CLIMATE POLICY INITIATIVE

Landscape of Climate Finance for Agriculture, Forestry, Other Land Uses and Fisheries

Preliminary findings

Supported by:

UKaid
from the British people

Authors: Daniela Chiriac, Harsha Vishnumolakala, Paul Rosane

Acknowledgements: The authors would like to thank contributions from Barbara Buchner, Dharshan Wignarajah, Baysa Naran, Anna Balm, Rob Kahn, and Caroline Dreyer, for advice, editing and internal review and Josh Wheeling and Angela Woodall for layout and graphic design. The authors also acknowledge contributions from Jake Connolly for database maintenance, data cleaning, research, and project support.

The authors appreciate the review and guidance from the following expert outside CPI: Mike Reddaway (UK Foreign, Commonwealth and Development Office).

Photo credits: Shabdita Bajpai and Anna Balm.

Recommended citation: Climate Policy Initiative. 2022. "Landscape of Climate Finance for Agriculture, Forestry, other Land Use and Fisheries: Preliminary Findings."

Related CPI works:

Global Landscape of Climate Finance: A Decade of Data
Landscape of Climate Finance in Africa
Climate Finance Innovation for Africa
The Landscape of Methane Abatement Finance
Global Landscape of Climate Finance 2021
Examining the Climate Finance Gap for Small-Scale Agriculture

Contact: Daniela Chiriac daniela.chiriac@cpiglobal.org

About CPI: CPI is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, India, Indonesia, the United Kingdom, and the United States.

CLIMATE POLICY INITIATIVE

Key Findings

Between 2013 and 2020, climate finance to agriculture, forestry, other land uses, and fisheries (AFOLU*) followed a mostly positive trend. However, it recorded a 20% drop between the period 2017/18 and 2019/20, with the latter annual average reaching USD 16.3 billion. This represents only 2.5% of total climate finance tracked, indicating that AFOLU sectors are underfunded in comparison to other sectors, like renewable energy generation receiving 51% or low-carbon transport with nearly 26% of the total.

Current levels of tracked AFOLU climate finance are dwarfed by the estimated need to place the sectors on a pathway compatible with the Paris Agreement. AFOLU sectors require a nearly 26-fold increase in annual funding, i.e., USD 423 billion annually by 2030 (compared with the annual average of USD 16.3 billion in 2019/20) in order to shift to a low-carbon and climate resilient trajectory. New capital is required to finance this overarching shift which represents a business opportunity for the agri-food private sector. Returns-to-investment ratio is estimated at over 15:1 for society and businesses. Equally, governments need to play an essential role by repurposing existing harmful public support for unsustainable AFOLU towards sustainable agricultural production practices and healthy diets. More policy and finance mobilization efforts are required to accelerate and scale up investments, as well as improve the quality of finance and reporting. In this regard, measurement and disclosure of the impact and outcomes of AFOLU climate finance deployed is essential to assess its effectiveness.

The growth in overall climate finance for AFOLU translated into a significant increase in finance for climate mitigation, while climate adaptation seems to plateau for the period 2015-2020. The AFOLU sector is uniquely positioned to deliver triple wins in terms of (1) productivity and incomes, (2) climate adaptation and resilience and (3) GHG emissions reduction through the use of climate-smart agriculture integrative approaches. This remains insufficiently explored. Therefore, increased focus on AFOLU investments with dual benefits should feature high on public and private funders' agendas.

*For the purposes of this report, the acronym “AFOLU” includes fisheries.

CLIMATE POLICY INITIATIVE

Key Findings

An overwhelming majority of tracked AFOLU climate finance originates from public sources, with philanthropies providing the small fraction identified on the private side. Multiple barriers limit private investments in the AFOLU sectors including high real and perceived risks coupled with lack of impact considerations which discourage private investments. Rapidly scaling up successful blended finance mechanisms should be a priority in the quest to fill the climate finance gap.

The East Asia and Pacific region is the lead recipient of climate finance for AFOLU, followed by Sub-Saharan Africa. While Sub-Saharan Africa remains one of the lowest recipients of total climate finance across all sectors, the region attracts substantive investments towards AFOLU, which speaks to the economic significance of AFOLU within the region – 23% of Sub-Saharan Africa's GDP comes from agriculture.

Forestry and agriculture combined receive nearly 80% of the AFOLU climate finance in 2019/20. Conversely, climate financial flows targeting fisheries represent a minor fraction, as are those addressing food loss & waste, and low-carbon diets. Increased investments in these areas could unlock the potential that wider food consumption patterns hold for climate change mitigation.

Data gaps

Despite sustained efforts to improve coverage of the data collected, significant gaps still persist on the public domestic financial flows as well as domestic and international finance flows from private sector actors. While the findings presented should be interpreted with these data constraints in mind, they still provide a valuable overview of the known actions in this space and point to the need for increased standardization of climate solutions and consistent data disclosure by both public and private sectors.

