EU trade and climate finance flows to developing countries in support of the Global Green Transition

European Climate Foundation

cambridge econometrics

clarity from complexity

Authors

Sara Marqués Rubio (Cambridge Econometrics)

Marton Kovacs (Cambridge Econometrics)

Caroline Robert (Cambridge Econometrics)

Stijn Van Hummelen (Cambridge Econometrics)

Contributors

Flavia Salazar Sousa (European Climate Foundation)

Chloe Dudley (European Climate Foundation)

Project director

Stijn Van Hummelen

Contact person

Sara Marqués Rubio – smr@camecon.com

Cambridge Econometrics' mission is to provide clear and useful insights, based on rigorous and independent economic analysis, to address the complex challenges facing society.

www.camecon.com

Cambridge Econometrics Limited is owned by a charitable body,the Cambridge Trust for New Thinking in Economics.

www.neweconomicthinking.org

Authorisation and version history

Version	Date	Authorised for release by	Description
1	22/11/2024	Stijn Van Hummelen	Draft report
2	24/01/2025	Stijn Van Hummelen	Revised report
3	14/02/2025	Stijn Van Hummelen	Final report

Contents

Figures

1. Executive summary

This report assesses the role of the European Union (EU) in addressing global climate challenges through its exports of environmental goods and climate finance contributions to developing economies. The analysis looks at the EU's role as a global actor while also evaluating the contributions of its Member States and institutions. It investigates how the EU mobilises resources through bilateral and multilateral public climate-related development finance and private finance mobilised through public efforts. It also evaluates the EU's role as an exporter of environmental goods, which indirectly supports climate transitions in developing countries by enabling access to low-carbon and environmental technologies. As opposed to other previous studies, which also focus on analysing climate finance, the added value of including trade data and considerations expands the narrative to include crucial commercial flows for the transition.

In recognition of the dynamic global landscape, the analysis aims to contextualise the EU's efforts up to 2022 by drawing comparisons with other major economies, specifically the United States and China, illustrating their respective approaches as significant players in the global climate finance and trade arena. By assessing trends over the past decade, the analysis explores differences in the scale and focus of environmental goods exports and climate finance contributions. It is important to recognise, however, that, as a non-Annex I country under the UNFCCC, China does not have the same formal obligations to provide climate finance to developing countries as the EU and the US.

Regional insights are also provided for key developing areas – Latin America, Africa, and Asia (South-East and South Asia) – illustrating variations in trade and financial flows going into these regions. Additionally, the report includes case studies on topics such as the allocation of public climate-related development finance between mitigation and adaptation objectives, changes in financial instruments used, and exports of critical environmental goods such as electric vehicles, solar panels, batteries, and wind turbines.

By collecting and examining data on the type and volume of European contributions – through trade, official development assistance (ODA), and mobilised private capital – the report aims to clarify the EU's role in supporting global climate action and inform the strategic coherence of its external policies. While climate finance and trade in environmental goods both contribute to the climate transitions of developing countries, they differ in structure, scale, and underlying logic. This analysis emphasises the need for greater alignment between the two: financial flows must support equitable access to clean technologies, while trade must promote sustainable industrial development. Ultimately, the report aims to raise awareness, support informed decision-making, and strengthen the foundation for equitable and effective climate partnerships – anchored in both the EU's strategic interests and the global imperative for a just green transition.

Trade

The IMF defines environmental goods as those that directly contribute to environmental protection, including goods related to pollution control and resource management, as well as those that have

been specifically modified to be more "environmentally friendly" or "cleaner".[1] Tracking export flows offers insights into how different countries are aligning their economic and environmental interests. In addition, we can observe which regions are receiving the environmental goods they need to meet their own environmental goals, and which could be lagging. While financial mechanisms act as support for the green transition, trade is regarded as a facilitator. By focusing on the exports of trade in environmental goods in addition to financial flows, this report provides a comprehensive understanding of the EU's contributions to the green transition in developing countries.

Our analysis shows that the EU and the US were the dominant exporters of environmental goods from 1995 to 2012. From 2012 onwards, however, China significantly expanded its exports, marking a strategic shift and an increasing role in global trade. By 2013, China had surpassed both the EU and the US to become the largest exporter of environmental goods. This growth continued, and by 2021, China's exports were USD 116 billion higher in value than those of the EU and US, driven largely by the booming demand for solar panels. The trend is particularly pronounced with trade partners in Latin America and South-East Asia, underscoring China's competitive position and growing influence as a key exporter of green technologies.

Latin America and South-East Asia clearly emerged as key importers of environmental goods from the US and China, respectively, while the EU maintained its position as the leading exporter of environmental goods to Africa. Among exporters, the EU demonstrated the most balanced distribution of environmental goods exports across regions, with the largest contributions going to Latin America and Africa, with a growing importance of South-East Asia. The US directed much of its exports to Latin America, with a strong presence in Mexico. China's environmental good exports were predominantly concentrated in South-East Asia, spanning a variety of countries. Although the EU remained the largest exporter to Africa, China has significantly increased its environmental goods exports to the region in recent years.

Deep dives into the export trends of key technologies for the transition reveals that China dominated the market of solar panels but remained in competition with the EU for electric vehicles and wind power. Across all the time periods analysed (2012-2022), China was by far the largest exporter of solar panels to developing countries, with the EU and the US having limited contributions. In the Electric Vehicles market, exports surged from 2020 onwards, largely driven by China and the EU. Wind power exports to developing countries have historically been mainly sold by the EU, but from 2021 onwards China matched its level of activity. The US played a secondary role across these technologies but emerged as a key player in the export of cells and batteries from 2017 onwards.

Climate Finance

Consistent with other recent publications on climate finance, our comparative analysis finds that the EU and its Member States (combined) led in the deployment of public and mobilised private climate finance to developing countries during the analysed period. In 2021, the EU's contributions in bilateral public climate-related development finance and mobilised private climate finance to developing countries were nearly ten times larger than those of the US and reached approximately USD ~21.5 billion, mainly

[1] Trade in Environmental Goods | Climate Change Indicators Dashboard

driven by public climate finance contributions. Private finance mobilised by the EU in developing countries was slightly higher than that mobilised by the US, with the EU taking the lead in 2016. For multilateral public climate finance flows, the EU maintained a leadership role by steadily increasing contributions since 2017, reaching USD ~2.6 billion in 2020. Yet, since 2016, China has been closing the gap with EU multilateral flows, with its multilateral public climate finance contributions reaching nearly USD 2 billion by 2021.

Looking at the split between adaptation and mitigation finance is essential for assessing the evolution and priorities of both providers and recipients involved. The EU focused mainly on mitigation finance over the 2000-2010 period. From 2010 onwards, it adopted a more balanced approach, steadily increasing the share of adaptation finance to reach equal levels by 2020. In contrast, the US mainly directed its public climate finance towards mitigation efforts throughout most of the observed periods, with less support for adaptation. However, a substantial increase in adaptation support occurred in 2022, when it became the dominant focus.

Africa has historically been the main recipient of bilateral public climate-related development finance, reflecting both the continent's acute vulnerability to climate change and its substantial climate finance needs, estimated at over USD 250 billion annually by 2030. Across all years analysed, the EU has directed the largest levels of bilateral public climate-related finance to Africa, underscoring its strategic focus on the region. The US also prioritised Africa in its climate finance portfolio. Initially, most of the climate finance deployed was directed towards mitigation efforts. However, since 2011, there has been a growing emphasis on adaptation, which by 2022 accounted for over a third of the total bilateral public climate finance to Africa.

In Latin America, mitigation finance has consistently surpassed adaptation finance since 2010, reflecting efforts to cut emissions in energy, deforestation, and agriculture. Similarly, in South Asia and South-East Asia mitigation finance has consistently exceeded adaptation finance throughout the observed period. Although adaptation finance has increased over the years in both regions, it has grown at a slower rate than mitigation finance.

Considerations

In the current geopolitical landscape, marked by heightened economic competition and shifting global alliances, taking the lead on climate finance and trade in environmental goods with developing countries has become a strategic necessity. By proactively shaping new climate partnerships, developed economies can strengthen economic ties, enhance supply chain resilience, and secure access to critical raw materials essential for their own energy transitions. Fostering sustainable growth in developing countries also helps mitigate geopolitical instability, reduces migration pressures, and expands markets for green technologies and investments.

However, climate finance and trade in environmental goods must not be pursued in isolation. Climate finance is often shaped by international commitments, while trade responds to commercial logics and industrial competitiveness. Yet both can contribute to the climate transition in developing countries. Aligning them more strategically is essential for enabling systemic change. Trade flows must be underpinned by finance that supports capacity building, regulatory alignment, and downstream participation in clean value chains. Climate finance, in turn, should be designed with a long-term perspective, enabling access not just to technologies but to the markets, investment, and innovation ecosystems that sustain clean industrial development.

The challenge ahead is therefore one of coordination – across finance, trade, industrial policy, and development cooperation. Future EU strategies should aim to integrate these domains more cohesively, leveraging instruments such as the Global Gateway and green investment frameworks to facilitate Clean Trade and Industrial Partnerships that are equitable and transformative. This includes aligning export promotion with local development goals, supporting clean production standards, and ensuring that climate finance flows empower domestic industries and institutions in partner countries. Not doing so risks giving room to other global players who are increasingly positioning themselves as partners of choice in climate and economic development for emerging countries.

While this report offers a robust evidence base to inform European policy-making processes, it also highlights persistent data limitations – particularly regarding climate-aligned private investment, foreign direct investment (FDI), and the real-world climate impact of trade and finance flows in recipient countries. Addressing these gaps will be essential to deepen understanding of how financial and commercial engagements translate into measurable decarbonisation outcomes. Future analysis should aim to cover a broader set of environmental goods that reflect emerging priorities in the green economy, as well as an expanded set of contributors, including the Gulf Cooperation Council countries. Finally, strengthening the connection between financial and trade flows and their measurable climate impacts – while integrating partner country perspectives – will be critical to ensuring that climate cooperation is both effective and equitable.

2. Introduction

2.1. Context

This report presents a comprehensive analysis conducted by Cambridge Econometrics (CE) in collaboration with the European Climate Foundation (ECF), focusing on tracking the EU's climate finance and trade flows to developing countries. The aim of this project is to collect and analyse data on the type and volume of European Union (EU) climate-related development finance and trade in environmental goods flows towards various recipient countries. In recognition of the dynamic global landscape, the analysis aims to contextualise EU's efforts up to 2022 by drawing comparisons with those of China and the United States. The selection of these two countries was made due to their substantial presence in the green transition, and key roles in exporting green technologies. By assessing trends over the past decade, the analysis explores differences in the scale and focus of environmental goods exports and climate finance contributions. However, it is important to recognise that, as a non-Annex I country under the UNFCCC, China does not have the same formal obligations to provide climate finance to developing countries as the EU and the US.

To achieve this project's goal, CE undertook a robust data collection exercise structured around three critical dimensions: recipient countries, provider countries, and the type of flows. The analysis focuses on key metrics, including Official Development Assistance (ODA)[2] for climate and the environment, trade in environmental goods, and mobilised private climate finance over the last decade. To address data gaps, bilateral public climate finance data for China was sourced from AidData[3] - please refer to Annex A for more details. Multilateral public climate finance for China was sourced from annual reports and financial statements of a selected group of multilateral development banks (MDBs)[4]. To facilitate user engagement and enhance the accessibility of the findings, an interactive dashboard has been developed, available here. This dashboard enables stakeholders to explore the database effectively, providing valuable insights into the EU's comparative performance in supporting green transitions across regions such as Latin America, Africa, South-East Asia, South Asia and the Pacific.

[2] Official Development Assistance (ODA) are presented net from Other Official Flows (OOF) as OOF includes less concessional, commercially oriented flows. Combining these can overstate the level of genuine development assistance, misleading about the scale and intent of providers' commitments. Cleaning ODA from OOF aligns with international standards, such as those set by the OECD.

[3] AidData. 2023. Global Chinese Development Finance Dataset, Version 3.0. Retrieved from https://www.aiddata.org/data/aiddatas-global-chinese-development-finance-dataset-version-3-0

[4] MDBs included: African Development Bank (AfDB), Asian Development Bank (ADB), Asian Infrastructure Investment Bank (AIIB), European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB), Inter-American Development Bank Group (IDBG), Islamic Development Bank (IsDB), New Development Bank (NDB), World Bank Group (WBG).

2.2. Objectives of this report

Objective 1: Understanding the EU's role in the global green transition

The primary objective of this project is to analyse and clarify the role of the EU and its Member States in supporting the green transition in developing countries. By collecting and examining data on the type and volume of European contributions – through trade in environmental goods, official development assistance (ODA), and mobilised private capital – the project aims to provide a clearer understanding of the EU's role in supporting global climate action and inform the strategic coherence of its external engagements. Ultimately, the goal is to raise awareness, inform decision-making, and create a stronger foundation for effective and equitable climate partnerships, anchored in both the EU's strategic interests and the global imperative for a just green transition.

Objective 2: Exploring how different financial and commercial flows address the green transition needs

This report aims to examine how various financial and commercial flows from Europe, the United States and China address the growing demands of the green transition in regions such as Latin America, Africa, South and Southeast Asia and the Pacific. It explores the critical role of trade in facilitating access to low-carbon technologies and resilience-building products. It also analyses public climate finance to assess alignment with global climate priorities, the instruments used, and targeted sectors, while evaluating mobilised private finance to understand its role in scaling up resources for adaptation and mitigation. Through case studies, it highlights the balance between adaptation and mitigation finance, the evolution of financial instruments from grants to market-based tools, and the implications of these shifts for accessibility and risk mitigation in vulnerable regions.

Objective 3: Highlighting key challenges to the global green transition

Finally, this paper highlights the critical challenges associated with mobilising resources and aligning financial and commercial flows to support the green transition. These challenges include data gaps, the need for greater alignment between climate finance and trade in environmental goods, declining availability of concessional finance amid constrained fiscal space, and the misalignment between the priorities of climate finance providers and recipients. By offering a comprehensive evidence base, this analysis enables European climate finance actors to better understand these challenges and develop informed strategies to address them effectively in the current geopolitical landscape.

2.3. Definitions

Indicators

Trade in Environmental Goods focuses on **exports** of environmental goods from the selected exporters to importer countries. The IMF defines these goods as those that directly contribute to environmental protections, such as goods related to pollution management and resource management, and adapted goods, which are goods that have been specifically modified to be more "environmentally friendly" or

"cleaner"[5]. They capture a wide range of products, including renewable energy technologies (e.g., solar panels, and wind turbines), energy-efficient machinery, water purification equipment, waste management solutions, and electric vehicles. These environmental goods, although they are not explicitly defined as "climate goods", and may capture a broader scope than the climate transition (i.e. air, and water quality, and biodiversity conservation efforts), are used by the recipient countries to achieve climate neutrality. It is important to also note that the analysis is limited to exports from the EU, China, and the US to the selected developing countries and does not include exports in the opposite direction, or between EU, China, and the US. The data used to assess Trade in Environmental Goods is sourced from the IMF Bilateral Trade in Environmental Goods dataset[6] and the United Nations ComTrade database[7]. This dataset provides estimates of bilateral trade flows for environmental goods, which are aggregated by partner countries using HS 6-digit commodities identified as environmental goods based on OECD and Eurostat classifications. The data is presented in US dollars and as a percentage of total exports. This dataset serves as the foundation for analysing the trade flows from key exporters to importer countries and is accessible via the IMF Climate Data API (last updated April 2024). Please note that within this data export credits, defined as financial facilities provided to exporters to support their international trade activities, where not included.

Bilateral public climate finance is another critical indicator, encompassing official Overseas Development Assistance (ODA) allocated to projects supporting climate adaptation and mitigation. This measure reflects the public sector's role in driving climate action, particularly through financial commitments aimed at reducing emissions or enhancing resilience in developing countries. The data utilised is sourced from the Development Finance for Climate and Environment dataset provided by the OECD[8]. This dataset captures bilateral climate-related development finance, detailing contributions by country toward climate mitigation and adaptation objectives. It is important to note this is different from climate-specific finance in that it takes into consideration the full size of the project, rather than the specific component of the project that is directed to climate objectives. This makes the climate-related development finance on aggregate larger than the climate-specific finance. The financial figures are presented in US dollars and are available for automated download (last updated June 2024). Data for China on public climate finance was sourced from AidData[9], which encompassed a comprehensive dataset tracking 20,985 projects across 165 low- and middle-income countries, supported by loans and grants from official sector institutions in China, amounting to approximately $1.34 trillion. This dataset spans 22 commitment years (2000-2021) and includes detailed timelines for project implementation from 2000 to 2023. However, it lacks a specific environmental project classification, requiring the development of a methodology to categorise the projects effectively. The details of the methodology used can be found in the Annex A of this report.

Private finance mobilised by bilateral public climate finance is included as an indicator, capturing the private sector's contributions to climate-related projects. This measure specifically tracks private finance mobilised through official interventions, highlighting the link between public sector initiatives and private investment in climate projects. The OECD Mobilised Private Finance for Development[10] database is used to

[5] Trade in Environmental Goods | Climate Change Indicators Dashboard
[6] Bilateral Trade in Environmental Goods | Climate Change Indicators Dashboard (imf.org)
[7] Department of Economic and Social Affairs/United Nations. 2022. United Nations Comtrade database. https://comtrade.un.org.
[8] Development Finance for Climate and Environment - OECD
[9] AidData. 2023. Global Chinese Development Finance Dataset, Version 3.0. Retrieved from https://www.aiddata.org/data/aiddatas-global-chinese-development-finance-dataset-version-3-0
[10] OECD Data Explorer • Mobilised private finance for development

capture this indicator. This data captures bilateral climate-related mobilised private finance by countries. The term "mobilisation" describes the causal link between private finance made available for a specific project and an official intervention. The financial figures are presented in US dollars and are available for download (last updated July 2024). These indicators together provide a comprehensive view of how public and private financial flows are structured to support the global green transition.

For **multilateral flows**, to capture multilateral public climate finance, we used the Development Finance for Climate and Environment dataset provided by the OECD, which allows to present the overall volume provided by each institution and Multilateral Development Bank (MDB) and main recipients of multilateral flows. However, this dataset does not assign the provision of multilateral public climate finance to specific countries. As a result, this was complemented by the "Provision of public financial support: contribution through multilateral channels" UNFCCC dataset[11], which assigns multilateral flows to individual countries but lacks details on the recipient allowing for a comparative analysis of support across different providers. Additionally, AidData was used to capture information on China's contributions, enhancing the overall data structure. In terms of mobilised private finance, CE presented multilateral flows from the OECD Mobilised Private Finance for Development, mirroring the format used for public finance by showcasing the overall size and main recipients. However, CE did not assign support by provider, as no readily available dataset existed, and developing a methodology to attribute private investors to countries was beyond the project scope. The approach has a key limitation: it was not possible to create direct comparisons between provider-recipient flows for multilateral contributions, unlike bilateral flows. Consequently, we are presenting this information in a separate section within the dashboard and the report to maintain clarity and avoid misuse. Public finance data on contributions to and expenditures by multilateral organisations was also presented separately, except for the combined data from UNFCCC and AidData.

An overview of the data sources used by country-indicator can be found in Table 1 below.

Table 1 Overview of data sources

Provider /Exporters	**Bilateral public climate finance**	**Bilateral mobilised private climate finance**	**Trade in environmental goods**	**Multilateral public climate finance**	**Multilateral mobilised private climate finance**
EU	OECD Development Finance for Climate and Environment	OECD mobilised private finance for development	IMF Bilateral Trade in Environmental Goods	UNFCC Provision of public financial support, and OECD data for MDB specific information	N/A by MDB from the OECD mobilised private finance for development

[11] Provision of public financial support: contribution through multilateral channels

US	OECD Development Finance for Climate and Environment	OECD mobilised private finance for development	IMF Bilateral Trade in Environmental Goods	UNFCC Provision of public financial support, and OECD data for MDB specific information	N/A by MDB from the OECD mobilised private finance for development
China	AidData's Global Chinese Development Finance Dataset	N/A	IMF Bilateral Trade in Environmental Goods	Annual reports and financial statements of a selected group of MDBs for calculating China's support	N/A by MDB from the OECD mobilised private finance for development
UK	OECD Development Finance for Climate and Environment	OECD mobilised private finance for development	IMF Bilateral Trade in Environmental Goods	UNFCC Provision of public financial support, and OECD data for MDB specific information	N/A by MDB from the OECD mobilised private finance for development

Motivation

Following COP29, countries agreed to tripling climate finance to developing countries from the previous USD 100 billion annual goal to USD 300 billion annually by 2035. However, a significant financing gap remain, recognised in the Next Collective Quantified Goal's (NCQG) wider aspiration of mobilising climate finance to developing countries to the amount of USD 1.3 trillion per year by 2035. Failure to meet these targets would not only undermine the goals of the Paris Agreement but also erode trust among nations and stakeholders involved in the climate process. According to the OECD's climate-specific data, the USD 100 billion climate finance goal was met for the first time in 2022, two years after the original 2020 deadline.[12].

Analysing public climate-related development finance, mobilised private finance, and trade in environmental goods is essential to addressing the persistent challenges in meeting international climate commitments and advancing the global climate agenda. Public climate finance analysis is critical to identifying where funds are flowing, assessing their alignment with climate priorities, determining the instruments used for their allocation, and identifying the targeted sectors. Similarly, understanding mobilised private finance is important to capture the effectiveness of policies and incentives in attracting private sector contributions to climate action, which is essential for scaling up resources to meet the growing demands of climate adaptation and mitigation.

[12] Climate Finance and the USD 100 billion goal

Trade in environmental goods also plays a pivotal role, as it facilitates access to essential technologies and products that drive low-carbon development and resilience-building efforts. Analysing trade patterns can reveal barriers to the deployment of these goods, and help identify key players and trade relations in the market. Focusing on the exports of trade in environmental goods, in addition to financial flows, can provide a more comprehensive understanding of global contributions to the green transition. While finance is an essential tool for funding environmental projects, technology transfer through trade plays a crucial role in driving long-term sustainability changes and capacity building in importing countries. Financial mechanisms act as support for the green transition, whereas trade is regarded as a facilitator. By tracking exports, we can observe which regions are receiving the environmental goods they need to meet their own environmental goals, and which could be lagging. In addition, tracking export flows offers insights into how different countries are aligning their economic and environmental interests.

2.4. Scope and Structure

Geographical scope

The geographical scope of this report centres on the EU's role in advancing the green transition, contextualising its efforts with those of two major global players: the United States and China. On the provider-exporter side, the analysis includes EU-level flows, as well as contributions from key Member States such as France, Germany, and Italy, with data from the United Kingdom (UK), also incorporated. The EU aggregate presented for the climate finance figures (both public and mobilised private) includes the sum of all Member States and EU institutions support, where applicable (i.e., climate finance indicators). The statistics for the EU institutions are also included in isolation within the multilateral flows section. For the trade indicator, the EU aggregate represents the addition of all EU Member States. On the recipient-importer side, the study maps financial and trade flows to regions including Latin America, Africa, South and South-East Asia, and the Pacific, providing a comprehensive view of global dynamics in climate finance and environmental trade. A summary of the countries covered by indicator, and the definitions of the country groups is presented below. Please note, this selection has been driven by data availability and the scope of the research. Please refer to the Appendix C for more details on the specific countries included in each country group.

Table 2: Coverage of provider-exporters by indicator

Provider /Exporters	**Bilateral public climate finance**	**Bilateral mobilised private climate finance**	**Trade in environmental goods**	**Multilateral public climate finance**	**Multilateral mobilised private climate finance**
EU	Available Sum of EU27 Member States, and EU institutions Deep dives	Available Sum of EU27 Member States, and EU institutions Deep dives	Available Sum of EU27 Member States Deep dives	Available Sum of EU27 Member States and EU institutions Deep dives	Not available Presented by Multilateral Development Bank (MDB)

	available for France, Germany and Italy.	available for France and Germany.	available for France, Germany and Italy.	available for France, Germany and Italy.	
US	Available	Available	Available	Available	Not available Presented by MDB
China	Available	Not available given lack of data availability. However, a case study focusing on China's private mobilised finance on renewable power generation has been added.	Available	Available	Not available Presented by MDB
UK	Available in EU Member States deep dives for comparison	Available in EU Member States deep dives for comparison	Available in EU Member States deep dives for comparison	Available to contrast individual Member States	Not available Presented by MDB

Table 3: Coverage of recipients-importers by indicator

Recipient /Importers	**Bilateral public climate finance**	**Bilateral mobilised private climate finance**	**Trade in environmental goods**	**Multilateral public and mobilised private climate finance**
Africa	Available	Available	Available	Available without mapping to provider
Latin America	Available	Available	Available	Available without mapping to provider
South Asia	Available	Available	Available	Available without mapping to provider
South-East Asia	Available	Available	Available	Available without mapping to provider
Pacific	Available	Available.	Available	Available without

				mapping to provider
Caribbean	Available	Available	Available	Available without mapping to provider

Given that this report focused uniquely on the flows from the selected providers to recipients for all indicators, we are only capturing a subset of all total flows. For example, for trade in environmental goods, the presented figures will not cover all trade flows, but will rather focus on the exports from the EU, US, and China, to the selected recipients. This implies that exports across providers (i.e., China's flow of exports to the EU and US), exports from recipients to providers (i.e., Latin America's exports to the US), and exports from providers not included in the scope (i.e., Canada's exporting activity) are not captured. The same holds for all the other indicators.

Structure of the Report

The report begins with an analysis of the EU's role in the global green transition, covering all key indicators while also providing detailed insights into trends at the level of individual Member States and the UK. It then places the EU's role in a broader context by comparing it with the US and China, examining differences in trends and the evolution of financial and trade flows over time. Within this section, four case studies are included to provide further insights on specific topics of interest. Subsequently, a regional deep-dives section is presented, where the green transition is analysed from the perspective of developing countries. In this section, the trends, and origin of the flows are analysed across time. Additionally, some country-level granularity is included to evaluate whether specific countries are driving the regional-level results. Finally, the concluding section is presented where limitations, further research needs, and identified challenges ahead in the green transition are highlighted.

Case studies

Within the report, four case studies have been included to provide further insights on topics of interest. The first case study entails a deep dive into the trade flows of four selected environmental goods; electric vehicles; solar panels; wind turbines; and cells and batteries. The second case study looks at how public climate finance has been divided between adaptation and mitigation projects for the EU and the US. The third case study assesses the composition of instruments used for the deployment of bilateral public and mobilised private climate finance, how this composition has changed over time, and how it varies across recipients. The fourth case study attempts to fill data gaps present in the data for China, by looking at the trends of their renewable power generation private investment.

3. The EU's Role in the Green Transition Abroad

3.1. Overview

In the context of this report, when we refer to 'EU' within trade, this is a reference to the addition of EU Member States, whereas for climate finance the "EU" refers to the combined total of provided finance by EU Member States and EU institutions. Hence, the 'EU aggregated' section reflects the exports on environmental goods of all EU Member States combined. For data presented on climate finance, "EU aggregated" encompasses both climate finance deployed directly by individual Member States and funding channelled through EU-level mechanisms managed by institutions like the European Commission.

EU aggregate

Trade in environmental goods

Trade in environmental goods is an important facilitator for the green transition in developing countries. It allows countries to access the technologies and expertise needed to reduce their environmental impacts. For importers of these goods, trade offers an opportunity to avoid more polluting development pathways by adopting cleaner and more sustainable technologies from others. For exporting countries of these goods, trade offers a means to contribute to the green transition, strengthen global efforts, and drive economic growth through green innovation, both domestically and abroad.

Exports of environmental goods from the EU (as the aggregate of all its Member States) to developing countries have grown between 1994 until 2021. Figure 1 shows steady upward trajectory in the total EU exports of environmental goods, climbing from 10 billion USD in 1994 to over 50 billion USD by 2021. This consistent growth reflects the EU's role as a major exporter of environmental goods to developing countries, driven by increasing demand for clean technologies and sustainable products.

During the 2003-2008 period, exports in environmental goods grew steeply. **Figure 1** also highlights a particularly sharp rise in EU exports during this period, with exports nearly doubling from around 20 billion USD in 2003 to nearly 40 billion USD by 2008. This period of rapid growth likely coincided with higher innovation, and expanding environmental commitments in developing countries, supported by global sustainability initiatives such as the Kyoto Protocol[13].

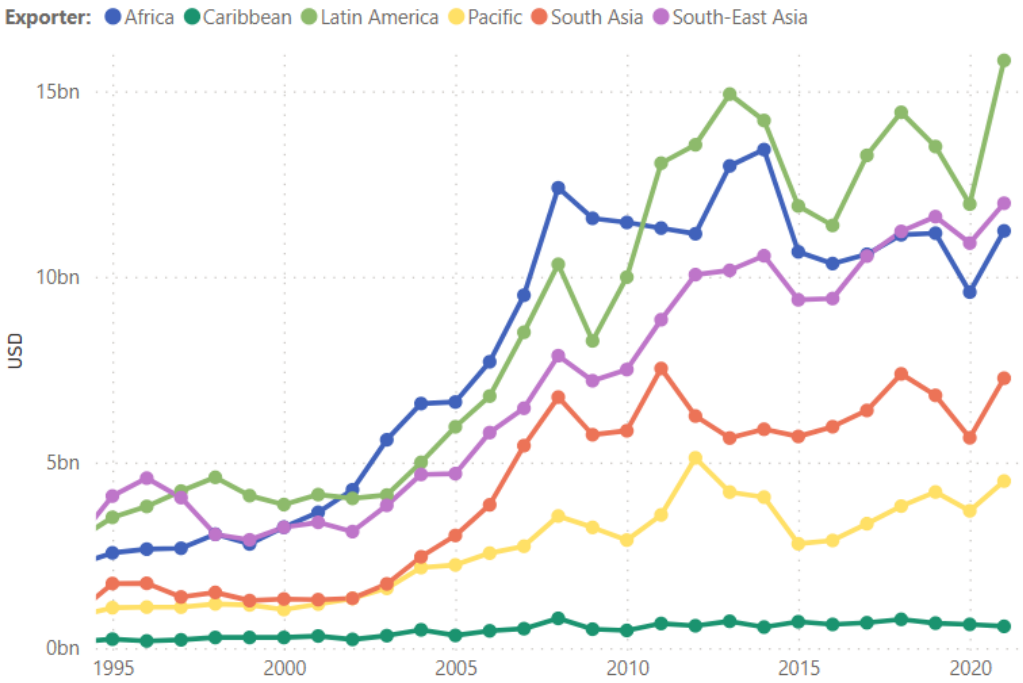
In the following time periods, a weaker increasing trend is observed with high variability across periods. After 2008, the growth in EU exports continued but at a slower rate, with substantial fluctuations in the overall trend between years. For example, the data reveals a decrease in exports around 2014-2016 of

[13] Tran, T.M. International Environmental Agreement and Trade in Environmental Goods: The Case of Kyoto Protocol. *Environ Resource Econ* **83**, 341–379 (2022). https://doi.org/10.1007/s10640-021-00625-2

close to 10 billion USD, followed by an over 10 billion USD increase by 2021.

Latin America, Africa, and South-East Asia are the main importers of the EU's environmental goods. These regions consistently account for the highest import levels. From 2002-2010 Africa was the largest importer, closely followed by the other two regions until 2008. In 2011, Latin America took over as the largest importer and has remained the largest ever since, with a widening gap in 2021 of close to 5 billion USD and total imports worth 15 billion USD. This relatively faster increasing trend in Latin America underscores the increasing demand for green technologies within the region and its reliance on EU suppliers to meet this demand. In recent periods, South-East Asia followed in second, and Africa in third.

Figure 1: Destination of EU's Exports in Environmental Goods Over Time

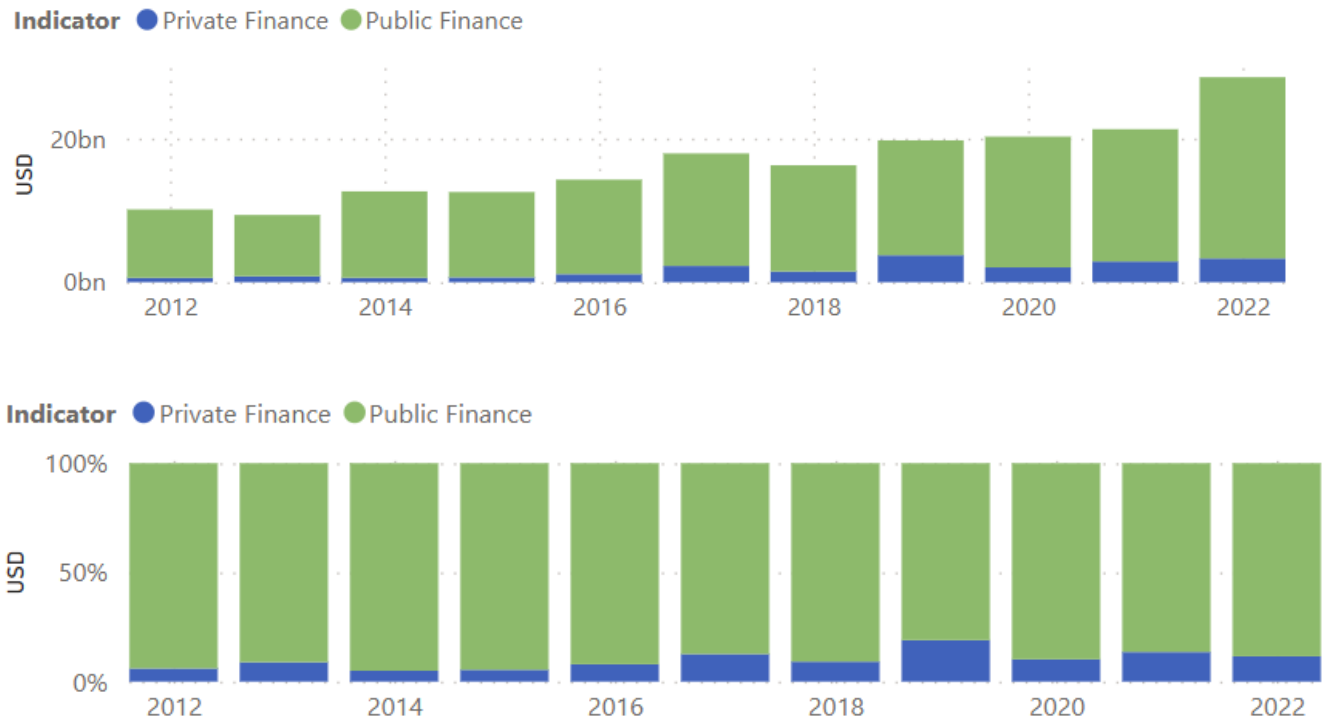


Source: IMF Bilateral Trade in Environmental Goods
Note: EU in all graphs across the report is defined as the aggregate across all Member States.

Climate finance

Over the past decade, the EU's bilateral public and mobilised private financial support (defined as the aggregation of Member States and EU institutions) for the green transition grew significantly, increasing from approximately 10 billion USD in 2012 to over ~28.5 billion USD in 2022.

