Climate change and sustainability consulting practice

MSC (MicroSave Consulting)

The world's local expert in financial, economic, and social inclusion in the digital age

October 17, 2023

MSC is recognized as the world's local expert in economic, social and financial inclusion

International financial, social & economic inclusion consulting firm with 25+ years of experience

>200 staff in 9 offices around the world

Projects in ~68 developing countries

Our impact so far

>550 clients	>1,300 publications
Assisted development of digital G2P services used by >875 million people	Implemented >875 DFS projects
Developed >275 FI products and channels now used by >55 million people	Trained >10,500 leading FI specialists globally

Some of our partners and clients

MSC

Sectors we work in

Providing impact-oriented business consulting services

- Banking, financial services, and insurance (BFSI)
- Water, sanitation, and hygiene (WASH)
- Government and regulators
- Micro, small, and medium enterprise (MSME)
- Social payments and refugees
- Gender
- Education and skills
- Digital and FinTech
- Agriculture
- Youth
- Climate change and sustainability
- Health and nutrition

Multi-faceted expertise

Advisory that helps you succeed in a rapidly evolving market

- Policy and strategy
- Products and channels
- Research and analytics
- Organizational transformation
- Digital technology and channels
- Catalytic finance
- Design thinking and innovation
- Marketing and communicatio n
- Training
- Government and regulations and policy
- Data insights

Our approach to climate change adaptation and mitigation

Greater integration of climate change considerations into development sector programs

In several of our existing and new programs funded by the Gates Foundation, we examined how well poor people can adapt to the impacts of climate change through improved livelihood choices, access to finance, and access to government benefits.

Similarly, we have been working with AGRA in Africa on sustainable food systems transformations, agricultural risk management mechanisms, and financing instruments in agriculture sector interventions.

Creation of alliances and forums to allow development sector players to share knowledge and experiences

MSC chairs the Climate Resilient Agriculture and the Elevating the Voices of Affected People working groups at the CIFAR Alliance. The Alliance's mission is to accelerate responsible innovation in digital finance for climate adaptation and resilience.

MSC has also created the global Climate Resilience Agriculture Virtual Club (CRAgVC), whose mission is to enable innovative digital solutions to drive transformative changes in smallholder farmers' climate resilience.

Enhancement of development sector players' knowledge of climate change's impact and pathways to resilience

We supported DWM's initiative to inform its investee companies' (financial institutions) climate action strategy by developing a tool for the investee companies to self-assess their contribution toward climate change, climate action, and their level of preparedness against climate risks.

We conducted in-depth studies to enhance the understanding of the impact of climate change on poor people and the role of financial services to support their coping strategies.

Strategic focus areas in climate change adaptation and mitigation

Climate-resilient agri-food systems 01

1.1 Climate-resilient smallholders
Strengthening the resilience of smallholder farmers against climate change through the promotion of locally-led adaptation techniques

1.2 Carbon-smart farming:
Promotion of on-farm carbon sequestration and reduction of greenhouse gas emissions through climate-smart agriculture practices

1.3 Sustainable agriculture
Driving the adoption of sustainable agricultural practices, such as soil health management, efficient water resources management, and localized production and consumption

Climate finance 02

2.1 Catalytic finance for climate action
Promotion of catalytic finance to unlock commercial financing toward climate action

2.2 Inclusive financial products for climate action
Support to develop and deliver private sector-led, green inclusive financial products

2.3 Climate and disaster risk financing
Support to the public and private sectors to develop and deliver climate and disaster risk financing mechanisms and instruments

Clean energy 03

3.1 Renewable energy for agriculture
Support to develop and deliver private sector-led financing of DRE (distributed renewable energy)-powered agricultural solutions

3.2 Clean cooking solutions
Support to develop and deliver private sector-led clean cooking financing products

3.3 Distributed Renewable Energy (DRE) for SMEs
Support to develop and deliver private sector-led rooftop-solar financing products

Urban resilience 04

4.1 Resilience against extreme heat
Strengthening urban poor people's resilience against the impacts of extreme heat

4.2 Resilient water supply and sanitation facilities
Support to develop and deliver private sector-led financing of extreme weatherproof water supply and sanitation systems

Services offered

01 Research and insights

02 Strategy formulation support

03 Technical advisory and capacity development

04 Tools and framework development

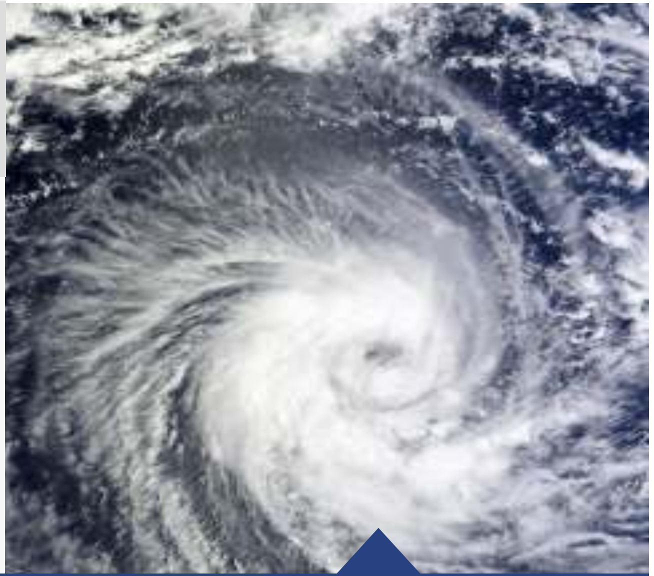
05 Project implementation support

Our flagship projects in Asia and the Pacific

Deep research into climate change's impacts and how vulnerable communities have been responding to it

CGAP engaged MSC to work with Decodis to understand how climate change affected vulnerable communities in Bangladesh, India, and Nigeria. The research examined how these communities have responded, what role financial services have played, and what role they should play to support climate resilience and adaptation.

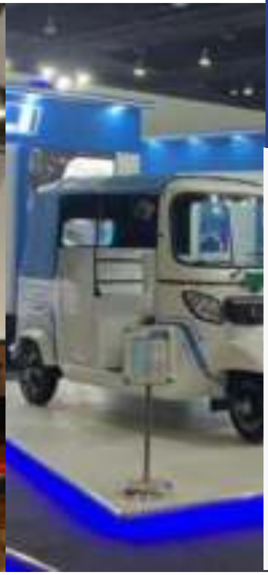
CGAP and MSC then convened a workshop to discuss the report and fine-tune CGAP's climate change strategy.



