

Food and Agriculture Organization of the United Nations



Innovative finance for agrifood systems transformation



## Key messages

There are trade-offs when directing scarce public resources towards commercially-oriented innovative financial solutions, instead of the underserved non-commercial tier of the agrifood systems. It is therefore crucial for investment in the former to deliver measurable impact, demonstrate strong potential to mobilize finance and effectively reach end-beneficiaries.

Innovative financial solutions should always be based on a use of public funding that is catalytic and marketfriendly – derisking investments without crowding out private sector engagement. Concessional support should be time-limited and non-distortive, fostering over time the sustainable growth of private markets that finance innovative and transformative interventions across all dimensions of agrifood systems.

Expanding access to concessional capital, particularly climate finance, will be key to scaling innovations that promote climate-smart agricultural practices and better support the underserved non-commercial tier of the agrifood market.

Innovative solutions should be aligned with a country's access to private finance (limited, moderate or high), to ensure the correct balance between non-commercial, subcommercial and commercial finance.

Developing financial markets for agrifood systems does not happen in a vacuum. Not all risks can be addressed by innovative financial solutions. More holistic approaches are needed by donors, multilateral





development banks, development finance institutions and (sub)national governments. This is especially true in low-income countries, where weak enabling environments contribute to high country risks, which raise the cost of capital and make it difficult for innovations to scale – highlighting the critical need for concessional finance in these markets.

Agrifood systems form the core of global food production, processing and distribution and are key to advancing a sustainable future. They are at the heart of pressing issues such as food insecurity, hunger, poverty and climate change. Yet they remain systematically underfinanced (FAO *et al.*, 2024).

Public resources alone cannot meet the financing demands of small and medium-sized enterprises in agriculture (agri-SMEs), smallholders and other actors in the agrifood systems value chain. In low- and middle-income countries (LMICs), international development funds, multilateral development banks (MDBs) and central government expenditures provide a large share of funding, but have failed to materially increase investment flows (SAFIN and Convergence, 2021; Bonilla-



Diaz, 2023). As recognized by the 2024 *State of Food Security and Nutrition in the World (SOFI)* report, using innovation to scale the volume and quality of public and private investments has become essential to enabling agrifood systems transformation, and to meeting Sustainable Development Goal (SDG) 2 (Zero Hunger).

Building on SOFI 2024, this policy brief explores how innovative finance can help to fill the gap by mobilizing private capital for sustainable and resilient agrifood systems. If effectively deployed, innovative financial solutions tailored to small-scale agriculture and the food value chain can promote social inclusion, while responding to disruptors such as climate change, unhealthy food environments and biodiversity loss. However, high country- and sector-specific risks, low margins, long payback periods and unproven business models, as well as the mismatch between the investment needs of value chain actors and different pools of capital, can reduce appetites for financial innovation and limit the solutions available.



#### Figure 1. Financing the agrifood systems through the three market tiers

*Source*: Authors' own elaboration based on FAO (Food and Agriculture Organization of the United Nations), IFAD (International Fund for Agricultural Development), UNICEF, WFP (World Food Programme) & WHO (World Health Organization). 2024. The State of Food Security and Nutrition in the World 2024 – Financing to end hunger, food insecurity and malnutrition in all its forms. Rome. https://doi.org/10.4060/cd1254en

To better understand how innovations catalyse market creation, agrifood markets can be analysed through three key tiers: a small market for commercial capital (high access to private financing); a sizeable subcommercial market (moderate access to private financing); and a large non-commercial tier (limited access to private financing), primarily served through concessional and informal finance (this framing expands on FAO *et al.*, 2024). While innovative financial solutions with the potential to mobilize private capital could be deployed at all tiers, most will target the (sub)commercial segment of the agrifood systems. Here, small subsidies can encourage private investment for businesses already on the path to market viability. Thus, to scale innovations and better support underserved non-commercial agrifood actors as they progress through market tiers, expanding concessional capital – especially international climate finance – is essential (FAO, forthcoming).

For the innovative financial facilities and instruments described in this brief to be truly effective at promoting an increased engagement of private capital in agrifood systems investment, they have to be characterized by five main positive traits: they should be **catalytic; market-friendly; collaborative; time-limited, and they need to promote innovation**. What does this imply? Firstly, it is crucial for these instruments to be based on a use of concessional public resources that is always catalytic and market-friendly, able to bolster – rather than crowd out – private engagement. Public flows of financing should derisk and strengthen the appeal of longer-term, more complex investments in agrifood systems that hold strong transformative potential, and which are actually developed in collaboration with private stakeholders. Public sector support should be time-limited and non-distortive, supporting over time the sustainable growth of private markets for agrifood systems financing, rather than creating longer-term dependence. Finally, such instruments should aim to encourage private sector-led innovation in agrifood systems, rather than to artificially maintain legacy technologies and practices through subsidies or other support measures. As practical examples of these various concepts, this brief presents a selection of case studies of financial facilities, ranked across the five traits above.

In this context, the brief also highlights the opportunities for and challenges to scaling innovative finance and assesses how new tools can be best leveraged for transformative impact and private capital mobilization in agrifood systems. By focusing on specific case studies,<sup>1</sup> it draws on innovations in blended and sustainable finance. Innovations are described based on the definition and typology outlined in Table 1. The insights in this brief draw on analyses by development finance institutions and climate investment funds, as well as on academic and grey literature.

Definition	An innovative financing instrument for food security and nutrition fulfils at least one of the following conditions: It has been developed in the last 10 years; it is implemented in a different way from its original purpose; its use is novel in financing for food security and nutrition; it involves new combinations of actors.				
Typology	Pure innovation	The innovation has not been attempted before at the global level, or in other markets/sectors.			
	Agrifood systems finance innovation	The innovation has been attempted in other sectors, but not yet in the agrifood systems.			
	Tailored local/ thematic innovation	The innovation is tailored to the local context and targets key cross-cutting themes within the sector or value chain. This approach can derisk the agrifood systems as a whole and signal possibilities for the wider market.			

