

In collaboration
with Deloitte



Green Returns: Unleashing the Power of Finance for Sustainable Food Systems

WHITE PAPER

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Foreword



Shay Eliaz
Partner, ESG Strategy and
Transformation, Deloitte



Tania Strauss
Head, Food and Water,
World Economic Forum, LLC

The food system accounts for roughly one-third of global emissions.¹ The transition to a sustainable food system represents an incredible opportunity to drive progress against climate change. Emissions attributed to the food system are projected to increase between 60-90% between 2010 and 2050 unless transformative measures are taken.² Despite this, a sustainable food system transformation remains chronically underfunded, making up only approximately 4% of climate finance.³ This primer on the opportunity aims to help investors and the financial sector reorient climate finance towards food and agriculture to combat climate change, generate positive social impacts and economic returns.

In this report, you will find five financial vehicles to scale across the food value chain and concrete examples already in the market. We are urgently calling for the financial and food-agri sectors to

collectively develop strategies to overcome the widespread challenges related to generating sector-specific knowledge, developing appropriate standardized metrics and reporting practices, and coordinating across the food value chain. Given the growing amount of capital for sustainability investments to reduce portfolio carbon intensity and climate risk exposure, now is a critical time to invest.

Together, as we align efforts and pool resources towards supporting farmers and consumers in a transformation of food systems, we offer the world time to achieve climate action now. Embracing bold collaboration, fit-for-purpose innovation and public-private investment, we can secure a healthier, more resilient planet. The economic and social dividends of investing in our farmers, and in our plates will be far-reaching, ensuring a sustainable, thriving and equitable world for all.

Executive summary

Unlocking finance for sustainable food systems transformation: a call to action for the global finance community.

Despite accounting for roughly one-third of global emissions, food systems receive a disproportionately low share of climate finance in comparison to other heavy-emitting sectors. The finance community has a unique opportunity to lead and catalyse a global food systems transformation.

To raise awareness of the opportunities and better understand the barriers hindering the finance sector's ability to catalyse this transformation, the World Economic Forum, in partnership with Deloitte, have engaged finance stakeholders from around the globe to initiate action on this critical topic.

Through the deployment of innovative key financial tools: supply chain finance, equity finance, insurance, debt, and grants and blended finance, food systems players from across the value chain can gain access to the capital required to support a sustainable food systems transformation. Deployment of these tools can help mitigate climate and supply chain risks, drive market growth, and lead to favourable socioeconomic outcomes such as improving resilience and equity across the food value chain.

Nonetheless, developing, deploying and scaling these solutions pose unique challenges in the finance community. To better understand these barriers and propose potential solutions, insights were gathered through the collective convening of leading global banks, lenders, venture capital and private equity firms, development finance agencies, philanthropic organizations and government organizations.

Through these discussions, three common themes were identified as primary barriers: **lack of sector-specific knowledge**, the **inability to execute data-driven decisions** and the **complexity of coordinating** across the food value chain.

To adequately support a sustainable food systems transformation at the pace required, players from across the finance sector have a role to play in the design and scale of both existing and new innovative financial products and solutions that ease access to capital and de-risk the transition to climate-smart, equitable practices across the food value chain.

