Better Finance, Better Food: Case Study Catalogue
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This report was supported by NICFI in partnership with the Food and Land Use Coalition.

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Transforming today’s food and land use systems could unlock $4.5 trillion in new business opportunities every year; to get there we need to rapidly replicate and scale what is already working.

Today’s food and land use systems are typically extractive, destructive and reinforce major inequalities. They generate over $12 trillion a year in hidden environmental, social and economic costs.1

Meanwhile, over half the world’s GDP depends on nature2 and is therefore at risk because of the ongoing destruction of terrestrial and ocean ecosystems linked to the way we currently produce food and use land. The covid-19 pandemic brought the world’s attention to the unintended consequences of our relationship with nature as we farm and feed ourselves. Covid-19 has also reinforced inequalities across the food system, disrupting supply chains and pushing millions of vulnerable people below the poverty line.
Transforming to a more sustainable food and land use system is critical if we want to curb climate change, protect biodiversity and improve human health. It is also critical as we seek to (re)build more inclusive post-covid economies – especially for rural communities – while ensuring food security, supporting resilient jobs and tackling systemic vulnerabilities which make shocks like natural disasters, recessions – and pandemics – so much worse.

This is not only about protecting people and planet. Investing in more regenerative, nature-positive solutions can unlock $4.5 trillion in new business opportunities each year by 2030, driven by shifting consumer preferences for healthier food, new policies around responsible production, advances in technology which improve supply chain transparency, and widespread corporate and country commitments to reach “net zero” – which will need to include investment in largescale nature-based solutions.

This unprecedented set of enabling conditions will create value in the “new” food and land use economy, and destroy value in the old; investors will be left behind if they don’t shift capital out of “4-degree” food and land use portfolios and stranded agricultural assets.

We are already seeing this play out in real time. Commitments to finance nature and sustainable land use are already on the rise. In 2020 alone, HSBC announced that it would raise a $1 billion natural capital investment fund; Lombard Odier launched a $400 million circular bioeconomy fund that seek to harness the power of nature; and Walmart committed to transforming the world’s supply chains to be truly regenerative, while protecting, managing or restoring at least 50 million acres of land and one million square miles of ocean by 2030. Meeting these commitments will require a significant shift in both what and how we invest. It means moving away from financing short-term, capital-intensive, high-input business models which are inherently exposed to climate risk, as well as major drivers of it. Instead, we need to invest in more resilient, circular solutions which are knowledge-based, regenerative and driven by value instead of volume.

New financial products, innovative supply chain partnerships, and investment vehicles which blend public, private and philanthropic capital are already being developed to shift capital out of the “old” food and land use economy and into the new one. We have identified seven core business model and financing “archetypes” which can accelerate this shift – from blended finance funds to supply chain partnerships to sustainability linked debt and insurance products to market solutions to pay for ecosystem services (see Exhibit 1).

Each of the archetypes tackles a different inefficiency in the financial system to (i) create/capture the value of nature; (ii) incentivise more resource-efficient outcomes; and/or (iii) harness public and philanthropic funds to mobilise private finance to get to scale. The “Better Finance, Better Food” case study catalogue includes over 50 examples of these different business models and financing solutions.

Unfortunately, many of these solutions are still sub-scale and/or not well-known. The “Better Finance, Better Food” case study catalogue is designed to address this issue. We hope it serves as a source of knowledge and inspiration for investors, business leaders, policymakers, development finance institutions, project developers, philanthropies and local communities who do not want to reinvent the wheel. What’s more, we hope it demonstrates that there is already a wide range of investable opportunities across the risk/return spectrum around the world.

The real challenge lies in replicating these business models and financing archetypes to get to scale. We need to significantly reduce transaction costs and cut down the time it takes to access and deploy capital. That means we need to mainstream new financial products, standardise investment structures and rapidly accelerate pipeline development. Unless we learn from what is already working to streamline transactions and make “innovative” solutions more “vanilla”, then largescale capital will never shift fast enough.

It is in that spirit that we have compiled some of the most promising business models and financial instruments/products in this catalogue. Success will be if “Better Finance, Better Food” helps to:

a. Demonstrate a strong pipeline of investable food and land use assets around the world which are good for people and planet

b. Rapidly scale financial innovations which are already delivering results

c. Replicate what is working across geographies and asset classes

d. Ensure that policy interventions accelerate proven solutions and unlock private capital for market-based solutions
Success also looks like building a movement – gathering more examples through an open-source campaign where everyone can access the learnings. We know there are many more people – from farmers to fund managers – who have a story to share. Help us get to 500+ case studies and take this agenda mainstream! “Better Finance, Better Food” is just the beginning.

For more information, or to submit a case study, please visit www.blendedfinance.earth/case-studies or email contact@blendedfinance.earth

**EXHIBIT 1**

**Business model and financing archetypes can address key inefficiencies of today's system**

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Source: Blended Finance Taskforce, 2020
Food and land use systems generate over $12 trillion in environmental, social and economic hidden costs – more than their current market value

Transforming the world’s food and land use systems to bring climate change under control, safeguard biological diversity, ensure healthier diets for all, improve food security and create more inclusive rural economies is possible through the implementation of a comprehensive reform programme (see Box 1).

Investors and financial regulators have a crucial role to play to deliver this transformation by mobilising capital to the right places and managing existing risks to agriculture, forestry, and fisheries portfolios. In fact, not participating in the transformation is likely to result in financial losses, potential strains on financial stability and missed business opportunities.

“Better Finance, Better Food” analyses how finance can transform food and land use systems and highlights the business models and financing archetypes that, if scaled and mainstreamed, will accelerate the development of regenerative, healthy and equitable food and land use systems. Building on the work carried out with the Food and Land Use Coalition, the report identifies the investment products, vehicles, strategies, and partnerships that are needed to mobilise capital for a more sustainable system.
10 Critical Transitions to transform food and land use systems

1. **Promoting healthy diets**: Global diets need to converge to local variations of what is “people and planet” positive – a predominantly plant-based diet, high in protective foods (fruits, vegetables and whole grains), a diverse protein supply and low in sugar, salt and processed foods with relevant local variations, emphasising high-quality and affordability.

2. **Scaling productive and regenerative agriculture**: Agricultural systems and techniques that enhance soil health, reduce the use of chemical fertilisers and improve crop resilience should become more widespread. Combining traditional techniques like crop rotation and agro-forestry with deeper knowledge of local soil, water and weather conditions will be key; new advanced precision-farming technologies and bio-based fertilisers and pesticides should also become the standard.

3. **Protecting and restoring forests and other natural ecosystems**: There is enough land to feed the world while protecting nature and limiting global heating to well below 2 degrees. This will require an end to deforestation and conversion of other ecosystems for agriculture. 1.2 billion hectares of land currently used for agriculture will also need to be freed up for restoration by 2050. This can be achieved by scaling regenerative business models that create value from standing forests (including carbon sequestration), agriculture production-protection models and businesses that generate value from forest regrowth, including ecosystem services and forest commodities.

4. **Securing a healthy and productive ocean**: Sustainable fishing and aquaculture can unlock the untapped potential to increase supply of ocean protein. This can reduce pressure on land for food and support a more diverse protein supply for healthier diets. This will require the reform of wild-catch fisheries and expansion of “mariculture”, or open-ocean cultivation. It will also be critical to protect and restore essential ocean habitats – estuaries, wetlands, mangroves and coral reefs – while curbing nutrient and plastic pollution.

5. **Diversifying protein supply**: Rapidly developing alternative sources of protein is critical for healthy diets and reducing environmental degradation. Protein supply should be further diversified into plant-based, insect-based and laboratory-cultured sources. Animal-based protein substitutes have already entered the market and are expected to scale rapidly – they could make up ~ten percent of the global meat market by 2030.

6. **Reducing food loss and waste**: Approximately one third of all food produced goes to waste, costing around $1 trillion a year and using an agricultural area almost the size of the US. Tackling food loss and waste would relieve future pressures on land for food production, significantly bring down food-related greenhouse gas emissions and environmental damage and reduce food insecurity around the world.

7. **Building local loops and linkages**: 80 percent of food will be consumed in cities by 2050; what urban dwellers choose to eat will therefore shape the future of global food systems. Peri-urban areas could become major farming centres over the next decade – especially for fruit, vegetables and other perishable foods. Urban farming is expected to stay small-scale, but it can act as a useful supplementary form of production which improves the resilience of food supply to urban areas. Innovation is growing in this area with high-tech horticulture to low-tech circular business models.

8. **Harnessing the digital revolution**: Digitising food and land use systems (e.g. through precision farming, logistics and digital marketing tools) can help producers and consumers make more informed choices and improve efficiency from production to consumption. Digitisation and better connectivity are also driving the development of infra-light, distributive and circular business models for next-generation supply chains.

9. **Improving rural livelihoods**: Making the food system more inclusive will require investment in to transforming rural economies. Improving the productivity, access to market infrastructure and related skills of agriculture workers – especially those living below the poverty line in emerging markets – is critical to a more equitable and secure way of producing food and using land.

10. **Accelerating the demographic transition**: Women play a central role in food and land use systems, given their decision-making role in resource-management, nutrition and family planning. Crucially, women in rural areas are often disadvantaged due to lack of land ownership, access to credit and education. Ensuring equal access to women has also been identified as a key strategy in reducing birth rates, leading to lower greenhouse gas emissions and less competition for resources.

Source: Food and Land Use Coalition, 2019
Despite significant progress driven by ambitious investors and regulators to re-align financial flows and investment with Paris climate targets and the Sustainable Development Goals for people and planet, there are still major inefficiencies in the way food and land use systems are financed. These inefficiencies prevent capital from flowing to priority areas—such as nature conservation and rural infrastructure. They do not reward solutions with better environmental and social impacts—such as regenerative agriculture, local supply chains or sustainable fishing. Public finance also reinforces the status quo, and locks in the old economy: more than $700 billion worth of government subsidies go to agriculture and fishers; of that, only 15 percent is targeted at public goods. Less than 3 percent of climate finance from multilateral development banks is allocated to agriculture.

Delivering the food and land use transformation will therefore require a significant shift in what gets financed: from capital-intensive, externality-generating, high-input assets in linear value chains to knowledge-based, regenerative and circular business models that are driven by value rather than volume and are more resilient, human-scale, diversified and in balance with nature. Capital will need to be reallocated from the “old” food and land use economy into the new one. New investment will also be needed—to the tune of $300 to $350 billion each year to 2030.

Transforming the food and land use system will also require a systemic shift in how food and land use systems are financed—away from short-term investment practices that fail to price in climate-related financial, social and environmental risk, and into long-term investment solutions that put a price on nature and account for the trillions of dollars of hidden costs relating to climate, biodiversity, human health and livelihoods.

The good news is that this transition is value-creating; shifting capital into a more regenerative, equitable and nature-positive food and land use economy could generate at least $4.5 trillion a year in new business opportunities by 2030 (see Exhibit 1).

**EXHIBIT 1**

**There is an annual business opportunity of $4.5 trillion associated with the ten critical transitions in 2030**

USD billions (2018 prices), 2030 estimates, examples of opportunities >$100bn

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Source: SYSTEMIQ, Blended Finance Taskforce, 2019 (see online technical annex at https://www.foodandlandusecoalition.org/global-report)

To realise this economic prize, we will need to scale business models, financial products, supply chain partnerships and investment vehicles which capture the value of nature, incentivise more sustainable, resource-efficient outcomes, and which harness public and philanthropic funds to mobilise billions of dollars of private finance to get to scale.

The Blended Finance Taskforce has worked with its partners and extended network to gather examples of these business models and financial solutions. We categorised more than 50 case studies into seven “archetypes” which can help tackle inefficiencies in the way we currently finance food and land use assets around the world— from blended finance funds to sustainability-linked debt, from nature-linked insurance to payments for ecosystem services, from shared services solutions and supply chain partnerships to pipeline incubators and accelerators.
Business model and financing archetypes can address key inefficiencies of today’s system

From an old system … to a new system … through seven financing archetypes

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Incubators and accelerators inject capital into early-stage/pilot projects with the aim of developing a robust and investable pipeline. Their services include technical assistance, project preparation, fundraising, advisory and seed funding.

Source: Blended Finance Taskforce, 2020

Seven actions to replicate and scale the business models and financing archetypes which are tackling inefficiencies in the system include:

1. **Modernising development finance**: Donor governments and development capital providers can (i) increase support for sustainable agriculture and natural solutions (it currently attracts less than 3% of finance from multilateral development banks); (ii) support early stage investment solutions to demonstrate the viability of regenerative and nature-positive business models; (iii) optimise the use of catalytic instruments such as guarantees to de-risk investment and mobilise private capital; and (iv) commit to sharing data and best practice for blended finance transactions to enable better risk management for long-term growth.
2. **Harnessing the power of technology**: Financial intermediaries and technology providers can strengthen and scale partnerships to leverage the full potential of digital solutions to help address well-established barriers to financing—including land tenure issues, poor credit profile of borrowers and limited access to collateral. This can facilitate the development of more distributed, infra-light and resource-efficient systems while helping farmers and forest communities access global supply chains.

3. **Disclosing climate and nature-related risks**: Financial institutions, investors and corporates should integrate and disclose climate and nature-related risk assessments when evaluating counterparts, making investment decisions and evaluating portfolios, building on the recommendations of the Taskforce for Climate-Related Financial Disclosure’s and the newly established Taskforce for Nature-Related Disclosure.

4. **Establishing high-integrity impact metrics**: The finance sector needs to partner with civil society and academia to develop science-based benchmarks, metrics, and labelling schemes to avoid “greenwashing”. Efforts are underway, including with the European Union’s sustainable finance taxonomy and green bond label, and the Science-Based Targets initiative for financial institutions.

