



Landscape of Climate Finance for Agrifood Systems 2025

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ABOUT CPI & CLIC

Climate Policy Initiative (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 seven offices around the world in Brazil, India, Indonesia, South Africa, the UK, and the US. The ClimateShot Investor Coalition (CLIC) is a global coalition working to accelerate and scale finance for low-carbon, climate-resilient, and nature-positive agriculture and food systems globally. CPI is the Secretariat of CLIC.



DESCRIPTORS

REGION

Global

SECTOR

Agrifood Systems, Agriculture, Forestry, Other Land Use, Fisheries and Aquaculture, Food Systems, Nature and Biodiversity

KEYWORDS

Climate finance, agrifood systems, agriculture, forestry, fisheries, aquaculture, land use, AFOLU, nature, biodiversity

RELATED CPI WORKS

[The Triple Gap in Finance for Agrifood Systems \(2024\)](#)

[Landscape of Climate Finance for Agrifood Systems \(2023\)](#)

[The Climate Finance Gap for Small-Scale Agrifood Systems \(2023\)](#)

[Landscape of Climate Finance for Agriculture, Forestry, Other Land Uses, and Fisheries \(2022\)](#)

[Landscape of Climate Finance for Land Use in Brazil 2021–2023 \(2024\)](#)

[Sustainable Finance Flows to India's Agriculture Sector \(2025\)](#)

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EXECUTIVE SUMMARY

Transitioning agrifood systems to low-emission, climate-resilient pathways is critical to achieve the SDGs and also safeguard food supply chains, ensure the climate resilience of food production, and sustain inclusive economic growth. Employing more than a billion people, roughly one third of the global workforce, agrifood systems are the economic and social backbone of many emerging markets and developing economies (EMDEs). At the same time, they generate around 30% of global greenhouse gas (GHG) emissions and exert pressure on 86% of the species at risk of extinction, placing them among the largest drivers of climate change and biodiversity loss. Yet, the level of climate finance directed to the sector remains starkly out of step with this footprint, leaving agrifood systems acutely vulnerable to escalating climate shocks—with far-reaching implications for food security, livelihoods, and economic stability.

Agrifood systems are not only at the center of today's climate and nature crisis, but also a pivotal lever for driving solutions. Embedding sustainability across farms, forests, and fisheries—as well as throughout related supply chains—can deliver significant mitigation and adaptation benefits while restoring ecosystems and strengthening rural resilience. With the right investments and policy frameworks, agrifood systems can shift from being a major source of environmental harm to a cornerstone of climate-resilient, inclusive development.

Finance for sustainable agrifood systems has increased, but remains woefully short of transition needs. This report analyzes climate finance to global agrifood systems in 2021/22, tracking flows across financial sources, climate uses, sectors, regions, and instruments. Flows have risen markedly compared to data from 2019/20 presented in CLIC's first [Landscape Climate Finance to Agrifood Systems](#) (2023). However, this progress builds on a low base, and much of the growth is concentrated in China and Europe. Funding remains lacking in other key agrarian regions, leaving overall investment critically misaligned with the sector's mitigation, adaptation, and resilience potential.

To bridge the gap, we identify priority areas where governments, private financial institutions (FIs), and corporations must act. We also present recommendations to reshape financial flows, enhance resilience, and unlock long-term value through innovation, investment, and systemic change. This aligns with CPI's Climate Finance Roadmaps methodology, which informs investment strategies across sectors and geographies, highlighting financing opportunities and required policy support (CPI, 2024a).

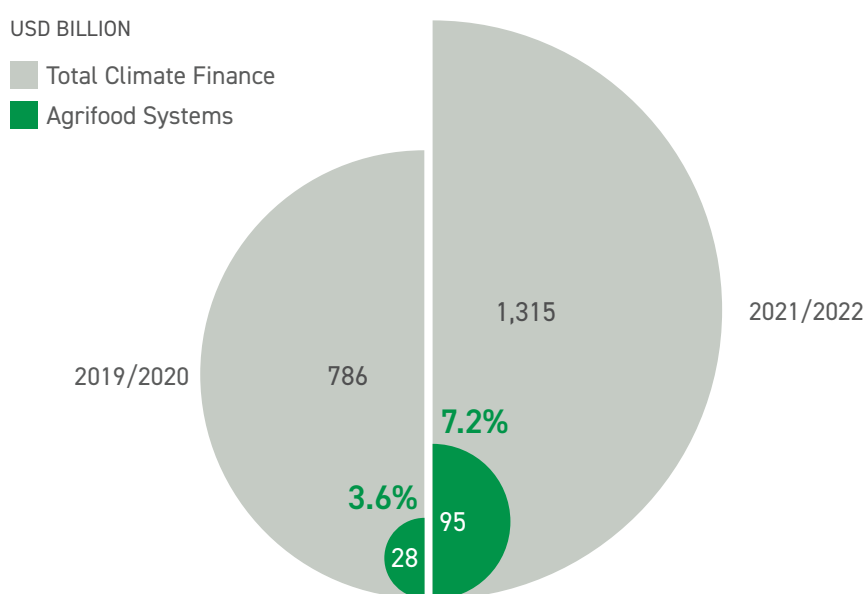
KEY INSIGHTS

Global flows to agrifood systems reached nearly USD 100 billion in 2021/22¹, accounting for around 7% of total climate finance. Flows to agrifood systems increased from USD 28.5 billion in 2019/20 to USD 94.9 billion in 2021/22 (see Figure ES1), rising from 3.6%² to 7.2% of the global share of climate finance (CPI, 2024c). While this growth is encouraging and points to the possibility of transformational change, it does not signal that the sector is on track. The increase is largely due to a sharp rise in domestic public investment in a small number of regions—primarily China and Europe—rather than the broader systemic shift that is needed globally. Current investment remains far below what is needed to support a global transition: twelve times more finance—USD 1.1 trillion annually—is required through 2030 to align agrifood systems with climate goals (CPI & FAO, 2024).

Domestic resources are responsible for nearly three-quarters of agrifood systems' climate funding. Flows from domestic sources rose from USD 13.3 billion in 2019/20 to USD 69.3 billion in 2021/22, increasing from 47% to 73% of total funding. This was primarily driven by rural reforms under China's *14th Five-Year National Agricultural Green Development Plan*, which aims to increase agricultural productivity and income, and fiscal incentives under Western Europe's Green Deal and COVID-19 recovery strategy, which aim to promote a green, resilient, and just transition aligned with the EU's 2050 carbon neutrality goal.

Private capital remains particularly absent in key agrarian regions, notably sub-Saharan Africa (SSA) and Latin America and the Caribbean (LAC). While total private finance increased nearly sixfold from 2019/20 levels—reaching USD 19.2 billion in 2021/22—this was largely concentrated in upper-middle- and high-income economies. Real and perceived risks, weak enabling environments, and a lack of de-risking tools continue to deter investment in SSA and LAC, perpetuating the financing gaps highlighted in the first Landscape of Climate Finance to Agrifood Systems (CLIC, 2023).

Figure ES1. Climate finance to agrifood systems as a share of global total, 2019/20 vs. 2021/22



¹ We report climate finance flows as biennial averages to smooth out annual fluctuations in data.

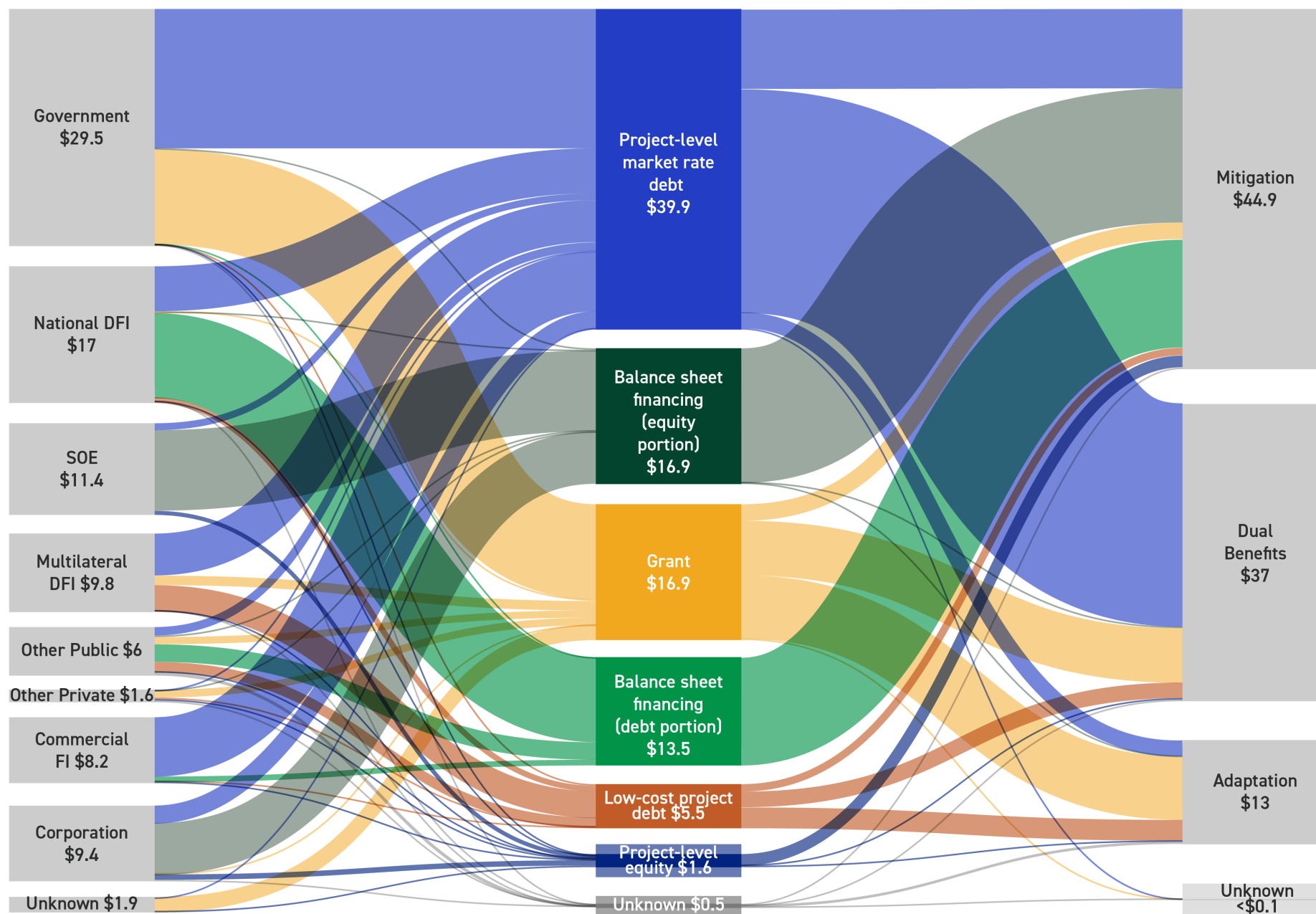
² The 3.6% figure differs from that presented by CLIC in 2023 because revised data from CPI's Global Landscape of Climate Finance (GLCF), including USD 7 billion in additional agrifood flows, raised 2019/20 climate finance totals to USD 786 billion, thereby lowering agrifood's share from 4.3% to 3.6%.

USD BILLION

INVESTOR TYPE

INSTRUMENTS

USES



Agrifood systems remain severely underfunded despite their critical role in emissions abatement and their potential for sustainable investment and job creation. Agrifood systems are the second-largest source of GHG emissions globally—second only to energy systems. However, they received just 3.8% of total mitigation finance tracked across all sectors in 2021/22—a slight increase from 2% in 2019/20. This is ten times less than the mitigation finance received by energy systems and seven times less than the transport sector (CPI 2024b). Without urgent action, agrifood systems will remain a major driver of emissions, undermining efforts to meet global mitigation targets.

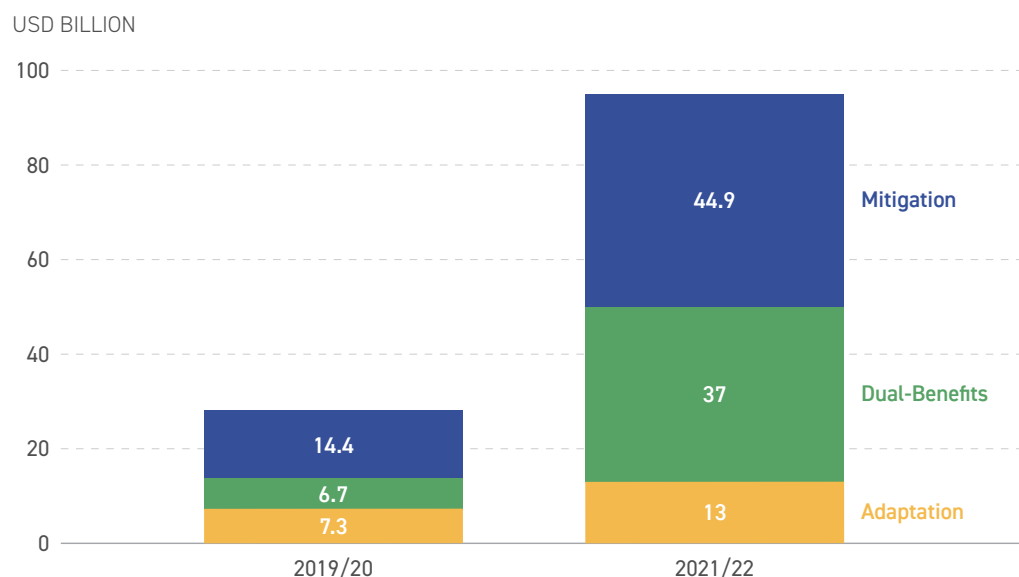
Financial institutions must reprioritize investments to address the trillion-dollar agrifood funding gap and realize the sector's vast opportunity. Public and private actors collectively contribute trillions (see Figure 4b) annually to agrifood systems, suggesting the availability of capital to fund the climate transition. The investment needs of agrifood systems can be met by redirecting financial flows to sustainable projects and solutions. The challenge is not the adequacy of funds but their effective alignment with SDGs.

SOURCES OF FINANCE

- **Public finance (USD 73.8 billion, 78%)** remained the dominant type of funding, with domestic sources increasing over five times and surpassing international sources in share and volume. This growth was largely driven by domestic investment by governments, national development finance institutions (DFIs), and state-owned enterprises (SOEs), suggesting increased national policy support for climate-aligned agrifood investments. However, this growth was primarily concentrated in developed and advanced emerging economies, underscoring persistent disparities in domestic resource mobilization.
- **Private finance (USD 19.2 billion, 20%)** grew nearly six times from 2019/20 levels, primarily due to commercial financial institutions (FIs) and corporations investing in agrivoltaics and biomass projects. However, private capital continues to bypass agrarian economies in SSA and LAC, where real and perceived risks, limited bankable projects, and a lack of de-risking mechanisms hinder investment—continuing patterns identified in the first agrifood landscape analysis.

CLIMATE USES

Figure ES2: Climate finance to agrifood systems by climate use, 2019/20 vs. 2021/22



Note: Unknown climate use values (USD 4 million in 2019/20 and USD 49 million in 2021/22) are not shown in the chart.

- **Mitigation finance (USD 44.9 billion, 47%)** remained the largest share of total flows, driven by energy-related projects such as agrivoltaics and bioenergy—particularly in East Asia and the Pacific. Land-based activities, such as soil carbon sequestration and sustainable livestock management, remain underfunded despite their high mitigation potential.
- **Dual-benefit finance (targeting both adaptation and mitigation outcomes) (USD 37 billion, 39%)** surged nearly six times from 2019/20 levels (see Figure ES2), with agrifood systems receiving over half the total dual-benefit finance tracked across all sectors (USD 64 billion). Most flows were deployed via use-of-proceeds bonds, primarily issued by governments. While limited data granularity hinders detailed tracking, where available, funds targeted upstream activities like agroforestry, climate-resilient seeds, and improved grazing.
- **Adaptation finance (USD 13 billion, 14%)** grew in absolute terms but declined as a relative share. Funding remained heavily concessional, delivered mostly through public grants and low-cost debt. Private investment was negligible, signaling high perceived risks and limited scalable business models.

SECTORAL ANALYSIS

- **Crop and Livestock Systems (USD 38.6 billion, 41%)** remained the highest-funded sector, although dominated by energy projects like agrivoltaics and biomass. Excluding these, agriculture-specific mitigation declined, with minimal support for on-farm solutions such as soil carbon management and agroforestry.
- **Fisheries and Aquaculture (USD 10.7 billion, 11%)** ostensibly receive adequate funding when compared to the sector's investment needs for a climate transition. However, reported needs are likely underestimated due to the nascency of blue finance and separate reporting mechanisms (CPI & FAO, 2024).

- **Forestry (USD 10.3 billion, 11%)** was the only sector that reported a decline in climate investment, likely due to data gaps and inconsistent reporting rather than an actual drop. Most funding supported mitigation—including afforestation, reforestation, and bioenergy—with adaptation finance falling significantly short of sectoral needs.
- **Biodiversity, Land, and Marine Ecosystems (USD 3.9 billion, 4%)** received ten times more financial flows than 2019/20 levels, yet investment must scale nearly fifty times for the sector to reach its full resilience potential.
- **Food and Diets (USD 0.4 billion, 0.5%)** remained the least-funded sector, requiring a 125-fold increase to meet needs. Critical opportunities to address upstream food loss in low- and middle-income countries remain overlooked. Scaling finance for sustainable diets and circular food systems will require stronger policy levers and implementation-focused funding.

REGIONAL ANALYSIS

- **East Asia and the Pacific (USD 43.5 billion, 46%)** remained the top recipient of agrifood climate finance, driven almost entirely by domestic investment, particularly from China in agrivoltaics and sustainable agriculture. Excluding China, flows to the region were far more modest and concentrated in Japan and Korea.
- **Sub-Saharan Africa (USD 7.8 billion, 8%)** fell to the third-largest destination by funding volume but received the highest share of adaptation finance globally, commensurate with Africa's climate vulnerability and marginal contribution to global GHG emissions.
- **Latin America and the Caribbean (USD 5.9 billion, 6%)** received a lower share of funding than 2019/20 levels, and witnessed a shift toward domestic funding, driven by public expenditure on sustainable land use, agroforestry, and reforestation in Brazil.

