Emerging analysis

Where has the money come from to finance rising climate ambition?

Mark Miller, Lionel Roger, Yue Cao and Annalisa Prizzon

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Key messages

There are growing concerns that rising ambition on international climate finance will squeeze out a focus on poverty reduction. This is understandable: total official flows have risen more slowly than reported increases in climate finance demonstrating that climate finance has not been 'new and additional'.

Observed increases in climate finance do not appear to have come about because of squeezing finances in sectors less relevant to climate. Increases in climate finance have primarily resulted from an increase in the proportion of investment in energy and transport sectors being designated as climate finance.

Understanding the impact of this shift on development depends upon what is driving the increase in climate finance. Finance could be 'repurposed' to new objectives, 'realigned' where new technologies are being used to meet the same objectives or 'rebadged' where all that is changing is approaches to accounting.

In lower-income countries, both 'climate finance' and 'development finance' should focus on supporting countries to develop in a climate-changed world.

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Acronyms

DAC	Development Assistance Committee
MDB	multilateral development bank
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
OOF	other official flows

1 Introduction

The commitment to provide $100 billion in international climate finance has been a critical symbol of trust in international climate change agreements ever since the 2009 Copenhagen Accord.

As the Accord states: ‘In the context of meaningful mitigation actions and transparency on implementation, developed countries commit to a goal of mobilizing jointly $100 billion a year by 2020 to address the needs of developing countries.’

Despite having more than a decade to fulfil this pledge, developed countries have fallen well short of the target. Self-reporting by developed countries found that just $83.3 billion in climate finance had been mobilised by the 2020 deadline (OECD, 2022). Forward-looking scenarios prepared in the run-up to COP26 (OECD, 2021) suggest that the initial $100 billion commitment will only be met in 2023 – itself an optimistic target following the Russian invasion of Ukraine…

Volumes of international climate finance need to be urgently ratcheted up to orient future development pathways in a way that is consistent with temperature goals and that enables adaptation to climate shocks and stresses. With negotiations under way to replace the $100 billion target, sufficient ambition will be critical in helping to catalyse the necessary levels of sustainable investment in emerging markets.

While increased climate action is essential, there are concerns that international climate finance commitments are being met through the repurposing or rebranding of pre-existing international development finance instead of through additional resources as stipulated in the Copenhagen Accord. This could lead to lower income countries having to pay twice for climate change: once for bearing the burden of its impacts and a second time for the diversion of development finance (Kenny, 2020). Mitchell et al. (2021) have also shown that the overall envelope of official financial flows has not grown sufficiently to accommodate $83 billion in ‘new money’.

Despite concerns that the money is not ‘new’, there has been limited work exploring how increasing climate ambition is affecting the overall composition of official financial flows. If not all the money is ‘new’, then it follows that some kind of substitution must be happening. In a world where addressing climate change and

promoting development finance were mutually exclusive goals, it would be relatively easy to observe if increases in climate finance were indeed being funded by 'new money' or by cuts to so-called 'development' finance. In reality, there is often a clear overlap between these high-level complex goals: for instance, irrigation can increase agricultural yields but also strengthen resilience against more unreliable rainfall. Social protection systems can be deployed to protect citizens against climate shocks as well as pandemics or food price shocks caused by wars. Investments in renewable energy reduce the carbon intensity of energy generation but can also expand energy access.

To get around this challenge, this study analyses the evolution of both total official financial flows and total climate finance flows between 2009 and 2019 (we exclude the most recent data for 2020 because of the exceptional nature of the Covid-19 response).

It explores two potential mechanisms through which substitution might be occurring:

- **Cross-sector reallocation** where funding for certain sectors that have a low proportion of climate finance (e.g. health or education) is reduced in order to increase funding in sectors with a larger proportion of climate finance (e.g. energy or agriculture).
- **Intra-sector changes** where climate finance increases have been achieved by a changing portfolio of investments within a sector (e.g. a shift from fossil-fuel to renewable energy projects in the energy sector).

The study does not find evidence of cross-sector reallocation. Rather, it concludes that rising climate finance is concentrated in the energy and transport sectors, accounting for 56 cents out of every additional US dollar of climate finance from bilateral donors and 74 cents from MDBs. However, this appears to be occurring primarily as a result of a growing share of investment in these sectors being counted as 'climate finance'. Total volumes of finance in these sectors remain relatively flat; indeed, overall investment of multilateral development banks in energy has fallen.

The results of the study suggest that, to date, concerns that climate finance is squeezing out the financing of certain social sectors often associated with poverty reduction may have been overstated. Instead, rises in climate finance appear to be driven by the changing composition of investments in infrastructure sectors.