5. **Integrating resilience and adaptation**: The role of nature-based solutions to improve resilience against climate shocks needs to be better understood and integrated into financial products. The insurance industry, enabled by technologies and complex scenario modelling, has a key role to play in evaluating the role of nature in mitigating climate-related risks and can mainstream parametric solutions to rapidly pay-out after climate events to build physical and financial resilience for governments and communities.

6. **Standardising payments for nature**: Investors can contribute to robust public-private initiatives such as the Taskforce on Scaling Voluntary Carbon Markets, explore new solutions like Queensland’s reef credit scheme and learn from programmes like the Architecture for REDD+ Transactions, to develop high-quality markets for carbon and other environmental outcomes (e.g. biodiversity, reef protection) that largely remain unregulated.

7. **Optimising the use of philanthropic capital**: The philanthropic community can play a leading role in deploying catalytic, early stage capital to support civil society activities and policy shifts, as well as pipeline development through investments in technical assistance, project preparation, advisory and seed funding.

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God’s Grace Farm selling organic cherries at the Beijing Farmer’s Market.
The large collection of case studies in “Better Finance, Better Food” demonstrates a strong pipeline of investable opportunities around the world

The real challenge is to replicate the business models and financing archetypes that are already working to mobilise capital for more sustainable food and land use assets. We must avoid reinventing the wheel and learn from today’s success stories – that will be the fastest way to: (i) reduce transaction costs and cut down the time it takes to access capital; (ii) accelerate pipeline development and deployment of new funds; and (iii) mainstream innovative financial products and standardise investment structures.

**Methodology**

The “Better Finance, Better Food” case study catalogue includes over 50 examples of financial solutions which mobilise capital for the new food and land use economy or business models which create value from a more regenerative, nature-positive approach. The case studies were selected according to a set of core criteria including:

(i) **Archetype:** the way the solution tackles one of the core inefficiencies that we have identified as a key barrier in financing more sustainable food and land use assets

(ii) **Innovation:** the uniqueness in design, deployment and/or outcomes to mobilise private capital and strengthen partnerships across the financial value chain

(iii) **Scalability:** the potential for the solutions to be scaled and replicated across different assets and geographies

We chose examples from around the world – with a focus on case studies from emerging markets. They range from relatively small pilots to interventions aimed at mobilising over $1 billion, though most examples look at opportunities between $100-$500 million and the largest portion are covered by impact investing and blended finance funds.

Key stakeholders are listed for each case study, showcasing the different players that need to come together to make these initiatives a success. These include development capital providers, private investors, foundations, NGOs, multilateral organisations, project developers, incubators and many others.

Each case study has been mapped against the Food and Land Use Coalition’s “10 Critical Transitions to Transform the Food and Land Use System”. Mapping the “Better Finance, Better Food” case studies to these Critical Transitions highlights where most of the financial innovation and investment is occurring (e.g. strengthening rural livelihoods, scaling regenerative agriculture, and protecting nature) and where significant gaps remain (e.g. healthy diets, reducing food loss and waste, local supply chains, oceans and gender).

The catalogue is not meant to be exhaustive. Platforms which (i) track funds that invest in smallholder farmers (e.g. ISF Advisors’ Fund Database);12 (ii) profile blended finance transactions (e.g. the Convergence Database);13 and (iii) provide financial data by asset class (e.g. Preqin)14 already exist. These case studies should be complementary: describing business models and financial product archetypes that are unique in design, deployment and outcomes. From a review of over 100 cases, we selected over 50 that reflect the current pipeline, have the greatest opportunities for scale and address some of the key inefficiencies of the current financial system.

Based on the examples included in this case study catalogue, we learned the following:

**Opportunities exist for investors with different risk appetites.** The case studies in “Better Finance, Better Food” illustrate potential opportunities at different points across the investment lifecycle. This means that a broad spectrum of investors with different risk appetites and ticket size / geography requirements should be able to participate in the new food and land use economy. This includes (i) venture philanthropists who want to support projects which new nature-based revenues streams; (ii) angel investors and early-stage VCs who could invest in new “shared” models for agriculture inputs; (iii) development banks who play a critical role de-risking regenerative agriculture projects; and (iv) institutional investors who could come into large-scale land use funds for sustainable timber.
Innovative financial solutions are being pioneered in regions that are food insecure and face widespread destruction of natural ecosystems. We are seeing the most financial innovation in sub-Saharan Africa and South-East Asia – where a large part of the population is involved in smallholder farming and still living below the poverty line. This innovation is typically needed to tackle significant financing gaps linked to (i) limited financial value on nature and ecosystem services; (ii) inefficient food production; and (iii) difficulty accessing finance for smallholders because they are not viewed as creditworthy by traditional investors (e.g. due to lack of track record or collateral).

EXHIBIT 3

Financing innovation is targeting investments in sub-Saharan Africa, South-East Asia and Latin America, where needs are greater

![Map showing financial innovation areas](https://example.com/map)

**Operational**  **Under development**

Note: One case study can serve multiple geographies, in which case it has been counted in each region

Source: Blended Finance Taskforce, 2020

Most new business models and financing innovations focus on rural livelihoods, sustainable agriculture and the protection/restoration of forests. Most of the case studies we reviewed tackle a number of the Critical Transitions at once – demonstrating higher value creation when solutions addressed benefits to people, planet and profit. A majority of examples focused on regenerative agriculture and strengthening rural livelihoods or conservation/restoration of nature (land based). Gaps remain for solutions which mobilise capital for the healthy diets, a sustainable ocean economy and gender outcomes.

Few business models or financial solutions target the promotion of healthy diets. Nutritional impacts of food and land use investments are not broadly factored into the financing innovations in “Better Finance, Better Food”. Alongside regenerative farming methods and access to finance for smallholders, this would require the financial instruments/business models to screen for the types of crops farmed and their impact on local diets. Major work on this front has been led by the Global Alliance for Improved Nutrition (GAIN), whose Nutrition Financing Facility is accompanied by an impact framework that has nutrition at its core. Limited indicators linked to nutrition are currently included in public and private investors’ impact or alignment frameworks for investments in land use. Liability risks linked to negative health impacts of agri-businesses are likely to rise which may drive more attention in this space.

Solutions for a healthy and productive ocean are still nascent, but this is becoming increasingly important to investors. Even though innovations targeted at the sustainable ocean economy are emerging, they are still small compared to the solutions focused on land-based food systems. The ocean covers 70 percent of our planet, 15 produces about 20 percent of the animal protein we consume, employs up to 260 million people through the fisheries sector alone and can provide efficient protein via non-fed mariculture (bivalves, seaweed), which requires no land, no freshwater, no fertiliser and no feed to grow. Financing innovations will be key to unlocking the
There is rising investor interest in ocean-related investments, such as the aquaculture-focused investment fund Aqua-Spark, but challenges remain: investments in fisheries and ocean ecosystems are characterised by unclear ocean governance structures and (lack of) guaranteed access rights for fishers. Addressing these challenges will require legislative changes and likely the de-risking of capital – especially for investments in transitioning to more sustainable fisheries.

**EXHIBIT 4**

**Most financing innovations help scale regenerative agriculture, protect nature and strengthen rural livelihoods**

| CT 1: Promoting Healthy Diets | CT 2: Scaling Productive and Regenerative Agriculture | CT 3: Protecting and Restoring Nature | CT 4: Securing a Healthy and Productive Ocean | CT 5: Investing in Diversified Sources of Protein | CT 6: Reducing Food Loss and Waste | CT 7: Building Local Loops and Linkages | CT 8: Harnessing the Digital Revolution | CT 9: Delivering Stronger Rural Livelihoods | CT 10: Improving Gender Equality and Accelerating the Demographic Transition |

**Source: Blended Finance Taskforce, 2020**

**Accelerating the demographic transition for women is critical; development banks and other investors can strengthen outcomes by including gender as a key impact indicator.** Gender is an increasingly important metric in the impact-investing space, with initiatives such as the 2X Challenge and specific solutions such as the IIX Women’s Livelihood Bond. The promotion of gender equality is nevertheless still not a mainstream indicator of many investments in the food and land use space. Despite the fact that women account for 43 percent of the agricultural workforce, they remain under-served, receiving only 10 percent of total aid for agriculture, forestry and fishing. The FAO estimates that in developing countries, providing women with equal access to resources could increase female farmers’ yields by 20-30 percent, in turn reducing the global number of undernourished people by 12-17 percent (2010). This catalogue does not include financing innovations that specifically address female education or family planning, which could also help to catalyse the demographic transition.

**Technological innovation is key to reducing transaction costs and improving access to finance – particularly for smallholders.** Reaching smallholders in remote areas, who often do not have access to traditional banking methods, can be extremely complex and result in high transaction costs. Technological innovations in mobile banking, traceability systems and online ledger systems can help to significantly lower transaction costs, especially through the use of mobile phones. Among smallholder farmers, studies have shown that owning a mobile phone results in higher profits. Relevant technological advancement in this space includes:

a. **Digitising operations:** technical assistance supported by development finance to improve operations via digitisation at the smallholder level – essentially, an efficiency gain with proven technology.

b. **Improving access to finance:** using farmers’ digital footprints (including warehouse receipts, contracts with buyers, data on harvests and irrigation) to inform their credit scoring and access to finance.

c. **Fintech innovations:** enabling online services for smallholders who do not currently have access to formal banking. Transaction costs can be significantly reduced by providing financial services online, allowing smallholders to open bank accounts, take out loans, pay for crop/climate insurance and execute trade transactions to sell their products.
The following case study collection has been developed together with Blended Finance Taskforce members and partners. The case studies are categorised into the core business model and financing “archetypes” which are tackling inefficiencies in the financial system, as follows:

1. Impact investing
2. Blended finance funds
3. Shared services/fintech
4. Supply chain innovations
5. Sustainability-linked debt
6. Nature-linked debt
7. Paying for nature
8. Incubators and accelerators
To shift capital out of the old economy into the new one, we need to rapidly scale and replicate what is working, sharing learnings, identifying synergies and pursuing new opportunities to accelerate investment. That is why “Better Finance, Better Food” is not only a case study catalogue but also an open-source campaign.

We know there are many more people – from farmers to fund managers – who will be keen to share their story. Through an online open-source campaign, we are aiming to collect 500 more case studies for everyone to access. For more information, or to submit a case study, please visit www.blendedfinance.earth/case-studies or email contact@blendedfinance.earth.
AgDevCo

Founded in 2009, AgDevCo is an impact investor supporting the development of agribusinesses in sub-Saharan Africa. The company provides patient capital in the form of debt and/or equity to African-based companies that have the potential to achieve far-reaching development impact. Their ultimate vision is a thriving commercial agriculture sector which benefits both people and planet. AgDevCo contributes towards this vision by investing in and supporting early stage agribusinesses (debt and equity of $2–10 million) to create jobs, produce and process food and link farmers to markets. They provide hands-on technical assistance to help build sustainability and bankability in these businesses. AgDevCo’s current portfolio has $126 million of committed funds into 50 companies. To date, AgDevCo’s investments and technical assistance (current and exited investments) have engaged 516,000 (37% women) small-scale farmers and created or sustained 15,000 jobs (22% women).

AgDevCo has a dedicated Smallholder Development Unit (SDU), launched in 2015. The SDU is a $15 million, five-year project to increase the productivity of, and facilitate market access for, smallholder farmers through out-grower schemes. The scheme provides grants and technical assistance to de-risk smallholder farmers through out-grower schemes across Ghana, Malawi, Mozambique, Senegal, Sierra Leone, Tanzania, Uganda and Zambia. SDU is supported by the Mastercard Foundation (90 percent) and FCDO (10 percent).26 AgDevCo’s Smallholder Development Unit is currently on track to meet its goal of supporting 25 agricultural enterprises, benefiting 381,000 smallholders (half of whom are women) by 2020.27

AgDevCo also provides core businesses support to its investment portfolio via its in-house team of specialists in Agriculture, ESG and Enterprise Development (finance, tax and business administration). These specialist teams provide support throughout the investment lifecycle and ultimately help to ensure portfolio businesses are agriculturally sound, sustainable and adhere to the highest ESG standards.

AgDevCo is currently fundraising for up to $16.5 million to fund a new Technical Assistance Facility, which combines the inclusive TA of the Smallholder Development Unit with the core business support to develop high quality technical assistance projects to enhance financial and impact returns.
Aqua-Spark is an open ended fund specialised in making equity investments in sustainable and innovative aquaculture companies across the globe. Through its synergistic and impactful portfolio, Aqua-Spark seeks to increase food security and improve ocean and freshwater health and biodiversity, by advancing the aquaculture industry towards more sustainable and equitable food production.

Aqua-Spark invests in sustainable small and medium-sized businesses along the aquaculture supply chain. The fund prefers to be a minority stakeholder (20-49 percent), with no position size exceeding 20 percent of capital committed to the fund. Within the portfolio, the majority of investments are typically revenue-generating firms with proven business models that wish to scale up, while some additional focus is put also to investing in companies at proof of concept stage, such as disruptive new technologies and disruptive new uses for existing products.

At this critical juncture of accelerated growth of the industry, already larger than wildcaught fish for human consumption and on its way to tripling production in the next two years - these investments will influence how the industry develops, enabling it to reach its potential as the most resource efficient, transparent and nutritious form of animal protein production.

As of November 2020, the fund’s portfolio includes 20 companies that span the entire aquaculture supply chain. Examples include: Chicoa Fish Farm, a company with a mission to kickstart the aquaculture industry in Mozambique through the sale of fingerlings (small fish for grow-out) and feed, while assisting prospective aquaculture farmers with farming know-how; Indian Ocean Trepang, a sea cucumber farmer in Madagascar that is combating the overfishing of local sea cucumber species through its own farming operations and through a smallholder aquaculture farmer program; and Swedish Algae Factory, which sells algae used to clean wastewater from fish farms, thereby reducing waste in water released from recirculatory aquaculture systems.
Criterion Africa Partners (CAP) is a private equity firm, investing in the acquisition and development of sustainable assets across the forestry value chain in sub-Saharan Africa.