#### Table 1. Typology of innovative financing instruments

Source: Authors' own elaboration based on FAO, IFAD, UNICEF, WFP & WHO. 2024. The State of Food Security and Nutrition in the World 2024 – Financing to end hunger, food insecurity and malnutrition in all its forms. Rome. https://doi.org/10.4060/cd1254en

<sup>&</sup>lt;sup>1</sup> Examples are selected/recognized for their potential to foster significant development impact and/or higher mobilization volumes.

## BOX 1. Defining key terms

**Blended finance** refers to the strategic use of development or concessional finance for the mobilization of additional finance, usually commercial private finance, towards sustainable development.\*

**Pari-passu** participation means that all investors within the same class contribute capital and share risks and returns equally, with proportional rights and distributions based on their invested amount.

**Platforms** are business models that facilitate financial services and transactions, connecting and linking stakeholders such as funders, lenders, borrowers and service providers in the agriculture sector.\*\*

**Securitization** is the process of pooling development-related financial assets, such as loans for infrastructure, health or agrifood projects in LMICs, and converting them into tradeable interest-bearing securities. These securities are then sold to investors, who receive the interest and principal payments from the underlying assets.

**Vanilla bonds** are traditional fixed-income securities that pay a regular interest (coupon) and return the principal upon maturity, with no additional features or options.

**Use of proceeds bonds** are bonds where the funds raised are earmarked for specific projects or purposes, such as environmental or social initiatives, and are often aligned with specific criteria or standards.

**Sustainability-linked bonds** are general-purpose debt instruments whose financial characteristics (for example, coupon step-up/step-down) depend on the issuer meeting predefined sustainability or environmental, social and governance (ESG) objectives. They are a forward-looking performance-based instrument whose proceeds can be used for general corporate purposes, as they are not earmarked for specific underlying assets/projects.

Notes:

Source: Authors' own elaboration.

<sup>\*</sup> Definition based on FAO, IFAD, UNICEF, WFP & WHO. 2024. The State of Food Security and Nutrition in the World 2024 – Financing to end hunger, food insecurity and malnutrition in all its forms. Rome. https://doi.org/10.4060/cd1254en \*\* Platform types in this sector include fintech platforms – new technology-driven companies offering innovative financing services; market development platforms; and investment funds or financial firms adapting platform-based business models.

# **Blended** finance

Blended finance can help to address high risks and/or low returns that constrain private investment in sustainable agrifood systems.<sup>2</sup> Currently, investments are heavily constrained by demand- and supply- side challenges. On the supply side, there is high sector and business model risk (such as agronomic, natural hazard and price risks), high transactions due to small ticket sizes, data gaps and hard-to-reach locations. On the demand side, there are also information asymmetries and a lack of investment readiness and fit-for-purpose financial instruments (Apampa *et al.*, 2021; ISF Advisors, 2022). These factors result in uncompetitive risk-adjusted returns, especially compared with other sectors. Deploying development finance in innovative blended structures can improve returns by offering pricing and/or non-pricing terms that are not available on the market; this type of blending can also improve the risk profile of the investment. It can derisk investments through instruments such as guarantees, which mitigate risk. Such approaches enable competitive risk-adjusted rates of return and help to reduce costs of finance and enhance access for agrifood businesses, SMEs and underserved communities.

The use of blended finance in agrifood systems is increasing, although its overall allocation remains small relative to other sectors. Only 2 to 4 percent of official development assistance (ODA) is allocated to blended finance annually (Convergence, 2021, 2024),<sup>3</sup> but concessional finance for blended agri-transactions rose by 57 percent between 2017 and 2021. Between 2014 and 2024, 24 percent of blended finance transactions were aligned with SDG 2 (Convergence, 2024). Most transactions target micro, small and medium enterprises (MSMEs), with smallholder farmers and rural communities as the primary beneficiaries. Funds are the most commonly used blended structure across the value chain due to their diversification benefits and investor familiarity. Meanwhile, bonds remain rare (Convergence, 2022).

#### Blended finance for disruptive, digital, climate-smart agribusiness models

Investing in disruptive business models, particularly digital and climate-smart agri-solutions, can create bankable opportunities. Agricultural blended finance still largely flows through commercial banks, but support for accelerators and early-stage venture funds focusing on digital startups and agtech businesses is growing (ISF Advisors, 2022). Blended finance has seeded these specialized funds (see Case study 1), supporting their commercial transition, while enhancing data sourcing and financial intermediation (Millan, Limketkai and Guarnaschelli, 2019). Increasingly, investments in disruptive business models are also marked by a clear need and opportunity to support climate-smart agriculture. While blending helps these higher-risk investments to reach bankability, many have yet to scale and struggle to commercialize. Thus, greater access to concessional finance, especially from international climate funds, is crucial to scaling climate-smart activities, due to their unproven business case, new technologies and the need for longer tenors and non-cash flow financing to support new practices such as agroforestry, reforestation and conservation.

 $<sup>^2</sup>$  See definition in Box 1.

<sup>&</sup>lt;sup>3</sup> ODA supplied to the entire blended finance market totalled USD 1.07 billion in 2022, of which about 10 percent was directed to projects in Ukraine.