2 Has there been ‘new money’ to fund greater climate ambition?

Back in 2009, the governments of so-called developed countries (a category that persists within the UN climate accords) committed to ‘mobilising’ $100 billion in ‘new and additional’ finance per year from 2020 to help developing countries mitigate and adapt to the effects of climate change. The 2015 Paris Agreement reaffirmed this commitment. The implication is that climate finance should be funded through new commitments rather than reallocating existing development finance flows. Data from the Organisation for Economic Co-operation and Development (OECD) shows that developed countries fell short of the target, providing $83.3 billion by 2020 (see Table 1). Bilateral public finance and the public operations of multilateral development banks (MDBs) have been the two most significant sources of climate finance, accounting for more than three-quarters of the total.

Table 1 Aggregate trends of climate finance mobilised by and attributed to Annex II 'developed countries'[1]

	2013	2014	2015	2016	2017	2018	2019	2020
Bilateral public climate finance	22.5	23.1	25.9	28.0	27.0	32.0	28.7	31.4
Multilateral public climate finance attributable to developed countries	15.5	20.4	16.2	18.9	27.1	30.5	34.7	36.9
MDBs	13.0	18.0	14.4	15.7	23.8	26.7	30.5	33.2
Multilateral climate funds	2.2	2.0	1.4	2.6	2.9	3.5	3.8	3.5
Inflows to multilateral institutions (where outflows unavailable)	0.3	0.4	0.4	0.6	0.5	0.3	0.3	0.2
Climate-related officially supported export credits	1.6	1.6	2.5	1.5	3.0	2.7	2.6	1.9
Mobilised private climate finance	12.8	16.7	N/A	10.1	14.5	14.7	14.4	13.1
By bilateral	6.5	8.1	N/A	5.2	4.0	3.8	5.8	5.1
By multilateral attributable to developed countries	6.2	8.6	N/A	4.9	10.5	11.0	8.6	8.0
Grand total	**52.4**	**61.8**	**N/A**	**58.5**	**71.6**	**79.9**	**80.4**	**83.3**

Source: OECD (2022), Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020

To help understand how bilateral and MDB climate finance have been funded, we look at the evolution of their overall official financial flows since the 2009 Copenhagen Accord through to 2019.

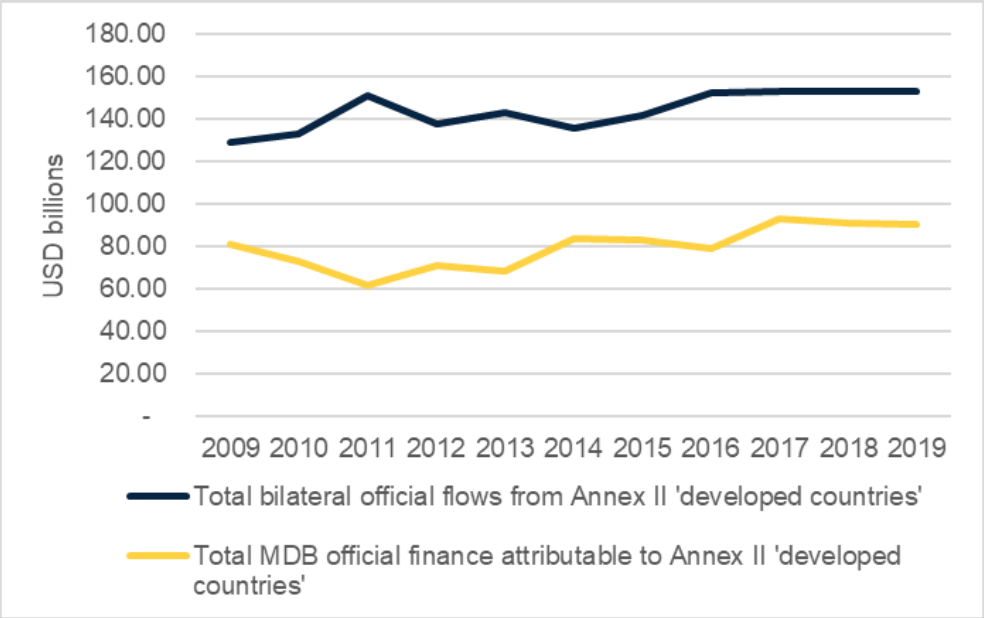
Figure 1 shows that there has been a small rise in the total official financial flows (combining official development assistance (ODA) and other official flows (OOF)) from the 'developed countries' responsible for the climate finance target (the Annex II countries). However, they have plateaued during the second part of the 2010s. Figure 1 also tracks total official financial flows from MDBs that are attributed to developed countries using OECD's computed shares (reflecting the fact that it is not only 'developed countries' that capitalise the MDBs). In 2009, MDB lending grew to support the response to the global financial crisis, but then fell back sharply in the years that followed to just $62 billion in 2011. Since that time, lending volumes slowly climbed up to $90.4 billion in 2019.