CAP, which emerged from Global Environmental Funds’ Africa Sustainable Forestry investment programme, now manages two funds: Africa Sustainable Forestry Fund I, which has disbursed $160 million, and the second fund, Africa Sustainable Forestry Fund II, targeting $200 million (first close at $82 million).

CAP makes investments in and manages businesses within the forestry sector in three subsectors: plantation acquisition and rehabilitation; downstream (wood) manufacturing; and biomass energy. Its main funders are the Grantham Foundation for the Protection of the Environment, and investors include development finance institutions, foundations and family offices.

Examples of CAP’s portfolio companies include: Mphome, a 6,400-hectare pine and eucalyptus plantation in South Africa; KVTC, which owns sawmills and Africa’s largest privately owned teak plantations; and Peak Timbers, a 31,000-hectare, FCS-certified timber plantation and sawmilling business.
Legal & General Investment Management (LGIM) is one of the largest asset managers in Europe. It has recently renewed and expanded its “Climate Impact Pledge” to catalyse the transition towards net zero carbon emissions globally.34

To do so, LGIM published its climate analysis of over 1,000 listed companies from 15 climate critical sectors, including food retail and financial institutions that are responsible for over 60 percent of GHG emissions.

The analysis results in scores, displayed publicly in the form of a traffic light system, determined by the analysis of a company’s governance, strategy, risk & opportunities, scenario analysis (Paris-alignment) and metrics and targets.35

Companies that do not meet LGIM’s minimum standards will be subject to divestment, increasing the pressure on companies to improve their ESG targets.

To further support its scoring approach, LGIM launched the climate risk framework, Destination@Risk, co-developed with Baringa Partners. Starting from 2021, LGIM will use its Destination@Risk framework to create an internal dashboard for internal portfolio managers and analysts to facilitate the integration of climate risk assessments through LGIM’s entire portfolio.

By releasing company scores, LGIM hopes to support companies to commit to net-zero emissions by 2050.36
The Lyme Timber Company is a private investor that strategically invests in projects with a high conservation potential in the USA and Canada, generating revenues through the production of sustainable timber, recreational leasing, the supply of alternative energy and the production of carbon offset credits.

Lyme Timber’s business model works by monetising a public-private partnership approach called conservation easements, which involves a legally binding contract to conserve private land and prevent future landowners from dividing/developing their property. Conservation easements protect and conserve the land’s resources, keeping land in private hands, while boosting the land’s public benefit and enhancing natural ecosystems.37

Over the course of its history, Lyme Timber has developed five funds: Lyme Northern Forest Fund (2002, $64.5 million); Lyme Forest Fund (LFF) (2006, $190.6 million); LFF II (2010, $160.4 million); LFF III (2014, $250 million); LFF IV (2016, $250 million); LFF V (2018, $300 million).

Lyme’s current overall investment portfolio consists of about 1.5 million acres of land, 85 percent of which is forestlands, while the rest is rural real estate. Current portfolio examples are the Lyme Great Lakes Timberland, comprising of 677,000 acres of sustainably managed forestland; Lyme Redwood Timberlands, a 112,000-acre forest parcel along a salmon river which is restored through Lyme’s sustainable forest management; and the Chocolate Bay Mitigation Bank, comprising of 9,500 acres of intercoastal waterway frontage that is held as a conservation and mitigation project.38
The L’Oréal Fund for Nature Regeneration is a €50 million impact investing fund set up by L’Oréal and managed by Mirova Natural Capital, designed to repair natural ecosystems. It complements the company’s efforts to reduce its impact on biodiversity across its value chain by repairing the damage already done.

The fund will invest in projects supporting marine and forest ecosystem restoration, which also have a positive economic impact for people relying on these very ecosystems. Envisioned investments include regenerative agriculture, sustainable fishing, marine ecosystem restoration, eco-tourism and carbon credit projects.

By 2030, the fund aims to help restore one million hectares of degraded ecosystems, capture 15 to 20 million tons of CO2 and create hundreds of jobs.39

The fund is part of a larger ESG social-environmental program released in May 2020 by L’Oréal called “L’Oréal for the Future”. This program includes a Product Environmental and Social Labeling mechanism, a €50 million charitable endowment fund to support woman’s organizations and a €100 million impact investment fund. The impact investment fund is equally split into an investment fund dedicated to Nature Restoration, and a fund aimed at preventing climate change by investing in the circular economy.
SLM Partners is an impact investor that acquires and manages rural land in several parts of the world, implementing regenerative agriculture, ecological farming and sustainable forestry systems, delivering both financial returns and environmental benefits.40

SLM invests in farm and forestry land on behalf of pension funds, family offices and insurance companies. SLM acquires and, with the help of local partners, transforms and manages agricultural and forestry land through its offices in the UK, USA and Australia. Through its investments, it aims to regenerate land, while increasing economic returns for its investors.

SLM raised AU$105 million for their first fund, SLM Australia Livestock Fund (AU$75 million in equity from Danish pension funds and AU$30 million in debt), acquiring over 480,000 hectare grazing land in Australia for sustainable beef production.41 In 2018, SLM created the SLM Silver Fund, which invests in sustainable forestry in Ireland, transforming existing plantations into “Continuous Cover Forestry” to improve biodiversity as well as making the plantation more disease and windfall resistant.42 The fund has backing from Irish investors, the European Investment Bank and other European institutional investors.43 SLM is planning on expanding its ownership of over 12,140 hectares of farmland to scale up regenerative organic farming in the US, specialising in organic grains.44
&Green Fund

The &Green Fund aims to de-risk investments in sustainable agricultural production with a focus on forest restoration, as well as tropical forest, peatland and biodiversity protection. &Green targets to mobilize $2 billion to protect 5 million hectares of tropic forests and peatlands and improve the lives of half a million smallholder farmers.45

Managed by Sail Ventures, the fund provides long-term loans and guarantees to supply chain companies that directly source from farmers or cooperatives, medium-to-large-scale farming businesses, financial institutions, and service and input providers. &Green targets an average investment size between $5 million to $15 million (max 25 percent of overall ticket). Partners in the Fund include IDH (landscape convening, technical assistance), UNEP (implementing agency of GEF contribution and assistance with communication, reporting and verification efforts), Good Growth Partnership (mutual support due to shared vision), 20x20 Initiative (member) and AFR 100 (partner of initiative) to channel private capital into forestry projects.46, 47

To date, the fund has received contributions from NICFI ($100 million), Unilever ($25 million) and GEF ($2 million), with an ultimate target of $400 million. At the project level, the fund aims to organise an additional $1.6 billion of private capital to achieve an overall mobilisation ratio of around 5:1.

As of July 2020, &Green has screened over 80 projects, and made investments into three companies: a $23.75 million investment through 7- and 15-year notes from RLU (PT Royal Lestari Utama bond; see case study on the Tropical Landscape Financing Facility)48, to finance a sustainable rubber plantation in Indonesia;49 a $30 million, 10-year loan to DSNG (PT Dharma Satya Nusantara Tbk), helping the sustainable palm oil company to implement “No-deforestation, No-peat and No-exploitation” (NDPE)50 throughout its supply chain and achieve full “Roundtable on Sustainable Palm Oil” (RSPO)51 certification; and a $10 million, 8-year loan to sustainable agriculture company Roncador (Agropecuária Roncador LTDA) to expand its livestock operations, recuperate degraded lands and conserve over 70,000 hectares of forest.52

Stakeholders:
Norwegian International Climate and Forest Initiative; GEF; Unilever; UNEP; IDH Sustainable Trade Initiative; Good Growth Partnership; Sail Ventures

Status:
Operational
Aceli Africa is a market incentive facility aimed at catalysing lending to agriculture in sub-Saharan Africa. Through its work, its hopes to address the region’s $65 billion annual financing gap for agricultural SMEs.

Aceli Africa’s goal is to improve the financial attractiveness of lending to agricultural SMEs by increasing the capital supply, providing technical assistance and generate data and learnings for policy changes benefitting agricultural SMEs. Research led by Aceli Africa found that lending to the agriculture sector is limited because of low margins and high opportunity costs. To de-risk investments, Aceli Africa assists local agricultural SME lenders by providing 2-8 percent of the qualifying loan amount ($25,000 to $1.5 million; aligned with gender inclusion, food security, nutrition, and/or climate resilience goals) into a reserve account, which can be drawn on to cover first losses of any qualifying loans across the local lender’s portfolio. Aceli Africa’s second intervention is to reduce the cost of originating and serving - especially rural - agricultural SME loans, through its “origination incentives” for loans ranging from $25,000 to $500,000. Additionally, Aceli Africa has $10 million reserved for technical assistance in form of business and finance training to agricultural SMEs, through which it hopes to increase the investable pipeline for lenders.

The design funding for Aceli Africa was provided by UK Aid, while the implementation donors (2020 onwards) are USAID, Feed the Future, Good Energies and Mulago. Its institutional partners are the Council on Smallholder Agricultural Finance (CSAF), Global Development Incubator (GDI) and Ropes&Grey, while its data and learning partners are Dalberg, the International Growth Centre and MIX.
The Africa Agriculture and Trade Investment Fund (AATIF) is a blended finance vehicle that invests in agricultural production and businesses along the agricultural supply chain in sub-Saharan Africa. Through its investments, AATIF aims to increase food security, strengthen income among people employed in the agricultural sector, and strengthen the competitiveness of local agriculture businesses.

The fund, managed by DWS, provides direct financing to commercial farms, processing companies and cooperatives, and indirect investments to local financial institutions and large agricultural intermediaries on-lending to small and medium companies. The fund provides financing in the form of debt, mezzanine or equity to companies or financial institutions. A $6 million technical assistance facility, provides technical support to beneficiaries, including for due diligence, impact assessment and accounting. Founding partners include BMZ, who provides a first loss guarantee; KfW who together with the Deutsche Bank capitalizes the fund’s mezzanine transactions; DWS as an equity investor; and the European Commission who invests in the fund’s junior equity tranche. Its compliance advisors are ILO and UNEP.

Since its inception in 2011, the fund has disbursed $300 million to 19 investees and indirectly supported over 250 agri-businesses in 16 countries. The portfolio includes financial institutions like a $25 million, 5-year loan to BancABC to support the growth of its agriculture funding; to intermediaries like a $20 million, 3-year loan to Wienco – a Ghanaian distributor of inputs and off-taker of cocoa, maize and cotton; or direct investment in the form of an $11 million, 5-year (plus an extension for up to 10-year) loan to Agrivision Africa for its seed farm and vertical integration into wheat and maize processing.
Launched in 2020, the AGRI3 Fund aims to de-risk finance for sustainable land use. The investments should either contribute to sustainable agricultural production or prevent deforestation and enhance reforestation, and at the same time improve rural livelihoods. The fund’s main goal is to mobilize over $1 billion of loans by de-risking finance from financial institutions and other key parties in food and agri value chains.

Born from a partnership between UNEP and Rabobank,61 IDH and FMO, the evergreen AGRI3 fund aims to become a $190 million guarantee fund (with Mirova Althelia as the lead-advisor), supported by a $15 million technical assistance facility (managed by IDH). The fund targets guarantees of $2-15 million (smaller sizes possible if they lead to larger investments; max $25 million) to enable projects between $5 and $25 million. Smaller is optional, as long as the structure/project is replicable. The objective to de-risk loans by providing guarantees, is to enable financial institutions to provide loan tenor extensions, larger size loans, and subordinate loans– alongside technical assistance.62

Rabobank and the Dutch government have each committed $40 million to the fund, creating an initial $80 million capital base. Currently, the Fund is operating with Rabobank’s pipeline but it is open to other mission-aligned financial institutions, commercial banks and Development Finance Institutions (DFIs).
Launched in 2013, the Fund’s portfolio – now fully committed – comprises of real assets, including certified agroforestry produce and environmental assets such as carbon (sometimes used as collateral). By investing in sustainable land-use practices, Althelia aims to mitigate the main drivers of deforestation and reduce carbon emissions for the land-use sector.

The Fund has helped avoid 101,300 hectares of deforestation, 41.8 million tonnes of CO₂, and protected 2 million hectares of critical habitat. Its fully invested portfolio includes 10 projects, eight of which are still active, with investments ranging from $7-13 million. Projects are centred around (i) conservation and restoration (e.g. $7 million investment into the Tambopata-Bahuaja Biodiversity Reserve project, which focuses on long-term restoration of the reserve’s buffer zone around the park by producing cacao); (ii) scaling sustainable agriculture (e.g. the Cooperativa Agraria Industrial Naranjillo Ltda., which focuses on the optimization and restructuring of the Cooperative’s cacao and coffee processing capacity); (iii) improving human livelihoods (e.g. PECSA’s sustainable cattle ranching model in Brazil).

Althelia has since been bought by Mirova - an asset manager dedicated to sustainable investing, part of Natixis Investment Managers - and renamed Mirova Natural Capital.
The Amazon Biodiversity Fund is a blended finance fund aimed at creating sustainable business models in the Brazilian Amazon basin to reduce deforestation. The closed-end fund targets a size of $100 million and will invest equity, convertible debt, loans, structured- and profit-participating-debt.

USAID provides a guarantee covering up to 50% of principal for debt allocations. The International Centre for Tropical Agriculture (CIAT) invests in the fund’s junior tranche, providing further de-risking for investors in the senior tranche.

The fund is split into two investment windows: a “Venture” window, investing in very early-stage companies, and a “growth” window, targeting more mature companies with positive cash flows. An example of a potential investment is Manioca, an established company seeking to expand its production of high-quality regional food products.