INSTRUMENT ANALYSIS

- **Debt finance (USD 58.9 billion, 62%)** continued to be the largest type of funding, with increased private participation from commercial FIs and corporations investing in dual-benefit solutions.
- **Equity finance (USD 18.6 billion, 20%)** multiplied five times from 2019/20 levels, driven by SOEs and corporations using balance sheet financing for energy-related projects. However, early-stage venture capital is limited, and insurance and guarantees remain underutilized despite their de-risking potential, particularly for agri-SMEs in developing economies.
- **Grant finance (USD 16.9 billion, 18%)** grew in absolute terms, but declined as a relative share, raising concerns over the adequacy of support for adaptation and smallholder-focused interventions that rely heavily on concessional capital.
- **A more strategic mix of instruments** is needed to match the sector's diverse risk profiles—complementing debt with greater use of grants for adaptation and public goods, equity for innovation and risk-sharing, and de-risking tools like guarantees and insurance to unlock private finance for smallholders and high-risk contexts.

CATALYSTS FOR CHANGE

The geopolitical landscape has evolved significantly since the period covered by this analysis and continues to develop in ways that impact climate finance for agrifood systems. While the global context continuously changes, the underlying challenges and the potential solutions prevail. More than ever, adopting a forward-looking, solutions-oriented approach is critical to maintaining momentum for vital climate action that supports global food security, inclusive economic development, and resilient livelihoods.

There is no silver bullet. Unlocking climate finance for agrifood systems depends on a confluence of critical enabling conditions—robust public policy, strong local financial institutions, and coordinated multistakeholder action. These elements form the foundation of every solution presented in Table ES1. The table summarizes key actions for governments, DFIs and donors, commercial FIs, and food and beverage corporates to catalyze change in the areas limiting climate finance to agrifood systems. Section 9 of this report provides detailed recommendations for each stakeholder group, along with real-world examples.

Table ES1: Action matrix for agrifood climate finance

Action Area	Governments	DFIs & Donors	Commercial FIs	Corporates
Financial access: Expand affordable, tailored finance for smallholders and agri-SMEs to scale climate-smart practices.	Expand de-risking tools (e.g., guarantees, insurance, concessional credit) through local banks, cooperatives, and fintechs to reach underserved actors and strengthen local financial systems.	Scale blended finance using concessional capital, first-loss guarantees, and technical assistance (TA). Support pipeline development by funding and sharing successful business models to demonstrate viability.	Develop tailored products such as flexible climate-smart loans, weather-indexed insurance, and sustainability-linked bonds. Standardize instruments to cut costs and improve scalability.	Expand supplier finance with pre-harvest loans and low-interest credit for sustainable practices. Co-invest in local agri-SME funds and support savings groups to build supplier financial resilience.
Policy-enabling tools: Align policies, subsidies, and regulations with climate and investment goals.	Redirect current subsidies to climate-smart practices and align agriculture, trade, and energy policies with Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs). Strengthen land tenure, market access, extension services, and input delivery. Embed climate goals into agricultural planning through coherent policy reform.	Support policy reform via TA and green policy-based lending. Help governments design taxonomies, sustainable finance rules, and agri-aligned incentives. Facilitate multi-stakeholder country platforms to scale innovative finance models.	Engage in policy dialogues to shape sustainable finance frameworks. Advocate for clear agri-related taxonomies and incentives to mitigate climate and nature risks. Align lending practices with evolving policy landscapes.	Collaborate with policymakers to integrate agriculture into climate strategies. Co-develop standards and participate in pilot initiatives (e.g., regenerative certification) that inform future regulations.
Climate-resilient infrastructure: Build robust infrastructure that withstands climate shocks.	Prioritize public investment in resilient rural infrastructure (e.g. irrigation, storage, off-grid energy). Integrate climate risk assessments and adaptation benefits into project appraisal to avoid maladaptation and maximize long-term value.	Partner with national development banks (NDBs) to finance climate-smart agri-infrastructure via concessional credit lines and TA. Support pipeline development and build risk management capacity for local lenders.	Offer term loans or leases for climate-resilient infrastructure (e.g., flood-proof processing, solar-powered cold storage). Tap DFI credit lines and issue resilience-linked bonds with clear metrics.	Co-finance or subsidize infrastructure for smallholder suppliers (e.g., drip irrigation, solar pumps, or storage facilities) to improve productivity and reduce exposure to climate shocks.
Market development: Strengthen value chains and market access to reduce risk and boost farmer incomes.	Establish public funds to support early-stage farmer aggregation (e.g., co-ops, aggregators), covering costs like staffing, legal, and assessments. Enable commodity exchanges and warehouse receipt systems to boost farmer access to finance and markets.	De-risk aggregation models via credit guarantees, blended finance, and TA to support value chain finance through buyers and co-ops. Help build the institutional capacities of aggregators and input providers.	Leverage fintech and digital platforms to aggregate farmers, assess risk, and deliver bundled services (e.g., finance, inputs, market access). Use data-driven tools to scale lending and improve repayment.	Secure long-term sourcing contracts with farmer groups, offering price stability and technical support. Reward climate-resilient practices with price premiums and share more value with producers.

Action Area	Governments	DFIs & Donors	Commercial FIs	Corporates
Physical climate risk mitigation: Embed climate risk assessments into investment and planning decisions.	Embed agrifood in NDCs and NAPs with clear adaptation goals. Prioritize climate risk in national climate plans, land use policy, and budget allocation.	Build internal capacities and tools to assess physical climate risks in agrifood portfolios. Support clients with adaptation metrics and integrate climate risk into investment decisions.	Embed climate risk into credit scoring and loan pricing. Develop products like weather-indexed parametric insurance and climate-resilient working capital.	Help suppliers manage risks with drought-tolerant seeds, climate-smart training, and localized weather information. Invest in climate adaptation across value chains.
Nature-based solutions: Invest in ecosystems to enhance resilience and productivity.	Align agricultural and climate policy with nature goals. Repurpose harmful subsidies, mandate biodiversity impact assessments, and scale payment for ecosystem services.	Condition finance on biodiversity outcomes. Embed ecosystem indicators (e.g., soil, water, biodiversity) in due diligence. Fund agroecology pilots and nature-positive TA.	Incorporate biodiversity into ESG scoring. Use satellite and AI tools to track impact and issue biodiversity-linked bonds or green loans with measurable outcomes.	Set biodiversity targets for sourcing. Scale agroforestry and regenerative practices. Use credits and payment for ecosystem services (PES) schemes to reward nature-positive suppliers.
Technological innovation: Scale agtech and climate-smart tools to boost efficiency and reduce emissions.	Invest in R&D, incubators, and innovation hubs, anchored by clear policy targets. Support regulatory sandboxes and public-private R&D initiatives for climate-smart tech adoption.	Fund pilots and scale proven technologies with seed capital and de-risking instruments. Promote cross-country learning to adapt innovations regionally.	Finance early-stage agtech via tailored instruments (e.g., pay-as-you-go irrigation, equipment leasing). Partner with startups to scale affordable digital ag solutions.	Pilot precision agriculture tools and sensors with suppliers. Scale successful models globally and support R&D through shared innovation platforms.
Data and disclosure: Improve data, reporting, and transparency to guide investment and track progress.	Mandate TCFD- and TNFD-aligned disclosure through sustainability and financial regulations. Invest in taxonomies, open access agrifood data (e.g., emissions, soil, yields), and systemic and impact-oriented KPIs on food security, biodiversity, and resilience.	Disclose climate and nature risks and link funding to science-based targets or risk assessments. Invest in public, interoperable data platforms (e.g., Global Emerging Markets Risk Database) and promote harmonized metrics and labels to scale climate finance.	Require borrowers to adopt credible transition plans. Use ESG and climate data in credit decisions and support shared infrastructure (e.g., emissions tracking, climate-risk maps).	Disclose Scope 3 and biodiversity risks across supply chains. Equip suppliers with tools and finance to report emissions, land use, and ecosystem metrics aligned with global standards.

TABLE OF CONTENTS

1.	Introduction	11
2.	Methodology	14
2.1	Definition and scope	14
2.2	Data improvements and limitations	15
2.3	Benchmarking flows against investment needs	17
3.	Climate finance for agrifood systems	18
4.	Sources of finance	21
4.1	Public sources	21
4.2	Private sources	23
5.	Climate uses	25
5.1	Mitigation finance	25
5.2	Adaptation finance	27
5.3.	Dual-benefit finance	31
6.	Sectoral analysis	33
6.1	Crop and Livestock Systems	34
6.2	Forestry	34
6.3	Fisheries and Aquaculture	35
6.4	Biodiversity, Land, and Marine Ecosystems	36
6.5	Food and Diets	38
7.	Regional analysis	40
8.	Instrument analysis	42
9.	Catalysts for change	44
10.	Conclusion	49
	References	50

1. INTRODUCTION

As a major driver of emissions and a highly exposed sector to climate impacts, agrifood systems cannot be overlooked in the pursuit of a low-carbon, climate-resilient, and nature-positive future.

Global agrifood systems sit at the nexus of today's most urgent global imperatives—climate change, food security, and inclusive economic growth—offering a unique opportunity for “triple wins” in sustainable development. These systems directly employ over a billion people—a third of the global workforce—and contribute almost a third of global GHG emissions (World Bank, 2024a; FAO, 2024a). They also play a central role in biodiversity loss, threatening 86% of the species at risk of extinction due to land-use change and ecosystem degradation linked to food production (Chatham House, 2021).

Smallholder farmers are disproportionately vulnerable to escalating climate impacts. They face droughts, floods, heat stress, and pest outbreaks, which directly undermine crop yields, livestock productivity, and rural livelihoods worldwide. Producing roughly 35% of the world's food, these farmers play a critical role in global food security, yet often lack resources to build resilience (IFAD, 2024).

Cascading crises have exposed the deep fragility of global agrifood systems, reinforcing the urgent need for coordinated, resilient, and well-financed responses to safeguard food security and strengthen climate adaptation. Conflicts such as those in Ukraine, Sudan, and Palestine continue to disrupt supply chains and exacerbate global hunger (FSIN & GNAFC, 2024). Climate disasters are compounding vulnerabilities—El Niño-driven droughts, for example, have led six sub-Saharan African countries to declare a state of emergency due to crop failures, water shortages, and livestock losses (UN OCHA, 2024). These shocks are contributing to a worsening global hunger crisis: between 713 and 757 million people faced hunger in 2023—roughly one in eleven people globally, and one in five in Africa (FAO, 2024b).

This precarious situation has been intensified by major shifts in the donor landscape. The abrupt freeze of USAID funding by the US government in early 2025 led to the termination of 83% of its programs, severely disrupting global agrifood assistance (The Guardian, 2025). Ethiopia, one of the largest recipients of US aid, was particularly hard-hit—nearly 16 million people depended on donated grain in 2024, and 35,000 metric tonnes of food were left stranded in warehouses, at risk of spoiling due to the abrupt halt in operations (The Guardian, 2025). In parallel, the UK's Foreign, Commonwealth & Development Office (FCDO) has announced cuts to its international aid budget, with spending projected to decline to 0.3% of GNI by 2027/28, raising serious concerns about future support for climate adaptation and resilience, and food security in low- and middle-income countries (LMICs) (Bond, 2025). More broadly, they reflect a troubling trend: tightening public budgets and shifting geopolitical priorities threaten to undermine critical climate and development initiatives when they are most urgently needed.

At the same time, agrifood systems have gained unprecedented recognition on the global climate agenda since 2023. COP28 was a landmark moment, with nearly 160 world leaders endorsing the UAE Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action, committing to integrate food systems into national climate strategies (WRI, 2023). Over 300 non-state actors, including Climate Policy Initiative (CPI), united behind a Food Systems Call to Action to align food systems with the 1.5°C goal (UNFCCC, 2023). Additionally, the Africa Green Revolution

Forum rebranded as the Africa Food Systems Forum, signaling increased ambition from the Global South in advancing climate-resilient food systems.

The financial sector stepped up investment in climate-resilient agrifood systems through impact investment, blended finance and strategic partnerships in 2024. Under its G7 Presidency, Italy launched the Apulia Food Systems Initiative to fund climate-resilient agriculture in Africa (Reuters, 2024) alongside a coordination mechanism for DFIs and public banks to co-invest in sustainable agrifood projects using risk-sharing tools (MAECI, 2024). Impact investment is growing: Acumen committed USD 300 million to support smallholders' climate adaptation and mobilize an additional USD 1.2 billion (Acumen, 2024a), while donors pledged USD 85 million to AgDevCo to scale sustainable crop production among African agri-SMEs (AgDevCo, 2025). Agrifood-focused venture capital and private equity are rising in Africa, with investments reaching USD 197 million in 2024, more than 50% of which went to climate-smart agriculture solutions (AgBase, 2025). Blended finance platforms are scaling up, with the International Finance Corporation (IFC) and OCP Group launching a USD 800 million agri-finance initiative to strengthen African value chains (IFC, 2023a), while the AGRI3 Fund, backed by the UN Environment Programme and Rabobank, is using guarantees to unlock commercial lending for deforestation-free agriculture (Rabobank, 2024).

Expectations are high that this momentum will sustain in 2025. The biennial UN Food Systems Summit Stocktaking Moment (UNFSS+4) in July will help maintain this momentum by ensuring that agrifood systems remain central to global policymaking. The UN Forum of the Standing Committee on Finance has identified sustainable food systems and agriculture as its focus for 2025 (UNFCCC, 2025). Finally, with Brazil—a major agricultural producer and exporter—hosting COP30 there is growing hope that food systems will remain firmly in the spotlight.

Despite increasing attention from policymakers and investors, agrifood systems remain one of the most underfunded levers for climate action. Clearer investment pathways and targeted financing mechanisms are needed to unlock capital at scale. As a step toward bridging the agrifood climate funding gap, CLIC is piloting CPI's newly developed Climate Finance Roadmaps methodology (CPI, 2024a), which aims to provide a structured approach to mobilizing finance for priority sectors and geographies. The first application, to be featured in a forthcoming CLIC report, focuses on the livestock sector in Latin America and the Caribbean, with the objective of identifying the key investors, financial instruments and policies needed to scale sustainable solutions.

This Landscape of Climate Finance for Agrifood Systems report (hereafter the “Agrifood Landscape”) is structured as follows:

1. **Section 2** outlines the scope, methodology and data improvements and limitations in tracking agrifood climate finance.
2. **Section 3** provides an overview of 2021/22 agrifood climate finance flows, trends, and funding gaps.
3. **Section 4** assesses sources of finance, both public and private contributions.
4. **Section 5** analyzes climate finance across mitigation, adaptation, and dual-benefit interventions.
5. **Section 6** presents an in-depth analysis of sectoral finance flows across Crop and Livestock Systems, Forestry, Fisheries and Aquaculture, Biodiversity, Land and Marine Ecosystems, and Food and Diets.

6. **Section 7** explores regional finance distribution, highlighting domestic and international flows.
7. **Section 8** examines financial instruments, including debt, equity, and grants.
8. **Section 9** identifies catalysts for change in funding agrifood climate finance, with targeted stakeholder-level recommendations.
9. **Annexes** for this report, provided in a separate document, cover:
 - **Methodology Annexes (I-V)** detail our methodology for tracking climate finance to agrifood systems.
 - **Data Annex (VI)** summarizes this tracked data in tabular form.

2. METHODOLOGY

This report builds on the tracking methodology established in CLIC’s inaugural Agrifood Landscape report (CLIC, 2023), with various refinements to enhance the granularity and coverage of tracked agrifood climate finance flows. These aspects are summarized below and detailed in the methodological annexes.

2.1 DEFINITION AND SCOPE

This edition of the Agrifood Landscape adopts the comprehensive definition of agrifood systems presented in The Triple Gap in Climate Finance for Agrifood Systems (CPI & FAO, 2024) (see Box 1)³.

Box 1: Definition of agrifood systems

Agrifood systems encompass food and non-food agricultural products that sustain livelihoods, including crops, livestock, fisheries, and forestry. They span the entire value chain—from production and processing to distribution, consumption, and waste.

Beyond agricultural production, agrifood systems operate within broader economic, societal, and environmental contexts, integrating institutions, stakeholders, and ecosystems that influence their sustainability and resilience. By capturing these interconnections, agrifood systems reflect the complex interactions, feedback loops, and trade-offs that shape food security, economic development, and environmental outcomes.

As in the previous Agrifood Landscape, our analysis categorizes project-level climate finance across key sectors, mapping financial flows to activities that contribute to climate change mitigation, adaptation, or both. Based on an updated taxonomy developed by CPI and FAO, we use new sectoral classifications and activity tags to improve the granularity and coverage of agrifood climate finance flows (See Annex II). This edition of the report categorizes agrifood climate finance under the following key sectors:

- **Agriculture, Forestry, Other Land Use, and Fisheries (AFOLU)**⁴: This sector is central to agrifood systems and is derived from IPCC emissions categories, as used in CPI’s Global Landscape of Climate Finance (GLCF) analysis. We disaggregate AFOLU data into Crop and Livestock Systems, Forestry, and Fisheries and Aquaculture.
- **Food and Diets**: This sector captures the role of downstream agro-industries and consumption patterns in agrifood systems. Given its impact on emissions, resource efficiency, and food security, we continue to track the sector distinctly to improve its visibility and highlight gaps to finance relevant solutions.

³ The definition in the report—prepared by CPI (led by CLIC) and the UN Food and Agriculture Organization (FAO)—builds on that introduced in CLIC’s first Agrifood Systems report (CLIC, 2023) and The State of Food and Agriculture (FAO, 2023a) and aligns with the broader scope developed by the FAO, IFAD, UNICEF, WFP, and WHO.

⁴ Throughout this report, the term AFOLU is used as including fisheries and aquaculture.