Figure 2: EU Total Bilateral Financial Support to the Green Transition (USD bn and share between mobilised private and public climate-related development finance)



Sources: OECD mobilised private finance for development and OECD Development Finance for Climate and Environment

In 2022, **the EU's aggregated bilateral mobilised private and public climate-related development finance was primarily directed towards Africa, accounting for ~53% of total support**. This highlights Africa as a key recipient region, reflecting its significant financing needs for climate adaptation and mitigation efforts. Latin America followed, receiving ~20% of the total. South Asia and South-East Asia received ~17 and 7%, respectively. In contrast, the Caribbean and Pacific regions received smaller shares, with contributions at ~3%, pointing to either lower financing flows or smaller-scale project needs in those areas. The bar chart provides further insight into the composition of bilateral climate finance. Public finance constituted the main climate financial flow across all regions, except the Caribbean where the bulk of the climate finance came from mobilised private finance. Latin America attracted the highest share of private finance, followed by Africa and the Caribbean. However, it should be noted that the leading recipient of mobilised private finance varied a lot across the years (trend analysis available further down).

Figure 3: EU Share of Aggregated Bilateral Mobilised Private and Public Climate-Related Development Finance by Recipient Countries (2022)

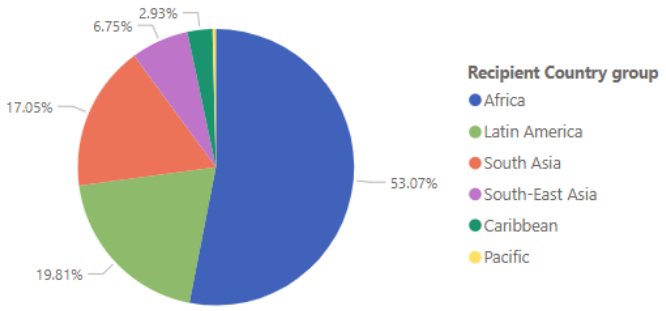
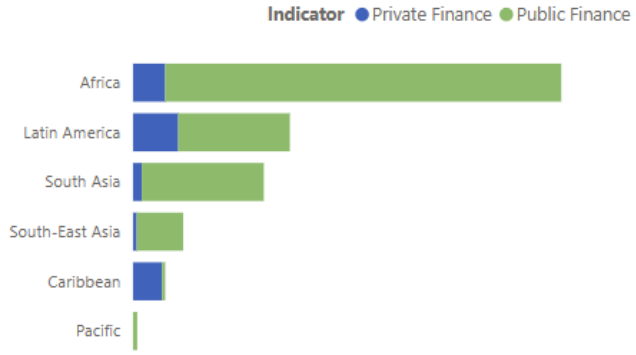


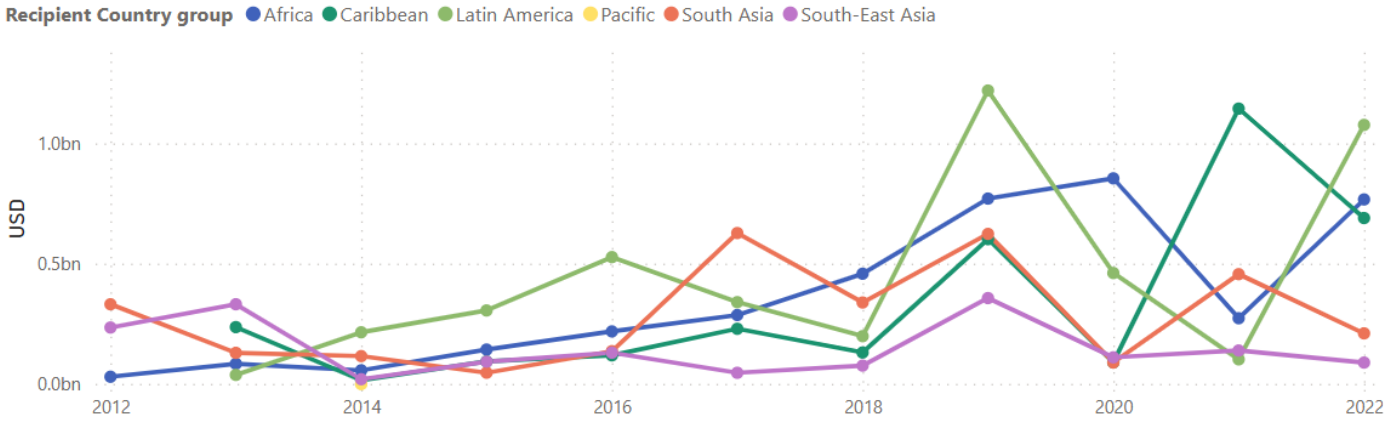
Figure 4: EU Total Bilateral Mobilised Private Investment and Public Climate-Related Development Finance (2022)



Sources: OECD mobilised private finance for development and OECD Development Finance for Climate and Environment

In 2022, the EU's combined private finance mobilised by bilateral public climate finance to developing economics in scope reached USD ~3.3 billion. Over the past decade, private finance contributions showed significant variability, with noticeable increases from 2016 onwards, reflecting a gradual upward trend. The main recipient fluctuated year-on-year with Latin America and Africa taking the largest shares overall. In 2020 and 2022, contributions to Africa were particularly substantial. Support to Africa however presented a one-off decrease in 2021 of close to USD 0.6 billion, after increasing by over USD 0.7 billion in 2022. The same was observed for Latin America during 2020-2021, where support decreased by over USD 1 billion, increasing by USD ~1 billion in 2022. Caribbean also received substantial allocations of mobilised private finance, although at smaller scales compared to Africa. Contributions to the Caribbean increased substantially after 2020 indicating growing private sector engagement in the region. South-Asia received more consistent but lower levels of mobilised private climate finance over the period, without a clear increasing trend. In contrast, South-East Asia and Pacific saw relatively small inflows, with negligeable values in earlier years and minor increases after 2018. This suggests challenges in mobilising private investment for climate-related initiatives in these regions. The data show an overall upward trajectory in mobilised private climate finance, with a clear negative shock during the COVID-19 period, and other minor year-on-year variations.

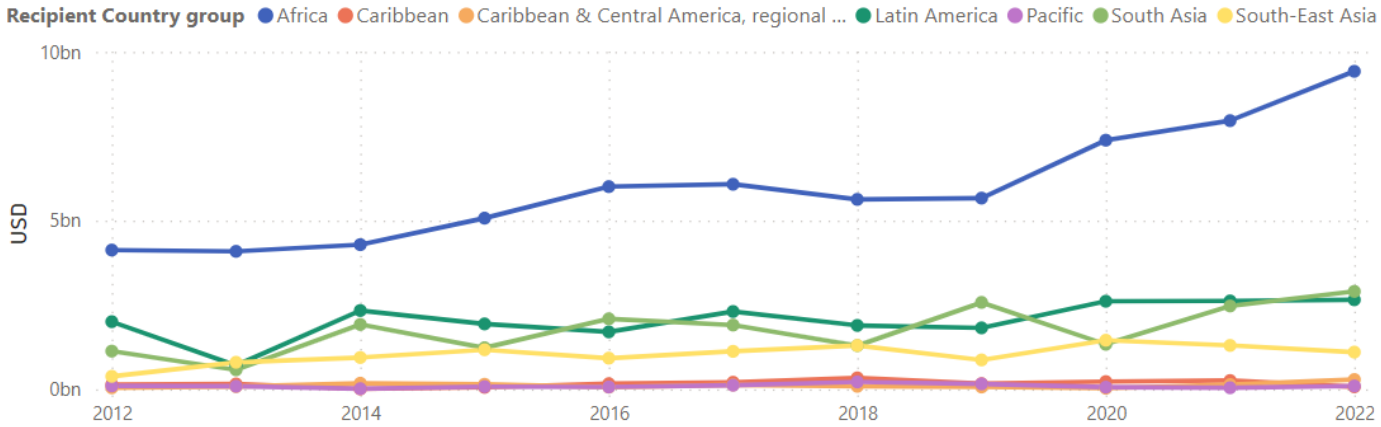
Figure 5: EU Private finance mobilised by bilateral public climate finance (USD bn)



Sources: OECD mobilised private finance for development

In 2022, the EU's combined bilateral public climate-related development finance to developing economies in scope reached nearly 17 billion USD, marking one of the highest levels over the past decade. Public finance contributions have shown a relatively stable trend, with some fluctuations but an overall upward trajectory since 2012 for Africa. Africa remained the largest recipient of public climate finance throughout the period, with notable increases in 2016, 2020, and 2022. South Asia, South-East Asia, and Latin America also received substantial shares of public finance, albeit at lower levels compared to Africa. South-East Asia saw increases in specific years, particularly 2015, 2018, and 2020. Latin America received a slightly larger allocation of public funding over the decade at similar levels to that of South Asia. The Caribbean and Central America received relatively modest levels of public climate finance, with a slight increase in 2022. Overall, the data reveal a consistent prioritisation of Africa.

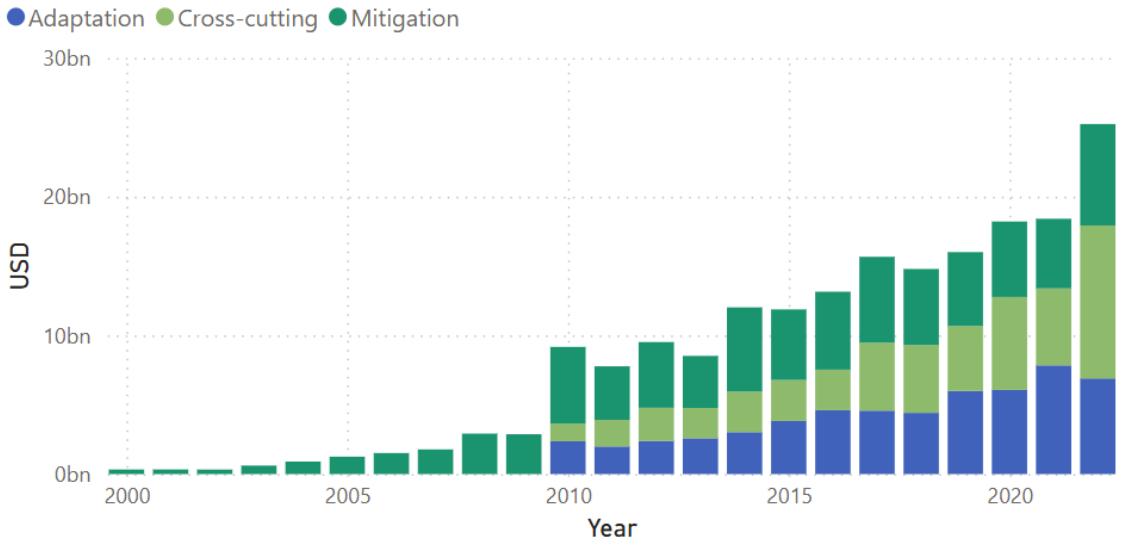
Figure 6: EU Bilateral Public Climate-Related Development Finance (USD bn)



Sources: OECD Development Finance for Climate and Environment

The EU focused mainly on mitigation finance over the 2000-2010 period. **From 2010 onwards, the EU adopted a more balanced approach, steadily increasing the share of adaptation finance to reach equal levels by 2020. This highlights a shift in the EU's strategy to adaptation needs**. Additionally, an increase in the cross-cutting finance between adaptation and mitigation can be seen from 2010 onwards.

Figure 7: EU Total Bilateral Public Climate by Objective



Sources: OECD Development Finance for Climate and Environment

Financial instruments

Public climate finance encompasses a range of instruments to support climate-related projects and initiatives, each tailored to address specific needs and challenges. Debt instruments, such as bonds and loans, are used by public entities to raise capital for large-scale climate projects. In cases where financial burdens hinder progress, debt relief reduces or restructures the obligations of developing countries, freeing up resources for climate action through concessional terms or cancellations. Public entities can also invest in equity and shares in collective investment vehicles (CIVs), which pool funds from multiple investors to support diverse portfolios of climate initiatives. In addition to financial tools, free-standing technical assistance plays a key role by providing expertise, capacity-building, and advisory services essential for implementing effective projects. Grants offer non-repayable funding to finance research, pilot projects, and capacity-building efforts, while loans provide funds to governments or organisations with favourable terms, such as low interest rates and extended repayment periods, to enable sustainable climate investments. Lastly, scholarships and training programmes focus on building human capital and equipping individuals and communities with the skills and knowledge needed to address climate challenges. Together, these instruments form a comprehensive toolkit for advancing public climate finance goals.

Historically, the OECD reported ODA flows at face value, treating both grants and loans equally without accounting for the concessionality (i.e., the degree of favourability) of loans. This approach overlooked the actual economic value of assistance, especially concerning loans with varying terms such as interest rates, repayment schedules, and grant elements. In 2019, the OECD implemented a significant change by adopting the "grant equivalent" system for reporting ODA loans. Under this methodology, only the concessional portion of a loan (i.e., the "gift" component) is counted as ODA. This shift aims to more accurately represent the genuine financial effort made by providers, particularly highlighting loans offered on generous terms. Consequently, this transition to the grant equivalent system introduces complexities when comparing historical data, as earlier figures may not fully capture the concessional nature of past financial instruments.

Below, we highlight key trends in the composition of financial instruments (Figure 8) and their growth over time (Figure 9) in the deployment of public climate finance. Grants have historically played a dominant role, particularly in the early 2000s. However, a notable increase in debt instruments is observed, suggesting a shift towards leveraging additional capital through blended finance approaches. Equity investments and debt relief remained marginal. Figure 9 shows that grants have seen the sharpest increase, followed closely by debt instruments.

Figure 8: EU financial Instruments Mix, Bilateral Public Climate-Related Development Finance

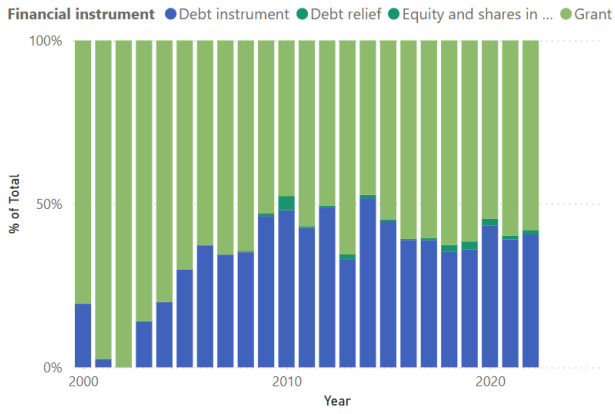
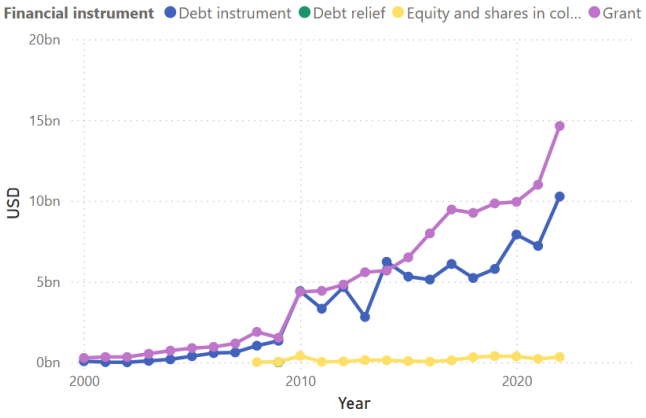


Figure 9: EU Bilateral Public Climate-Related Development Finance by Financial Instrument



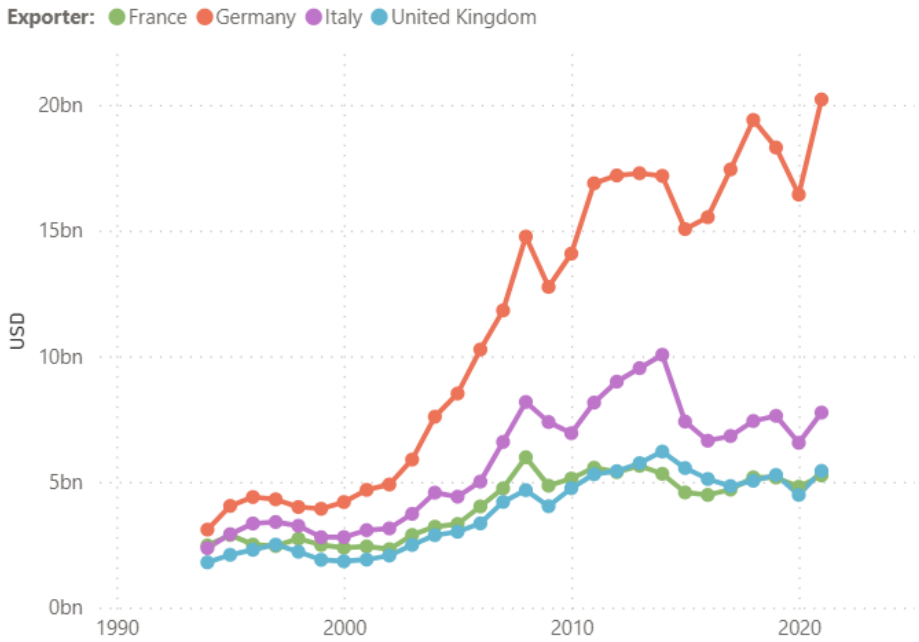
Sources: OECD Development Finance for Climate and Environment

EU Member States + UK

Trade in environmental goods

Within the EU, Germany is the main exporter to developing countries, clearly dominating the flows of other Member States and even the United Kingdom. Figure 10 shows Germany's dominance as its export levels consistently exceeded those of the other European countries displayed. By 2021, Germany's exports of environmental goods to developing countries almost reached 25 billion USD, far exceeding levels of other major exporters like France, Italy, and the United Kingdom.

Figure 10: Exports of Environmental Goods from EU Member States + UK



Source: IMF Bilateral Trade in Environmental Goods

The EU's exports of environmental goods flow to a broad set of importing regions. Commercial relations, and their evolution across time, differ widely across Member States and European countries.

France's exports are mainly directed to Africa. Figure 11 shows Africa being the primary destination of France's environmental goods, peaking at close to $3 billion in value around 2010 before stabilising at lower levels by 2021. Exports to other regions, such as Latin America and South-East Asia, remain relatively low in comparison.

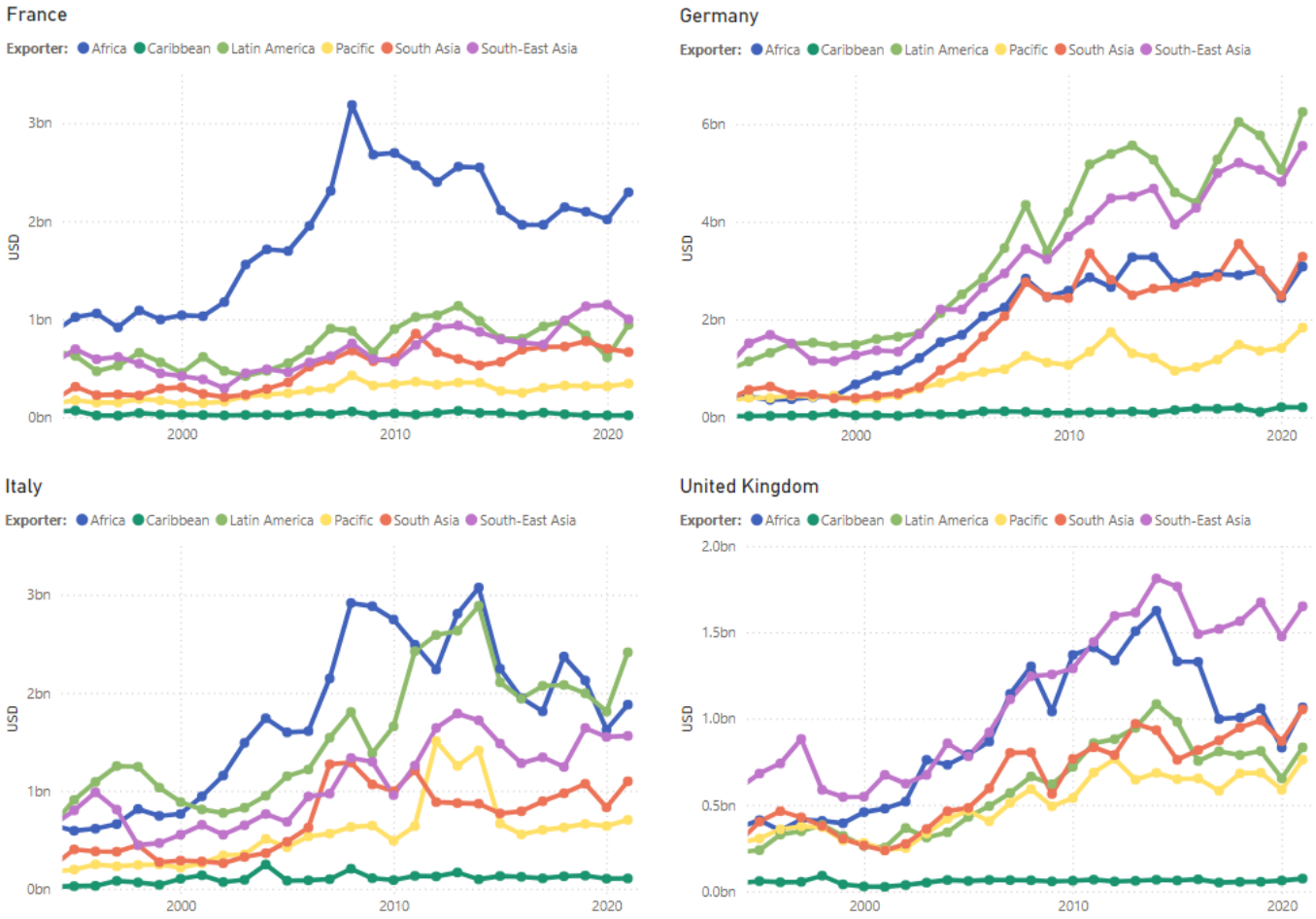
Germany's exports to Latin America and South-East Asia are higher compared to its exports to other regions. Germany's exports to Latin America and South-East Asia show substantial growth over the years, increasing by over 4 billion USD each from 2000 to 2021. Africa and South Asia follow in second and third place with similar levels of imports, and slower growth patterns compared to the two main importers.

Italy's exports of environmental goods vary considerably over time, with Africa being the primary recipient from 2001-2010, and Latin America closely matching this relation from 2010 onwards. By 2021, Latin America overtook Africa, reaching nearly 2 billion USD in imports compared to Africa's 1.5 billion USD. Notably, the Pacific region experienced a sharp but short-lived increase during 2011-2015, peaking at approximately $1.5 billion before falling back to prior levels.

Exports of environmental goods from the United Kingdom were mainly directed to South-East Asia and Africa until 2014, when exports to Africa started to decline. By 2021, South-East Asia was clearly the primary importer of the UK's environmental goods exports, nearing $2 billion in value while Africa's imports of environmental goods from the UK came close to 1 billion USD.

Among the key players in Europe, Germany leads in exports of solar panels, electric vehicles and wind power, whereas France and the United Kingdom have recently overtaken Germany in exports of cells and batteries. For solar panels, Germany largely dominated the exporting activities to developing countries until 2018, when France closely matched, but did not surpass export flows. Exports of electric vehicles have been largely sold by Germany since 2020 onwards, with a yearly increasing lead. In the wind power market, German exports have experienced some fluctuations over time but have consistently remained the largest across the observed European countries.

Figure 11: Destination of key European exports in Environmental Goods over time



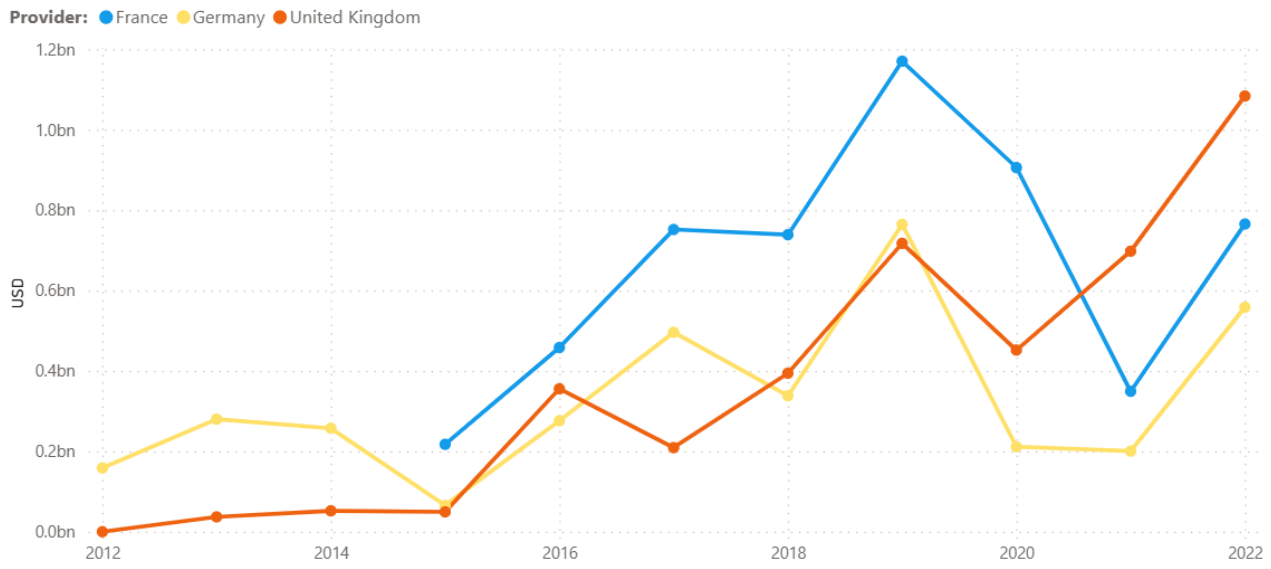
Source: IMF Bilateral Trade in Environmental Goods

Mobilised private climate finance

Germany, the UK, and France's mobilised private climate finance contributions show a broadly similar upward trajectory over the period, with substantial increases in 2018 and 2022 and decreases in 2020 and 2021. The steady growth from 2016 onwards could reflect efforts to attract private finance, while the dip in 2020 could correspond to global economic disruptions. Yet, the strong recovery observed in 2022 suggests renewed mobilisation efforts across all three providers. Italy's mobilisation of private climate finance is close to zero and hence not included in this section.

France led the mobilisation of private climate finance up until 2021, showing a sustained upward trend with notable peaks in 2019 before the COVID-19 disruptions, when contributions came close to USD 1.2 billion. Germany, while mobilising at a lower overall level compared to France, shows a similar pattern with support peaking in 2019 close to USD 0.8 billion. However, mobilisation dipped for both France and Germany in 2020 and 2021 before showing signs of recovery in 2022. The UK exhibits the clearest increasing trend over the period, given its ability to recover from the COVID-19 downturn in 2021, becoming the largest provider. After a low start between 2012 and 2015, UK contributions surged, reaching its highest level observed in 2022 of around 1 billion USD, unlike France and Germany which are still recovering from a previous downturn. This shows the UK's ability to promote consistent growth in bilateral mobilised private climate finance.

Figure 12: Bilateral Mobilised Private Finance (USD bn)



Sources: OECD mobilised private finance for development

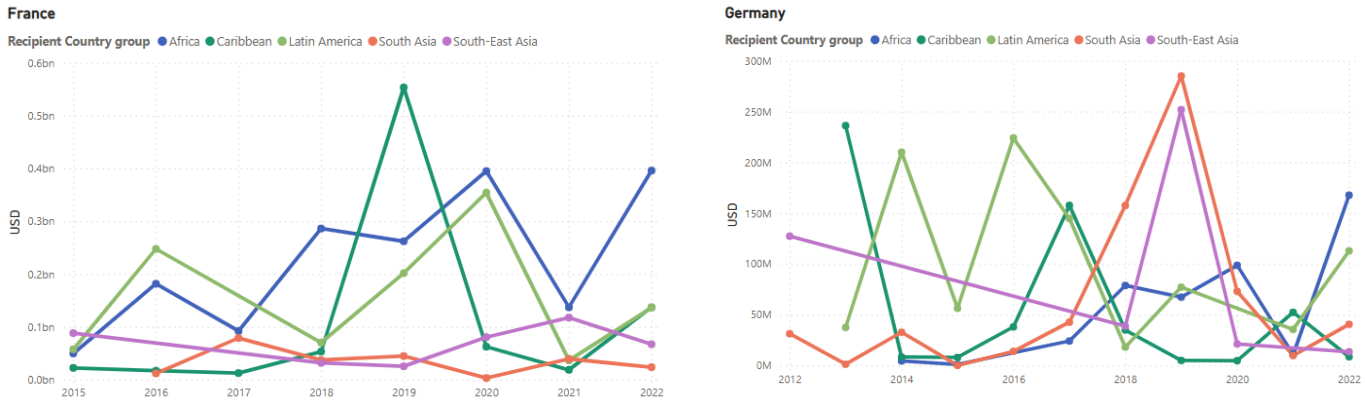
Figure 13 shows France's bilateral mobilised private finance by recipient country groups between 2015 and 2022, measured in USD billion. From 2018 onwards, Africa received the largest share of mobilised private finance (except from 2019), reflecting its prioritisation within France's bilateral efforts. Contributions to Africa grew substantially in 2018 and reached an all-time high in 2022 within the period analysed, after quickly recovering from the COVID-19 downturn. Contributions to Latin America, also emerged as a key recipient, particularly before 2018, and in 2020. The Caribbean received lower levels of support consistently, except for 2019, where it experienced a one-off increase of USD 0.5 billion, becoming

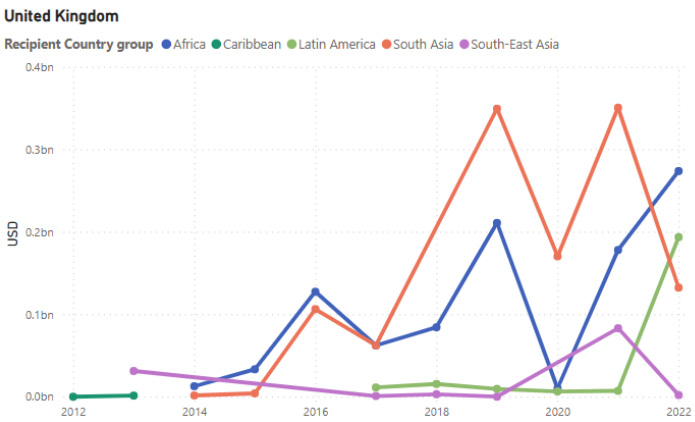
the largest recipient. South-East Asia and South-Asia also benefited from smaller allocations across the period. The high point in 2019 and 2020, where total mobilisation came close to USD 1, and 0.9 billion respectively, highlighting a particularly active year for France, with increased contributions across multiple regions. The dip in 2021 followed by a recovery in 2022 suggests that broader economic conditions affect contributions.

On the other hand, Germany's mobilisation of private finance exhibits considerable variation across regions and years, without a clear region of focus. Mobilised private finance for South Asia and South-East Asia surged sharply in 2019, reaching USD ~0.0.26 billion. However, contributions to the region declined significantly thereafter. Africa, in contrast, shows lower and more consistent levels of support, with a significant increase in 2022 making it the main recipient in that year. Latin America received substantial levels of support from 2013-2017 (coupled with high fluctuation) stabilising at lower levels thereafter, with peaks observed in 2013 and 2016. Contributions to the Caribbean remained sporadic, with peaks in 2013 and 2017. Overall, Germany's mobilised private finance demonstrates a regionally uneven pattern.

Africa and South Asia have consistently been the primary recipients of UK mobilised private climate finance. In the periods prior to 2019, the support of South-Asia and Africa remained relatively similar. However, in 2019 South-Asia's support increased by over 0.3 billion USD, making it the region of focus. Overall, all recipients presented notable decreases in support during 2020, but Africa presented the strongest recovery becoming the largest recipient by 2022. Contributions to Latin America have been comparatively lower but have maintained a steady presence throughout the period, with an increase in 2022.

Figure 13: Bilateral Mobilised Private Finance from France and Germany (USD bn)





Sources: OECD mobilised private finance for development

Bilateral public climate-related development finance

The trends in bilateral public climate-related development finance contributions from France, Germany, Italy and the UK between 2012 and 2022 highlight clear differences in mobilisation levels and trajectories among the three providers. Germany emerges as the leading provider, with a consistent upward trajectory. France's contributions remained stable, while UK and Italy's participation, though increasing slightly in later years for the latter, have been lower.

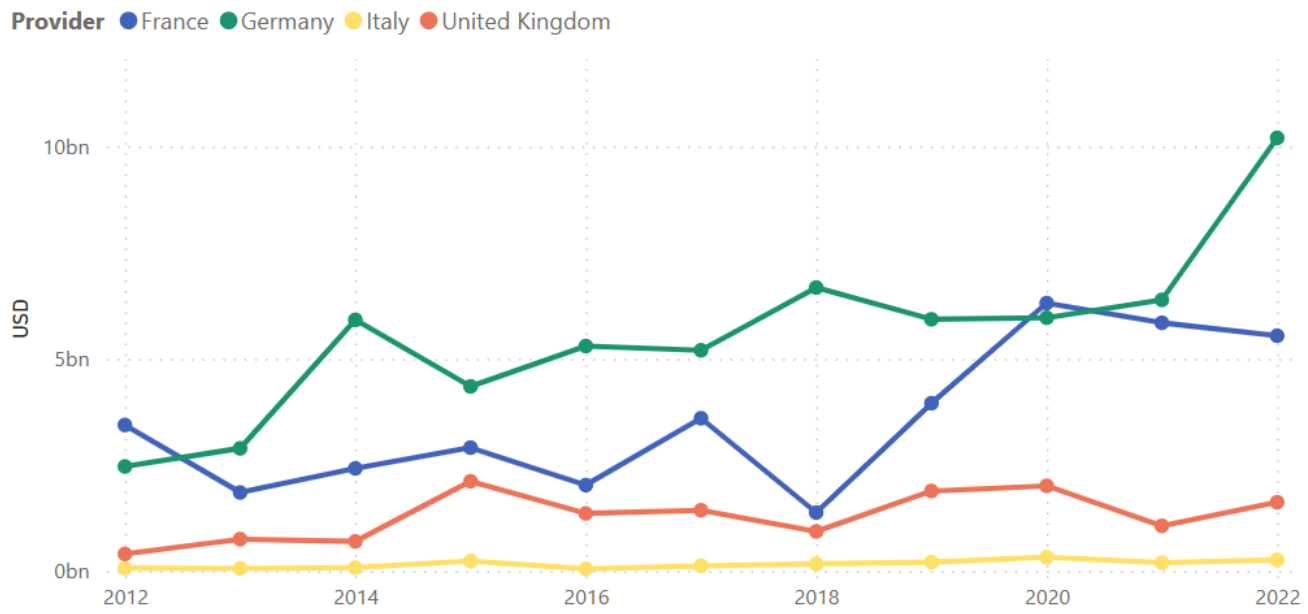
Germany consistently contributed the largest amounts of public climate-related development finance, with a steady upward trend over the period, increasing from near 2 billion USD in 2012 to over 10 billion USD in 2022. Key surges occurred in 2014, 2018, and 2022.