These observed increases are clearly insufficient to fully accommodate the increases in climate finance. Comparing the 2010-2014 average to that of 2015-2019 shows that while there are modest increases in the total envelope, they do not sufficiently explain the total volumes that bilateral donors and MDBs are reporting as new and additional 'climate finance'. Looking at 2009 and 2019 as 'point years' paints a similar picture. This is consistent with the findings of Mitchell et al. (2021). Funding increases in

[1] In the context of the $100 billion goal in the UNFCCC negotiations, the grouping of 'developed countries' refers to the twenty-four Annex II countries with 'special financial responsibiliites'. Calculations of multilateral finance are based on the finance attributed to the twenty-four Annex II countries.

climate finance are therefore not just a case of ‘new money’, but also of money being reallocated or reoriented for different purposes.

Figure 1 Evolution of total official financial flows from bilateral donors and MDBs, 2009-2019 (USD billions)



Source: Authors’ calculations from OECD-DAC Creditor Reporting System. Ratio of attribution to MDBs drawn from the 2020 Joint Report on Multilateral Development Banks’ Climate Finance (2021)

Table 2 A comparison of ‘additional’ official financial flows and reported climate finance in 2019

Financing source	Total official financial flows attributable to ‘developed countries’ in USD billions				Reported climate finance in 2019
	Average 2009-2014	Average 2015-2019	Difference in averages	Absolute differences 2019 vs 2009	
Bilateral public finance	140.3	150.8	10.5	24.1	28.7
Multilateral development banks	71.7	87.6	15.9	9.3	30.5

Source: Authors’ calculations. Total official flows from OECD-DAC Creditor Reporting System and reported climate finance from OECD (2022)

3 Changes in the composition of official financial flows

The preceding discussion has shown that the overall volumes of bilateral and MDB public finance have not grown sufficiently quickly to accommodate 'new and additional' climate finance flows. This raises the question of whether the composition of overall official finance is also changing, and if so, how. What compositional changes are driving the increases in climate finance? Are certain types of funding being squeezed as a result of a greater focus on climate finance?

To help answer these questions, two OECD-hosted datasets have been merged. The first is the 'Aid by sector and donor' (presented by the OECD in the 'DAC5 table'), which reports annual official development finance flows (both ODA and non-concessional OOF), disaggregated into 38 sectors. The second is the OECD Development Assistance Committee (DAC)'s climate-related development finance dataset at the activity level.[2] Activities are coded using the same sectoral classification as the DAC5 tables. Commitments are classified by purpose using Rio markers (climate change *adaptation* and *mitigation*) as well their climate score; that is, whether they have climate change mitigation or adaptation as a *principle* or *significant* purpose. MDBs do not apply this scoring system and reflect the joint methodologies for tracking climate change mitigation finance and climate change adaptation finance. For mitigation finance, only the component that directly contributes to climate change mitigation is accounted for. As for adaptation finance, 'the volume of MDB reported adaptation financing is an estimation of total project finance for specific project activities that contribute to overall project outcomes in the process of adapting climate change' (2020 Joint Report on Multilateral Development Banks' Climate Finance, 2021).

After aggregating the project-level climate finance data at the year, provider and sectoral levels, the data is matched with the total ODA and OOF flows reported in the DAC5 dataset. This results in an unbalanced panel dataset with up to 14,481 observations, consisting

[2] https://www.oecd.org/development/climate-change.htm

of 38 sectors for 88 providers (44 countries, 17 MDBs and 27 other multilaterals) over the course of up to 10 years (2009-2019; on average, 7.2 years per provider and sector combination).

These datasets are used to explore two potential differing approaches to substituting 'non-climate' finance for climate finance:

- **Cross-sector reallocation**. One potential approach to raise the overall volumes of climate finance would be to reallocate official financial flows from less climate-relevant sectors to those that are more climate-relevant. For instance, donors might cut back their overall financing of sectors with a low proportion of climate finance (e.g. health and education) and increase investments in sectors with relatively larger proportions of climate finance (e.g. energy, transport and agriculture).
- **Intra-sector changes**. A second possibility would be for increases in volumes of climate finance to be driven by changes within sectors. Donors might realign or rebadge a portfolio of investments in a given sector so that climate finance rises as a share of the total investments in that sector.

