



FINANCING CLIMATE CHANGE ADAPTATION

How Mercy Corps' is catalyzing private sector investments in climate change adaptation and resilience

SEPTEMBER 2020

The Dynamic Landscape of Climate Finance in a COVID-19 World

It is estimated that the effects of COVID-19 could push 265 million people into acute food insecurity by the end of this year¹. Yet, the global COVID-19 pandemic is not happening in isolation. At the beginning of 2020, an estimated 168 million people were already in need of humanitarian assistance². This number, the highest in decades, is driven by conflict, extreme weather events, and economic shocks - much of which is driven by accelerating climate change. For many people, COVID-19 is just one of the many challenges they face.

¹ World Food Programme | <https://www.wfp.org/news/covid-19-will-double-number-people-facing-food-crises-unless-swift-action-taken>

² United Nations | <https://news.un.org/en/story/2019/12/1052731>

Disasters like floods and droughts do not stop because there is a global pandemic and climate change remains a strengthening driver of such threats. It is important to effectively leverage investments in response (humanitarian) and recovery (long-term stimulus) to build resilience to multiple hazards and maintain momentum on reducing climate risks.

Long before the COVID-19 crisis, the climate crisis was disproportionately impacting the poorest and most vulnerable people. While reducing greenhouse gas emissions (mitigation) remains a priority, it is critically important to increase capacity to manage the unavoidable impacts of climate change (adaptation) and build resilience of those that will be most impacted.

The World Resources Institute projects that from 2020 onward, we need to invest \$5.7 trillion annually in green infrastructure and other adaptation and mitigation efforts if we are to avoid the worst impacts³. Much of the adaptation money will need to go to those least able to cope and adapt - Least Developed Countries and fragile states. Despite the target of \$50 billion per year in adaptation funding, confirmed in the 2015 Paris Agreement⁴, investments have fallen short, and even if met, will likely be insufficient to meet the growing needs. Furthermore, the funding to date has flowed to a narrow band of countries with higher capacity to absorb funds and implement large infrastructure programs. This is leaving behind more fragile countries and at-risk communities which desperately need investments in early warning and early actions systems, forecast based financing, shelters, drought and flood resilient crops, and other adaptation interventions.

Despite this shortfall there is more funding available to fight climate change than ever before, and the numbers are growing. The World Bank, the British and French governments, and the European Commission - among others - have committed significant new funds to the climate crisis despite anticipated economic contractions due to the impact of COVID-19. Trillions of dollars will also be mobilized in the coming years to recover from the COVID-19 crisis, presenting an opportunity to build back sustainably and build back sustainably and in a way that reduces the likelihood of future shocks and increases communities' resilience to risks when they arise.

Our Approach

At Mercy Corps we see an important role in helping to address two fundamental challenges within this dynamic funding landscape that continue to limit climate change adaptation outcomes - the shortfall in public funding and the lack of funding reaching the most vulnerable communities and fragile states. Our approach to climate finance seeks to design and test adaptation models that are at least in part commercially driven and can attract private investment to blend with public or philanthropic funding in ways that allow for more immediate and more sustainable impact at scale.

Strengthening Markets and Consumer Finance for Climate-Smart Technologies

Markets offer vital channels for advancing access to climate-smart and risk-reduction products and services, particularly in contexts with weak public sector services or protracted crises. In many places we work, information systems are weak and market actors are unable to invest in new products or services or unable to carry the risk of offering credit to ensure affordability. Our approach identifies high value products and services for particular contexts and works with actors across the supply chain to strengthen access and uptake for high risk market segments.

³ World Resources Institute | <https://www.wri.org/news/2020/04/release-new-data-shows-millions-people-trillions-property-risk-flooding-infrastructure>

⁴ UNFCCC | https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf

Building markets for water conservation technologies in Jordan's agricultural sector: The **Water Innovations Technology program**, funded by the US Government, is working with agricultural input suppliers and commercial farmers to reduce the impacts of Jordan's major climate change risk - water scarcity. The Mercy Corps team - along with local and international partners - is working to build a long-term market for high efficiency irrigation and other agricultural technologies in support of this strategy. The team is working with suppliers to enhance their knowledge, product line quality, and customer outreach, with financing institutions to provide tailored loans to make investments affordable, and with farmer groups to increase knowledge and provide technical meters of water. Longer term, the program will have helped catalyze a new national market for water conservation technologies that will reduce the water demand of Jordan's agricultural sector, making this sector and the country as a whole more resilient to climate change risks.