France's contributions remained relatively stable but at lower levels compared to Germany, fluctuating between 1 and 6 billion USD. After a slight decline in 2018, France's support grew gradually, peaking at around 6 billion USD in 2020 before stabilising through 2022.

Italy's public climate-related development finance remained minimal throughout the period, with negligible contributions recorded until 2017. From 2018 onward, Italy began to report slightly higher values, although levels remained below 1 billion USD, indicating a more limited role in bilateral public climate finance mobilisation compared to France and Germany.

The UK's bilateral public climate finance contributions have shown a steady but relatively moderate trend compared to France and Germany. Starting from low levels in 2012, the UK's contributions saw a gradual increase, particularly in 2015 and 2019. Contributions remained relatively stable from 2016 to 2022, averaging around 2 billion USD annually.

Figure 14: Bilateral Public Climate-Related Development Finance (USD bn)



Sources: OECD Development Finance for Climate and Environment

The breakdown of bilateral public climate-related development finance from France, Germany, and Italy between 2012 and 2022 reveals differences in the scale, trends, and regional distribution of funding across the three countries. Africa was the primary recipient of public climate finance from all three countries, with France and Italy focusing on directing a larger proportion of its support to Africa, while Germany maintained a broad regional distribution.

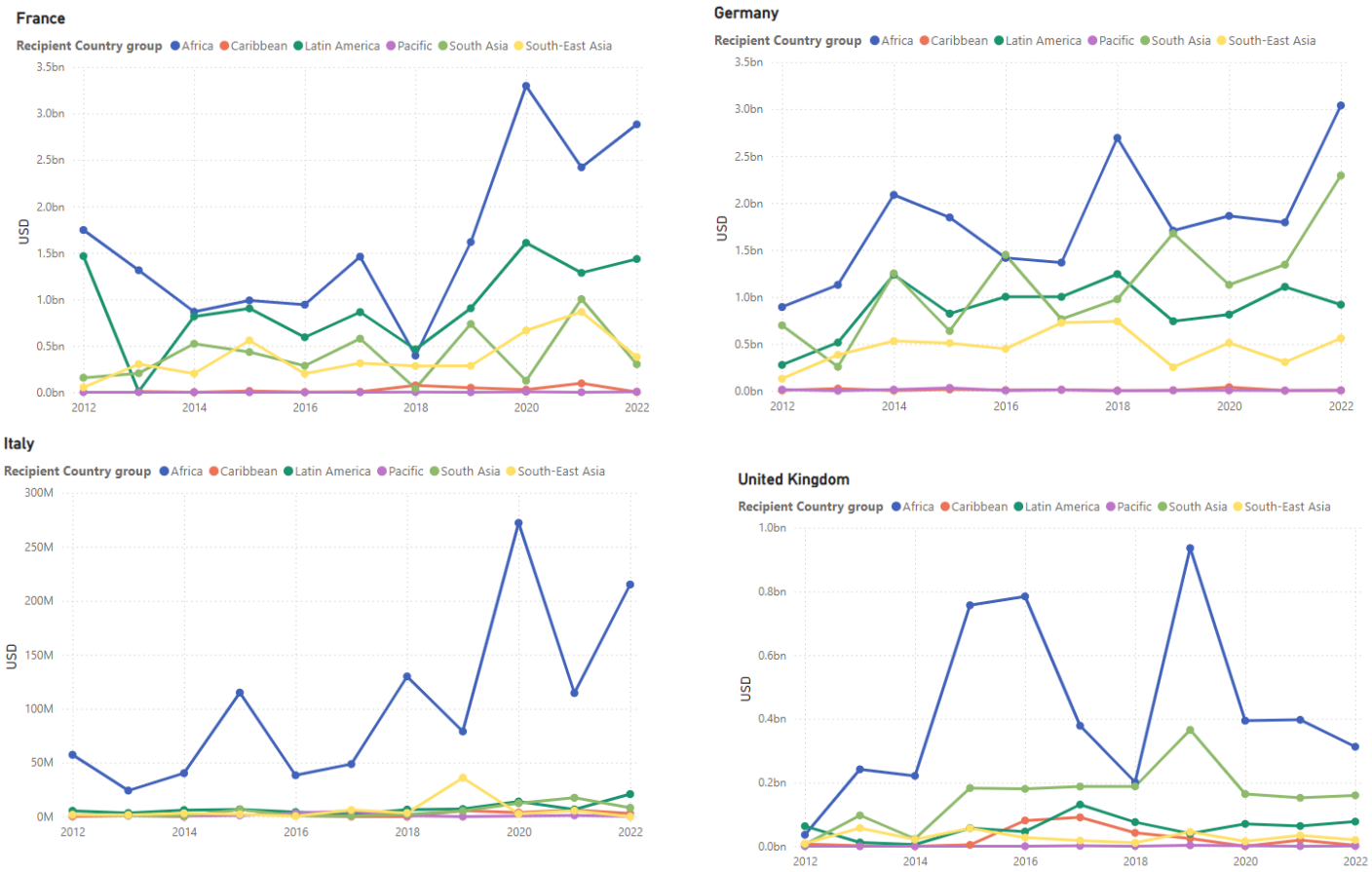
France's public climate-related development finance grew sharply from 2019 onwards, driven primarily by significant contributions to Africa, which consistently received the largest share over the decade. Funding to Latin America and South-East Asia remained relatively stable over time, while contributions to the Caribbean and Pacific regions were small. The steep growth in Africa after 2018 indicates a strong focus on climate-related initiatives in the region.

Germany displayed a steady and diversified allocation of public climate-related development finance, with notable rises in 2014, 2018, and 2022. Africa and South Asia emerged as the largest recipients, with both regions experiencing substantial increases in certain years. Contributions to Latin America and South-East Asia were lower but steady over the period. Germany's relatively balanced distribution across regions highlights its broader engagement in global climate finance.

Italy reported significantly lower levels of public climate-related development finance compared to France and Germany, with contributions concentrated primarily in Africa. Increases in 2019 and 2022 were driven by sharp increases in funding to the region, while support to other recipient groups, including Latin America and South Asia, remained small. The limited scale of Italy's contributions reflects its smaller role in bilateral public climate finance.

The UK's bilateral contributions have fluctuated over the years, with peaks in 2015, 2016 and 2018. Africa is the primary recipient of UK public climate finance, receiving the largest share across most years. South Asia is also an important recipient region, particularly during periods of higher contributions, such as in 2018 and 2020, when funding to the region sharply increased. In contrast, contributions to Latin America, the Caribbean, and South-East Asia remain comparatively low and stable throughout the period. The graph highlights the UK's focus on Africa and South Asia.

Figure 15: Bilateral Public Climate Finance from France, Germany and Italy (USD bn)



Sources: OECD Development Finance for Climate and Environment

3.2. Considerations

Despite the EU's strong track record in climate-related development finance, sustaining and scaling this contribution will require a more integrated and forward-looking approach. Fiscal constraints, growing domestic pressures, and rising political uncertainties across Member States risk limiting the ambition and predictability of future contributions. Meeting the New Collective Quantified Goal (NCQG) will require not only additional resources but also a more stable and coordinated financing architecture.

At the same time, Europe's role in supporting the global green transition cannot rely on finance alone. The EU currently lags behind China in exports of key environmental goods and technologies. In a world of increased competition for clean industrial capabilities, Europe has an opportunity to strengthen its standing by better aligning its climate and trade strategies. The analysis shows that the geographic distribution of European climate finance and trade flows varies significantly in scale and trends, particularly at Member State level. Africa has emerged as the primary recipient of both bilateral public climate-related development finance and private finance mobilised through public channels, reflecting its acute climate vulnerability and longstanding ties with Europe, particularly France. It is also the main importer of France's and Italy's environmental goods exports. In contrast, Latin America and South-East Asia – key markets for European environmental goods, particularly from Germany – have received comparatively lower volumes of bilateral public climate-related development finance, despite the former being a region where Europe has successfully mobilised greater levels of private investment.

A more integrated regional approach – tailored to local needs and opportunities – would allow Europe to more effectively combine clean technology exports with targeted public finance and investment instruments, ensuring that trade and financial flows reinforce one another. Facilitating clean technology transfers, investing in green value chains in partner countries, and ensuring trade policies support equitable climate outcomes can help establish the EU as a more effective and reliable partner in the global green transition.

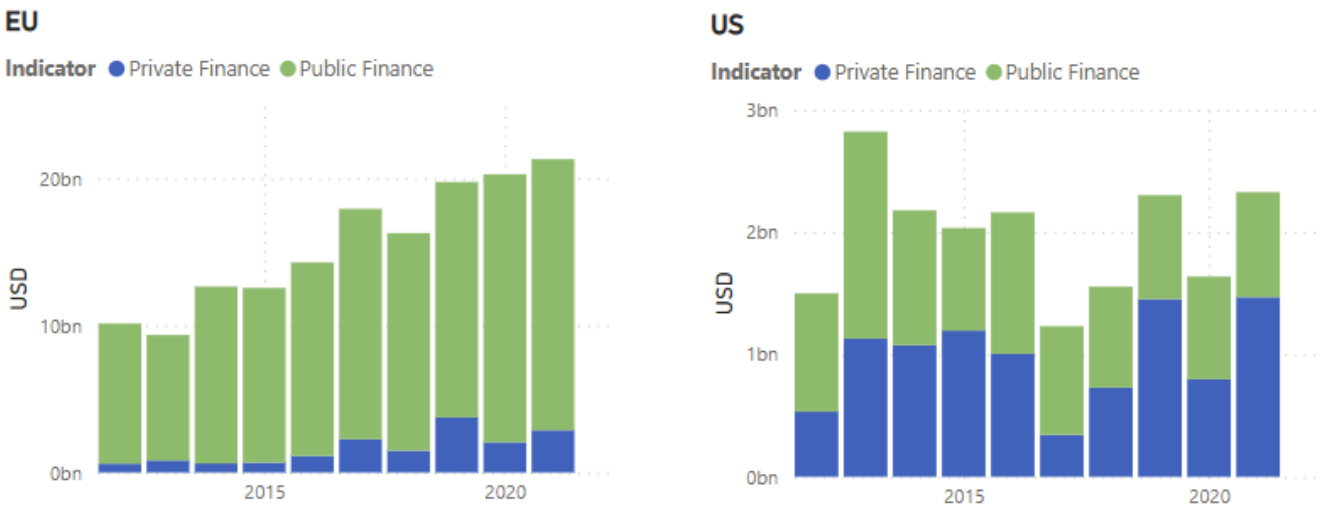
Looking ahead, the EU and its Member States' credibility as global climate actors will depend on their ability to lead not only through contributions, but also through coherence. This includes supporting systemic reforms to the international financial architecture, while aligning internal and external policies to drive ambition without negatively impacting least developed countries. By taking steps to connect climate finance and clean trade more deliberately, and by championing new and fair instruments for climate solidarity, the EU can help shape a more equitable and effective model of international climate cooperation.

4. Contextual analysis: the role of the US and China

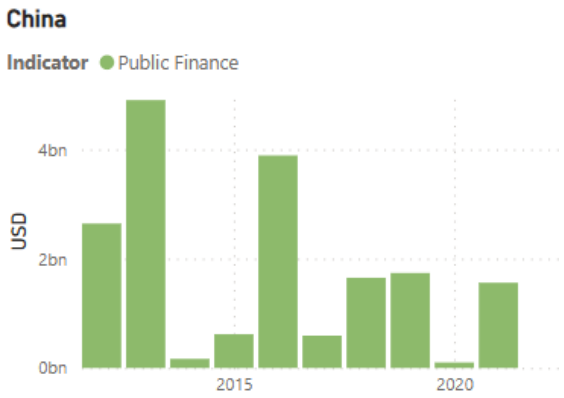
The data suggests that the EU is the main provider of bilateral public climate-related development finance to developing countries in comparison to the US and has made notable progress in mobilising private climate finance. In 2021, the EU's total bilateral climate finance exceeded USD 20 billion, with a significant majority coming from public finance. This level of public finance is notably higher than that of the US, which provided less than a fourth of the EU's contributions, and of China, whose lower contributions reflect its classification under the United Nations Framework Convention on Climate Change (UNFCCC) as a non-Annex I developing country. As such, China has no official obligation to provide financing to other countries and remains eligible for support from the developed countries listed in Annex I of the convention[14].

Environmental goods exports from China, the US, and the EU to developing economies significantly support climate-related objectives, with a combined value of approximately USD 220 billion. While not financial aid, this trade enables developing countries to access green technologies. China has surpassed the EU and the US in exporting environmental goods, making products like solar panels and batteries more affordable and accessible in developing economies.

Figure 16: Total Value of Bilateral Public and Mobilised Climate Finance (USD bn)

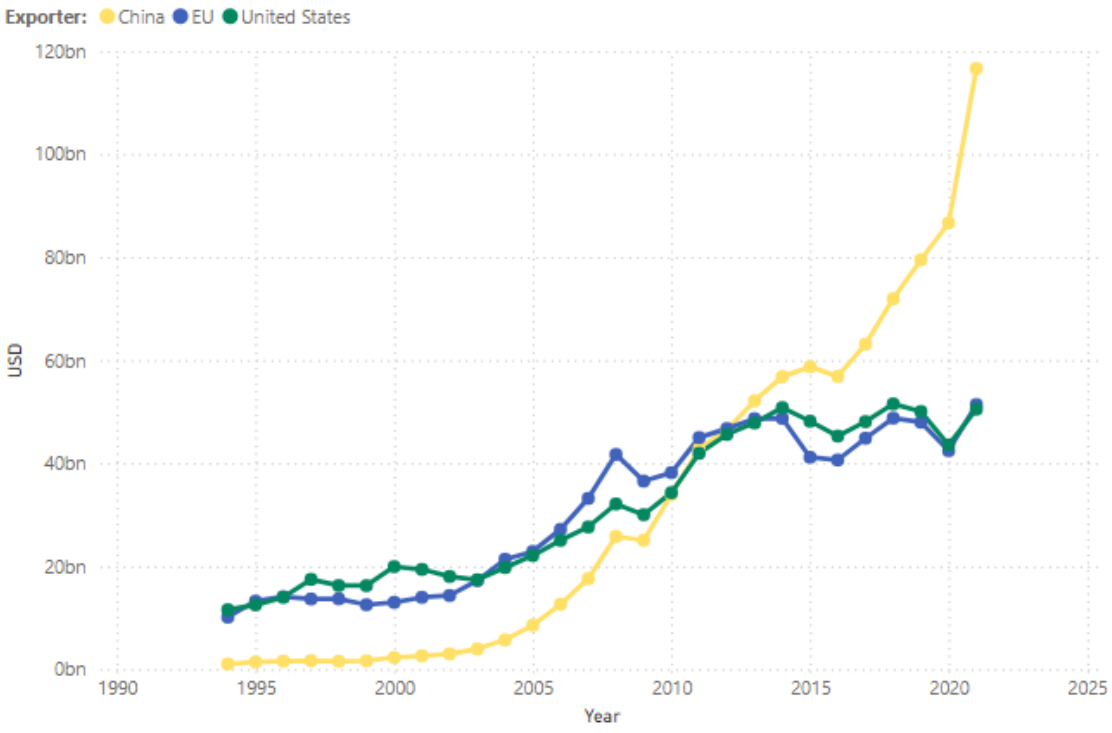


[14] Annex II countries, primarily industrialised nations that were members of the OECD in 1992, are obligated to provide financial resources to assist developing countries in their climate mitigation and adaptation efforts. As a non-Annex I country, China does not share this specific obligation, which accounts for its relatively lower levels of bilateral public climate finance.



Sources: OECD, AidData

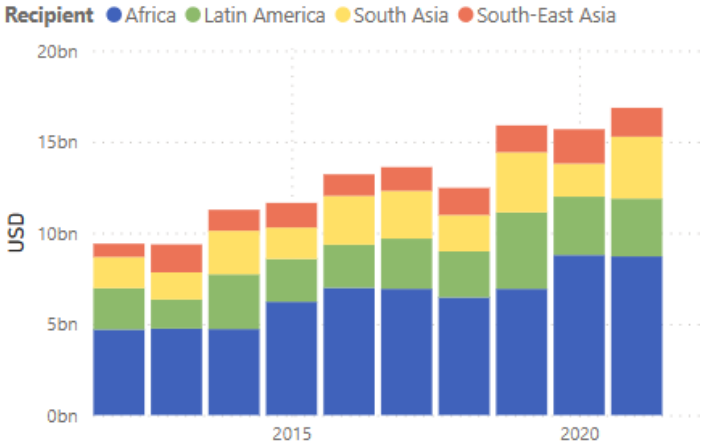
Figure 17: Exports of Environmental Goods (USD bn, 2021)



Sources: IMF

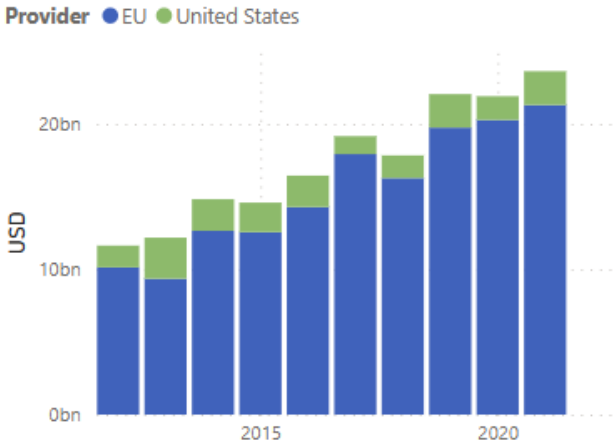
The analysis of aggregated bilateral financial flows from the US and EU, for the period 2012 to 2022 reveals certain trends in regional allocations and provider contributions. Africa is consistently the largest recipient. Latin America is the second-largest recipient region, followed by South Asia and South-East Asia. The EU's climate finance contributions are consistently larger than those of the US.

Figure 19: Aggregated bilateral climate finance by recipient region, all providers combined (USD bn)



Sources: OECD Development Finance for Climate and Environment, and OECD Mobilised Private Finance for development

Figure 18: EU vs US aggregated bilateral climate finance, all recipients combined (USD bn)



Sources: OECD Development Finance for Climate and Environment, and OECD Mobilised Private Finance for development

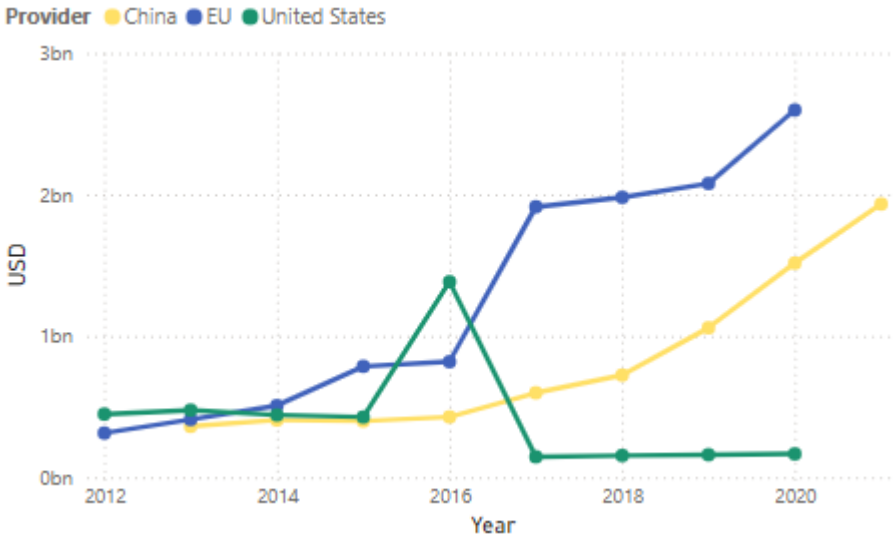
The EU and its Member States (combined) have been the primary contributor of multilateral public climate finance. The EU's contributions to MDBs for climate finance have grown consistently over the past decade, reaching nearly USD 3 billion by 2020. The EU's consistent growth in contributions to MDBs aligns with its strategic climate diplomacy objectives and commitment to multilateralism. In contrast to the variability observed in US contributions, the EU's steady contributions reflect a more consistent commitment.

China's multilateral contributions, while initially modest, began to grow steadily after 2016. By 2020, China's contributions reached nearly USD 2 billion. This is consistent with the World Resource Institute (WRI, 2024) and the Centre for Global Development (CGD, 2024) findings, which found that China's multilateral climate finance has seen a substantial increase in recent years, in part driven by the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB) introduction into the multilateral financial architecture.

The US multilateral contributions on the other hand have remained mostly stable year-on-year until 2015, peaked in 2016 and sharply decreased to reach negligible levels between 2017 and 2020. As of 2020, US contributions remained significatively lower than that of the EU and China, potentially reflecting shifting domestic policies and priorities in recent years. A potential explanation for these relatively low levels of support from the US could also be the congressional pressures faced at the time, which prevented climate finance disbursements from being approved[15].

[15] Thwaites, Joe. "How the U.S. Can Still Meet Its Global Climate Finance Pledges." *Natural Resources Defense Council*, 15 Apr. 2024, https://www.nrdc.org/bio/joe-thwaites/how-us-can-still-meet-its-global-climate-finance-pledges. Accessed 4 Feb. 2025.

Figure 20: Multilateral Public Climate Finance: Contribution to MDBs (USD bn)



Sources: UNFCCC Provision of public financial support: contribution through multilateral channels, and AidData's Global Chinese Development Finance Dataset

4.1. Trend in Environmental Goods Trade Flows

Trade in environmental goods is an important facilitator for the green transition in developing countries. It allows countries to access the technologies and expertise needed to reduce their environmental impacts. For importers of these goods, trade offers an opportunity to avoid more polluting development pathways by adopting cleaner and more sustainable technologies from others. For exporting countries of these goods, trade offers a means to contribute to the green transition, strengthen global efforts, and drive economic growth through green innovation both domestically and abroad.

The key exporters of interest - the EU (as an aggregation of Member States exporting activities), the US, and China – are at the forefront of exporting these essential technologies. As a result, their export patterns show relevant insights into how different economies contribute to the green transition on a global scale, through their scale, direction, and focus.

Trade in environmental goods has grown steadily, with increasing manufacturing and demand for greener technologies. Initially led by the EU and closely followed by the US, China became the leading exporter in 2013, reshaping global trade patterns. By 2021, China's exports far exceeded those of the EU and US. The EU exports mainly to Latin America, Africa, and Asia, while China focuses on South-East and South Asia. US exports primarily target Latin America, especially Mexico, and select countries in South-East Asia.

Trend Analysis

Exports of environmental goods from the EU, US, and China to Latin America, South-East Asia, South-Asia, has been increasing over the years. In Figure 21, we can observe how exports of environmental goods across all exporters increased over time. From 1995 to 2007, the EU and the US were the clear leaders in exports of environmental goods. As shown in Figure 21, both the EU and the US maintained relatively parallel trajectories from 1995 to 2007, providing yearly around 10 to 20 billion USD worth of exports in environmental goods to the importing regions of focus. Their exports rose gradually, reflecting the growing demand for environmental goods as well as their commitment to supporting sustainable growth in these areas. During this time China's exports remained relatively low.

Around 2007, China started to increase its involvement in exporting trade in environmental goods, marking a shift in its strategy and role. This period represents a turning point for China, as it moved from being a minor player to rapidly increasing its exports of environmental goods. China's greater focus on green technology manufacturing and exports positioned China as a major supplier. This change suggests that China recognised both the economic opportunities and the geopolitical advantages of expanding its role in the green transition. This transition coincides with the merging of industrial policy into China's technology self-sufficiency targets, through the implementation of Medium to Long term Science and Technology plans (2002-2020)[16]. Another policy that could be influencing[17] this shift includes the SEI (strategic, emerging, industries) policy implemented by the State Council in 2010, which targeted industrial development in seven sectors including energy efficiency, environmental technologies, new energy, new materials, and new electric vehicles[18]. During this period, the EU and US continue to increase their exports of environmental goods reaching yearly exports worth 30 billion by 2013.

In 2013, China became the largest exporter of environmental goods. This can be seen in Figure 21, as China's exports continued to rise during this period, while those of the EU and the US stagnated. China's ascent in 2013 above the EU and the US reflects the maturity of its green-tech manufacturing sector and its successful positioning as the largest manufacturer of sustainable technologies worldwide.

From 2015 onwards, exports of environmental goods from the EU and the US more or less stagnated. This can be seen in Figure 21, as both the EU and the US saw a decrease in the trade flow level in 2015-2016 and 2020 compared to the level in previous years, with total export values falling to yearly 40 billion USD in both cases. These drops are likely linked to economic slowdowns, market shifts, and the global impact of the COVID-19 pandemic. In more recent years, exports from the EU and US recovered to around 50 billion USD but have not grown beyond. China's exports on the other hand only fell by 5 billion USD during 2015-2016 and continued to increase during the COVID-19 pandemic.

China now dominates trade in environmental goods. Figure 21 shows China's exports continuing to rise

[16] Outline of the National Medium- and Long-term Science and Technology Development Plan (2006-2020). The State Council of the People's Republic of China. Available in Chinese here: https://www.gov.cn/gongbao/content/2006/content_240244.htm

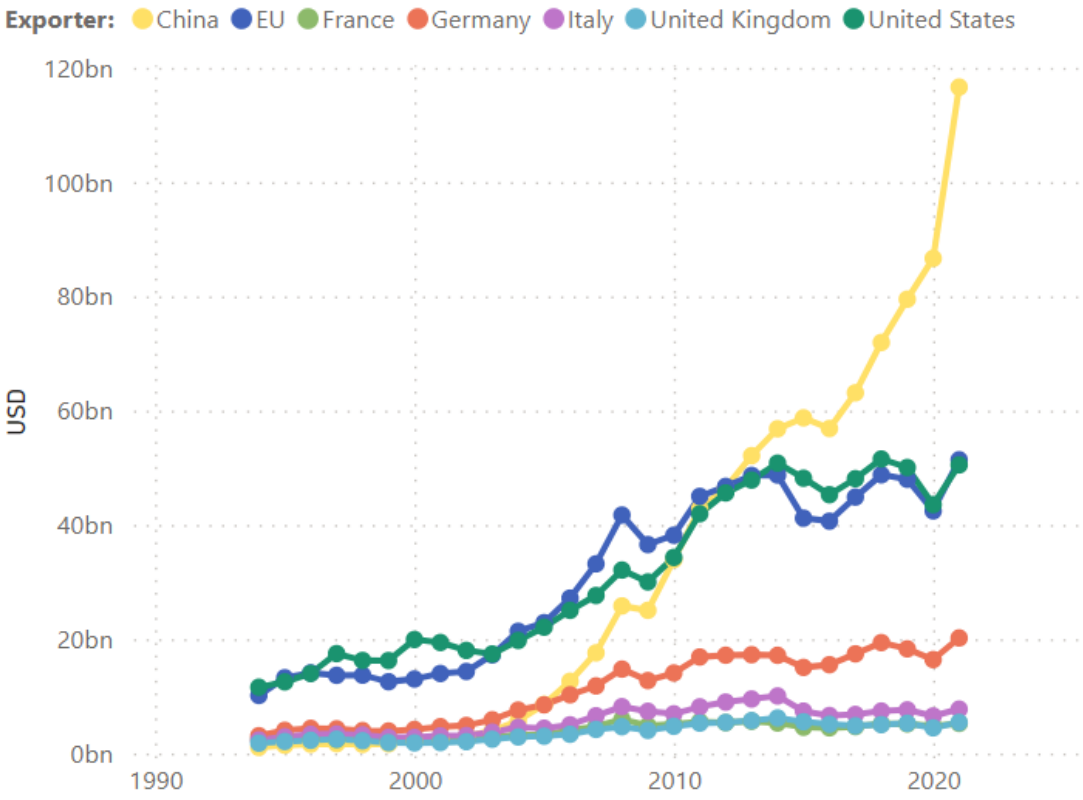
[17] Note that there is no causal analysis behind this claim, as the data analysis performed is not able to provide information concerning the drivers of the observed trend. The policies mentioned here only coincide in timing and direction of impact with the observed trend.

[18] Decision of the State Council on Accelerating the Cultivation and Development of Strategic Emerging Industries, Guo Fa, 2010, No. 32. Available in Chinese here: https://www.gov.cn/zwgk/2010-10/18/content_1724848.htm

steeply in 2021, reaching close to 120 billion USD worth of exports, while those of the EU and the US remain relatively stable and much lower in volume at around 50 billion USD. This gap shows China's leading position in the market, driven by its trade-dominated strategy and large manufacturing capabilities in producing environmental goods. The EU's and the US's export levels are close to each other but substantially lower than China's.

Within the EU, Germany is the largest exporter. Germany's export levels of environmental goods are substantially above those of other EU member states, including France, and Italy. Germany's lead has been pronounced from 2008 onwards.

Figure 21: Trade in Environmental Goods Over Time for Main Exporters



Source: IMF Bilateral Trade in Environmental Goods

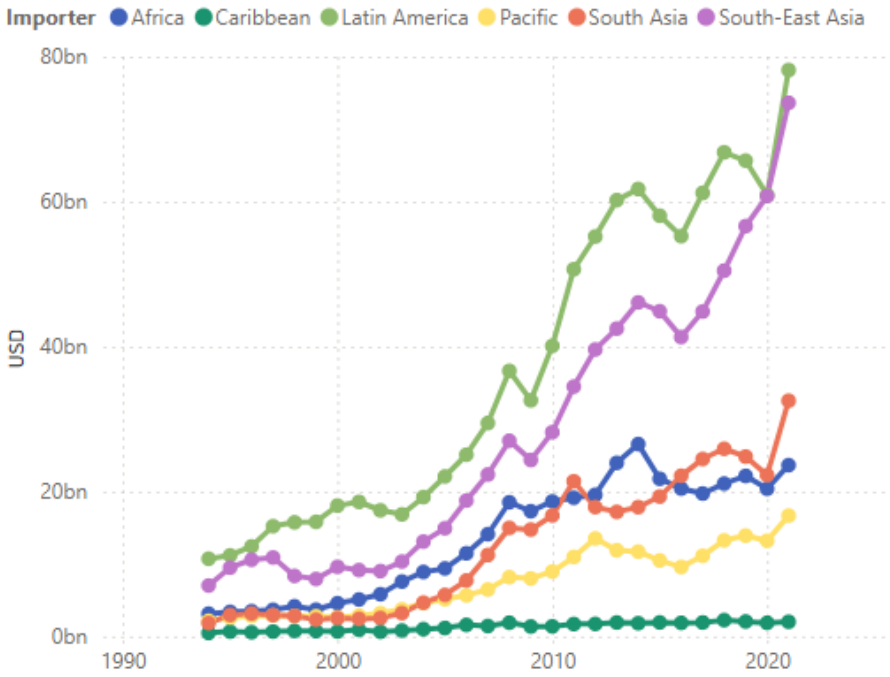
Destination of exports

Exports to Latin America and South-East Asia have grown the most. The data presented in Figure 22 shows a clear upward trend in imports of environmental goods by all regions from 1994 to 2021. The growth is particularly accentuated from 2010 onwards. While all regions have seen increased trade volumes over this period, Latin America and South-East Asia stand out as the regions with the most substantial growth. By the end of the observed period, these two regions reached yearly import levels which are more than 40 billion USD above those of other regions. This suggests a strong demand and growing market for environmental goods in these regions.

From 1994 to 2010, Figure 22 indicates that exports of environmental goods from the EU, US, and

China were evenly distributed across importing regions. This may be due to the nascent green technology markets and early global environmental policies.

Figure 22: Trade in Environmental Goods Over Time by importers



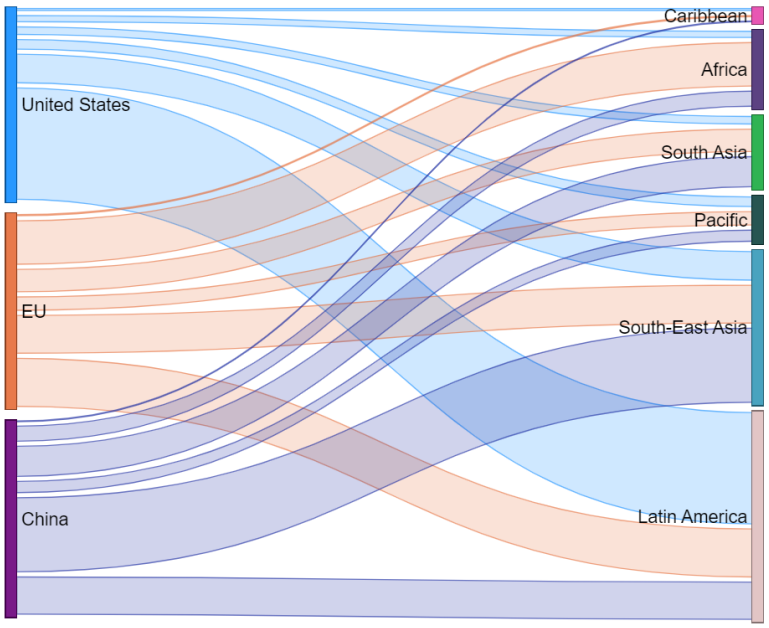
Note: The Values presented in this figure correspond to the exported environmental goods from the EU, US, and China as a whole.
Source: IMF Bilateral Trade in Environmental Goods

Figure 23 shows a Sankey diagram of where the exports of environmental goods from the EU, US and China have historically been flowing to (i.e. aggregate of all years determines the size of the links and nodes). This information helps us draw insights into the commercial ties observed.

Across all exporters, the EU's trade connections span all regions without one region dominating as an export market. The US and China have more dominant markets for their export of environmental goods. In contrast to the EU, in Figure 23 we observe how the exports from the US and China are highly concentrated in Latin America and South-East Asia respectively. For the US, the largest importing country is Mexico, receiving over 65% of its exports of environmental goods. China has particularly strong ties with a range of countries, such as Vietnam, Malaysia, Thailand, Indonesia, and Singapore, explaining the large flows to South-East Asia. In South Asia, India and Pakistan are large importers of Chinese environmental goods.

From the importer's perspective, a few have a dominant export partner. The US is the main supplier of environmental goods to Latin America, China to South-East Asia, and the EU to Africa. The rest of the importing regions have a relatively more diversified split across the exporting regions considered.