The relative importance of these approaches are considered in turn.

Reallocation of official financial flows from more climate-relevant to less climate-relevant sectors

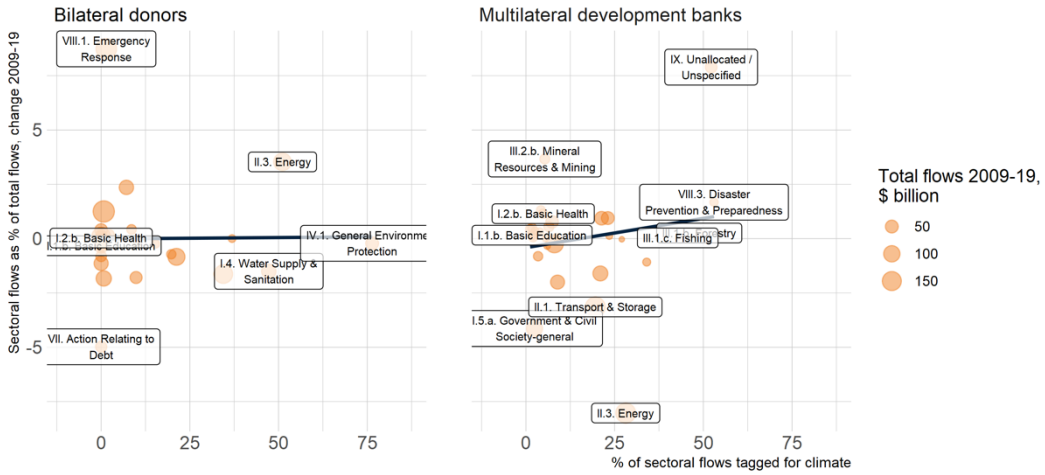
If there was a systematic pattern of reallocation from less climate-relevant sectors to more climate-relevant sectors, we would expect allocations to grow in sectors that are highly climate relevant and decline in sectors with low climate relevance. This does not appear to be happening.

Figure 2 plots changes in the total volume of official financial flows between 2009 and 2019 against the proportion of climate finance in a given sector. As an illustration, the left-hand panel shows that total bilateral flows to the energy sector have grown by almost 5% between 2009 and 2019. Moreover, it is a highly 'climate relevant' sector, with more than 50% of projects in the sector tagged as climate finance.

For bilateral donors, there does not appear to be a positive correlation between the increases in the overall volume of official financial flows since 2009 (the vertical axis of Figure 2) and its climate relevance (horizontal axis). The left-hand panel shows that flows for education, which attracted essentially no climate finance, remained largely flat over the decade in question. This was also the case in climate-intensive sectors such as agriculture, forestry and fishing, and transport and storage.

For MDBs, there is a slight upward trend. Financing for disaster preparedness and protection does appear to be becoming increasingly significant. However, the percentage of total funding for other key climate sectors like energy and transport has reduced as a proportion of total flows.

Figure 2 Change in relative importance of a sector between 2009-2019 vs the % of sectoral flows tagged as relevant for climate



Source: OECD-DAC Creditor Reporting System and OECD-DAC climate-related development finance dataset

To get a more systematic picture, we estimate the marginal effects[3] of additional climate finance (across all sectors in any given donor country or institution) on the total official financial allocation of each sector. The results of this exercise can indicate the distribution of additional climate finance; that is, how an incremental dollar of climate finance is typically 'split' between sectors (Figure 3).