Catalyzing private sector financing of electric two- and three-wheelers in India

The World Bank, in partnership with India's NITI Aayog and SIDBI, launched the Electric Vehicle Operations and Lending for Vibrant Ecosystem (EVOLVE) risk-sharing program to encourage banks and non-banking financial companies to finance electric two- and three-wheelers.

SIDBI hired MSC as the lead consultant to structure a partial credit guarantee and low-cost loan facility. MSC was also tasked to design the facility's operating structure and bring on board 10 financial institutions to the facility.



Developing a reference document to aid the formulation of Fiji's sovereign CDRF strategy

UNDP engaged MSC to develop a comprehensive guidance note to inform the Government of Fiji's Climate & Disaster Risk Financing Instruments (CDRFI) strategy. An instrument highlighted by the guideline document was private sector-led parametric insurance products for the agriculture sector.

Based on the guidelines, the Fijian Government, with UNDP's support, developed and launched a market-based parametric insurance product. By the end of 2021, 1,388 beneficiaries had registered for the product, of whom 442 (32%) were women.

Our flagship projects in Africa

Technical advisory to develop NDVI-based digital microinsurance for an Ethiopian FinTech company

In 2016, MSC extended technical advisory and capacity-building support to Kifiya Financial Technology PLC, an Ethiopia-based payment service provider. MSC's support enabled it to translate the idea of an NDVI data-based digital crop insurance into a product. The program secured the Ethiopian government's support to train more than 100,000 farmers in 2017 and a commitment to a direct premium subsidy for 200,000-plus farmers.

Advice on marketing strategies to scale up the adoption of a seed replanting guarantee program in Kenya

In 2016, MSC agreed to offer technical assistance to ACRE Africa with financial support from the Alliance for Green Revolution in Africa (AGRA). MSC conducted a qualitative primary survey that involved farmers, input dealers, and agrovet extension agents. The survey identified that communication gaps at the level of various stakeholders stifled the product's marketing and distribution.
Based on its assessment, MSC designed a comprehensive marketing plan for ACRE Africa.

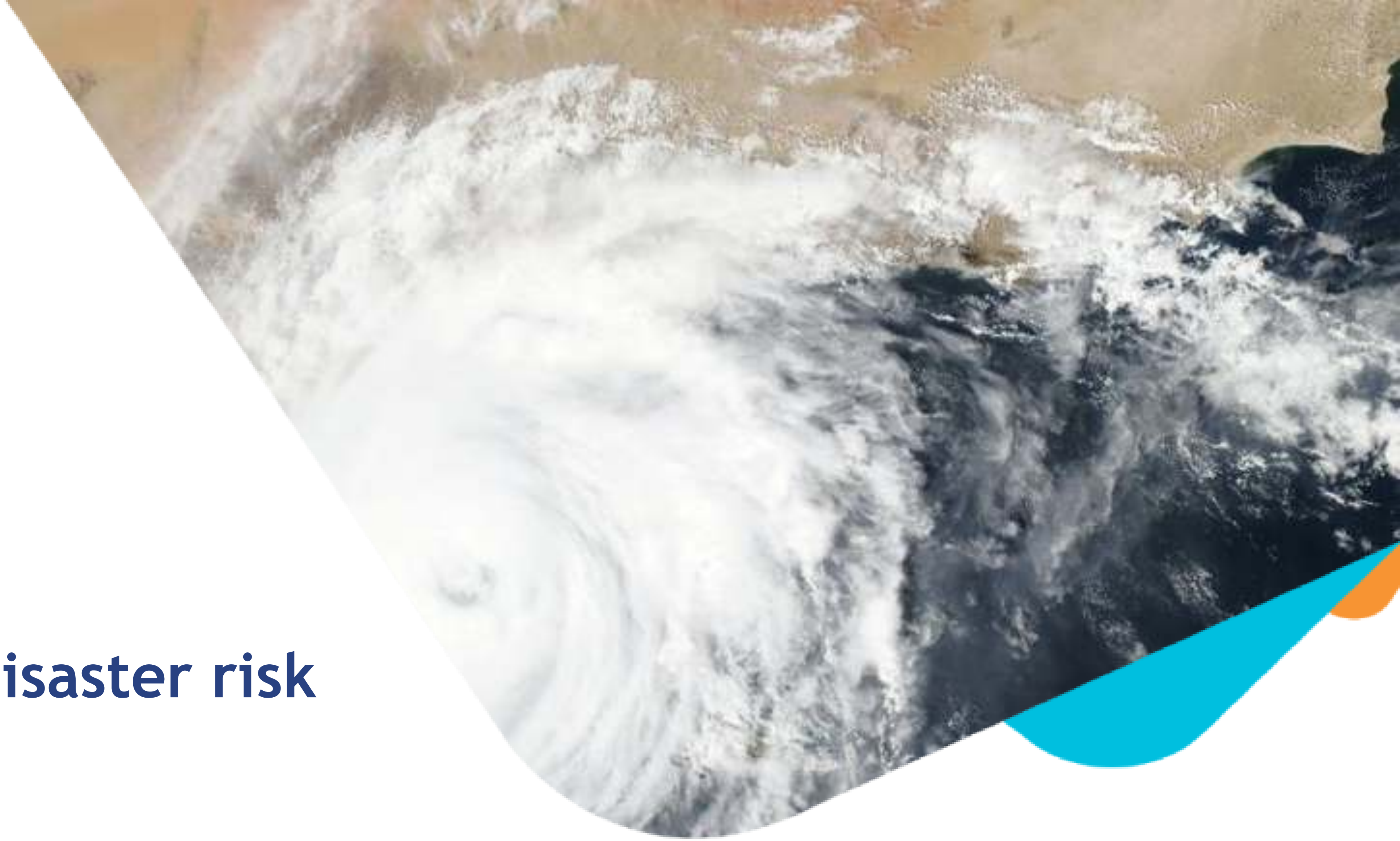
Mainstreaming climate risk and resilience consideration through capacity development of local governments in Uganda

The UNDP hired MSC to develop a module on mainstreaming climate change, climate risk management, and resilience building for local government managers and Ugandan leaders. The module would be delivered through the Civil Service College Uganda.

