

Deloitte.



Green returns:

Unleashing the power of finance
for sustainable food systems

A call to action for the global finance community

The urgent need for food systems transformation

Food and agriculture systems account for nearly one-third of global climate emissions, of which 39% are tied to agricultural production, followed by land use (32%) and supply chain activities (29%). Food systems are also responsible for more than 80% of tropical deforestation and biodiversity loss as well as 70% of global freshwater withdrawals.

These emissions are projected to increase 60% to 90% between 2010 and 2050 unless transformative measures are taken. They are so significant that inaction in food systems transformation alone could prevent achievement of the Paris Agreement 2°C goal.

The transition to a sustainable food system represents a major opportunity to achieve progress against climate change. With appropriate financing, it can drive 20% of the emissions reductions needed to reach 2050 climate goals and generate \$4.5 trillion in new market opportunities each year. Such a transformation requires the deployment of new financial tools, alongside at least a 15-fold increase in investment in food systems, to meet the \$300 billion to \$350 billion yearly expected investment needs over the next decade.

Now is a critical time to invest.

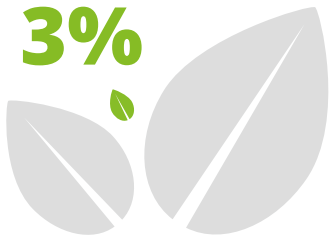
Food systems contribute **1/3** of global greenhouse gas emissions⁸



33%
= **4%**

yet they receive less than **4%** of climate finance⁹

3%



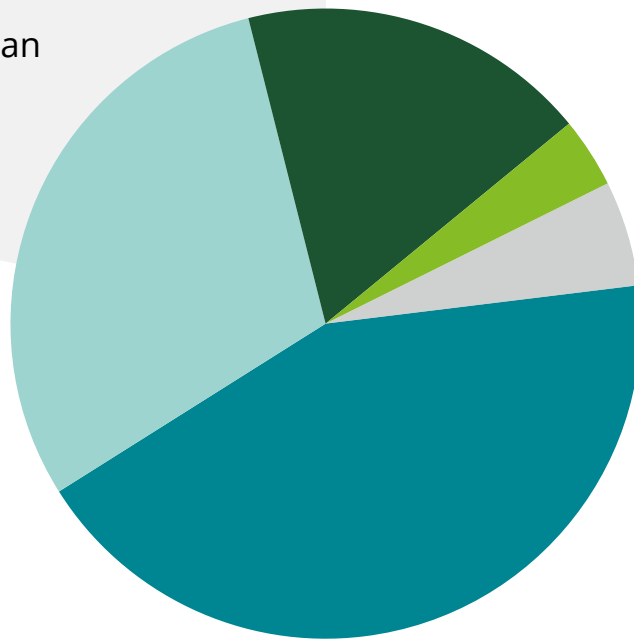
Primed to grow...

with **3%** of climate finance attributable to agriculture, forestry, and other land use, there remain significant opportunities to increase funding

\$ 600 billion*

total climate finance budget

Food systems have the best potential to receive increased climate finance



Food systems



Renewable energy



Energy efficiency



Sustainable transport



Other

\$ 300 billion

The finance sector is best positioned to **help grow investments in food systems** from **\$300-\$350 billion**

~15x

Representing **~15x market growth** within the next decade

A significant growth opportunity for climate finance

Sustainable food systems transformation remains chronically underfunded, making up only approximately 4% of climate finance,¹⁰ including the following estimates:

- The agriculture, forestry and other land use (AFOLU) sector receives less than 4% of overall climate finance while renewable energy, energy efficiency, and sustainable transport receive 18%, 30%, and 43%, respectively.¹¹
- Only 3% of climate finance attributable to banking and capital markets targets the AFOLU sector.¹²
- Only 5.5% of total philanthropic giving toward climate change mitigation is allocated to decarbonizing food systems and agriculture.¹³
- Food systems receive 3% of total public climate finance.¹⁴

Filling this gap and addressing the transformation investment needs of the food and agriculture sector thus represent a significant growth opportunity for the finance sector.

Five financial vehicles: How the finance community can lead

Agriculture transformation-specific versions of five financial vehicles could help mitigate climate and supply chain risks, drive market growth, and lead to better socioeconomic outcomes such as creating jobs and improving farmer resilience and equity. Banks, asset managers, insurers, development finance agencies, philanthropic organizations, and governments all have roles to play.