- **Policy, National Budget Support, and Capacity Building** (referred to as “policy support” for brevity): This sector includes policy instruments, economic incentives, and market-based mechanisms that realign agricultural subsidies and remove administrative barriers. While policy support is an essential category for systemwide transformation, given its role across agrifood sectors, we do not analyze its financial flows separately, but embed it throughout the report within relevant sectoral discussions.
- **Biodiversity, Land, and Marine Ecosystems:** This newly included sector uses an improved taxonomy developed by CPI and FAO to better capture agrifood-related activities and solutions. It reflects the vital role of these ecosystems in food production, resilience, and climate adaptation. Our tracking methodology for this sector is still evolving, and finance flows are currently underestimated. Importantly, this is not a full accounting of nature finance; only finance at the intersection of climate and nature is included within the scope of this analysis.

Agrifood systems also encompass activities across other sectors—energy, transport, water and wastewater, solid waste, and industry—through upstream and downstream activities. Although integral to systemic change, finance for these activities is rarely tagged as agrifood-related, limiting visibility for these solutions. While we apply a keyword-based tagging approach to capture relevant flows, limited project-level detail causes some finance to remain untracked, likely leading to an underestimation of financial flows to these sectors.

2.2 DATA IMPROVEMENTS AND LIMITATIONS

Our tracking uses public and private sector project-level datasets covering 2019 to 2022, as used for CPI’s GLCF. Following this established methodology ensures consistency in capturing funding sources, climate objectives, and destinations. Project-level data provides the highest level of granularity and confidence to track flows. However, gaps can remain, particularly for private finance where disclosure is limited. For more details, see the most recent GLCF Methodology (CPI, 2023a).

To improve data coverage across 2019-22, we have made two key updates:

1. New data sources were added, improving the visibility of government-led investments, especially in Europe, North America, and Latin America (see Annex II).
2. An expanded keyword list was used, which increased the tagging accuracy of non-AFOLU projects, allowing us to capture more agrifood-relevant finance (see Annex III).

As a result, we categorize 2019-22⁵ climate finance flows into two subsets to distinguish between actual changes in investment and increases driven by improved data coverage and classification (see Figure 1):

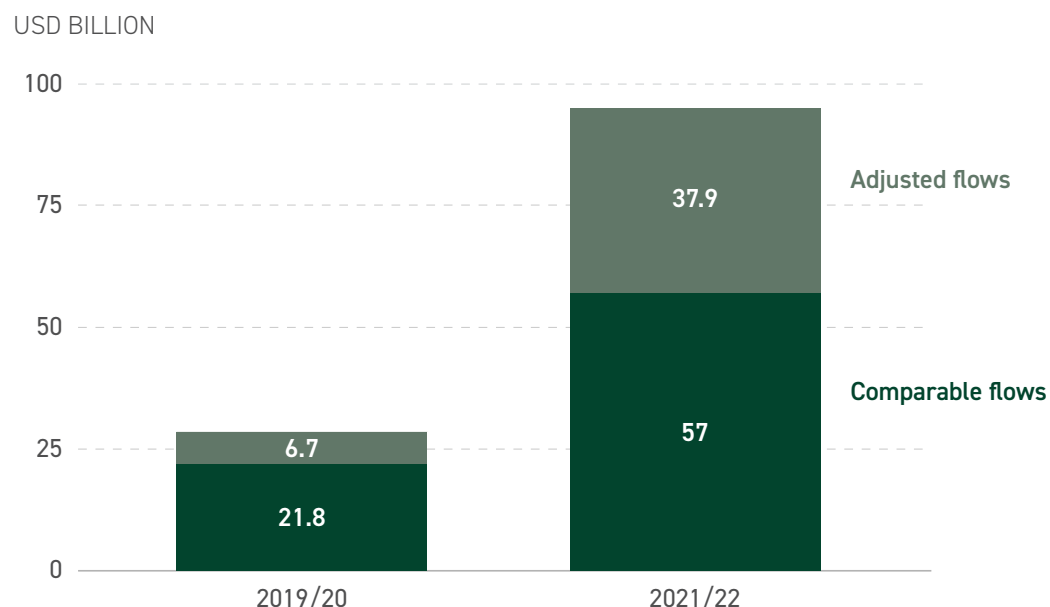
1. Comparable flows are financial flows captured using the same data sources and keywords as in the 2023 Agrifood Landscape. These flows are directly comparable over time and reflect actual changes in investment in agrifood systems.
2. Adjusted flows refer to financial flows captured primarily⁶ through the new data sources and expanded keyword list introduced in this edition (see above). These flows would not have been tracked using the methodology applied in the previous Agrifood Landscape. While they may

⁵ We report climate finance flows as biennial averages to smooth out annual fluctuations in data.

⁶ Nearly half of adjusted flows in 2019/20 comes from data sources that were not accessible in 2021/22 (see Annex IV). While these would be comparable if 2021/22 data were available, we categorized them as adjusted to avoid falsely suggesting these flows dropped to zero.

represent real investments, the observed increases are more likely to reflect improvements in data coverage or refinements to classification methods.

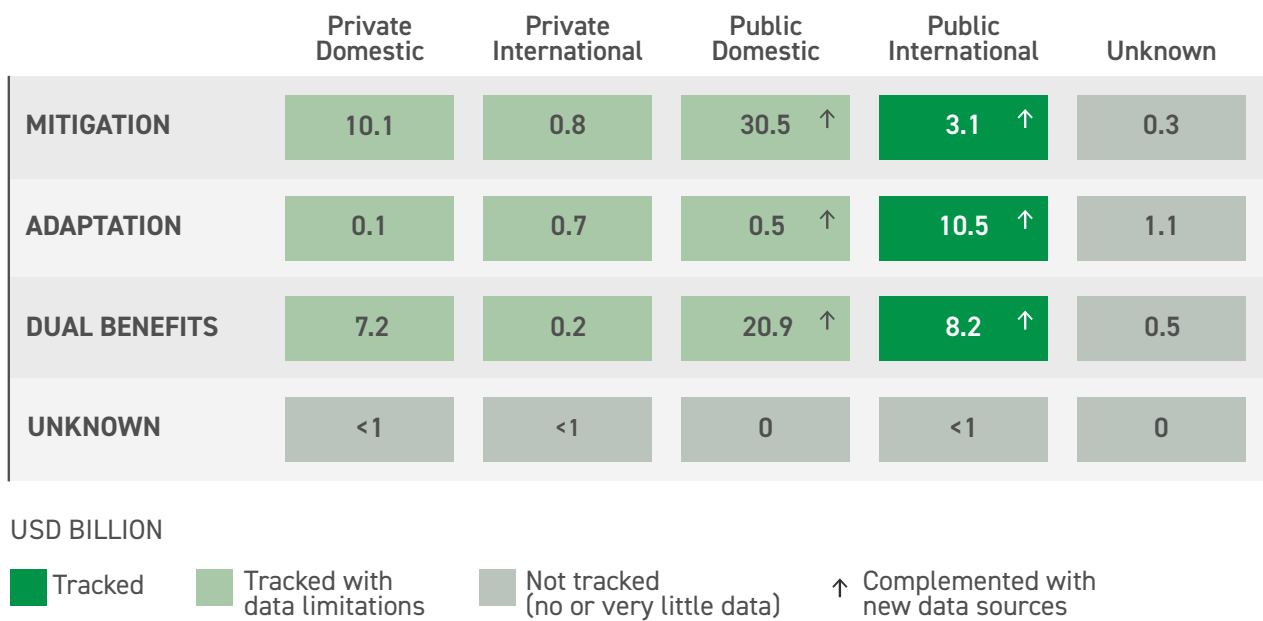
Figure 1. Methodological split of climate finance to agrifood systems, 2019-22



Unless otherwise noted, figures in this report combine both comparable and adjusted flows to provide a comprehensive view of agrifood climate finance. Comparable flows are presented selectively to minimize repeated methodological caveats. When they are referenced, we indicate this in footnotes to clarify whether observed variations reflect actual changes in investment or improved data coverage.

Despite improved data coverage, significant gaps persist in tracking agrifood climate finance across the public and private sectors (see Figure 2). Many governments still lack standardized frameworks, making it difficult to isolate climate-related spending within broader agrifood budgets. The absence of climate-tagged subsidy reporting further contributes to underreporting. Private finance is even harder to capture due to voluntary reporting practices, lack of adaptation-specific frameworks, and proprietary data constraints (CPI, 2024b). CPI's new *Adaptation Finance Tracking Taxonomy*, which includes agrifood classifications, aims to address this by enabling a more consistent identification of adaptation-relevant private investments (CPI, 2024b). Continued progress depends on better data collection, clearer disclosure incentives, and greater standardization across both public and private actors.

Figure 2. Climate finance for agrifood systems by source, climate objective, and quality of data coverage in 2021/22



2.3 BENCHMARKING FLOWS AGAINST INVESTMENT NEEDS

For the first time, this report assesses the agrifood climate finance gap by benchmarking 2021/22 flows to required investments. This uses estimates from The Triple Gap in Climate Finance for Agrifood Systems (CPI & FAO, 2024), which were derived using a two-pronged approach:

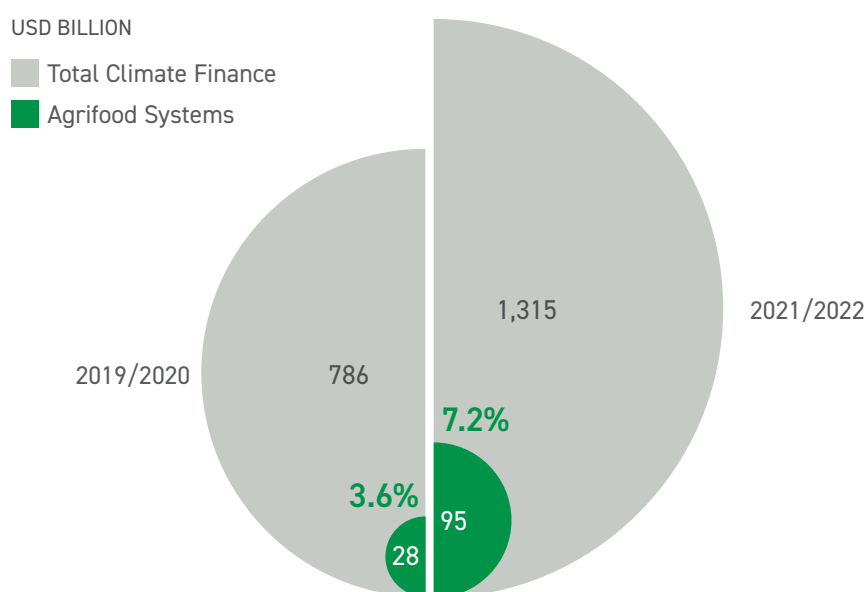
1. **Top-down needs:** A global estimate of the climate finance required to transition agrifood systems to a 1.5°C pathway⁷ by 2050, based on predictive models that assess financing needs across sectors, solutions, and activities, using climate scenarios developed by various institutions.
2. **Bottom-up needs:** A country-level assessment of the finance required for agrifood systems to meet national climate targets, as outlined in Nationally Determined Contributions (NDCs) submitted to the UNFCCC.

⁷ While 2024 marked the first year in which global temperatures exceeded 1.5°C above pre-industrial levels (WMO, 2025), this benchmark remains relevant as a long-term temperature target under the Paris Agreement, which is assessed over decades rather than single years.

3. CLIMATE FINANCE FOR AGRIFOOD SYSTEMS

Tracked climate finance for agrifood systems reached USD 94.9 billion in 2021/22 from the USD 28.5 billion captured in 2019/20. These flows accounted for 7.2% of the total USD 1.31 trillion in climate finance across all sectors in 2021/22 (CPI, 2024c), as shown in Figure 3.

Figure 3. Project-level climate finance to agrifood systems, 2019/20 and 2021/22⁸



Notably, 40% of the tracked flows in 2021/22 are due to new data sources and methodological improvements (USD 38 billion). However, even excluding these adjustments, agrifood climate finance more than doubled—from an annual average of USD 22 billion in 2019/20 to USD 57 billion in 2021/22.

A key driver of this growth has been the sharp rise in domestic spending, which increased from 47% of total flows in 2019/20 (USD 13.3 billion) to 73% in 2021/22 (USD 69.3 billion). This increase has been concentrated in countries with strong fiscal capacity, enabling policy environments, and well-developed financial markets—with East Asia and the Pacific and Western Europe together accounting for 90% of domestic funding in 2021/22. Excluding these two regions, total agrifood funding would have grown by a more modest 62%.

The East Asia and Pacific region—particularly China—accounted for the bulk of the increase in domestic finance, which rose from USD 8.3 billion in 2019/20 to USD 41.5 billion in 2021/22. To some extent, this growth can be attributed to China's *14th Five-Year Plan for National Agricultural Green Development*, which positioned green rural development and sustainable agriculture as national priorities (FAO, 2021a). The plan provided a clear policy mandate and institutional framework that mobilized significant public and private investment toward climate-aligned agrifood

⁸ Total climate finance for 2019/20 (USD 786 billion) and 2021/22 (USD 1,315 billion) includes CPI (2024c) figures—USD 779 billion and USD 1,305 billion respectively—plus additional agrifood data of USD 7 billion and USD 10 billion, respectively.

activities. Our data reflects this trend, showing a sharp rise in funding for agrivoltaic projects—driven by policy support, declining technology costs, and other contributing factors (see Box 2).

In Western Europe, domestic finance rose sharply from USD 1 billion in 2019/20 (7% of total agrifood funding) to USD 21 billion in 2021/22 (30%). This increase reflects strong policy momentum under the European Green Deal—a strategy launched in 2020 to make the EU climate neutral by 2050 through investment in clean energy, sustainable food systems, and nature protection—and its integration into the EU's COVID-19 recovery strategy. Framed as 'two sides of the same coin', the Green Deal served as the EU's economic blueprint for a resilient recovery, with 30% of the EUR 1.8 trillion recovery package earmarked for climate action, including agrifood transformation (European Commission, 2020).

Despite this substantial growth, a significant agrifood climate finance gap persists. While NDCs collectively estimate annual investment needs at USD 201 billion, this “bottom-up” figure likely understates the true scale of investment required, due to countries' incomplete and inconsistent reporting of agrifood-related climate needs. Aligning agrifood systems with a 1.5°C pathway could require up to USD 1.1 trillion annually, or an increase from current flows by twelve times. The 2025 NDC update (NDCs 3.0) presents a critical opportunity to strengthen national commitments and explicitly integrate food systems into climate strategies. However, progress to date has been limited—only 19 countries (representing 21% of global GHG emissions) have submitted updated NDCs, with few including specific agrifood targets or measures (Climate Watch, 2025).

Agrifood systems also remain severely underfunded relative to other major emitting sectors. In 2021/22, the energy systems and transport sectors attracted USD 482 billion and USD 331 billion in mitigation finance, respectively—roughly 10 and 7 times more than agrifood systems (CPI 2024c).⁹ This disparity is concerning, given that agrifood systems contribute more than 30% of global GHG emissions, approximately 17% more than heat and electricity (World Bank, 2024a). With emissions from agrifood systems showing little decline between 2019 and 2021, current mitigation investments are insufficient (CGIAR, 2024).

Commercial FIs are critical to accelerating the sustainable transformation of agrifood systems—but current capital flows remain deeply misaligned. The public sector provides an average of USD 650 billion annually in net agricultural support, of which 88% (USD 572 billion)¹⁰ carries a high to moderate risk of environmental harm (World Bank, 2024b). Meanwhile, in 2023, private FIs had USD 6.1 trillion in active financing to companies at the highest risk of driving tropical deforestation through agricultural commodity production (Forest Declaration Assessment, 2025). Redirecting even a portion of these funds toward climate-smart agriculture and sustainable supply chains could unlock systemic change. The challenge is not the availability of capital but its effective alignment with sustainability goals.

⁹ These refer to projects that are exclusively energy systems and transport focused, rather than overlapping with the AFOLU sector.

¹⁰ Consists of market price support (46%) and direct budgetary support (42%).