The module intended to develop the capacities of local government officials. Through it, officials could formulate locally-led strategies that mainstreamed climate action in the planning process to manage climate risk.

Engagement summaries

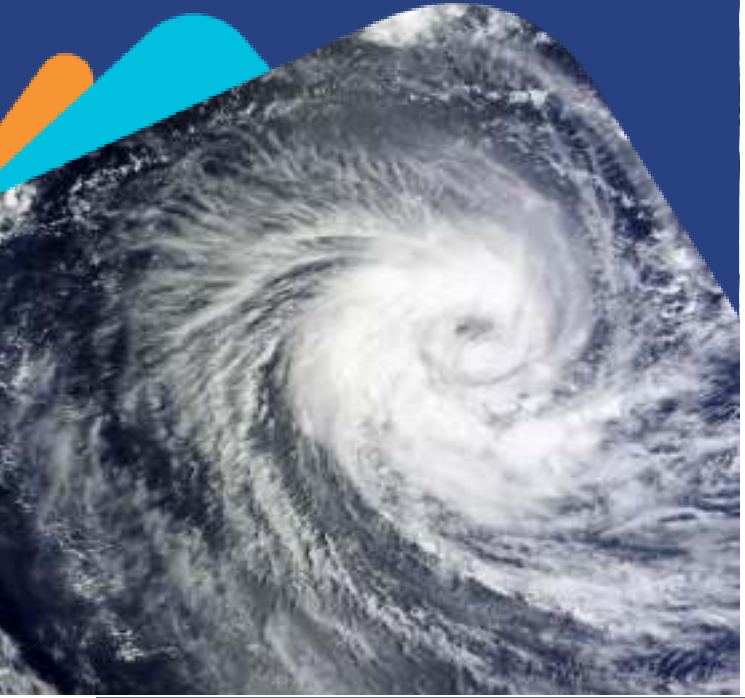
- Climate and disaster risk financing
- Climate-resilient agriculture
- Distributed renewable energy
- Electric mobility financing
- Elevating the voices of affected people
- Energy and natural resources
- Private sector engagements



Climate and disaster risk financing

Guiding climate and disaster risk financing strategy formulation

Development of a reference document to help formulate Fiji's sovereign CDRF strategy



The challenge

The Pacific Insurance & Climate Adaptation Program sought to drive the market in Fiji for climate and disaster risk insurance. However, Fiji currently lacks a sovereign climate and disaster risk financing and insurance (CDRFI) strategy that could serve as a framework for policymaking.

Without a CDRFI strategy, Fijian Ministries and the Reserve Bank of Fiji cannot formulate enabling policies and regulations to help develop the country's CDRFI market.

Our engagement

UNDP engaged MSC to develop a comprehensive reference paper to inform the CDRF strategy formulation. The reference paper provides insights and guidance on the following aspects, among others:

- CDRFI's importance for Fiji, considering its vulnerability to climate change and disasters;
- Assessment of current mechanisms of government financing for disaster reduction, retention, and transfer, and gaps in such financing;
- Assessment of Fiji's insurance market and its needs and capacity to serve the demand for CDRFI products.

Clients and partners

UNDP

UNCDF

UNITED NATIONS UNIVERSITY
UNU-EHS
Institute for Environment and Human Security

Expected outcome

- Based on the guidelines in the document, the Fijian Government with UNDP's support led the development and launch of a market-based parametric insurance product.
- By the end of 2021, a total of 1,388 beneficiaries had registered for the product, of whom 442 (32%) were women.

MSC

Climate and disaster risk insurance in Asia

A pioneering sector-level study to understand existing CDRI solutions in 22 markets across South and Southeast Asia

The challenge

International development agencies have struggled to drive the adoption of climate and disaster risk insurance (CDRI) products worldwide. Asia poses the greatest challenge due to its size, location, and presence of many countries with low socio-demographic indicators and complex financial markets. Climate change has already exacerbated the number and scale of disaster events in Asia. Hence, stakeholders need to understand the current landscape of CDRI products and work to scale up its adoption.

Our engagement

Against this background, MSC analyzed the status of CDRI across 22 countries in South and Southeast Asia. We collaborated with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Regulatory Framework Promotion of Pro-poor Insurance Markets in Asia (RFPI-Asia).

MSC undertook robust secondary research on the existing policy and regulatory environments around CDRI and existing CDRI solutions at the macro, meso, and micro levels.

Key informant interviews across Bangladesh, Indonesia, the Philippines, and Vietnam further complemented the findings.

Clients and partners

Published by: giz

InsuResilience Global Partnership

Outcomes and impact

- The findings were the centerpiece of the official press statement of the 15th International Microinsurance Conference held in Dhaka, Bangladesh in November 2019.
- The study informs, for the first time, the inadequacy of existing CDRI interventions. It serves as a baseline for stakeholders to measure future progress and offer credible CDRI solutions in Asia.
- Our findings revealed that sovereign risk transfers and other insurance mechanisms in the region directly or indirectly cover just upward of 212 million lives. This still leaves more than 91% of the region without any disaster risk cover.

MSC

Disaster risk insurance for MSMEs

Development of microinsurance products for MSMEs in the Philippines to transfer natural disaster risk

The challenge

The Philippines is particularly vulnerable to typhoons and tropical cyclones due to its geographical location. Over the past decade, the country has lost about 8,200 lives to super cyclones and experienced 1,077.8 mm of rainfall that flooded all of Baguio city in Benguet province. The super cyclone Haiyan claimed 6,352 lives and caused economic damages worth USD 2.98 billion.
In 2018, GIZ, the Department of Trade and Industry (DTI), and the Government of the Philippines took up the challenge to study the nature of risks vulnerable MSMEs face and develop solutions to help them transfer this risk through financial products.

Our engagement

In 2018, the GIZ- RFPI Asia team engaged MSC to undertake research and develop products to help MSMEs transfer disaster risk. MSC covered a sample of 180 MSMEs and discussed potential financial products with insurance companies and collateral finance institutions. The exercise led to a product concept for business interruption insurance for MSME units.

Research

MSC deployed its proprietary research tools and extracted insights from interviews with MSMEs and insurance and credit service providers.