- Increase finance for climate-smart agriculture: Innovative businesses at the intersection of climate and agriculture can significantly enhance agricultural practices/yields, boost primary producer incomes, reduce food waste, preserve natural forests (Chemonics, 2021) and diversify food production.<sup>4</sup> The use of blended finance instruments in the area of climate-smart agriculture is still low, compared with its potential. In markets where (sub)commercial businesses show growth potential, blended finance with concessionality from international climate funds should be scaled. In countries with unsustainable debt levels where blended finance is limited, debt swaps can push them to implement climate and food security policies and increase resources for climate-smart agriculture.<sup>5</sup>
- Support beyond seed funding: Enterprises, especially high-risk digital and agtech startups, need support post-pilot and seed funding stages to test concepts and scale in new markets. Most donor mandates are limited to three years or less, hindering long-term development.<sup>6</sup> Development finance should support businesses to maturity, tailoring support through the life cycle of the investment, including via technical assistance (TA) and long-term finance for regenerative climate-smart agriculture.
- **Develop local fund management capacity:** Local fund managers have limited resources, but their cost structures and networks of local investors are a key asset for early-stage venture funds (Husar, 2022b; ISF Advisors, 2022). Building entrepreneurial fundraising capacity is key, despite equity valuation challenges in frontier markets that lack important benchmarks.<sup>7</sup>

<sup>&</sup>lt;sup>4</sup> See Box 15 in FAO *et al.*, 2024.

<sup>&</sup>lt;sup>5</sup> Debt swaps (or debt-for-development swaps) are defined in the 2024 SOFI report as "referring to a conditional restructuring of a specific part of debt, which in most cases is linked to some form of debt relief. The condition requires that the liberated funds (or a portion of them) are redirected towards a predefined development investment".

<sup>&</sup>lt;sup>6</sup> Donor mandates are around three years, while MDBs and development finance institutions (DFIs) may have mandates of five to seven years.

<sup>&</sup>lt;sup>7</sup> Equity valuations in frontier markets are challenging since the lack of key benchmarks makes it hard to determine fair market value and compare investments; this uncertainty often acts as a disincentive to invest.

## CASE STUDY 1 AGRI3 Fund

The AGRI3 Fund was launched in 2020. It offers a replicable structure to develop climatesmart businesses that accelerate forest conservation and the implementation of innovative and sustainable solutions in high-impact sectors, such as sugar cane, cattle, dairy, rice, soy and cotton. The Fund derisks investments over long repayment periods through first-loss and second-loss guarantees, tenor extension guarantees, pari-passu participation interest and subordinated loans to financial institutions, which then provide agri-producers with subordinated financing extending over 10 years, enabling investments in high-risk and large-scale farm improvements, agroforestry practices and reforestation, which would not otherwise be possible (Benni, 2024). While partial credit guarantees are common in blended finance, they have not been previously targeted at helping agri-producers to become climate-resilient.

**Structure:** The AGRI3 Fund comprises a Finance Fund (FF) and a Technical Assistance Fund (TAF). Donors provide junior capital into the FF, which then co-invests alongside commercial and development banks – which contribute to the Fund's senior debt and mezzanine capital – in sustainable supply chains via subordinated loans and guarantees (primarily partial credit guarantees covering 30 to 50 percent of the financial institution's risk). The TAF, which is also donor-funded, supports pipeline development and capacity building.

What the innovation enables: Thanks to the layered capital structure and concessional support coming into junior tranches, AGRI3 could extend USD 300 million in guarantees backed by USD 144 million in capital between 2020 and 2024. As a result of the derisking involved, these investments plan to mobilize additional capital for projects worth USD 5 million to USD 50 million up to a total USD 1 billion,<sup>8</sup> while providing USD 15 million in TA. As of 2021, investment support amounted to a total guarantee exposure of USD $\sqrt{21.6}$  million for loans totalling USD 50 million, across six transactions. The long tenor guarantees enable agri-producers to receive customized financing from partner financial institutions (FIs), with considerably longer terms (10+ years) than they could otherwise obtain. To date, the fund has underspent its budget and focused on large-scale agribusinesses due to more conservative partner FIs, limiting its reach to smallholder farmers. Evaluations suggest that AGRI3's additionality could increase with enhanced TA and a greater focus on high-risk operations, such as early-stage biological production, which would expand the use of underutilized instruments such as first-loss guarantees (SEO and Dutch Ministry of Foreign Affairs, 2024).

1) Catalytic	<b>High</b> – The Fund leverages concessional capital to mobilize additional capital from private financial institutions, such as Rabobank, towards investments in agrifood systems.			
2) Market-friendly	<b>Medium</b> – The Fund has, so far, chiefly co-invested together with one large private financial institution (Rabobank) and is seeking to expand its portfolio with a higher number of private capital providers.			
3) Collaborative	<b>High</b> – The Fund's investments are based on collaborative efforts between private financial institutions, the Fund's Technical Assistance Facilities, local service providers and various other stakeholders.			
4) Time-limited	<b>Medium</b> – The Fund's injection of concessional capital is meant to enable higher-risk investments in in agrifood systems with a longer time horizon, paving the way for the development of a private market for such investments at national level.			
5) Promoting innovation	<b>Medium</b> – The Fund's investments seek to promote the uptake of climate-smart practices and clean energy technologies for agricultural production and processing, among both the investee agribusiness and the network of smallholder farmers from which it sources.			

#### Ranking of the Food Securities Fund's performance against the five traits

<sup>&</sup>lt;sup>8</sup> Investments range from USD 3 to 15 million.

#### Blended finance for technical assistance and market development platforms

**Investing in market development platforms can expand the supply and demand of investible opportunities by mitigating risks and connecting actors across agrifood systems** and establishing new investment models. Early-stage support from concessional capital, climate funds or MDBs and DFIs can strengthen agri-value chains and develop a pipeline of higher-risk early-stage investments. On the supply side, platforms can support local FIs by derisking loans through preselection support, farmer training, direct TA and incentive payments.<sup>9</sup> On the demand side, platforms help agribusinesses and SMEs to improve management capacity and financial systems and scale out grower schemes. By addressing risk, return and cost considerations for different actors, platform structures can offer a mix of avenues to crowd-in investors with varying preferences. Additionally, through their integrated approach – addressing both demand- and supply-side constraints – platforms can advance 'market-level derisking' (SAFIN and Convergence, 2021).