Figure 23: Historical Flow of Trade in Environmental Goods

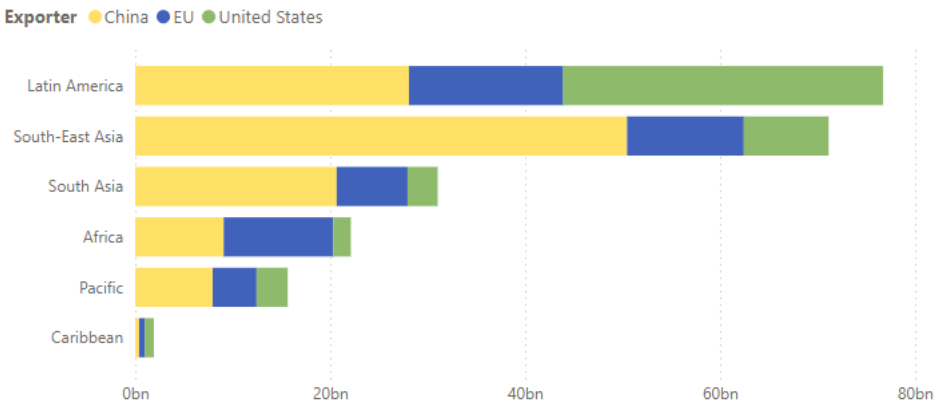


Source: IMF Bilateral Trade in Environmental Goods

Note: The size of the links is determined by the sum of trade in environmental goods from 1994 to 2021

Looking into whether these relationships have changed over time, Figure 24 provides the total exports in environmental goods received by the importing region in 2021, split by the exporting region. This analysis allows us to see whether data for recent years diverts from the trends observed above. **China has strengthened its position across all importing regions, reshaping the landscape of environmental goods exports by 2021.** In Latin America, China has overtaken the US as the main source of environmental goods. The EU remains the largest exporter to Africa, but China asserted its role as the main source of environmental goods to the other regions. The Caribbean is the only exception, as the EU and the US are the main suppliers of environmental goods.

Figure 24: Trade in Environmental Goods by Importer and Exporter (USD trillion, 2021)



Source: IMF Bilateral Trade in Environmental Goods

Note: The following values are the aggregate of environmental goods imported by the importing country groups from the importers of focus in 2021.

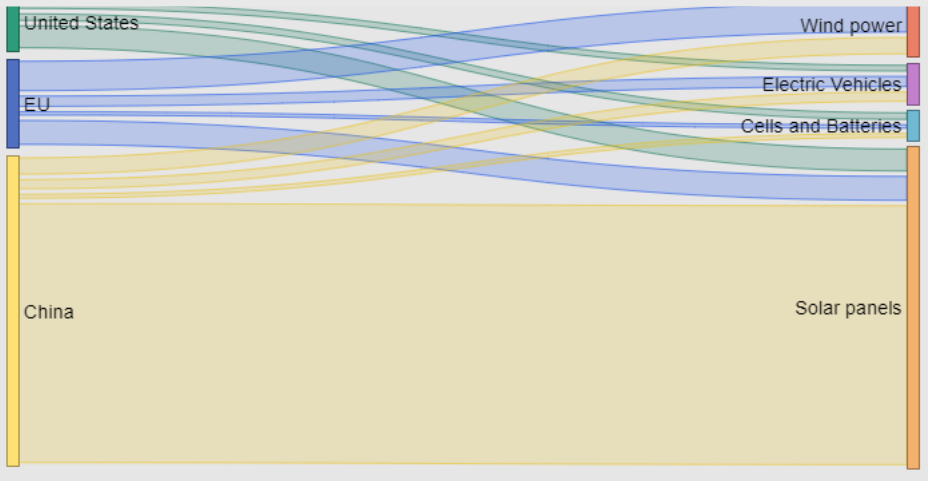
Case Study 1: Trade in Environmental Goods

This section examines export patterns in key green technologies: electric vehicles, solar panels, wind turbines, and batteries. These goods are crucial for reducing carbon emissions by enhancing energy efficiency and sustainability. Analysing trade flows reveals leading regions in exporting these technologies, as well as key importers investing in them. The four selected environmental goods; electric vehicles, solar panels, wind turbines, and cells and batteries, were selected as a result of their high data availability and quality, their key role in the green transition, and expert opinions within the ECF team on where added value could emerge. The complete list of environmental goods reported by the OECD was considered. This list was reduced down to the goods for which there was data availability for all countries within the UNCOMTRADE dataset. From this, an expert consultation was conducted to narrow down the list of interest. Finally, the four key technologies were selected for the case study not only due to their environmental impact but also for their strategic importance in shaping global influence in the green technology sector.

Trend analysis

Within exporting activity of selected regions, the EU is the second largest exporter of electric vehicles and first in wind power, while China dominates the market of solar panels. The US plays a secondary role across all technologies considered, with a relatively stronger export position in solar panels, and cells and batteries. The market for solar panels is the largest among all environmental goods considered, and it is dominated by China. This can be seen in Figure 25, where the largest node across the technologies is that of solar panels, showing that during 2016-2021 it represented the largest amount (in terms of value). Exports from the US and the EU are much smaller. The second most exported environmental good from the four analysed is electric vehicles, for which China is the dominant player closely followed by the EU. Although the electric vehicle market is the second largest, its export volume remains smaller than that of solar panels, indicating that demand for electric vehicles from developing regions is still maturing compared to solar panels. The EU's position as the second largest exporter, close to China, positions it as a key player in the global shift towards sustainable mobility abroad. Wind power is the third most exported environmental good, and the EU is the largest exporter of this technology. Export levels in this market are lower than those of solar panels, however. Exports of cells and batteries are lower than those of the other environmental goods considered, and a dominant player is not yet observed in the data. The small size of this market reflects the early stages of the demand for large-scale energy storage solutions in the importing regions, which is what these goods are mainly used for. However, as renewable energy and electric vehicle adoption continues to grow, battery exports are expected to grow.

Figure 25: Total exports for selected Environmental Goods (2016-2022)



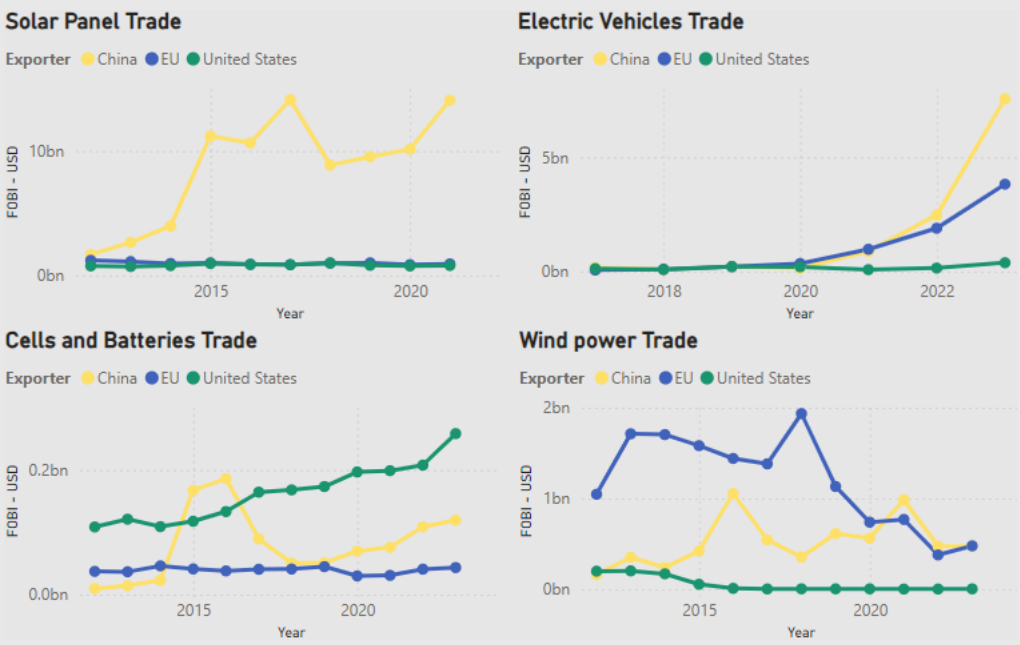
Source: UNCOMTRADE

Note: The following values are the aggregate of environmental goods exported by the exporters for the selected key technologies from 2016-2022. The destinations included in the aggregate value are those recipients of focus within the report. The value of exports is measured at FOB.

Examining the evolution of export activities over the years reveals changes in export capacities and import demand. For solar panels, China has led exports since 2012, with significant dominance from 2015 onwards, reaching its highest observed level in 2021. Figure 26 shows a steady increase in China's solar panel exports. With regards to electric vehicle exports, the EU's and China's increased rapidly between 2020 and 2023. By 2023, annual exports increased to over $3 billion for the EU and $7 billion for China, indicating rising demand from developing markets. Exports of cells and batteries from the three regions have grown more steadily over time, with the US being the largest exporter, followed by China. In the wind power market, the EU dominated exports from 2012 to 2021 but was overtaken by China due to declining EU exports and increasing Chinese exports since 2018. The US remains a minor player. This shift suggests potential changes in the EU's focus or competitive pressure from China.

Among the key players in Europe, Germany leads in exports of solar panels, electric vehicles and wind power, whereas France and the United Kingdom have recently overtaken Germany in exports of cells and batteries. For solar panels, Germany largely dominated the exporting activities to developing countries until 2018, when France closely matched, but did not surpass export flows. Exports of electric vehicles have been largely sold by Germany since 2020 onwards, with a yearly increasing lead. In the wind power market, German exports have experienced some fluctuations over time but have consistently remained the largest across the observed European countries. With regards to cells and batteries, as observed previously, the exporting activities remain relatively similar across countries, with Germany initially being the main exporter, and France and the United Kingdom overtaking in the latest years.

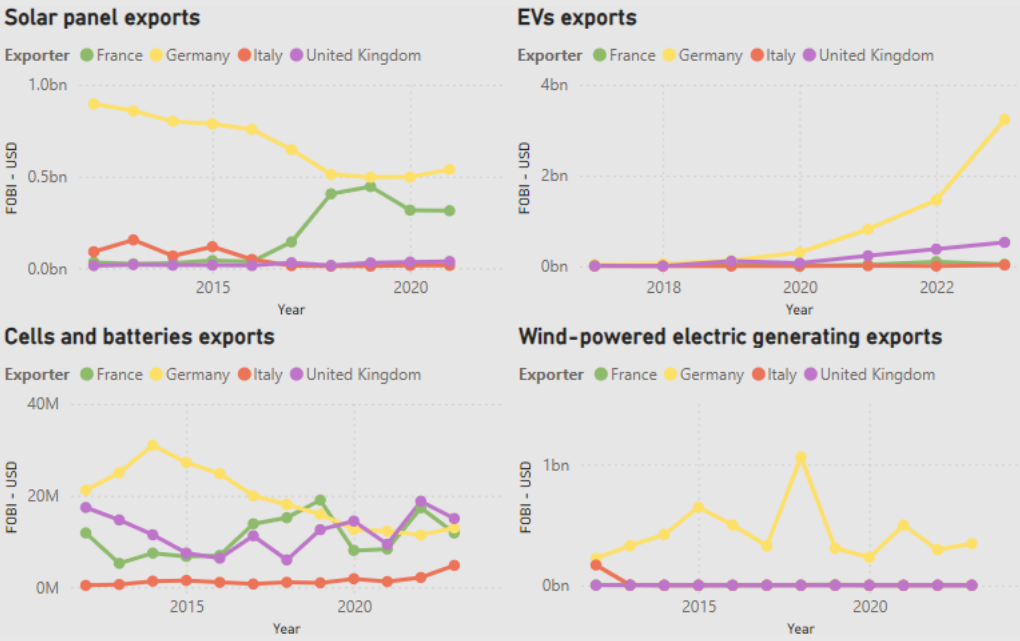
Figure 26: Exports of key technologies across time by exporters



Source: UNCOMTRADE

Note: The following values show trade flows on the selected key technologies from the exporters in the legend to the recipients of focus within this report Value of exports is measured at FOB.

Figure 27: Exports of key technologies across time by exporters – with a focus on Europe



Source: UNCOMTRADE

Note: The following values show trade flows on the selected key technologies from the exporters in the legend to the recipients of focus within this report Value of exports is measured at FOB.

Key importing countries

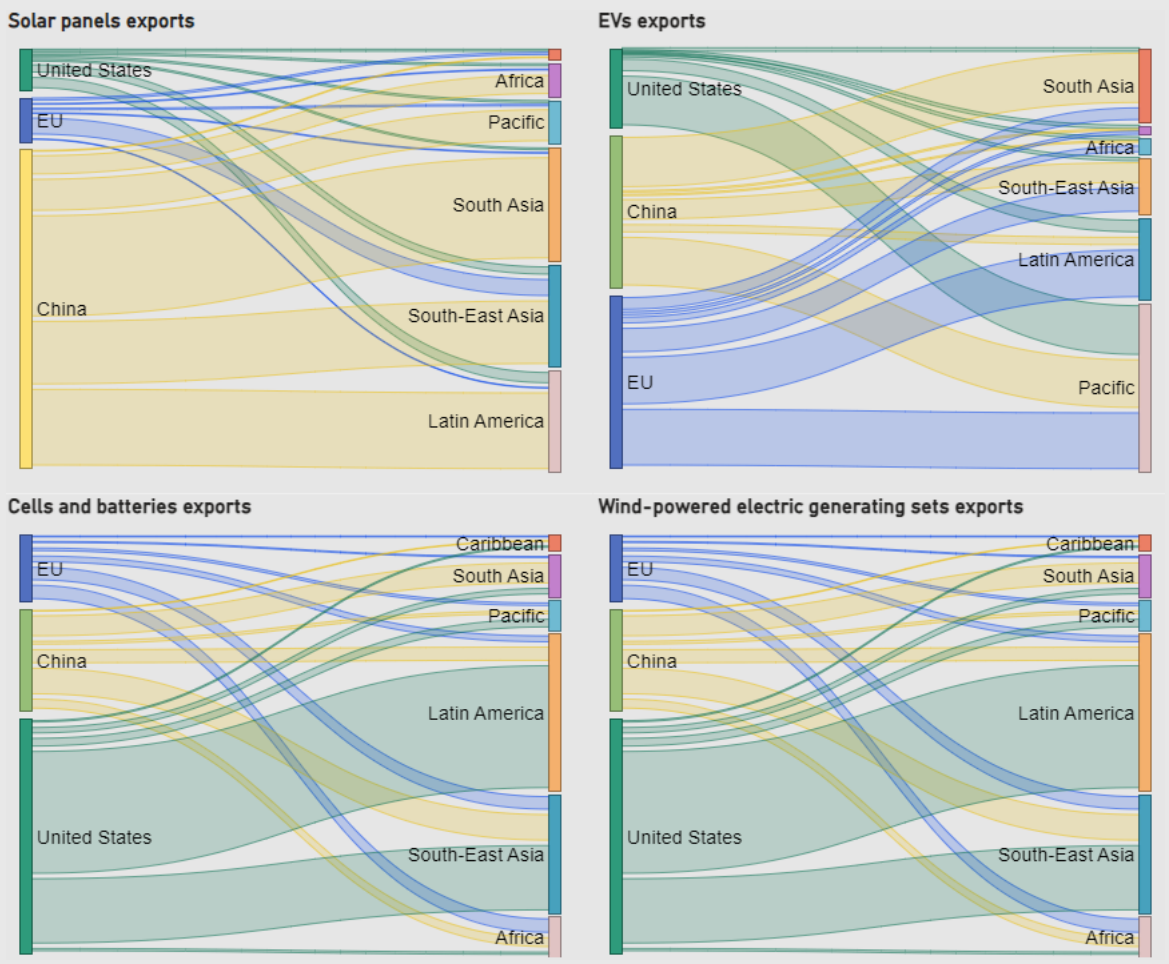
Most solar panel exports go to South Asia, followed closely by South-East Asia and Latin America. The high demand in South Asia is likely driven by the region's rapid industrial expansion and increasing need for sustainable energy solutions.

Within the electric vehicles market, the Pacific is the largest importer, followed by South Asia and Latin America. This suggests a commitment by the Pacific region to reduce emissions in the transport sector and transfer to electric vehicles. All other regions import relatively few electric vehicles up until 2020, while it can be noted that China is the main supplier for South-Asia and the EU for Latin America. Overall, the demand for EVs, though smaller than for solar panels, suggests an emerging interest in sustainable transportation, with the Pacific region serving as an early adopter.

For cells and batteries, Latin America is the main export market, followed by South-East Asia. These regions may require advanced energy storage solutions to support the growing presence of renewable energy sources. All other importing regions present smaller amounts of trade. The demand for Latin America and South-East Asia is satisfied mainly by the US. As renewable energy capacity grows, this demand is likely to increase across all importing regions, opening opportunities for exporting countries to capture market share.

For wind power, Latin America is the main export market, followed by the Pacific and South-East Asia. For Latin America, the majority of the demand is satisfied by EU exports, whereas for the Pacific and South-East Asia demand is satisfied by the EU and China in almost equal terms. The EU's exports to Latin America may reflect both its technological leadership in the wind power market, as well as strategic partnerships.

Figure 28 Key technologies trade flows from exporters to importers



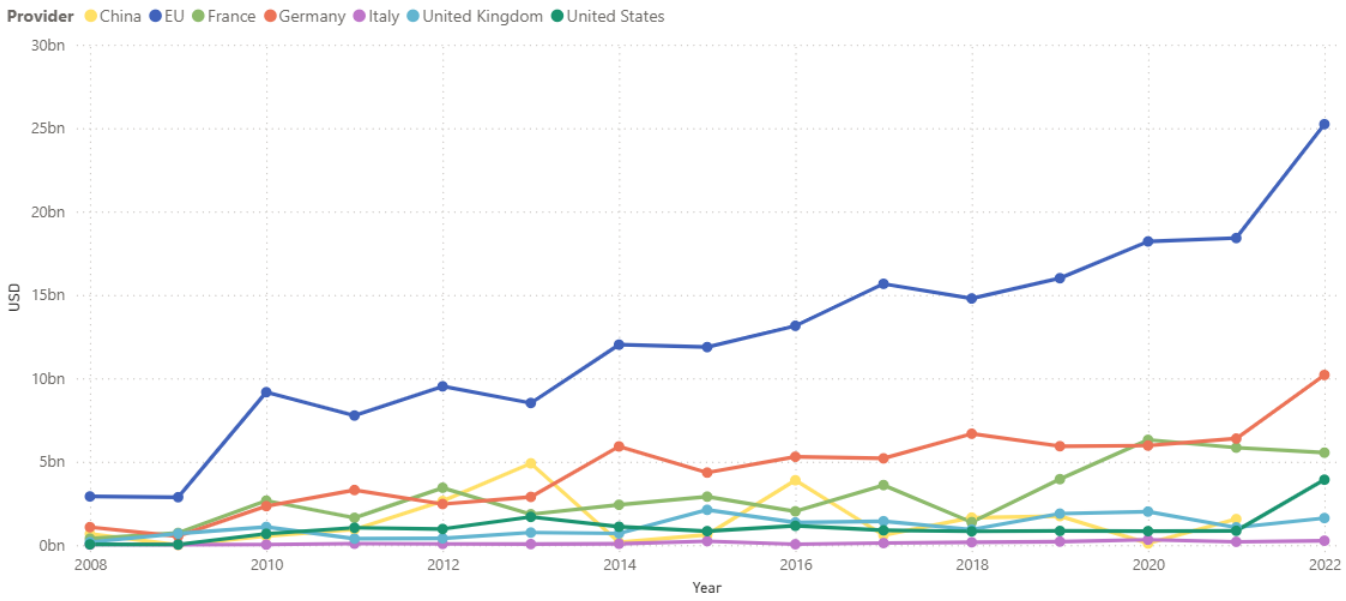
Source: UNCOMTRADE
Note: The size of the nodes and links are determined by the aggregate of environmental goods exported by the exporters for the selected key technologies from 2016-2022. The value of exports is measured at FOB.

4.2. Bilateral public climate-related development finance trends

The EU emerged as the largest provider of bilateral public climate-related development finance in the analysed period, with its largest contributions at USD ~20 billion in 2022. This reflects a steady upward trend in climate finance support from the EU, which began in 2009 and has continued. In contrast, the US provides less bilateral public climate-related development finance, with a notable decline after 2019 with contributions reaching an annual level of USD 1 billion. In 2022, we observe how the support from the US starts to increase, reaching close to USD 5 billion. This shift in support could be potentially explained by the change in US administration and renewed focus on climate finance once the original USD 100 bn goal

was note met in 2020[19]. China's public climate finance increased between 2014 and 2016, but returned to lower levels by 2022, possibly reflecting changing priorities or strategies. It is important to recognise, however, that as a non-Annex I country under the UNFCCC, China does not have the same formal obligations to provide climate finance as the EU and the US. On the international stage, EU Member States deploy significantly higher levels of bilateral public climate-related development finance compared to the US and the UK.

Figure 29: Bilateral Public Climate-Related Development Finance (USD bn)



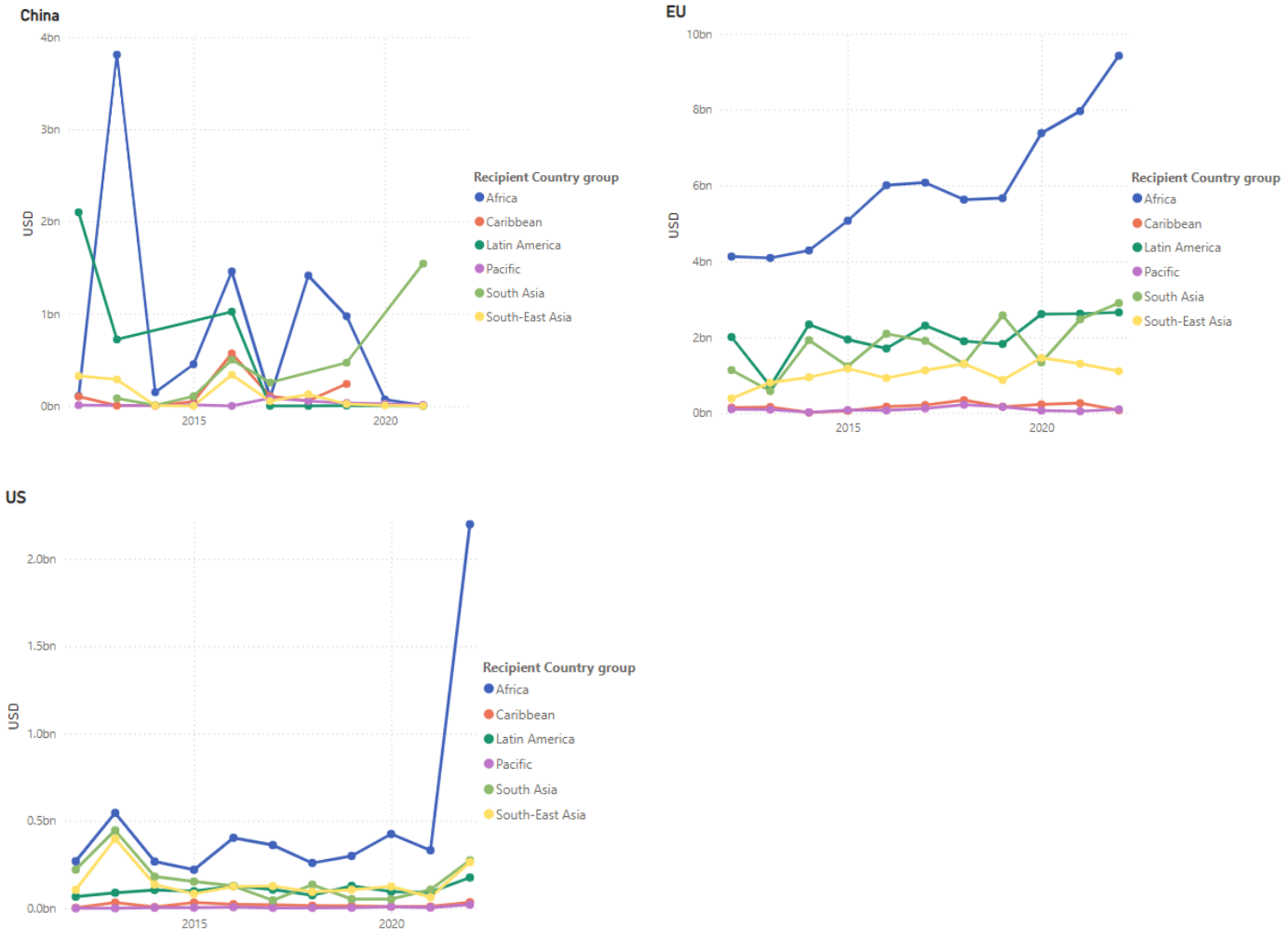
Sources: OECD Development Finance for Climate and Environment, and AidData's Global Chinese Development Finance Dataset

Africa receives most of the bilateral public climate finance provided by the providers considered, with substantial contributions from both the EU and the United States. This high allocation may underscore a focus on supporting climate resilience and sustainable development in a region highly vulnerable to climate impacts. The EU, in particular, is the largest contributor to Africa. South Asia is the second-largest recipient, receiving notable contributions from the EU and China.

The EU appears to distribute its financial support relatively evenly across recipient regions, with significant support to Africa, South Asia, and Latin America. On the other hand, the US support flows primarily to Africa (in priority Ethiopia and Malawi) and Latin America (in particular Guatemala and Peru), suggesting a more targeted approach to climate finance aligned with its geopolitical and economic interests. The US's contributions in Latin America, in particular, reflect its regional influence and potential prioritisation of neighbouring regions. China's significant contributions to South Asia, in particular Pakistan, highlight its strategic interest in that region, through infrastructure projects and economic partnerships. This engagement is consistent with China's broader foreign policy objectives and its emphasis on regional connectivity and development. On the other hand, contributions from China to African states have been decreasing.

[19] Lashof, Dan. "Tracking Progress: Climate Action Under the Biden Administration." *World Resources Institute*, 30 July 2024, https://www.wri.org/insights/biden-administration-tracking-climate-action-progress. Accessed 4 Feb. 2025.

Figure 30: Bilateral Public Climate Finance for China, EU and US (USD bn, 2021)



Sources: OECD Development Finance for Climate and Environment, AidData's Global Chinese Development Finance Dataset

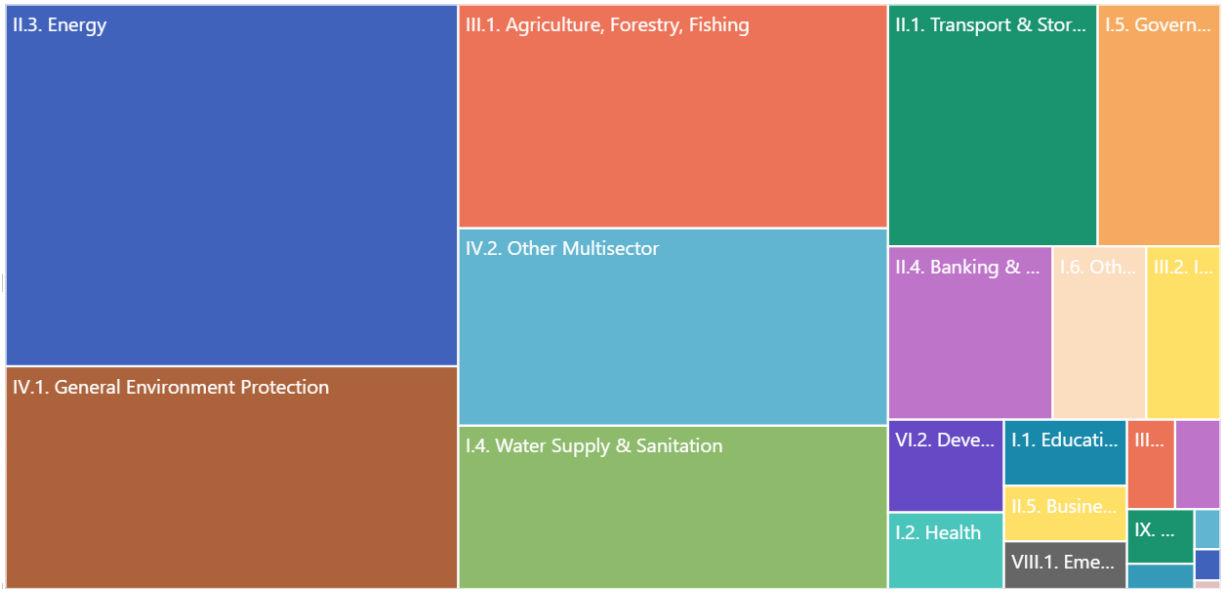
The sectoral breakdown of climate finance allocations for the EU, US, and China reveals distinct priorities. The EU's funding is distributed across multiple sectors, reflecting a comprehensive approach that addresses a wide range of environmental and social needs. In contrast, the US funding focuses more narrowly on environmental protection and social resilience, emphasising strategies that integrate ecological sustainability with efforts to enhance human well-being and community adaptation to climate challenges. China's focus on energy and infrastructure sectors reflects a development-oriented approach, leveraging climate finance to support economic growth and expand influence through strategic partnerships.

The EU's climate finance allocations are diversified, with substantial investments in both energy and environment protection, suggesting a dual focus on clean energy transitions and broader environmental sustainability. Other significant sectors include agriculture, forestry and fishing, indicating the EU's emphasis on sustainable land use and biodiversity conservation. Investments in water supply and sanitation and multisector initiatives demonstrate the EU's commitment to addressing essential services and cross-sectoral climate impacts. This balanced allocation supports both mitigation and adaptation needs across various environmental and infrastructure domains (see below for more details).

The largest share of US bilateral public climate-related development finance goes to environmental protection. This is a broad sector which includes projects for biodiversity, resource management, and reducing environmental degradation, but which is also often chosen when the activity's scope is too broad to be assigned to an specific sector. Significant funds also support sustainable land use and food security in agriculture, forestry, and fishing. Additionally, the US invests in population policies and energy, emphasizing renewable energy and efficiency, though less than the EU and China. Smaller investments in health acknowledge the link between climate change and human health risks.

China's climate finance is mainly directed towards the energy sector, emphasising energy infrastructure development, likely due to the BRI's goals. Apart from energy, China invests significantly in transport, storage, and industry, focusing on large-scale infrastructure and economic growth. This strategy supports both economic growth and climate resilience, especially in developing regions. Additionally, China funds water supply, sanitation, and other infrastructure projects, highlighting its infrastructure-led climate support approach. It is important to highlight that, since climate finance data for China is not systematically collected, it is possible that part of general Chinese environmental contributions are not being tracked.

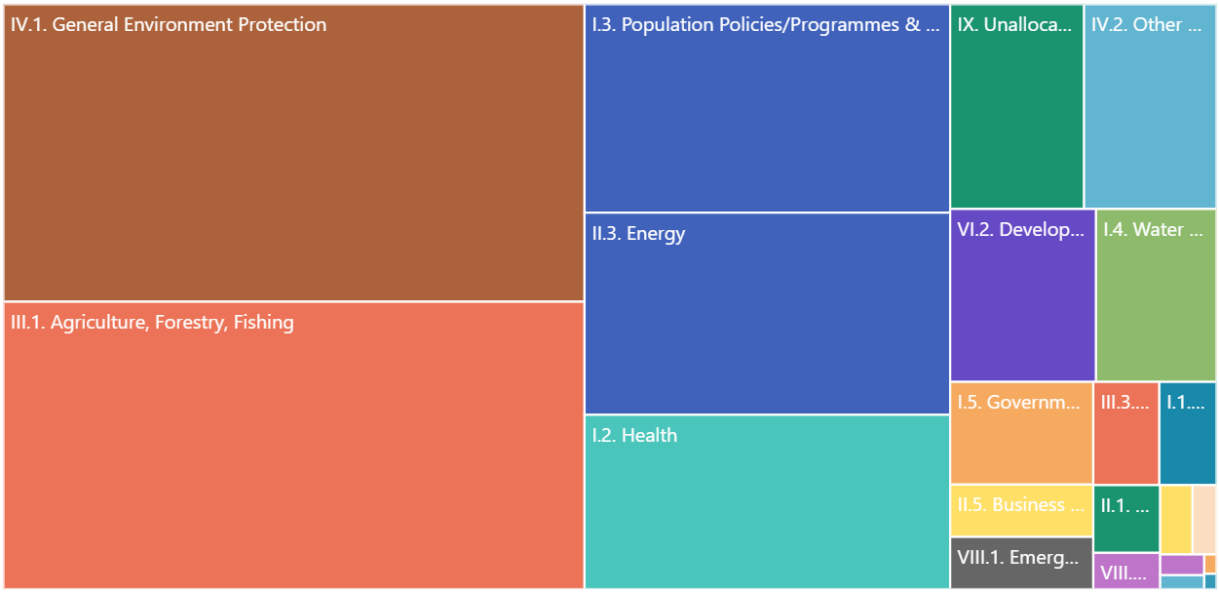
Figure 31: EU Sector Breakdown



Source: OECD Development Finance for Climate and Environment

Note: The size that a sector takes in the tree map is defined by the size of bilateral public climate finance that the sector receives across all developing regions of focus.

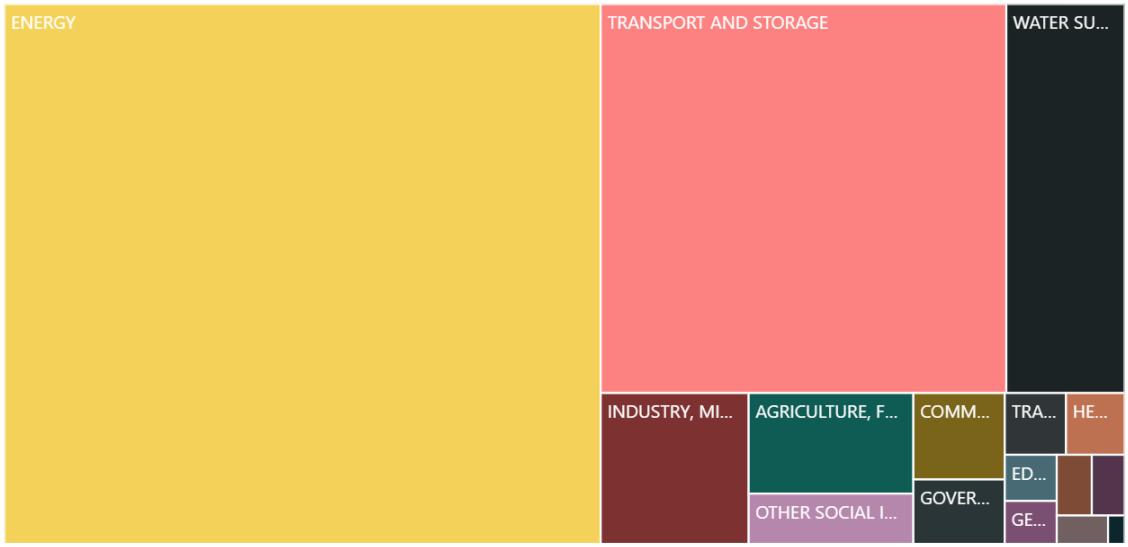
Figure 32 US Sector Breakdown



Source: OECD Development Finance for Climate and Environment

Note: The size that a sector takes in the tree map is defined by the size of bilateral public climate finance that the sector receives across all developing regions of focus.