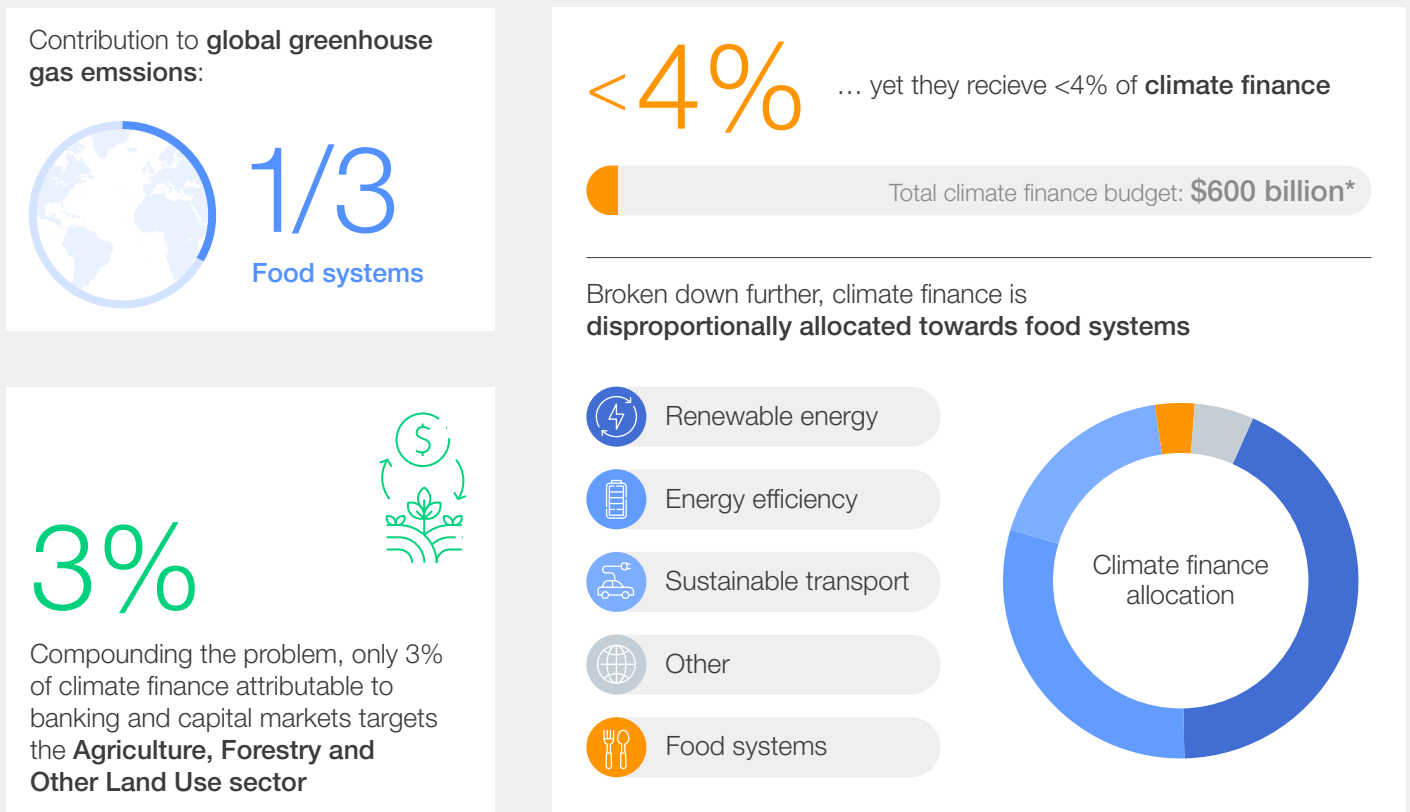
Introduction

Sustainable food system transformation requires closing a significant climate finance gap.

Investing in how food is produced and consumed differently can deliver net-zero climate solutions while sustainably feeding a population of 10 billion by 2050. Today food and agriculture systems

account for nearly one-third of global emissions,⁴ of which 39% are tied to agricultural production, followed by land use (32%)⁵ and supply chain activities (29%).⁶

FIGURE 1 The state of food systems finance today



Note: *Approximately

Sources: Nature Food, International Food Policy Research Institute (IFPRI), Global Alliance for the Future of Food

Emissions attributed to the food system are projected to increase between 60-90% between 2010 and 2050 unless transformative measures are taken.⁷ The emissions attributed to global food systems are so significant that inaction could prevent achieving the Paris Agreement goal of limiting global warming to below 2°C.⁸ In addition, food systems are responsible for over 80% of tropical deforestation and biodiversity loss⁹ as well as 70% of global freshwater withdrawals.¹⁰ In fact, 56% of agricultural finance institutions agree that climate change will negatively impact their client's financial performance.¹¹ The finance industry is uniquely

equipped to drive the sustainable food system transformation due to the capital they allocate.

With adequate and appropriate financing, food and agriculture systems can drive 20% of emissions reductions needed to reach 2050 climate goals¹² and generate \$4.5 trillion in new market opportunities each year.^{13,14} Capturing the benefits of such a transformation requires the deployment of financial tools alongside an increase in investment in food systems of 10-31 times¹⁵ to meet the \$300-350 billion yearly expected cost over the next decade.¹⁶

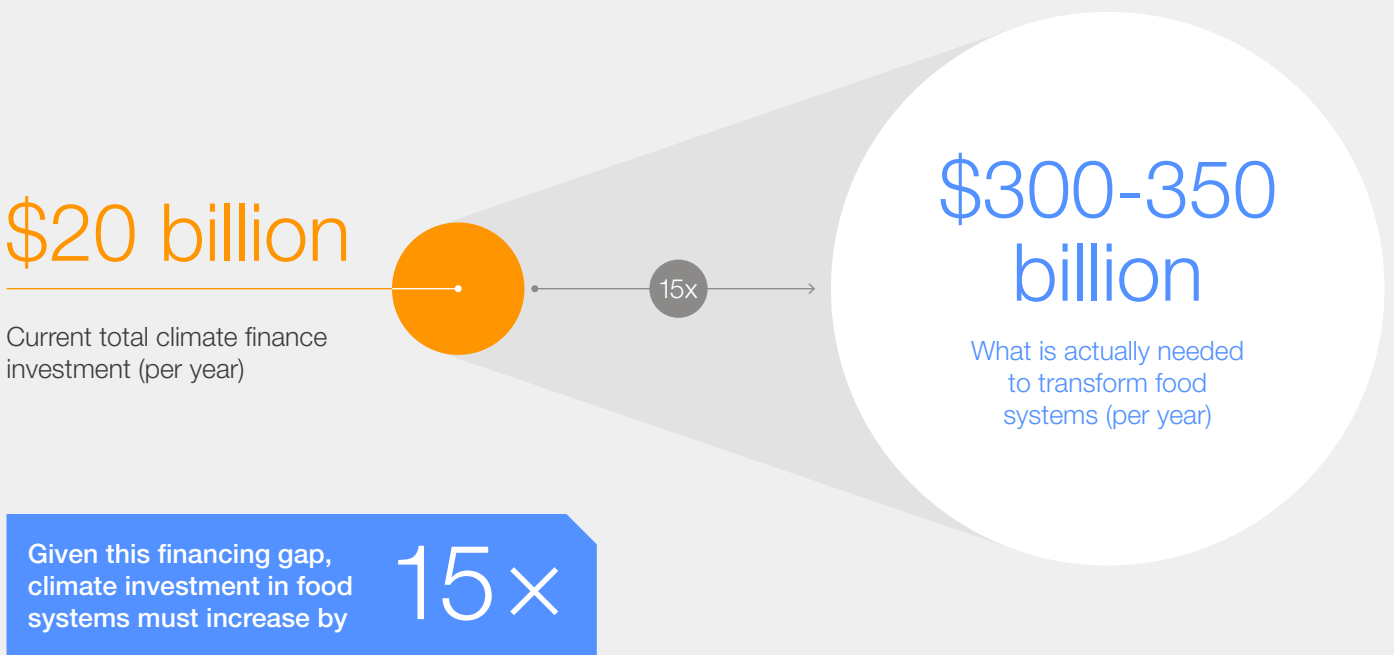
However, today there is a significant gap in climate finance directed towards a transformation of the food and agriculture system, which is disproportionately low compared to other sectors. Estimates include:

- The Agriculture, Forestry and Other Land Use (AFOLU) sector receives less than 4% of overall climate finance^{17,18} while renewable energy, energy efficiency and sustainable transport receive 18%, 30% and 43%, respectively.¹⁹
- Only 3% of climate finance attributable to banking and capital markets targets the AFOLU sector.²⁰

- Only 5.5% of total philanthropic giving towards climate change mitigation is allocated to decarbonizing food systems and agriculture.²¹
- Food systems receive 3% of total public climate finance.²²
- These figures present a game-changing opportunity to rethink climate finance towards food and agriculture systems that generate positive impacts and financial returns.

FIGURE 2 What needs to be done for food systems transformation

Finance to catalyse a sustainable food systems transformation is insufficient



Sources: IFPRI, Food and Land Use Coalition

The World Economic Forum and Deloitte partnered to understand the unique opportunities and barriers for financial institutions to catalyse the food systems transformation. This report overviews five financial

vehicles that could help better mitigate (climate and supply chain) risks, drive market growth and lead to better social-economic outcomes such as creating jobs and improving farmer resilience and equity.

1

Financial vehicles: how the finance community can lead the food system transformation

The finance community can lead by designing, deploying and scaling financial solutions across five key categories.

1.1 Levers financial institutions can pull

Fortunately, there are existing financial products and services that could be applied to accelerate food systems transformation. However, these are not scaled sufficiently to support the transition at the pace required. Banks, asset managers, insurers, development finance agencies, philanthropic organizations and governments each have a role to play in the design and scale of existing and new

innovative products and solutions that ease access to capital and de-risk the transition to climate-smart, equitable practices across the food value chain.

Five important categories for private financial institutions to deploy include supply chain finance, equity finance, insurance, debt and grants and blended finance.



Supply chain finance

Financial institutions can support companies across the food value chain as they seek to achieve sustainability goals by offering a diverse portfolio of supply chain finance solutions. Many food value chain stakeholders (e.g. farmers, input providers, processors, manufacturers) lack liquid working capital and de-risking solutions required to implement sustainable capital-intensive tools, projects and processes (e.g. equipment to implement low-emission agricultural methods, a new workstream that upcycles agricultural waste).

Supply chain finance tools allow suppliers to access transaction funds faster and under favourable terms, catalysing project implementation and delivering sustainable solutions that can impact the entire food value chain. Financial institutions can provide the necessary infrastructure for these tools by supporting relevant legal, regulatory and policy frameworks, providing technology platforms, advising suppliers and building awareness of the demand for supply chain finance programmes among their networks.²³

Multinational commercial banks, development banks, fintech companies and lenders can provide supply chain finance tools to their clients, such as sustainable payables finance, sustainable trade loans, carbon payments and offtake agreements.

Financial organizations that are best suited to offer these kinds of tools fall within the following criteria:

- Financial institutions that serve both large-scale and small-scale clients along the food value chain (e.g. producers, manufacturers, processors, distributors).
- Commercial banks and/or financial organizations that offer trade finance solutions, such as supply chain finance products or programmes.
- Financial institutions with an existing supply chain finance technology platform (e.g. JPMorgan and Taulia's Early Payment Program) or with access to a supply chain finance-enabling operating model.²⁴

CASE STUDY 1

International Finance Corporation's (IFC) Global Trade Supplier Finance programme

The IFC's Global Trade Supplier Finance programme provides short-term financing to small- and medium-sized suppliers in emerging markets. These suppliers sell to large domestic buyers or export to international buyers by discounting invoices once they are approved by the buyer. Favourable financing rates are linked to sustainability measures that minimize impacts on the environment and

promote climate-resilient agriculture practices. As part of this programme, IFC has partnered with Barry Callebaut, a global chocolate and cocoa manufacturer, to provide their suppliers in Mexico with discounted short-term working capital financing terms linked directly to the suppliers' environmental, social and governance (ESG) performance in relation to Barry Callebaut's ESG benchmarks.²⁵

The following enablers, among others, can help scale supply chain finance tools to accelerate food system transformation:

- **Dedicated technology platforms:** Using an in-house technology platform to implement supply chain finance tools allows banks to connect stakeholders, ensure transparency and provide a seamless experience for their clients to manage suppliers.

- **Supplier scorecard:** A supplier sustainability benchmarking system, could help financial institutions evaluate the relative performance of suppliers and determine eligibility for different financial tools.²⁶
- **Coordinated efforts:** To better understand and address implementation complexities within existing regulatory frameworks and required new data and technology investments and policy changes.