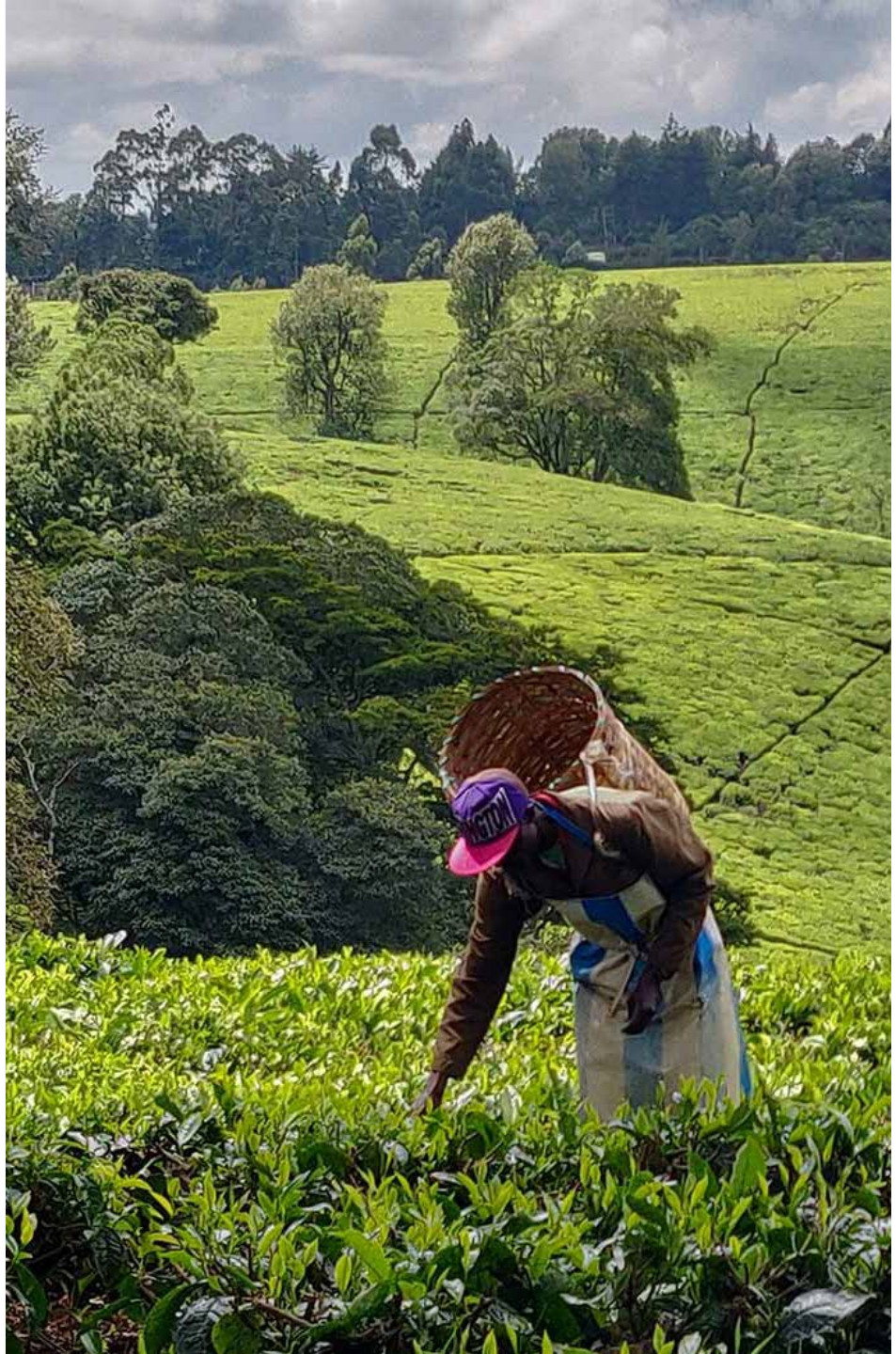

Table of Contents

1. Introduction

CLIMATE POLICY INITIATIVE

Background

Over the last decade, the agriculture, forestry, other land uses, and fisheries (AFOLU) sectors were responsible for 13-21% of global greenhouse gas (GHG) emissions (IPCC, 2022, IPCC AR6 WGIII, Chapter 7). More widely, food system-related emissions, represent 34% of total GHG emissions per year, primarily comprising agriculture production and land-use activities (71%), with the remainder (29%) originating from other supply chain activities (retail, transport, consumption, etc.) (Crippa et al., 2021). **Due to their substantive contribution to GHG emissions, AFOLU sectors are uniquely positioned to deliver significant climate mitigation benefits in a relatively low-cost and quick manner**. Against this setting, the rapid deployment of finance for climate mitigation in AFOLU is critical to help align with the 1.5°C Paris Agreement target.

Furthermore, agriculture and food systems are disproportionately exposed and vulnerable to adverse climate-related shocks, particularly so in low-income countries. Beyond the immediate impact on the quality and yield of agricultural production, climate change is undermining food access and inflicting economic loss (Holleman et al., 2020). On average, the AFOLU sectors have a significant economic importance in low-income countries, representing 25% of their GDP and providing employment to 63% of the workforce. In contrast, these figures are 8% and 30% respectively in middle-income countries and 1% and 3% respectively in high-income countries (FOLU, 2019).

This brief report presents the preliminary findings of an ongoing larger study, aiming to provide a comprehensive analysis of the global climate finance flowing towards AFOLU. The complete study is planned for publication in Spring 2023, and will aim to provide a baseline for the current and past volumes of global climate finance targeting AFOLU.

The preliminary findings are based on analysis of the consolidated dataset 2013-2020 produced for CPI's Global Landscape of Climate Finance series (CPI, 2022a). Despite sustained efforts to improve coverage of AFOLU data collected, significant gaps still persist on the public domestic financial flows as well as domestic and international finance flows from private sector actors (CPI, 2022a; CPI, 2020). The findings presented should therefore be interpreted with these data constraints in mind. The full publication will seek to fill some of these data gaps.

Relevance

The goal of the study is to measure progress and help to define ambitions and actions to increase investments in AFOLU, while fostering greater consensus on the priorities for climate finance in the sector.

The release of these preliminary findings at COP27 is meant, in addition to fuelling ambitions and commitments from both the public and private sector, to equally stress the importance of following up on those commitments by regularly disclosing quantitative information on actual implementation, so that progress in the transition can be transparently and reliably measured.