Product development

MSC's rapid prototyping tool was used to assimilate information quickly and translate it into a product. This helped program managers launch the product by early 2019.

Clients and partners

giz

Outcomes and impact

- GIZ-RFPI rolled out the micro-DRI product in collaboration with the DTI. The Government of the Philippines aggressively promoted the product among vulnerable MSMEs.
- The product targeted 15,000 MSMEs in the Philippines, which included more than 2,000 enterprises in Davao City alone.
- The MSMEs benefitted from the minimal premium rate of PHP 900 (USD 18.56) per annum for annual coverage of up to PHP 500,000 (USD 10,309).

Weather-index based microinsurance

Research to deliver market insights into weather index-based microinsurance products for vulnerable communities in South and Southeast Asia

The challenge

In 2013, weather-index insurance (WII) products that target smallholder farmers in Asia were nascent. Most WII product programs were donor-driven, except in India and Indonesia where private players were the frontrunners.

The WII products faced an uncertain future due to a dependence on donor-led subsidies, lack of reinsurance products, unpredictable claim experiences, and a rudimentary data collection infrastructure. The Climate and Development Knowledge Network (CDKN), funded by DFID and the Dutch Ministry of Foreign Affairs, wanted to assess the WII market in five Asian countries. It sought to enhance the affordability and outreach of WII solutions and devise a program to develop a market for WII.

Our engagement

CDKN contracted MSC to deliver market insights on WII in India, Pakistan, Sri Lanka, Indonesia, and the Philippines.

MSC conducted extensive secondary research and industry expert interviews to deliver market insights. The report provided holistic information on WII in these countries, its advantage over traditional agri-micro insurance, growth drivers, constraints, diversification opportunities, and impact.

MSC also advanced CDKN's agenda in India through a report presented at the Microfinance India Summit. The report received a warm response from the microfinance and associated financial services industries.

Clients and partners

CDKN

Outcomes and impact

- Our findings emphasized that reinsurance serves as a necessary infrastructure to drive growth in WII. Convinced by the importance of such findings, the Central Bank of the Philippines permitted the Philippines Crop Insurance Corporation (PCIC) to offer index-based reinsurance in 2018. This also attracted global reinsurers, such as Swiss Re and Munich Re, which were earlier disinterested due to the PCIC's restrictive mandate.
- Our report also emphasized the significance of real-time weather data to help develop the WII market. In India, private players, such as Skymet, responded to this requirement and installed about 7,000 automatic weather stations in around 20 states countrywide.

Microinsurance to mitigate disaster risk

Review of SDC's program targeted to develop resilience among the poor and vulnerable through risk transfer

The challenge

Countries with a low socio-demographic index (SDI) have weaker resilience against natural disasters than those with higher SDIs. As per the latest available data, in 2017, the number of lives lost due to natural disasters was 10 times higher in low-SDI countries than in high-SDI countries. The Swiss Agency for Development and Cooperation (SDC) sought to combat this disparity in disaster resilience. It launched a program in India in 2015 to develop disaster risk transfer solutions for poor and vulnerable communities.

The challenge for SDC was to gather lessons from the project, develop a template for other low-SDI countries, and exit the project.

Our engagement

In 2016, MSC undertook a detailed assessment of the theory of change proposed by the project, its operating model, financial outlay, and replicability based on the performance and impact assessment.

MSC used its existing experience in developing pro-poor and customer-centric financial solutions to evaluate the risk transfer solutions developed by the project.

MSC collated the findings, suggested the changes needed to globalize the template, and charted a successful exit plan for SDC.

Clients and partners

Outcomes and impact

- The project enrolled 87,000 poor beneficiaries from vulnerable sections across two Indian states.
- The dissemination of market insights on disaster risk transfer solutions across South and Southeast Asia engaged policymakers, market stakeholders, and development agencies. It led to a 43% growth in the active risk transfer programs available from 2012 to 2018, 80% of which were microinsurance programs.

Diagnosing India’s inclusive risk finance landscape

A diagnostic study of India’s inclusive disaster risk financing landscape to inform a program strategy

The challenge

As part of its growing work in the inclusive insurance and risk finance (IRFF) space, UNDP conducts diagnostic exercises in several countries to understand the contexts, gaps, and opportunities for collaboration and technical assistance.

The diagnostic study in India sought to review the inclusive insurance and risk finance landscape with a focus on the supply and demand situation at an individual level and the legislative and regulatory environment around these instruments.

Based on this diagnostic, UNDP sought to inform its intervention strategy for the Indian market.

Our engagement

UNDP contracted MSC to undertake the diagnostic study. MSC conducted the diagnostic study using literature reviews and key-stakeholder consultations.

We consulted stakeholders, such as the Ministry of Agriculture and the National Disaster Management Authority, to reveal the connection between climate risk management in the agriculture sector and a broader set of disaster risk management mechanisms and instruments.

Clients and partners

UNDP

Expected outcome

- The diagnostic study is expected to inform a program under UNDP’s Insurance & Risk Finance Facility in India

Climate-resilient agriculture

Sustainable food system transformation

Insights to enable policymaking for sustainable food system transformation in Kenya and Ghana

The challenge

Emerging African economies, such as Kenya and Ghana, face challenges when they attempt to establish a sustainable food system in their countries and ensure nutrition security. AGRA (a member of the Food and Land Use (FOLU) coalition) helps the governments of these countries develop suitable programs and policies to transform their food systems into sustainable ones.

Yet, transformation into a sustainable food system is challenging. In these countries, the existing food systems face the following challenges:

- Agriculture is at subsistence levels, irrigation facilities are limited, and the countries have a high dependence on basic food grains.
- The food systems are not inclusive, and the countries depend significantly on animal sources for protein.
- Agriculture production is vulnerable to the effects of climate change.
- Despite the challenges in food production, food wastage at various levels remains significant.

Our engagement

MSC supported AGRA to drive policy advocacy and program planning to enable the governments of Kenya and Ghana to adopt food system transformation programs.

MSC conducted a landscape analysis of existing policies, programs, and institutions. This analysis sought to identify the gaps in the system that inhibit sustainable food system transformation. Based on the findings, MSC identified prospective partners of FOLU, determined the action plan for food system transformation, and prioritized FOLU's advocacy agenda.