The Fund is managed by sustainable investment manager Mirova Natural Capital™.
The ARCH Cold Chain Solutions East Africa Fund focuses on developing, financing, constructing and operating new temperature-controlled storage and distribution facilities in East Africa, to reduce the high rates of food spoilage due to lack of refrigeration.67

The fund will focus on greenfield investments in cold chain solutions across the East African region, supported by active local operations partners involved in the logistics network. Target clients are expected to be active mainly in the agriculture/food (~90 percent) and vaccines/medicine (~10 percent) sectors. ARCH Emerging Markets Partners, the fund manager, is committed to sustainability and will aim to source energy needs via off-grid renewable power production and minimize waste and biodiversity impacts.68

Currently, the European Investment Bank is considering a €15 million ($20 million) investment into the fund.

In July 2020, the Fund has announced a $70 million investment to construct a temperature-controlled warehouse across Kenya, with its flagship warehouse (15,000 square metres) being planned in the Tatu City Special Economic Zone in Nairobi.69
California FreshWorks provides grants and loans to food enterprises aiming to increase access to affordable healthy food, spur economic development and job creation while ensuring racially and socially equitable access to food in underserved and low-income communities in California.70

The fund, managed by Capital Impact Partners (formerly NCB Capital Impact), is organised into three layers: senior debt ($100 million), subordinate debt ($25 million) and first loss capital ($7.5 million).71 The programme provides technical assistance and financing (between $50,000 and $3 million, at 5-6 percent) to innovative projects along the food value chain that are not yet investment-ready, but can demonstrate a path to profitability within 12 months. These loans can be used for real estate acquisition, construction and tenant improvements, facility expansion and upgrades, working capital, inventory, or equipment purchase.

Investors in the fund include: five banks and insurance company in the senior tranche, Calvert Foundation, Capital Impact and TCE providing the subordinate debt; JP Morgan Chase Foundation, CDFI fund and TCE providing first-loss cover in the form of grants.72

Investment examples include a $900,000 ($100,000 working capital, $800,000 community facility) loan to Mandela Partners, an Oakland, CA (USA) food co-op to establish their “Ladder Up” fund for supporting suppliers; a $650,000 ($450,000 community facility loan, $200,000 line of credit) investment into Ag Link, a Central Valley, CA (USA) local fresh food supplier to low-income communities; and a $13 million investment into the Vallarta Supermarket in Fresno which provides healthy, local food to an underserved community in Fresno, CA (USA).
The Food Securities Fund provides season-long working capital loans to agricultural aggregators (cooperatives, processors, traders) in emerging markets, addressing the common gap of timely and affordable credit. Structured and launched by Clarmondial, the fund combines an innovative investment approach with a regulated open-ended fund structure suitable to institutional investors, allowing it to deliver impact at scale.

Credit assessment favours supply chain relationships over the traditional focus on collateral availability. It allows the Fund to support aggregators prior to harvest and throughout the agricultural cycle. In addition to financial criteria, the loans are linked to sustainable management practices and monitoring of social and environmental standards, including deforestation-free supply chains, climate-smart agriculture, smallholder engagement and improved transparency.

Conservation International and WWF are founding members of the Fund’s Impact Advisory Board. Clarmondial also received support from Convergence, Good Energies Foundation and Climate KIC. The risk blending of the fund comes from a USAID commitment of $37.5 million in credit guarantees, through the Bureau for Food Securities and the DFC, and from value chain partners e.g. larger corporates. The Global Environment Facility (via Conservation International) has committed $15 million to the initiative.73

The fund has been approved by the Luxembourg regulator. Public and private sector investors have confirmed their interest and initial investor on-boarding processes are taking place. The fund expects to make its first investments in 2020.
Launched in 2017, the Climate-Smart Lending Platform (CSLP) aims to assist agricultural lenders to incorporate climate risk into their loan portfolios, and thus drive the adoption of climate-smart agriculture by smallholders. Today, most agricultural loans fail to price in negative externalities linked to unsustainable farming practices. Additionally, there is often very little data to assess investments into smallholder farmers, making it difficult to invest in them. The CSLP tries to address both of these problems by aiming for mainstream credit scores that are linked to climate-smart agricultural practices. This provides smallholders with a climate credit score, which is expected to drive sustainable land-use practices and increase climate resilience of both farmers and lenders.74

The CSLP platform includes three key tools: climate-smart credit products and process designs; a climate-smart credit scoring tool; and an environmental compliance monitoring tool. Credit scores will be based on sustainable farming practices, incentivising their uptake by farmers. The platform will provide lenders with plug-in credit scoring technology. Furthermore, the platform will use remote sensing to cross-reference the creditworthiness of borrowers located in difficult areas (compliance monitoring). Lastly, the platform will be able to provide early warning systems for credit and climate-related loan defaults to lenders.75

In addition to the original initiators – F3 Life, Financial Access, IUCN, and the Climate Policy Initiative’s Global Innovation Lab for Climate Finance – the platform is supported by Partnerships for Forests to set up a minimum viable product (MVP) that offers a solution which is replicable and scalable, aiming to enable access to climate smart finance for large numbers smallholders at low costs and manageable risk for loan providers. The Sophia Foundation has contributed funding in exchange for equity, alongside its support to incubate the F3 Life component of the platform. With IUCN support, the national Rwandan climate fund intends to assist the project in Rwanda. Furthermore, the Netherlands Foreign Trade and Development Cooperation is also providing support.76

The platform aims to convert and restore 1.5 million hectares of land by 2026 through climate-smart practices. This is predicted to improve the livelihoods of 1 million farmers, by increasing farmers’ yields by two to four times under extreme weather conditions compared to business-as-usual practices.77
Global Fund for Coral Reefs

The Global Fund for Coral Reefs (GFCR) is a blended finance vehicle to protect and restore coral reefs through investing in and incubating solutions that alleviate pressure on the ocean ecosystem. It aims to achieve four outcomes:

• Protection of priority coral reef sites and climate change resilient refugia
• Transformation towards sustainable livelihoods of reef-dependent communities
• Coral reef restoration and adaptation technologies
• Recovery of coral reef-dependent communities to major shocks (e.g. large storms, health crises, etc.)

GFCR is the first UN Multi-Partner Trust Fund for SDG 14 (Life below Water). The blended fund consists of a Grant Window ($125 million) managed by the UN Grant Administrator and an Investment Window ($375 million) managed by BNP Paribas and Mirova Natural Capital. Through both windows, the Fund hopes to mobilize an additional $2-3 billion in public and private capital. The GFCR will invest in projects and companies aimed at improving (directly or indirectly) coral reef health and regeneration. These include marine protected areas (MPA), eco-tourism, sustainable fisheries, sustainable aquaculture, reef insurance, waste management, and access to clean energy.

Through the Grant Window, GFCR will deploy grants to improve the investability of priority projects and businesses and their enabling environments (e.g. marin spatial planning). The Investment Window will provide long-term debt and equity.
Launched in 2018, IDH Farmfit is a blended finance fund supported by a €30 million IDH Farmfit Business Support Facility. Together, they aim to catalyse investments from commercial capital in the agriculture sector (e.g. SME, traders, financial institutions) by leveraging public financing to de-risk investments in smallholder farming and lift 5 million smallholder farmers out of poverty by 2025.80

IDH Farmfit Business Support Facility provides technical assistance to banks and companies to produce cost-effective inclusive business models for smallholders, as well as providing tools to analyse the viability of businesses. The support facility is supported by the UK Department for International Development and the Bill & Melinda Gates Foundation.

The fund is a cooperation between Jacobs DE, Mondelez, Unilever, Rabobank and the Dutch government. It will use a range of instruments including guarantees, subordinated loans, and equity and mezzanine financing to invest in sustainable businesses that provide services, inputs and credit to smallholders. A USAID guarantee of up to $250 million covers senior lenders’ losses by 40 percent in any given transaction.81, 82

An example investment of the IDH Farmfit fund is its provision of a guarantee to Neumann Kaffee Gruppe, a green coffee trader. Through the first loss guarantee provided by IDH, they are now able to provide short-, medium- and long-term financing to its coffee farmers, which is delivered through a mobile payment system.83

Stakeholders:
Rabobank; IDH; Jacobs DE; Mondelez; Unilever; UK Department for International Development; Bill & Melinda Gates Foundation; USAID

Status:
Operational
Land Degradation Neutrality Fund (LDN) is a blended finance vehicle investing in projects that directly or indirectly reduce or reverse land degradation. It invests debt (mezzanine, profit-sharing loans) and equity (minority and majority positions), with investment sizes ranging from $5-20 million and a tenure of 10 to 15 years. The target size of the fund is $300 million, of which 20-30% are reserved for first loss capital. Through its investments, the LDN aims to fill the market gap of providing financing with long tenure terms, flexible repayment structures and longer grace periods to land restoration activities. The fund is co-sponsored by the United Nations Convention to Combat Desertification, and investors include the EIB ($50 million) and French Agency for Development as anchor investors, private capital providers like Fondaction, BNP Paribas, and the de-risking partners IDB Invest, GEF and the Government of Luxemburg (amongst others). LDN also includes a technical assistance facility, which is managed by IDH, to provide pipeline for the investment fund. LDN’s goal is to transition half a million hectares of land to sustainable land management practices, expected to result in the storage of 35 million tons of CO2 equivalent and create or support 100 thousand jobs. Within its impact framework, the fund is also committed to promoting gender equality and social inclusion. An example investment of the LDN is the Urapi programme, which is, in partnership with four Peruvian coffee cooperatives, implementing agroforestry projects on 9,000 hectares of degraded land.
The Meloy Fund for Sustainable Community Fisheries is an impact investment fund that invests debt and equity into enterprises that support the transition towards sustainable coastal fisheries. Over its ten-year lifespan, it aims to create a positive impact on 100,000 fishers, and place over 1.2 million hectares of coastal habitat under improved management.88

Meloy Fund GP, a subsidiary owned by Rare, manages the fund. The fund makes debt and equity investments in fisheries-related entities. It aims to invest $1 - $5 million in companies that are too large for microfinance loans but have yet to grow enough for private equity.89 The investments are made in synchronisation with Rare’s main programme and are targeted to create demand for its Fish Forever Programme.90

Investors into the fund include Conservation International, GEF, the Jeremy and Hannelore Grantham Environmental Trust, J.P. Morgan Chase, the Woodcock Foundation, USAID and FMO in 2018, bringing the fund to a final close of $22 million.

Example investments by the fund include $1 million in Meliomar Inc, a Philippines-based fish aggregator, processor and trading company that has agreed to source sustainable fish from local Filipino communities, expected to create over $2.5 million in additional annual income to 16,000 local fishers and improve 12,000 hectares of marine ecosystems by 2021.91 Another example is an investment (terms undisclosed) into PT. SIG, an Indonesian fish processor exporting fresh and frozen yellowfin, to advance the company’s ESG targets.92
The Nature+ blended finance fund aims to address a critical gap in early-stage venture support for regenerative businesses that need to scale. The fund is a collaboration between the International Union for Conservation of Nature (IUCN) Mirova Natural Capital and the Coalition of Private Investment in Conservation (CPIC). The Global Environment Facility (GEF) is an anchor investor in the fund, providing $8 million for first loss investor protection.

The fund - planned for launch in early 2021 - will invest in nature-based solutions including:
• Marine, coastal resilience and fisheries
• Forest protection and sustainable management
• Forest landscape restoration (including agroforestry)
• Sustainable agriculture
• Freshwater and green natural infrastructure projects

Investees will be selected for their impact on biodiversity, improvement to sustainable land use in production systems, equitable socio-economic impact on local communities, innovativeness, additionality, scalability and replicability, contribution to gender equality and management of environmental and social risk.

The Nature+ Accelerator fund will deploy grants, debt and equity through three windows:
• Seed: $5 million in repayable grants or convertible notes (approx. $100,000 per 50 projects)
• Early Venture: $15 million in debt and equity (approx. $1 million per 15 projects)
• Venture: $20 million in debt and equity (approx. $5 million in 4 projects).

The fund expects to screen a minimum of 500 opportunities and source the pipeline through an open application process. By 2030, the fund aims to support 70 investment deals through all fund windows, creating measurable social, climate and land use impacts.
Nutritious Foods Financing Facility

The Nutritious Foods Financing Facility (N3F) is an impact first fund which aims to unlock the potential of local food systems in Sub-Saharan Africa to increase access to nutritious and safe foods in the region, particularly for lower-income populations. The Facility will provide tailored financing and technical assistance to small- and medium-sized enterprises (SMEs) that operate along the food value chain to increase access to nutritious foods through wider distribution and improved affordability, variety, and desirability.

The fund aims to address the financing gaps for SMEs producing nutritious foods consumed domestically by the vulnerable population within sub-Saharan Africa. It will do so via a blended capital structure, which includes different capital tranches, and will be funded through a combination of public and private capital. The N3F will also mobilise capital from donors and philanthropies as grants for technical assistance to be provided to investees and as catalytic capital to mobilise additional private investment funding. Alongside the Fund, the Facility will also provide technical assistance to investee companies to improve their business models and increase their nutritional impact, with consideration of gender equity and environmental sustainability. In order to track and maximise the N3F’s impact, GAIN and Incofin have developed a set of novel nutrition-focused criteria for the Facility: better measurement of the nutritional impacts of agribusinesses is essential, as such, indicators are rarely included in impact reporting frameworks. The N3F’s nutrition criteria and its measurement and impact framework will facilitate the selection of SMEs producing foods of high nutritional value, whilst also documenting and measuring the impact of the fund on increasing the supply of nutritious foods in the region.