- Client-ownership can foster commercial viability: When client companies have a financial stake in the TA facility (TAF) through a cost-sharing arrangement (typically 20 to 50 percent) the incentive for sustained change is enhanced. Over-reliance on donor resources can also diminish financial additionality, especially when a grant-funded TAF subsidizes the investment fund's operating costs beyond what is necessary to attract private investment (Enclude, 2017).
- Establish clear, measurable and demand-driven objectives: Setting precise, demand-driven goals during project design enables TAFs to tailor their offerings to specific needs. Clear mandates for TAFs with an investment arm also promote good governance and prevent undue influence from fund managers, ensuring a focus on impact.
- Dedicate TA towards pipeline development and enabling-environments:<sup>10</sup> Most TA focuses on post-investment or late-stage pre-investment, as fund managers prioritize projects in which they plan to invest. By contrast, donors value pipeline development, irrespective of final investors. Deal matching platforms can complement pre-investment support by facilitating transactions between bankable pipelines and investors, accommodating different preferences and ticket sizes (Millan, Limketkai and Guarnaschelli, 2019).

 <sup>&</sup>lt;sup>9</sup> Incentive payments can be extended to FIs that serve specific segments or meet specific objectives (ISF Advisors, 2022).
 <sup>10</sup> A good example not covered in this report is the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL).

## **CASE STUDY 2** Land Degradation Neutrality Fund

The Land Degradation Neutrality (LDN) Fund is a pioneering platform that mobilizes capital at the intersection of agrifood and land restoration. Its risk-layered fund structure links agriculture to broader risks facing food systems by creating investment opportunities and diversifying revenue streams, including via carbon sequestration. With a partial guarantee of USD 15 million by IDB Invest and concessional junior debt from the French Development Agency (AFD), the European Investment Bank and the Government of Luxembourg, the Fund has reached USD 208 million, with 60 percent of this mobilized from private investors, including commercial banks and insurers such as BNP Paribas, Garance and Crédit Agricole du Maroc in senior tranches.

**Structure:** The LDN Fund is managed by Mirova. It provides long-term debt and equity financing for sustainable land use and ecosystem restoration projects,<sup>11</sup> using a layered capital structure, with junior investors (donors, climate funds) taking a first-loss position to derisk investments for senior investors (DFIs, impact investors). The fund is supported by a TAF managed by the Sustainable Trade Initiative (IDH), providing (repayable) grants to assist with project design, implementation and post-investment support, including enhancing ESG impacts and managing risks. Although the LDN Fund and TAF have separate governance structures, they share a board to align on strategy and impact goals.

What the innovation enables: The IDB guarantee and concessional capital in junior tranches has mobilized private investors by improving the risk-return profile and derisking the senior tranche. The Fund then invests this mobilized capital into profitable, large-scale land restoration activities that meet robust ESG standards. While the TAF facilitates project preparation, the Fund's blended structure offers long tenors and grace periods, with flexible repayment schedules.

Ranking of the Land Degradation Neutrality Fund's performance against the five traits				
1) Catalytic	<b>High</b> – The Fund leverages its financial resources to mobilize private capital towards investments in agrifood that also generate positive impacts in terms of land restoration and sustainable land use.			
2) Market-friendly	<b>Medium</b> – The Fund's investments do not always contemplate the financial participation of private stakeholders, but they usually tend to focus on tickets that would not be considered by the private financial sector by itself.			
3) Collaborative	<b>High</b> – The LDN Fund's investments see the participation of its Technical Assistance Facility, civil society organizations, farmer cooperatives, large-scale value chain companies and various other stakeholders.			
4) Time-limited	<b>Medium –</b> The LDN Fund seeks to enable specific investments that would not materialize in the absence of its support, but they are not always necessarily conducive to the longer-term development of a private market for such investments.			
5) Promoting innovation	<b>High</b> – The Fund promotes the use among large networks of smallholder farmers of innovative technologies and practices that foster sustainable land use and increased resilience against climate change.			

<sup>11</sup> It allocates 60 percent of its capital to sustainable agriculture, 30 percent to sustainable forestry and 10 percent to other land-use sectors.

#### Blended finance to mobilize institutional investment

Blended finance can be used to develop products that can better intermediate institutional investor capital. Standardization, aggregation and securitization approaches can better meet the ticket size and risk-return appetites of a range of institutional investors. This is especially important as there are very few blended agricultural investments over USD 200 million (SAFIN and Convergence, 2021). MDBs and DFIs can play an important role as aggregators that can pool investments and structure them into large-item products with various tranches, to appeal to the risk appetite and preferences of a range of investors.

- Blended finance should focus on higher-risk tranches to optimize the use of concessional funds, as risk-oriented financial instruments are underutilized, despite their mobilization potential. In layered blended fund structures, first-loss/junior tranches funded by donors and foundations absorb the highest risk; mezzanine tranches are often backed by DFIs, with commercial investors and some DFIs investing in the least risky senior tranches. The subordination structure acts as a credit enhancement of the senior tranches. For example, the Climate Finance Partnership managed by BlackRock used a 20 percent blended first-loss tranche from donors, philanthropic organizations and DFIs to attract over USD 400 million of institutional senior capital.
- Credit-enhancement, insurance and guarantee products should be scaled since they are essential for mobilizing commercial capital, but remain underutilized, especially in transactions targeting vertically integrated businesses, as well as trading and market access solutions higher up the value chain (Havemann, 2019; SAFIN and Convergence, 2021). Their effectiveness in expanding investor risk and improving financial access should be more closely examined at the design stage, to ensure that products are well-targeted (Perera et al., 2022; OECD, 2021). Guarantees should be increasingly deployed to supply chain actors (such as aggregators) at the portfolio or programme level, where success is well documented (SAFIN and Convergence, 2021).
- Investor education should be prioritized when introducing novel blended structures: Deal sponsors should incorporate market knowledge-sharing in fundraising efforts, while standardizing structures and documentation to promote knowledge and replicability.