This study is produced by CPI as the Secretariat of the ClimateShot Investor Coalition (CLIC), an action-oriented group of leaders in the impact investment community working in agriculture and food systems globally. CLIC aims to collectively scale-up and accelerate finance for agriculture and food systems with the vision to shift these sectors to a low-carbon, climate-resilient and nature-positive pathway by 2030, thus delivering on the ambitions of the Glasgow Breakthrough Agenda on Agriculture. Launched at COP26, the Breakthrough Agenda on Agriculture aims to "make climate-resilient, sustainable agriculture the most attractive and widely adopted option for farmers everywhere by 2030."

This research on AFOLU climate finance flows supports the delivery of the Breakthrough Agenda on Agriculture. The first annual Breakthrough Agenda report 2022 (IEA et al., 2022) sets out the vast gap between needs and current financial flows of international climate finance into the agriculture sector and calls on participating countries of the Agriculture Breakthrough and private sector investors to channel larger volumes of climate finance to agri-SMEs and smallholder farmers, particularly in developing countries. Our study will complement the Breakthrough Report by delving into greater detail, providing a baseline for global climate finance targeting AFOLU based on historical data as well as providing recommendations on modalities for governments, development finance institutions, and the private sector, to work together and make more finance available. The study is included as one of the Priority International Actions for 2023 identified by participating countries of the Agriculture Breakthrough and will be used to inform dialogue in 2023 between Breakthrough countries on further actions that can be taken to accelerate progress to the 2030 Agriculture Breakthrough.

2. Preliminary Findings

Between 2013 and 2020, climate finance to AFOLU followed a generally positive trend, however, it recorded a large drop in 2019/20.

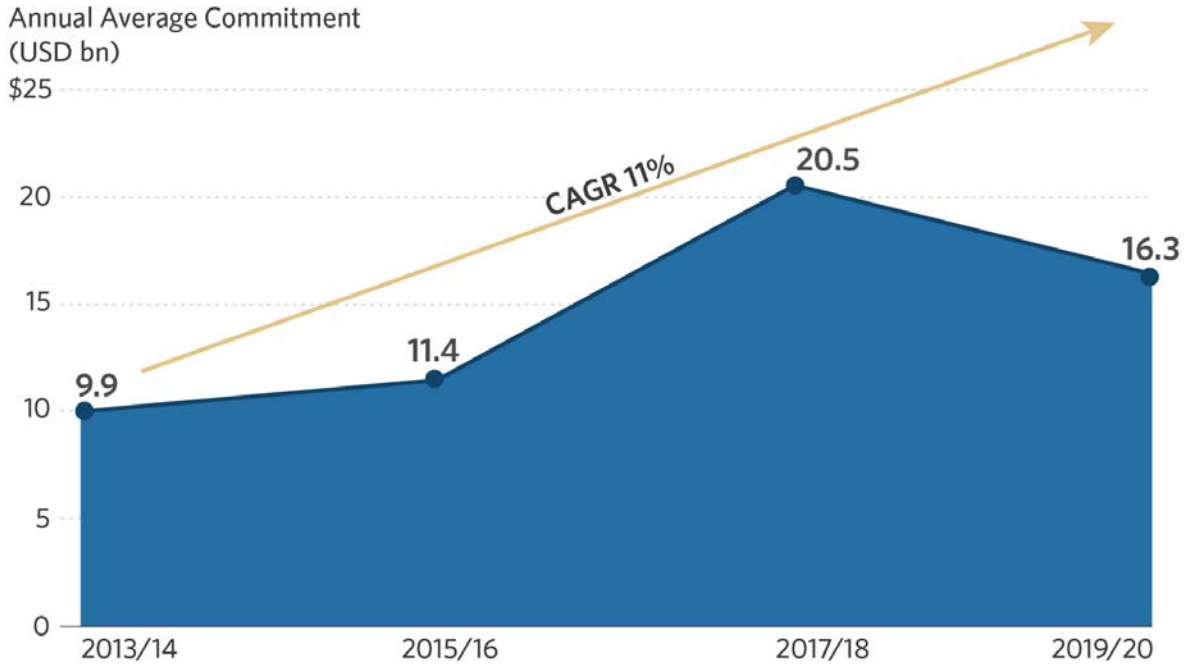

Figure 2.1: Global climate finance flows to AFOLU sectors (USD billions, annual averages between 2013 and 2020)

*CAGR refers to the growth rate at an annual compounded rate to show smoothed rate taking into account any fluctuations year on year
**CPI traditionally reports two-year averages to smooth out annual fluctuations in data. The upcoming larger study will as much as possible use annual figures where they fulfil CPI's standards of accuracy.

In the period 2013 – 2020, climate finance for AFOLU increased at a slightly higher rate* (11%) compared with global flows across all sectors (10%). AFOLU flows peaked in 2017/18, at USD 20.5 billion annual average**, representing a more than two-fold increase compared with 2013/14 and 80% more than 2015/16.

However, the 2019/20 sectoral distribution shows that AFOLU, with only 2.5% of total climate finance, lags behind other sectors like renewable energy generation receiving 51% or low-carbon transport with nearly 26% of the total climate finance (CPI, 2022a). More efforts are required to accelerate and scale up investments, as well as improve the quality of finance and reporting. In this regard, disclosing the impact and outcomes of AFOLU climate finance deployed is essential to assess its effectiveness (CPI, 2022a).

While the global climate finance flows across sectors continued the upward trend between 2017/18 and 2019/20, AFOLU was the only sector recording a fall in 2019/20 (CPI, 2022a).

A few plausible factors could explain the AFOLU drop: (1) funding fluctuations of few large reporting institutions; (2) changes in the methodologies used by reporting institutions or (3) impact of the COVID-19 pandemic and the ensuing economic crises affecting the sector disproportionately. Further analysis on the possible explanatory factors as well as potential updates of the funding levels for the sector will be included in the larger study to be published in Spring 2023.