Increasing consumer financing options for Kenya's Islamic communities: The Building Resilience to Climate Extremes and Disasters (BRACED) is a central part of DFID's global climate change platform. Under the first phase of the BRACED program Mercy Corps supported the launch of Crescent Takaful Sacco (CTS), the first Shariah-compliant microfinance institution in northern Kenya, to provide loans for climate smart technologies. The Sacco offers savings, lending, and investment services based on Islamic principles, such as profit sharing in collective ventures by lending money to groups instead of individuals, and the group's cohesion and reputation acts as a guarantee. CTS provides a range of products that will help the community adapt to climate shocks such as prolonged drought, that often result in extreme poverty. The products include Ayuta Sokoni, which pools funds from entrepreneurs to support them in various aspects of trade such as re-stocking their products. Ayuta Al-Rafiq, another product, gets groups of friends to define common economic objectives such as co-investments in businesses and pooled resources. Over 3,000 households in Wajir benefit from the products through the Mercy Corps BRACED program. In addition to providing financial services that meet community needs in Wajir, the Sacco will aim to strengthen savings groups and eventually link them to other financial service providers like banks. Financial inclusion is increasingly important, and will only become more essential, in the face of growing climate change impacts such as prolonged droughts and erratic rainfall.

Creating financing options for small and medium-sized businesses that offer climate change adaptation solutions to farmers in northern Uganda: The Northern Uganda: Transforming the Economy through Climate Smart Agriculture (NU-TEC) program, one of the UK government's flagship climate finance investments in Africa, aims to significantly expand the uptake of climate-smart agricultural practices across this sub-region through the private sector. One major limiting factor is upstream finance for businesses - with agribusinesses unable to access capital for investment in new climate resilient business lines. The Mercy Corps Uganda team is working to address this challenge in partnership with Equity Bank – a regional institution providing consumer and small and medium sized enterprises (SME) financing services across East Africa. Mercy Corps has provided loan capital to Equity Bank to deploy to agribusinesses in Northern Uganda that are providing climate-smart agricultural goods or services, as well as technical assistance to support Equity Bank's entry into what has been traditionally perceived as a riskier market. Equity Bank re-lends the capital through short-term loans throughout the project's lifespan, while honing specific product offerings to this new customer base to ensure sustainability beyond the project lifespan. At the end of the project the capital will be returned to DFID via Mercy Corps, an example of the opportunity to leverage development finance to support and de-risk entry into a new market.

Risk Transfer Solutions & Disaster Insurance

Insurance is a vital disaster-risk management tool in wealthier economies; however approximately 93% of assets in the developing world are not insured. Vulnerable individuals and small and micro-entrepreneurs often live and work in conditions that leave them particularly vulnerable to natural disasters with few financial

reserves to recover. Our approach supports enterprises pioneering solutions to insurance or other risk management tools for low income and vulnerable markets through a range of technical assistance and smart subsidies.



Pioneering a new micro-insurance model for small-holder farmers in Central and South

America: MiCRO bridges the divide between the world’s insurance markets and the most vulnerable populations, overcoming barriers that keep low-income populations, including smallholder farmers and micro-entrepreneurs, from accessing the risk protection that they need, at a price they can afford. MiCRO does this through designing risk transfer solutions e.g. insurance) that help families and micro-entrepreneurs recover from natural catastrophes, which minimizes the need to liquidate valuable household or business assets. MiCRO’s index-based natural hazard insurance products are triggered when predetermined levels for different catastrophic events are reached (e.g. excessive rainfall, severe drought and earthquakes). The payouts vary depending on the deviation from historical averages based on indices and data produced either by NASA, the United States Geological Survey (USGS), or select local sources. MiCRO’s solutions have two components: a risk transfer mechanism that is designed based on the conditions and needs of each intervention, and a program that aims to benefit end consumers by strengthening their resilience, productivity and by improving their livelihood conditions.



Reimagining the landscape of agricultural insurance in East Africa: Pula, a Mercy Corps Ventures’ investee, is radically restructuring agricultural insurance, using technology to help insure the previously unbanked, uninsured, and untapped market of smallholder farmers. Pula provides farmers with insurance that is bundled with inputs and advisories to help farmers increase yields and protect their income. For the farmers, the insurance is free. Agricultural input companies pay the premium to differentiate their product from their competitors’ products, and the insurance is underwritten by third-party insurers/reinsurers. Pula’s understanding of smallholder risk allows it to be the intermediary, collecting data that is used to serve farmers and providers alike. Pula currently offers risk management and transaction execution and implementation services. It provides comprehensive risk analysis and assessment through remote sensing, GIS, and on-the-ground yield assessments, and it quantifies risks and develops mitigation and transfer options, such as weather and area yield index insurance. It has developed the largest database of granular crop yield data for smallholder farmers in East Africa and uses its proprietary data sets to synchronize local advice, helping farmers achieve higher yields and income every season.