The fund will be managed by Incofin Investment Management, a leading impact fund manager focused on microfinance and rural and agricultural finance. GAIN will act as the fund’s sponsor and will manage the Facility’s technical assistance component by providing technical assistance to the SMEs. The Facility has been developed with the support of the Netherlands Ministry of Foreign Affairs and has secured commitments from the Rockefeller Foundation and Irish Aid.
responsAbility Investments is an asset manager with $3.5 billion assets under management from private, institutional and public investors. The company supplies debt and equity financing predominantly to non-listed firms in emerging and developing economies in the energy, agriculture and finance sectors.

responsAbility is getting ready to launch its second sustainable food and agriculture private equity fund (responsAbility Food & Agriculture II), focused on providing growth capital to companies across the agricultural value chain in Asia to improve rural livelihoods, promote sustainable agriculture and strengthen value chains.

The fund will invest primarily in mid- and downstream companies, including supply chain and infrastructure-, food and beverage products- and food distribution companies. Through its downstream position, it aims to influence upstream food producers, traders, and aggregators to implement sustainable sourcing and (production) practices.

The fund is planning to take minority stakes in 6-8 companies, with a projected ticket size of $10-35 million (average $20-25 million). In addition to normal due diligence, the investee companies will be screened for ESG alignment. Through this screening the fund plans to create impact through:

- Increasing productivity and income for smallholder farmers
- Fostering sustainability in agriculture upstream production
- Boosting sustainability in processing/production of food
- Enlarging the supply of sustainable food and agricultural products

The strategy builds on the experience of the responsAbility Agriculture I ($67.4 million). Portfolio companies include: Samunnati, an Indian financial service provider offering credit and market linkages to smallholder farmers and SMEs across the agricultural value chain; and Wingreens Farms, an Indian high-quality ingredient farm to table company.95,96
Root Capital

Critical transitions:
- Productive & Regenerative Agriculture
- Protecting & Restoring Nature
- Stronger Rural Livelihoods

Innovation: Blended finance funds

Geographic focus: Latin America, East and West Africa, Indonesia

$: $1.4 billion loans disbursed

Founded in 1999, Root Capital is a non-profit providing loans to small, growing enterprises in the agricultural sector to improve the livelihoods of smallholder farmers. Root Capital fills the funding gap experienced for small and growing enterprises that are too large for microfinance but too small for conventional banks, which require collateral and a track record to receive credit.97

Root Capital disburses loans ranging from $200,000 to $2 million, with repayments based on harvest and sales cycles. In sub-Saharan Africa, Root Capital focuses on coffee, tree nuts, and local food crops. In Latin America, it mainly engages in coffee and cocoa; while it mostly focuses on coffee and coconut sugar in Indonesia. Root Capital also provides capacity building that strengthens governance, financial management, and agronomic capacity and helps them build lasting relationships with international buyers. Loans are conditional upon passing environmental screens and must comply with sustainable best practices, to receive international certification. Based on a triangulation model, Root Capital pre-finances agricultural enterprises using purchase orders from international buyers, who will pay once the produce is exported. By using the purchase order as a form of collateral, Root Capital disburses the revenues to the enterprises, deducting the loan and interest rates.98

Root Capital uses a blend of private and public capital to structure its operations. USAID provided a guarantee to the non-profit, while the money to disburse grants are provided from philanthropic sources (e.g. Ikea Foundation, Mastercard Foundation amongst others). Root Capital’s subordinate debt is also served by philanthropic capital (e.g. Skoll Foundation, Silicon Valley Community Foundation) while its senior debt is provided by development finance institutions (e.g. IDB, MIF, OPIC – total: $20 million), philanthropic capital (e.g. family foundations), impact investors and corporates (e.g. Starbucks, General mills and other).99

To date, Root Capital has worked with more than 735 clients who represent 2.3 million farmers. In 2019, Root Capital disbursed $121 million, financed 201 business, and trained 458 businesses.100 Example investments include: more than $5 million in cumulative financing to an Indonesian woman-owned, 2,000 farmers strong coffee cooperative;101 $2.5 million in cumulative financing to a sustainable cocoa cooperative in the Peruvian Amazon, with 60 percent of its members being indigenous communities;102 and credit summing up to over $1.8 million (in addition to $20k in grants) to a Kenyan grain aggregator that includes a gender equity workstream.103

Stakeholders:
- USAID; Multiple Philanthropic agencies; DFIs; Impact Investors; Corporates

Status:
- Operational
The $132 million Sustainable Ocean Fund (SOF) provides growth capital to scalable businesses that build resilience in coastal ecosystems and create sustainable economic growth and livelihoods. SOF is building a blended portfolio of sustainable seafood, circular economy and conservation focussed businesses. The fund has a blended structure, having secured a $50 million Development Credit Authority facility with USAID, which will provide a principal protection guarantee covering eligible projects in the portfolio. As of Nov. 2019, the fund has $92 million in commitments from (but not limited to) the European Investment Bank, Axa Investment Managers, IADB, FMO, and Caprock Group. The geographical focus of the fund will be 30 percent in Asia and Pacific, 40 percent Latin America and the Caribbean, and 30 percent Africa. Mirova Natural Capital (former Althelia) has also partnered with Conservation International and the Environmental Defense Fund for scientific and technical expertise.

As of 2020, the Fund has invested more than half of its assets in circular economy initiatives, including fair trade and chemical plastic recycling and port facilities; around 40 percent in sustainable seafood including marine aquaculture, by-catch reduction technologies and insect protein; and 3 percent in marine conservation through MPAs. More than half of the funds have been awarded to start-ups.
Founded in 2005, New Forests is a sustainable real assets investment manager focusing on generating positive impact alongside financial returns in conservation, rural land management and sustainable forest plantations.

New Forests manages multiple funds investing in sustainable forestry across Southeast Asia, New Zealand, Australia and North America. Its investments include brownfield plantations, greenfield developments, processing facilities and conservation finance projects. Institutional investors typically invest in New Forests funds.\textsuperscript{107}

New Forest’s Tropical Asia Forest Fund (TAFF) was the first sustainable forestry fund for institutional investors in Asia.\textsuperscript{108} It is focused on sustainable plantation forest management in Southeast Asia and had a final close in 2013 at $170 million in capital commitments.\textsuperscript{109} New Forests is currently developing the Tropical Asia Forest Fund 2 (TAFF2), its second fund focused on sustainable forest plantations in Southeast Asia. It will invest in high sustainability plantation forestry in Indonesia, Laos, Cambodia, Vietnam, and Malaysia. TAFF2 will target investments where active investment management can add value and support the transition of Southeast Asia’s forest industry toward sustainable forest management, and support the development of the whole industry in terms of training, high-quality resourcing, silviculture, information and business systems, and ESG performance. A blended finance structure will help support impact outcomes in climate change mitigation, biodiversity, and community engagement and development. TAFF2 expects to have its first close in early 2021.

Across its portfolio, New Forests manages approximately 1 million hectares of lands and forests. In Asia, this includes PT Hutan Ketapang Industri, a large scale Indonesian FSC certified rubber plantation; Mekong Timber Plantations, an FSC certified eucalyptus plantation in Laos; and Acacia Forest Industries, an FSC certified eucalyptus plantation in Sabah, Malaysia.\textsuperscript{110}
The Tropical Landscape Finance Facility (TLFF) is an Indonesian government-endorsed blended finance facility, focused on sustainable agriculture and renewable energy expansion in Indonesia.111 TLFF includes a lending platform, managed by ADM Capital with BNP Paribas as structuring adviser and arranger, as well as a grant fund, managed by the UN Office for Project Services. UN Environment and ICRAF manage a Jakarta based secretariat for the facility.

TLFF’s first transaction is a sustainability bond for PT Royal Lestari Utama (RLU), a joint venture between Michelin and a subsidiary of Indonesia’s Barito Pacific Group. The transaction is the first corporate sustainability bond issued in Asia. The use of proceeds from the bond are to finance the production of sustainable natural rubber, the restoration of forested buffer zones and the implementation of a Community Partnership Programme (CPP)112 in Jambi and East Kalimantan provinces. In all, approximately half of the rubber plantation (45,000 out of the total 88,000 hectares) will be set aside for conservation, restoration and community partnership programs, while the remaining area is for commercial plantations. A Wildlife Conservation Area (WCA) created in late 2017 acts as a buffer zone to stop further encroachment into the 143,000 hectare Bukit Tigapuluh National Park – one of the world’s most precious ecosystems and wildlife habitats for endangered species such as the Sumatran tiger, the orangutan and the Asian elephant. The CPP is designed to enhance the livelihoods of the 50,000 people living in and around the concessions and train 24,000 local farmers.113 Additionally, it is expected that at maturity the plantation will employ 16,000 people who will see additional benefits in housing, health care and education as well as improved health from reduced fires as the company works to stem slash and burn agriculture in the concessions.

The bond was tranched according to investor appetite and Moody’s rated the Tranche A 15-year notes ‘Aaa’ based on a USAID guarantee. The &Green Fund is a key investor in the bond, purchasing a 15-year Tranche B note and thus helping to catalyse additional investors (see &Green case study).114 Michelin has committed to a 75 percent off-take from the project.
The West African Initiative for Climate-Smart Agriculture is a blended finance fund, investing in climate-smart agricultural practices by smallholder farmers in west Africa. It aims to convert 185,000 hectares of farmland to CSA (climate-smart agriculture), mitigate 2 million tonnes of CO2 per year and improve the food security and income of 90,000 smallholder households.115

The fund is composed of a financing facility (80 percent), managed by ECOWAS Bank for Investment and Development (EBID); and a technical assistance facility (20 percent) managed by the Regional Agency for Agriculture and Food (RAAF). The financing facility provides equity, loans, and guarantees below $1 million directly to agribusinesses, or on-lends to local financial institutions at subsidised rates. The technical facility supports intermediary financial institutions to design investment products linked to CSA. Additionally, the technical facility helps farmers adopt CSA practices.116

Currently, ECOWAS and EBID have committed $8 million to finance the first pilot, out of a total of $18 million to spend over the lifetime of the fund. The fund plans to pilot its approach in six ECOWAS member states, and if successful, aims to scale up the fund’s engagement across all 15 member states.
Founded in 1988, the Conservation Fund is a not-for-profit organisation with a mission to preserve critical ecosystems in the US, while pursuing economic development for local communities.

Due to the fragmented nature of land ownership in the US, forests have multiple owners, which prevents the development of holistic management plans and allows for unsustainable management practices to take place. Through the Working Forest Fund, the Conservation Fund protects forests by purchasing and converting them into public goods. By working in partnership with land trusts, public agencies and sustainable timberland managers, the WFF secures permanent protection, acquiring the most-high value, at-risk private forestry land with philanthropic, state and federal agencies capital. With the acquired land, WFF develops a sustainable harvest, habitat and wildlife plan. WFF simultaneously acquires a permanent conservation easement, forever preventing the commercial development and fragmentation of the forests. The easement allows for public access and sustainable timber harvesting using best practice. Once the easement is acquired, the WFF sells the land to private and public buyers, reinvesting capital back into further forest acquisitions.

WFF has secured over 683,000 acres of land, deployed $500 million in acquisition capita and sequestered 159 million tonnes of CO2. The fund’s portfolio includes North Coast Forests, a 74,000-acre California redwood forest that supports 1,757 jobs, stores over 23 million tonnes of CO2 and is lightly managed for biomass growth, forest health and economic viability; Logan & Hatfield McCoy, 32,410 acres of forest lands, supporting 47 jobs, storing over 6.8 million tons of CO2 with the potential for economic diversification through outdoor recreation, wildlife tourism, and wood products in coal-impacted communities; and Clarion Junction, 32,591 acres of forest lands supporting 328 jobs, storing about 7.9 million tons of carbon, with the opportunity to secure the supply chain of a local mill.

The fund plans to rapidly scale its model, seeking to secure 5 million acres of high-value conservation forests over the next 10–15 years.
Earthbanc is a green digital investment platform incentivising effective, systemic action on climate change by building and deploying superior carbon offsets through the financial & corporate market segments. This supports businesses and individual customers alike to offset their emissions while directly investing in high impact, high quality regenerative projects around the world.

Using satellite technology and machine learning, Earthbanc is increasing the efficiency of carbon verification in both trees and soil by 80,000-fold, thereby opening carbon markets to 500 million small and large holders, who can now monetise their carbon. This solves many of the social inequity problems that current approaches to forest and carbon projects create. Earthbanc verified carbon offsets provide deep social and environmental impact, and track biodiversity metrics, making them the obvious choice for businesses that are serious about contributing to the SDGs.

Earthbanc provides a digital platform for financial services to channel investments into renewables, regenerative agriculture and conservation projects. Earthbanc’s carbon portfolio focuses on high impact projects such as protecting biodiversity hotspot forests and ecosystems, regenerative agriculture and agroforestry. These provide some of the most cost effective climate change mitigation and adaptation benefits, whilst also strengthening livelihoods and empowering communities to thrive. On its platform, Earthbanc offers Grow Bond that achieved 6 percent return (2019) whilst sequestering two tonnes carbon for every $100 invested.

In 2020, Earthbanc “graduated” from a Central Bank Blockchain Fintech Sandbox, proving the robustness of its blockchain technology. Other backers of Earthbanc are the European Space Agency Business Incubator, EIT Climate-KIC Nordic Accelerator and impact investors globally.

Stakeholders:
EIT Climate-KIC Nordic Accelerator

Status:
 Operational
Farmers are typically forced to sell their produce immediately after harvesting, when the price is lowest, due to limited access to storage facilities and finance. Ergos Business Solutions addresses this barrier by operating a network of micro warehouses that enables farmers to store their produce, reduce waste, use the stored goods as collateral to access immediate financial liquidity, and sell the produce when it reaches the desired price.121

Through a mobile app, Ergos provides farmers with a warehouse stock count and real-time market prices. Farmers can use digital warehouse receipts as collateral with loan providers to access short-term funding allowing them to wait to sell the produce at a higher price.122 Maize farmers who use the facilities have sold their produce at prices 20-30 percent higher than before using Ergos.123 Through its work, Ergos is providing better livelihoods for farmers as well as reducing food loss and waste at the production level.