“ Favourable financing rates are linked to sustainability measures

Equity finance

Financial institutions, such as investment banks, sovereign wealth funds, pension funds and private equity/venture capital firms, have the expertise, resources and networks to identify promising investments and provide the necessary equity capital to increase the accessibility and affordability of sustainable technology and practices. In developed countries, equity finance can play a role in scaling new sustainable business models and innovative technologies in support of enabling monitoring, reporting and verification (MRV) methods. In emerging countries, actors along the food value chain struggle to access the financial resources needed to meet relevant sustainability commitments.²⁷

Within equity finance, tools such as private equity funds, venture capital funds and natural capital/conservation equity funds can be used to scale

organizations that are developing innovative solutions to preserve natural capital and support sustainable food systems.

Typically, these services are offered by institutions that meet the following criteria:

- Specialized knowledge or interest in food system topics signifying the financial institution has the required subject matter knowledge and network to successfully scale food system businesses.
- Access to large institutional or private funds that are interested in investing in ESG-related ventures.

Examples of equity financing tools can be found in both developed and emerging markets, from financing the modernization of dairy farming in Ethiopia to catalysing the development of groundbreaking technologies throughout the EU.

CASE STUDY 2

United Green

Through the Food and Agriculture Organization of the United Nations' (FAO) AgrInvest initiative, the venture capital fund United Green has committed to mobilizing \$20 million to advance sustainable economic growth and boost employment for underserved communities within Ethiopia's dairy

sector. The fund is working alongside FAO's food system experts and using FAO-developed tools (e.g. Ex-Ante Carbon Balance Tool and the Global Livestock Environmental Assessment Model) to assess the environmental and social impact of their investment.²⁸

CASE STUDY 3

Healthy Food Systems Impact Fund II

A technology-focused venture capital fund was launched in 2021 by Pymwymic, a cooperative of European investors. The Healthy Food Systems Impact Fund II invests in companies that develop innovative technologies (e.g. crop intelligence software, soil biology analytics) with the potential to transform the food system. The fund aims to invest €60 million in up to 14 companies by 2030.^{29, 30}

The following enablers, among others, can help scale equity finance tools to accelerate food system transformation.

- **Amplifying the business case:** Many investors are either unaware of or unable to adequately calculate the business case for investing in food system transformation. Encouraging clients and investors to invest in innovations

that drive transformation is essential to scaling equity finance.

- **Strategic partnerships:** Strategic partnerships allow investors with limited subject matter expertise to invest in new areas by leveraging each other's industry-specific knowledge to create a mutually beneficial relationship.

“ Insurers can provide reduced premiums and offer innovative insurance products and risk management services to ease the transition to sustainable practices.

Insurance

Mitigating transition risk is one of the biggest obstacles to a global food system transformation. There is an opportunity for insurers to provide risk management solutions that both support sustainable agricultural practices and protect against crop yield loss and supply chain disruptions. Insurers can provide reduced premiums and offer innovative insurance products and risk management services to ease the transition to sustainable practices.

Relevant insurance tools include crop yield insurance, parametric/index-based weather insurance, agricultural derivatives, incentive-based pricing and trade credit insurance.

Due to regulations regarding insurance products in support of the food system, there are limited examples of innovative insurance products for food systems organizations. First movers in this space include governments and niche, purpose-focused agribusiness insurers.

CASE STUDY 4

Dominican Republic insurance products

The United States Agency for International Development (USAID) and non-profit Fundación REDDOM are partnering with Swiss Re, Columbia University International Research Institute and Guy Carpenter to design index insurance products for stakeholders in the Dominican Republic. These products are designed to build financial resilience for banana, plantain and dairy farmers should severe

winds or droughts damage their crops and livestock. Following insurance product development, this group of collaborators will train Dominican insurers to take over the management of the products. As a first-of-its-kind insurance product, the product designers will evaluate product performance to understand whether climate resilience was improved among programme participants.³¹

CASE STUDY 5

Tata AIG microfinance products

Tata AIG, an Indian general insurance company, offers microfinance products to boost the financial and socioeconomic resilience of small and marginal farmers in rural, poverty-stricken areas. Tata AIG launched a project in collaboration with InsuResilience Solution Fund to provide weather insurance to smallholder farmers engaged in subsistence agriculture across India.³²

The following enablers, among others, can help scale insurance tools to accelerate food system transformation:

- **Influencing public policy:** Advocating for policies that enable producers and other value chain organizations to adopt sustainable practices enables insurers to offer policies that cover these sustainable practices.

- **Government partnership:** Organizations that have relationships with government entities are better equipped to offer insurance products, as they may be able to co-create subsidized programmes.
- **Using innovative technology:** The emergence of new technologies, such as remote sensing and satellite imagery, allows insurers to calculate risk and process claims more efficiently with improved precision.

Debt

Many stakeholders along the food system chain (specifically farmers, ranchers and specialized small- and medium-sized enterprises (SMEs)) operate on thin margins and do not have the financial means to expand their operations, improve efficiency and productivity, and access new markets. Agricultural enterprises are capital intensive, require large upfront investments to transform, and often carry sizable debt. The potential costs entrench “business as usual” behaviour. By issuing debt, financial institutions have an opportunity to provide stakeholders with the capital needed to effectively transform their operations. Providing favourable terms for operating loans could help ease transformation investment for many stakeholders.