Clients and partners

AGRA

Expected outcomes

The expected outcomes of MSC's interventions are:

- An increase in the number of FOLU members in Kenya and Ghana, including public and private sector entities;
- A defined action plan for FOLU to influence policymaking and program development to sustainably transform food systems;
- Involvement of public funds and donor support in the programs.

Catalytic financing for climate-adaptive agribusiness

Delivering insights to facilitate the design and delivery of catalytic financing for climate-adaptive agribusiness

The challenge

GIZ and India's National Bank for Agriculture and Rural Development (NABARD) designed the CAFRI project to deliver blended finance instruments to attract private capital for climate-smart agriculture through the farmer producer organization (FPO) ecosystem. GIZ needed a consulting and implementation partner to assess the needs of smallholder producers to attract private financing for climate-smart agriculture and scale the program.

Our engagement

MSC supported GIZ to mobilize private financing through nudges to NABARD to design and deliver blended finance instruments to FPOs. Under the engagement, MSC conducted a pilot of CAFRI's approach with two FPOs in India's Bihar state.

The engagement was divided into two parts. In the first part, MSC sought insights on the climate change-induced physical risks and hazards that the FPOs face, their vulnerabilities against these risks, and their current coping mechanisms. Based on these insights, MSC's experts recommended climate-adaptive measures categorized into adaptation strategies in the short, medium, and long term.

In the second part, MSC assessed the financing needed to implement these adaptation strategies. Based on the assessment, MSC suggested a capital subsidy package to enable FPOs to set up warehouses to prevent post-harvest losses.

Clients and partners

giz

Expected outcome

MSC expects GIZ to use these insights to nudge NABARD to design a blended finance program for FPOs.

MSC

The landscape of climate change adaptation mechanisms and instruments for rural India

A study on climate change's impact on rural India and the availability of mechanisms and instruments that strengthens resilience against climate change

The challenge

Through its Innovative Climate Risk Insurance (ICRI) project, GIZ seeks to strengthen the climate adaptive capacity of India's rural population through the promotion of innovative market-led mechanisms and instruments. The project team struggles with a lack of insights into the available market mechanisms and instruments that target specific climate risks in particular geographies.

Our engagement

The ICRI project team approached MSC to deliver insights into the available market mechanisms and instruments through desk-based research.

MSC's climate and disaster risk financing and insurance experts conducted a literature review to:

- Identify the various extreme weather events and climate hazards specific to a particular agroclimatic zone
- Outline the past economic impact of these extreme weather events and climate hazards on the rural regions in these agroclimatic zones.
- Identify cases of market mechanisms and instruments crucial to reduce the economic impact of these extreme weather events and climate hazards on the rural population
- Calculate the future estimates of economic losses due to these events exacerbated by climate change
- Comment on the gaps in existing market mechanisms and instruments that seek to strengthen the rural population's climate resilience
- Recommended insurance-led pathways to achieve climate resilience of India's rural population

Clients and partners

Published by:

Expected outcome

The ICRI project team used the insights to inform policymaking in the insurance sector to enhance the insurance sector's capacity to offer better climate and disaster risk management solutions to India's vast rural population.

Scale-up of the seed replanting guarantee program

Advice on marketing strategies to scale up the adoption of a seed replanting guarantee program in Kenya

The challenge

The lack of moisture in the soil during seed planting significantly threatens smallholder farmers' sustainability in Africa. ACRE Africa launched the Replanting Guarantee (RPG) product in 2009 in Kenya to develop resilience among these farmers. The RPG program involves an index insurance product that guarantees free replacement of maize seeds that fail to germinate due to a lack of soil moisture. The collaborative offering involves seed companies, Safaricom, ACRE Africa, and insurance companies.

However, ACRE Africa struggled to scale up the product's adoption. It suspected that marketing efforts remained inadequate for various stakeholders, such as seed dealers, agrovet extension agents, and farmers. The marketing plan needed revision.

Our engagement

In 2016, MSC agreed to offer technical assistance to ACRE Africa with financial support from the Alliance for Green Revolution in Africa (AGRA). MSC conducted a qualitative primary survey that involved farmers, input dealers, and agrovet extension agents. The survey identified that the communication gaps at the level of various stakeholders stifled the product's marketing and distribution.

MSC designed a comprehensive marketing plan for ACRE Africa based on this assessment. MSC's key recommendations were as follows:

- Communicate the value proposition to seed dealers clearly and equip them with promotional material
- Train and equip extension agents to promote the product to target farmers; instruct them to deliver the technical aspects as clearly as possible
- Simplify the registration and settlement process to build trust; assign dedicated time slots for outbound calls aligned to the availability of farmers in a day; intensify communication during the planting season

Outcomes and impact

- An impact evaluation of the program indicated that the insured farmers invested 19% more in their farms and earned 16% more than uninsured farmers in 2016.
- By 2018, ACRE had offered crop insurance products to more than 1.7 million farmers across Kenya, Tanzania, and Rwanda to cover agricultural assets worth USD 181 million.

Clients and partners

Digital crop microinsurance

Technical advisory and capacity-building support to translate an innovative concept into a feasible digital crop microinsurance product to develop climate change resilience

The challenge

Since early 2015, Ethiopia has been in the grip of the worst droughts in recent history, which threaten the food security of more than 10 million people. The digital technology platform Kifiya Financial Technology PLC sought to respond to the current crisis and seek solutions to Ethiopia's historical vulnerability to the prolonged drought. Kifiya conceptualized a crop microinsurance program for farmers based on satellite imagery (normalized difference vegetation index).

The entity, however, struggled to translate the concept into a commercial product. It engaged MSC to turn its vision into reality.

Our engagement

In 2016, MSC provided technical advisory and capacity-building support to help Kifiya translate its pioneering NDVI-based agriculture insurance product concept into a first-of-its-kind product in Ethiopia. MSC provided the following support:

- Translated the concept into an easy-to-understand, client-centric index insurance product
- Forged partnerships with a leading insurer and government agencies
- Analyzed the regulations in Ethiopia and obtained regulatory approval
- Mobilized government support and secured the commitment of financial aid to the project in the form of direct subsidy to beneficiaries
- Formulated a strategic business plan that aligned seamlessly with the client's existing DFS business

Clients and partners

kifiya

Outcomes and impact

- The product was piloted with 2,000 farmers in 2016 and scaled up to 100,000 farmers in 2017-18.
- The project secured government support for the financial education and training of more than 100,000 farmers in 2017 and a commitment toward a direct premium subsidy for more than 200,000 farmers in 2018-19.