Ergos is supported by Aavishkaar, an early-stage impact investor focused on rural enterprises in underserved geographies. Aavishkaar has a track record of $155 million invested in 300 start-ups since its launch in 2001.
FarMart is an agri-fintech platform based out of India, that helps smallholder farmers receive digital credit and farm inputs. Through this, it aims to fill the credit gap (less than 20 percent of Indian smallholders have access to formal credit124) faced by India’s rural farmers.

FarMart’s proprietary credit underwriting algorithms analyse smallholders’ creditworthiness based on 50 alternative soft and hard data points. This reduces credit transaction costs and time enabling farmers access to formal credit. No cash disbursement is given to farmers, ensuring zero misutilization of funds. Farmers receive a virtual credit card (a 10-digit credit number on their mobile phone) through which they can buy high-quality seeds, fertiliser and other inputs from offline merchant partners. The loans are tied to a farmers’ harvest cycles and offer flexible repayment options (in small amounts of bullet repayment) as the farmers have seasonal cash flows. This increases farmers’ income by smoothening the entire cycle of credit for the farmer. The resulting flexibility has increased FarMart farmer’s productivity by 15-20 percent.125 In 2020, FarMart has joined the Catalyst Fund portfolio.126

Within its pilot phase, FarMart reached over 300 farmers and, distributed over $20,000 in credit, of which less than one percent did not perform. FarMart is planning to scale up to over 100,000 farmers, distributing approximately $13 million in credit as of October 2020.127 FarMart is also exploring partnerships with advisory companies for weather and crop advisory services for its farmers to further improve their productivity.
Farmcrowdy, Nigeria’s first digital agricultural platform, connects smallholder farmers in Nigeria with financing, insurance, technical assistance and direct access to end customers. Through these services, it aims to increase investment in, and empower smallholder farmers to boost Africa’s food security.

Through the platform, (international) investors invest in crop cycles from inception to harvest, equipping farmers to invest in productivity-enhancing tools and practices, with guaranteed purchase of produce to off-takers. In addition, farmers are given on-the-ground advice and training in agricultural practices.128

Farmcrowdy uses a profit-sharing model splitting the post-harvest profit between key stakeholders: 40 percent for farm sponsors; 40 percent for farmers; and 20 percent for Farmcrowdy. The platform coordinates with pre-arranged buyers to sell the farm harvest when the crop cycle is complete. Return-on-investment for sponsors has been between 6 and 25 percent, depending on the crop, with the risk of crop failure mitigated by an insurance cover.129, 130

So far, the platform has connected more than 25,000 small-scale farmers with over 4,000 unique sponsors. Launched by young entrepreneur Onyeka Akumah, the platform not only facilitates increased investment and market opportunities for farmers but is itself generating jobs and driving growth in a fundamental sector of sub-Saharan Africa’s economy.131

**Stakeholders:**
- GSMA Ecosystem Accelerator Innovation Fund; Ajayi Solutions; Niche Capital; Christof Walter; Cox Enterprises

**Status:**
- Operational
Hello Tractor

Africa’s “Uber for Farmers”, Hello Tractor is an Internet-of-Things solution for shared services in agriculture, enabling smallholder farmers to connect with tractor owners via a digital platform and SMS service. Founded in Nigeria, the service is now also active in Kenya, Mozambique, Bangladesh and Pakistan. Based on a pay-as-you-use model, farmers can hire affordable equipment inputs to boost agricultural yields, while remote asset tracking and virtual monitoring provide security to tractor owners. Hello Tractor reduces investment costs of farming by turning an unaffordable fixed cost into a variable one, helping to fill the mechanisation gap that characterises much of smallholder agriculture in rural sub-Saharan Africa and lowering the barriers to entry for young people to engage in agriculture.

The service allows tractor owners and dealers to also benefit through services like demand management, tractor and fleet management and performance monitoring. The company has captured 75 percent of private commercial tractor inflows to Nigeria and supported over 250,000 farmers.

Hello Tractor has partnered with IBM to pilot an advanced agricultural decision-making and analytics tool to operates across its services. This service utilises IBM blockchain and artificial intelligence to:

(i) provide relevant information to farmers on when to cultivate, what to plant and the appropriate fertiliser to use, as well as predictions regarding crop yields to help develop a credit score for loans;
(ii) help tractor owners optimise operations by forecasting future fleet utilisation and predicting maintenance;
(iii) provide real time information to tractor dealers on repair and servicing needs;
(iv) enable banks and financial institutions to make better-informed credit decisions for farmers and tractor owners based on trusted and forecasted data; and
(v) inform government policy around incentives, regulations and investment prioritisation.

Stakeholders:
Hello Tractor; IBM

Status:
Operational
SunCulture is a technology company aiming to empower and increase smallholder farmer’s yields through the development, financing and sale of off-the-grid solar-powered water pumps.

Many smallholder farmers in Africa are relying on expensive diesel-powered or unreliable and labour-intensive manual irrigation techniques for their crops. Powered by solar energy, SunCulture’s irrigation systems significantly reduce farmers’ operating costs. SunCulture has a wide variety of products ranging from basic solar-powered water pumps, solar-powered irrigation system (including Africa’s first commercial solar-powered product), and a “ClimateSmart Battery” irrigation systems that also powers a household’s lights, charges phones and has an optional TV power supply add-on. Additionally, SunCulture is offering business advice to smallholder farmers and offers “pay-as-you-go” financing, enabling smallholder farmers to close the financing gap to acquiring the irrigation systems.

So far, SunCulture has been a success, with farmers reporting increases of up to three times usual crop yields where new irrigation systems are installed, significant cost reductions when SunCulture’s systems replace fuel-powered water pumps, and a significant labour reduction where they replace manually operated wells. SunCulture currently operates out of Nairobi, Kenya and serves the African market. The company vision is to expand globally, targeting the 500+ million smallholder farming households around the world.
Danone is one of the largest dairy producers in the world, working with over 140,000 farmers to produce 8 billion litres of fresh milk each year. Danone seeks to empower the next generation of farmers by offering long-term contracts that can span multiple generations, with prices evolving in accordance with production costs rather than market conditions. This price management stabilises profit margins for farmers and mitigates the effects of market price volatility on farmers’ incomes. A more stable income enables farmers to invest in regenerative and sustainable farming practices.

In 2018, 24 percent of Danone’s milk produced by its farmers came from long-term contracts, up from 19 percent in 2017. In Europe, long-term contracts have been established with 40 percent of farmers.
**GAIN Premix Facility**

**Critical transitions:**

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<th>Innovation</th>
<th>Supply chain innovations</th>
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<td>Geographic focus</td>
<td>Africa, Central and Southern Asia, Latin America</td>
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<td>$75 million</td>
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Founded in 2009, the GAIN Premix Facility was set up to help provide food fortification in developing countries by facilitating a more cost-effective way of acquiring and financing the purchase of high-quality mineral and vitamin premix.  

The GAIN Premix Facility includes: a certification facility, set up with the help of Intertek, to screen and certify premix suppliers against rigorous quality standards; a procurement facility for buyers; and a credit facility offering interest-free credit to premix buyers, to smooth cash flows and supporting national distribution models for premix. Over the years it has achieved a default rate of only 1 percent.

Since its launch, the facility has sourced about $75 million of fortificants and premix blends for buyers across 48 countries in Africa and Central and Southern Asia. The core operations of the Facility are funded by its donors, including the Bill and Melinda Gates Foundation and the Government of the Netherlands.

**Stakeholders:**

- Global Alliance for Improved Nutrition (GAIN);
- Bill and Melinda Gates Foundation;
- Government of the Netherlands

**Status:**

- Operational
Supported by the UK’s Department for International Development (DFID), Trado is a project led by the Cambridge Institute for Sustainability Leadership and a consortium of agricultural supply chain stakeholders including BNP Paribas, Barclays, Rabobank, Sainsbury’s, Sappi, Standard Chartered, and Unilever, using blockchain technology and financial incentives to improve supply chain transparency and sustainability.\(^\text{146}\)

In 2019, Trado launched its data-for-benefits-swap pilot using Provenance’s supply chain tracking technology, built on Ethereum blockchain and Halotrado’s smart contracts. The swap occurs between a supplier providing “first mile” environmental and social data, and a buyer allowing their financing rate to be applied to the working capital financing of the supplier. Suppliers normally only get paid after the product is shipped and have to raise working capital to cover operation costs. Pre-shipment financing at cheaper rates incentivises them to provide additional production data. The pilot was carried out with actual payments and supply of goods from 225 smallholder producers of tea in Malawi for Unilever, covered by Barclay’s trade finance department.\(^\text{147}\)

Receiving financing 35 days earlier than usual increased farmers’ profits by 3 percent. Creating transparency along the supply chain is important for large food retailers as the data can track positive impact and show compliance with environmental and social standards.\(^\text{148}\) Trado plans to test its blueprint on other supply chains to explore other effective uses of the data gathered.
Walmart’s supply chain financing programme

Launched in 2019, Walmart partnered with HSBC to develop a sustainable supply-chain financing programme, providing preferential credit rates to Walmart’s suppliers based on their performance against Walmart’s Sustainability Index program and Project Gigaton. It is a unique form of sustainable supply-chain financing, with financing rates pegged to suppliers’ environmental and social ratings. Suppliers that improve their sustainability credentials will have access to improved financing from HSBC. Suppliers are assessed against their performance in two of Walmart’s programmes:

1. **Sustainability Index**: In 2009, Walmart partnered with the Sustainability Consortium (TSC) to launch its Sustainability Index. The Index gathers data and information across the life cycle of Walmart’s products, identifies the key social and environmental hot spots, and provides an agenda for improvement. Each supplier is scored, ranked against others, and presented with improvement opportunities. By 2017, 70 percent of Walmart’s goods were provided by suppliers who participated in the Index, covering 300 buyers in over 125 categories and representing 3,000 unique products.

2. **Project Gigaton**: Alongside the Sustainability Index, Walmart launched its Project Gigaton in 2017, an initiative to avoid one billion tonnes of greenhouse gas (GHG) emissions by 2030. To date, over 1,000 suppliers have joined the project, conserving 93 million tonnes of emissions. For Walmart’s agriculture supply chain to join Project Gigaton, suppliers need to commit to reducing greenhouse gas emissions, with a focus on efficient fertiliser and water use, manure management, enteric emissions, and feed conversion. Walmart estimates that its agricultural supply chain can potentially reduce 300 million metric tonnes of GHG emissions by 2030.

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**Critical transitions:**

- **Innovation:** Supply chain innovations
- **Geographic focus:** Global
- **$:** n/a

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**Stakeholders:**

- Walmart; The Sustainability Consortium; HSBC

**Status:** Operational
In 2010, the Brazilian Government developed the ABC Plan, the Federal Government’s Strategy for Low-Carbon Agriculture Plan, which aims to shift its land-use policy towards sustainable agriculture by using market-based incentives to drive the transition. The ABC Plan aims to restore 15 million hectares of degraded pasturage; develop 5 million hectares of integrated crops, forest, agroforestry and livestock; expand no-till agriculture by 8 million hectares; replace nitrogen fertiliser with Biological Nitrogen Fixation across 5.5 million hectares; reforest 3 million hectares; and implement biogas and compost infrastructure to handle 4.4 million m³ of animal waste.

BNDES, the Brazilian National Bank for Economic and Social Development, provides preferential credit rates for low-carbon agricultural investments in livestock, forestry and crops, compared to market rates set by the Brazilian Central Bank. The project aims to provide R$1.1 billion in low-interest rate loans to producers who provide detailed plans for the implementation of at least one sustainable agricultural system. 73 percent of the credit is financed by BNDES, with the rest comes from other sources. BNDES channels its resources through accredited banks (e.g. Rabobank and Banco do Brasil), effectively subsidising the below-the-market-interest rate, covering the difference to match market interest rates. The ABC programme is the first of its kind to incentivise low-carbon emission practices through attractive credit lines.

According to Brazil’s Ministry of Agriculture, Livestock and Food Supply, since 2010, the ABC Plan has invested more than R$17 billion ($4.6 billion) through the ABC Plan’s funding line.
In 2019, COFCO International, the trading division of China’s largest agriculture firm managing 100 million tonnes of commodities, signed a $2.1 billion sustainability-linked loan as its core financing facility, from a consortium of 20 banks. To date, it is the largest credit package to be given to a commodity trader. Furthermore, it is the first loan to be linked to sustainability performances in mainland China.157 It demonstrates COFCO’s commitment to sustainable commodity supply chains and transparency.

COFCO’s loan offers lower interest rates dependent on year-on-year improvements of ESG performance.158 The overall loan has three tranches, with a one-year revolving credit facility and a three-year term loan. Interest rates are tied to COFCO’s ESG rating from Sustainalytics and specific KPIs -such as around the traceability of soft commodities- with a focus on soy from Brazil. BBVA, ING and Rabobank are acting as the lead sustainability coordinators.