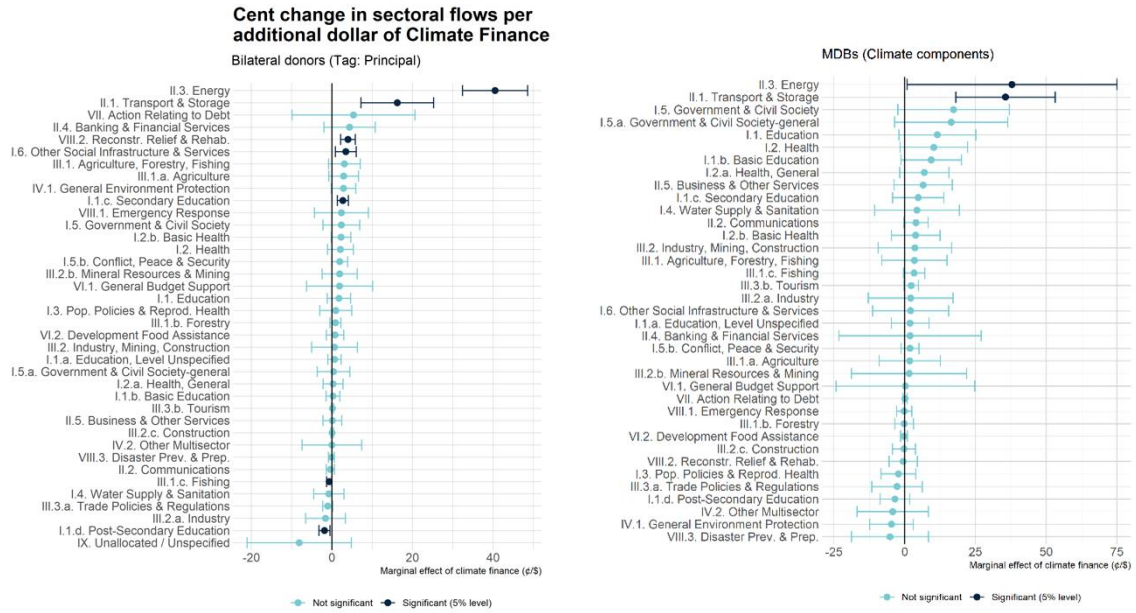
The estimations show that for each additional dollar of climate finance reported well over half is allocated to the energy sector or the transport and storage sector. For bilateral donors, the findings show that for the typical additional dollar tagged as having climate as a 'Principal' target, the energy sector saw an additional allocation of 40 cents, while flows for transport and storage increased by 16 cents. In all other sectors, the effect was either statistically insignificant or very small. It is a similar story with MDB finance: the energy sector gained about 38 cents for every additional dollar of climate finance, while transport and storage gained about 36 cents.

However, there are no observable systematic displacement effects away from other sectors. If any sectors were to exhibit a negative

[3] Data explains the methodology, formulates statistical hypotheses, presents the results in detail and reports a number of robustness checks.

marginal effect with respect to climate finance, this would be a strong indication that climate goals are met by making cuts to these sectors. Outside of energy and transport, however, the effect was either statistically insignificant or very small. While the results suggest that climate finance is rising most quickly within the energy and transport sectors, they provide little evidence that this is systematically displacing funds away from sectors where climate finance is relatively less important.

Figure 3 Cent change in sectoral flows per additional dollar of climate finance[4]



Source: Authors' calculations (see Data for more detail)

'Reorientation' or 'rebadging' of official financial flows in a given sector towards climate finance

An alternative explanation for the substitution of existing development finance flows is that donors are 'reorienting' or 'rebadging' the financing in a given sector. If the 'reorientation' or 'rebadging' of finance is taking place within a sector, climate finance would be expected to rise faster (or fall slower) than the overall volume of official finance.