Figure 4a. Climate finance for agrifood systems vs. transport and energy systems, 2021/22

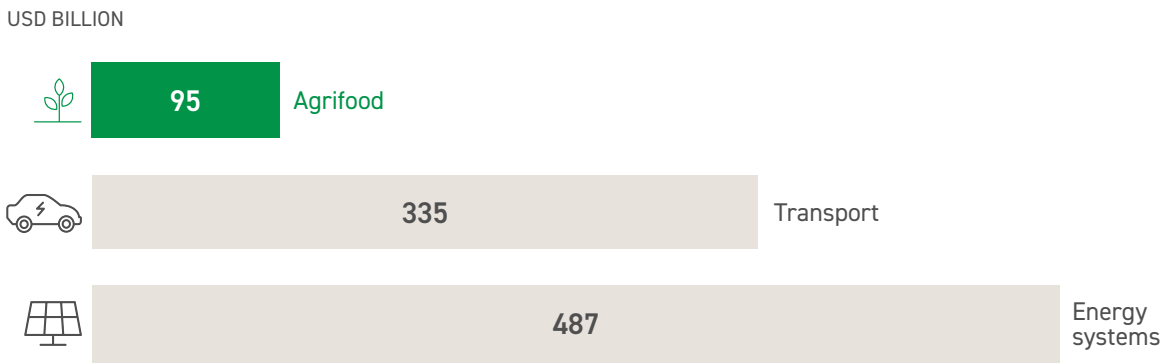
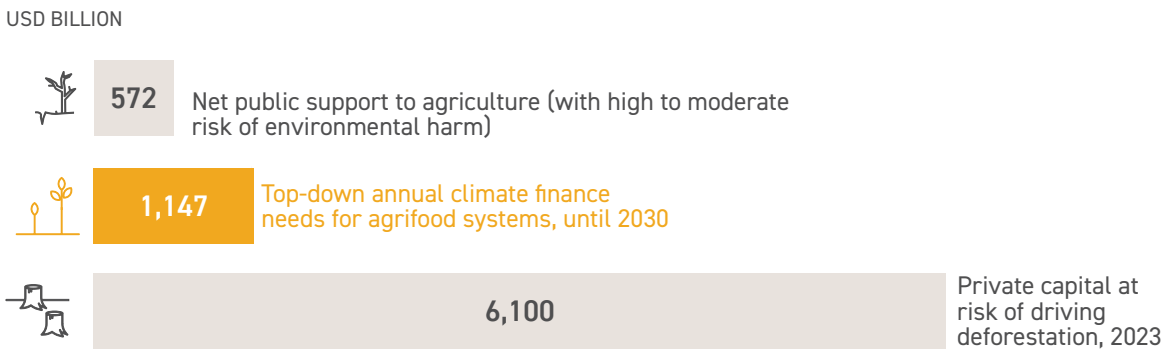


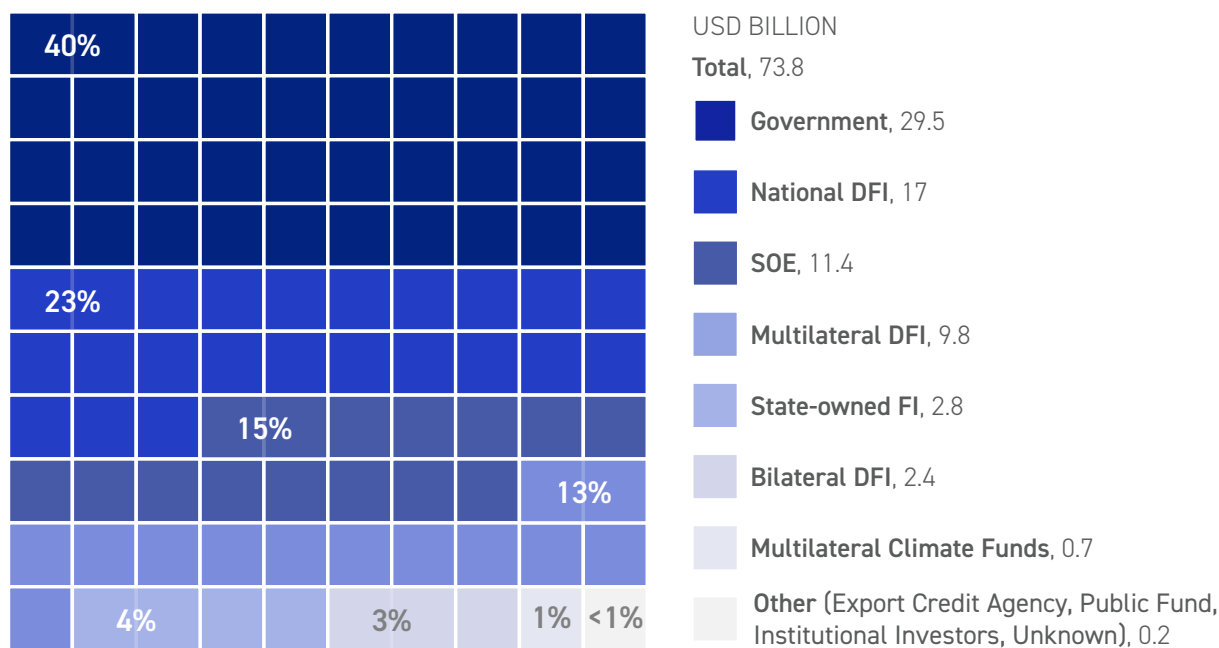
Figure 4b. Annual agrifood climate finance needs vs. climate-misaligned capital



4. SOURCES OF FINANCE

4.1 PUBLIC SOURCES

Figure 5. Public sources of climate finance for agrifood systems, 2021/22



Public actors remained the dominant source of agrifood climate finance in 2021/22, contributing 79% of total flows—USD 73.8 billion. This marked a threefold increase from 2019/20, when public finance totaled just USD 24.2 billion. Much of the funding in 2021/22 came from governments, national DFIs, and state-owned enterprises (SOEs), which together accounted for nearly 80% of public flows.

In absolute terms, governments recorded the largest increase in agrifood climate finance, with contributions growing from USD 9.5 billion in 2019/20 to USD 29.5 billion in 2021/22. However, in relative terms, the most dramatic growth occurred among state-owned enterprises (SOEs) and state-owned financial institutions, whose combined contributions jumped sharply from USD 260 million to USD 14.3 billion during this period. This growth was heavily influenced by the large-scale deployment of agrivoltaics in China, driven by targeted national policy support (see Box 2).

Excluding China's major renewable agriculture investments, mobilization from development finance institutions (DFIs) also significantly increased. Between 2019/20 and 2021/22, multilateral DFI financing nearly doubled, from USD 4.9 billion to USD 8.8 billion. Multilateral DFIs largely channelled their resources to low- and middle-income countries (LMICs), allocating nearly two-thirds of their funding to sub-Saharan Africa and Latin America, primarily targeting dual-benefit projects across Crop and Livestock Systems. More broadly, multilateral development banks (MDBs)

have consistently expanded their climate finance commitments since 2020. Specifically, MDB annual financing for agrifood systems grew by nearly USD 2.9 billion between 2019 and 2022, signaling increasing institutional prioritization of climate-aligned food and land use investments (MDBs, 2020; 2021; 2022; 2023).

In 2021/22, domestic sources accounted for over two-thirds of public agrifood climate finance—totaling USD 51.9 billion—primarily concentrated in developed and advanced emerging economies.

East Asia and the Pacific dominated, receiving USD 30.6 billion (59% of all domestic public finance), driven largely by national DFIs investing heavily in Chinese agrivoltaics. Western Europe followed with USD 16.4 billion (32%), predominantly financed through green bonds targeting both mitigation and adaptation projects. Notably, domestic financing in regions most vulnerable to climate impacts and with significant agricultural adaptation needs remained strikingly low: Latin America and the Caribbean received only USD 2 billion, while the Middle East and North Africa, sub-Saharan Africa, and South Asia combined accounted for just USD 0.5 billion.

International public finance, providing the remaining one-third (USD 21.9 billion) of public agrifood finance, relied significantly on DFIs—with multilateral DFIs contributing USD 9.6 billion and bilateral DFIs USD 2.4 billion, primarily towards adaptation and dual-benefit projects in Crop and Livestock Systems. These institutions primarily utilized debt instruments, both market-rate (46%) and concessional (37%). Government-led international funding amounted to USD 9 billion, delivered almost entirely as grants. The European Commission alone contributed USD 5.3 billion in grant financing, predominantly channeling resources to adaptation and dual-benefit projects in Western Europe (52%) and Central and Eastern Europe (37%).

Critically, international public finance has not matched the pace of domestic investments. Between 2019/20 and 2021/22, international public finance grew by only 57%, significantly trailing behind a five-fold increase in domestic finance. This widening gap highlights a stark imbalance and raises critical concerns about the equity of climate finance distribution. Given that 65% of agrifood climate finance needs identified in countries' NDCs (amounting to USD 201 billion annually) explicitly depend on international support, this trend not only exposes systemic underfunding but also risks deepening inequalities between countries with differing capacities to self-finance climate action. It underscores an urgent need for international actors to scale up investments, particularly in vulnerable regions facing the greatest climate risks and resource constraints (CPI & FAO, 2024).

Box 2: Agrivoltaics for China's rural revitalization

Agrivoltaics—installing solar-PV panels above or alongside agricultural fields, fish farms, or rivers—maximizes land efficiency by expanding renewable energy generation alongside food production. Several factors have driven China's rapid development of agrivoltaics. First, land resource optimization is essential, given that the country produces 25% of the world's grain and feeds 20% of the world's population with less than 10% of the world's arable land (FAO, 2021b).

Rural revitalization is another driver. Integrated agrivoltaics systems can boost rural communities' economic resilience by creating new income sources for farmers and creating jobs. This aligns with China's 14th Five-Year National Agricultural Green Development Plan, which emphasizes sustainable rural development and improved livelihoods for farmers (FAO, 2021a).

The declining cost of solar PV—which dropped by 90% globally between 2010 and 2023—has further accelerated agrivoltaics adoption (IRENA, 2024).

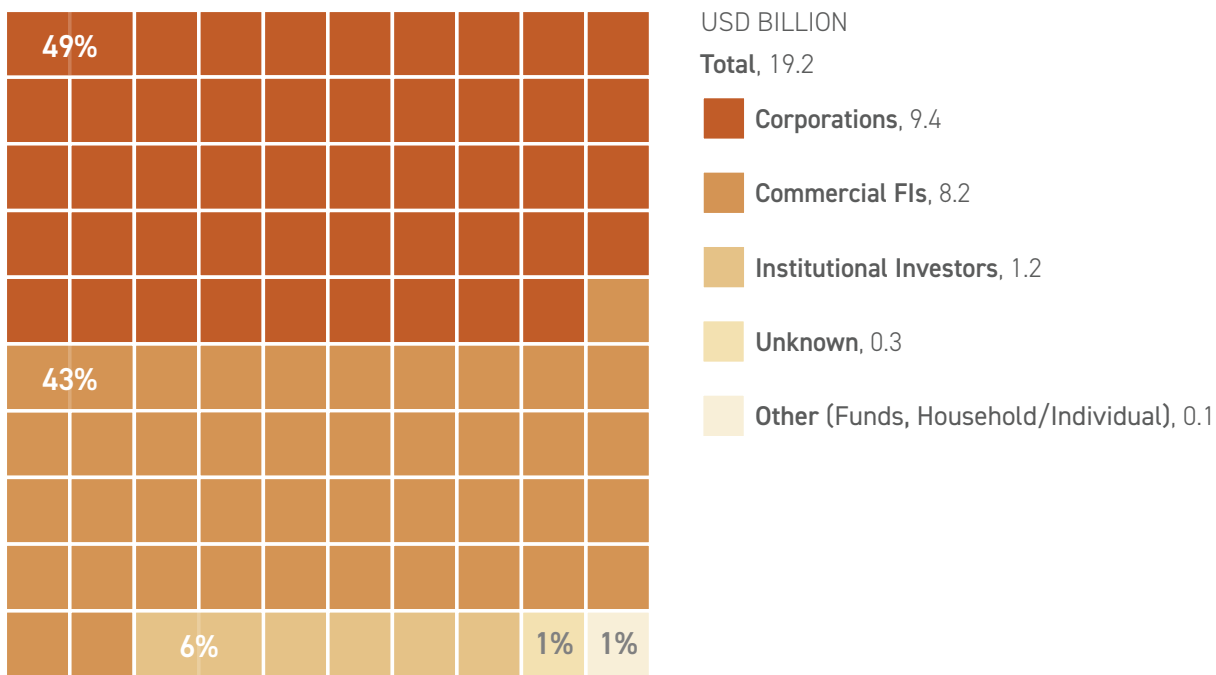
The Chinese government has also provided subsidies and tax benefits to mobilize private capital (WRI, 2018). For instance, in 2023, public grants de-risked investment in Inner Mongolia, enabling herders to co-fund a 1-megawatt solar grazing project, earning 20% dividends from energy sales (WRI, 2024). The installation enhances climate resilience by providing shade, reducing water evaporation, and mitigating livestock heat stress while advancing China’s renewable energy transition.

With rising demand for efficient land use and clean energy, the Asia-Pacific agrivoltaics market is projected to have a compounded annual growth rate (CAGR) of 35% from 2023 to 2028 (MarkNtel Advisors, 2023).

However, unregulated expansion risks land use conflicts and “solar extractivism,” whereby large firms profit, and local communities see limited returns (Hu, 2023). Policymakers must establish clear land use regulations, develop industry standards to balance food and energy production and ensure strong community engagement to prevent displacement and maximize local benefits (Energy Partnership, n.d.; WRI, 2024).

4.2 PRIVATE SOURCES

Figure 6. Private sources of climate finance for agrifood systems, 2021/22



Note: Unknown climate use values (USD 4 million in 2019/20 and USD 49 million in 2021/22) are not shown in the chart.

Private actors contributed USD 19.2 billion in agrifood climate finance in 2021/22, marking a nearly sixfold increase since 2019/20. Corporate actors and commercial FIs accounted for 92% of these flows, largely investing in agrivoltaics and biomass. Excluding Chinese agrivoltaics, private financing would still have increased nearly fourfold in the same period.

Corporations accounted for 49% (USD 9.4 billion) of private finance in 2021/22—nearly ten times more than in 2019/20. Around two-thirds went to Chinese agrivoltaics, primarily via balance-sheet equity, while the rest flowed mostly through corporate bonds into dual-benefit projects in Western Europe and biomass plants in Japan. In Japan, biomass drew notable private sector interest, likely due to its maturity, dispatchability, and lower risk profile. This was supported by a growing domestic market driven by feed-in tariffs, policies for cost recovery and fuel security, and its positioning as a regionally distributed energy source with economic and resilience co-benefits (Jetro, 2024).

Commercial FIs accounted for the second-largest share of funding at 43% (USD 8.2 billion)—nearly five times more than in 2019/20.¹¹ About 60% came from green bond issuances in Western Europe and East Asia and the Pacific. Excluding bonds, USD 3.2 billion was provided mostly as market-rate or balance-sheet debt, over 60% of which financed domestic biomass projects in Japan. In contrast, sub-Saharan Africa and Latin America and the Caribbean received just 3% and 0.5%, respectively—despite urgent financing needs. Without stronger de-risking and pipeline support, private capital will continue to bypass these high-impact regions.

Commercial FIs can provide critical finance to help farmers access agricultural inputs, reducing their reliance on high-interest informal credit (FAO, 2024c). However, these banks are often deterred from such lending due to real and perceived risks, including physical climate risks (EIB, 2024). Global agricultural credit distribution remains uneven—Asia receives 55% of the USD 1.2 trillion in annual credit, and Africa just 2% (FAO, 2024c). Despite agriculture's central role in sub-Saharan Africa—contributing up to 18% of the region's GDP and employing over 40% of the population—commercial lending to the sector is severely underdeveloped (EIB, 2024). Box 3 highlights how de-risking mechanisms, such as credit guarantees and first-loss coverage, can encourage commercial banks to expand lending to smallholders and agri-SMEs.

Philanthropic foundations contributed only 6% (USD 1.2 billion) of private finance in 2021/22, doubling their contribution from 2019/20. Nearly half of this supported adaptation-focused agriculture projects (e.g., market linkages for smallholders, livestock vaccinations, irrigation-as-a-service, etc.) in sub-Saharan Africa, aligned with 2019/20.

Box 3: De-risking pathways to scale commercial agrifood investment

MDBs and climate funds can use concessional capital to support risk-sharing and co-financing mechanisms that unlock commercial investment in climate-resilient agrifood systems. Instruments such as credit guarantees and first-loss coverage can incentivize commercial banks to lend to smallholders and agri-SMEs (MFW4A, 2024).

Aceli Africa provides a working de-risking model in East Africa. By combining first-loss coverage with origination incentives, it has supported over 20,000 agricultural loans totaling USD 1.2 billion between 2019 and 2022—90% of which came from commercial banks (Aceli Africa & Dalberg, 2024). To date, commercial lending to East African agri-SMEs under this program has grown at a CAGR of 50%.

11 On a comparable basis, commercial FIs' contributions declined, from USD 1.6 billion in 2019/20 to USD 0.7 billion in 2021/22.

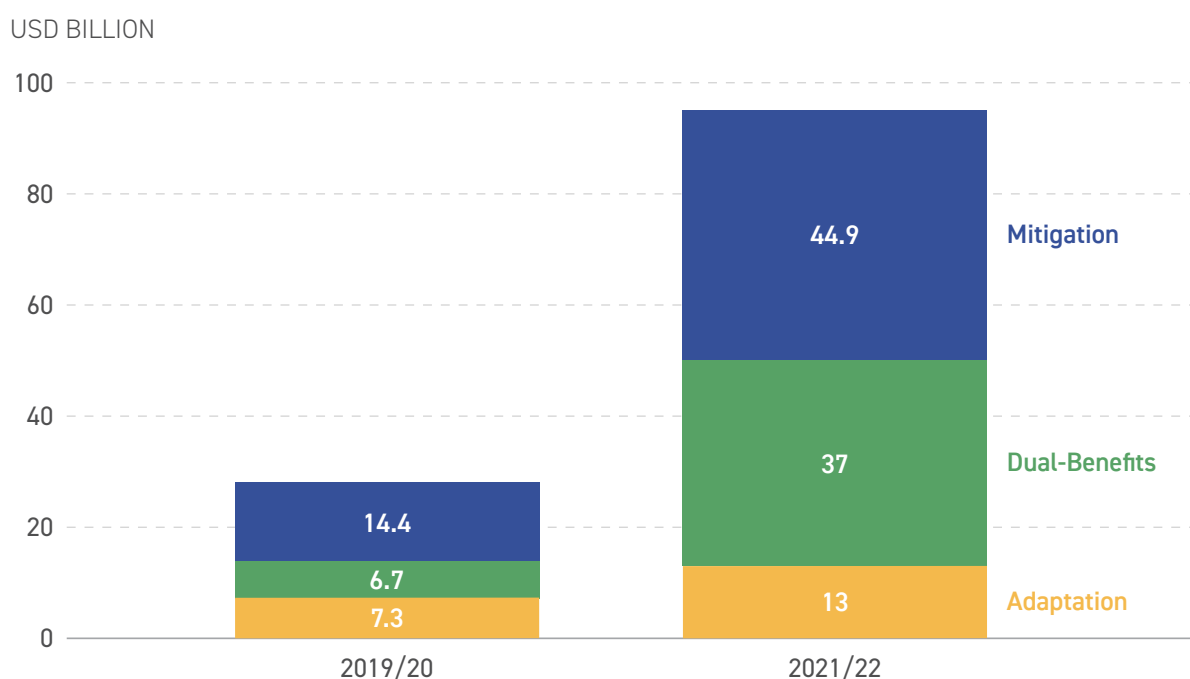
5. CLIMATE USES

Around half (USD 44.9 billion) of climate finance to agrifood systems targeted GHG mitigation in 2021/22, similar to 2019/20 (Figure 7). Flows primarily went to East Asia and the Pacific (88%)—mainly to energy projects linked to Crop and Livestock Systems and Fisheries and Aquaculture.

Adaptation flows grew in absolute terms, rising from USD 7.3 billion in 2019/20 to USD 13.0 billion in 2021/22, though their share of total agrifood climate finance fell from 26% to 14%. Most adaptation finance (81%) was deployed through concessional capital, with sub-Saharan Africa receiving the largest share (29%).