1. **Supply chain finance:** Supply chain partners can offer more favorable financing terms to suppliers who meet certain sustainability requirements, while helping value chain companies make progress toward their sustainability goals (e.g., Scope 3 emissions).
2. **Debt:** Loans and bond issues specifically designed to incentivize and reward transformation activities, such as sustainability-linked loans and green bonds, can help lower the cost of capital and mobilize investment for projects aligned with a company's sustainability goals.
3. **Equity finance:** Private equity finance is an increasingly common approach for investment in new and emerging agricultural technology and innovations that can be utilized to scale food systems transformation.
4. **Grants and blended finance:** This is an approach to development finance that strategically employs public and philanthropic funds to mobilize private capital flows to emerging markets.
5. **Insurance:** This distributes or reduces the actual or perceived risks associated with an investment. These tools can help address the risks associated with transitioning to sustainable practices and manage ongoing price volatilities and yield risks related to climate change.

[Download the full report](#) to read case studies for each vehicle.



Barriers and solutions to scale

Working with leading global banks, lenders, venture capital and private equity firms, development finance agencies, philanthropic organizations, and government organizations, we uncovered three primary barriers to scaling investment in agricultural transformation:

- **Capacity:** Lack of sector-specific transformation knowledge among banking staff.
- **Data:** The inability to execute data-driven decisions due to an unfamiliarity with the disparate data related to food systems productivity and climate change.
- **Incentives:** The complexity of coordinating transformation incentives and commitments across the food value chain.

These insights led us to identify several action-oriented solutions:

- **Community of practice:** Develop a community of dedicated stakeholders to both encourage data sharing and collaboration across the financial sector and inform policy development that incentivizes sustainable food systems.
- **Sector strategy:** Co-develop a sectorwide strategy to actively define and chart the direction for sustainable food systems investment.
- **Industry benchmarks:** Co-develop industry benchmarks that are inclusive of food and agriculture-specific key performance indicators for a food systems sustainability ranking system to inform investments.
- **Accuracy of data on investment choices:** Ensure investment in sectorwide data to inform investment choices (e.g., carbon sequestration and nutritional level of products).
- **Scale financial tools:** Create a blueprint to scale promising tools that focus on high-impact solutions with an emphasis on value chains in regions with high agri-food-related emissions. Elevate and scale successful piloted financial tools and associated programs to catalyze food systems transformation.

It is the intent of the sponsors of this project that we can play a role in helping financial institutions mobilize these vehicles. This will both channel financing to the agricultural transformation investments that the world needs and become a driver of growth for those institutions that rise to the challenge.

[Download the full report](#) for an in-depth discussion and real-world case studies.



Endnotes

1. Crippa et al., "[Food systems are responsible for a third of global anthropogenic GHG emissions.](#)" *Nature Food* 2 (2021): pp. 198–209.
2. United Nations Environment Programme (UNEP), [Emissions Gap Report 2022: The closing window – Climate crisis calls for rapid transformation of societies](#), 2022.
3. World Economic Forum (WEF), [Food, nature and health transitions – Repeatable country models](#), January 2023; Guillaume Gruere and Makiko Shigemitsu, "[Water: Key to food systems sustainability](#)," Organisation for Economic Co-operation and Development (OECD), March 22, 2021.
4. Keywan Riahi et al., "[The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview](#)," *Global Environmental Change* 42 (January 2017): pp. 153–68.
5. Michael A. Clark et al., "[Global food system emissions could preclude achieving the 1.5° and 2°C climate change targets](#)," *Science* 370, no. 6517 (2020): pp. 705–08.
6. Global Alliance for the Future of Food, [Untapped opportunities: Climate financing for food systems transformation](#), 2022; Food and Land Use Coalition, [Growing better: Ten critical transitions to transform food and land use](#), September 2019; Race to Zero, [Assessing the financial impact of the land use transition on the food and agriculture sector](#), September 2022.
7. Intergovernmental Panel on Climate Change (IPCC), [Climate Change 2022: Mitigation of climate change](#), Working Group III contribution to the Sixth Assessment Report of the IPCC, 2022; Food and Land Use Coalition, [Growing better: Ten critical transitions to transform food and land use](#).
8. Crippa et al., "[Food systems are responsible for a third of global anthropogenic GHG emissions.](#)"
9. Eugenio Díaz-Bonilla and Ruben Echeverría, "[Climate finance: Funding sustainable food systems transformation](#)," *2022 global food policy report: Climate change and food systems* (Washington, DC: International Food Policy Research Institute, May 2022), pp. 48–57.
10. Eugenio Díaz-Bonilla and Ruben Echeverría, "[Climate finance: Funding sustainable food systems transformation.](#)"
11. Baysa Naran et al., [Global landscape of climate finance: A decade of data 2011–2020](#), Climate Policy Initiative, 2022.
12. Ibid.
13. Global Alliance for the Future of Food, [Untapped opportunities](#).
14. Ibid.



This publication contains general information only and Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional adviser. Deloitte shall not be responsible for any loss sustained by any person who relies on this publication.

As used in this document, "Deloitte" means Deloitte & Touche LLP, a subsidiary of Deloitte LLP. Please see www.deloitte.com/us/about for a detailed description of our legal structure. Certain services may not be available to attest clients under the rules and regulations of public accounting.