Climate finance to AFOLU is dwarfed by the estimated needed to place the sectors on a Paris-compatible pathway.

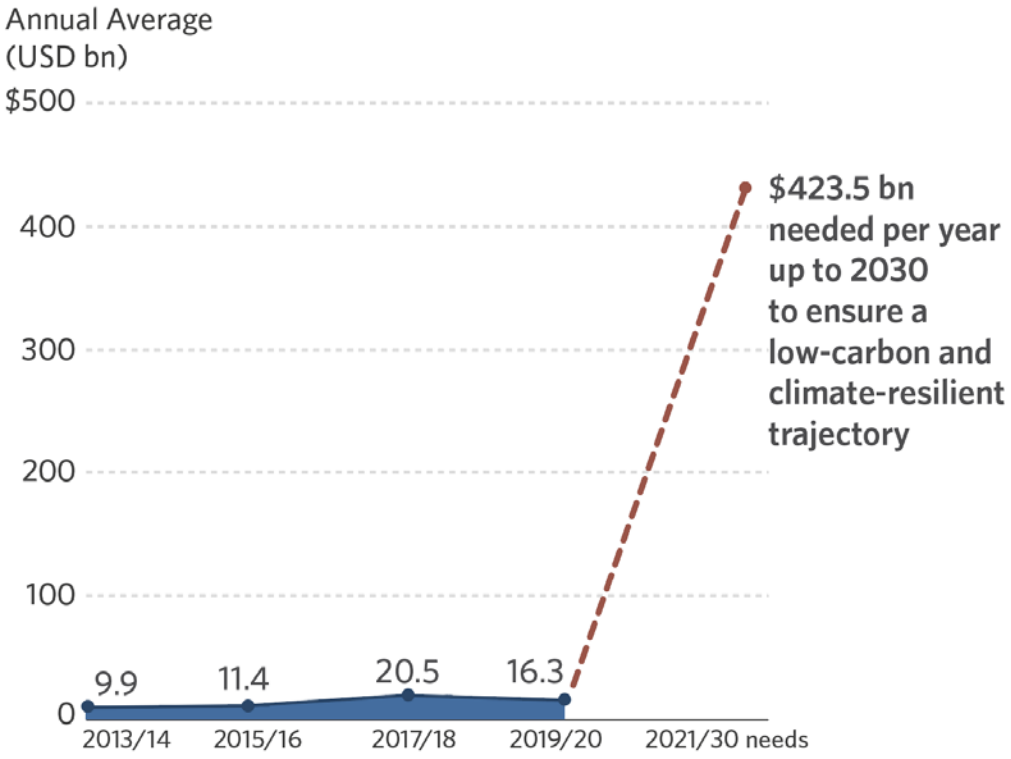

Figure 2.2 Global tracked climate finance flows and the average estimated annual climate investment need through 2030

*The average between a low estimate of USD 300 billion and a high estimate of USD 547 billion.
**After 2030, annual estimates change.

The AFOLU sectors require a nearly 26-fold increase in annual funding by 2030 compared with the 2019/20 annual average in order to shift to a low-carbon and climate resilient trajectory. Data and knowledge on climate finance needs are constantly evolving and their assessment will change with the course of actions taken by public and private actors and with more data becoming available. However, based on recent estimates in the literature reviewed, the comprehensive transition of the AFOLU sectors requires on average USD 423.4 billion per year* up to 2030**.

To achieve this in the next eight years, there is an urgent need for investment to support the shift in major areas of the agriculture and food systems, including regenerative crop production, sustainable livestock and fishery practices, stop deforestation, scale up diversified proteins production and consumption, reduce food loss and waste, training farmers, build the rural infrastructure as well as educate and provide access to reproductive health for women and girls in rural areas (UNEP, 2021; FOLU, 2019; Harmsen et al., 2019)

New capital is required to finance this overarching shift; for the agri-food private sector, embedding climate and nature sustainability in their operations represents a major business opportunity. Investments in these transition avenues are estimated to have a return to investment ratio of more than 15:1 for society and businesses (FOLU, 2019). Equally, governments need to play an essential role. Worldwide, public support for the agricultural and food systems sectors is estimated at USD 620 billion per year (IFPRI, 2022), thus holding a high potential to be repurposed towards sustainable production practices and healthy diets. Calls for action in this direction are multiplying (IFPRI, 2022; IEA et al., 2022).

Finance for adaptation in AFOLU is stagnating, while integrated approaches for adaptation and mitigation remain underutilised.