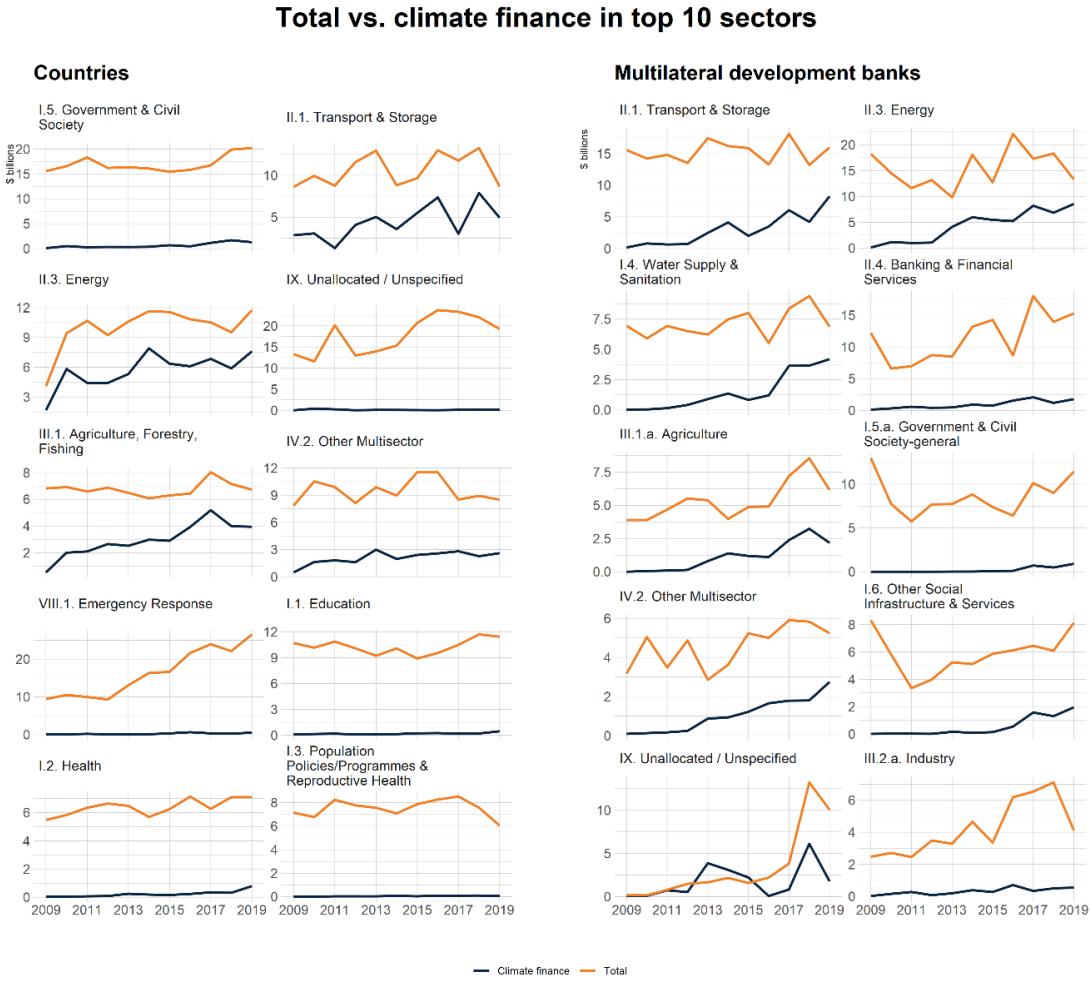
Figure 4 shows the trends of total official financial flows and climate-specific flows across a range of sectors. In some instances, climate finance flows and total official financial flows seem to be closely tracking each other. For instance, in the left-hand panel, increased

[4] Bilateral donors and multilateral development banks report climate finance in different ways. Bilateral donors tag the relvance of development project to climate change as either 'principal' or 'significant' depending on the overall purpose of a project. MDBs break down their investments in to components and account only for specific climate components.

bilateral climate finance in the energy sector has been accompanied by similar increases in total investment in the energy sector. This suggests that bilateral climate finance in the energy sector is being funded by new and additional resources from bilateral donors. Similarly, in the right-hand panel, rising MDB climate finance in the agriculture sector seems to be funded by an increase in total commitments to the agricultural sector.

In other instances, there have been sharp rises in climate finance even as the total volumes of official finance remain unchanged. For instance, the right-hand panel shows sharp increases in MDB climate finance in water supply and sanitation, transport and storage, and energy, even as the overall volume of finance in these sectors remains flat (or even decreases in the case of energy). In these sectors, it seems that development finance is being realigned or rebadged as ‘climate finance’.

Figure 4 Comparison of total official financial flows and climate finance flows in 10 sectors between 2009-2019

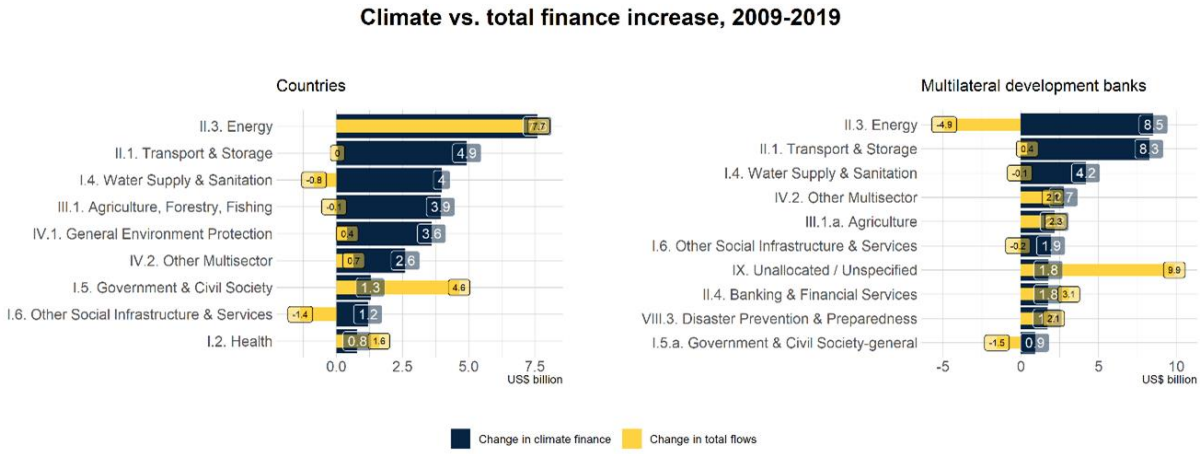


Source: Authors’ calculations (see Data for more detail)