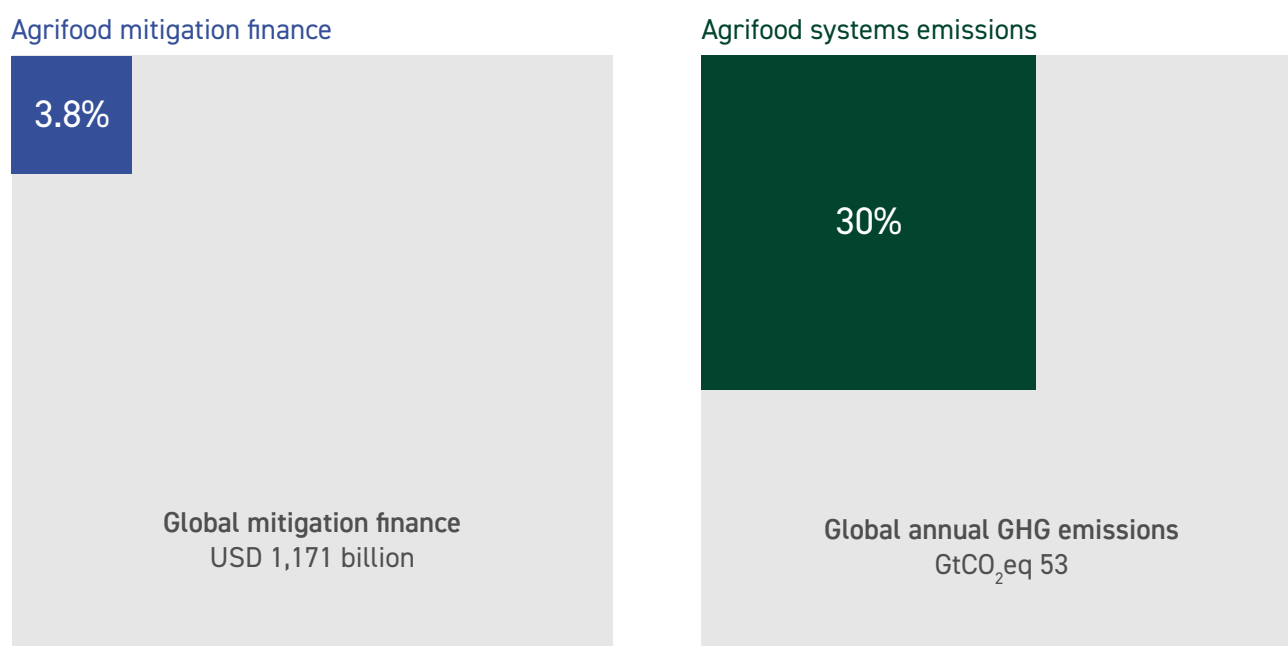
Dual-benefit flows—those supporting both mitigation and adaptation—increased notably, with multilateral DFIs mobilizing USD 4.3 billion more than in 2019/20. Over half of total dual-benefit flows remained within Western Europe, primarily supporting core agrifood activities through use-of-proceeds bonds.

Figure 7. Agrifood climate finance by use, 2019/20 and 2021/22



5.1 MITIGATION FINANCE

Mitigation finance for agrifood systems more than tripled between 2019/20 and 2021/22, increasing significantly from USD 14.4 billion to USD 44.9 billion. Yet, despite agrifood systems contributing nearly one-third of global GHG emissions (FAO, 2023b), these flows account for only 3.8% of total mitigation finance across all sectors—revealing a major mismatch between climate finance allocation and emissions sources.

Figure 8. Agrifood share of mitigation finance in 2021/22 and corresponding share of global GHG emissions.

Source: CPI analysis and FAO (2023b)

Public actors provided three-quarters of agrifood mitigation finance in 2021/22, with national DFIs contributing half and SOEs another third. Excluding Chinese agrivoltaics, national DFIs remain the top source, while multilateral DFIs and governments follow—each providing USD 1.5 billion. The former focused on Crop and Livestock Systems in East Asia and the Pacific and Western Europe; the latter mainly provided grant financing to biomass plants under the EU Cohesion Policy.

Private actors contributed a quarter of agrifood mitigation finance, with corporations accounting for nearly two-thirds. However, excluding Chinese agrivoltaics, corporations fell behind commercial FIs—both of which heavily invested in biomass plants in Japan. While biomass is widely treated as carbon neutral under current policy and accounting frameworks, this assumption is increasingly debated. Emerging research suggests that carbon payback periods can stretch over decades, depending on the feedstock and forest regrowth rates, potentially limiting short-term climate benefits (Chatham House, 2022). Its growing share in mitigation finance may thus reflect a missed opportunity to support more diverse, high-impact solutions in underfunded regions.

Crop and livestock systems received almost two-thirds of agrifood mitigation flows—followed by fisheries and aquaculture (19%) and forestry (16%). A significant share—71% (USD 31.8 billion)—is associated with solar-PV installations¹² on agricultural land and fish farms in China. Biomass plants in Japan account for an additional USD 2.7 billion. Other mitigation investments include biochar applications, crop diversification, organic fertilizers, improved livestock feeding practices, and sustainable forest management to increase carbon stocks.

¹² Some projects may involve agrivoltaic systems that support agrifood production, but limited project-level data prevent us from distinguishing them from solar installations used solely for electricity generation. These flows are included under Crops and Livestock Systems for consistency, though this may overstate mitigation within core agrifood activities.

Agrifood systems hold significant mitigation potential and are essential to achieving global net-zero targets. They could reduce emissions by up to 8.3 Gt CO₂e annually through economically viable measures, and up to 21.9 Gt CO₂e based on technical potential¹³ (FAO, 2023c). Realizing this potential will require a mix of supply-side actions—such as improved agricultural practices—and demand-side shifts like dietary change and food waste reduction (IPCC, 2021).

On the supply side, nearly half of agrifood GHG emissions occurred at the farm gate in 2020 (FAO, 2023b). Upstream interventions alone could deliver 20–30% of the mitigation needed to meet 1.5°C or 2°C climate targets (IPCC, 2022a), including improved soil management, sustainable cropping systems, and deforestation prevention. On the demand side, adopting sustainable diets is the most impactful intervention—potentially cutting emissions by 6.5 Gt CO₂e per year, freeing 3.1 billion hectares of land, and easing pressure on water systems. Further gains can be made by reducing food loss and waste, particularly in urban areas where local actors are well-placed to drive change (see Box 9) (FAO, 2023c).

Finance for critical demand-side measures—such as shifting dietary patterns—remains severely limited, rising only slightly from USD 0.1 billion to USD 0.4 billion between 2019/20 and 201/22. Most funding supported R&D in developed countries, with limited investment in broader implementation, especially in emerging markets. Still, the alternative protein sector continues to draw interest from institutional investors seeking ESG-aligned opportunities and protection against animal welfare and supply chain risks (FAIRR, 2018; Good Food Institute, 2023).

Without urgent action, agrifood systems will continue driving emissions, threatening global climate goals. Inaction risks locking in high emissions while also degrading soil health, biodiversity, and climate resilience (FAO, 2023c). More finance is needed to decarbonize supply chains and support high-impact solutions such as soil carbon management, agroforestry, biochar, and methane abatement. This can be achieved through blended finance, public-private partnerships, and integrating agrifood mitigation into national climate policies.

5.2 ADAPTATION FINANCE

Agrifood adaptation finance reached USD 13 billion in 2021/22, representing 20.3% of global adaptation finance and 1.1% of total climate finance. Despite a 77% increase from USD 7.3 billion in 2019/20¹⁴, the sector's relatively small share highlights the critical need to accelerate investments, especially given the compounding threats of climate change, biodiversity loss, and socio-economic risks.

More than half of agrifood adaptation funding in 2021/22 went to Crop and Livestock Systems (33%) and Biodiversity, Land, and Marine Ecosystems (23%), highlighting the central role of healthy soils and resilient ecosystems in ensuring food security.

¹³ Technical mitigation potential refers to the maximum emissions reduction possible with current technologies. Economic mitigation potential refers to the reduction achievable at an annual cost of up to USD 100 per tCO₂-eq—aligned with the social cost of carbon.

¹⁴ Looking at only comparable flows, adaptation finance for agrifood systems increased by 27%, from USD 6.6 billion in 2019/20 to USD 8.4 billion in 2021/22.

Box 4: Voluntary Carbon Market (VCM) for agrifood systems

The Voluntary Carbon Market (VCM) is a small but growing channel for climate finance in agrifood systems. Credits linked to agrifood activities—including the full supply chain from inputs to consumption and waste management but excluding land use change—account for over 10% of projects but only around 1% of issued credits (Wollenberg et al., 2025). Notably, two-thirds of these projects are still in the pipeline, and credit volumes could triple in the coming years (Wollenberg et al., 2025).

In 2023, transactions reached USD 30 million for agriculture and USD 350 million for forestry, supporting practices like sustainable farming and forest management. Although agriculture credits made up just 5% of market value, they have shown steady growth since 2019 (Ecosystem Marketplace, 2024).

More than 80 methodologies across 10 standards currently apply to agrifood (Wollenberg et al., 2025). There is a trend toward consolidation and methodological robustness, with growing use of innovations like remote sensing, machine learning, and AI to tackle cost and accuracy challenges in MRV (Wollenberg et al., 2025). However, smallholder projects continue to face significant barriers, and there are still relatively few agrifood VCM projects in low-income countries (Wollenberg et al., 2025).

Agrifood credits also offer unique mitigation potential. By targeting methane and nitrous oxide emissions—particularly from enteric fermentation and rice cultivation—they have the potential to address hard-to-abate sources beyond carbon sequestration (CPI, 2022). However, to date, few projects in the VCM have meaningfully delivered methane abatement from rice and livestock systems, despite these being among the largest sources of agrifood emissions. With methane finance needing to exceed USD 16.5 billion annually to meet 2030 targets, the VCM could play a more catalytic role in unlocking this potential (Global Methane Hub, 2025; CPI, 2023b).

Figure 9. Sectoral breakdown of adaptation finance for agrifood systems, 2021/22

AGRIFOOD CLIMATE ADAPTATION FINANCE - USD 13 BILLION



Regionally, sub-Saharan Africa received the largest share (29%, USD 3.7 billion), reflecting both funders' priorities and the region's acute climate vulnerability and heavy reliance on agrifood livelihoods. However, other highly vulnerable regions, such as Latin America and the Caribbean (USD 1.6 billion) and South Asia (USD 0.7 billion), received significantly lower funding. Without increased adaptation investments, emerging markets and developing economies (EMDEs) risk declining agricultural productivity, increased rural poverty, and severe food insecurity affecting an estimated 950 million people by 2030 (World Bank, 2023a). This threatens to reverse development gains and increase economic instability, deepening reliance on external aid and unsustainable borrowing.

Agrifood adaptation finance remained heavily reliant on public sources, which accounted for around 85% of total flows. This reflects persistent barriers to private-sector participation, including the perception of adaptation as high risk, limited project pipelines (CPI, 2024b), and challenges in developing scalable, bankable business models (World Bank, 2021). Public finance was predominantly concessional: 78% (USD 8.7 billion) came in the form of grants or low-cost debt. Grants—mostly from governments—represented 55% of total public flows, while concessional debt (23%) was largely provided by multilateral and bilateral DFIs.

Private-sector contributions remain minimal and largely philanthropic. Around 90% of private agrifood adaptation finance came from philanthropic sources, with most in the form of grant funding toward Crop and Livestock Systems (71%). Without greater private engagement, governments and DFIs will continue shouldering the burden of financing critical adaptation measures—such as drought-resistant crops, precision farming, resilient infrastructure, and early warning systems. This reliance is especially burdensome for governments in sub-Saharan Africa and Southeast Asia, many of which are constrained by debt and limited fiscal space (Brookings, 2024).

A key obstacle in scaling adaptation finance is the limited engagement of local FIs capable of effectively deploying funds at the community level. Despite their proximity to smallholder farmers and SMEs, local FIs face significant barriers such as foreign exchange risk, capacity constraints, and inadequate systems for tracking impact and financial flows. Strengthening local FIs' involvement can improve capital efficiency, reduce transaction costs, and foster sustainable resilience at the grassroots level (see Box 5).

Agrifood corporates also hold untapped potential to build resilience in their supply chains. Strategies like long-term off-take agreements can strengthen upstream adaptation, particularly as climate-induced disruptions—such as record-high prices in coffee and cocoa—become more frequent (Financial Times, 2025). With future risks projected for key commodities like maize and soy (Oxford Economics, 2024), proactive investment in resilience is becoming increasingly urgent.

Finally, improving data and strengthening knowledge of local solutions are essential for catalyzing private-sector engagement. The lack of mandatory reporting for private adaptation finance contributes to persistent data gaps, particularly among insurers, pension funds, and corporates (CPI, 2024b).

Box 5: Tapping into local FIs to deliver agrifood adaptation benefits

Engaging local FIs in adaptation finance can make solutions more context-specific, cost-effective, and impactful (IIED, 2021). Local actors—especially in sub-Saharan Africa, where 83% of agri-SMEs' financing needs go unmet—often face barriers accessing debt due to their size, business models, or sectors (ISF Advisors, 2022; OECD, 2023). Local FIs have the capital, proximity to clients, and cost structures to help close this gap.

Leveraging local FIs for adaptation finance can yield the following benefits:

- **Local networks and knowledge:** Local FI's deep community ties can enable effective deployment of capital to farmers and SMEs, with contextual borrower risk insights improving lending decisions and reducing defaults (Patel, 2023).
- **Reduced transaction costs:** Decentralizing climate finance disbursement through local FIs minimizes associated administrative costs, increasing efficiency in delivering funds (IIED, n.d.).
- **Strengthened institutional sustainability:** Local FIs can foster long-term financial resilience in EMDEs, ensuring continued investment beyond donor cycles. They can also aggregate smaller projects, improving access to finance (CPI, 2024d).

However, local FIs face the following challenges in scaling their engagement:

- **FX risk:** Most international climate finance is provided in hard currencies (e.g., USD, EUR), while local FIs operate in domestic currencies. This exposes borrowers to currency volatility and higher credit risk, with limited affordable hedging options. Instruments like The Currency Exchange Fund offer some relief in EMDEs where commercial providers are absent.
- **Capacity gaps and institutional risk:** Many local FIs lack expertise in climate risk assessment, structuring adaptation finance, and monitoring impacts. Short-term financing, complex fund access, and unstable regulatory environments further hinder long-term investment (OECD, 2023; 2024).
- **Insufficient tracking and transparency:** Local FIs often lack robust tracking systems to monitor adaptation flows and understand their impacts on communities (Gautam et al., 2024). Current climate finance tracking does not fully capture last-mile recipient data due to data gaps highlighted in the Triple Gap report (CPI & FAO, 2024).

Overcoming these challenges will require stronger partnerships between international financiers, governments, and local FIs. Solutions include expanding liquidity facilities (e.g. Aceli Africa), deploying risk-sharing tools (e.g. African Guarantee Fund), and providing technical assistance to strengthen capacity (e.g. Just Institute).

5.3 DUAL-BENEFIT FINANCE

Agrifood dual-benefit finance—addressing both mitigation and adaptation—rose nearly sixfold, from USD 6.7 billion in 2019/20 to USD 37.0 billion in 2021/22. This accounts for over half of all dual-benefit finance across sectors.

Tracking dual-benefit finance remains challenging due to data gaps, limited reporting capacity, and methodological constraints. As a result, current estimates are likely to capture limited flows. Additionally, a lack of granular reporting means that 72% of agrifood dual-benefit flows are categorized as “unspecified,” limiting analysis of which subsectors receive support.

Governments provided USD 23 billion in dual-benefit finance—representing 62% of the total and 79% of all public dual-benefit finance—primarily through use-of-proceeds bonds. While 76% of government dual-benefit finance lacks granularity, USD 4.2 billion is tracked as going to upstream activities in sustainable agriculture, forestry, and fisheries—such as climate-resilient seeds, agroforestry, and improved grazing management. A further USD 0.4 billion supported biodiversity, and USD 0.3 billion provided policy support. Multilateral DFIs were the second-largest public contributors, providing USD 4.4 billion, with USD 2.9 billion (65%) directed to crop and livestock systems and USD 1.4 billion (31%) going to policy support.

Commercial FIs contributed the largest share of private dual-benefit finance, at USD 5 billion (67%), mainly through use of proceeds bonds to core agriculture, forestry, and fisheries activities—including investments in sustainable supply chains, irrigation efficiency, and renewable energy for agri-processing. Corporations accounted for USD 2.2 billion (29%), a marked increase from USD 3 million in 2019/20, largely driven by use-of-proceeds bonds in Western Europe.

Agrifood climate interventions rarely work in siloes—co-benefits are widespread and often span social, economic, and environmental dimensions, including improved livelihoods, ecosystem health, and food security. Unlike dual-benefit interventions, which explicitly target both mitigation and adaptation, co-benefits reflect the broader positive outcomes that can arise from a single action. For example, agroecological practices may reduce emissions (mitigation), enhance drought resilience (adaptation), boost farmer incomes (economic), and preserve biodiversity (environmental). Recognizing and scaling such co-benefits is essential to delivering holistic, just, and sustainable agrifood transitions. Recent research (World Bank, 2023b) shows that practices integrating both adaptation and mitigation could boost annual cropland, livestock, and forestry incomes by USD 329 billion while increasing global food production to feed the world until 2050—all without compromising biodiversity or carbon storage.

Inadequate climate investment would have devastating effects on livelihoods in agrifood value chains, especially for smallholder farmers. Heightened risks of loss and damage due to climate impacts disproportionately impact marginalized populations, including women. Gender-sensitive interventions, including targeted finance for women-led farming initiatives, are needed to ensure resilient and inclusive agrifood systems, reduce socio-economic disparities, and limit climate migration.

Box 6: Scaling nature-based solutions in agrifood systems

Nature-based solutions in agrifood systems such as agroforestry, sustainable agriculture, and agroecological practices could deliver over one-third of the emissions mitigation required by 2030 globally in a cost-effective manner (Griscom et al., 2017). There is a need to shift agrifood finance from nature-negative to nature-positive activities to support soil resilience, water and biodiversity conservation, air quality, and local communities.

Moreover, there is a major opportunity to increase private investment in nature-based solutions through scalable, replicable financing models. The AGRI3 Fund, launched in 2020 to mobilize USD 1 billion for sustainable food systems in EMDEs, provides credit enhancements and technical assistance. In 2024, it partnered with HSBC to guarantee USD 50 million in loans to Indian microfinance institutions, supporting agriculture, resilience, and forest protection (CPI, 2024e; AGRI3, 2024).