COFCO estimates that it will save $1 million a year due to a lower interest rate and plans to use those savings to further fund its sustainability agenda.159
FIRA, Mexico’s development bank has issued two green bonds to finance sustainable agriculture and forestry: the first one in 2018, for MXN 2.5 billion ($130 million) for protected agriculture. The funds were used to finance greenhouse projects with sustainable irrigation systems using precision sprinklers.160

The labelling of the bond as “green” was driven by the cooperation between the Inter-American Development Bank (IDB), FIRA and the Climate Bonds Initiative (CBI), a not-for-profit organisation that has developed a voluntary certification scheme for green bonds. IDB supported FIRA to conduct a study on sustainable protected agriculture in Mexico, which fed into the certification criteria for protected agriculture developed by the Climate Bonds Initiative for the bond. Sustainalytics acted as external reviewer for the certification of the bond.161

The second bond was issued in November 2019 – for the same amount but with a longer tenor (four and a half years rather than three) and with proceeds allocated to sustainable forestry and solar projects as well as protected agriculture.162
Olam is an agri-business operating throughout the agricultural value chain—including the production, processing and trading of food products—across 66 countries. In May 2018, Olam secured Asia’s first three-year sustainability-linked revolving credit facility (RCF), amounting to $500 million.

Olam’s sustainability-linked credit facility is provided by a consortium of 15 banks with loans conditional on the achievement of sustainability targets. Olam has agreed to meet 50 different environmental, social and governance criteria, which will be assessed by Sustainalytics. On a yearly basis, the agreed standards will be assessed against three overarching KPIs (prosperous farmers and food systems, thriving communities, regeneration of the living world), and if achieved, the interest rates of the loan will be reduced based on their performance. Other key stakeholders for the facility include ING Bank as the sustainability coordinator and BNP Paribas as the agent.

A second sustainability-linked loan was taken out by Olam in 2019, amounting to $525 million. Similar to the first one, the facility has three tranches, including a one-year $315 million RCF, a two-year $105 million RCF and a three-year $105 million RCF.

A third sustainability-linked loan amounting to $250 million was agreed in September 2020.
In 2018, the Republic of Seychelles launched the world’s first sovereign blue bond to finance sustainable fishing practices and marine protection.

The bond benefits from two credit enhancement instruments: a partial guarantee by the World Bank (IBRD) of $5 million, and a concessional loan of $5 million from GEF, which partially subsidises the bond’s interest payments from 5.5 to 2.8 percent. The bond was privately placed with three private investors: Nuveen, Prudential and Calvert Impact Capital. The majority of the transaction costs for the bond were covered by the Rockefeller Foundation. Standard Chartered Bank and Bank of New York Mellon assisted in the process and payments.

The proceeds will finance the sustainable transition of small-scale fisheries (the Mahe Plateau Demersal Fisheries Management), including the rebuilding of fish stocks, harvest control and complement marine projects. Furthermore, it provides additional funding for the continued development of Seychelles EEZ marine spatial plan, the World Bank SWIOFish 3 project, and the allocation of 30 percent of marine protected areas for Debt Swap for Conservation and Climate Adaptation. Being the first of its kind, the Seychelles’ Blue Bond can serve as a replicable model for other Small Island Developing States, that are seeking to increase the adaptability and resilience of local communities, and protect marine ecosystems.
Small Island Developing States are burdened with sovereign debt, while also heavily exposed to the risks posed by climate change, such as hurricanes and rising sea-levels. In 2018, the Republic of Seychelles agreed to protect a third of its marine and coastal area in exchange for a reduction of its sovereign debt. This first-ever climate adaptation debt restructuring was brokered between Paris Club creditors and the Seychelles Government and converted $21 million of Seychelles’ debt into investments in coastal protection and adaptation.

The Nature Conservancy’s NatureVest raised a $15.2 million impact loan and $5 million of grant funding from Oceans 5 (a group of philanthropists focused on marine conservation and health) to enable the government to purchase $21.6 million of debt (at a rate of 93.5 cents on the dollar). The transaction was carried out by the Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) – a newly established entity to manage the flow of funds. The government will then issue two promissory notes to SeyCCAT: the first for $15.2 million at 3 percent over 10 years to repay the NatureVest loan, and the second one for $6.4 million to fund the programme of conservation activities and capitalise future endowments.

The financing will help the implementation of a Marine Spatial Plan for the Seychelles Exclusive Economic Zone, an area 3,000 times its landmass. Furthermore, the deal will conserve 400,000 km² of its marine area within the next five years. The Nature Conservancy has been exploring similar deals for other countries that have significant public debt levels and areas of natural environment to protect.
ACRE Agriculture Parametric Insurance

Launched in 2014, ACRE Africa, formerly the Kilimo Salama Parametric Insurance programme, is a weather index-based insurance service provider. Many smallholder farmers' crops and livelihoods are at risk from weather variations, yet many farmers do not have the capital or logistical means to access insurance. A pertinent barrier for insurers is that insurance requires on-farm monitoring of losses, causing high transaction costs, which leads to unaffordable premiums for smallholder farmers.173

ACRE Africa’s index-based insurance product pays out insurance automatically in the case of extreme weather events. The automatic releasing of funds and automated pay-out calculator removes the high cost of the claims process, making insurance premiums more affordable for smallholder farmers. ACRE acts as a service provider, partnering with local aggregators (i.e. cooperatives), agribusinesses, agricultural NGOs, and microfinance institutions to develop a parametric insurance product that allows farmers to purchase insurance premiums through trusted sources. The insurance is distributed by agribusinesses, out-growers, lending institutions, seed distributors linked to mobile network operators and credit cooperatives.

First funded by the Global Index Insurance Facility (GIIF) and Syngenta Foundation for Sustainable Agriculture, ACRE Africa has now partnered with insurers such as UAP Insurance (Kenya), APA Insurance (Kenya), SORAS Insurance (Rwanda) and reinsurers Swiss Re and Africa Re.174 As of September 2020, over 1.7 million farmers across Tanzania, Rwanda and Kenya have been insured for a value of over $181 million by ACRE’s weather index-based insurance.175

Stakeholders:
ACRE Africa; Global Index Insurance Facility; Syngenta Foundation for Sustainable Agriculture; SORAS; Swiss Re; APA Insurance Kenya

Status:
Operational
The Mesoamerican Coral Reef Insurance is a parametric insurance scheme devised to protect the health of a part of the Mesoamerican reef, in order to maintain both its ecosystem services and storm mitigation function.

In 2017, the Nature Conservancy partnered with Swiss Re and the state government of Quintana Roo to develop the first parametric insurance product pilot that is aimed at enhancing the resilience of coral reefs and the communities that depend on them, both as a source of coastal protection and for economic livelihoods. This pilot is now being taken over by Global Parametrics, to fully commercialise and replicate the pilot scheme across the whole Mesoamerican reef.

In the pilot, the insurance scheme is applied to a precise area of the Mesoamerican reef, identified based on the occurrence of extreme weather events. The insurance will pay out 40 percent of the total when wind speeds reach 100 to 110 knots within the designated area, and in full when the wind speeds reach 160 knots. A fund was set up as the beneficiary for the insurance, with the requirement to only use the pay-out funds for the restoration and rehabilitation of the reef (50 percent of pay-out) and coastal ecosystems restoration (50 percent). The establishment of the beneficiary fund allows for the swift reparation of the reef after a damaging storm event, which is critical to ensure the reef’s continued ecological functioning. The reef not only provides livelihoods to fishers and the tourism industry, but also serves as a natural storm buffer protecting the Riviera Maya, which provides $10 billion per year to the national GDP.

The State Government of Quintana Roo has purchased the insurance product using tourism tax revenues. The $3.8 million insurance policy is provided by Afirme Seguros Grupo Financiero, a Mexican-based insurer.
The Pacific Islands are vulnerable to natural disasters, yet only 9 percent of the Fijian population are covered by life insurance. The United Nations Pacific Financial Programme (PFIP) aims to build a microinsurance programme, which can act as a vital tool to aid coastal fishing communities to adapt and prepare for natural disasters and their consequent financing needs.¹⁷⁹

In partnership with the Pacific Communities (SPC) fisheries and marine ecosystems, the PFIP is researching the potential risks facing local communities, in order to build an implementation strategy for a new microinsurance solution for the most vulnerable populations in the region. The research will look into how natural disasters negatively impact the assets and living standards of the coastal communities.¹⁸⁰

The programme is funded by the Regional Disaster Resilience in the Pacific Small Island Developing States (RESPAC) and the Russian Federation and is implemented by the United Nations Development Programme.¹⁸¹
Launched in 2018, Sprout Insure is a German-based start-up, responsible for establishing a blockchain platform to provide climate risk insurance to smallholder farmers in developing countries. Through the use of technology, Sprout aims to increase the crop insurance coverage rates of smallholder farmers, of which currently only 20 percent (less than 3 percent in sub-Saharan Africa) have access to crop insurance. This access to insurance is expected to increase smallholder farmers' resilience to climate change.

Using a distributed ledger system, Sprout Insure builds transparent smart weather-indexed crop insurance contracts. During an extreme weather event, the insurance is paid out automatically, without filing or processing a claim, facilitating quick, transparent, fair and reliable payments.

Sprout Insure has partnered with ACRE Africa and its implementation partners are Etherisc, which builds decentralised insurance applications on the blockchain. A major benefit of using blockchain for parametric insurance is the further reduction in transaction costs in the claims process. Once the platform is at a sufficient scale, estimates show it will reduce costs of issuing contracts by 41%, allowing for a 30% reduction in premiums, and a decrease in claim cycles from three months to one week. At its maximum potential, the platform could mobilise $6 to 10 billion in annual premiums. The pilot, which started in early 2020, is expected to insure 1.2 million farmers in Kenya.
Blue Finance is a social enterprise investing in the management of marine protected areas (MPA). Through its investments, it aims to create local economic development opportunities for vulnerable coastal communities while preserving pristine ocean ecosystems.

Good management of marine protected areas (e.g. biodiversity management, law enforcement) is critical to their effectiveness. However, over 60 percent of MPAs report inadequate funding to provide even basic services. Blue Finance tackles this funding gap by unlocking money from impact investors, DFIs, philanthropies and de-risking partners to implement sustainable revenue mechanisms for the MPAs. Revenue streams are generated from innovative eco-tourism solutions, nature fees, sustainable fishery and blue carbon, which are pooled in a special purpose entity. This entity works with local governments and with local partners (NGOs and communities) to manage the MPA under a long-term collaborative management agreement.

A portfolio example of Blue Finance is the MPA “Arrecifes del Sureste” in the Dominican Republic, which covers 8,000 square kilometres and attracts over four million visitors annually. Blue Finance, partnering with local NGOs, signed a 10-year agreement with the government to co-manage the MPA. To finance the management, Blue Finance has structured a loan from impact investors blended with philanthropic grants. Through this investment, the MPA management is expected to create a marine spatial plan, improve and monitor the health of the MPA, ensure compliance and enforcement, engage local communities, support the MPA’s tourism industry and implement innovative revenue strategies to become financially self-sufficient.

Stakeholders: n/a

Status: Operational
Launched in 2016, Climate Trust Capital (CTC) is a private equity style fund investing in projects that generate carbon offset credits while providing market-rate returns. Through its investments, it aims to generate carbon credits that equate to sequestering 2 million tons of CO2 emissions over ten years.

CTC is a for-profit investment manager, a wholly-owned subsidiary of the Climate Trust (not-for-profit). CTC invests in early-stage, US-based carbon offset projects like grassland conservation, biogas plants and forestry. These projects are certified by the Climate Action Reserve, a carbon credit accreditor, ensuring that the generated carbon credits are transparent, monitored and verified. The fund’s revenues are generated from selling credits on the voluntary carbon markets and traded on the California cap-and-trade program, leveraging market-based incentives to turn a profit. Within its projects, it often partners with mission-aligned partners on the ground.

The fund was brought to existence through a $5.5 million programme-related grant from the David and Lucile Packard Foundation.

Since 2019, the fund has reached $40 million in carbon project funding commitments, and is fully invested in seven projects. Examples of these projects include: a $2.2 million dollar investment in a 113,000-acre improved forest management project in Maine that was developed in accordance with the California Air Resources Board protocol for U.S. Forest Projects; a $1.12 million investment into an anaerobic digester in a dairy farm that traps and destroys methane emitted from the farm’s manure lagoon; and a $262,000 investment in a grassland conservation project, creating conservation easements that protect soil carbon from being released.
The Forest Carbon Partnership Facility (FCPF) aims to mobilise investment in the reduction of emissions from deforestation and forest degradation; forest carbon conservation; sustainable forest management; and the enhancement of forest carbon stocks in developing countries, i.e. REDD+ activities. The FCPF works with 47 countries across Africa, Asia and Latin America to:

1. Support the design of REDD+ strategies; develop baseline emission levels; and measuring, reporting and verification systems through the **FCPF Readiness Fund**. Current funding from donors is $400 million.

2. Deliver results-based payments through the **FCPF Carbon Fund** to countries that have implemented REDD+ strategies and have achieved verified emissions reductions (VERs) from forest and land use. Current funding from donors is $900 million. Private investors are also participating in one tranche of the fund and have committed to buying each VER at a floor price of $5 per unit. The fund is yet to generate VERs.
The Livelihoods Funds are investment vehicles tackling environmental degradation while addressing rural poverty. The funds rely on the support of private companies committed to promoting sustainable development while reducing their carbon footprints or transforming their supply chains, as well as engagement with public organisations, NGOs and civil society to ensure maximum impact. The funds are advised by Livelihoods Ventures.

Livelihoods currently operates two investment funds:

1. The **Livelihoods Fund for Family Farming** (L3F) finances large-scale sustainable agriculture projects that deliver positive environmental impacts across landscapes and improve livelihoods for local rural communities. The financial return for the fund is provided by results-based payments from private and public off-takers that commit to paying for the raw materials, public goods and environmental services generated. Launched in 2015, the fund is committed to investing €120 million over 10 years.