Testing Market Solutions for Nature-Based Solutions

Nature-based solutions (NBS) for climate change offer an opportunity to protect and restore natural ecosystems, while reducing the risk of adverse effects of climate change and mitigating greenhouse gas emissions. NBS also results in significant developmental co-benefits in the realms of gender, livelihoods, and resilience. Despite these clear benefits few truly successful examples of NBS exist. Therefore, our approach is to test the application of NBS in vulnerable areas and demonstrate the value for larger scale investment.



Incentivizing resilient agriculture practices through new loan products in Haiti: Mercy Corps’ Credit for Conservation (CfC) focuses on testing a new approach to incentivizing a much needed replenishment and protection of the natural resource base in a country highly vulnerable to climate change. The program provides funding through farmer associations who disbursed loans and provided conservation training to group members on schedules relevant to the farmers. Through the CfC, smallholder farmers receive watershed conservation and natural resource management

training, subsequently implementing these newly acquired conservation and management skills on their farmland. This initiative not only provides farmers with needed capital, but increases agricultural production, generates income, ensures food security, and stabilizes local food markets for participating communities. At the end of phase I, the program had conserved 618,716 meters of soil and water and planted 265,945 trees; this marked a 145% increase in soil retention in agroforestry in the towns of Ti Bwa and 51% increase in Sibase. During the 2015 drought, program participants were 52% more profitable than the control group who did not participate in the program's training.



Market-based models for risk management: Now in its third phase, the Managing Risks through Economic Development program is a multi-country program in Nepal, Timor-Leste and Indonesia. MRED aims to enable smallholder farming communities, particularly the most vulnerable in these communities, to be more resilient to natural hazards and the adverse effects of climate change, and to recover more quickly and sustainably from natural disasters. M-RED's vision is to create a replicable, sustainable, and scalable model for empowering smallholder farmers to build their own ecological resilience. The program, which has been working to build resilience to flooding since 2013, promotes an integrated intervention model – the “nexus model” – that combines traditional community-based disaster risk reduction (DRR) with market-based economic incentives through investing in DRR. Two basic approaches are used under this model: planting sugarcane on erosion-prone riverbanks to prevent river cutting while increasing productivity and income, and planting fodder species in marginal, hilly lands to mitigate landslides while providing food for dairy cows.

Innovative Climate Finance Models

The standard humanitarian and development tools deployed by wealthy governments and development finance institutions – largely sovereign loans and project grants – are insufficient in scope and scale to meet the climate change challenge. To reach the level of funding required, it is essential to unlock far greater amounts of private capital and to encourage investments in higher risk environments. Therefore, donors are increasingly searching for innovative models to deploy their relatively scarce climate change resources to leverage greater private sector financing.



Designing an impact bond to finance urban flood resilience in Indonesia: As a member of the Zurich Flood Resilience Alliance and as a partner in the InsuResilience Global Partnership, Mercy Corps is designing a flood resilience impact bond (FRIB) to increase sustainable investment in flood resilience infrastructure in Indonesia. Unlike other forms of infrastructure (i.e. bridges or public water), flood resilience infrastructure is difficult to commodify through tolls or utility bills. Impact bonds are designed to encourage high quality outcomes by combining impact investment with new funding models that pay for outcomes. In this pilot program, an upfront investment in the flood resilience intervention will be made by an investor. The investor receives their money back with a return from the local government or a traditional bilateral or multilateral donor once the agreed upon outcomes are achieved. This structure provides upfront capital for infrastructure -or other identified - projects and potential profit for the investor. This impact bond will be the first of its kind in an emerging market.



Demonstrating the viability of solar business investment in the fragile context of Afghanistan: To address the challenge of high upfront costs for solar PV installation in high risk environments, Mercy Corps' Frontier Energy program designed and tested a revolving fund that covers the original capital investment. The program recovers the money from the customer through installments that match their savings from reduced reliance of diesel generator fuel - the dominant source of power for businesses with little to no grid supply. Under this pilot, Mercy Corps bundled

competitive bids to ensure the lowest price and highest quality for consumers, provided quality control oversight for solar installers, administered the revolving funds, and developed a new financial product for solar installations with a partner micro-finance institution. Based on this experience, Mercy Corps expanded the concept in Afghanistan and is currently fundraising for a new revolving fund design. The lease-to-own finance model allows money paid towards the lease to revolve back into the facility to finance future projects. Over time, aggregated demand for solar power across companies will bring down the cost of power and improve quality standards, while reducing the financing risk. The vision is to build a vibrant Afghan solar sector that provides the highest level of service at affordable prices to Afghan consumers.

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About Mercy Corps

Mercy Corps is a leading global organization powered by the belief that a better world is possible. In disaster, in hardship, in more than 40 countries around the world, we partner to put bold solutions into action — helping people triumph over adversity and build stronger communities from within.

Now, and for the future.



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