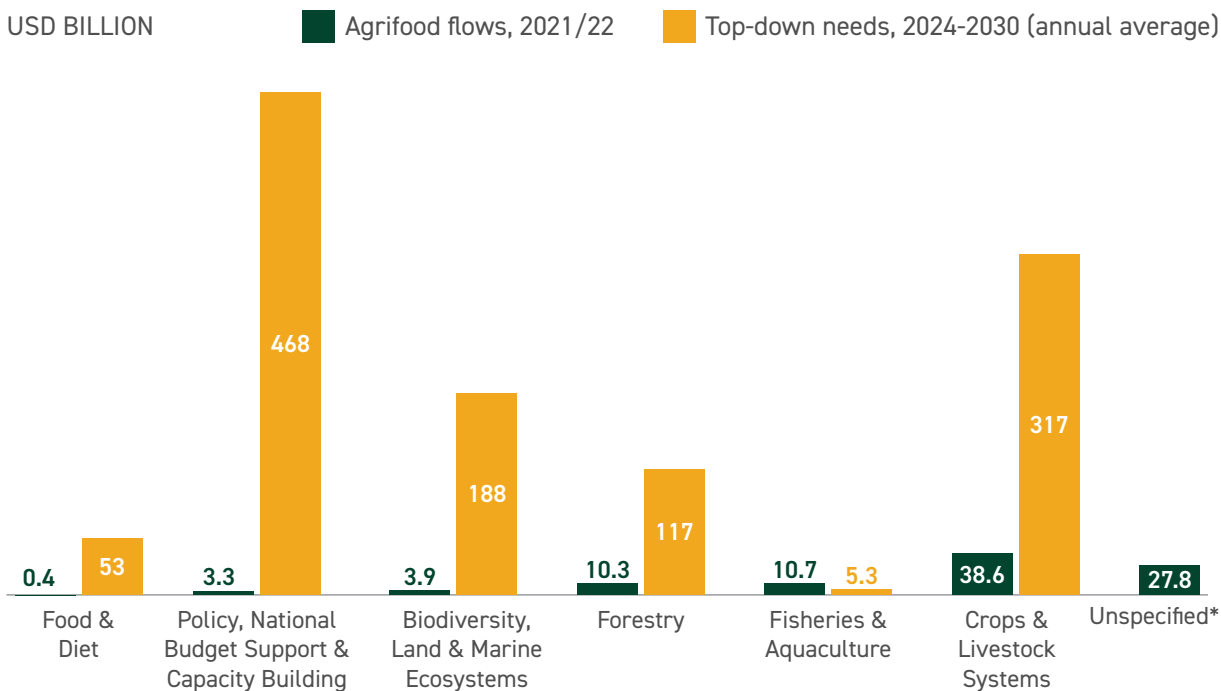
VCM also offers growing potential. NbS credits—linked to sustainability pledges—could unlock up to USD 12 billion by 2030 and USD 100 billion by 2050 (MSCI, 2024a). Long-term corporate offtake deals are increasing, though impact depends on price signals (MSCI, 2024b). With 2023 prices averaging USD 9/tCO₂e, they remain below the USD 20–70 range needed to sustain most agriculture and forestry projects (MSCI, 2023).

6. SECTORAL ANALYSIS

Crop and Livestock Systems received the largest share of agrifood climate finance in 2021/22, accounting for 41% (USD 38.6 billion) of total flows—consistent with 2019/20. The fisheries and aquaculture sector and the forestry sector followed, each receiving 11%, while food and diets received just 0.4%.

All agrifood sectors remain critically underfunded for the climate transition. The largest gaps are in food and diets, and in policy, national budget support, and capacity building¹⁵—both of which require over 130 times more climate finance (Figure 10). Fisheries and aquaculture show low estimated needs, largely due to underreporting and the nascency of blue finance; current flows should not be interpreted as evidence of adequate investment. Meanwhile, nearly a third of agrifood finance is classified as ‘unspecified,’ reflecting limited granularity in how funds—particularly from use-of-proceeds bonds—are reported and allocated across agrifood systems.

Figure 10. Agrifood climate finance and top-down annual investment needs by sector, 2021/22



*There is no needs estimation for unspecified category of agrifood flows.

Source: CPI analysis, CPI & FAO (2024)

¹⁵ For further insights into the finance gap in the Policy, National Budget Support, and Capacity Building sector see the Triple Gap report: Policy instruments, R&D, extension services (CPI & FAO, 2024).

6.1 CROP AND LIVESTOCK SYSTEMS

Crop and Livestock Systems saw a nearly fourfold increase in funding, growing from USD 11.7 billion in 2019/20 to USD 38.6 billion in 2021/22. Despite being the most financed subsector, current investment still falls far short—annual funding must increase eightfold to meet climate transition and resilience targets. Investment needs through 2030 are estimated at USD 316.7 billion per year: 50% for crop systems (including crop diversity, soil health, and carbon storage), 27% for livestock systems (covering GHG mitigation, grassland, and manure management), and 23% for supply chains and water management (CPI & FAO, 2024).

Nearly three-quarters of finance for Crop and Livestock Systems in 2021/22 (USD 27.7 billion) supported mitigation activities. However, 85% (USD 23.5 billion) went to Chinese agrivoltaic projects, followed by USD 2.2 billion for biomass plants in Japan. This concentration in renewable energy skews the picture of sectoral investment and masks the limited support for agriculture-specific mitigation. Excluding these energy-focused projects, mitigation finance for Crop and Livestock Systems declined from USD 11.2 billion in 2019/20 to USD 7.2 billion in 2021/22. Only USD 0.4 billion targeted on-farm climate interventions such as soil carbon management, agroforestry, biochar application, improved rice cultivation, and better livestock and nutrient management. Yet these solutions remain a major untapped opportunity—if fully scaled, they could reduce emissions by up to 4.1 GtCO₂e annually, equivalent to the total annual emissions of India (FAO, 2023c; EDGAR, 2024).

Dual-benefit finance for Crop and Livestock Systems more than doubled from USD 3 billion in 2019/20 to USD 6.5 billion in 2021/22. However, this growth was uneven. The majority of funding (85%) went to sustainable crops, agroforestry, and livestock production, while critical areas such as resilient supply chains, infrastructure, and water systems continue to receive limited support—hindering their potential to drive adaptation and mitigation at scale.

Adaptation flows for Crop and Livestock Systems remained static between 2019/20 and 2021/22, averaging USD 4.3 billion annually. sub-Saharan Africa received nearly half (48% or USD 2.1 billion) of these flows. In contrast, those to other key agrarian regions remained relatively low or even declined, including South Asia (USD 0.4 billion) and Latin America and the Caribbean (USD 0.2 billion). Multilateral DFIs provided over a third of adaptation finance to the sector, while governments accounted for 29%, primarily as grants. Notably, philanthropic funds provided over 10% of flows, signaling an increasing role for private philanthropy in adaptation.

6.2 FORESTRY

Forestry was the only sector that saw a decline in funding, dropping from USD 1 billion in 2019/20 to USD 10.3 billion in 2021/22.¹⁶ The sector requires USD 117 billion annually to effectively combat deforestation and harness its potential for climate mitigation, adaptation, and nature-positive outcomes (CPI & FAO, 2024).

A key driver of this decline was a reduction in market-rate debt investments by national DFIs in China's afforestation, reforestation, and biosphere conservation programs from 2019/20. However, it is unlikely that these large-scale initiatives were discontinued—particularly given China's strong policy push under the 14th Five-Year Plan, which aims to expand national forest

¹⁶ The reduction was even more pronounced when considering only comparable flows for the Forestry sector, dropping from USD 9 billion in 2019/20 to USD 6.7 billion in 2021/22.

coverage to 24.1% by 2025 and increase forest stock volume by 1.4 billion cubic meters (CCCI, 2024). A more plausible explanation for the decline in tracked flows is incomplete or inconsistent data reporting, which may have led to an underestimation of actual investment levels.

More than half of finance flows to this sector supported core forestry activities. Afforestation, reforestation, forest conservation, and sustainable forest management projects—such as community-based tree planting, forest landscape restoration, and improved harvesting practices—received USD 1.8 billion, while unspecified mitigation-focused projects received USD 4.1 billion. In addition, energy-related projects received USD 2.8 billion—concentrated on biofuel and biomass production. The remaining funds supported other interventions, primarily disaster risk-reduction measures (USD 1.2 billion), such as wildfire management practices.

Forestry finance was largely driven by DFIs and governments, which together accounted for 90% of total flows in 2021/22. National DFIs were the largest source, providing over a third of total funding—mainly as market-rate debt for domestic projects in China (94%) focused on afforestation and ecological restoration (CCICED, 2021). Multilateral DFIs tripled their support from USD 0.4 billion in 2019/20 to USD 1.2 billion in 2021/22, with a growing share in low-cost debt and grants, reflecting a shift toward concessional finance and risk mitigation. In contrast, government contributions fell from an annual average of USD 2.8 billion in 2019/20 to USD 1.9 billion in 2021/22.

The bulk of forestry finance (72%) in 2021/22 went to mitigation, while adaptation received 15%. Although adaptation finance for core forestry activities nearly tripled between 2019/20 and 2021/22, it still falls short of meeting the subsector's needs.

6.3 FISHERIES AND AQUACULTURE

In 2021/22, Fisheries and Aquaculture received USD 10.7 billion—11% of total agrifood climate finance—but the distribution was highly uneven. Only 15% supported core activities such as sustainable fisheries management, enforcement against illegal fishing, and building resilience for small-scale fishers. The majority—81%—went to energy-related projects, mainly solar-PV installations on fish farms in East Asia and the Pacific. Excluding these energy investments, finance for the sector still grew markedly, from just USD 0.1 billion in 2019/20 to USD 2.1 billion in 2021/22, largely driven by government support.

Sub-Saharan Africa and South Asia received just 14% of Fisheries and Aquaculture finance despite the sector's centrality to regional food security and livelihoods. In Africa, per-capita fish consumption is projected to decline as production fails to keep pace with population growth—a worrying trend for sub-Saharan countries where aquatic foods supply essential proteins and micronutrients (FAO, 2024d). In South Asia, climate change is depleting fish stocks, intensifying extreme weather events, and threatening coastal economies (World Bank, 2023c). Despite these growing risks, the sector remains largely overlooked in climate finance.

Uncertainty and misaligned incentives continue to hinder climate finance for Fisheries and Aquaculture, leaving critical resilience investments underfunded. High perceived risks and unproven revenue models deter commercial capital to the sector, while limited policy support and concessional finance further constrain investment (Convergence, 2021; Stanford Center for Ocean Solutions et al., 2024). To bridge this gap, governments must integrate fisheries into National Adaptation Plans and blue economy strategies. FIs should deploy blended finance and other de-

risking mechanisms to attract private capital, while donors and investors must prioritize ecosystem restoration, sustainable management, and social protection to enhance sector resilience.

The European Maritime, Fisheries and Aquaculture Fund (EMFAF) is an example of a dedicated climate finance (supra-) plan to advance the sector's transition. Launched by the European Commission in 2021, the EMFAF is the sister program to the previous European Maritime Fisheries Fund, featuring an extended mandate to include more sustainability and climate considerations. The fund deployed USD 3.2 billion in 2022 in EU member countries targeting dual-benefit projects, with two-thirds for sustainable fish production and the remainder for supply chain management.

Box 7: Financing climate-smart aquaculture in East Africa

Given its high-risk profile, aquaculture has received low private climate investment. The sector faces risks related to the environment and diseases, as well as high infrastructure costs for new projects. Moreover, it is challenging for small fish farmers to achieve the economies of scale required to be competitive, particularly in sub-Saharan Africa, where the market is less mature (FAO, 2022). Fish feed accounts for 70% of operating costs, resulting in low to no margins (Africa Contemporary Farmers, 2024). Good quality feed is required across the six-month fish growth cycle to support animal health and, eventually, human protein intake (FNB Tech, 2024)

Given aquaculture's role in supporting livelihoods, food security, and gender inclusion, it is crucial to drive investments to businesses, reinforce market infrastructure, and promote sustainable practices.

Kenya-based fish farming platform Aquarech is filling a knowledge gap with comprehensive training from pond construction to environmental practices in East Africa. Its online marketplace also provides superior fish feed and links farmers to manufacturers via flexible credit options. This model results in faster fish growth and higher yields, 35% improved production, reduced costs, and 50% increased revenues (Acumen, 2024b). Aquarech closed an equity round of USD 1.7 million in 2023 led by Aqua-Spark and including CLIC members Acumen and MercyCrops (Aquarech, 2023).

6.4 BIODIVERSITY, LAND, AND MARINE ECOSYSTEMS

Biodiversity, Land, and Marine Ecosystems, which provide key ecosystem services for sustainable agrifood systems, received USD 3.9 billion in 2021/22 (4%). These flows must increase 49-fold to reach the USD 188 billion needed annually by 2030 (CPI & FAO, 2024).

In 2021/22, the biodiversity sector received an annual average of USD 3.1 billion in climate finance, with 78% of flows targeting adaptation. Excluding Western and Eastern Europe, this figure drops to just USD 0.7 billion, primarily sourced from governments (69%) and multilateral climate funds (21%), mostly from developed countries (74%). The majority was disbursed internationally, prioritizing regions with critical habitats such as sub-Saharan Africa (42%) and Latin America and the Caribbean (16%). In contrast, Western and Eastern Europe received significantly higher volumes, with the European Commission disbursing USD 6.2 billion in 2022 alone—USD 5.7 billion through the 2021–2027 Cohesion Policy Framework and USD 0.5 billion via the EMFAF, focused on marine ecosystems.

Only 2% of biodiversity-related climate finance reached East Asia, the Pacific, and South Asia collectively—despite these regions being home to nearly a third of the world's biodiversity hotspots, supporting millions of livelihoods and playing a vital role in global climate resilience (South Pole, 2024).

Over three-quarters of biodiversity finance comes from public sources, primarily from governments. Much of this is grant funding, concentrated within Europe, particularly under the EU Cohesion Policy. Private sources account for just 1% of total flows, underscoring the urgent need to boost private sector engagement. Existing data remains heavily focused on public finance, leaving major gaps in tracking the scale and nature of private investment in biodiversity.

Scaling investment in nature remains difficult due to the absence of clear revenue streams. Key ecosystem services—such as pollination and water purification—are largely unpriced, limiting private sector interest beyond grant-based funding. In response, initiatives like the Natural Capital Investment Alliance and the Coalition of Private Investors for Biodiversity are working to develop models that mobilize nature-positive finance across agriculture, land use, oceans, and protected areas. One emerging solution is biodiversity credits, which aim to monetize measurable conservation outcomes (see Box 8).

Box 8: Biodiversity credits to support ecosystem conservation and restoration

Over 50% of global GDP depends on ecosystem services, particularly in agriculture—75% of food crops rely on pollinators (WEF, 2020; IPBES, 2016). Yet, biodiversity is in crisis: vertebrate populations have declined by 73% in the past 50 years, and human activity has altered two-thirds of land and oceans (IPBES, 2019). These impacts pose material risks for businesses and investors. Biodiversity loss ranks among the top global risks this decade (WEF, 2023), and major asset managers like BlackRock now factor natural capital into stewardship (BlackRock, 2024).

The key barrier to scaling biodiversity finance is the lack of market incentives—benefits are shared, but responsibilities are not. Biodiversity credits offer a promising solution by monetizing positive conservation outcomes. A high-integrity framework for biodiversity credits was launched at COP16 (IAPB, 2024), helping channel capital into nature-positive agrifood systems. These credits can support conservation agriculture, diversify farmer incomes, and attract private finance.

Market momentum is growing. The voluntary biodiversity credit market reached USD 8 million in 2023 and could grow to USD 760 million–2 billion by 2030 (WEF, 2023). Regulatory schemes such as Colombia's Estrategia Nacional de Compensaciones Ambientales and the UK's Biodiversity Net Gain are anchoring national compliance markets.

Innovative financing models are also emerging. The LandBanking Group, backed by the Global Innovation Lab for Climate Finance (2024), is piloting Nature Equity Assets—credits backed by verifiable conservation outcomes across biodiversity, carbon, soil, and water. These pilots include agroforestry in cocoa supply chains and forest protection in soy-producing areas, supporting biodiversity and Indigenous communities through technology-enabled monitoring and verification (Global Innovation Lab for Climate Finance, 2024).

Almost USD 7 trillion in public and private investments go to activities with direct negative impacts on nature globally each year, far outweighing nature-positive flows (UNEP, 2023).

Reversing this trend is a key focus of global biodiversity initiatives, including the biodiversity COPs. COP16 in 2024 marked progress by operationalizing the Cali Fund¹⁷ and expanding commitments to the Global Biodiversity Framework Fund.¹⁸ Redirecting agrifood finance toward solutions such as agroforestry and habitat restoration is essential to aligning food systems with biodiversity goals and strengthening long-term resilience (AXA, 2024).

6.5 FOOD AND DIETS

The Food and Diets sector received just 0.5% of climate agrifood finance in 2021/22, at USD 0.4 billion. While this was an almost threefold increase on the flows tracked in 2019/20, investment still falls drastically short, with USD 52.8 billion needed annually through 2030, which requires a 100-fold increase (CPI & FAO, 2024).

Mitigation finance remained dominant in this sector, accounting for 91% of flows in 2021/22.

Funded projects primarily support healthy low-carbon diets—such as diversified protein sources and plant-based options—as well as reducing food loss and waste and strengthening local food systems. Finance remains heavily concentrated in research and development (R&D) and awareness-building, and 87% of total flows are provided as grants.

Funding was heavily focused on developed markets, with 51% going to Western Europe and 19% to the US and Canada—regions where food waste is highest (FAO, 2019). The Middle East and North Africa also received a notable share (17%), reflecting investments in food security and supply chain efficiency. In contrast, regions with emerging markets—such as South Asia and sub-Saharan Africa—received minimal finance despite facing high levels of food loss prior to the distribution and consumption of food.