## CASE STUDY 3 Food Securities Fund

The Food Securities Fund raised capital from institutional investors to address the credit gap in agribusiness pre-harvest working capital loans through an innovative standard and liquid fixed income fund structure (listed in Luxembourg). The Fund provides loans through blended risk-sharing arrangements to local agricultural aggregators (such as cooperatives, traders and processors) that pool produce from farmers, especially smallholders. Loans are offered based on the quality of borrowers' supply chain relationships rather than relying solely on collateral, which many aggregators lack. The Fund's risk blending comes from a credit guarantee backed by the Government of the United States of America (US Government) prior to 24 January 2025, and uniquely also from value chain partners, including large corporations.

**Structure:** Large corporations in the agriculture sector help the Fund to originate transactions, which are derisked through a combination of first-loss guarantees by the agricultural corporates and a pari-passu risk-sharing agreement with the US Government's Development Credit Authority on the remaining exposure. If the guarantee is not sufficient, remaining losses will be equally divided between the USD 3.75 million US Government-backed partial guarantee and the Fund. This is an open-ended investment fund with a standard and liquid fixed income structure listed on the Luxembourg Stock Exchange. Due to regulatory constraints, the Fund only accepts professional investors.

What the innovation enables: By offering loans that cover the entire agricultural cycle, the Fund enables its borrowers to provide increased pre-harvest support to farmers. In addition, since the Fund is not dependent on traditional collateral from borrowers, it can provide an additional source of financing alongside existing FIs. Given that all loans are based on investment criteria requiring responsible ESG practices, the Fund is also able to promote climate-smart agriculture and forest conservation practices.

Kanking of the root Securities rund's performance against the five traits				
1) Catalytic	<b>High</b> – The Fund collaborates with large-scale enterprises in specific value chains (such as exporters and processors) that add their capital to the risk-sharing arrangement behind each investment.			
2) Market-friendly	<b>Low –</b> The Fund's blended finance arrangements see a large participation of institutional investors and multilateral/bilateral DFIs.			
3) Collaborative	<b>High</b> – The Fund collaborates with large-scale value chain enterprises, networks of smallholders, institutional entities and various other stakeholders.			
4) Time-limited	<b>Low</b> – The Fund seeks to enable investments in agrifood systems characterized by higher risk and a longer time horizon, but the high participation of institutional investors is not very conducive to the development of private markets for investments.			
5) Promoting innovation	<b>High</b> - The Fund uses its funding to promote the use of sustainable development practices and technologies across different value chain segments.			

Ranking of the Food Securities Fund's performance against the five traits

### Challenges to and enablers of blended finance

Agrifood systems transformation presents a significant investment opportunity, but increased blended finance is needed to bridge financing gaps and make the transformation more commercially attractive. The unproven business models, new technologies, small investment sizes and non-revenue-generating conservation activities crucial to the transformation need to be supported by risk-return enhancements that blended finance can offer, particularly if additional concessional finance is allocated to innovative solutions (Apampa *et al.*, 2021; SAFIN and Convergence, 2021). These issues are compounded by poor farm-to-market connectivity, a predominance of smallholders/ agri-SMEs with low productivity and vertical connectivity, and the risk aversion of MDBs and DFIs. To scale blended finance innovations, the following should be considered:

- Blending for agrifood transformation mostly occurs at the fund level, creating opportunities for replicable structures to scale. Investing in funds that target innovative businesses operating at key sectoral nodes can derisk the value chain, especially for underfinanced climate-smart agriculture funds (Husar, 2022a).
- Small ticket sizes. The median investment volume in food systems is USD 34 million, with more than half below USD 50 million (Convergence, 2022).<sup>12</sup> High transaction costs deter MDBs, DFIs and commercial actors from investing. Risk-sharing with local FIs can help, but MDBs and DFIs should ensure that local FIs reach agri-SMEs in the 'missing middle', while promoting inclusivity beyond the transaction's lifespan.
- MDBs and DFIs have a low-risk appetite that does not match the financing needs of agrifood systems transformation.<sup>13</sup> In the frame of a blended finance approach, it is crucial for public capital to be used in a catalytic, market-friendly manner, which enables longer-term and higher-risk investments through the strategic addition of quality private capital, At present, MDBs and DFIs tend to show low-risk appetite when it comes to investing in agrifood systems, participating in blended finance arrangements with their own capital offered at commercial or semi-commercial terms, leveraging the risk mitigation effects of first-loss tranches provided by public donors (such as governments of high-income countries). The main risk with this approach is that it can discourage the engagement of private financial stakeholders, which points to a need for public FIs to increase their risk appetite and deploy their capital in a more catalytic manner, encouraging rather than crowding out private sector participation (Perera *et al.*, 2022; Husar, 2022a; ISF Advisors, 2022). In general, there are three main ways in which public financing might end up crowding out private stakeholders' participation in agrifood-related investments:
  - Financial crowding out: Private lenders are unable to compete with the subsidized flows of public financing directed at agrifood systems. When a state-run agricultural bank provides

<sup>&</sup>lt;sup>12</sup> Compared with USD 58.6 million for all transactions. Solutions targeting storage and transport (median size USD 44.6 million) have the largest median sizes across the food value chain (Convergence, 2022).