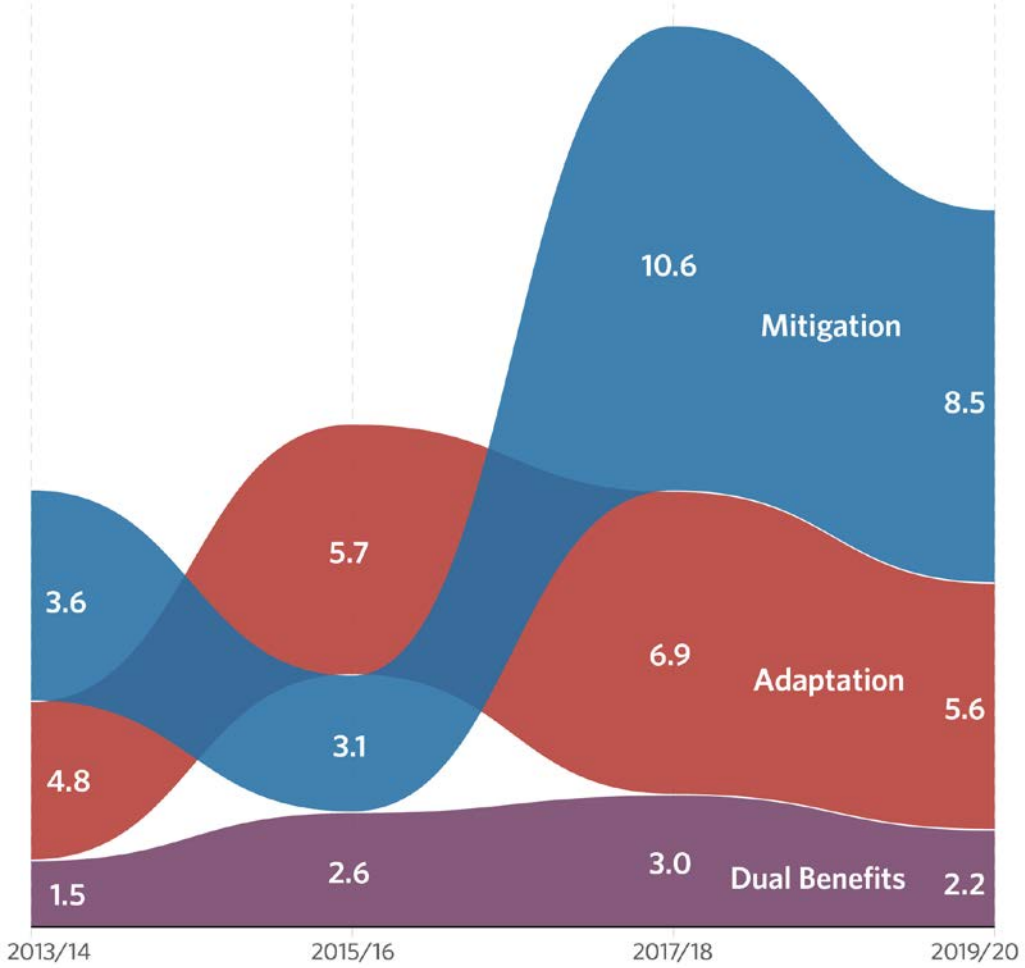

Figure 2.3 Global tracked climate finance flows for AFOLU by climate objectives within (USD billions, annual averages for the period 2013 - 2020)

The growth in overall climate finance for AFOLU translated into a significant increase in finance for climate mitigation, while climate adaptation seems to plateau in absolute numbers for the period 2015-2020.

Finance targeting climate mitigation recorded a major leap from USD 3 billion annual average for 2015/16 to USD 10.6 billion annual average for 2017/18. Adaptation finance, however, has fluctuated only mildly over 2015 – 2020 and dropped in 2019/20.

Although adaptation finance takes a considerably larger share in the total climate finance for AFOLU at 34%, compared with the overall climate finance across sectors at only 7.4%, this needs to be compared against the high climate risks which excessively affect agriculture, food systems, and rural communities (Holleman et al., 2020). Yet, while urgently needed, investments in climate adaptation are also notoriously challenging in the agriculture and food systems sectors, which explains the low levels of investment. Adaptation measures in agriculture lack markets where their impacts can be monetized, similar to carbon markets, thus they cannot be converted into additional revenue streams for farmers or investors. Without public or philanthropic support, private investors lack the incentives to come into this space. (ISF, 2016).

Yet the AFOLU sector is uniquely positioned to deliver triple wins in terms of (1) productivity and incomes, (2) climate adaptation and resilience, and (3) GHG emissions reduction through the use of climate-smart agriculture integrative approaches (FAO, 2013). This opportunity remains insufficiently explored, therefore increased focus on investments with both climate mitigation and adaptation benefits should feature high on public and private funders agenda.

An overwhelming majority of AFOLU climate finance originates from public sources.

Public sources include primarily national, bilateral, and multilateral development finance institutions as well as governments. Grants, concessional debt, and market-rate debt constitute the majority of these public finance flows.