Figure 33 China Sector Breakdown



Source: AidData's Global Chinese Development Finance Dataset

Note: The size that a sector takes in the tree map is defined by the size of bilateral public climate finance that the sector receives across all developing regions of focus. The sectoral categorisation of this data differs from that of the EU and US since the data is reported in different data sources. Regardless we have matched the sectors across datasets where possible and aligned the colour coding accordingly.

Case Study 2: Adaptation vs Mitigation Public Climate Finance

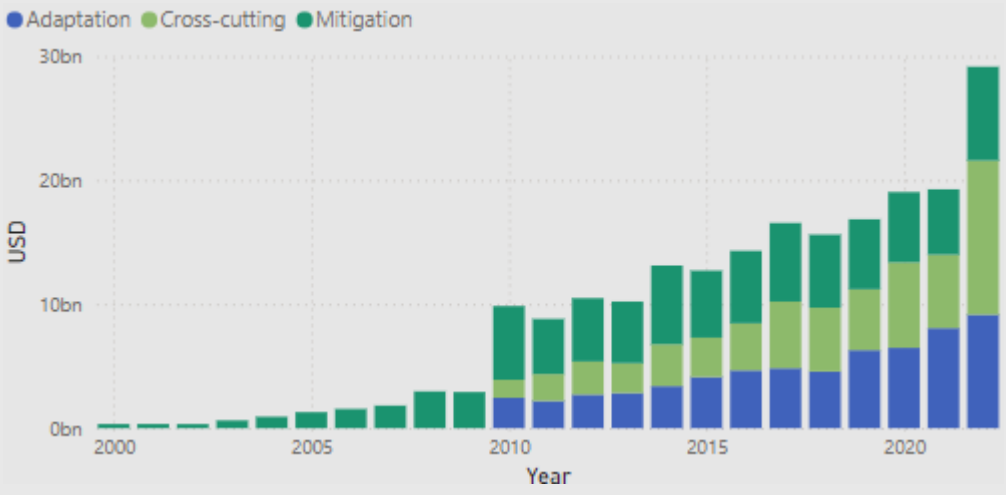
Looking at the split between adaptation and mitigation finance is essential for assessing the evolution and priorities of both providers and recipients involved. This analysis aims to provide insights into how the EU and US use public climate finance instruments as a way to address climate vulnerabilities of recipients (adaptation support), vs emissions reductions (mitigation support). This will help identify changes to global priorities, the responsiveness of finance to region-specific needs, and the alignment of support with global goals. Over time, we expect to see increased funding for adaptation; as the effects of climate change intensify, the demand for adaptation finance is expected to increase.

In Figure 34, the split of adaptation vs mitigation public climate finance across time is displayed for all providers and recipients of focus, in aggregate. It is important to note that there is also a category called 'cross-cutting', which represents those projects which target both adaptation and mitigation.

Overall, we observe that mitigation finance dominated until 2020, after which adaptation finance became more substantial. From 2000 to 2010, most public climate finance went to mitigation projects, with limited funds for adaptation. Between 2010 and 2018, both types of finance increased steadily. By 2018, adaptation finance surpassed mitigation and continued to do so, exceeding mitigation by a few billion dollars by 2020 and remaining higher in 2022. The cross-cut between these projects trended upward, peaking in 2021-2022.

The need to build resilience against climate impacts in vulnerable regions is increasing. Initially, mitigation finance was predominant, but as climate change effects become clearer, more funds are directed towards adaptation projects. The overlap between adaptation and mitigation indicates a recognition that these goals should be integrated.

Figure 34 Split between adaptation and mitigation bilateral public climate-related development finance for the US and the EU combined, across all recipients



Sources: OECD Development Finance for Climate and Environment

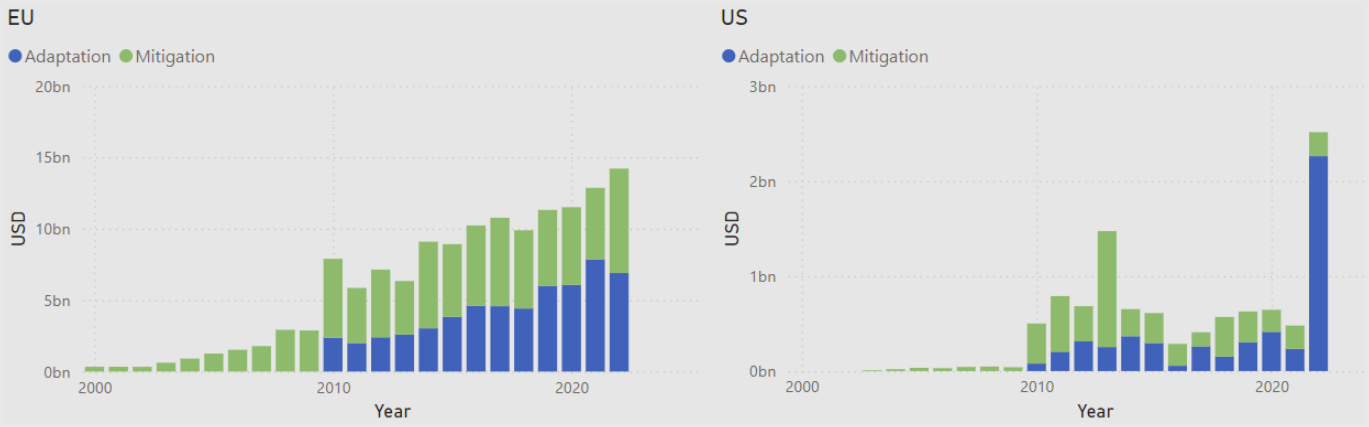
Note: The adaptation and mitigation specific levels shows the amount of bilateral public climate finance that was directed to projects where adaptation/mitigation was a primary or significant objective. This means that both these values capture projects where both objectives are present simultaneously. The overlap line in the left graph portrays the sum of all the bilateral climate finance where adaptation and mitigation where both an objective, however it does not provide the disaggregation of how

much is assigned to each objective. As a result, the adaptation and mitigation values cannot be isolated to the support which was exclusively directed to these objectives. Based on this, summing of the adaptation and mitigation values is not recommended, as this will involve some double counting.

The EU focused mainly on mitigation finance over the 2000-2010 period. From 2010 onwards, the EU adopted a more balanced approach, steadily increasing the share of adaptation finance to reach equal levels by 2020. This highlights a shift in the EU's strategy to support long-term emissions reduction goals and investments to help mitigate climate impacts. Additionally, an increase in the cross-cutting finance between adaptation and mitigation can be seen from 2010 onwards, indicating an increase in projects addressing both objectives.

In contrast, the US mainly directed its public climate finance towards mitigation efforts throughout most of the observed periods, with less support for adaptation. However, a substantial increase in adaptation support occurred in 2022, when it became the dominant focus. This spike in both adaptation and mitigation finance likely reflected renewed US commitments to climate action by the previous US Administration (2021-2024).[20]. Notably, there was also a growing overlap in adaptation and mitigation.

Figure 35: Split of adaptation and mitigation bilateral public climate finance for the EU and the US



Sources: OECD Development Finance for Climate and Environment

Note: The adaptation and mitigation specific levels shows the amount of bilateral public climate finance that was directed to projects where adaptation/mitigation was a primary or significant objective. This means that both these values capture projects where both objectives are present simultaneously. Based on this, summing of the adaptation and mitigation values is not recommended, as this will involve some double counting.

[20] COP 29 Update: U.S. International Public Climate Finance. US.S Department of State. Released on November 18, 2024. Available at: COP 29 Update: U.S. International Public Climate Finance - United States Department of State

Figure 36 illustrates the distribution of adaptation and mitigation public climate finance by recipient. This enables us to evaluate whether certain regions prioritise addressing immediate vulnerabilities from the effects of climate change over long-term emissions reduction, and how this balance has evolved over the years.

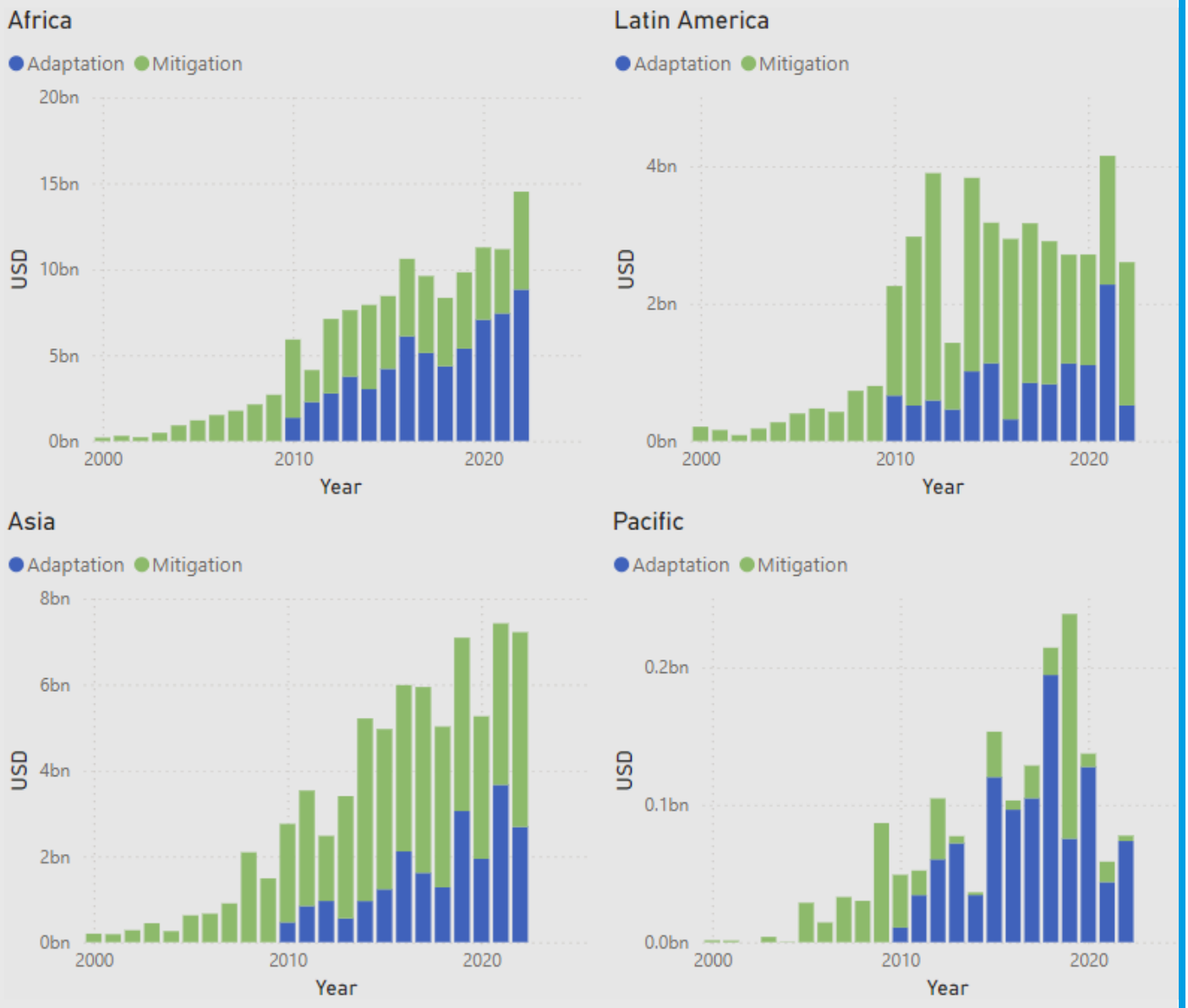
Africa received steadily growing amounts of both adaptation and mitigation finance over the years. Mitigation finance was the focus until 2010, but from then on adaptation finance became more important, reaching parity with mitigation finance by 2020. The emerging balance between the two types of finance suggests a growing recognition of Africa's dual need for both immediate adaptation measures and long-term investment in mitigation strategies.

In Latin America, mitigation finance has consistently surpassed adaptation finance since 2010. This increase reflects efforts to cut emissions in energy, deforestation, and agriculture. Although adaptation finance is growing and the gap is closing slightly, it still lags behind.

In Asia, which includes South Asia and South-East Asia, mitigation finance has consistently exceeded adaptation finance throughout the observed period. The higher allocation to mitigation projects is likely due to Asia's emphasis on energy transition, infrastructure decarbonisation, and renewable energy projects. Although adaptation finance has increased over the years, it has grown at a slower rate than mitigation finance.

In the Pacific region, adaptation finance has generally played a more significant role compared to mitigation finance over most periods. Since 2011, adaptation finance has surpassed mitigation finance, reflecting the region's heightened susceptibility to climate impacts such as rising sea levels and extreme weather events. However, during the 2016-2018 period, there were some fluctuations in this trend, with mitigation finance exceeding adaptation finance.

Figure 36: Split of adaptation and mitigation bilateral public climate finance by recipient



Sources: OECD Development Finance for Climate and Environment

Note: The adaptation and mitigation specific levels shows the amount of bilateral public climate finance that was directed to projects where adaptation/mitigation was a primary or significant objective. This means that both these values capture projects where both objectives are present simultaneously. Based on this, summing of the adaptation and mitigation values is not recommended, as this will involve some double counting.

4.3. Trends in Private Finance Mobilised by Bilateral Public Climate Finance

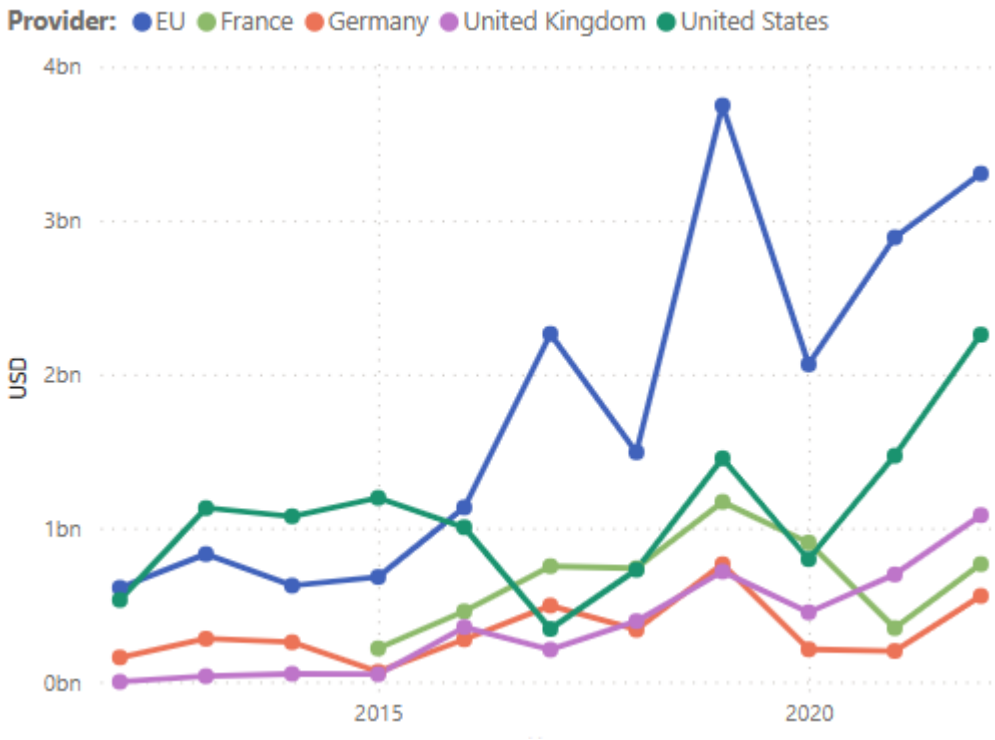
EU, UK, and US

Since 2016, the EU has taken the lead in private finance mobilised by bilateral public climate finance in developing countries, surpassing the US, which had previously dominated contributions. By 2021, EU member states and institutions mobilised private finance at a level above that of the US (over USD 1 billion). Among EU member states, France stands out as the top contributor, making substantial investments in climate-related private funds.

Considerable amounts of private climate finance were mobilised by the US in developing countries between 2012 and 2016. However, after this period, the US-mobilised private climate finance declined significantly, falling below the levels mobilised by the EU. In more recent years, however, US private climate finance support increased again, with notable growth since 2020. The introduction by the US of ambitious climate-related policies, such as the *Inflation Reduction Act (IRA)* and the *Bipartisan Infrastructure Law*, likely created incentives for private sector participation in climate investments. In addition, the US traditionally relied on market-based instruments, mainly guarantees, to mobilise private finance. Since 2020, there has been a renewed push to leverage public resources to attract private capital such as shares in CIVs, co-financing and direct investment in companies and SPVs. New initiatives include the *Green Climate Fund* and development finance tools from agencies like the US International Development Finance Corporation (DFC). These mechanisms provide investors with greater confidence to engage in climate-related projects, both domestically and internationally.

For both the EU and the US, mobilised private climate finance reached a high-point around 2019, followed by notable declines in 2020, likely due to the impacts of the COVID-19 pandemic, which disrupted financial flows worldwide. For all countries, the flows recovered to pre-pandemic levels, even surpassing them for both the EU and US.

Figure 37: Bilateral Mobilised Private Finance (USD bn)

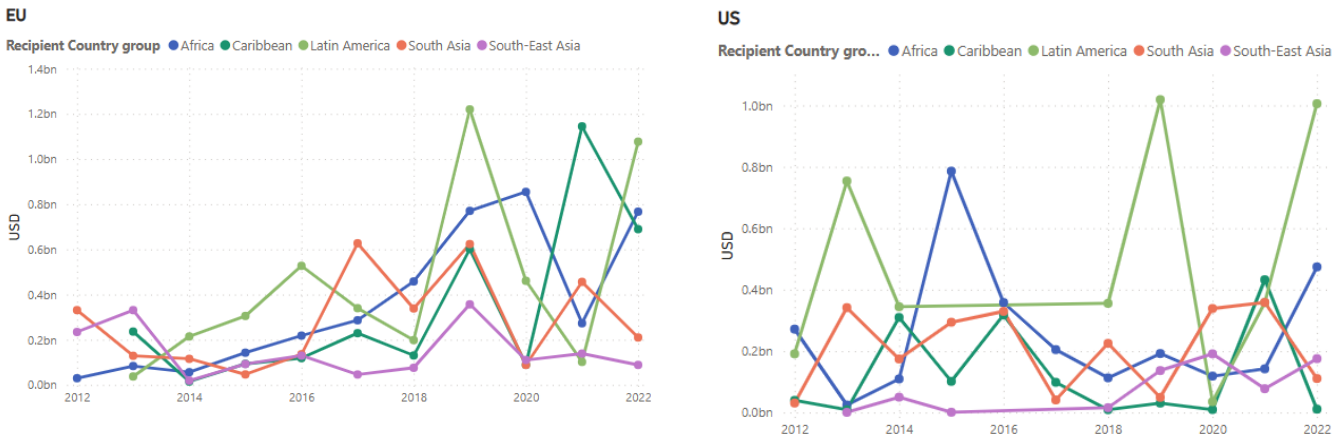


Source: OECD Mobilised Private Finance for Development

For the EU, Latin America and Africa have been among the main recipients historically albeit experiencing substantial fluctuations. Africa presented a sustained increase over the years, aside from a one-off decrease in 2021, reflecting the importance of the region and the increasing need for climate finance. Latin America, experienced highly fluctuating support with peaks in 2016, 2019, and 2022 when it represented the main recipient region. The Caribbean presented lower levels of support but a significant peak in 202. Other regions, including the South-East and South Asia, show lower and more stable levels of support.

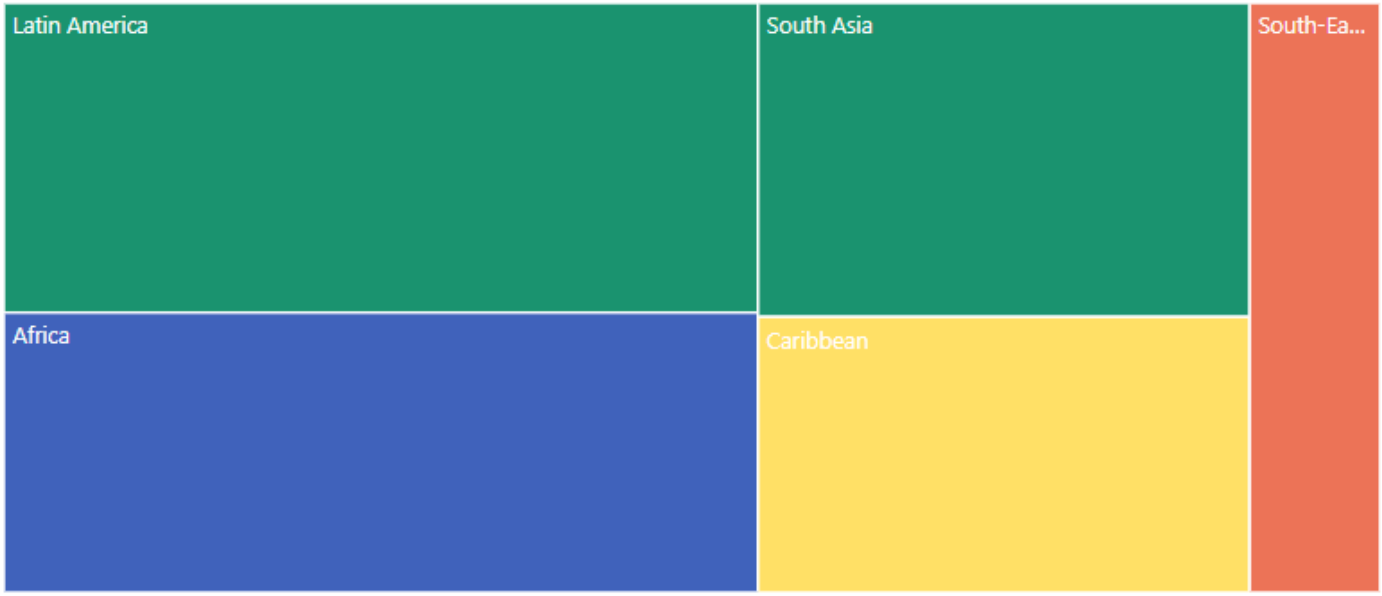
Latin America and Africa have also been the primary recipients of the US, often peaking above USD 0.5 billion, with Latin America showing particularly high spikes in 2013, 2018, and 2022. Africa also saw notable increases, particularly in 2014 but had been on a decreasing then stagnating tend up until 2021. In 2022, we observe a notable increase in the support for both Latin America and Africa. Meanwhile, Caribbean, South-East and South Asia have experienced more moderate levels of funding.

Figure 38: Private finance mobilised by bilateral public climate finance(USD bn)



Sources: OECD Mobilised Private Finance for Development

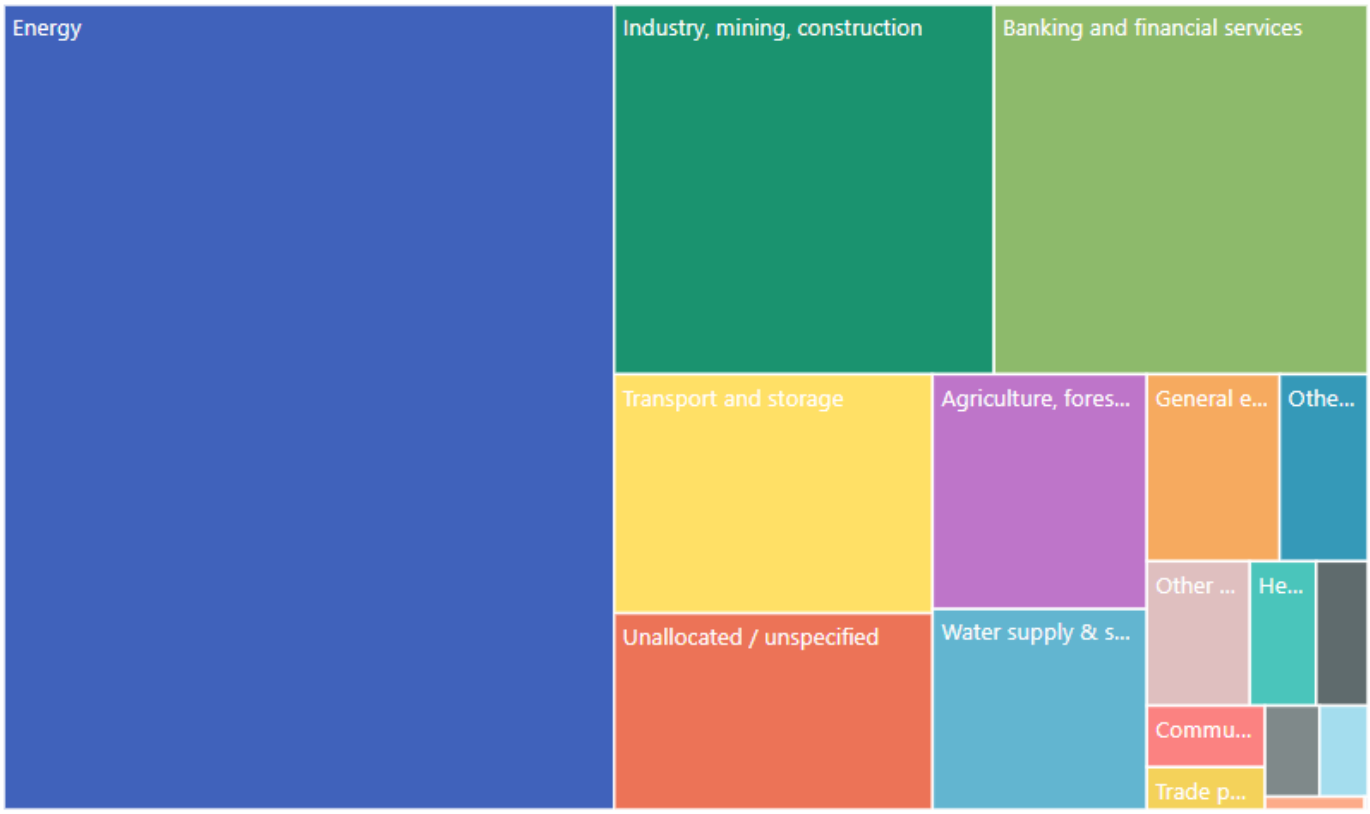
Figure 39: Total Private finance mobilised by bilateral public climate finance for EU and US



Sources: OECD Mobilised Private Finance for Development

The sectoral allocation of mobilised private climate finance in developing countries is heavily concentrated in the energy sector, reflecting a strong focus on renewable energy, energy efficiency, and decarbonisation. Significant funding also flows into industry, mining, construction, and banking and financial services, suggesting investments in green industrial practices, climate-resilient infrastructure, and financial instruments supporting climate initiatives. Moderate allocations are directed toward transport, agriculture, forestry, and water supply, highlighting efforts in low-carbon mobility, sustainable land use, and water security.

Figure 40: Sector breakdown (USD bn, EU and US)



Sources: OECD Mobilised Private Finance for Development

Case Study 3: Evolution of climate finance instruments

This section examines the strategic deployment of financial instruments in climate finance, focusing on how their evolution reflects shifting priorities and trade-offs. The analysis highlights the tension between concessionality and financial viability, as grants and low-interest loans give way to market-oriented tools like guarantees and equity investments to leverage private sector participation. This shift raises questions about accessibility for regions with constrained fiscal space, where limited ability to absorb debt often necessitates highly concessional financing. The section also explores the interplay between risk and instrument selection, showing how guarantees and co-financing arrangements have become pivotal in mitigating private sector hesitancy, albeit sometimes at the cost of direct support to vulnerable regions.

Bilateral mobilised private finance

Mobilised private finance encompasses a range of mechanisms to stimulate investment in climate-related projects. Credit lines, for example, are pre-approved amounts of funding provided by financial institutions that allow private companies to access money flexibly as needed for their projects. In contrast, direct investments in companies and special purpose vehicles (SPVs) involve public entities injecting upfront capital directly into private ventures, often through equity stakes or convertible debt. Both approaches focus on providing financial support, but credit lines emphasise flexibility, while direct investments are more fixed and targeted. To mitigate risks, guarantees play a crucial role by ensuring public institutions cover potential losses if a project fails, encouraging private investors to commit. This contrasts with simple co-financing, where public and private entities jointly fund a project, sharing both risks and rewards equally. Meanwhile, shares in collective investment vehicles (CIVs) allow public finance to invest in pooled funds, which spread risk across a portfolio of climate-related projects and leverage additional private contributions. Together, these instruments can balance flexibility, risk mitigation, and collaboration to create an effective framework for mobilising private finance.

When examining both the EU and US combined, it is observed that credit lines and guarantees have consistently contributed significantly to mobilising private climate finance. Credit lines presented notable increases around 2016, 2019, and in 2022, reaching nearly 2.5 billion USD. This pattern suggests that credit lines remain a key tool for financing climate projects, likely due to their flexibility and relatively lower risk compared to equity investments. The resurgence of credit lines in 2022 could indicate renewed interest in structured lending to support climate initiatives, possibly due to more favourable economic conditions or policy support. Guarantees where the main financing instrument until 2016 were they become less popular, until they presented further increases from 2020 onwards.

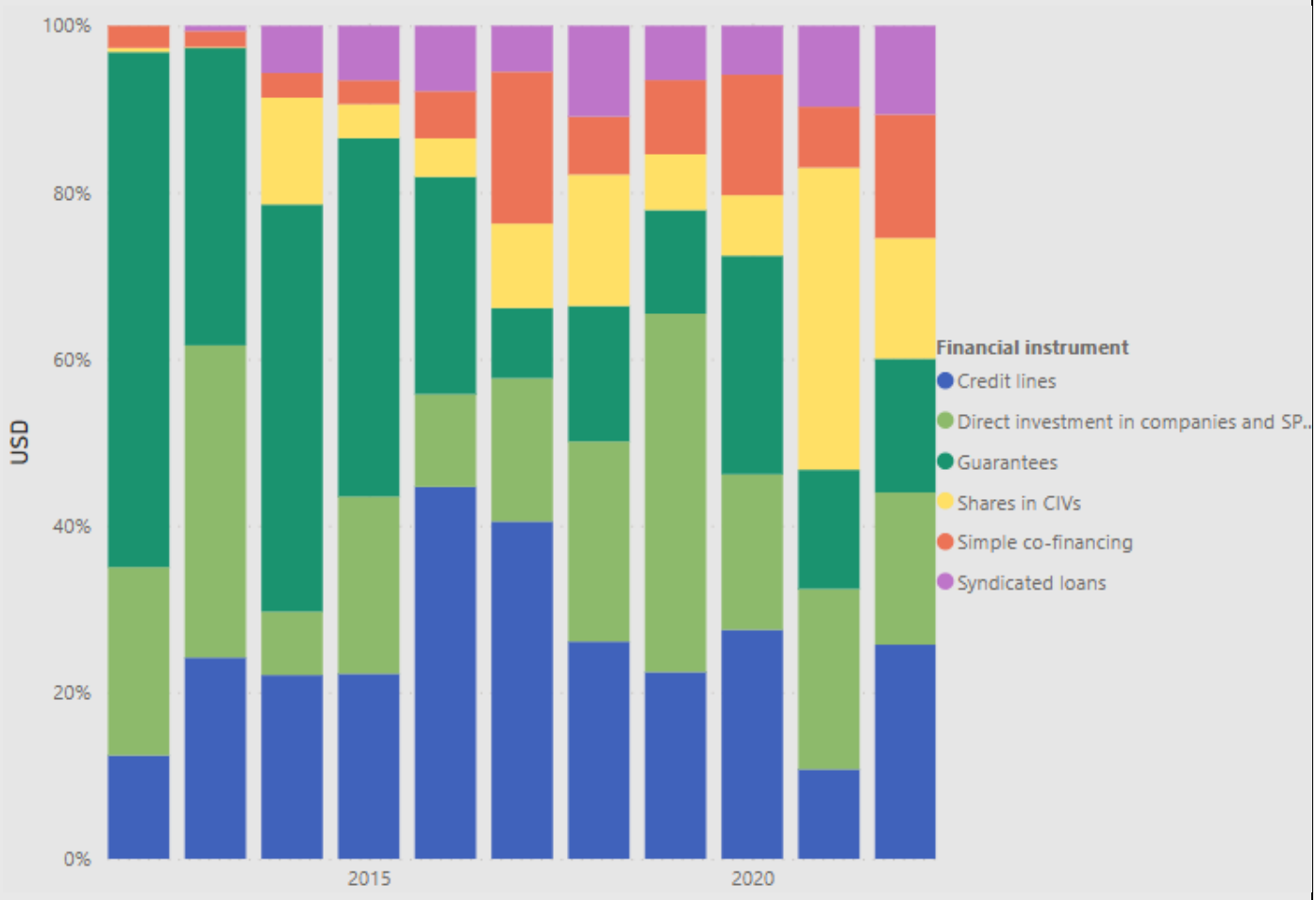
Direct investments in companies and Special Purpose Vehicles (SPVs) have shown significant volatility but an upward trend, especially in 2019. During this period, these investments surpassed others, indicating a preference for ownership stakes and higher returns in climate projects. This suggests growing confidence in direct equity investments in climate sectors and a maturing market.

Simple co-financing and syndicated loans have seen gradual increases. These instruments highlight the role of collaborative financing approaches in mobilising private capital for climate projects, where multiple public and private entities share financing responsibilities. Syndicated loans, represent efforts to

diversify funding sources and enable large-scale projects that require substantial capital.

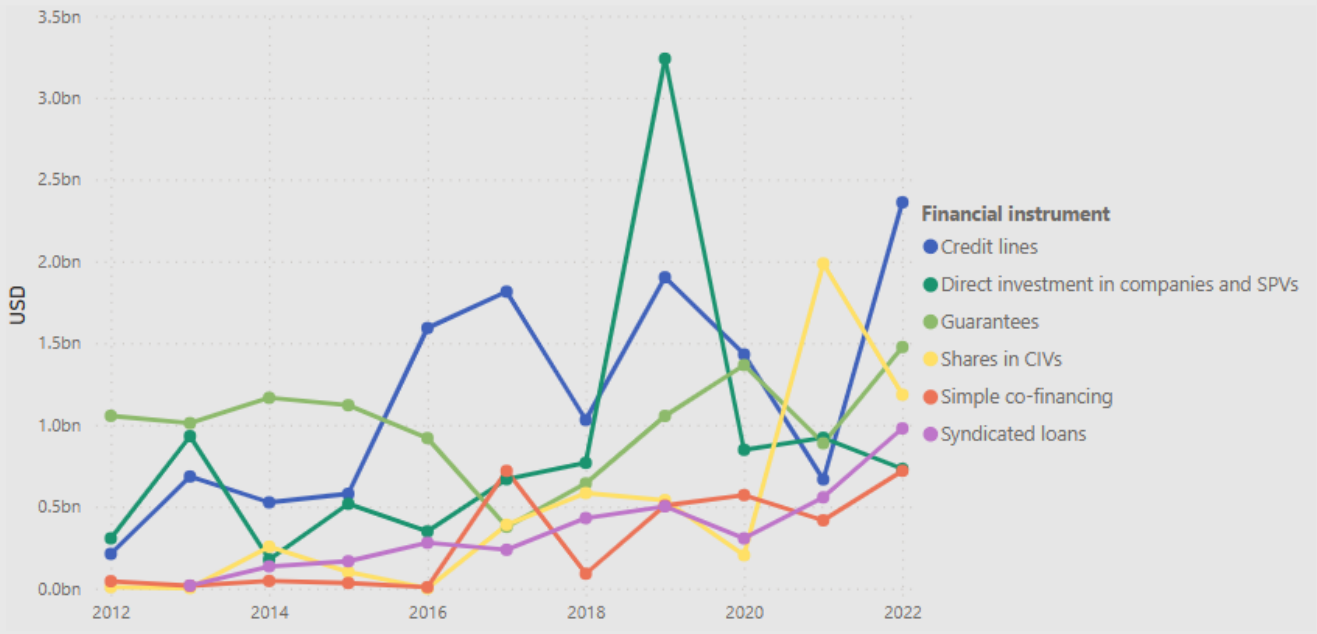
Finally, there has been a significant increase since 2021 in the use of shares in Collective Investment Vehicles (CIVs) within bilateral mobilised private climate finance. This surge indicates a growing preference for pooled investment structures, which allow multiple investors to collectively fund a diversified portfolio of climate-related projects.