Food loss and waste represent a significant yet underutilized opportunity to cut emissions, though the underlying causes vary by region. In low-income countries, losses occur mostly upstream due to inadequate cold storage, inefficient supply chains, and poor transport infrastructure (Project Drawdown, 2025). Targeted investments in logistics and post-harvest handling—especially for perishables like fruits, vegetables, and dairy—can reduce losses by 25–50%, cutting emissions while increasing farmer incomes (Shell Foundation, 2025). In contrast, high-income regions face primarily downstream waste, driven by strict retail standards, over-purchasing, and consumer behavior. Addressing this requires shifting consumption patterns, improving food labeling, adopting dynamic pricing for near-expiry products, and expanding food redistribution initiatives (Project Drawdown, 2025). As Box 9 highlights, cities—where over 70% of food is consumed—play a pivotal role in reducing food waste and associated emissions.

¹⁷ The Cali Fund is an international initiative that mobilizes finance from private companies benefiting from genetic resources, directing funds toward global biodiversity conservation.

¹⁸ The Global Biodiversity Framework Fund, managed by the Global Environment Facility, supports developing countries in implementing the Kunming-Montreal Global Biodiversity Framework to halt and reverse biodiversity loss by 2030.

Creating economic incentives to reduce food loss and waste is also important. Financial mechanisms such as blended finance structures, results-based payments, and private sector engagement can accelerate the adoption of solutions that move beyond R&D to implementation at scale.

Box 9: Feeding cities, not landfills

Cities present a key opportunity to cut food waste and ease pressure on food systems. With over 70% of food consumed in urban areas, food waste from cities accounts for 8–10% of global GHG emissions—mainly methane from landfills (UNEP, 2022). As urban populations grow, reducing food waste is critical to lowering cities' environmental footprint.

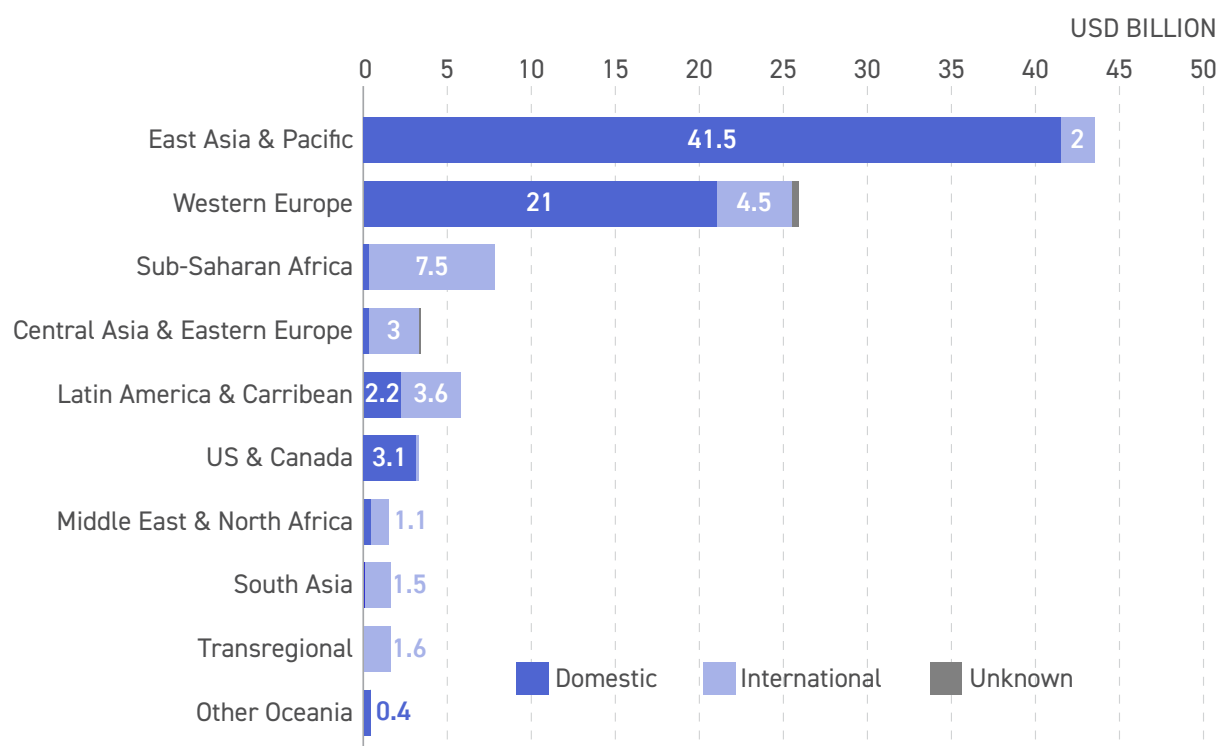
Upgrading urban markets with cold storage and sanitation can prevent spoilage, while local initiatives like industrial kitchens help preserve surplus food, create jobs, and support local economies (C40, 2023). Education and training for food producers and processors also play a role in minimizing losses (C40, 2023).

Cities can further reduce emissions by promoting composting and biogas production to turn waste into resources. Through collaboration with local governments, businesses, and communities, circular economy strategies can cut waste, lower emissions, and build more sustainable urban food systems.

One example is [ChumChum](#) a Mexico-based agrifood tech startup and member of the 2025 [CLIC Agrifood Investment Connector](#) cohort. The company transforms surplus and “ugly” produce into safe, high-quality products for major food manufacturers—cutting methane emissions, reducing pressure on natural resources, and promoting responsible consumption across Latin America and the Caribbean.

7. REGIONAL ANALYSIS

Figure 11. Regional climate finance flows for agrifood systems, 2021/22



Between 2019/20 and 2021/22, domestic resource mobilization for agrifood climate finance grew across developing economies—though unevenly. In Latin America and the Caribbean, domestic flows rose from an annual average of USD 0.5 billion to USD 2.2 billion, while sub-Saharan Africa saw a smaller increase from USD 0.2 billion to USD 0.3 billion. This growth, largely driven by governments and DFIs using grants and low-cost project debt to support sustainable crops, agroforestry, and livestock, signals increasing domestic commitment to climate-aligned food systems. However, the regional disparities also highlight varying fiscal space, policy environments, and institutional capacity to mobilize and deploy capital at scale. The trend underscores both the importance of concessional finance and the need for tailored support to strengthen domestic enabling conditions. Box 10 explores Brazil's approach, where strong domestic investment and innovative financing mechanisms have helped scale climate finance for land use.

In East Asia and the Pacific, agrifood climate finance reached USD 43.5 billion in 2021/22—46% of the global total and a fourfold increase from 2019/20. About 95% of this was domestically sourced, with China alone accounting for 86% (USD 37.6 billion), largely driven by investment in solar-PV projects (see Box 2). Excluding China, the region mobilized USD 6 billion, nearly half of which went to biomass plants in Japan and use-of-proceeds bonds supporting dual-benefit projects in Hong Kong, Korea, and Japan.

Sub-Saharan Africa also saw notable growth, with climate finance for agrifood systems rising from USD 4.4 billion in 2019/20 to USD 7.8 billion in 2021/22. Of this, 48% was directed toward adaptation—the second-highest regional share after Central Asia and Eastern Europe, where 53% (USD 1.8 billion) supported adaptation efforts. In Africa, this reflects the region's low emissions profile and high vulnerability to climate change, with a strong focus on sustainable crop production. Much of this shift has been enabled by concessional funding, given the high upfront costs of transforming agricultural practices.

Box 10: Brazil's unique agrifood systems financing

Brazil's agrifood system benefits from strong domestic investment and innovative financing mechanisms. Climate finance for land use—including agriculture, forestry, conservation, and resilience—doubled from an annual average of USD 8.6 billion (2015–20) to USD 17.1 billion (2021–23), with 97% sourced domestically and 72% coming from private actors (CPI, 2024f). A major driver of this investment is the federal agricultural plan, which mandates financial institutions to allocate resources toward rural credit.

Rural credit accounts for USD 9.9 billion annually—58% of Brazil's climate finance for land use. However, the program predates national climate policies and lacks full alignment with sustainability goals. Between 2020–22, one-third of deforested properties received subsidized credit, representing at least 15% of the USD 95 billion allocated during that period. This underscores the urgent need for stronger environmental safeguards to ensure rural credit supports climate and nature objectives.

Agricultural risk management is also a critical component, mobilizing USD 2.6 billion annually (15% of total flows), primarily for adaptation. The Rural Insurance Premium Subsidy Program alone provides USD 1.1 billion per year to help farmers manage climate risks and protect their livelihoods.

8. INSTRUMENT ANALYSIS

In 2021/22, debt instruments—primarily project and balance sheet financing—accounted for 62% of agrifood climate finance, up from 47% in 2019/20. This increase was driven by increased project-level, market-rate debt from public actors and commercial FIs, particularly for dual-benefit projects in crops, livestock, and forestry across Western Europe and East Asia. Debt from governments and national DFIs alone comprised 42% of total flows, up from 32% in 2019/20.

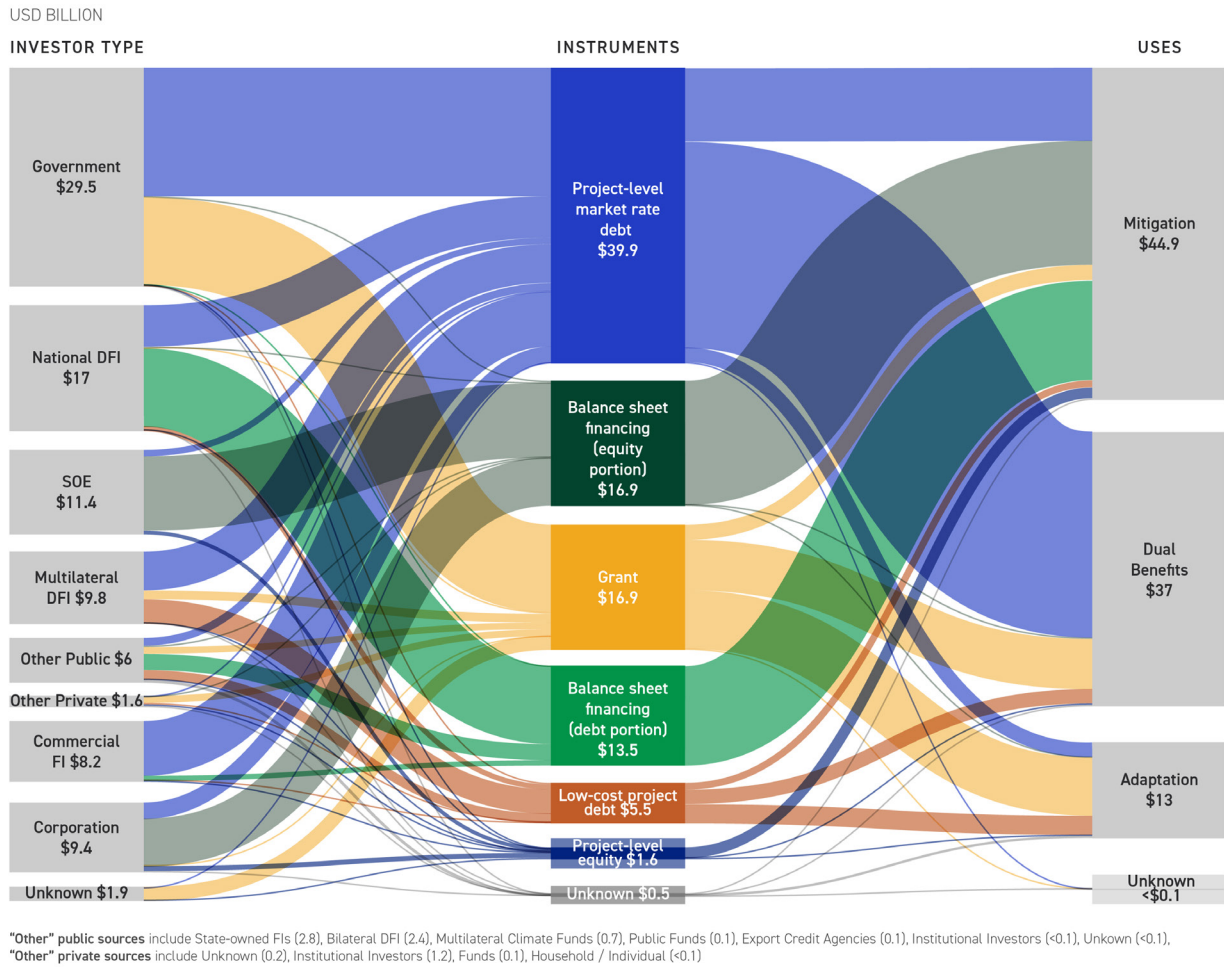
Equity finance rose sharply to 20% of flows—up from just 4% in 2019/20—largely due to East Asian corporations and SOEs. Over half of the USD 10 billion in equity tracked came from Chinese SOEs using balance sheet capital for agrivoltaics, helping to anchor risk and crowd in additional private investment.

Grant finance increased in absolute terms—from USD 10.8 billion to USD 16.9 billion—but its share fell steeply from 38% to 18%. This decline is concerning given grants' critical role in supporting adaptation, smallholder resilience, and public goods that lack immediate revenue potential, especially in regions where concessional capital is most needed.

Corporations and commercial FIs also expanded their footprint, with commercial banks providing more debt, and corporates combining debt and equity for large-scale mitigation projects such as bioenergy and renewable energy-powered agrifood systems—often with embedded co-benefits.

A more strategic mix of instruments is needed to align climate finance with the diverse risk and return profiles across agrifood systems. While debt remains important for scaling proven, revenue-generating solutions, its dominance must be complemented by the increased use of grants, concessional debt, and equity—particularly for adaptation-and smallholder-focused investments. Grants are critical for enabling early-stage, high-impact interventions that lack near-term returns, such as nature-based solutions, rural infrastructure, and climate advisory services. Equity plays a vital role in sharing risk and supporting innovation, especially for agri-SMEs and emerging business models with scalable climate potential. Blended finance and de-risking instruments—such as guarantees and insurance—can further crowd in private capital and expand access to finance in high-risk, underserved contexts (see Box 11).

Figure 12. Instrument breakdown for agrifood systems in 2021/22, by climate objective



Box 11: Insurance solutions for smallholder farmers

Risk mitigation tools such as parametric insurance, cash collateral guarantees, and weather index insurance are increasingly used to buffer smallholder farmers against climate impacts. In Colombia's Risalda region, the Café Seguro weather index insurance program—a partnership between Blue Marble Microinsurance and Nespresso—offers payouts for losses from excess rainfall and drought (Nespresso, 2022). Following La Niña-related rains in 2022, nearly 6,000 farmers received USD 3.4 million—the country's largest known weather index payout to smallholders (Blue Marble, n.d.).

In Kenya, Etherisc—supported by the [Global Innovation Lab for Climate Finance](#)—has insured 7,000 farmers against climate risks and is piloting a model where farmers pay premiums through income from carbon credits generated via climate-smart agriculture (Etherisc, 2024). Insurance not only protects farmers but also improves their access to credit, enabling financial inclusion and attracting private capital to support sustainable practices and preserve natural assets.

Despite these promising innovations, insurance remains underutilized in unlocking local financing. Proven de-risking approaches from other sectors are not yet fully applied in agrifood climate finance. The issue is not availability, but the lack of adoption at scale. Understanding and addressing this gap is critical to ensuring smallholder farmers can benefit from existing solutions.

9. CATALYSTS FOR CHANGE

Agrifood systems are at a critical juncture in their climate transition. Delays in investment risk deepening global hunger, income inequality, and climate vulnerabilities—especially in EMDEs. The cost of inaction would be immense, with trillions in lost productivity, rising health burdens, climate shocks, supply chain disruption, and social instability (FAO, 2024b). Yet, the very constraints that limit progress also reveal where targeted interventions can unlock transformative change. Accelerating investments under the right enabling conditions can mobilize capital, scale innovation, and build lasting resilience across agrifood value chains.

This section identifies eight action areas, highlighting persistent constraints and the catalysts needed to overcome them. These action areas are: financial access, policy-enabling tools, climate-resilient infrastructure, market development, physical climate risk mitigation, nature-based solutions, technological innovation, and data and disclosure.

The following tables outline actionable recommendations for different stakeholder groups in each action area, illustrated with real-world examples. These groups are: Governments—national authorities responsible for policymaking, regulation, and public investment; DFIs and donors—including development finance institutions, bilateral donors, concessional impact investors, and philanthropic organizations; commercial FIs; and corporates—multinational food and beverage companies.

While each action area has distinct characteristics, progress across them all depends on a confluence of critical enabling conditions: robust public policy, strong local public and private financial institutions, and coordinated multistakeholder action. These are essential levers that shape the success or failure of every intervention. There is no silver bullet—effective solutions require alignment across stakeholders that is grounded in these enabling conditions and responsive to national contexts and institutional capacities.

While these recommendations are designed to be actionable, the timeframe and extent to which they can be executed may vary by country. Many EMDEs face structural, institutional, or financial barriers that limit effective implementation, highlighting the need for country-level support to strengthen enabling environments and build capacities over time.

As we explore these opportunities, we acknowledge that the geopolitical landscape has evolved significantly since the period covered by our climate finance data. While the context that impacts the availability of climate finance for agrifood systems will continue to shift, the underlying challenges and the potential solutions prevail. Addressing these action areas with a coordinated, forward-looking, solutions-oriented approach is more critical than ever to sustain momentum for vital climate action that supports global food security, inclusive economic development, and resilient livelihoods.