2. The **Livelihoods Carbon Funds** (LCF) finance carbon sequestration projects such as agroforestry, ecosystem restoration and rural energy projects with high social impact, including improved market resilience, higher incomes and better health for vulnerable rural communities. Fund investors receive carbon credits in exchange for their contribution, which they can also use to offset their unavoidable emissions.194 The Livelihoods Carbon Fund #1 has invested €40 million in 9 projects across Africa, Asia and Latin America, planted 130 million trees – benefiting 1 million people – provided 120,000 households with efficient cookstoves and sequestered 10 million tonnes of CO2 over 20 years.194 The Livelihoods Carbon Fund #2, launched in 2017, plans to invest €100 million in carbon sequestration projects, achieving 12 million tonnes of CO2 over 20 years.195
The Great Barrier Reef is valued at AU$56 billion, contributing AU$6.4 billion to the national economy and supporting more than 64,000 jobs. While climate change is the most significant threat to the Great Barrier Reef, poor water quality is the second-highest threat. Tackling climate change is a global challenge but on a local level, improving water quality is a clear positive action that advances towards improving the health of the Reef. This highlights the need for data-driven, measurable market-based products like Reef Credits to be available to investors.

A Reef Credit is a tradable unit that quantifies and values the work undertaken by farmers and graziers to improve water quality flowing onto the Great Barrier Reef. The Reef Credits Scheme is the first water quality market of its kind in the world, and pays landholders for improved water quality resulting from on-farm actions, without compromising the productivity of their land. The world’s first Reef Credits were issued in October 2020 and purchased by HSBC and the Queensland government. Over 3,000 Reef Credits were issued, preventing more than 3,000 kg of nitrogen from reaching the Great Barrier Reef.

For buyers, Reef Credits provide a measurable, audited water quality outcome tracked against internationally recognised targets and based on actual reduction in pollutants entering the reef.

For landowners, Reef Credits provide the opportunity to recognise, value and monetise the critical actions they undertake to provide cleaner water to the Great Barrier Reef. The scheme encourages investment from corporations and government that diversifies landholder income, integrates sustainable practices, reduces business risk and helps to future-proof their property for years to come.

There is a market opportunity of over 6 million credits by 2030, and this opens the door for more businesses to put the environment on the balance sheet and invest in the future of the Reef and rural Queensland as part of their Environmental, Social and Governance (ESG) strategies.

The unique partnership between GreenCollar and Greening Australia combines expertise in environmental markets – particularly Reef Credits – and large-scale ground delivery of wetland and gully repair to stop sediment and pollutions at source. This partnership aims to significantly scale up investment in the water quality, carbon and biodiversity of Reef catchments.
Sustainable Commodities Conservation Mechanism

Set up by Lestari Capital with the help of Partnerships for Forests, the Sustainable Commodities Conservation Mechanism (SCCM) aims to provide credible, transparent and efficient ways to finance conservation projects in South-East Asia. The SCCM connects private companies seeking to link specific sustainability goals (e.g. the RSPO’s sustainable palm oil certification) and associated high-value conservation projects in need of funding.196

Lestari Capital, via the SCCM, identifies and undertakes due diligence on third party projections High Conservation Value (HCV) and High Carbon Stocks (HCS) landscapes, promoting the projects to private companies committed to financing environmental restoration for a minimum of 25 years. The SCCM provides fiduciary oversight and manages the long-term relationship contracts between the two parties, ensuring benefits to local communities are distributed, and social and environmental safeguards and performance-based payments are met. The SCCM funds are managed via a Special Purpose Vehicle (SPV) located in Singapore, which disburses payments through a custodian bank.197

For its first vehicle, the SCCM aims mobilise $50 million of private investment by the end of 2020. Among the SCCM’s first users was Cargill which now finances the conservation of the Nanga Lauk Village Forest in Indonesia for 25 years. It includes 1,430 hectares – of which high-value peatlands cover 58 percent, while the rest is covered by lakes. The area supports the livelihoods of 197 households.198

To date, the SCCM has established a proof of concept for the sustainable palm oil grower sector and is currently expanding its support a widening range of sustainability commitments and supply chain actors.199 To that end, Lestari Capital has developed the Rimba Collective with a number of global companies for supporting over 500,000ha of conservation projects through private sector finance. This is a unique mechanism that integrates conservation support into the cost of goods, making conservation part of business as usual.
In 2008, Vietnam was the first country in South-East Asia to pilot a national policy called the Payment for Forest Ecosystem Services (PFES) scheme, with the support of USAID. After two years, the scheme was launched nationwide through legislation establishing the forest environment services that must be paid for by beneficiaries (e.g. hydropower plants, water utilities, industry, tourist service providers) to forest owners. Forest services include soil protection, maintenance of water sources, carbon sequestration, biodiversity conservation and the provision of spawning grounds, sources of feed and natural seeds.

To date, the majority of the buyers of PFES have been water supply companies and hydropower plants. Deforestation causes sediment runoff from loose soils, which impacts their operations. The payments from the sale of PFES contracts are distributed to ecosystem service providers (e.g. local communities/land users) via government agencies. Vietnam’s PFES differs to other “payment for ecosystem services” schemes in that payments are not linked to results, but rather the scheme compensates individuals for engaging in active forest conservation – independent of performance. The primary beneficiaries are the local communities with rights to the forest lands. Overall, 355,000 households are receiving PFES payments by managing 3.5 million hectares of forest (25 percent of the total forest area in the country).
Water Funds use a “payments for ecosystem services” approach to incentivise watershed protection and reforestation. As of March 2020, The Nature Conservancy (TNC) had 29 water funds in operation across Asia and Latin America and another 30 under way in developing countries. The funds are currently financing more than 7 million acres of watersheds and securing drinking water for 50 million people.

The Upper Tana-Nairobi Water Fund was the first of its kind in Africa. 50 percent of Nairobi’s hydropower and 95 percent of Nairobi’s residents depend on the Tana River for water. However, water quality is compromised due to high levels of sediment runoff driven by upstream land conversions of forestry and wetland areas to agriculture by rural communities. As a result, 60 percent of Nairobi’s citizens do not have access to a stable water supply. The fund addresses the issue by providing payments to the communities around the Tana River who implement forestry and farming practices that reduce land conversion and soil erosion and improve the overall health of the river.202, 203

Investors in the fund include the Kenyan Electricity Generating Company (KenGen), Coca Cola and the Global Environment Facility. The International Fund for Agriculture (IFAD) is acting as the implementing agency.204 The fund trains nearly 15,000 farmers in practices such as agroforestry, resilient agriculture, and riverbank buffer zone building. The training has resulted in improved crop yields, providing additional income for rural communities.205 Research carried out for the fund showed that a $10 million investment in water fund-led conservation could return $21.5 million in economic benefits over 30 years.206, 207

Critical transitions:

| Innovation: | Paying for nature |
| Geographic focus: | Developing Countries |
| $: | n/a |

Stakeholders:
The Nature Conservancy; Natural Capital Project; FutureWater; GEF; IFAD; International Center for Tropical Agriculture; KenGen; Coca Cola

Status:
Operational
Launched in 2017, the Good Growth Partnership works across the supply chain of soy, beef and palm oil to reduce deforestation and advance sustainable development.

The Partnership is funded by the Global Environment Facility (GEF), and its implementation partners are the International Finance Corporation, Conservation International, UN Environment Programme and governments from Paraguay, Brazil and Liberia. Furthermore, the Partnership directly interacts with some of the largest commodities manufacturers in the world – for example, Unilever, Cargill and PepsiCo.208 The core of its mandate is to catalyse a transition to more sustainable supply chains.209 It does so by supporting policy development that ensure suitable land is used for production, and not areas that are high in biodiversity. It also facilitates investment and market-based incentives for sustainable production, analysing how banks identify and manage deforestation-related risk in their commodity portfolios. Additionally, the partnership supports market awareness for deforestation and provides capacity-building for sustainable land-use practices.210

An example is the partnership’s assistance to ten central and western African countries in participating in the Tropical Forest Alliance 2020 Africa Palm Oil Initiative.
Katapult Ocean is an accelerator aimed at scaling companies that have a positive impact on the ocean. Through its work, it seeks to develop the sustainable ocean economy and advance the 2015 UN Sustainable Development Goals (SDGs).

Katapult Ocean invests in start-ups that have a direct or indirect impact on advancing the UN SDGs – in particular, SDG 14: Life Below Water. This includes several ocean-related sectors including transportation, ocean health, fisheries, aquaculture, energy and new frontiers (e.g. technology, robotics, industrial hardware, etc.). Once accepted in Katapult Ocean’s accelerator program, start-ups enjoy a three-month long training program focused on growth, investor readiness, leadership development, scalability and networking. This includes access to subject matter experts, business leaders, entrepreneurs, investors and exposure to pilot customers, testing and data analytics. Additionally, Katapult Ocean invests between $150,000 and $300,000 into the accelerator start-ups, in exchange for around 8 percent in equity shares. Start-ups in the Katapult Ocean “ecosystem” also benefit from a mentor network of over 100 people.

As of the beginning of 2020, Katapult Ocean has raised about $4 million from a diverse set of investors including family officers, businesses and a pension fund. Since its inception in 2018 with its founding partner WWF, Katapult Ocean’s partner ecosystem has expanded to over 50 organizations, including Amazon Web Services, the World Bank, China Blue Sustainability Institute, McKinsey & Company, Hurtigruten and ABB.

Katapult Ocean’s portfolio spans 32 ocean startups spanning 17 countries and four continents. Examples include Oceanium, a Scottish company creating bio packaging materials from seaweed; Saathi, an Indian company developing eco-friendly hygiene products; Undersea, a Portuguese real-time water data monitoring company; and ATLAN Space, a Moroccan technology company that produces drones and uses Artificial Intelligence to monitor pollution, track marine life and combat illegal, unreported and unregulated fishing.
The One Acre Fund assists rural, sub-Saharan African farmers with financing, distribution, training and market facilitation. Through its work, it aims to empower rural farmers and lift them out of poverty.

The fund offers farmers flexible repayment schemes, providing high-quality seeds that are financed on credit. The repayment schemes allow farmers to adjust their payment depending on different crop cycles, overcoming an inherent risk of being unable to pay back within rigid loan repayment timeframes. Furthermore, farmers receive training throughout the season on sustainable agriculture techniques. Once the crop is grown, the One Acre Fund helps to facilitate market access for farmers by providing information on market fluctuations so that they can time crop sales to maximise profits.\(^{218}\)

30 percent of One Acre Fund is financed through grants payments, with recent funding coming from the Children’s Investment Fund Foundation and the Global Innovation Fund (2017), and 70 percent of One Acre Fund’s expenses are financed via the farmer loan repayments scheme. For every $1 invested by the fund, the farmer produces $3.16 in extra income (averaged over three years).\(^{219}\) As of 2019, the One Acre Fund worked with over 1 million farmer families across six countries in sub-Saharan Africa, and employed 8,280 full-time staff.\(^{220}\) Farmers, who enrol in the programme for three years, typically experience a $96 additional farm profit – an average 44 percent increase in profit.\(^{221}\)
Partnership for Forests (P4F) is an eight-year incubation programme managed by Palladium and SYSTEMIQ funded by the UK Foreign, Commonwealth and Development Office (FCDO) and the UK Department for Business, Energy and Industrial Strategy (BEIS).

Partnership for Forests’ goal is reducing deforestation by supporting regenerative business models such as (i) “standing forest” models that generate immediate revenues, e.g. through the low-impact harvest of products such as nuts and resins or the delivery of ecosystem services, such as carbon sequestration and conservation credits; (ii) Agriculture production-protection” models that produce deforestation free products and generate increased revenues per hectare, whilst reducing costs through reduced inputs, and the utilisation of increasingly sophisticated precision-farming techniques; (iii) “value from forest regrowth” models that can generate multiple, parallel cash flows – as diverse as bioplastics and biochar – from different plant species, which are particularly suited to local conditions.

In 2020, P4F has mobilized over £244m in private investment, forged 67 forests focused partnerships, worked with 24 commodities, and increased the sustainable use of 1.1m hectares of land in 17 countries.222 Example projects include Adum Banso Sustainable Oil Palm pilot, which aims to transform the palm oil sector in Ghana, producing scalable and replicable produce and protect models for communities in the area; COOPAVAM, where P4F supports the sustainable collection and commercialisation of Brazil Nuts to protect forests and improve livelihoods in the Amazon; and the PT Bumiampo Investama Sejahtera, where P4F supports the development of a 638 hectare, 80 percent community-owned, Kemiri Sunan biofuel plantation on degraded lands in Flores, Indonesia.223
ACKNOWLEDGEMENTS

We would like to thank NICFI, the funder of this work, for their continued support. We are also grateful to the members and friends of the Taskforce who generously offered their time and insights and shared their story of innovation.

ABOUT THE BLENDED FINANCE TASKFORCE

The Blended Finance Taskforce was launched in 2017 by the Business & Sustainable Development Commission. The Blended Finance Taskforce is a partnership that brings together actors from across the development and finance communities to accelerate the mobilisation of capital and finance the SDGs through thought leadership, convening and capital matchmaking. The Taskforce has produced leading research, implemented a comprehensive action programme to unlock capital for the SDGs, and supported the development and scaling of numerous blended finance vehicles and country platforms. The Taskforce has helped mobilise billions of dollars for the SDGs including through its support for the “Tri Hita Karana Forum for Sustainable Development”.

Organic rice and duck farm.
REFERENCES

Case Study Catalogue


2 Emiko Terazono. 2019. 'Alternative Meat' Sales to Hit $140bn Annually, Barclays Says' Financial Times, 22 May 2019. https://www.ft.com/content/c0be42e0-7c7d-11e9-8d1d-7f850f9a2b60.


49 Information from &Green website, available: http://www.andgreenfund.com/portfolio/.

50 No-deforestation, No-peat and No-exploitation

51 Roundtable on Sustainable Palm Oil


56 Federal Ministry of Economic Cooperation and Development (Germany)

57 International Labour Organization

58 United Nations Environmental Programme


78 Ibid.


A report supported by NICFI, in partnership with the Food and Land Use Coalition