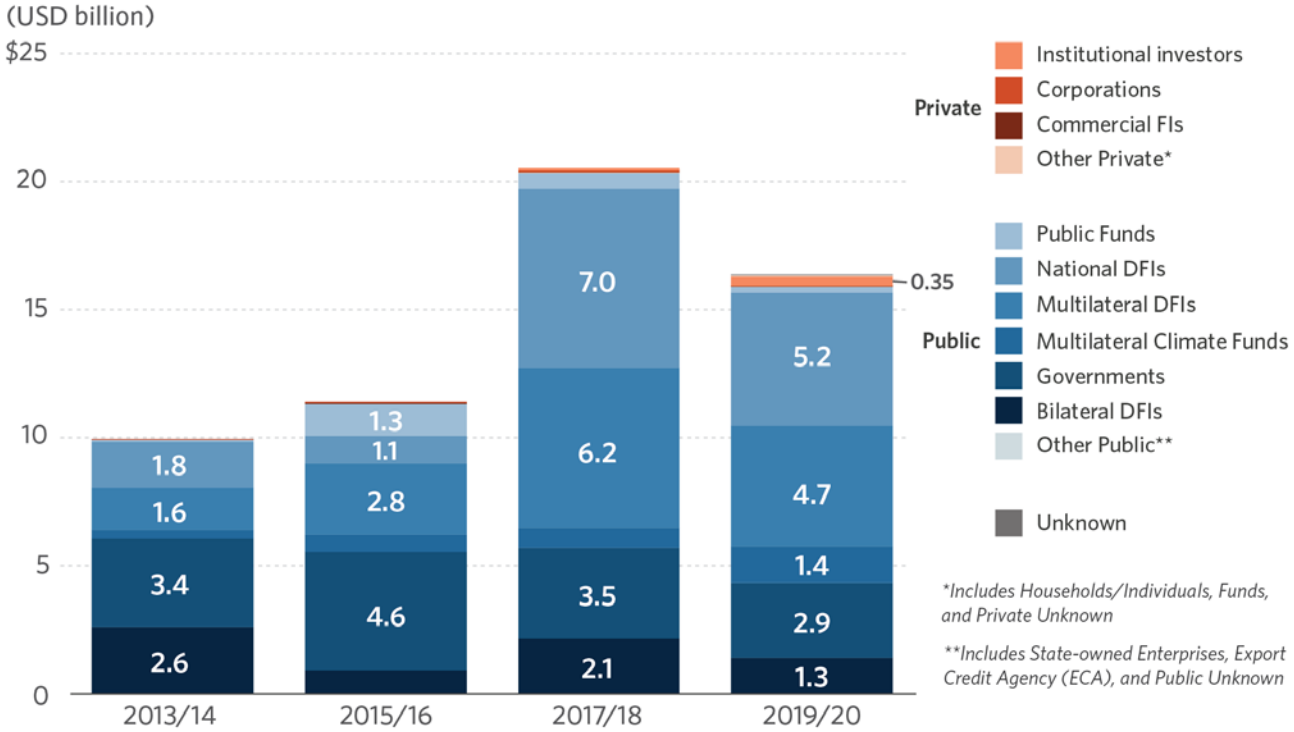

Figure 2.4 Sources of climate finance within AFOLU, by actor type (USD billions, annual averages between 2013 and 2020)

* Part of CPI's work on the Landscape of Climate Finance in Africa publication (CPI, 2022).

The private finance tracked is primarily sourced from institutional investors, mainly philanthropic foundations, and has passed the 1% threshold for the first time in the 2019/20 period. This is partially attributed to the inclusion of new data*, thus an actual increase in private financial flows is difficult to determine at this point.

Unlike public finance flows from the Global North to South, data on private finance flows is scarce and fragmented, making it particularly challenging to gather datasets of the same granularity as for public sector finance. This is in large part due to an absence of reporting obligations and a systematic framework for the private sector (CPI, 2021a; CPI, 2020).

Even with these caveats in mind, the low figures of private investments in AFOLU are indicators of a considerable lag compared with other sectors. As of 2019/20, across sectors, 49% of total climate finance originate from private sources (CPI, 2021a).

Multiple barriers limit private investments in the AFOLU sectors including high actual and perceived risks, upfront and transaction costs, small tickets sizes, long pay-back periods and low returns (CPI, 2021b). The high vulnerability to climate change of the sector coupled with the need for adaptation investments discourage private investments. Blended finance approaches offer opportunities for increased private investor participation in AFOLU and they seem to gain momentum reaching 28% of total blended finance deals in 2020, compared to only 16% between 2015-17 (Convergence, 2021).

In light of the vast climate finance gap that still needs to be filled, innovative ways to replicate and scale-up successful blended finance instruments should be prioritized in the AFOLU sectors.

The East Asia and Pacific region is the lead recipient of AFOLU climate finance with 39% of the total, followed by Sub-Saharan Africa receiving 24%.