<sup>&</sup>lt;sup>13</sup> Some DFIs manage their capital in an even more conservative manner than is required by regulation. For a detailed analysis, see Attridge and Novak, 2022.

subsidized financing to agribusinesses, for example, private financial institutions may see little opportunity to lend in the same space.

- Competitive crowding out: Government-led programmes impose regulations, conditions or preferential treatment for public stakeholders, which limit private sector involvement and can discourage investment and innovation. An example of this would be a government export agency that has exclusive rights to buy and sell certain crops (such as coffee or cocoa), discouraging private investors from investing in the value chain.
- Resource crowding out: When businesses become too dependent on public subsidies or similar incentives, private investors may see them as unsustainable or risky investments. Over time, if subsidies are removed, these businesses may collapse, further discouraging future private investment. An example of this would be a large-scale public irrigation system that is maintained by the government at artificially low costs, discouraging private firms from investing in commercial irrigation services.
- A lack of policy coherence and coordination reduces the effectiveness of blended finance. Developing viable agricultural finance markets does not happen in a vacuum. Not all risks can be addressed by a (blended) finance approach. Policy work, including conducive agricultural and trade policy, government support and capacity building, should complement blended finance, and should be better coordinated among donors, MDBs, DFIs and national and (sub)national governments (Havemann, 2019; Millan, Limketkai and Guarnaschelli, 2019; ISF Advisors, 2022; Husar, 2022a).
- Data gaps limit deal flow. Lack of data on the risk-return of agri-transactions led by MDBs and DFIs disincentivizes private investment (Havemann, 2019; Husar, 2022; ISF Advisors, 2022). Lenders lack consistent and clear lending criteria, while agri-SMEs are unsure about the factors that impact their creditworthiness (Husar, 2022; ISF Advisors, 2022). There is a clear need for a common language and set of bankability metrics to bridge flows of information.

## Innovative sustainable finance

**Sustainable finance presents an opportunity to deliver financing for agrifood systems transformation at scale.**<sup>14</sup> The green, social and sustainability and sustainability-linked (GSS+) bond market is now worth USD 1 trillion annually, and surpassed USD 5 trillion in 2024 in terms of cumulative historical volume (Environmental Finance, 2024). GSS+ issuances are expected to outpace traditional bonds (S&P Global Ratings, 2023), helping LMIC banks to transition to net zero by unlocking new capital and potentially lowering borrowing costs (OECD, 2024b, 2024a; IFC, 2022).

<sup>&</sup>lt;sup>14</sup> For the purposes of this brief, sustainable finance refers to finance designed to incentivize the borrower's achievement of environmental, social or governance targets and/or sustainable activities and projects. This can be done through pricing incentives or by linking proceeds to sustainable projects. The underlying instrument can be any financial product, including bonds, corporate loans, project finance loans, revolving credit facilities and derivatives (adapted from IFC, 2022).

Small-scale and climate-vulnerable agrifood systems initiatives face barriers in accessing commercial capital such as long-term debt and insurance products. Proceeds from bond issuances, with an average size of around USD 100 million in LMICs, are often not destined for small agricultural projects. Innovative solutions such as investment aggregation and matchmaking are key to financing climate-smart agrifood systems transformation.

Through innovation, sustainable financial instruments can be adapted to ensure that incentives reach farmers. Financing for agrifood systems actors can take the form of extending debt terms to account for environmental response times, reducing credit costs, facilitating longer commercial offtake agreements, improving supply chain financing terms and increasing resilience to economic fluctuations by diversifying financing (CBI, 2023). Several of these financing benefits can be delivered through the innovative instruments described below.

#### Use of proceeds: green, social and sustainability bonds

In 2023, 20 percent of the GSS bond market (USD 871.9 billion) was earmarked for use of proceeds (UoP) that included agriculture or fishery projects, totalling more than USD 160 billion. LMICs – especially in the Asia-Pacific and Latin America regions – are an active source of UoP for agrifood systems, making up 41 percent of volume in 2023 (see Figure 2). However, African issuers make up less than 1 percent of the agri-UoP market (CBI, 2023). UoP debt can support non-financial corporates and sovereigns in financing sustainable production by certifying activities as eligible for a GSS bond.



# Figure 2. Volume of agrifood use of proceeds by region, issuer and lower-middle-income vs high-income countries

*Notes*: LAC – Latin America and the Caribbean; HICs – High income countries; LMICs – Low-and-middle-income countries. *Source*: Authors' elaborations adapted from CBI. 2023. *Transition in action*: Agri-food. Gordon and Betty Moore Foundation, The Finance Hub & Climate Bonds Initiative. https://www.climatebonds.net/resources/reports/transition-action-agri-food.



- A robust framework for agrifood systems transformation finance is needed to provide market confidence and clarify best practices: Currently, there is no single UoP category that serves as a proxy for the agribusiness sector and creating a new category is not simple, especially considering the diversity and fragmentation of net-zero activities across agrifood systems.
- Issuers fail to reflect the wide range of eligible activities that promote sustainable agriculture (such as conservation farming, no-till practices, agroforestry). Despite LMICs having advanced sustainability financing frameworks (CBI, 2023), most fail to capture the impact of agribusiness investments and qualify them as green, social or sustainable. Technologies such as precision farming, blockchain food tracing and low-carbon logistics can bolster UoP projects.<sup>15</sup>
- GSS securitization can attract investors to small agricultural assets by offering longer maturities, larger ticket sizes and lower capital costs: In Brazil, credit rights innovations and contract receivables aggregate sustainable agrifood assets into GSS listed securities through a government-backed fund structure,<sup>16, 17</sup> and are then sold to institutional investors. This process allows financial entities to sell lending portfolios and recycle proceeds into new loans, increasing their lending capacity.