This is further borne in Figure 5 with regard to the absolute change in volumes of official finance and climate finance between 2009 and 2019. For instance, total official financial flows for transport and storage from both bilateral donors and MDBs have barely increased over the decade in question. Despite committing $8.3 billion in additional climate finance to the sector in 2019 compared to 2009, MDBs increased total flows to this sector by only $0.4 billion, while bilateral donors met none of the additional $4.9 billion in climate finance with 'new' money. Even more strikingly, MDBs have increased reported climate financing by $8.5 billion in the energy sector, but overall financing for the energy sector from this source has fallen.

The total volume of official lending is rising fastest in those sectors linked to operations that are more focused on institutional change or development policy operations (e.g. multi-sector, banking and financial services, disaster prevention and preparedness). These often entail large volumes of finance allocated at relatively low administrative cost for MDBs.

Figure 5 Change in volumes of climate finance and total official finance, 2009-2019



Source: Authors' calculations (see Data for more detail)

Understanding the drivers of changes within key climate sectors

Within key sectors such as energy, transport and storage, and water supply and sanitation, there is clear evidence that rising climate finance has come about not from 'new money' but rather from a rising proportion of finance in these sectors being recorded as climate finance.

Further investigation of project-level data could help to reveal the dominant factors driving the rising share of climate finance within critical sectors.

- If money is being **repurposed** away from developmental objectives (e.g. expanding energy access) to climate-related goals (e.g. decommissioning coal power stations), then investment for development is being squeezed.
- If this reflects a **realignment** of development investments (e.g. ‘greener’ technologies being deployed in rural development projects), then the impact on development would depend upon the design of the programme. For instance, certain green technologies may have larger up-front capital costs but be smarter investments over their life cycle.
- Where projects are simply being **rebadged** as ‘climate finance’ with little substantive change in the nature of the investment, then the development impacts of individual projects would not change. However, there are clearly issues in relation to the integrity of the climate finance target and an erosion of trust in future climate negotiations.

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4 Summary and policy implications

The preceding analysis helps to illuminate how current climate finance commitments have been met to date. Between 2009 and 2019, there were increases in the overall official financing envelope that have helped to meet climate finance commitments. In the early 2010s, these increases were partly driven by greater 'developed country' contributions. Since 2016, total official financial flows have continued to rise, primarily driven by greater MDB lending. These increases in overall official financial flows have not, however, been sufficient to fully accommodate the rise in climate finance.

There have also been changes in the overall composition of official finance. Between 2009 and 2019, a significant proportion of reported increases in climate finance has gone towards the energy and transport sectors. For each marginal dollar of increase, 56 cents of bilateral donor funding and 74 cents of MDB funding goes to these two sectors. However, these increases do not seem to be funded through displacing finance in other sectors. In fact, the overall volumes of finance in these sectors have been flat or, in the case of MDBs finances to the energy sector, have actually fallen. Instead, there has been either a 'reorientation' or a 'rebadging' of financing for transport and energy so that a much greater proportion is being recorded as climate finance.

This also suggests that *to date* (i.e. not necessarily in the future), climate finance has not squeezed out spending on sectors that are more traditionally associated with poverty reduction. Indeed, trends in the total volume of official financing seem to have limited relation to climate issues. From the MDB side at least, the sectors that seem to be rising fastest are those that can be financed through development policy operations.

Looking forward, thinking about 'climate finance' and 'development finance' in opposition is unhelpful as development and climate objectives frequently overlap. Ideally, greater attention would be paid to the overall universe of official financial flows – both in terms of the overall volumes and how it is being allocated. MDBs are also increasingly making use of climate related development policy operations. The types of policy and institutional conditions being deployed are under-studied.

The analysis also calls in to question whether adaptation finance versus mitigation finance targets are particularly helpful. For example, MDB climate finance is rising fastest for mitigation through the energy sector, but overall volumes have fallen sharply. Meanwhile funding for sectors that are associated with climate adaptation (for instance agriculture) has been reasonably stable.