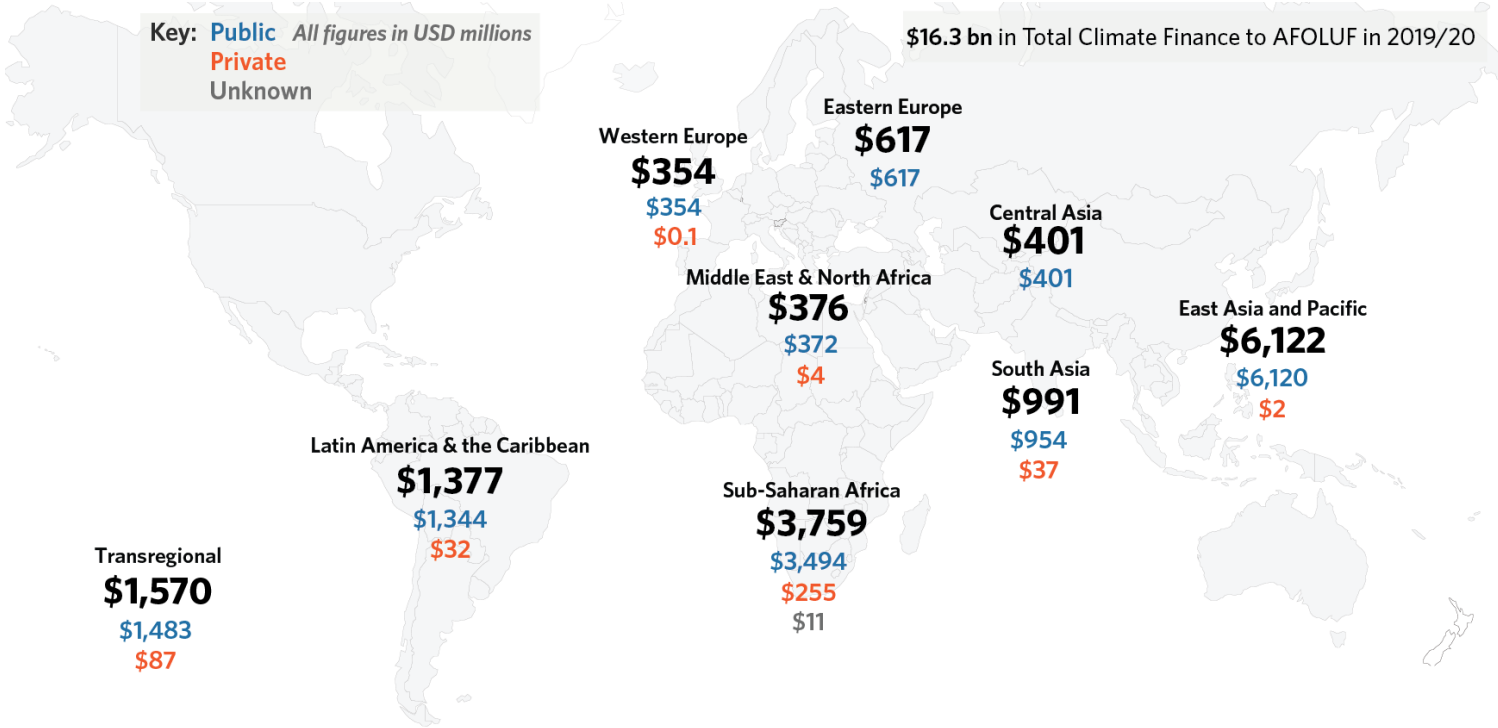

Figure 2.5 Destination region of climate finance to AFOLU, by public/private sources (USD millions, 2019/20 annual average)

The destination of USD770 million annual average could not be accurately identified due to inconsistent reporting methodologies among data sources.

*Unknown sources for SSA financing due to additional data collection compared with the other regions.

The primary source of finance for these regions are national and multilateral DFIs as well as governments.

Sub-Saharan Africa remains one of the lowest regional recipients of total climate finance across all sectors, standing at only 3.4%, or approximately USD 22 bn (CPI, 2022a). Despite this, the region attracts substantive investments towards AFOLU, second only to its Energy Systems sector (CPI, 2022b). This trend speaks to the economic significance of AFOLU within the region – 23% of Sub-Saharan Africa's GDP comes from agriculture (Goedde et al., 2019).

Our analysis reveals the extent of data gaps on climate finance for AFOLU. At the moment, we lack standardized and comparable data on investments for US & Canada as well as for Australia & Oceania were, while for Western Europe, Eastern Europe, and Central Asia, data on private sector investments constitute a gap. One of the objectives of the full report will be to provide quantitative and qualitative insights into these data gaps.

Forestry and agriculture combined receive nearly 80% of AFOLU climate finance in 2019/20.

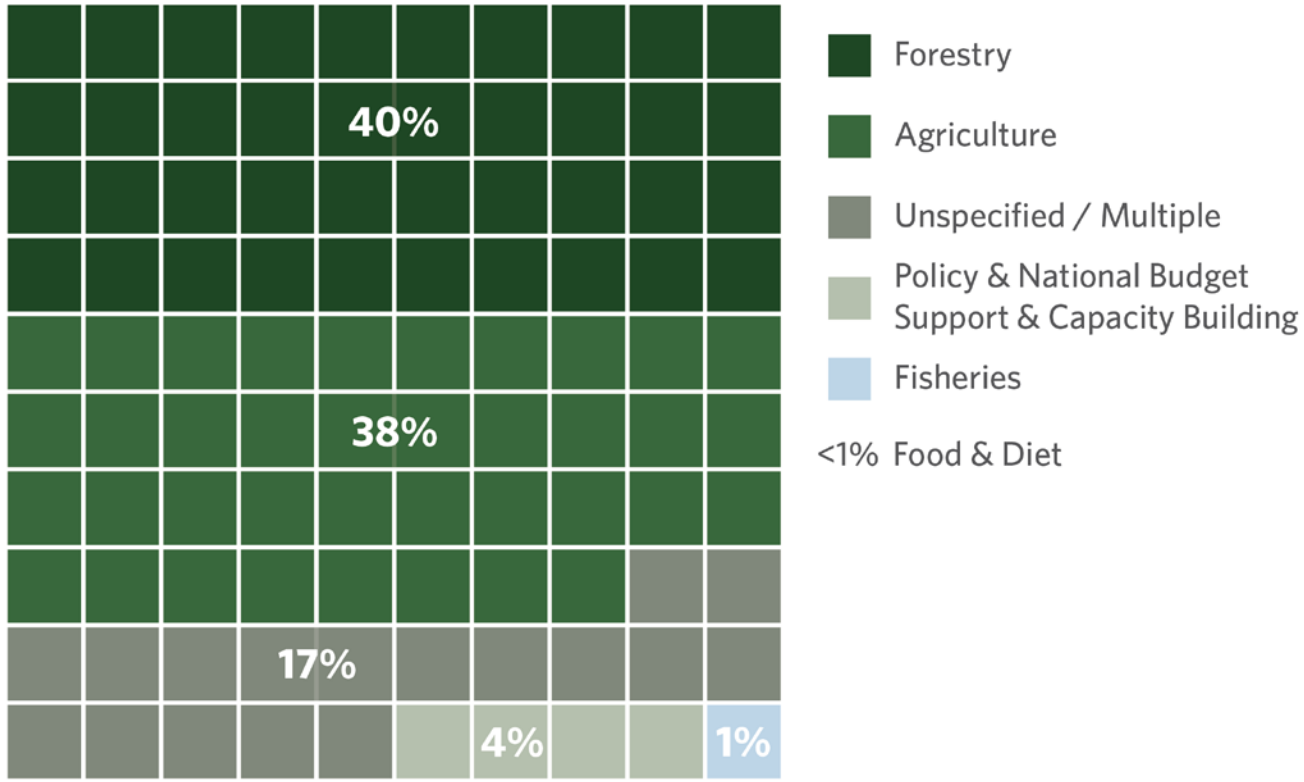

Figure 2.6: Sub-sectoral distribution of climate finance towards AFOLU (percentage of 2019/20 annual average)

Climate finance towards fisheries represent a minor fraction, standing at only 1% of the tracked climate finance, despite the potential for many seafood species to constitute a source of protein with lower GHG emission rates than land animal proteins (Bianchi et al., 2022). Similarly, finance addressing food loss and waste, as well as low-carbon diets constitutes less than 1% of the finance tracked, although they are identified as two of the key levers to address climate change in food systems (FOLU, 2019; IEA et al., 2022).