Figure 41: Breakdown of private finance mobilised by bilateral public climate finance by Financial Instrument (%)



Sources: OECD Mobilised Private Finance for Development

Figure 42: Private finance mobilised by bilateral public climate finance by Financial Instrument (USD bn)



Sources: OECD Mobilised Private Finance for Development

Africa deep-dive

The strategies employed by the EU and the US for mobilising private climate finance in Africa reflect differing priorities and approaches to address the continent's climate financing needs.

The EU uses a diversified mix of instruments, with credit lines playing a central role. This approach prioritises flexibility, allowing private entities in Africa to access pre-approved funds as needed. The EU also uses direct investments in companies and special purpose vehicles (SPVs), demonstrating a proactive effort to provide targeted funding to climate-related ventures in Africa. Over time, the EU has expanded its use of guarantees and shares in collective investment vehicles (CIVs) to leverage private capital and spread investment risks. These instruments, combined with smaller but consistent use of simple co-financing, indicate a collaborative approach aimed at enhancing the financial viability of projects across diverse sectors.

The US relies heavily on guarantees as the cornerstone of its strategy in Africa. This reflects a primary focus on mitigating financial risks to encourage private sector investment in a region where perceived risks are often high. While effective in de-risking investments, this strategy offers less direct financial support to African stakeholders compared to the EU's approach. Recent years, however, have seen the US increasingly employ shares in CIVs and simple co-financing, indicating a gradual shift towards pooled and collaborative funding mechanisms. Nevertheless, the US mix of instruments remains less diversified, relying predominantly on guarantees, which limits its ability to address the broader range of financing needs in Africa.

Figure 43 Financial Mix for Africa (%)

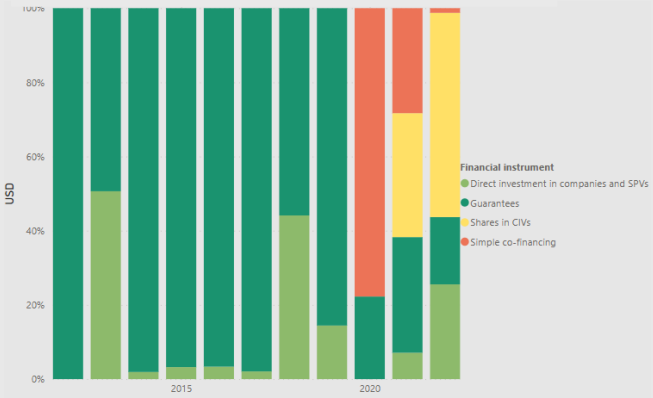
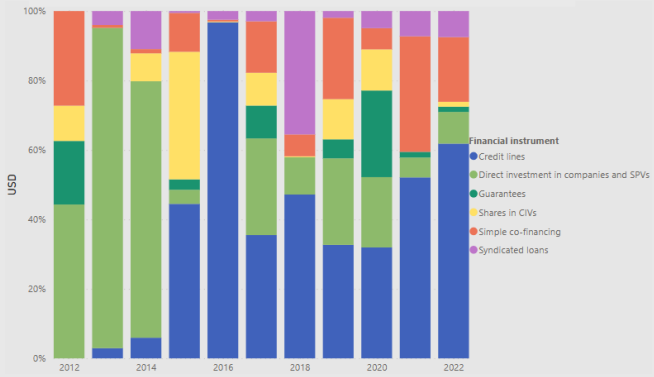


Figure 44: EU Financial Mix for Africa (%)



Sources: OECD Mobilised Private Finance for Development

The comparison highlights interesting differences in how the two actors engage with Africa's climate finance challenges. The EU's diverse approach caters to the continent's complex and varied financial needs, combining risk-sharing tools with direct funding and flexible credit mechanisms. This is particularly suited to Africa's constrained fiscal space, where concessionality and adaptability are critical. Meanwhile, the US's reliance on guarantees prioritises large-scale private investments by addressing perceived risks but provides fewer direct benefits to local actors. Both strategies have their merits: as shown by the EU's approach supports a wide range of instruments, while the US's focus on risk mitigation attracts significant private sector involvement.

Bilateral public climate-related development finance

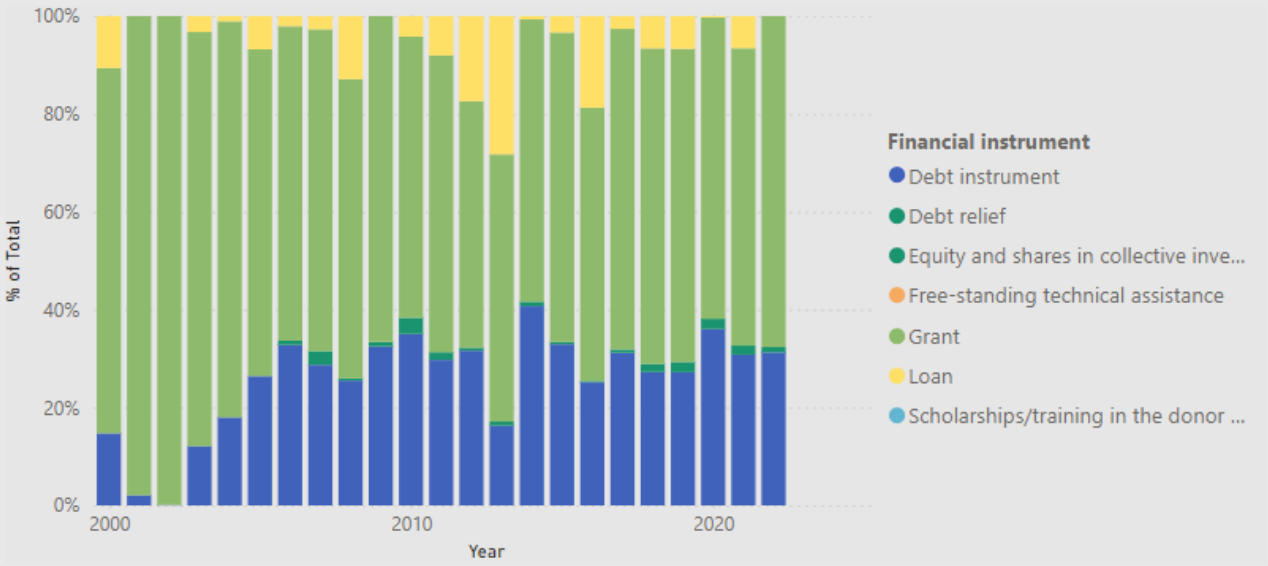
Public climate finance encompasses a range of instruments to support climate-related projects and initiatives, each tailored to address specific needs and challenges. Debt instruments, such as bonds and loans, are used by public entities to raise capital for large-scale climate projects. In cases where financial burdens hinder progress, debt relief reduces or restructures the obligations of developing countries, freeing up resources for climate action through concessional terms or cancellations. Public entities can also invest in equity and shares in collective investment vehicles (CIVs), which pool funds from multiple investors to support diverse portfolios of climate initiatives. In addition to financial tools, free-standing technical assistance plays a key role by providing expertise, capacity-building, and advisory services essential for implementing effective projects. Grants offer non-repayable funding to finance research, pilot projects, and capacity-building efforts, while loans provide funds to governments or organisations with favourable terms, such as low interest rates and extended repayment periods, to enable sustainable climate investments. Lastly, scholarships and training programmes focus on building human capital and equipping individuals and communities with the skills and knowledge needed to address climate challenges. Together, these instruments form a comprehensive toolkit for advancing public climate finance goals.

Figure 45 below illustrates the evolving percentage mix of financial instruments in bilateral public climate finance from 2000 to 2021 across all providers. Historically, the OECD reported ODA flows at face value, treating both grants and loans equally without accounting for the concessionality (i.e., the degree of favourability) of loans. This approach overlooked the actual economic value of assistance, especially concerning loans with varying terms such as interest rates, repayment schedules, and grant

elements. In 2019, the OECD implemented a significant change by adopting the "grant equivalent" system for reporting ODA loans. Under this methodology, only the concessional portion of a loan (i.e., the "gift" component) is counted as ODA. This shift aims to more accurately represent the genuine financial effort made by providers, particularly highlighting loans offered on generous terms. Consequently, this transition to the grant equivalent system introduces complexities when comparing historical data, as earlier figures may not fully capture the concessional nature of past financial instruments.

The graph shows that grants have consistently represented the largest share of bilateral climate finance, making up a significant portion of total funding across the years. Grants provide funding without requiring repayment, supporting projects in developing countries with limited financial capacity. Debt instruments also account for a notable share, particularly from 2005 onwards, indicating a reliance on loans to finance climate projects. The use of equity and shares in collective investment vehicles (CIVs), while smaller, shows a slight increase over the years, suggesting a growing willingness to engage in investment models that share ownership and potentially higher returns. Free-standing technical assistance and debt relief appear in smaller proportions, reflecting their targeted, complementary role in the broader climate finance landscape.

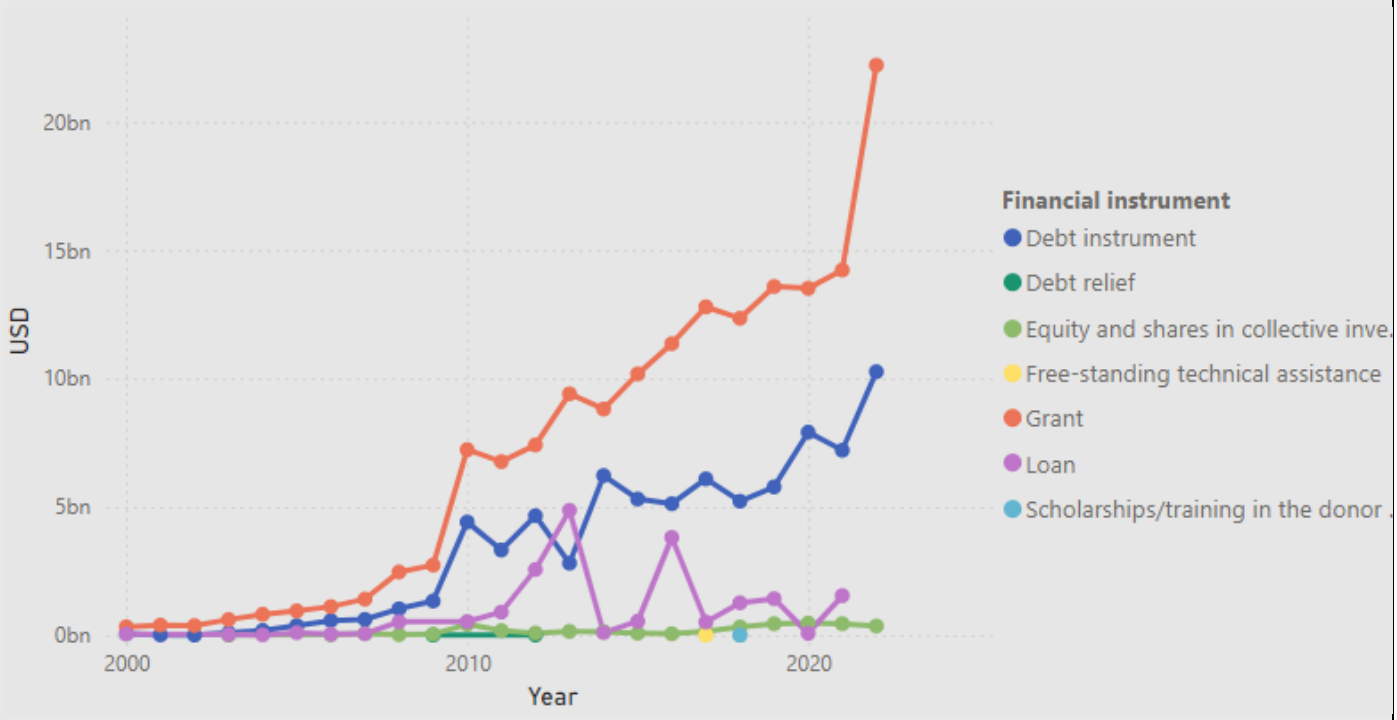
Figure 45: Financial Instruments Mix for Providing Bilateral Public Climate Finance (%)



Sources: OECD Development Finance for Climate and Environment, and AidData's Global Chinese Development Finance Dataset

Figure 46 below shows the total USD value of each financial instrument in bilateral public climate finance and highlights a steady increase in both grants and debt instruments, with an especially sharp rise after 2015. By 2021, grants and debt instruments reached unprecedented levels, each exceeding 15 billion USD, underscoring their critical role in meeting climate finance needs. Notably, equity investments and CIVs exhibit a modest increase in total value, aligning with a gradual shift towards instruments that share investment risk with the private sector. Loans show variability over the years but do not match the growth seen in grants and debt instruments, likely due to the preference for more flexible financing options in climate projects.

Figure 46: Bilateral Public Climate Finance by Financial Instrument (USD bn)



Sources: OECD Development Finance for Climate and Environment, and AidData's Global Chinese Development Finance Dataset

Africa deep-dive

The US, EU, and China have different strategies for providing public climate finance to Africa. The US primarily uses grants, offering non-repayable funds to support climate projects, thereby providing immediate financial relief without adding to African countries' debt burdens.

In contrast, the EU employs a more balanced and diversified mix of instruments. While grants play a significant role, particularly in earlier years, the EU has increasingly relied on debt instruments, such as loans, to provide more scalable financing options. The inclusion of debt relief and equity investments addresses both fiscal constraints and private sector mobilisation.

China's strategy is notably different, with a heavy reliance on loans dominating the mix of instruments. This aligns with China's broader focus on financing large-scale infrastructure projects, where loan repayments can generate returns. However, the limited use of grants and free-standing technical assistance can strain the fiscal capacity of many African nations and potentially exacerbate debt vulnerabilities.

Figure 47: US Financial Mix for Africa (%)

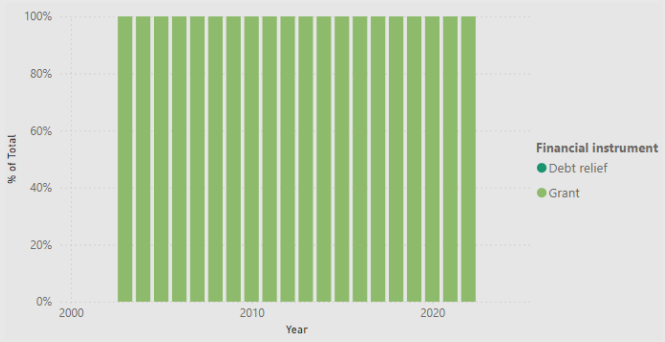


Figure 48: EU Financial Mix for Africa (%)

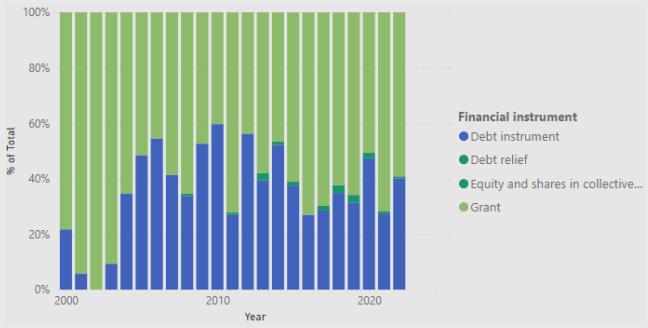
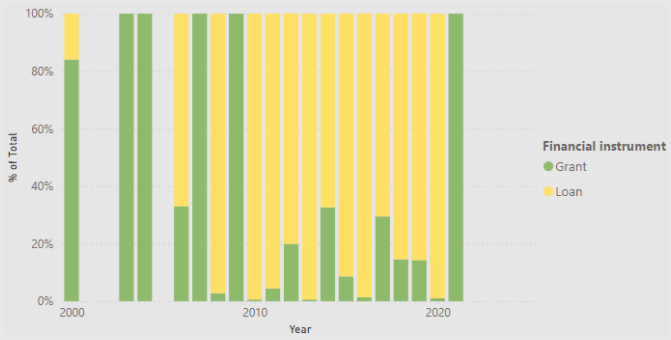


Figure 49: China Financial Mix for Africa (%)



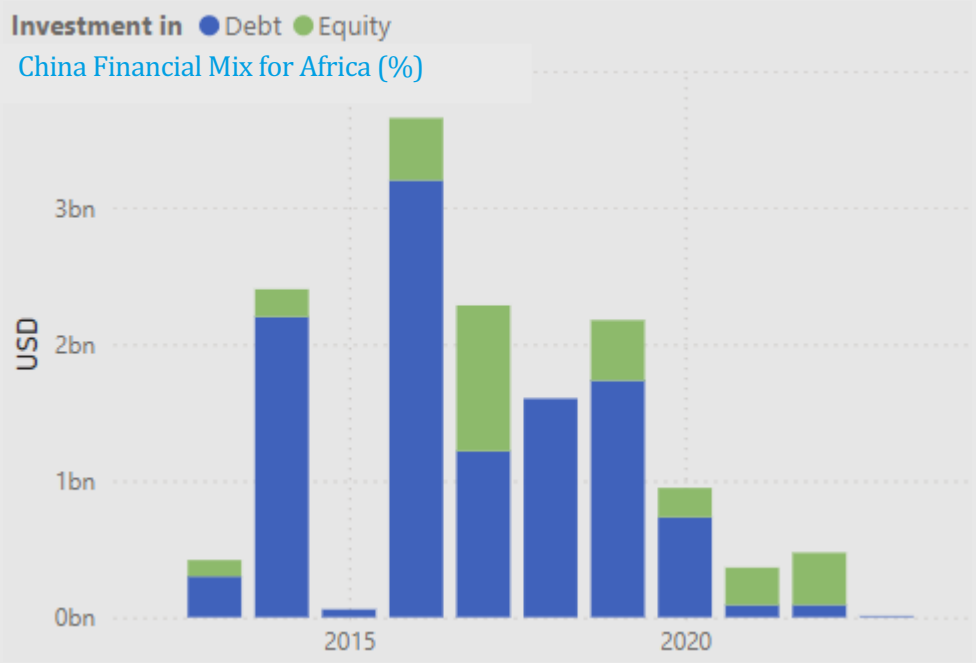
Sources: OECD Development Finance for Climate and Environment, and AidData's Global Chinese Development Finance Dataset

Case study 4: China's mobilised private finance in renewable power generation

In the case of China, comprehensive data on mobilised private climate finance is limited, indicating a lack of transparency in China's investments abroad. Data from the COFI database were leveraged, covering Chinese-financed power-generation projects in BRI countries that reached financial closure. Fossil fuel projects, development banks, and public finance funds are excluded to focus on climate-specific private finance. This data is not comparable with other countries' mobilised private finance due to different scope and coverage, nor should it be aggregated with previously presented Chinese public climate finance due to potential overlap.

Available data from China's investments in renewable power generation under the Belt and Road Initiative (BRI) reveal that Chinese investment in renewables peaked in 2016, with debt financing reaching >3bn USD. This may correspond to the increased climate finance commitments around the Paris Agreement, which spurred substantial investment interest in climate-related projects. Since then, there has been a downward trend, with a halving of available finance in 2020. This decrease may also signal a strategic change, with climate finance becoming less of a priority within China's broader international development and investment agenda. Throughout the period, debt financing was the dominant instrument, consistently comprising the majority of the climate finance flows compared to equity. This trend suggests that debt financing was for some time the preferred vehicle for funding climate projects, perhaps due to its more predictable returns and lower risk compared to equity. This may also reflect the nature of climate projects, which often require large-scale, capital-intensive investments with predictable revenue streams—suitable for debt structures. The IEA often notes that debt is a primary component of climate finance because it provides structured, lower-risk returns, which are attractive to institutional investors such as banks and development finance institutions (Energy Investment Outlook, 204). In contrast, equity financing, while riskier, enables investors to have ownership stakes and potentially higher returns, which might be more suited to high-growth or innovative clean technology projects. The observed shift from debt to equity as the predominant instrument in climate finance in the last two observed years in China may suggest a significant change in investment strategies, in which investors are increasingly willing to assume higher risks associated with equity investments, likely in pursuit of greater returns and a more active role in project governance. Such a trend may also reflect growing confidence in the profitability and viability of climate-related projects, as well as a desire to influence their strategic direction.

Figure 50: China's Bilateral Mobilised Private Finance on Sustainable Power Generation (USD bn)



Source: COFI (v2.2 2023-10-20) database, covering Chinese-financed power-generation projects in BRI countries that reached financial closure

4.4. Multilateral Public Climate Finance

The EU and its Member States combined have historically surpassed the multilateral climate finance contributions made by the US. The EU's contributions to multilateral public climate finance have shown consistent growth, rising from 2012 to 2020 and reaching >2 billion USD. This steady increase, and the rise in contributions around 2016 following the Paris Agreement, suggests an EU commitment to work through multilateral channels. For financing the transition in developing countries.

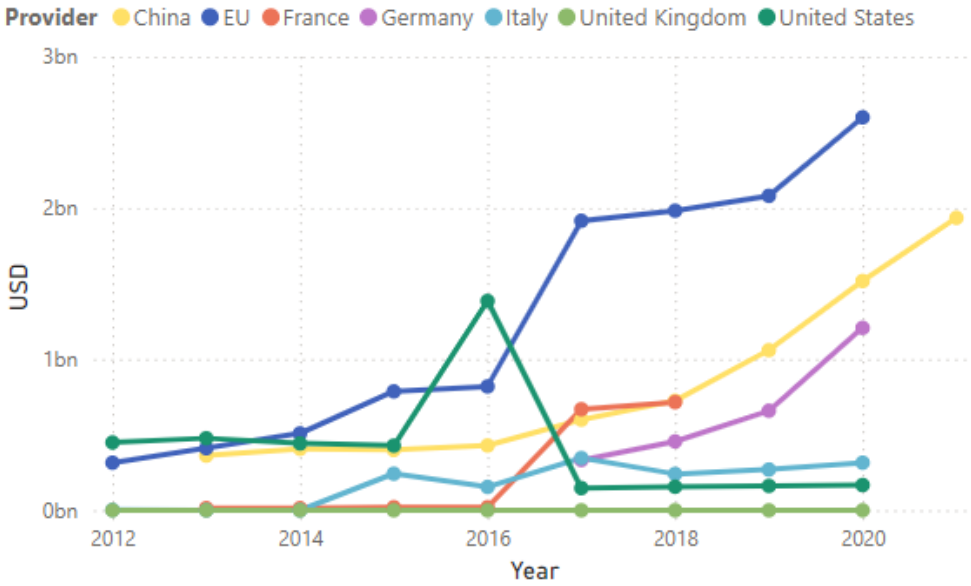
Among EU member states, Germany has shown a significant and steady increase in multilateral climate finance contributions, particularly after 2016, reaching nearly 1 billion USD by 2020. France, while contributing at lower levels than Germany, has steadily increased its contributions to multilateral climate finance over the years, although its earmarked contributions may face pressures from tighter fiscal space. Italy's contributions have also steadily increased over time, although contributing lower levels compared to Germany and France.

China's multilateral contributions, while initially modest, began to grow steadily after 2016, marking a significant shift in its approach to international climate finance. By 2020, China's contributions reached nearly USD 2 billion, reflecting a clear upward trend. This growth aligns with broader global efforts to scale up climate finance and is consistent with the findings of the World Resources Institute (WRI, 2024)

and the Center for Global Development (CGD, 2024), which noted a substantial increase in China's climate finance through multilateral institutions in recent years. One key factor driving this increase is the integration of the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB) into the multilateral financial architecture. Both institutions, established with significant Chinese involvement, have prioritised sustainable infrastructure and climate-resilient investments in their operations.

US contributions to multilateral public climate finance peaked around 2016, reaching close to 1 billion USD. However, this was followed by a sharp decline after 2017. Apart from this peak, the US has shown relatively low and inconsistent contributions to MDBs for climate finance, indicating a limited and variable commitment to multilateral climate funding. The dramatic drop in contributions after 2016 suggests a shift in the US climate finance strategy, with a reduced emphasis on supporting climate initiatives through multilateral frameworks.

Figure 51: Multilateral Public Climate Finance: Providers Contributions to All MDBs (USD bn)



Sources: UNFCC Provision of public financial support: contribution through multilateral channels, and annual reports and financial statements of a selected group of MDBs for calculating China's support.

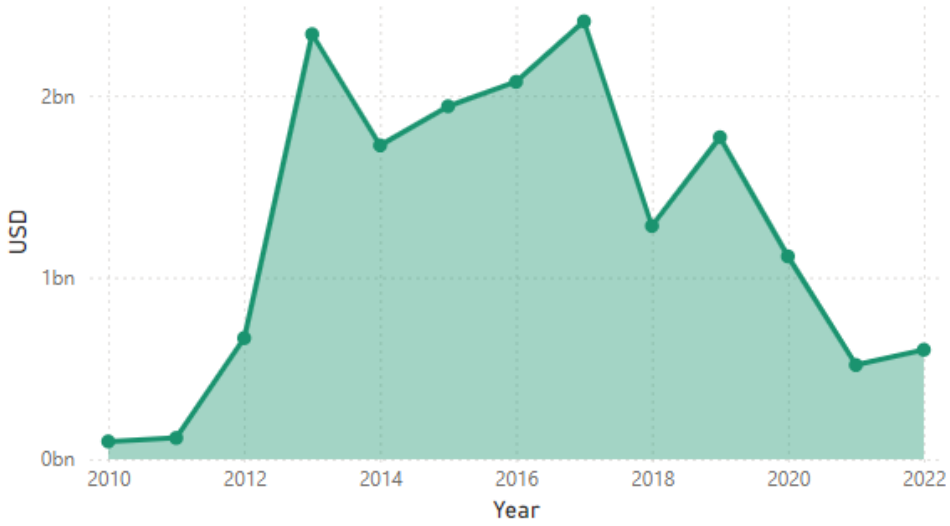
From 2010 onward, total multilateral public climate finance contributions experienced strong growth, peaking around 2016 at over 2.5 billion USD. This peak likely reflects a surge in commitments aligned with the Paris Agreement, as well as a global momentum shift towards addressing climate change.

Post-2016, however, multilateral climate finance contributions became more variable, with a notable decline around 2019–2020. The drop could suggest a reallocation of funds to emerging priorities outside of climate finance (e.g., support for public health). A small increase in contributions in 2020 signals a potential renewed interest or modest recovery in multilateral public climate finance, although it remains below the levels achieved in 2016. This uptick may reflect a cautious re-engagement by providers, possibly encouraged by recent climate commitments and the growing prominence of multilateral approaches in global climate finance.

Despite an overall increase in contributions to MDBs from top providers in 2022, a similar increase

in MDB spending was not observed during the same period. There could be several reasons for this discrepancy. First, a time lag typically could exist between the commitment of funds by contributors and their actual disbursement by MDBs. Additionally, while commitments to climate funds and MDBs have risen, some of these funds could be earmarked for long-term or strategic initiatives that do not require immediate spending. Administrative and operational bottlenecks within MDBs, compounded by pandemic-related delays, could also contribute to the slower deployment of funds. Lastly, unspent allocations could accumulate, adding to the apparent gap between high commitment levels and actual spending.

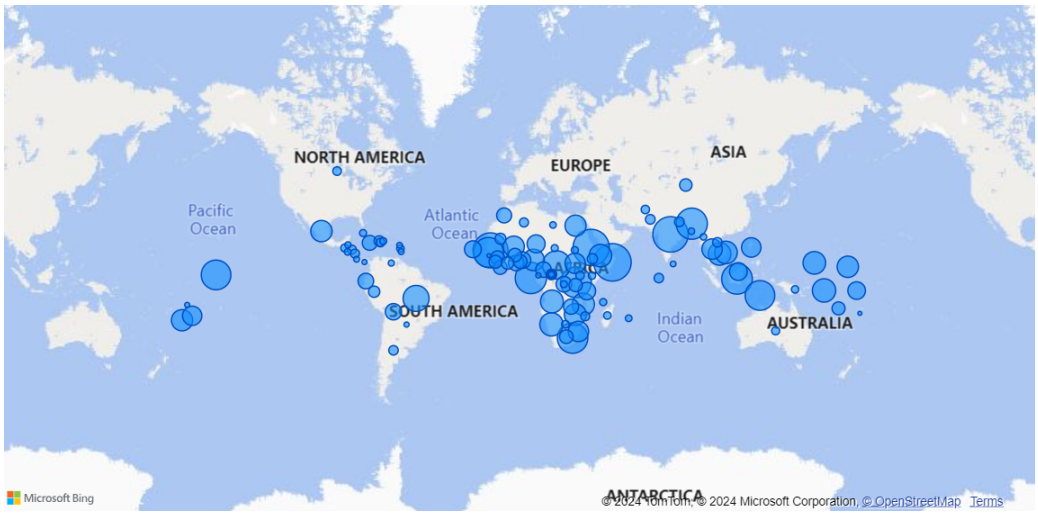
Figure 52: Multilateral Public Climate Finance by MDBs (USDD bn)



Source: OECD Development Finance for Climate and Environment

In 2021, MDBs directed substantial public climate finance to countries across Asia and Africa. Notably, nations in South and South-East Asia, alongside regions in Sub-Saharan Africa, received significant funding through MDBs. Latin American and Caribbean countries also benefited from notable MDB climate finance, reflecting concerted efforts to advance sustainable development, promote forest conservation, and enhance climate resilience within the region. Additionally, MDB climate finance extended to nations in the Middle East and Central Asia, albeit at comparatively lower levels than those in Asia and Africa. This distribution may suggest a growing recognition of climate-related risks in these areas and highlights an increasing focus on adaptation and resilience initiatives to mitigate potential adverse effects.

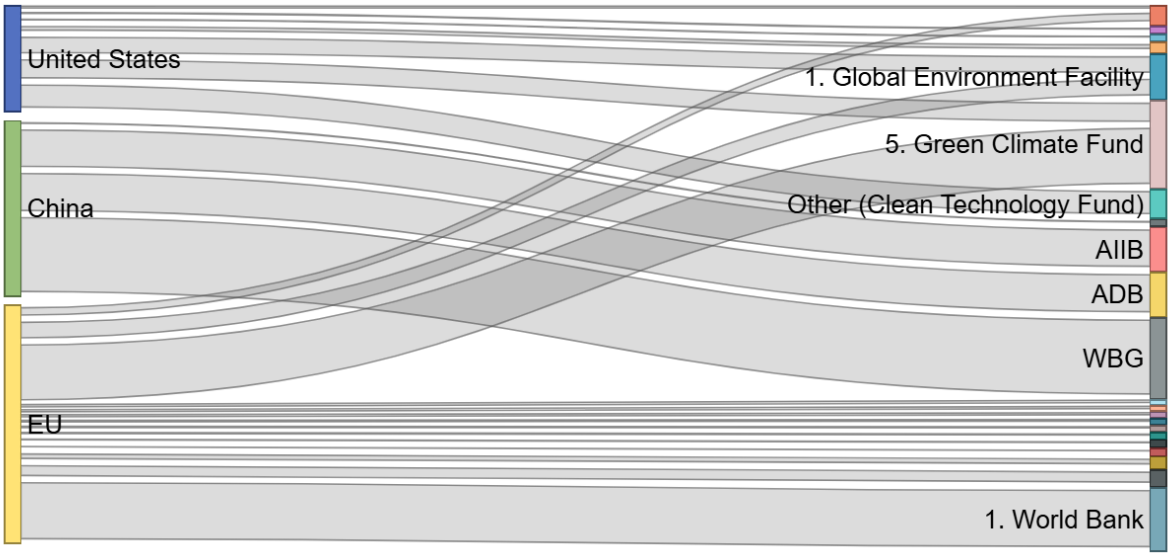
Figure 53: Main Recipients of MDBs Public Climate Finance (USD bn, all MDBs combined)



Source: OECD Development Finance for Climate and Environment

The EU, US, and China exhibited distinct strategies in their multilateral climate finance contributions. The EU allocated its funds across a diverse array of MDBs and climate funds, including specialised entities beyond the primary recipients, supporting a wide spectrum of initiatives, encompassing adaptation, mitigation, technology advancement, and ecosystem protection. In contrast, the US concentrated its contributions on a select group of major funds, notably the Global Environment Facility (GEF), and the Green Climate Fund (GCF). Both the EU and the US directed substantial funding to the GEF and GCF, supporting these institutions in managing and deploying multilateral climate finance for global projects. China also presented a distribution of its funds across major MDBs, including the World Bank, Asian Infrastructure Investment Bank (AIIB), and the Asian developing Bank (ADB).

Figure 54: Multilateral Public Climate Finance (Country contribution to MBDs for Values >0.4 bn USD)



Source: UNFCC Provision of public financial support: contribution through multilateral channels, and annual reports and financial statements of a selected group of MDBs for calculating China's support.

4.5. Multilateral Mobilised Private Climate Finance and Philanthropy

Since 2015, multilateral mobilised private climate finance has generally shown an upward trend, albeit with some fluctuations. The most notable increase observed occurred around 2022, with mobilised private finance reaching nearly 0.35 trillion USD. Although flows declined during the COVID-19 crisis, they demonstrated strong resilience, rebounding to pre-2019 levels in recent years. This growth may illustrate an expanding role of private finance in tackling climate issues. European institutions as well as the World Bank and the Green Climate Fund are among the key institutions that contributed to this rebound. However, other regional development banks, such as the Asian Development Bank and the African Development Bank, seem to have faced challenges in recommitting finance to climate projects.