Relevant debt tools include climate-risk-adjusted loans, lines of credit, loan guarantees, green bonds

and sustainability-linked bonds. Typically, these services are offered by institutions that meet the following criteria:

- Specialized knowledge in food system topics, signifying the financial institution has the required subject matter knowledge and network to successfully develop and scale debt products
- Strong balance sheet and ability to take on risk liability
- Strategic incentive (e.g. stakeholder concerns, impact on clients, new product line) to issue debt tools and assume the risk for food system transformation.

The following case studies exemplify how innovative debt solutions can incentivize sustainable outcomes.

CASE STUDY 6

Compass Group sustainable bonds

Compass Group, a British multinational food service company, released two sustainable bonds to raise funds that progress the group’s sustainability initiatives, enhance responsible sourcing and advance decarbonization goals within the company’s supply chain. To enable these bonds, Compass Group developed a sustainable

financing framework outlining eligibility requirements that are aligned with various international standards and guidelines. The bond funds projects that are either certified sustainable, fairtrade or organic goods; goods from local, socially diverse or minority suppliers; food waste reduction projects; or in support of healthy eating initiatives.^{33, 34}

CASE STUDY 7

HSBC and Mercon Coffee Group

In 2019, HSBC partnered with Mercon Coffee Group to offer the first coffee-only green revolving credit facility. To supplement the credit facility, HSBC’s advisers and auditors worked with Mercon to develop a custom index, which measures Mercon’s major environmental, social and economic key performance indicators (KPIs) that are linked to specific ESG goals. When

KPIs are met, Mercon receives a discount on the facility, which is reinvested back into its LIFT programme. Mercon’s LIFT programme is an ongoing educational and technical support programme to assist producers in adopting environmentally conscious practices that optimize their productivity and improve their community.³⁵

The following enablers, among others, can help scale debt tools to accelerate food system transformation:

- **Educating value chain actors:** Smaller players along the food value chain may be wary of debt financing, providing trainings and technical assistance regarding debt tools can help with better evaluation of this option.

- **Partnering with local banks:** Suppliers within food value chains typically bank with local or agriculture-focused institutions, larger multinational banks extending their resources to smaller local lenders can help scale the adoption of debt tools.

“ The market size of blended finance investment in agriculture has steadily increased year over year, representing aggregate financing of \$13.4 billion.

Grant and blended finance

Blended finance, an approach to development finance that strategically employs public and philanthropic funds to mobilize private capital flows to emerging markets,³⁶ serves as an effective de-risking tool for private investors to increase investment in the food system transformation by using public and philanthropic capital made available via grants or funds. They provide a viable solution to address projects that are heavily constrained by risk and minimal scale by spreading risk among multiple parties.

The market size of blended finance investment in agriculture has steadily increased year over year, representing aggregate financing of \$13.4 billion.³⁷ This trend is in line with increased investment in climate finance for food systems from the public sector. From 2000-2015, food systems received an average public investment of \$1.7 billion per year globally.³⁸ This investment increased to \$9 billion per year from 2016-2015 (429% increase).³⁹ Blended finance tools are increasingly focused on

supporting rural and smallholder farmers. In 2022, rural and smallholder farmers were the recipient of 36% of global climate blended finance deals, up from 26% in 2016-2018 (39% increase).⁴⁰

Financial institutions have an opportunity to de-risk investments through blended financing tools. They not only can capitalize off the increasing pool of public and philanthropic funds for their own investment projects but can also drive co-investment across both private and public sectors.

Financial organizations that are best suited to offer these kinds of tools fall within the following criteria:

- Track record and/or appetite to support developing economies
- Positioned to address country-specific risks and solutions.

The following use cases demonstrate how blended finance tools have been used to finance food system transformation from corporate initiatives as well as through government-sponsored grants.

CASE STUDY 8

IDH Farmfit Fund

IDH, the Sustainable Trade Initiative's Farmfit Fund, is a public-private impact fund that uses an innovative financing model to incentivize investment in smallholder farmers. The fund is facilitated by IDH and supported by a community of partners, including commercial banks, development banks, governments and value chain companies. The fund uses financial instruments such as guarantees, subordinated loans and equity or mezzanine financing to distribute funds with the goal of increasing smallholder income in

emerging markets.⁴¹ In Zambia, a \$4 million loan has been deployed to support CHC Commodities, an agricultural service and processing company, in strengthening its supply chain by supplying smallholder farmers with resources required to become climate-smart.⁴² These resources include training on climate-smart agricultural practices, environmental and social risk management, credible brokerage services and transparent pricing to safeguard local farmers against the negative impacts of climate change.

CASE STUDY 9

Agri3 Fund

Agri3 Fund, launched in October 2018, aims to unlock \$1 billion for forest protection and sustainable agriculture and bridge the funding gap for farmers to adopt sustainable practices due to banks' risk limitations. The fund is built to provide local and smallholder farmers access to financing and skills to aid in the transition to sustainable and climate-smart practices. The fund works by blending

public and private sources of capital to enable projects that would have otherwise not materialized due to high-risk profiles. To achieve this ambition, Agri3 provides credit enhancement tools, such as guarantees, to catalyse funding for initiatives. Agri3 is led by the UN Environment and Rabobank with partners including the Dutch development bank FMO and IDH's Sustainable Trade Initiative.^{43,44}

CASE STUDY 10

Tyson Foods

Tyson Foods and its programme partners applied for and were selected as recipients of a Partnerships for Climate-Smart Commodities grant from the United States Department of Agriculture (USDA) to accelerate the adoption and implementation of climate-smart practices and support underserved producers and US rural and agricultural communities. This programme, estimated to be a \$152 million effort, includes a

