Executive Summary - How innovative investment solutions can drive radical supply chain decarbonisation and climate adaptation

80% of global trade takes place in supply chains linked to transnational corporations[1], with more than 50% of annual greenhouse gas emissions[2]. The total cumulative cost of climate hazard exposure in the supply chains of the world's largest companies is projected to reach $25 trillion by 2050, the equivalent of 74% of all revenues in 2024[3].

Factors such as smaller company size, being in a low- or medium-income country, exposure to export markets, and heat-sensitive processes all contribute to higher sensitivity to climate-driven business losses[4], and all firms with limited access to finance in lower income countries saw a 30% drop in revenue in the face of modelled climate impacts[5].

There are significant barriers to accessing finance for smallholder and SME actors. Agriculture and industry receive <10% of climate finance[6], and there is a $2.4 trillion annual investment gap for emerging markets and developing countries to deliver climate goals[7]. 40 percent of SMEs in developing countries, have barriers to accessing finance[8].

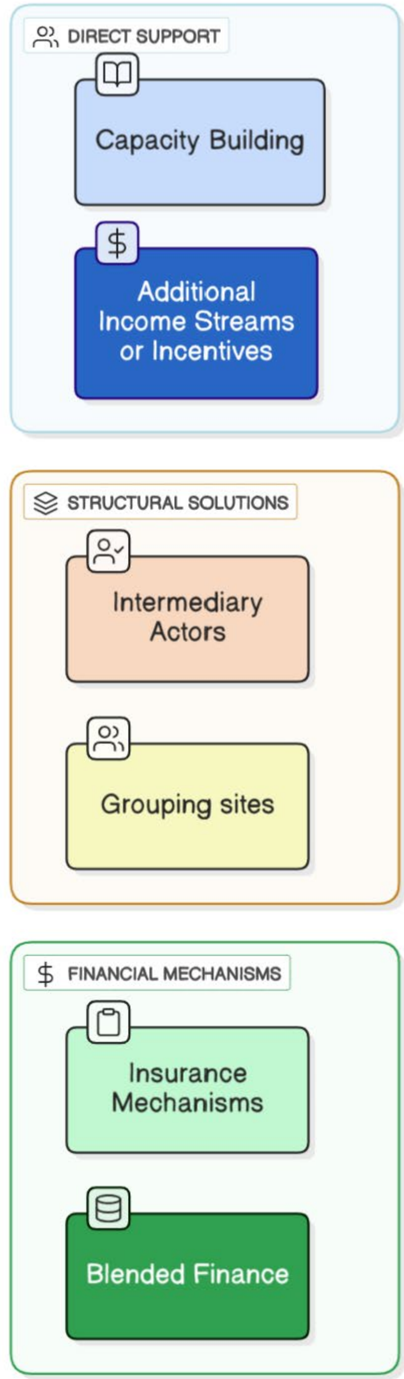
Small and Global South actors face several challenges in accessing investment in climate action, including some fundamental business barriers that disincentivise investment before they even attempt to access it.

Business barriers to investment	Financial barriers to investment
Lack of regulatory pressure	Complexity of process
Energy subsidies and other policy barriers	Higher-risk context
Lack of supply chain incentives	Organisation size
Lack of technical information	Site informality
Technology pipeline challenges	Low credit rating
Operational concerns	Low collateral
	Unpredictable or low revenues
	Unclear technology ROI
	High cost of borrowing

[1] *https://unctad.org/press-material/80-trade-takes-place-value-chains-linked-transnational-corporations-unctad-report*
[2] *https://www3.weforum.org/docs/WEF_Net_Zero_Challenge_The_Supply_Chain_Opportunity_2021.pdf*
[3] *https://www.spglobal.com/en/research-insights/special-reports/look-forward/climate-costs-are-rising-but-few-companies-have-an-adaptation-plan*
[4] *https://openknowledge.worldbank.org/server/api/core/bitstreams/72f74a78-b140-4f47-bd60-178481dfb5cd/content*
[5] *https://openknowledge.worldbank.org/server/api/core/bitstreams/72f74a78-b140-4f47-bd60-178481dfb5cd/content*
[6] *https://www.climatepolicyinitiative.org/wp-content/uploads/2000/06/compressed_Global-Landscape-of-Climate-Finance-2025.pdf*
[7] *Bhattacharya A. et al (2024) Raising Ambition and Accelerating Delivery of Climate Finance, London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science*
[8] *https://www.ifc.org/content/dam/ifc/doc/mgrt/2022-gsmef-progress-report.pdf*

Innovative opportunities to drive investment

Opportunities for brands, retailers and programmes working with the global supply chain to create innovative solutions typically fall into one of three categories:



Direct support to sites through capacity building on technological or financial solutions, direct grants or loans provided for specific climate activities, or direct incentives such as revenue from carbon markets, premiums, or preferential commercial terms.

Structural solutions can significantly de-risk finance by grouping actors (reducing likelihood of overall default) or by providing a secure intermediary. Grouping also has the benefit of enabling significant investment in landscape solutions such as shared infrastructure that are key for climate mitigation and adaptation. Brands and retailers may also wish to join collective efforts to scale investment rather than acting individually to support sites.

Financial mechanisms such as insurance can ensure that underlying outcomes (production volumes, decarbonisation outcomes) are significantly protected, building a more solid foundation for a 'stack' of solutions. Blended finance solutions such as combining philanthropic, public, concessional and private finance through structures like collateral or loan guarantee agreements from 3rd parties hold significant potential for unlocking scalable private sector and non-concessional finance with a de-risked ROI for investors.

Each of these solutions provides a different layer of re-risking for the actors involved, as well as addressing some of the incentive issues within the business barriers to investment. Individually or in combination they have the potential to unlock significant funding flows, in particular from the private sector.

Brands and retailers are well positioned to apply commercial incentives to sites directly or indirectly, and to provide loan guarantees, while programmes are more able to tap into philanthropic funding or concessional finance in a way that can de-risk further investment.

The Unlock approach

Future Earth Lab is bringing its knowledge and experience of innovative financial solutions to create an innovative 'finance stack' for the Unlock Programme, leveraging a number of the innovative strategies outlined to support access to climate finance for under-served actors within the supply chain.

The Unlock Investment Stack

- Private investment flows
- Repayment and securitisation mechanisms
- Offset purchases from beyond the value chain
- Resilience and co benefit payments
- Inset and scope 3 claims in line with reporting requirements
- Permanence insurance
- Credible, specific and validated GHG reductions and removals quantification
- Philanthropic funding

This investment stack blends philanthropic, private sector and development funding and security in order to scale investment in farmer technologies and practices.

It groups farmers geographically and provides an intermediary between lenders and farmers to allow for de-risked investment.

Unlock impact payments (Unlock Units) are a revenue stream that can be used to service and repay debt without farmers needing to directly access debt.

Insurance is used to ensure permanence of removals claims, while philanthropic and development funding are sought to de-risk private investment flows through Unlock to farmers.

Providing finance to the 20,000 farmers enrolled in Unlock would provide 13 million USD of commercial rate interest, or 1 million USD at a 1% securitised rate.

If scaled to cotton farmers globally, this could represent 64 billion USD annual interest at a commercial rate and 5 billion at a concessional or securitised rate.