Figure 55: Multilateral Mobilised Private Climate Finance by MDBs (USDD bn)

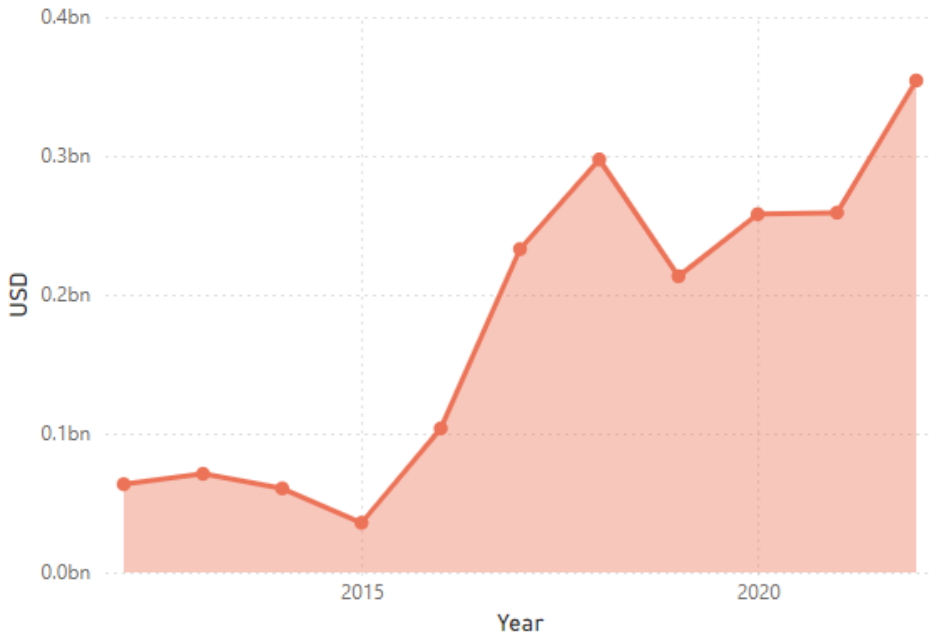


Figure 56: EU institutions

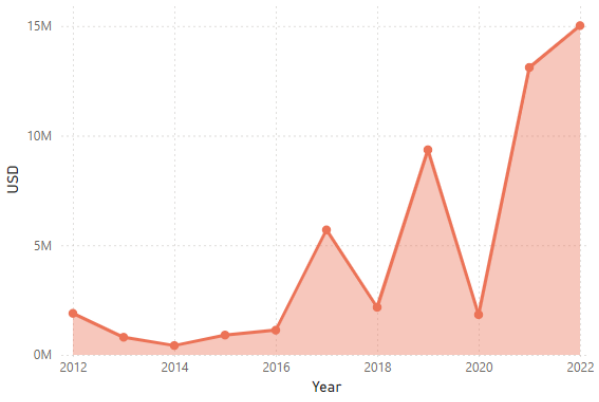


Figure 57: World Bank Group

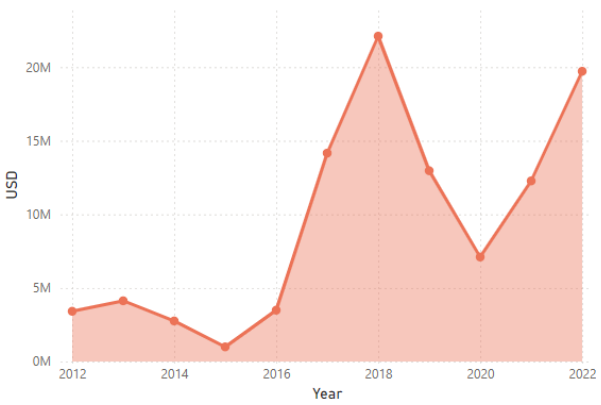


Figure 58: Inter-American Development Bank

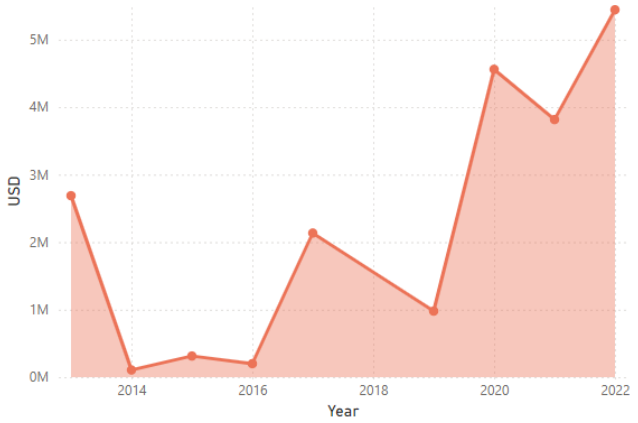
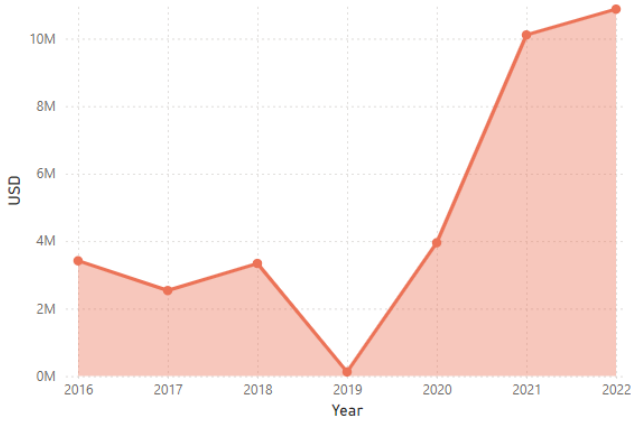


Figure 59: Green Climate Fund



Source: OECD private finance mobilised

The majority of mobilised private climate finance from MDBs was directed toward emerging economies in Africa, South America, and parts of Asia. Within Africa, prominent recipient regions were Sub-Saharan Africa, and Eastern Africa. Within Latin America, especially Brazil and neighbouring areas received a significant share of MDB mobilised private finance. In Asia, there were significant concentrations of privately mobilised finance, particularly in South and South-East Asia. These regions seem to offer substantial investment opportunities in renewable energy, drawing private capital through MDB partnerships aimed at mitigating climate risks and accelerating the transition to cleaner energy sources.

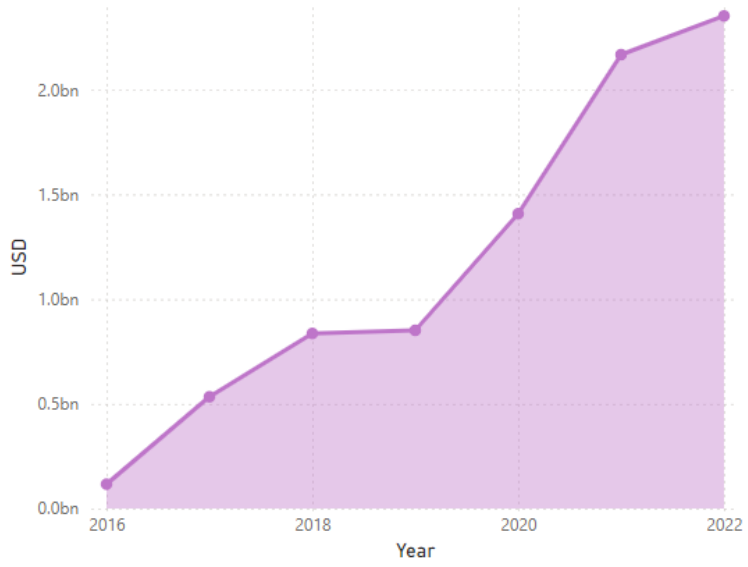
Figure 60: Main Recipients of MDBs Private Mobilised Climate Finance (in USD)

Source: OECD private finance mobilised

From 2016 to 2018, philanthropic contributions increased consistently, surpassing USD 0.5 billion in 2017 and nearing USD 1 billion by 2018. Growth then plateaued between 2018 and 2019, suggesting a temporary pause or stabilisation in philanthropic funding. However, contributions accelerated sharply from 2019 to 2021, reflecting a strong upward trajectory. By 2022, contributions surpassed USD 2 billion, marking a notable milestone. For comparison, Italy's bilateral public climate finance contributions in recent years have averaged USD 200–300 million annually, highlighting the scale at which private philanthropic actors are stepping in to complement traditional public sources. This trend can be attributed to increased commitments from major foundations responding to the escalating climate crisis.

This marks a shift in the climate finance landscape, as philanthropists increasingly bridge gaps in funding, particularly for innovative or underfunded areas such as climate justice and local adaptation. Unlike government contributions, which are often tied to political cycles or fiscal constraints, philanthropic funding can offer greater flexibility, speed, and risk-taking.

Figure 61: Public Climate Finance from Philanthropists



Source: OECD Development finance for climate and environment

5. Regional deep dives: Top recipient analysis

The distribution of climate finance across Africa, Latin America and Asia reveals significant regional and provider-specific variations. Africa received the largest share of bilateral public climate. In Latin America, bilateral mobilised private finance played a more prominent role. However, public finance remained critical in supporting climate efforts in all regions.

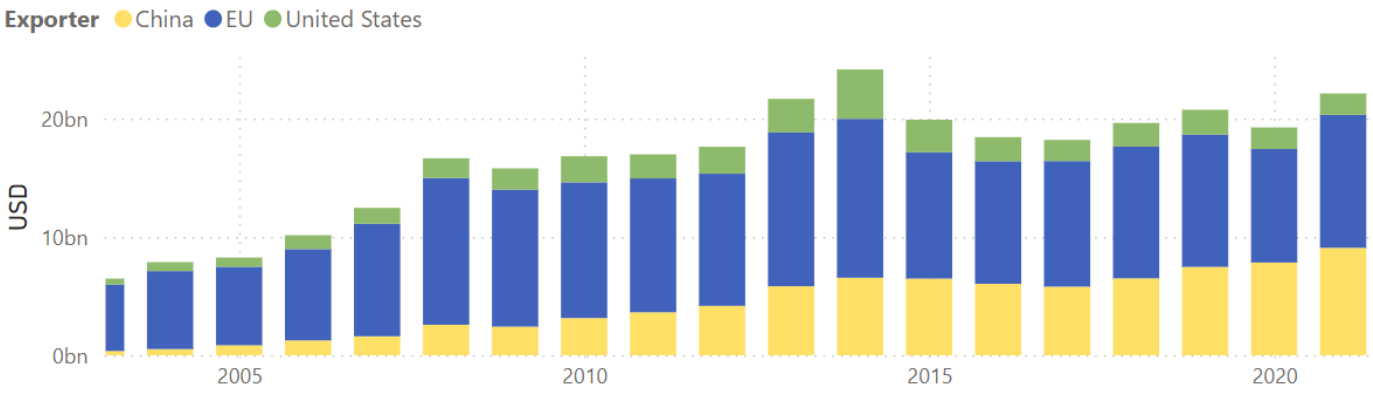
5.1. Africa

Trade in environmental goods

Environmental goods imported by Africa are primarily exported by the EU. As shown in Figure 62, EU exports have consistently dominated this market. China has recently become the second largest exporter of environmental goods to Africa. The US remains a minor player with no significant changes over the years.

Africa's imports of environmental goods from the EU, China and US have remained stable, averaging around 30 billion USD annually. There were small drops in 2016-2017 and 2020, with a 4 billion USD decrease, but exports to the region quickly returned to the 30 billion USD average. In 2021, there was a slight increase, possibly indicating rising demand, but overall export growth to the region has been limited.

Figure 62: Trade flows in Environmental Goods for Africa by exporter

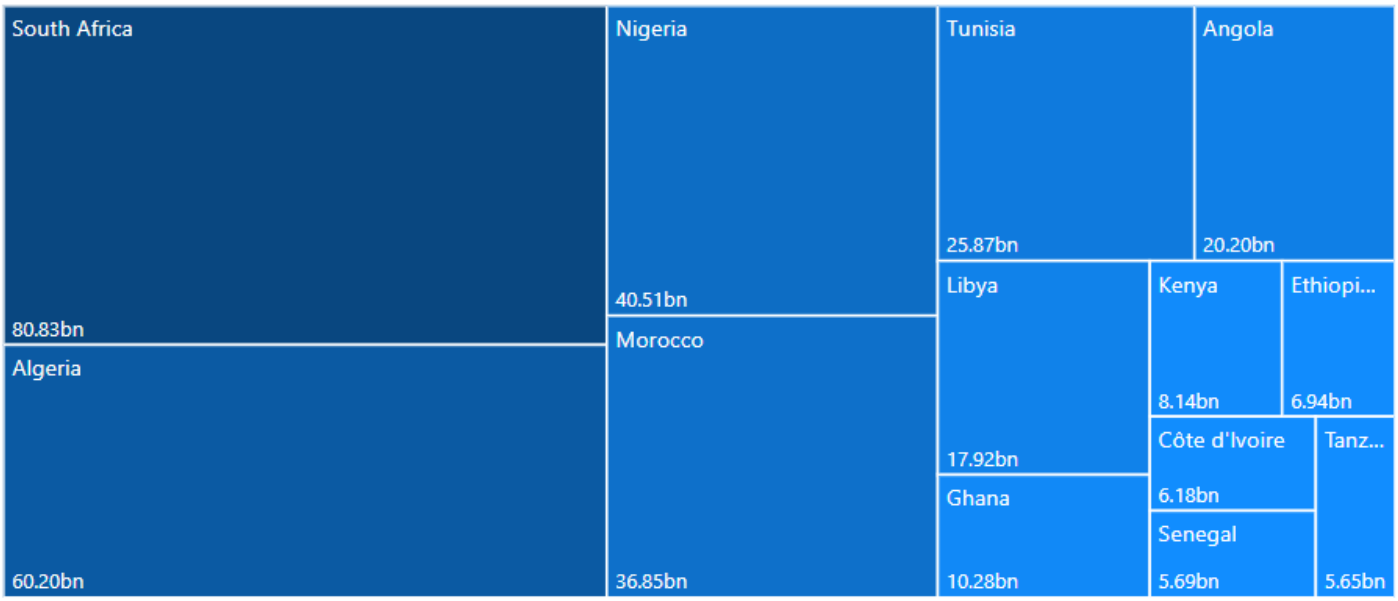


Source: IMF Bilateral Trade in Environmental Goods

Historically, South Africa, Algeria, Nigeria, and Morocco have been the largest importers of environmental goods in Africa. This trend has remained relatively stable, with Algeria increasing its lead over South Africa since 2014, and Morocco surpassing Algeria from 2019. South Africa experienced a sharp rise in imports from 2009 to 2013, followed by stable levels. Unlike bilateral public climate finance, importing

activity has been concentrated in these countries, likely due to their larger economies, higher industrial capacity, and greater readiness to adopt environmental technologies.

Figure 63: Historical imports of environmental goods by Africa, disaggregated at country level



Source: IMF Bilateral Trade in Environmental Goods

Climate finance

The EU has consistently been the primary provider of climate finance to Africa, with Germany and France leading these efforts among its Member States. In comparison, China and the US have maintained substantially smaller levels of climate finance contributions to Africa. Notably, China's contributions have declined in recent years, whereas the US have increased in recent years.

Regarding bilateral public climate-related development finance, the EU is well in the lead, with strong contributions from France and Germany. Over the period for which data has been analysed, there has been a notable increase in contributions across all the providers, with total contributions consistently reaching since 2015 between USD 1 and 2 billion per year for mobilised private climate finance and USD 5 and 10 billion for public climate finance. In terms of financial instruments, grants are the most important financial instrument (57%), followed by debts (30%), underscoring the preference for non-repayable aid and credit support.

The analysis of private finance mobilised by bilateral public climate finance from 2012 to 2022 reveals several trends. The EU has consistently led in mobilising private sector funds for climate initiatives, with a notable surge in 2022. Mobilised private climate finance from the US and the UK have also increased. Germany and France have maintained steady contributions.

Figure 64: Share of Aggregated Bilateral Mobilised Private and Public Climate Finance for Africa (2021)

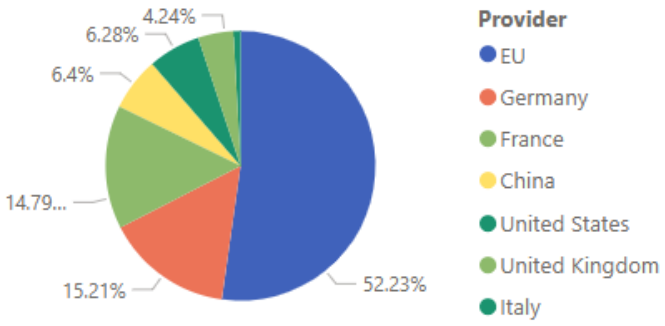
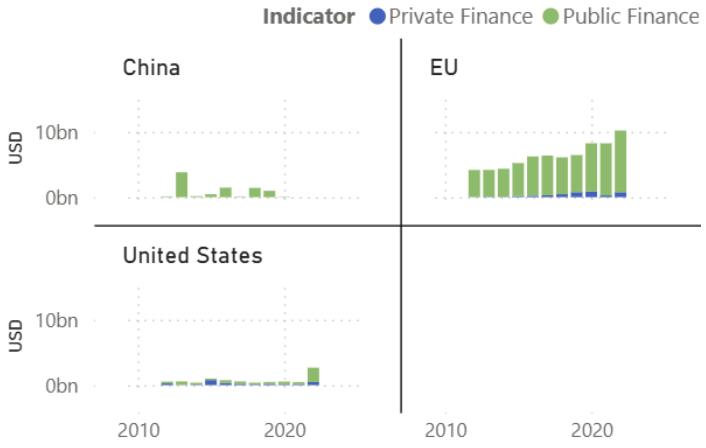


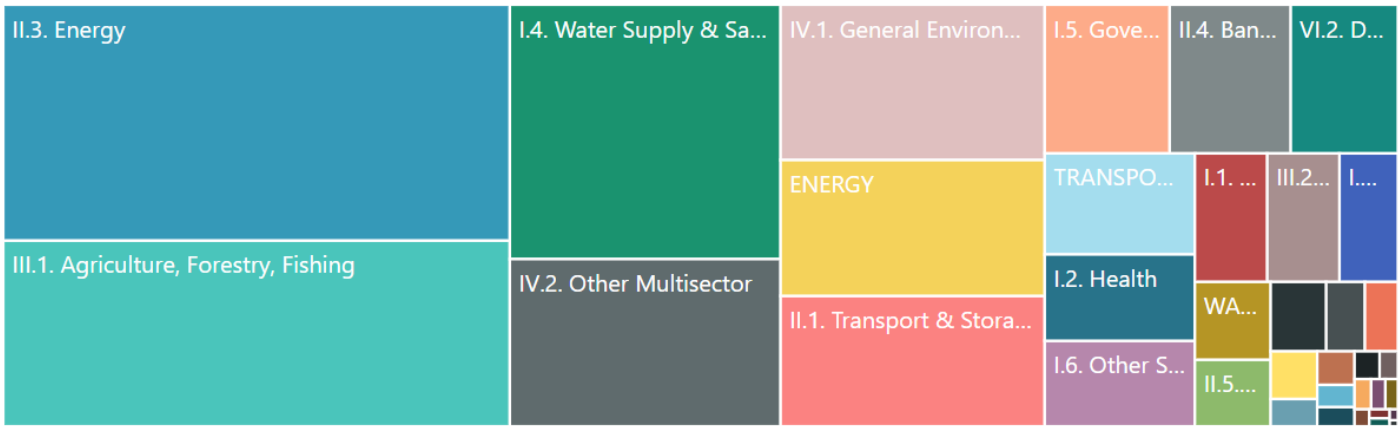
Figure 65: Total Bilateral Mobilised Private and Public Climate Finance for Africa (USD bn)



Sources: OECD Development Finance for Climate and Environment, OECD Mobilised private finance for development, and AidData's Global Chinese Development Finance Dataset

Climate finance to Africa predominantly targets energy, water supply and sanitation, and agriculture, forestry, and fishing. Investments in these sectors aim to enhance energy access, improve water and sanitation services, and promote sustainable agricultural practices, thereby addressing both mitigation and adaptation challenges in Africa.

Figure 66: Public Climate Finance to Africa by Sectors

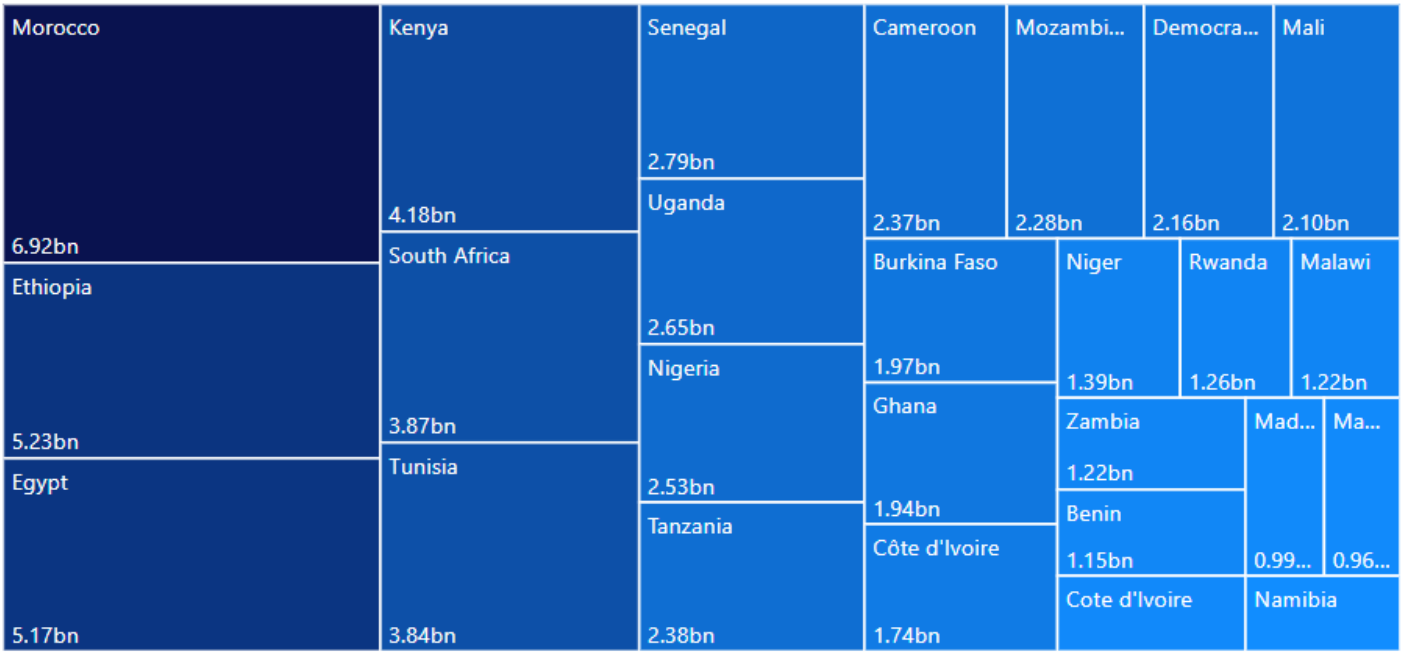


Sources: OECD Development Finance for Climate and Environment

Country-level analysis reveals that bilateral public climate finance in Africa has been distributed across many countries, with Morocco, Ethiopia, and Egypt receiving the largest amounts. More than 20 countries in Africa have received over USD 1 billion in bilateral public climate finance. This indicates a broad distribution of support without clear concentrations. The largest recipients include Morocco, Ethiopia, Egypt, Kenya, South Africa, and Tunisia, each receiving over 3 billion USD. Over time, country-specific funding levels have fluctuated significantly. Depending on the year analysed, different countries emerge as the largest recipients. Increases in one country are often offset by decreases in subsequent periods, demonstrating the high volatility and shifting regional focus of this support. There is no evidence of any

single country becoming the primary focus of bilateral public climate finance.

Figure 67: Historical bilateral public climate finance received by Africa, disaggregated at country level



Source: OECD Development Finance for Climate and Environment, and AidData's Global Chinese Development Finance Dataset

5.2. Latin America

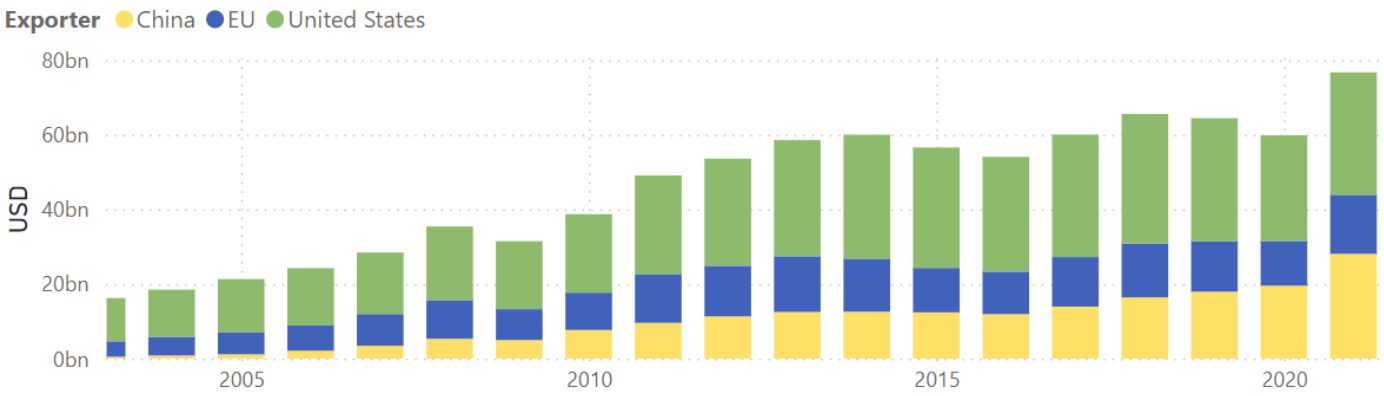
Trade in environmental goods

Environmental goods imported by Latin America largely originate from the US, with smaller yet substantial contributions from the EU and China. The US played a dominant role from 2015-2018, as it exported over half of the total environmental goods received by Latin America. During this period, the EU was the second largest exporter, while China followed closely behind. However, from 2018 onwards, China has substantially increased its exports to Latin America, taking up a larger share of the market. By 2021, this is visible, as the US remains the largest exporter of environmental goods to the region, with annual contributions of 32 billion USD, but is now closely followed by China with annual contributions of 28 billion USD, 16 billion USD larger than their activity in 2015. This illustrates China's expanding influence within the market of green technologies and the region.

The overall level of exports of environmental goods to Latin America has increased over the recent years. From 2016-2018 we observe how export levels increase from 63 billion USD to 77 billion USD, signalling an increasing demand for green technologies in Latin America, and suggesting increased maturity of key markets such as renewable energy, electric vehicles, and water and waste management infrastructure. This upward trajectory was disrupted by the COVID pandemic in 2020, where export levels dropped to 69 billion USD, reflecting a broader economic downturn. However, in 2021, export levels in the region quickly rebounded to reach a substantial increase up to 89 billion USD, driven mainly by China's increased activity in this market. This sharp rebound further highlights Latin America's increasing demand

for environmental goods.

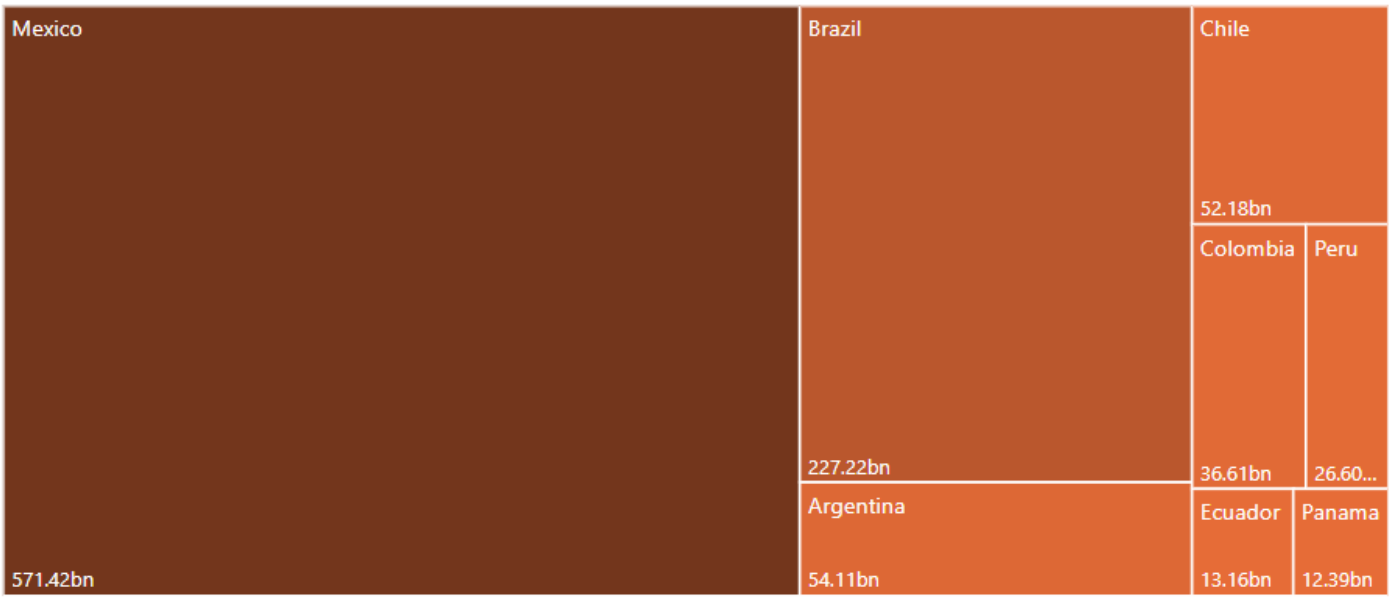
Figure 68: Trade flows in Environmental Goods for Latin America by exporter



Source: IMF Bilateral Trade in Environmental Goods

Country-level analysis reveals that historically, imports of environmental goods in Latin America have been largely concentrated in Mexico, which captures over 50% of the total flows. This dominance is likely driven by Mexico's close commercial ties with the United States, shown by trade agreements such as the US-Mexico-Canada Agreement (USMCA). After Mexico, Brazil follows in a distant second with a total of close to 350 billion USD lower importing activity. Over time, the concentration across countries has remained stable, with Mexico widening its gap with other countries steeply from 2009-2021. Brazil experienced a large increase in imports from 2003-2011, after which flows remained relatively constant, with a one-off downturn in 2016.

Figure 69: Historical imports of environmental goods by Latin America, disaggregated at country level



Source: IMF Bilateral Trade in Environmental Goods

Climate finance

In Latin America, the EU leads climate finance efforts, with France, Germany, and Spain playing major roles. France contributes more than Germany in this region. China is the second-largest contributor but reduced funding during the COVID-19 pandemic. The US contributes the least among these major providers. The breakdown of public climate-related development finance by financial instrument in 2022 highlights the predominant use of debt instruments (58%) and grants (39%), with loans and equity playing a smaller but still important role (12%). Debt instruments and grants account for significant portions of total public finance, illustrating the dual approach of providing repayable and non-repayable support.

The data on private finance mobilised by bilateral public climate finance shows that the EU and the US are on par in the deployment of finance. Over the period from 2012 to 2022, the level of finance provided has been broadly stable, with notable exceptions in 2018 and 2022.

Figure 70: Share of Aggregated Bilateral Mobilised Private and Public Climate Finance for Latin America (2021)

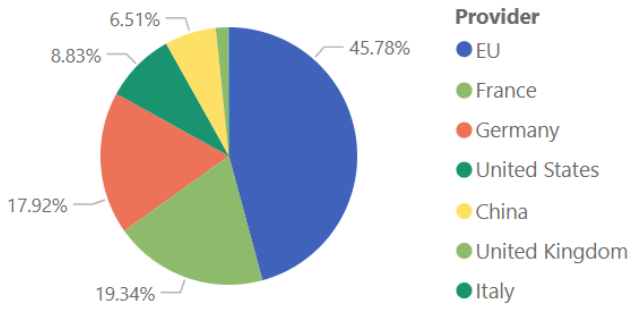
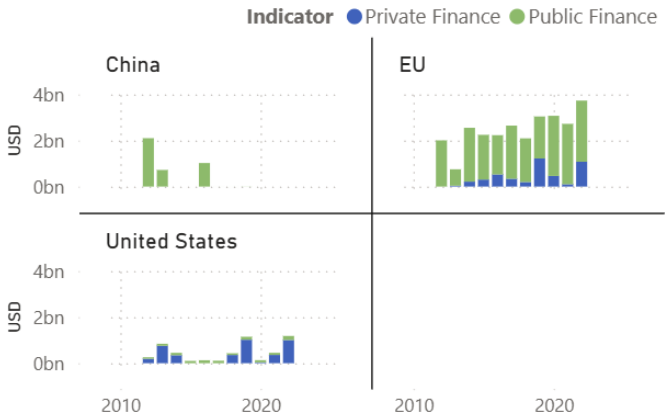


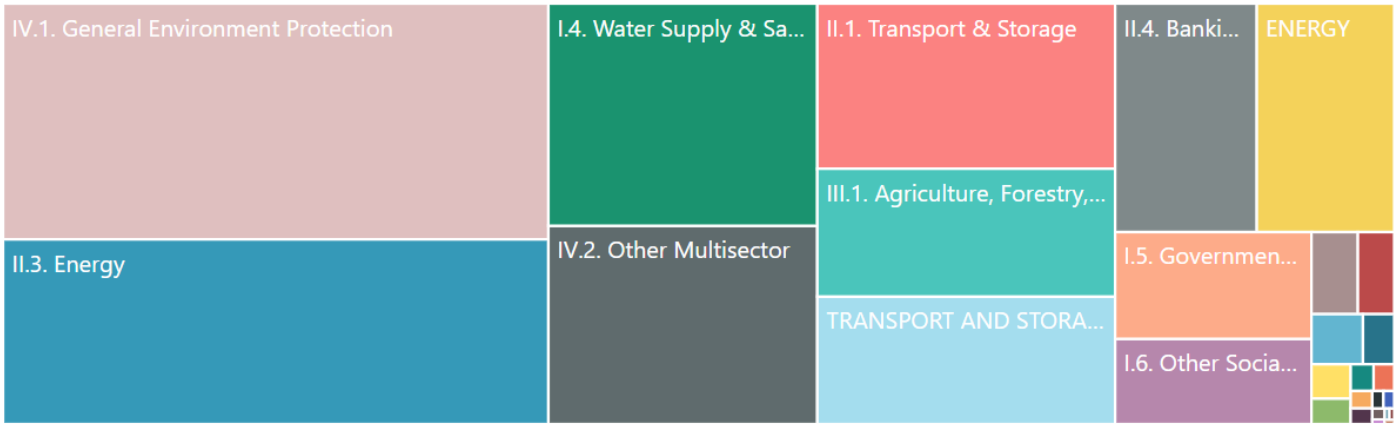
Figure 71: Total Bilateral Mobilised Private and Public Climate Finance for Latin America (USD bn)



Sources: OECD Development Finance for Climate and Environment, OECD Mobilised private finance for development, and AidData's Global Chinese Development Finance Dataset

Climate finance in Latin America is predominantly directed towards the energy sector, closely followed by general environmental protection initiatives. This focus reflects the region's emphasis on developing sustainable energy infrastructure and addressing environmental challenges. The substantial investment in environmental protection is supported by US funding, which often targets conservation and ecosystem preservation efforts.