\$60 million investment from USDA, \$42 million investment from Tyson Foods and \$50 million from strategic partners over a five-year period.⁴⁵ The investment aims to generate new revenue streams for farmers and ranchers with a focus on underserved producers and strives to return an expected \$100 million back into the pockets of the farmers and ranchers within Tyson's value chain.⁴⁶

Due to the prevalence of investment towards rural and smallholder farmers in developing countries, blended finance requires aggregation at a portfolio level to scale effectively. These portfolios can be managed through financial institutions or directly by corporate value chain players.⁴⁷

The following enablers, among others, can help scale blended finance tools to accelerate food system transformation:

- **Developing effective partnerships:** Partnering with organizations across the food value chain to apply for public/philanthropic grants.
- **Proactive pursuit of grants:** Proactively identifying public/philanthropic grants to create blended finance opportunities. This is especially pertinent given the increase in available public/philanthropic funding towards food.

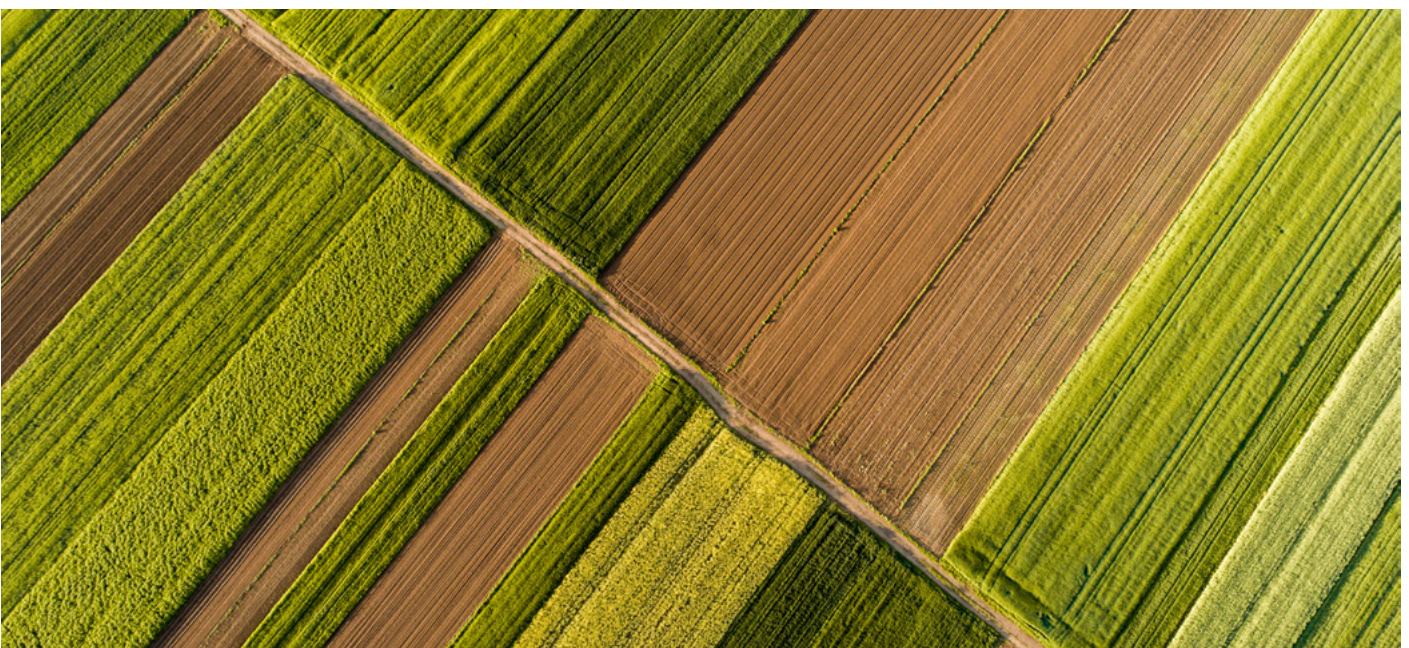
2 Barriers and solutions to scale: unique challenges and opportunities to catalyse the food system transformation

Innovative financial tools can incentivize sustainable food system transformations, despite key challenges.

2.1 Barriers to scale investment in food system transformation

When deployed and scaled, this collection of innovative financial tools has the capability to serve as the building blocks to incentivize and de-risk food system transformation for stakeholders across the value chain. Through both increased investment and growing attention from philanthropic, public and non-governmental organizations,⁴⁸ private financial institutions are well-positioned to co-develop and scale innovative financial solutions. Nonetheless, scaling these solutions is a significant challenge and comes with unique barriers for financial institutions.

To better understand these barriers and potential solutions, insights were gathered through discussions with leading global banks, lenders, venture capital and private equity firms, development finance agencies, philanthropic organizations and government organizations. The discussions revealed three common themes that were identified as primary barriers hindering investment, development, implementation and scaling of innovative financial tools: lack of sector-specific knowledge, the inability to execute data-driven decisions and the complexity of coordinating across the food value chain.



“ Many investors, due to their lack of regional- and crop-specific knowledge, struggle to identify appropriate solutions or assess portfolio risk exposure.