Product feasibility study for crop microinsurance

An examination of the feasibility of effective microinsurance product delivery to paddy and maize smallholder farmers in Tanzania

The challenge

Smallholder farmers comprise more than 80% of Tanzania’s farming community. A little over 1.9% of their total farmland is irrigated. The combination of small landholdings, rainfed sources of water, and lower adoption of technology exposes smallholder farmers to the vagaries of weather. Over the past decade, climate change has worsened heat waves and droughts in Sub-Saharan Africa.

The challenge for Alliance for Green Revolution in Africa (AGRA), a pan-African institution, was to develop resilience among smallholder paddy and maize farmers through risk transfer products. However, the market did not have suitable insurance products because most insurers did not find it feasible to serve smallholder farmers.

Our engagement

AGRA engaged MSC from April to June 2018 to undertake a feasibility study around the delivery of crop microinsurance to smallholder paddy and maize farmers. The MSC team conducted thorough secondary and primary research through qualitative and quantitative research tools with the following objectives:

- Understand the features and benefits of crop microinsurance programs and products available in Tanzania
- Spot the nuances of services that different service providers offer
- Identify the sources of risks for paddy and maize crops managed by smallholder farmers
- Determine the level of risk of crop failure

MSC recommended that AGRA implement a crop microinsurance project based on positive inferences drawn from the feasibility study.

Clients and partners

Outcomes and impact

- AGRA accepted MSC’s recommendations and forged partnerships with TAPBDS Co Ltd and Reliance Insurance Limited Tanzania to launch the *Wekeza Kwa Uhakika* (WEKU) project.
- In its initial phase, the project will improve the climate change resilience of smallholder farmers through crop insurance for 20,000 farmers in Tanzania’s Ruvuma and Njombe regions.

Distributed renewable energy

Access to debt for energy solution providers (MSMEs) in Kenya

A review of the framework, assumptions, and implementation strategy of guarantee fund programs managed by Energy4Impact in Kenya

The challenge

Energy4Impact, a UK-based NGO, seeks to reduce poverty in East Africa through accelerated access to energy. It provides technical, commercial, and financial advice to MSMEs in the clean and reliable energy solutions sector. Energy4Impact runs programs that enable MSMEs to access debt markets and offer credit guarantees to lenders.

In 2016, Energy4Impact understood it needed to evoke greater interest from institutional lenders on the operational aspects of its flagship programs—Capital Access for Renewable Energy Enterprises (CARE2) and Developing Energy Enterprises Programme (DEEP).

Our engagement

Energy4Impact contracted MSC to conduct a consultative review of both CARE2 and DEEP.

MSC reviewed the framework, underlying assumptions, operational guidelines, impact parameters, and implementation progress. It critically examined the success criteria of the programs.

Based on the assessment, MSC advised Energy4Impact to rework the investee companies' cash flow and return parameters and highlight them in the DPRs. This would enable Energy4Impact to gain the interest of institutional lenders to fund MSMEs enrolled under these two programs.

Clients and partners

ENERGY4IMPACT

Outcomes and impact

- The revised approach enabled Energy4Impact to support more than 4,000 microenterprises and 500 small enterprises and helped the programs mobilize institutional debt worth USD 136 million.
- The projects have provided clean energy access to 19 million people through 9,000 businesses and raised USD 180 million in debt.
- The projects claimed to have prevented 14 million tons of CO_2 emissions.

MSC

The role of finance in enhancing access to clean energy in India

Market insights into the role of microfinance institutions as enablers of access to clean energy in rural India

The challenge

The World Wildlife Fund (WWF) identified that the exploitation of forest resources and burning wood for fuel threatens India's forest ecosystem and local biodiversity. It envisaged that the transition from wood-based fuel to clean energy in rural India would minimize deforestation and the threat to biodiversity. WWF also believes such communities may have limited access to clean energy due to the upfront cost of adoption.

The WWF's challenge was to validate its hypothesis through research and reach out to a community of financial institutions to support its objectives.

Our engagement

In 2014, MSC undertook a study based on the WWF's hypothesis. It studied and documented the nuances of financing mass-market clean energy solutions.

The study involved various stakeholder interviews, which included microfinance institutions, banks, NGOs, clean energy solution providers, and sectorial experts.

The study produced an exhaustive guidance note on financing access to clean energy by pivoting the distribution prowess and financial strength of the grassroots financial organizations.

Clients and partners

WWF

Outcomes and impact

- The delivery and financing model outlined in the guidance note served as a template for Indian microfinance institutions to partner with solar lighting solution companies to deliver solar lamps on credit.
- In FY 2017-18, Indian microfinance institutions financed 2 million solar lamp units worth USD 55 million.

MSC

Distribution of energy-efficient solutions

Formulation and execution of a market entry plan for an African “pay-as-you-go” solar product company in India

The challenge

M-KOPA Solar is a pioneer in home solar energy solutions in Africa. It has solar solutions for equipment that range from lamps to refrigerators. M-KOPA’s “pay-as-you-go” model offers affordable and digital credit options to buyers to drive adoption.

M-KOPA Solar sought to test its model’s scalability in markets outside Africa, such as India. The challenge was India’s complex socio-demographic landscape and the lack of existing models to draw lessons from.

Our engagement

In 2015, MSC offered market entry support to M-KOPA Solar under its Digital Finance Plus intervention program for the Bill & Melinda Gates Foundation.

MSC undertook the following measures to support M-KOPA Solar:

- Identified the best potential market to pilot its products;
- Developed a framework for partner selection;
- Recommended changes in the distribution and financing processes of potential partners to enhance compatibility with M-KOPA’s processes;
- Formulated an operational business plan.

Clients and partners

BILL & MELINDA GATES foundation

M-KOPA SOLAR

Outcomes and impact

- Our intervention helped M-KOPA Solar formulate an India-specific strategy to help it succeed at a scale similar to Africa.
- The company claims to have saved USD 650 for each customer over five years. It has also generated 2,500 jobs in East Africa and contributed to 46% of household income.
- M-KOPA Solar also helped decrease CO_2 emissions by 1.7 MT and recycled 55,000 electronic products, which contributed to a circular economy.