To facilitate a more comprehensive analysis of official financial flows, there would need to be greater consistency of reporting approaches on so called ‘development’ and ‘climate’ finance. Ideally, information would be available on a grant-equivalent basis across both climate and development finance reporting.

Past trends do not necessarily foreshadow what will happen in the future. The MDBs are under significant pressure to upscale climate finance. For example, the World Bank is undertaking a programme of reforms ostensibly to enable the organisation to better respons to global challenges including addressing climate change. How such efforts should be resourced is proving to be contentious.

Additional financing headroom would allow for increases in overall lending volumes, but these demands are being made seemingly in the absence of new fiscal commitments to provide additional capital for such efforts. Lower-income countries are understandably aggrieved that limited finance may be repurposed to addressing climate change and diverted from addressing deprivation. This would clearly be unjust. The ‘developed countries’ need to increase their fiscal commitments not just push for their capital to be more highly levered.

It also bears mentioning however that increasingly in many cases, ‘climate-aligned’ investments are also becoming the smarter choice for development because of falling costs of technologies and changing markets structures. So called ‘climate finance’ is not necessarly the enemy of ‘development finance'. Indeed, the world’s great powers are clearly using the push to go green as a way to aggressively deploy public money to secure competitive advantage in new industries and create jobs.

A basic sense of justice and arithmetic dictates that lower-income countries should not be pressured to lead the charge in meeting global emissions targets. However, given a changing climate and wider changes in technology and regulation, there is little choice but to think about how best to develop in a climate-changed world.

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Appendix 1 Data

The analysis combines two datasets hosted by the OECD. The first is the ‘Aid by sector and donor’ (DAC5 table), which reports annual official development finance flows (both ODA and less concessional OOF), disaggregated into 38 sectors. The second is the OECD DAC’s climate-related development finance dataset at the activity level. This dataset is provided from the perspective of both the provider and the recipient; we use the latter, as it has more comprehensive institutional coverage (including flows from multilateral institutions to recipient countries) and covers a longer time period. Activities are coded using the same sectoral classification as the DAC5 tables. Commitments are classified by purpose using Rio markers (climate change *adaptation* and *mitigation*) as well their climate score; that is, whether they have climate change mitigation or adaptation as a *principle* or *significant* purpose. MDBs do not apply this scoring system and reflect the joint methodologies for tracking climate change mitigation finance and climate change adaptation finance. For mitigation finance, only the component that directly contributes to climate change mitigation is accounted for. As for adaptation finance, ‘the volume of MDB reported adaptation financing is an estimation of total project finance for specific project activities that contribute to overall project outcomes in the process of adapting climate change’ (2020 Joint Report on Multilateral Development Banks’ Climate Finance, 2021).

After aggregating the project-level climate finance data at the year, provider and sectoral levels, the data is matched with the total ODA and OOF flows reported in the DAC5 dataset. This results in an unbalanced panel dataset with up to 14,481 observations, consisting of 38 sectors for 88 providers (44 countries, 17 MDBs and 27 other multilaterals) over the course up to 10 years (2009-2019; on average, 7.2 years per provider and sector combination).

The baseline analysis focuses on the countries that are included in Annexes I and II of the United Nations Framework Convention on Climate Change (and that report to DAC), reducing the number of countries to 37.

To estimate the marginal effect of climate finance on each sector’s allocation, the following equation is undertaken separately for each sector *s*:

$$\Delta Total_{t,s,p} = \alpha_t + \alpha_p + \beta_1 \Delta Principal_{t,p} + \beta_2 \Delta Significant_{t,p} + \beta_3 \Delta Components_{t,p} + \varepsilon_{t,s,p}$$

$Total_{t,s,p}$ is the total sum of financial flows (ODA+OOF) committed at time *t* to sector *s* by provider *p*. $Principal_{t,s,p}$, $Significant_{t,s,p}$ and $Components_{t,s,p}$ are the flows tagged as climate finance reported by providers in that same year and sector. Δ is the first difference operator, hence all financial flows are included as year-on-year changes. α_t, α_p and α_s are fixed effects, which in this differenced specification pick up any growth trend in sectoral allocation or by specific donors, as well as any time-specific events that may affect all sectors in a given year. $\varepsilon_{t,s,p}$ is the error term.

Our coefficients of interest are β_1, β_2, and β_3. They measure the marginal change in total financial flows in a sector for any dollar tagged as climate finance in that same sector. For bilateral donors, β_1 and β_2 quantify the effect of flows tagged as *principal* and *significant*. For MDBs, β_3 is the relevant coefficient, measuring the effect commitments tagged as *climate components*.