Lack of sector-specific knowledge

A vast majority of financial institutions are not sufficiently equipped with food and agriculture-specific knowledge. This gap in specialized knowledge often leads to situations in which, despite available funds, investment in more familiar sectors (e.g. energy systems and transport) is favoured over the food system. Three primary knowledge gaps are 1) intricacies of the value chain and associated risks, 2) regional- and crop-specific knowledge, and 3) establishing a reasonable starting point to activate food system transformation efforts.

Lack of sufficient sector-specific knowledge also leads to a higher perceived risk associated with food- and agriculture-related investments as opposed to other transitioning sectors (e.g. clean energy) – an inaccurate notion as many climate risks facing food systems are likely similar to other sectors (e.g. extreme weather, supply chain disruptions, regulatory barriers, etc.). As the food system is vulnerable to the impacts of

climate change, a better understanding of risks associated with climate change, such as changes in precipitation patterns, nutrient availability or the occurrence of extreme weather events, could encourage financial institutions to invest more and be better informed in this sector.

Many investors, due to their lack of regional- and crop-specific knowledge, struggle to identify appropriate solutions or assess portfolio risk exposure for a given region and its respective value chains. This deficiency can affect the success and longevity of their investments.

The sum of these challenges contributes to a significant barrier facing stakeholders who are interested in activating investment in food systems: *how to establish a starting point?* While sector-specific expertise can be acquired, launching new services or offerings requires a more strategic approach. Uncertainty around standing up efforts within individual financial organizations leads to limited participation of organizations who lack the tools to develop a roadmap for investing in food systems in support of a sustainable transition.

FIGURE 3 Feedback from leading financial institutions regarding the lack of sector-specific knowledge



Lack of sector-specific knowledge



It is hard for banks without agri-food experience to step in this space – food is high risk, dependent on climate, weather, etc. – there are so many risks. Some banks know what risks are acceptable and what are not. For banks not active in this area, it is more difficult.



[Banks] want to finance these emerging opportunities, but they are not seeing it in public markets like they do in clean energy.



There are a lot of initiatives taking their own path and new ones coming every month – we need to connect the dots between them so that we are not duplicating efforts.



Grace period (loan terms) and risk appetite are difficult to adjust within the bank.

Inability to execute data-driven decisions

The second key barrier hindering the development and deployment of innovative financial tools is the lack of consistent, reliable data that enables financial institutions to advance the informed decisions needed to develop, implement and scale financial tools. Three data challenges were identified: nascent technology, lack of standardized sustainability metrics and inconsistent criteria to obtain public and philanthropic funds.

The nascent nature of the advanced data, technology and infrastructure required for efficient, reliable and replicable data collection (e.g. MRV) creates challenges – beginning at the farm level. As a result, data collection is expensive and complicated, which deters many stakeholders who are often resource-constrained from adopting technology that could, in turn, inform widespread investment. The lack of familiarity with these new technologies and approaches makes them appear more risky than traditional investments. Adequately financing these technologies to maturity will require convening the full ecosystem of financing actors. In addition to technology nascency, the lack of metric standardization across the food value chain

also poses challenges for financial institutions to invest in food systems efficiently and confidently. A coordinated approach to identifying and standardizing sustainability metrics and reporting frameworks can enable financial institutions to adequately assess the relative performance of sustainable practices across the food value chain. Without a set of standardized metrics and reporting practices, financial institutions are unable to benchmark and compare organizations across the supply chain, a key enabler to offering favourable financing terms.

Aside from a lack of standardized metrics to inform benchmarking across the value chain, philanthropies, development finance institutions (DFIs) and government organizations often require varying application criteria and reporting methods that are typically inconsistent with one another. This heterogeneity in criteria and reporting requirements, which is often tied to unlocking opportunities for blended finance, makes it prohibitive for many organizations across the food value chain to obtain funds. In total, the lack of data and resulting data standardization metrics and frameworks increase the risk for financial institutions associated with greenwashing, making it difficult for them to both invest in and create favourable financial products for those pioneering in this space.

FIGURE 4 Feedback from leading financial institutions regarding the inability to execute data-driven decisions



Inability to execute data-driven decisions



“Philanthropies and DFIs have different criteria and reporting methods that must be streamlined for easier access to blended finance funding.



The food sector’s major challenge is the lack of a benchmarking tool to truly understand where suppliers fall on a sustainability spectrum.



Scalable and affordable technology will unlock an effective and trustworthy way to measure carbon, unlocking the ‘M’ in MRV.

“ The success of a sustainable food system transformation is dependent on the ability of financial institutions to engage and coordinate with on-the-ground stakeholders.

Complexity of coordinating across the food value chain

Investing in a global food system transformation requires close collaboration across a complex and fragmented value chain. Solutions for specific value chain segments, regions, technology solutions and public incentives must be clearly defined to achieve desired outcomes. To ensure the longevity and success of transformation efforts, actors must work together to develop and implement integrated solutions, which requires careful orchestration of a variety of actors, many of whom often have mismatched incentives. Three critical challenges associated with the complexity of coordinating across the food value chain were identified: cost premium associated with sustainable products, limited government support and lack of trust among stakeholders across the value chain.

The cost premium tied to sustainable practices and the products they enable is a material challenge impacting the business case to invest in sustainable food system transformation. As emerging studies suggest that consumers are largely unwilling to bear the financial burden of sustainable products,⁴⁹ stakeholders across the food value chain are faced with the challenge and opportunity to rethink the distribution of costs across the value chain.