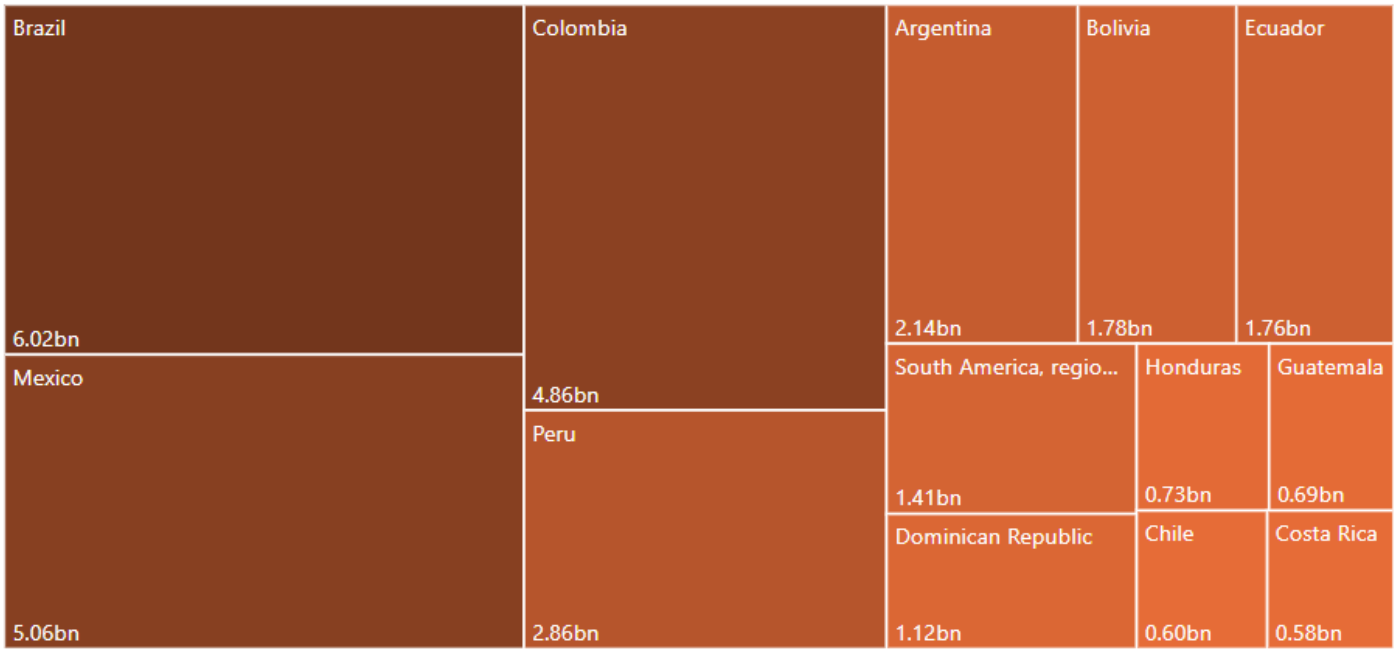
Figure 72: Public Climate Finance to Latin America by Sectors



Sources: OECD Development Finance for Climate and Environment

Country analysis indicates that bilateral public climate finance has historically focused on a few countries in Latin America. Only eight countries have received over 1 billion USD in bilateral climate finance, with Brazil, Mexico, and Colombia being the largest recipients. Over time, Brazil was the primary recipient of support until 2017, when its support level decreased to match that of Mexico and Colombia, averaging 0.3 billion USD yearly. The support for Mexico and Colombia has remained relatively stable over time. Argentina has received minimal support over the years, except in 2010, when there was a one-time increase of 2 billion USD.

Figure 73: Historical bilateral public climate finance received by Latin America, disaggregated at country level



Source: OECD Development Finance for Climate and Environment, and AidData's Global Chinese Development Finance Dataset

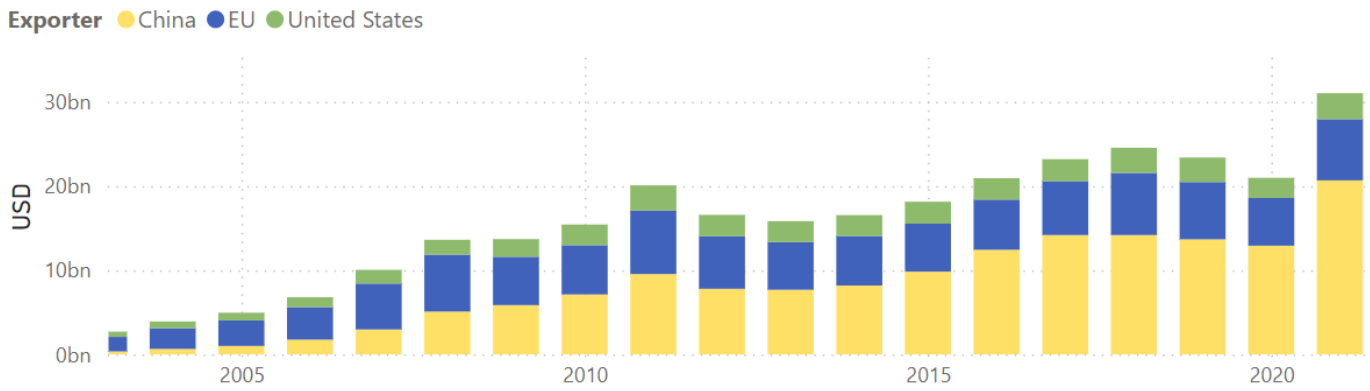
5.3. South and South-East Asia

Trade in environmental goods

China has established itself as the primary exporter of environmental goods to South and South-East Asia, with its dominance becoming increasingly evident over the past decade. Over this period, China's share of exports to these regions began to rise significantly, surpassing 50% by 2018 and continuing its rapid growth. As of the cut-off date in 2021, China had firmly established itself as the leading supplier of environmental goods, particularly in South-East Asia, where its export volumes far exceed those of other major players. The EU remains the second-largest exporter to these regions. However, its share has not kept pace with China's rapid growth. The US lags considerably behind, ranking as a distant third in terms of export volumes.

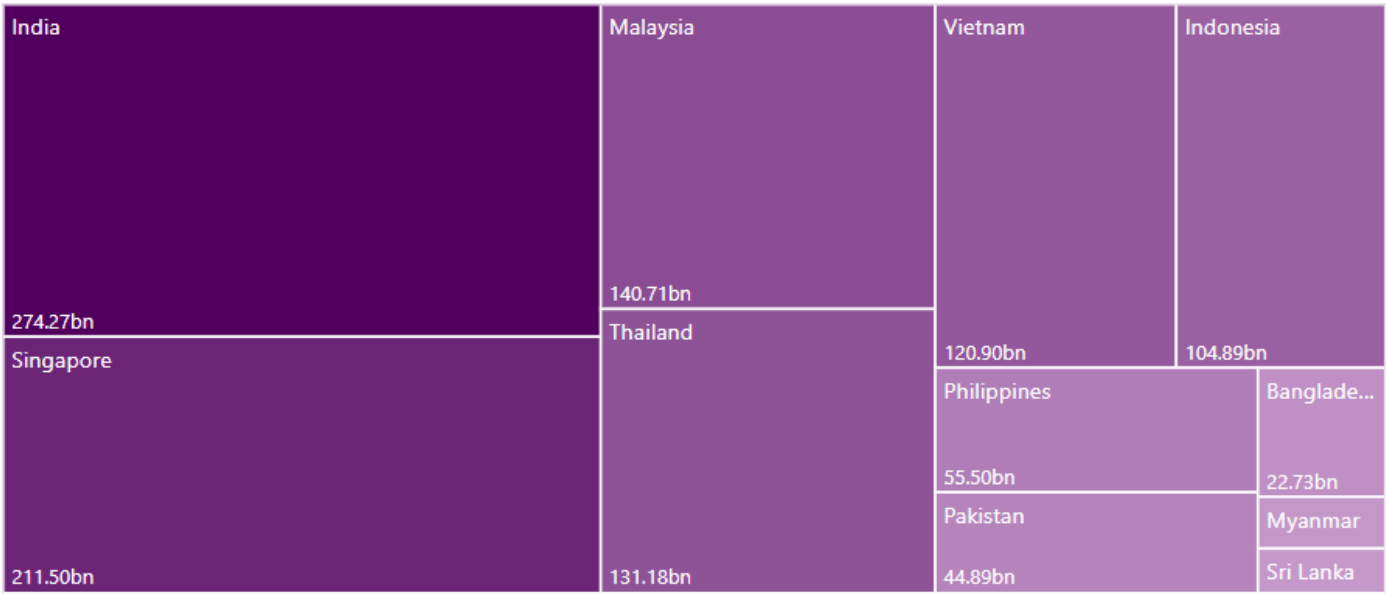
Exports of environmental goods to South-East Asia have increased steadily. In South Asia, while there is a general upward trend, exports fell during the COVID-19 pandemic. Exports to South-East Asia rose annually from 2016 onwards, reaching about USD 70 billion by 2021, an increase of USD 34 billion since 2016. In South Asia, exports grew by USD 8 billion from 2015 to 2018, hitting around USD 20 billion annually, but declined in 2019-2020 due to the pandemic. By 2021, they had risen again to approximately USD 30 billion.

Figure 74: Trade flows in Environmental Goods for South Asia by exporter



Historically, South and South-East Asia's main importers of environmental goods are India and Singapore, with imports worth 274 billion USD and 212 billion USD respectively. Malaysia, Thailand, Vietnam, and Indonesia also import over 100 billion USD each. India remains the largest importer of environmental goods from the region, but since 2018, Vietnam has surged to a close second, showing significant growth.

Figure 75: Historical imports of environmental goods by Asia (South and South-East Asia), disaggregated at country level



Source: IMF Bilateral Trade in Environmental Goods

Climate finance

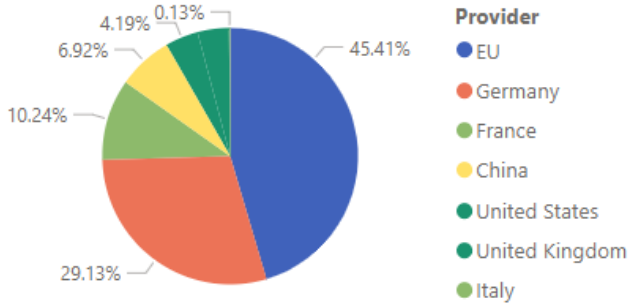
The EU leads in bilateral public climate-related development finance in South Asia, providing nearly USD 3 billion in 2022. While China has significantly increased its engagement in the region – rising from USD 0.1 million in 2015 to approximately USD 1.5 billion in 2022 – the US has maintained a steady but relatively modest commitment, averaging USD 200 million annually over the past decade. Notably, mobilised private finance in South Asia remains almost non-existent.

In South-East Asia, the financial landscape differs. The EU remains the largest contributor, primarily through public climate finance. However, in contrast to South Asia, mobilised private finance plays a key role in US financial flows to the region, averaging approximately USD 300 million per year over the last decade.

Most investments focus on sustainable energy infrastructure in both South and South-East Asia, with significant funds also going to transport and storage for South Asia and general environment protection for South-East Asia. These contributions have grown steadily over the past decade EU and China, with notable spikes during certain years.

Figure 76:Share of Aggregated Bilateral Mobilised Private and Public Climate Finance for South Asia and South-East Asia (2021)

South-Asia



South-East Asia

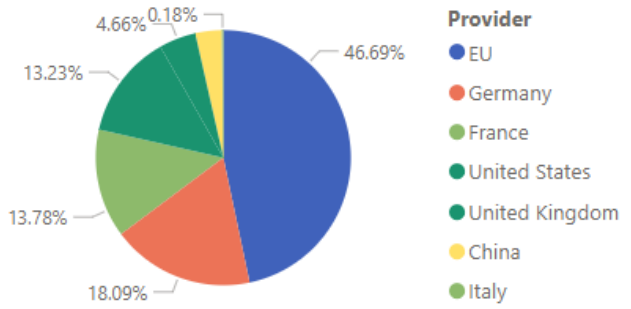
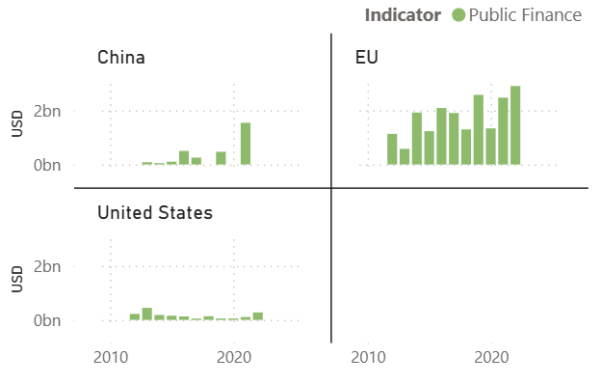
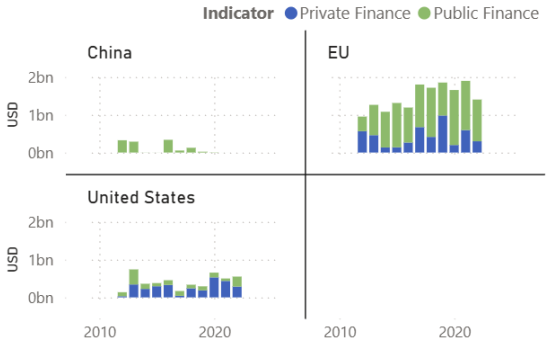


Figure 77: Total Bilateral Mobilised Private and Public Climate Finance for Asia (USD bn)

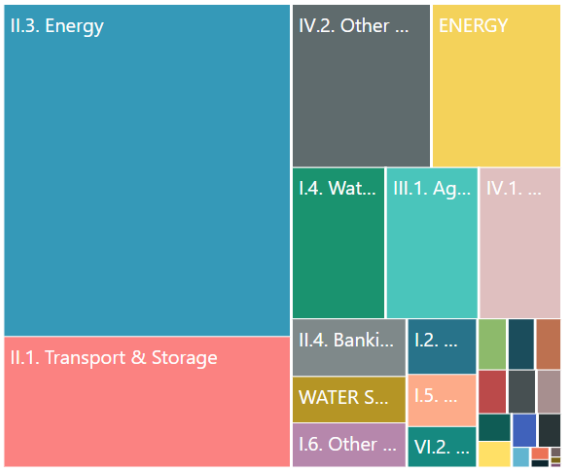
South-Asia



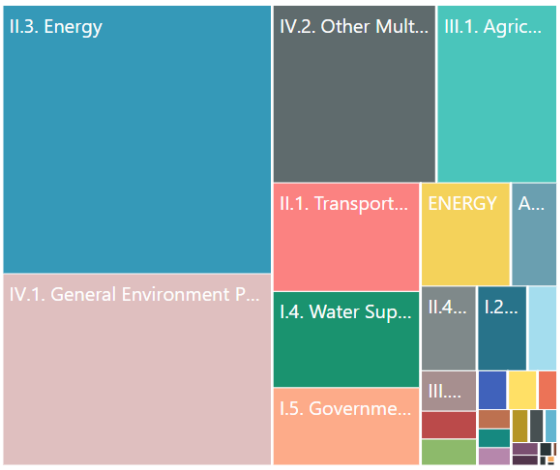
South-East Asia



South Asia



South-East Asia



Sources: OECD Development Finance for Climate and Environment, OECD Mobilised private finance for development, and AidData's Global Chinese Development

Finance Dataset

Country-level analysis shows that bilateral public climate finance in South and South-East Asia has mainly focused on India. Indonesia, Pakistan, Vietnam, and Bangladesh have also received over 4 billion USD each. Support towards India has steadily increased, while Indonesia, Vietnam, and Bangladesh have seen consistent levels of support. Pakistan had a notable increase in 2021, nearing 2 billion USD.

Figure 78: Historical bilateral public climate finance received by Asia, disaggregated at country level

Source: OECD Development Finance for Climate and Environment, and AidData's Global Chinese Development Finance Dataset

6. Conclusion

6.1. Limitations and further research needs

The findings of this study provide insights into the roles of the European Union (EU), China, and the United States (US) in advancing global climate goals through their climate finance contributions and trade in environmental goods to developing countries, with particular attention to the European contributions and exports. By using data from several data sources, such as OECD, IMF, ComTrade, UNFCC, and AidData, our analysis offers a comparative study across providers and recipients and different channels of support for the climate transition. Further, the use of text mining techniques enabled classifying datasets which did not have an environmental-specific focus and aligning definitions across data sources, thus expanding the possibilities of comparison. However, as with any data-driven research, there are some data gaps which limit the scope of the analysis. Additionally, there remain opportunities to refine and extend this work to build on the insights provided. In this section, we present these data gaps and limitations to help guide future research and highlight where additional data transparency is required.

Finance data for China is limited and requires further alignment with data sources of reference such as the OECD. Data on bilateral climate finance flows for China are partial or absent since, as a non-Annex I developing country under the UNFCCC, it does not have obligation to report on climate finance flows under the Paris Agreement. There are Chinese-specific data sources that can be used to address this gap, however, they require further data processing and alignment with the OECD guidelines. For example, AidData publishes a Global Chinese Development Finance dataset, which focuses on all development projects and does not provide an OECD-like classification of environmental/social projects. The China overseas finance inventory (COFI) is also available, but this dataset focuses exclusively on the power generation sector. A consolidated data source which brings all the necessary insights into one data repository, aligning with commonly used data sources such as the OECD, would be beneficial to promote further research. This could also help highlight in which areas further transparency and disclosure of data is required. A recent case in point is the work of the World Resources Institute (WRI), in its report *China's International Climate-Related Finance Provision and Mobilization for South-South Cooperation*[21], made best possible efforts to align its analytical framework with that used in the OECD's USD 100 billion climate finance reports, offering a valuable reference point for future methodological consistency.

Case studies on trade could be broadened to encompass a wider range of goods, particularly those relevant to current and future environmental and economic priorities. In this report, we have conducted an in-depth analysis of trade patterns in key sectors, specifically focusing on solar panels, electric vehicles, wind power technologies, and cells and batteries. These areas were chosen due to their critical role in the global transition toward clean energy and sustainable development. The insights derived from these specific

[21] China's International Climate-Related Finance Provision and Mobilization for South-South Cooperation (WRI, 2024): https://www.wri.org/research/chinas-international-climate-related-finance-provision-and-mobilization-south

sectors represent just one part of the broader picture. Expanding the scope of analysis to include other environmental goods - such as energy-efficient appliances, advanced water purification systems, or sustainable construction materials - could provide a more comprehensive understanding of trade dynamics in the context of the green economy.

The scope of the study would benefit from the inclusion of climate foreign direct investment (FDI) data, which is currently not publicly available. Although our report and dashboard present data on mobilised private finance, this only covers a subset of the total climate private investment. As a result, including information on climate greenfield investment, brownfield investment, equity investment, expansions, and merges and acquisitions that individual countries make in developing markets would provide a more complete picture. Some general FDI information is publicly disclosed within sites such as the OECD, and CPI Tracker, but this information does not allow to filter for climate specific FDI, or to attribute flows to specific countries. As a result, the information needed to conduct this analysis cannot be find publicly, and can only be accessed through pay wall – such as FDI Markets, and Bloomberg.

Conducting a detailed analysis of the relationships between different financial instruments, such as grants, loans, guarantees, and equity investments, could provide valuable insights into the strategies employed to support green transitions. Such an analysis could also reveal whether certain instruments are more effective in specific contexts and provide guidance on optimising the mix of financial tools to support sustainable development goals. This approach would enhance understanding of how financial strategies shape progress toward green transitions.

Further research would benefit from an expanded list of providers including countries such as the Gulf Co-operation Council member (GCC) states. GCC countries have emerged as major investors in Africa, contributing over $100 billion in investment over the last decade[22], mainly focused on resource-intensive sectors such as oil, gas, mining, and agriculture. Additionally, the trade of GCC countries with Africa has also increased in the last decade. EIU considers that GCC's mix of non-interventionist policies, network-building strategies, and corporate investment positions them as a key player in Africa's future. As a result, expanding the focus of this study to include GCC countries, can have added value in informing how the support for the green transition will evolve in the future.

6.2. Key findings

The EU emerged as the largest provider of bilateral public climate-related development finance to developing countries, demonstrating a balanced approach that integrates grants, loans, and equity to address both mitigation and adaptation needs across regions. **At the same time, Europe's role in supporting the global green transition cannot rely on finance alone. The EU currently lags behind China in exports of key environmental goods and technologies.** In a world of increased competition for clean industrial capabilities, Europe has an opportunity to strengthen its standing by better aligning its climate and trade strategies. The analysis shows that the geographic distribution of European climate finance and trade flows varies significantly in scale and trends, particularly at Member State level. A more integrated regional approach – tailored to local needs and opportunities – would allow Europe to more

[22] Economist Intelligence, EIU (The Economist): The Gulf Co-operation Council's expanding African footprint

effectively combine clean technology exports with targeted public finance and investment instruments, ensuring that trade and financial flows reinforce one another.

The US's climate finance contributions have been marked by fluctuations, often shaped by shifting domestic political dynamics. Before 2016, key initiatives such as the launch of the Power Africa Initiative (2013), the Climate Action Plan (2013), and the Global Climate Change Initiative (GCCI, phased out in later years) underscored efforts to integrate climate considerations into development finance. The Paris Agreement (2015) commitment led to increased pledges for multilateral climate funds, including the Green Climate Fund (GCF). Between 2016 and 2020 though, U.S. climate finance policy saw significant shifts, particularly in multilateral commitments with the withdrawal of the Paris Agreement, the halt of the contributions to the GCF and the discontinued GCCI. From 2020 onward, the US private finance mobilisation showed signs of acceleration, but bilateral public climate finance as well as multilateral flows, have remained limited. Regarding instruments, the US exclusively relied on grants to de-risk private public investments and guarantees for mobilised private finance, aligning with its broader reliance on market-based mechanisms to drive climate action. This focus highlights the US's preference for leveraging public resources to unlock private capital rather than directly increasing bilateral or multilateral public finance contributions.

China's approach to climate finance differs significantly from that of the EU and the US. Its role in facilitating the green transition is primarily driven by its role as an exporter of environmental goods such as solar panels, batteries, and other clean technologies. This has enabled China to lower the cost of green technologies globally, particularly in South and Southeast Asia, and cement its role as a dominant supplier in the global green technology market. China's contributions to bilateral public climate finance remain relatively modest and inconsistent, reflecting its status as a non-Annex I country under the UNFCCC. Yet, the recent increase in multilateral public climate finance highlights China's efforts to position itself as an emerging leader in global climate governance. By leveraging institutions like the AIIB and NDB, China can strengthen its influence within the multilateral climate finance framework while supporting developing countries in achieving low-carbon, climate-resilient development. This trend underscores China's evolving role in international climate finance as both a contributor and a strategic actor in the multilateral system.

6.3. Conclusions

In the current geopolitical landscape, marked by heightened economic competition and shifting global alliances, taking the lead on climate finance and trade in environmental goods with developing countries has become a strategic necessity. By proactively shaping new climate partnerships, developed economies can strengthen economic ties, enhance supply chain resilience, and secure access to critical raw materials essential for their own energy transitions. Moreover, fostering sustainable growth in developing countries helps mitigate geopolitical instability, reduces migration pressures, and expands markets for green technologies and investments. Inaction, on the other hand, risks giving room to other global players who are increasingly positioning themselves as partners of choice in climate and economic development. Leading on climate finance and trade is not just about addressing global climate goals – it is also about securing long-term economic and geopolitical stability.

However, climate finance and trade in environmental goods must not be pursued in isolation. Climate finance is often shaped by international commitments, while trade responds to commercial logics and industrial competitiveness. Yet both can contribute to the climate transition in developing countries. Aligning them more strategically is essential for enabling systemic change. Trade flows must be underpinned by finance that supports capacity building, regulatory alignment, and equitable participation in

green value chains. Climate finance, in turn, should be designed with a long-term perspective, enabling access not just to technologies but to the markets, investment, and innovation ecosystems that sustain green industrial development.

The challenge ahead is therefore one of coordination – across finance, trade, industrial policy, and development cooperation. Future EU strategies should aim to integrate these domains more cohesively, leveraging instruments such as the Global Gateway and green investment frameworks to facilitate Clean Trade and Industrial Partnerships that are equitable and transformative. This includes aligning export promotion with local development goals, supporting clean production standards, and ensuring that climate finance flows empower domestic industries and institutions in partner countries.

While this report offers a robust evidence base to inform strategy and dialogue, it also highlights persistent data limitations – particularly regarding climate-aligned private investment, foreign direct investment (FDI), and the real-world climate impact of trade and finance flows in recipient countries. Addressing these gaps will be essential to deepen understanding of how financial and commercial engagements translate into measurable decarbonisation outcomes. Future analysis should aim to cover a broader set of environmental goods that reflect emerging priorities in the green economy, as well as an expanded set of contributors, including the Gulf Cooperation Council countries. Finally, strengthening the connection between financial and trade flows and their measurable climate impacts – while integrating partner country perspectives – will be critical to ensuring that climate cooperation is both effective and equitable.

Appendices

Appendix A – AidData categorisation

Data for China was sourced from **AidData**, which encompassed a comprehensive dataset tracking 20,985 projects across 165 low- and middle-income countries, supported by loans and grants from official sector institutions in China, amounting to approximately $1.34 trillion. This dataset spanned 22 commitment years (2000-2021) and included detailed timelines for project implementation from 2000 to 2023. However, it lacked a specific environmental project classification, necessitating the development of a methodology to categorise the projects effectively. The challenges of this are:

- The size of the data set which includes over 20,895 individual projects;
- The inclusion of projects across a wide time length – which implies we must consider how the definitions of environmental projects have evolved;
- The large descriptions of the projects with many details;
- The need to ensure comparability against the OECD guidelines

To address this, CE implemented an algorithm-based approach, able to categorise projects into environmental and non-environmental. Overall, all projects that are considered to contribute to the green transition were included. Additionally, projects that can be considered 'environmental' but in a negative way, i.e not supporting the green transitions, were excluded.

To develop this algorithm, a rule-based method with semantic proximity using the word2vec algorithm was employed. The classification process began by identifying text columns in the dataset, specifically the title and description of each project. These columns were cleaned to remove non-essential words, transforming the text into a tokenized format suitable for analysis. Next, a list of relevant keywords related to environmental projects was created by analysing token frequency and proximity to key terms such as "environment," "green," "clean," "biodiversity," and "desertification" using the word2vec algorithm. This approach enabled the development of a tailored list of environmental terms. This list was further aligned with the OECD methodological document, by reviewing the definitions and ensuring all key words where covered. Additionally, 2 rounds of manual checks (covering more than 20% of the data) were performed to validate the keyword list selection. The classification involved labelling projects as either environmentally relevant (assigned a value of 1) or non-environmentally relevant (assigned a value of 0). This classification was informed by the construction of layered queries that considered the context of terms to ensure accuracy. Additionally, exclusion flags were implemented to eliminate projects that may have been classified as environmental but did not support the green transition, thereby refining the analysis further. This includes, but is not limited to, the following considerations:

- The use of "generally" is warranted here, as we define some common words that must be accompanied by at least one other environmental word. Such words are "electric", "electrification" or "environmental".
- Furthermore, we reverse the classification if an environmental word exclusively comes from a name of an institution, such as "Department of Environment".
- Any project containing references to coal-fired power plants, without the presence of decommissioning is classified as non-environmental.

Furthermore, no project can be included in classification if they don't meet the standard requirements of Oversees Development Aid defined by the OECD, and if they don't have a Chinese financier or are related to coronavirus aid.

Following the final classification results, a thorough check was performed for false positives (identified as environmental but actually non-environmental) and false negatives (classified as non-environmental but actually environmental). For false positive checks, a random subset of the classified data was manually inspected, and environmental issues were discovered in 10% of the cases, at least on a side objective level. To identify false negative results, all of the true classifications should be known ahead of time, but because this is not available in the data, we inspected the true classes in a different approach to compare this against our results. For this reason, we used ChatGPT to classify the projects based on the OECD definition and assessed the projects that ChatGPT identified as environmental but our classification identified as non-environmental. After thoroughly reviewing these results, we found that approximately 11% of the projects identified as environmental by ChatGPT but non-environmental by our projects are indeed related to environmental projects, at least on a secondary level. This 11% of projects accounts for 0.06% of all non-environmental projects, which is a non-significant number.

Appendix B – Data sources and limitations

Geographies covered and granularity available:

The focus of the report is on the EU, with the possibility of comparing performance against other major providers i.e., US and China. Moreover, some degree of geographic granularity in terms of European providers is given where possible i.e., for France, Germany, the United Kingdom and Italy. In terms of recipients, all information displayed focuses on Latin America, Africa, South-East Asia, South Asia, Pacific, and Caribbean. This means any other country outside these regions is not captured within our analysis. For example: Total trade figures will represents the amount of trade going from our selected providers (EU, US, China), and selected recipients, excluding flows within providers and from recipients to providers.

Public Finance:

OECD Development Finance for Climate and Environment:

- Description: tracks climate-related development finance flows from OECD member countries and other sources, aimed at supporting mitigation, adaptation, and environmental projects in developing countries. It includes concessional finance, covering public support sourced from both bilateral and multilateral channels. The database follows the Rio Markers methodology, which helps assess the climate relevance of projects by evaluating their primary and secondary objectives.
- Key limitations: Does not cover China
- Use in the dashboard: Bilateral and multilateral public finance

UNFCCC: Provision of public financial support: contribution through multilateral channels:

- Description: tracks contributions made through multilateral channels to assist developing countries in addressing climate change. It encompasses various types of public finance, including grants, loans, and other financial instruments aimed at promoting climate resilience and sustainability.
- Key limitations: This data provides information on who the provider countries of multilateral flows are, but not on the recipients of these flows.
- Use in the dashboard: multilateral public finance mapped for provider counties

AidData Global Chinese Development Finance Dataset

- Description: The AidData dataset provides detailed information on Chinese financial flows directed toward low- and middle-income countries, as defined by the OECD's Official Development Assistance (ODA) income classification. This dataset captures both traditional development aid and broader financial resources that support various developmental objectives in eligible countries, e.g., other official flows (OOFs), which involve resources provided by official agencies with developmental intentions but at non-concessional terms, as well as private financial flows mobilised by public agencies.
- Key limitations: no tagging of climate and environmental relevant projects
- Use in the dashboard: Bilateral and multilateral public finance (after categorisation of data)

Mobilised Private Finance:

OECD Mobilised private finance for sustainable development

- Description: tracks the amount of private sector finance mobilised through official development finance initiatives aimed at sustainable development goals. Data on mobilised private finance are collected for the leveraging mechanisms known to be used by development co-operation providers: syndicated loans, guarantees, shares in collective investment vehicles, direct investment in companies, credit lines, project finance and simple cofinancing arrangements.
- Key limitations: Does not cover China
- Use in the dashboard: Bilateral and multilateral private mobilised finance

The Chinese Official Finance to Africa (COFI)

- Description: developed by the World Resources Institute and its partners, tracks Chinese overseas financial investments in the power generation sector, including both equity and debt flows made by corporates and banks. The equity investments include greenfield investments and cross-border mergers and acquisitions (M&As). The debt investments or loans include those from Chinese banks, including the China Development Bank (CDB), the Export-Import Bank of China (China Eximbank), and commercial banks. Major players for energy investment are almost exclusively state-owned enterprises through either foreign direct investment or through backing by Chinese policy and commercial bank loans (Wang 2021; IEA 2020). The database covers projects within 87 Belt and Road Initiative (BRI) countries and provides details on 655 investments, with a focus on renewable and non-renewable energy, capturing information like capacity, investment amounts, and environmental impacts.
- Key limitations: It does not include specific environmental projects, it is not comparable with the OECD data (since it covers private finance more broadly and focused to the power sector), it does not clearly report concessionally metrics.
- Use in the dashboard: China's private climate finance (after filtering of data)

Trade:

IMF Bilateral Trade in Environmental Goods:

- Description: provides detailed information on trade flows between countries, covering both exports and imports across various goods. It includes data on trade volumes, values, and the types of products traded, enabling comprehensive analysis of global trade patterns and bilateral relationships. Environmental goods are defined in the IMF Bilateral Trade in Environmental goods dataset based on OECD and Eurostat. The OECD Environmental Goods and Service Industry manual offers a framework for identifying environmental goods: "The environmental goods industry consists of activities which produce goods to measure, prevent, limit, minimise or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. This includes cleaner technologies, products and initiatives that reduce environmental risk and minimise pollution and resource use."
- Key limitations: The classification of environmental goods faces challenges due to its broad categorisation, which can lead to inconsistencies in classification. This vagueness may include dual-

use goods that serve both environmental and non-environmental functions. In addition, the methodology tends to prioritise commercially viable products, potentially missing emerging technologies with future environmental benefits that lack significant market presence. Consequently, this could result in an underestimation of the potential scope of environmental goods.

- Use in the dashboard: Trade in environmental goods

UN Comtrade:

- Description: comprehensive repository of international trade data, providing detailed statistics on imports and exports between countries. It includes information on various commodities classified by the Harmonised System (HS), allowing for analysis of trade patterns over time. UN Comtrade database generally offers higher disaggregation compared to the IMF Bilateral Trade dataset, and was thus privileged for conducting case studies (however the data is the same since the IMF data is an aggregated version of this source). This granularity makes it a valuable resource for in-depth studies on trade patterns and trends. In contrast, the IMF dataset focuses more on broader bilateral trade flows between countries.
- Key limitations: N/A
- Use in the dashboard: for trade case studies which focus on specific HS-6 codes

Appendix C – Geographical categorisation

The following sections outlines the definitions of the country groups used in this report. This complements the tables presented in the main report which layout the geographical coverage of each indicator.

Table 4: Detailed geographical categorisation for providers-exporters

Provider/Exporter	*Countries included*
EU Member States	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden
EU institutions	Court of Justice of the European Union, Council of the European Union (The Council), Court of Auditors, European Parliament, European Council, European Commission, European Central Bank (ECB), European Investment Bank(EIB)
United States	United States (US)
China	China
Germany	Germany
France	France
Italy	Italy
United Kingdom	United Kingdom (UK)

Table 5: Detailed geographical categorisation for recipients-importers

Recipients/Importers	*Countries included*
Africa	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Cameroon, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Republic of Congo, Ivory Coast, Djibouti, Egypt, Equatorial Guinea, Eritrea, Gabon, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria,

	Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe
Latin America	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Barthelemy, Uruguay, Venezuela
South Asia	Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka
South-East Asia	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Vietnam,
Pacific	Cook Islands, French Polynesia, Fiji, Guam, Hawaii, Kiribati, Nauru, New Caledonia, Niue, Norfolk Island, Northern Mariana Islands, Marshall Islands, Micronesia, Palau, Papua New Guinea, Pitcairn Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu
Caribbean	Anguilla, Antigua and Barbuda, Aruba, Barbados, Belize, Bonaire, British Virgin Islands, Cayman Islands, Cuba, Curacao, Dominican Republic, Dominica, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinque, Montserrat, Puerto Rico, Saba, Saint Barthelemy, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Sint Maarten, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Island, United States Virgin Islands.