<sup>&</sup>lt;sup>15</sup> For example, Agritech in the Philippines applied social UoP criteria to its support for small-scale farmers and women.

<sup>&</sup>lt;sup>16</sup> Credit rights are defined by the Brazilian Securities Commission as securities that represent credit originated from operations in any economic segment.

<sup>&</sup>lt;sup>17</sup> Like the Credit Rights Investment Fund (FIDC) and the Fundo de Investimento nas Cadeias Produtivas Agroindustriais (FIAGRO) – see CBI, 2022.

## **CASE STUDY 4** Tropical Landscape Finance Facility (TLLF)

#### **Pure innovation**

The Tropical Landscape Finance Facility (TLFF) is a groundbreaking blended finance facility: it issued the first corporate sustainability bond in Asia. Its novel approach to risk management, which deals with project credit risk in two phases: pre- and post-maturity, has delivered scale and impact simultaneously for higher-risk projects in emerging markets and developing economies (EMDEs). In addition, its multi-tranche bond successfully aggregated small-scale investments and mobilized investors with differing risk appetites towards agribusiness. By combining innovative risk management techniques at the project level with a securitization structure and a multi-tranche bond, the TLLF championed a completely innovative and holistic approach to mobilizing finance for agrifood systems.

**Structure:** TLFF is a blended finance facility with a parallel loan and grant fund targeting green growth and sustainable agriculture in Indonesia. TLFF's loan fund (or revolving debt facility) invests in early-stage projects in sustainable agriculture and renewable energy, using credit enhancement from development financers at the 'construction phase'. As projects mature to the 'harvesting phase' and there is cash flow that can be packaged and sold, TLFF securitizes loans in the capital market and recycles capital for further lending. The grant fund, managed by the United Nations Environment Programme and World Agroforestry, supports pipeline development and TA.

What the innovation enables: In 2018, TLFF issued a USD 95 million loan to an Indonesian rubber plantation, backed by a US Government credit guarantee. This was later converted into Asia's first corporate sustainability bond, financing sustainable rubber plantations and land rehabilitation. The bond's multi-tranche structure, alongside a concessionally backed anchor investment by the &Green Fund, leveraged investors with varying risk-return and tenor appetites. By dealing with project credit risk in two phases, TLFF was able to credit-enhance projects during their riskiest 'construction phases' to ensure sustainable cash flows once projects matured. This allowed the Facility to lend to high-risk projects/sectors, crowding in institutional investment along the way while recycling capital for further lending.

1) Catalytic	<b>High –</b> The Facility employs both debt and grant financing to mobilize additional (non-concessional) capital from both public and private sources towards agrifood systems.
2) Market-friendly	<b>Medium –</b> The Facility mobilizes capital from both private stakeholders, as well as public/multilateral financial stakeholders seeking commercial returns (such as DFIs).
3) Collaborative	<b>High –</b> The Facility aims to bridge the gap between the Government, private sector and farmer communities, mediating among these various stakeholders to enable investments that bring about large-scale social impact and positive change.
4) Time-limited	<b>Medium –</b> The Facility's interventions seek to provide initial injections of financial capital that can pave the way to the development of private markets for agrifood systems investment.
5) Promoting innovation	<b>High</b> – The Facility offers financing at scale to companies working in renewable energy and sustainable agriculture where outcomes can include improved livelihoods, reduced deforestation, better agricultural efficiency, restored lands and other objectives.

Ranking of the Tropical La	ndscape Finance Facilit	y's performance aga	ainst the five traits
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#### Sustainability-linked bonds

Sustainability-linked bonds (SLBs), first issued in 2019, are general-purpose debt instruments with financial characteristics (for example, coupon step-up/step-down) linked to the issuer's achievement of certain sustainability objectives, measured by key performance indicators (KPIs) within a set time frame (ICMA, 2023). Unlike GSS+ bonds, SLBs are not tied to a specific UoP, but are based on overall ESG outcomes. Due to their broader scope, SLBs are well suited to the agriculture sector. Sustainability-linked bonds in agribusiness have grown 191 percent year-on-year since 2018, accounting for more than half (51 percent or USD 23 billion) of labelled bond issuance in this sector (IFC, 2022).<sup>18</sup> Their flexible criteria make them suitable for various agrifood actors in LMICs, where a pipeline of projects and a clear UoP theme may be harder to identify. Their relaxed reporting requirements also suit complex and geographically dispersed agrifood supply chains (CBI, 2022a).

- Sustainability-linked finance for agrifood systems should include KPIs beyond climate mitigation: Most SLBs in this sector focus on net greenhouse gas emissions, despite significant carbon footprint reductions occurring only later in transition timelines, especially for agricultural production companies and protein or dairy producers. KPIs related to biodiversity, as well as to diversity, equity and inclusion, are under-represented in agribusiness SLBs, despite the material impacts (CBI, 2024). Expanding eligible activities for SLB issuances to include these areas could better reflect the reality of agrifood systems.
- **Transparency and accountability are key to market confidence:** More emphasis is needed to ensure that KPIs are material and that performance targets are sufficiently ambitious to credibly scale the market, alongside strong corporate engagement to direct financing to farmers. Long-term capacity development pre- and post-issuances can enhance KPI reporting, while promoting coordination among issuers, regulators and investors (OECD, 2022).
- Certified sustainable agriculture practices improve traceability and sustainability reporting along the supply chain, including in financial institutions (CBI, 2023): While rare in low-income countries (LICs), certification schemes are growing via government-led frameworks in middle-income countries (MICs), such as the Brazilian Embrapa Low Carbon Soybean. Expanding these into more markets can standardize KPIs, providing investors with confidence and comparable targets to help inform investment decisions.