Like other sectors, financial products offered to food value chain stakeholders must comply with

a mass of government regulations and policies. In the case of food systems, governments have not yet adequately prioritized a sustainable food system transformation, making it difficult to offer innovative financial products without supporting policies in place. Insufficient policy support results in a false sense of limited demand for transformative solutions and products, which hinders the viability of a sustainable food system transformation.

The success of a sustainable food system transformation is dependent on the ability of financial institutions to engage and coordinate with on-the-ground stakeholders like farmers and ranchers. The experience, knowledge and perspective of these stakeholders are critical to both growing the understanding and perception of the food and agricultural sector among financial institutions and to successfully market and scale financial products. Research has demonstrated the importance of trust in the adoption of financial tools, especially in low-income or limited literacy contexts, as it is difficult for stakeholders to assess risk and gauge expected returns.⁵⁰ A lack of coordination across the food value chain has led to stakeholders pursuing their own priorities in isolation, resulting in impacts that are neither compounding nor lasting. As a result, financial institutions express concerns over a perceived lack of demand from farmers and agriculture corporations. Addressing these concerns will require coordinated demand signals from influential players throughout the food sector to stimulate investment.

FIGURE 5 Feedback from leading financial institutions regarding the complexity of coordinating across the food value chain



Complexity of coordinating across the food value chain

“

An integrated value chain approach is required. If a farmer needs to invest for the coming 7 years, the buyer, off-taker, processor and distributor, needs to help. It is not just the problem of the bank.

“

If a farmer wants funding from the government to purchase technology, the government will ask them ‘How many jobs are you going to create?’ This is the wrong question as we want farms to be more automated, efficient and productive.

“

We need public money to de-risk – they think there is enough money to de-risk but there is a lack of commitment and business models.

A call to finance action: investment in food system transformation

Effective collaboration and coordination along the food value chain underpin the strategic pathway towards unlocking a sustainable food system transformation. With these critical barriers to investment in mind, committed stakeholders across the value chain can pre-competitively work together to generate actionable solutions that enable a sustainable transformation.

Insights gathered from research and collaboration with global financial leaders led to the proposal of several action-oriented solutions. These pathways are meant to serve as preliminary steps towards addressing critical barriers that hinder investment in a sustainable food system transformation:

- **Establishment of a 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 sector-wide strategy to actively define and chart the direction for sustainable food system investment.
- **Industry benchmarks:** Co-develop industry benchmarks that are inclusive of food and

agriculture-specific KPIs for a food system sustainability ranking system to inform investment.

- **Accuracy of data on investment choices:** Ensure investment in sector-wide 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 programmes to catalyse the food system transformation.

Each proposed pathway is intended to support pre-competitive, collaborative stakeholder ideation and solutions to establish the initial infrastructure required to scale investment in a sustainable food system transformation. While the proposed pathways are not the only avenue for action, each solution outlined above could be designed to address key barriers hindering investment and are meant to build upon one another, ultimately leading to the successful deployment and scaling of innovative financial tools.

“ Effective collaboration and coordination along the food value chain underpin the strategic pathway towards unlocking a sustainable food system transformation.

Contributors

Lead author

Serpil Tascioglu

Fellow, Food and Water,
World Economic Forum

World Economic Forum

Derek Baraldi

Head, Sustainable Finance

Manuela Stefania Fulga

Centre Curator, Banking and Capital Markets,
Financial and Monetary Systems

Deloitte

Shira Beery

Senior Manager, Deloitte

Michael Chen

Consultant, Deloitte

Arianna Pramnauth

Consultant, Deloitte

Julia Ricciarduli

Consultant, Deloitte

Merril Stypula

Manager, Deloitte

Acknowledgements

Barbaros Corekoglu

Senior Relationship Manager, Rabobank

Amy Franzen

Senior Vice-President and Co-Head, US
Originations Sustainable Finance, HSBC

Julian Lampietti

Manager, Global Engagement Agriculture and
Food Global Practice, World Bank

Mindy Montgomery

Vice-President, Environmental, Social and
Governance (ESG), CoBank

Peter Newton

Associate Professor, Environmental Studies,
University of Colorado Boulder

Jeremy Ng

Sustainable Investing Associate, Bridgewater

Martien van Nieuwkoop

Global Director, Agriculture and Food Global
Practice, World Bank

Sean O'Sullivan

Managing General Partner, SOSV

Nienke Stam

Director, Landscape Finance, IDH

Carsten Stendevad

Co-Chief Investment Officer, Sustainability,
Bridgewater

Suzanne van Tilburg

Global Head, Food and Energy Networks,
Rabobank

Lieke Verhofstad

Business Development Manager, Global Food
and Energy Networks, Rabobank

Lizzy van der Wal

Program Manager Landscape Finance, IDH

Mary Whitelaw

Chief Sustainability and Corporate Affairs Officer,
Allied Irish Banks (AIB)

Steven Wittbecker

Chief Sustainability Officer, CoBank

Mohamad Yaghi

Agriculture and Climate Policy Lead,
Royal Bank of Canada (RBC)

Production

Phoebe Barker

Designer, Studio Miko

Laurence Denmark

Creative Director, Studio Miko

Martha Howlett

Editor, Studio Miko

Endnotes

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World Economic Forum
91–93 route de la Capite
CH-1223 Cologny/Geneva
Switzerland

Tel.: +41 (0) 22 869 1212
Fax: +41 (0) 22 786 2744
contact@weforum.org
www.weforum.org