Scarce data for these two sub-sectors can explain the small financial flows identified, thus stressing the importance of standardized data collection methodologies as well as systematic reporting of investment data, particularly from the private sector. The extended study is aiming to fill some of the data gaps identified, particularly private investments in alternative proteins.

Yet, our results also constitute an indicator of the untapped potential that fisheries as well as wider food consumption patterns hold for climate change, which could be unlocked with increased investment.

3. Next Steps

Watch this space

The findings presented in this report constitute the foundation of a larger study planned for publication in Spring 2023.

We will build on these preliminary findings to:

- Deepen our analysis of climate finance flows to AFOLU as well as expand the coverage of our datasets particularly on the private sector investments.
- Analyze climate finance flows towards small-scale AFOLU.
- Produce recommendations on addressing the finance and data gaps for various groups of stakeholders.

Meanwhile, we welcome your comments and inputs at:

daniela.chiriac@cpiglobal.org

clic@cpiglobal.org

Please also visit our webpage for any latest news on the ClimateShot Investor Coalition (CLIC):
https://www.climatepolicyinitiative.org/climateshot-investor-coalition-clic/

4. References

References

Bianchi M, Hallström E, Parker R.W.R., Mifflin K, Tyedmers P, Ziegler F. 2022. "Assessing seafood nutritional diversity together with climate impacts informs more comprehensive dietary advice." Communications Earth & Environment, Volume 3, Page 188. https://doi.org/10.1038/s43247-022-00516-4.

Climate Policy Initiative (CPI) [B.Naran, J.Connolly, P.Rosane, D.Wignarajah, E.Wakaba, B.Buchner]. 2022a. "Global Landscape of Climate Finance: A Decade of Data 2011-2020." https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-a-decade-of-data/.

CPI [Meattle C, Padmanabhi R, Fernandes P, Balm A, Wakaba G, Chiriac D, Tonkonogy B]. 2022b. "Landscape of Climate Finance in Africa." https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-africa/.

CPI. 2021a. "Global Landscape of Climate Finance 2021." https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2021/

CPI [Chiriac D, Byrd R]. 2021b. "Leveraging Policy Tools to Improve Impact of Financial Instruments in Sustainable Agriculture, Forestry and Other Land Use (AFOLU)." https://www.climatepolicyinitiative.org/wp-content/uploads/2021/10/Leveraging-Policy-Tools-to-Improve-AFOLU-Impact-Oct-2021.pdf.

CPI [Chiriac D, Naran B, Falconer A]. 2020. "Examining the Climate Finance Gap for Small-Scale Agriculture." https://www.climatepolicyinitiative.org/publication/climate-finance-small-scale-agriculture/.

Convergence. 2021. "The State of Blended Finance 2021."https://www.convergence.finance/resource/the-state-of-blended-finance-2021/view

Crippa M, Solazzo E, Guizzardi D, Monforti-Ferrario F, Tubiello F.N., Leip A. 2021. "Food systems are responsible for a third of global anthropogenic GHG emissions." Nature Food, Volume 2, Pages 198-209. https://www.nature.com/articles/s43016-021-00225-9.

Food and Agriculture Organisation. 2013. "Climate-Smart Agriculture Sourcebook." https://www.fao.org/3/i3325e/i3325e.pdf.

References

Food and Other Land Use Coalition (FOLU). 2019. "Growing Better: Ten Critical Transitions to Transform Food and Land Use." https://www.foodandlandusecoalition.org/wp-content/uploads/2019/09/FOLU-GrowingBetter-GlobalReport.pdf.

Goedde L, Ooko-Ombaka A, Pais G. 2019. "Winning in Africa's agricultural market." McKinsey. https://www.mckinsey.com/industries/agriculture/our-insights/winning-in-africas-agricultural-market

Harmsen J.H.M., Van Vuuren D.P., Nayak D.R., Hof A.F., Höglund-Isaksson L, Lucas P, Nielsen J, Smith P, Stehfest E. 2019. "Long-term marginal abatement cost curves of non-CO2 greenhouse gases." Environmental Science & Policy, Volume 99, Pages 136-149. https://doi.org/10.1016/j.envsci.2019.05.013.

Holleman C, Rembold F, Crespo O, Conti V. 2020. "The impact of climate variability and extremes on agriculture and food security." Food and Agriculture Organization (FAO). https://www.fao.org/3/cb2415en/cb2415en.pdf.

Initiative for Smallholder Finance (ISF). 2016. "The Climate Conundrum: Financing Smallholder Productivity and Resilience in the Age Of Climate Change." https://isfadvisors.org/wp-content/uploads/2020/06/isf_briefing_13_the_climate_conundrum.pdf.

International Food Policy Research Institute (IFPRI). 2022. "Global Food Policy Report: Climate Change and Food Systems." https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/135889/filename/136101.pdf.

Intergovernmental Panel on Climate Change (IPCC). 2022. "Climate Change 2022: Mitigation of Climate Change." https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_Full_Report.pdf.

International Energy Agency (IEA), International Renewable Energy Agency (IRENA), UN Climate Change High-Level Champions, Marrakech Partnership. 2022. "The Breakthrough Agenda Report 2022." https://iea.blob.core.windows.net/assets/49ae4839-90a9-4d88-92bc-371e2b24546a/THEBREAKTHROUGHAGENDAREPORT2022.pdf.

United Nations Environment Programme (UNEP). 2021. "State of Finance for Nature." https://www.unep.org/resources/state-finance-nature.

CLIMATE POLICY INITIATIVE

Thank You

@climatepolicy

@climatepolicyinitiative