MSC

Financing electric mobility

Operationalization of a climate finance enterprise

Market research and product development advisory to a newly-formed entity in climate finance enterprise

The challenge

A newly formed entity planned to offer rooftop solar and electric mobility financing solutions in the Indian market. It wanted to understand the market potential for e-mobility financing solutions.

The rapidly changing battery technology, absence of charging standards, the developing nature of the electric two and four-wheeler market, and a disorganized electric three-wheeler market posed major challenges for the entity. It sought to identify an array of suitable financing solutions for the electric three-wheeler segment.

Our engagement

The entity engaged MSC to help understand the nuances of the electric mobility market and advise on suitable products. MSC conducted a market research and interviewed e-rickshaws and electric three-wheeler manufacturers, battery and charging solutions providers, dealers, and end-users.

Based on the market insights, MSC undertook the following tasks to help the entity:

- Rationalized its strategic business plan;
- Drafted a detailed product and process policy;
- Drafted an investment memorandum and operational budget.

Clients and partners

AMET

Outcomes and impact

- MSC helped the entity finalize a product and business plan to finance electric three-wheelers. The entity has sought regulatory clearance to start operations from the Reserve Bank of India.
- Electric three-wheelers occupy 88% of the Indian market, the largest share of the electric mobility market. In FY 19, the annual sales of electric three-wheelers reached 1.10 million units.
- 400,000 units out of the 1.10 million were e-rickshaws. This offered an equal opportunity to generate income for low-skilled wage earners and manual rickshaw pullers.

MSC

Design and delivery of the EVOLVE-RSP

Design and delivery of a blended finance instrument to unlock private sector financing for electric two and three-wheelers in India

The challenge

The Government of India plans to achieve 30% EV penetration by 2030. As of 2022, electric vehicle sales accounted for 4.98% of the total vehicles registered in the country.
Electric two and three-wheelers, which comprised more than 95% of the total electric vehicles sold in 2022, will be instrumental to reach the 30% EV penetration target. However, major barriers to the rapid growth of electric two- and three-wheelers are the high upfront cost of these vehicles compared to their internal combustion engine (ICE) counterparts and the lack of affordable financing.

The World Bank and NITI Aayog, India, formulated the EVOLVE-risk sharing program to address the financial gap. The program offers financial institutions USD 250 million in low-cost loans and credit guarantees to unlock private sector financing toward electric two- and three-wheeler segments.

Our engagement

The Small Industries Development Bank of India (SIDBI), the EVOLVE-RSP's Program Manager, contracted MSC to design the facility's structure and bring stakeholders on board. MSC undertook the following tasks:

- Validated the risks and de-risking measures involved in financing electric two- and three-wheelers, computed the resulting expected credit losses to the facility, and finalized the terms of the low-cost loan and credit guarantee facility under the program;
- Designed selection criteria, credit models, and due diligence checklists for various borrower categories, such as individual salaried segments, drivers, owners, fleet operators, and leasing companies, among others;
- Designed the criteria to identify and onboard the financial institutions participating in the program and electric vehicle manufacturers.

Clients and partners

Expected outcome

- The EVOLVE-RSP plans to unlock private sector financing for 8 million electric two- and three-wheelers over the next 8-10 years.
- The earmarked USD 250 million can unlock USD 1.83 billion worth of loans from banks and non-banking financial institutions to this sector.
- Based on initial estimates, scaling up of electric two and three-wheelers supported by EV-RSP can potentially mitigate up to 9.5 million tons of CO_2 in GHG emissions during the vehicle's lifetime.

Elevating the voices of affected people

Strengthening climate resilience and adaptation through financial services

Insights into the impact of climate hazards on vulnerable communities in Bangladesh and the role of financial services to inform their adaptation strategies

The challenge

Bangladesh's southwest region faces frequent tropical cyclones and storm surges that lead to soil and groundwater salinization. Cyclones have wreaked havoc on the lives and livelihoods of urban and rural poor communities.

However, the global inclusive finance community has a limited understanding of the cyclones' direct and indirect impact on the lives and livelihoods of poor and vulnerable rural and urban communities. Studies have yet failed to adequately reveal how these communities adapt to the increased intensity and frequency of these events and how financial services inform their adaptation strategies.

As a result, the global inclusive finance community cannot formulate programs to deliver inclusive financial services that meet these vulnerable communities' adaptation needs.

Our engagement

CGAP engaged MSC to study and uncover an understanding of the following:

- Direct and indirect impacts of cyclones and their associated perils on the lives and livelihoods of the affected communities in Southwest Bangladesh;
- Adaptation strategies of these poor and vulnerable households and the role of financial services in those strategies;
- Pathways to enhance the role of financial services in the adaptation strategies and strengthen the resilience of these communities against climate change.

Clients and partners

CGAP

DECODIS

Outcome

- CGAP conducted a consultative workshop in Dhaka based on the first set of insights generated from the qualitative research.
- The workshop brought together leading climate adaptation and inclusive finance communities' members on a common platform.
- The workshop allowed these two communities to share their perspectives on the problems caused by climate change impacts on poor communities and how inclusive financial services can lead the pathway to climate adaptation.

MSC

Impact of climate change on smallholder farmers and their coping strategies

The impacts of climate change on the lives and livelihoods of Bihar’s smallholder farmers and the role of livelihood assets to inform their coping strategies

The challenge

Climate change will intensify the impact of hydrometeorological events, and floods will be the most devastating climate hazard in the future. The agriculture economy and the financial health of smallholder farmers will be severely affected unless they develop mechanisms to mitigate the increasing risk of flood and land degradation.

The international inclusive finance community has a limited understanding of climate change’s direct and indirect impacts on smallholder farmers and their strategies to cope with these impacts. Another challenge is the limited body of literature that reveals the role of livelihood assets to strengthen the climate resilience of smallholder farmers.

Our initiative

MSC undertook a qualitative research study to understand the impact of floods on the lives and livelihoods of smallholder farmers in Bihar. The study sought to understand:

- The kind of livelihood assets that help the smallholder farmers cope with the impacts of recurring floods;
- The role of financial institutions, social safety nets, and alternative income opportunities to shape their coping response.