Table 1. Catalysts for change: Financial access

Action area: Financial access			
Constraints: Underdeveloped financial systems, high-risk perceptions, and short-term investment horizons restrict access to capital for smallholders and agri-SMEs.			
Governments	DFIs & Donors	Commercial FIs	Corporates
Expand de-risking tools to lower perceived risks and crowd in private capital. Examples include guarantees, insurance programs, concessional credit lines, and first-loss capital. Prioritize domestic deployment through local banks, cooperatives, and fintechs to strengthen local financial ecosystems and improve access for underserved actors. Example: Ghana Incentive-Based Risk-Sharing System for Agricultural Lending (GIRSAL), a government-owned facility, has partnered with 35 FIs to unlock ~USD 100 million in agricultural loans for 137 agribusinesses. Its credit guarantees have reduced interest rates by 1–6%, saving borrowers ~USD 100k, and benefiting more than 67,000 farmers and workers (GIRSAL, 2024).	Scale blended finance solutions to de-risk agrifood investments and mobilize private capital. This includes providing concessional finance, risk-sharing mechanisms, and technical assistance. Support pipeline development by generating and sharing evidence from successful pilots and business models, helping to demonstrate viability and build investor confidence. Example: The African Development Bank’s (AfDB’s) Agri-Food SME Catalytic Financing Mechanism de-risks agrifood investments by providing concessional loans and capacity-building support. It mobilizes public and private capital, ensuring at least 1.5 USD from the private sector for every dollar deployed (AFDB, 2024).	Develop tailored products such as climate-smart loans with flexible repayment terms, parametric insurance, and sustainability-linked bonds that reward environmental performance. Standardizing green finance products can further reduce transaction costs and boost investor confidence. Example: ACRE Africa, a leading agricultural insurance provider, has helped over 3.1 million farmers access climate insurance across Kenya, Rwanda, Tanzania, Zambia, and Nigeria. It has facilitated more than USD 100 million in payouts following weather shocks, enabling rapid recovery and building resilience among smallholders. (ACRE Africa, 2025)	Expand supplier financing programs, offering low-interest credit and pre-harvest loans to farmers adopting sustainable practices. Co-invest with impact investors in local agribusiness funds and support community savings schemes to strengthen the financial resilience of their supplier base. Example: Nestlé’s Income Accelerator Programme, launched in 2022 in Côte d’Ivoire, reached 2,000 cocoa-farming households in 18 months, boosting yields by 32% and net income by 38% through conditional incentives for sustainable farming practices and income diversification (Procurement Magazine, 2024).

Table 2. Catalysts for change: Policy-enabling tools

Action area: Policy-enabling tools		
Constraints: Misaligned subsidies, fragmented regulations, and weak institutional capacity discourage investment in EDMs.		
Governments	DFIs & Donors	Commercial FIs & MNCs
Repurpose agricultural subsidies to incentivize climate-positive investments. Reforms could also ensure policy coherence across sectors—aligning agricultural, trade, and energy policies with NDCs and NAPs. In parallel, strengthen land tenure security, market and financial access, extension services, and input delivery systems to create a more enabling environment for climate-aligned investment. Example: The EU’s Common Agricultural Policy (CAP) ties farm subsidies to climate performance by enforcing stricter environmental standards, allocating 25% of direct payments to eco-schemes, and directing 35% of rural development funds to support climate, biodiversity and animal welfare (European Commission, n.d.).	Support financial access by advising and strengthening country capacities to design and implement enabling policies and incentive frameworks. Facilitate country platforms to identify and scale innovative agrifood finance multistakeholder collaborations—expanding their current energy-focused scope to include a clear identification of adaptation and resilience investment priorities for food systems (CPI, 2024d). Engage with policymakers to develop sustainable finance regulations—such as taxonomies, disclosure rules, and climate-aligned investment policies—drawing on models like the European Development Finance Institutions (EDFI) Association’s coordinated regulatory advocacy (CBI, 2024). Use green policy-based lending to drive reforms in land use, subsidy structures, and sustainable agriculture incentives. Example: Launched with IFC and World Bank support, Colombia’s green taxonomy sets detailed green finance criteria for seven key sectors—including agriculture, livestock, and forestry (59% of national GHG emissions)—to guide sustainable investments toward its 2030 and 2050 climate targets (Argus Media, 2022).	Engage proactively with policymakers to strengthen sustainable finance frameworks that support agrifood system transformation. This includes aligning with taxonomies, advocating for incentives that reduce climate and nature-related risks, and supporting the integration of agriculture into national climate strategies. Contribute to public-private dialogues, co-develop green finance standards, and participate in pilot initiatives—such as regenerative agriculture certification—that inform future regulations.

Table 3. Catalysts for change: Climate-resilient infrastructure

Action area: Climate-resilient infrastructure			
Constraints: Inadequate transport, storage, and energy infrastructure raise costs and limit the viability of climate-aligned agrifood investments.			
Governments	DFIs & Donors	Commercial FIs	Corporates
Prioritize investment in climate-resilient rural infrastructure—such as storage, irrigation, and renewable energy for farming communities. Planning could include climate risk assessments and avoid unintended negative impacts like deforestation. Strengthening public investment appraisal to account for mitigation and adaptation benefits is essential. Example: Brazil’s 2024/25 Plano Safra committed USD 88.2 billion for agricultural development, including USD 19.6 billion for climate-resilient infrastructure. This includes investments in expanding irrigation networks, installing on-farm renewable energy systems, and increasing grain storage capacity to reduce post-harvest losses (USDA, 2024).	Scale climate-resilient agrifood infrastructure by partnering with national development banks (NDBs), offering concessional credit lines and technical assistance for project appraisal, pipeline development, and risk management. With strong local reach and alignment with national climate goals, NDBs are key to financing infrastructure like irrigation, cold storage, and renewable energy (ODI, 2020). Example: The IDB-NAFIN-FIRA partnership channels a USD 100 million IDB credit line for climate-resilient agriculture in Mexico. NAFIN, an NDB, on-lends via FIRA, a public second-tier agri-finance institution to 1,100+ sub-projects (~USD 90,000 each) for irrigation, renewable energy, and storage infrastructure (IDB, 2024).	Offer tailored financing for climate-resilient agrifood infrastructure such as term loans or leasing for flood-proof processing plants or heat-resilient storage. They can also tap DFI-backed credit lines to offer concessional rates for resilience upgrades, and structure green bonds or impact investment vehicles with clear resilience metrics. Example: Helios Investment Partners secured USD 200 million from DFIs—BII, EIB, FMO, and others—for the CLEAR Fund, targeting mid-sized businesses across sub-Saharan Africa in climate-smart agriculture, green energy, mobility, and agrifood infrastructure (BII, 2024).	Directly support on-farm and local infrastructure upgrades that build climate resilience. This includes providing or subsidizing efficient irrigation technology, renewable energy, storage, and processing facilities. Example: PepsiCo is scaling drip irrigation across 10,000 hectares in India, Vietnam, and the US to replace water-intensive flood irrigation. The initiative aims to improve yields, reduce fertilizer use, and cut water use by 50%, supporting climate-resilient infrastructure for its network of potato and other crop farmers (CSRWire, 2022).

Table 4. Catalysts for change: Market development

Action area: Market development		
Constraints: Fragmented supply chains and revenue uncertainty heighten investment risk.		
Governments	DFIs, Donors & Commercial FIs	Corporates
Accelerate the adoption of aggregation models by establishing a dedicated fund to cover early-stage development costs—such as staffing, training, marketing, legal and tax support, and environmental assessments to measure and track on-farm improvements (GFI, 2023). Design policies and public programs that improve smallholders’ access to markets and finance. This can include creating commodity exchanges or warehouse receipt systems so farmers can store produce and use it as collateral for loans. Example: Kenya launched its national Warehouse Receipt System (WRS) in 2020, backed by AGRA, enabling over 13,000 smallholders to store grain in certified warehouses, access credit using receipts as collateral, and avoid distress sales. The initiative aims to reduce post-harvest losses, improve price realization, and support aggregation by farmer groups—including women and youth—for better market access and financial inclusion (AGRA, 2021).	DFIs and donors can catalyze inclusive rural finance by supporting aggregation models that organize smallholder farmers through agribusinesses, cooperatives, or digital platforms. By offering credit guarantees, blended finance, and technical assistance, they help de-risk lending and enable banks to extend value chain financing. This approach lowers transaction costs, improves loan performance, and connects farmers to reliable input and offtake partners. Building on this, commercial FIs can use fintech and digital marketplaces to scale outreach. By bundling farmers into digital ecosystems—enabled by mobile banking, e-wallets, and digital credit scoring—FIs can streamline lending and repayment. These platforms also link farmers to buyers and input suppliers, while using real-time data for credit decisions and risk assessment (AgFunder, 2024).	Enter into long-term agreements with farmer groups to ensure consistent demand, price stability, and adoption of climate-resilient practices—ideally including guaranteed offtake. These models can be further strengthened by pursuing price premiums for sustainably produced goods and ensuring a fair share of the added value reaches primary producers. Example: Nestlé’s Nescafé Plan, while not a formal offtake agreement, demonstrates a strong sourcing relationship with over 100,000 coffee farmers globally, combining technical assistance, inputs, and steady purchasing to promote regenerative agriculture (Nestlé, 2023).

Table 5. Catalysts for change: Physical climate risk mitigation

Action area: Physical climate risk mitigation			
Constraints: Physical climate risks are not systematically integrated into investment decisions.			
Governments	DFIs & Donors	Commercial FIs	Corporates
Prioritize agrifood systems appropriately in NDCs and NAPs, fully reflecting their role in emissions, climate vulnerability, and rural development. With the NDC 3.0 submission deadline now passed, it remains unclear how prominently agrifood systems feature in national climate strategies. Example: Brazil’s NDC signals progress by embedding land-use actions into national climate policy, including a commitment to end deforestation and scale up native vegetation restoration. Notable gains have been made in reducing deforestation in the Amazon and Cerrado. While agrifood systems are not explicitly addressed, these efforts lay the initial groundwork for more sustainable land management and rural resilience (Política Por Inteiro, 2024; UNFCCC, 2024).	Strengthen institutional capacities to assess and manage physical climate risks in agrifood portfolios. This includes investing in climate risk assessment tools, building internal expertise, and integrating risk data into lending and investment decisions. Example: The IFC recently enhanced its Climate Assessment for Financial Institutions (CAFI) tool, specifically aiding banks and investors to evaluate agrifood investments’ resilience against physical climate threats and adapting lending decisions based on standardized adaptation metrics, risk exposure data, and climate vulnerability assessments. The upgraded tool supports the integration of climate risk into credit analysis, portfolio stress testing, and pipeline screening for adaptation-aligned investments (IFC, 2023b).	Translate climate risk insights into tailored financial products that provide rapid payouts after extreme events, such as parametric insurance linked to local weather patterns. Embed climate risk modelling into credit assessments and pricing, helping de-risk investments and incentivize climate-resilient practices.	Invest in strengthening the climate resilience of their agrifood supply chains by helping farmers manage physical climate risks. This includes supporting access to drought-resistant seed and crop varieties and providing advisory services on weather forecasting and climate-smart practices.

Table 6. Catalysts for change: Nature-based solutions

Action area: Nature-based solutions			
Constraints: Financial models often treat ecosystems and biodiversity as externalities and overlooking their role in climate resilience and sustainable food systems.			
Governments	DFIs & Donors	Commercial FIs	Corporates
Align climate and agricultural policies with ecosystem regeneration and biodiversity protection. This includes embedding nature-based approaches into national climate plans and agricultural strategies, repurposing harmful subsidies, and expanding nature-positive incentives. Mandate biodiversity impact assessments and scaling payment for ecosystem services (PES) to create stronger market signals for biodiversity-aligned investments.	Proactively embed standardized ecosystem assessments—covering biodiversity, soil health, and water resources—into their investment due diligence, conditioning financing explicitly on measurable biodiversity outcomes. To support this approach, DFIs and donors could provide targeted technical assistance to borrowers, promoting nature-positive practices such as agroecology and conservation agriculture. Example: IFC’s Biodiversity Finance Reference Guide offers financiers a clear framework to identify investments that effectively contribute to biodiversity protection, providing practical guidance to align financial flows with ecosystem restoration and conservation objectives (IFC, 2023c).	Leverage advanced technologies, such as satellite imagery and AI-driven biodiversity mapping, to identify and manage nature-related risks. They could explicitly incorporate biodiversity into ESG risk scoring and credit assessments, issuing biodiversity-linked financial instruments—like sustainability-linked loans and green bonds—to incentivize investments delivering tangible ecosystem improvements. Example: The Finance for Biodiversity Pledge, endorsed by over 190 FIs, demonstrates a willingness to mainstream biodiversity into private finance (Finance for Biodiversity, 2023).	Prioritize nature-positive strategies, scaling sustainable agriculture, agroforestry, and soil regeneration practices. Set clear biodiversity targets alongside climate goals, using biodiversity-linked credits, ecosystem service payments, and innovative finance models (e.g., carbon sequestration programs) to incentivize regenerative practices throughout their value chains. Example: Natura’s Living Amazon Mechanism combines receivables finance and technical assistance to support Amazonian cooperatives to sustainably harvesting non-timber forest products—protecting standing forests, improving local livelihoods, and securing a biodiversity-positive supply of bio-ingredients (CPI, 2024g).

Table 7. Catalysts for change: Technological innovation

Action area: Technological innovation			
Constraints: Breakthrough technologies lack early-stage funding and enabling conditions to scale rollouts.			
Governments	DFIs & Donors	Commercial FIs	Corporates
Invest in R&D for sustainable agricultural technologies and facilitate private sector financing. Support incubators and innovation hubs to nurture local agtech solutions, underpinned by clear policy targets and regulatory sandboxes that guide and de-risk innovation at scale. Example: The Kigali Food Innovation Hub, launched in partnership with AGRA and Rwanda’s Ministry of ICT and Innovation, aims to revolutionize agriculture in Rwanda and drive sustainable food systems across Africa through innovative practices and technologies (CNBC Africa, 2025).	Fund pilot projects and scalable solutions, offering grants or seed capital for proof-of-concept technologies like solar-powered cold storage in remote areas. By de-risking early-stage innovations and facilitating regional knowledge transfer, DFIs and donors play a key role in scaling successful models across markets. Example: BIl’s investment in SunCulture has helped scale solar irrigation solutions across East Africa by de-risking the technology and enabling expansion into new markets (BIl, 2024).	Provide targeted financing that supports early-stage startups and scalable solutions. Strategic partnerships with agtech firms can enable innovative financing models, such as pay-as-you-go solar irrigation or equipment leasing, reducing upfront costs for smallholders. Example: Rabo Partnerships and Coop Bank co-developed an innovative digital lending platform that uses automation and remote sensing to streamline input loans for smallholders, boosting access to finance and farm productivity. (Rabobank, 2025).	Pilot innovations with producers and scale successful models across global operations, such as mobile crop sensors, regenerative soil monitors, or AI advisory tools. Example: PepsiCo Europe partnered with Yara to deliver precision farming tools and agronomic support, helping farmers improve nutrient efficiency and cut crop-related emissions (PepsiCo, 2024).

Table 8. Catalysts for change: Data and disclosure

Action area: Data and disclosure		
Constraints: Poor data and limited transparency hinder investment planning and risk analysis.		
Governments	DFIs, Donors & Commercial FIs	Corporates
Strengthen national data systems by integrating TCFD and TNFD frameworks into sustainability, climate, and financial reporting regulations. Complement these with national taxonomies, harmonized ESG metrics, and investments in open access agrifood data (e.g., emissions, soil health, yields). Invest in systemic, impact-oriented KPIs linked to food security, biodiversity, ecosystem services, and resilience, supporting iterative refinement among stakeholders. Example: France now requires public and private FIs to disclose climate- and biodiversity-related risks (TNFD, 2021).	Adopt TCFD- and TNFD-aligned disclosures to transparently report climate and nature risks in agrifood portfolios. DFIs should lead by example by explicitly linking funding to science-based targets or climate-risk assessments. Invest in or co-develop interoperable public data platforms (e.g., geospatial tools, climate-risk databases) to enhance transparency and accuracy for investors, local banks, and policymakers. Promote global harmonization of sustainability standards and widely accepted labels, creating standardized, investable asset classes to scale climate finance. Leverage creditor/shareholder influence by requiring borrowers to adopt credible transition plans, and actively participating in collaborative climate finance initiatives. Examples: The IFC publishes third-party assured TCFD reports linking investments to climate-risk assessments (IFC, 2023d). The Global Emerging Markets Risk Database (GEMs), established by IFC and EIB, aggregates detailed data on credit defaults and recovery rates across EMDEs, improving investment risk transparency (GEMs, n.d.). The FAST-Infra Sustainable Infrastructure Label certifies sustainable infrastructure projects, providing a standardized framework to define and scale sustainable investment opportunities (FAST-Infra, n.d.).	Adopt and implement TCFD and TNFD frameworks to consistently disclose and manage material climate and nature-related risks across agrifood operations and supply chains. Corporations should report using standardized, systemic impact metrics and KPIs, such as on land-use efficiency, regenerative agricultural practices, biodiversity impacts, and Scope 3 emissions. Align disclosures with public taxonomies and international ESG standards to build investor trust, facilitate access to sustainable finance, and enhance corporate accountability.

10. CONCLUSION

The urgency to transition agrifood systems toward climate-resilient, low-emissions, and nature-positive pathways has never been greater—and so too is the opportunity. In a global context marked by shifting geopolitical priorities and constrained public budgets, especially in donor countries, the availability of concessional finance and aid is likely to tighten further. This could lead to a decline in future international agrifood climate finance. Yet, this changing landscape should not be viewed as a deterrent but rather as a call for smarter, more strategic deployment of capital—leveraging innovation, coordination, and alignment to do more with less.

To drive meaningful progress, stakeholders must deepen collaboration and move away from isolated projects to systemwide transformations. Governments and DFIs should integrate food systems more deliberately into national climate strategies and unlock additional domestic finance for agrifood systems through subsidy reforms and improved policy agendas. Investors must move beyond isolated transactions and invest in scalable, high-impact solutions and portfolios. Bridging the gap between global commitments and tangible impact will also require the inclusion of smallholder farmers, marginalized groups, and local institutions within investment strategies. Strengthening local financial and data ecosystems will also be key to making finance more accessible, traceable, and aligned with long-term resilience.

Despite these headwinds, there is a growing ecosystem of initiatives charting a course forward, such as country platforms, blended finance mechanisms, and nature-positive disclosure frameworks. Upcoming global milestones like the UNFSS+4 in Ethiopia and COP30 in Brazil offer timely opportunities to reinforce this momentum and elevate agrifood systems within the climate agenda. With coordinated action, improved data, and greater accountability for both public and private actors, the agrifood transition can remain a linchpin of climate ambition. While this report's insights offer a foundation to build upon, sustained commitment, adaptive strategies, and bold leadership will be essential to transform momentum into measurable impact.

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