominica	4.57
Grenada	4.53
Lao People's Democratic Republic	4.51
Antigua and Barbuda	4.36
Guinea-Bissau	4.20
San Marino	4.16
Nauru	4.09
Maldives	3.72
Marshall Islands	3.54
Micronesia, Federated States of	3.43
Tuvalu	3.10
Comoros	2.62
St Vincent and the Grenadines	2.59
St Kitts and Nevis	2.13
Seychelles	2.02
Liechtenstein	0.81
Monaco	0.48
Palau	0.32
Niue	0.07
British Virgin Islands	0.01
Cayman Islands	0.01
Montserrat	0.01
Turks and Caicos Islands	0.01
Anguilla	0.01
Palestine	0.00314
Holy See	0.00004
Total	20,467

Source: Authors based on OECD (2024b)