<sup>&</sup>lt;sup>18</sup> As of Q1 2023.

#### Challenges and enablers to innovative sustainable finance

There is significant potential for sustainable bond issuance in low- and middle-income countries, with a well-documented need for agrifood systems investment and supportive government sustainability policies across LMICs. Addressing barriers and leveraging enablers can scale sustainable finance innovations:

- Data and impact reporting infrastructure: Robust data infrastructure is crucial for creating impact and post-issuance reports, yet many LMICs lack this capability. Concessional resources can support data infrastructure, aggregating existing farmer and SME geolocalized data for improved portfolio oversight and GSS+ reporting. Governments and domestic stock exchanges can encourage improved ESG reporting by issuing market guidelines.
- Sector complexity and KPI development: The agrifood system's diverse activities, ranging from crop and livestock production to reforestation, require tailored KPIs. Identifying underlying assets and developing robust targets that capture climate adaptation, resilience, biodiversity, water use and food waste will be key.<sup>19</sup> Harmonized frameworks, such as the CBI's Agri-Food Transition Criteria, can help to standardize GSS+ bond certifications in the sector, making more agrifood activities eligible for investment. Concurrently, technical assistance by DFIs can support ambitious transition plans.
- **Sustainable finance mechanisms can provide direct farm-level support** if the transition plans of SLB issuers and the underlying portfolio of UoP issuers include direct payments to farmers.
- Scaling these opportunities requires supportive regulatory frameworks and policies that enable demonstration transactions, data on financial performance and market guidelines (CBI, 2022b). These efforts are key in LICs with underdeveloped capital markets.
- Leveraging catalytic capital to address pricing and cost-benefit considerations: Labelled bonds offer potential for discounted pricing, but entail higher transaction costs than vanilla bonds, especially in long supply chains such as agrifood. Donors and MDBs/DFIs can provide anchor investments and cover costs for first-time issuers, and derisk via credit guarantees. Concessional capital can fund TA and project preparation to develop ready-to-finance GSS+ pipelines.<sup>20</sup>

<sup>&</sup>lt;sup>19</sup> To ensure market confidence, design weakness should also be addressed. For example, SLBs often have call-options before the bond's maturity, allowing issuers to buy them back before the step-up penalty strikes. IFC found that penalties for early calls were more lenient for SLBs with step-up penalties, averaging 15.4bp, whereas the average penalty was 31.2bp.
<sup>20</sup> This includes pre-investment activities such as project feasibility studies and value-for-money analyses that comprise climate risk assessments.



# Conclusion

Well-designed innovative financial solutions can significantly shift capital towards agrifood systems. This brief underscores the need for ongoing innovation and offers some key conclusions to increase impact, leverage private investors and meet the needs of actors across the value chain.

Innovation should balance the need to tailor and scale new financial structures. Considering varied investor expectations on returns, risk and investment time horizons, innovative tools should be tailored to agrifood systems' assets and opportunities. However, to avoid further fragmentation, scalable and replicable models should be the focus, as seen in Case study 1 (Havemann, Negra and Werneck, 2020). Small, decentralized investment vehicles - common in this sector - increase transaction costs and deter investors. Standardizing financial structures/instruments (as seen in renewable energy) can promote scale and mobilization, especially as agrifood systems grow, the investment-impact thesis behind 'agrifood system innovations' solidifies, and the sector moves beyond piloting 'pure innovations'.

Pooling assets while derisking senior tranches is common across blended and sustainable innovations, highlighting the need for more concessional finance in agrifood systems. Mobilizing capital requires aggregation, achievable through funds that channel finance to financial institutions and value chain actors who manage project portfolios, while extending debt/equity (see Case study 3). Even when investments are pooled to address ticket size and pipeline concerns, concessional funding is often in junior tranches, to derisk and credit-enhance private investors in senior tranches (see Case study 2). Securitization within the GSS+ bond space shows the potential of pooling agrifood assets into listed products sought after for their liquidity and transparency.

**Supporting the enabling environment is key to more and better use of innovative finance**. This includes forming linkages across the agrifood system to address biodiversity, climate, economic shocks and nutrition, thereby derisking the value chain (see Case study 4). Increased programmatic support from donors, MDBs, DFIs and (sub)national governments is required, especially in LICs where weak enabling environments contribute to high country risks, raising the cost of capital and making it difficult for innovations to scale (Husar, 2022a; ISF Advisors, 2022).

Instruments that evidence their ability to reach small and rural beneficiaries, secure welfare impacts for rural/underserved populations, attract new (private) investors and operate at higher risk levels than commercially viable should be scaled and supported by concessional resources. Much of the agrifood system is too small and risky to be reached by innovations focused on (sub) commercial returns, necessitating concessional support. In turn, if public resources are channelled towards commerce-oriented financing solutions, instead of the bottom non-commercial tier, their impact thesis and capacity to reach end-beneficiaries while mobilizing new actors must be well substantiated to justify this trade-off.

Limiting trade-offs by scaling well-tailored financial innovations will require a step change in international climate finance. To access climate finance, LMICs and local agrifood actors struggle to meet the application and accreditation requirements of international climate funds (FAO, forthcoming), hindering successful disbursements towards agrifood system interventions and constraining 'local innovations'. If international climate finance does not focus on expanding access and reaching across the agrifood value chain – especially its underserved segments – financial innovations will be limited in their impact and their ability to support actors as they grow through the market tiers.

In summary, there is a sizeable investment opportunity associated with this transformation, but leveraging it will require more innovative finance and concessional support compared with business-as-usual, given the frontier and high-risk nature of much of the agrifood system. Achieving scale through innovation depends on bridging traditionally siloed communities of investment practitioners, to adopt a sustainable, inclusive agrifood system transformation perspective.

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