Another major project objective was to identify metrics that can determine the smallholder farmers’ resilience against climate change before, during, and after the interventions. We also adopted a cost-effective research model that could encourage programs and policymakers to use them extensively. The metrics would inform the effectiveness of interventions to strengthen the smallholder farmers’ resilience against climate change.

Outcome

- MSC published the qualitative study findings.
- We are in the process of publishing the smallholder farmer resilience index.

Energy and natural resources

Employment growth in the renewable energy sector

Policy advocacy for a group of ministers on employment generation in India's renewable energy sector

The challenge

India's renewable energy sector faced a 43% decline in capacity installation in Q1 2020 from Q4 2019 due to the lockdown measures imposed to curb COVID-19's spread. The sector holds the key to economic recovery and employment generation post-COVID-19, though it is not immune to economic slowdowns.

The challenge for the Government of India has been the identification of policy enablers to actualize the sector's employment potential as part of economic recovery.

Our engagement

In April 2020, the Government of India constituted a Working Group of Ministers on Employment and Skill Development. The Ministry of Social Justice and Empowerment, responsible for the Group of Ministers' supervision, also set up a Group of Experts to advise on solutions and policy measures.

Mr. Manoj Sharma, Director-MSC, was appointed as the Group of Expert's Cochair. MSC provides secretarial support to the GoEs under this arrangement through the following measures:

- Engagement of sectorial experts, which includes those in renewable energy, in discussions and policy advisory;
- Validation of expert opinions through comprehensive research;
- Documentation of validated opinions and presentation of final recommendations to the GoM.

Clients and partners

Outcomes and impact

- MSC compiled a series of policy measures to improve the renewable energy sector's employment-generation capacity.

Review and implementation assessment

Consultative review of the Punjab State Power Corporation Limited's "Save Water, Earn Money" program

The challenge

Groundwater extraction in India's Punjab state has increased from 149% of the naturally-available recharge in 2013 to 165% in 2018. During the same period, the state experienced a 32.81% negative variance from normal annual rainfall, which further depleted groundwater recharge. Climate change has accentuated these periods of dry spells since 2009. In June 2018, the Government of Punjab's state electricity distribution company launched the "*Paani Bachao, Paise Kamao*" program with implementation support from J-PAL, TERI, and the World Bank. The objective was to promote groundwater's judicious use without harm to the agricultural economy. The stakeholders' challenge was to identify the behavioral triggers to motivate farmers not to exploit free electricity and deplete groundwater reserves.

Our engagement

MSC conducted a study of the program in July 2019. We observed that some farmers were skeptical about the metering process deployed to offer financial incentives and calculate the amount of power farmers save.
Based on the program observations, we recommended the following interventions to change beneficiaries' behavior toward the program and drive its adoption:

- Strategic intervention: Set up a dedicated project management unit (PMU) to train extension agents, develop SEDC officials' capacity, and incorporate beneficiary feedback to improve the program's delivery;
- Operational intervention: Deploy digital metering to instill trust in the power consumption monitoring mechanism and encourage farmers to self-monitor consumption;
- Stakeholder-level intervention: Mobilize smallholder farmers' opinions in the program's favor through timely communication of incentives credited into bank accounts.

Outcomes and impact

- The project stakeholders accepted most of our recommendations. They started to notify beneficiaries about the savings calculations through SMS.
- The SEDC did not issue power bills to farmers, even to those who consumed more than their eligible quota.
- The program's second phase plans to reach out to 50,000 farmers out of a staggering 1.25 million who use free power to run 1.35 million groundwater pumps. However, till November 2021, only 4.69% of the power consumers in 200 villages had subscribed to the program. Farmers mainly opted out because they did not receive the promised incentives under the first phase.

Clients and partners

Soil health and fertility improvement

Consultative evaluation of India’s soil health management program

The challenge

In April 2014, the Government of India launched the Soil Health Management (SHM) program to motivate farmers to optimize chemical fertilizer consumption, which would improve soil health, restore soil organic matter, enhance the soil’s carbon capture capacity, reduce soil erosion, and restore the micronutrient profile. The government conducted soil sampling and issued Soil Health Cards to farmers to ensure the adoption of the recommended dose of chemical fertilizers.

However, the SHM program could not persuade farmers to use the recommended dose of chemical fertilizers based on their farms’ soil health status, even after a year of its launch.

Our engagement

Between 2016 and 2019, MSC conducted a series of beneficiary-level studies to understand the reasons for the lukewarm response to the program.

In November 2016, we conducted a pilot study in Andhra Pradesh state’s Krishna district. Based on its initial findings, we conducted a national-level study in 54 districts across 18 states.

MSC’s study sought to uncover structural and behavioral barriers to the SHM system’s adoption among farmers. We noted that the apprehension of reduced productivity due to the reduced chemical fertilizers’ use is a key bias at the farmers’ level.

Clients and partners

Bill & Melinda Gates foundation

Output and outcome

Based on its studies, MSC suggested measures that could increase adoption. These included localization of awareness campaigns, timely delivery of soil health reports, and refinement of the recommendations on fertilizer use based on a crop’s phenology.

Currently, the program has issued guidelines to establish soil testing facilities at the village level to meet the demand for localized awareness creation and timely delivery of soil health reports.

The second cycle of soil sampling and testing conducted between 2017 and 2019 saw an increase of 8.30% in the number of samples tested. The number of Soil Health Cards dispatched to farmers increased by 11.56%.

An assessment of India’s flagship LPG distribution program

Consultative assessment of a subsidy-backed LPG distribution program to drive the adoption of alternatives to polluting energy sources

The challenge

The Government of India’s Ministry of Petroleum and Natural Gas (MoPNG) launched the Pradhan Mantri Ujjwala Yojana (PMUY) to address the need for clean cooking fuel for 50 million households, especially in the country’s rural and remote areas. Toxic fumes, such as carbon monoxide and carbon dioxide from burning firewood, kerosene, and peat, threaten human health. Household emissions also lead to higher greenhouse gases in the atmosphere, though their share is smaller than other sources of CO2 emissions. The program offered a direct cash subsidy to incentivize households to shift permanently from polluting cooking fuels to LPG.

The MoPNG’s challenge was to reach the initial target of 50 million beneficiaries and ensure behavior change, which would lead to LPG’s adoption as a permanent alternative to polluting cooking fuels.

Our engagement

MSC assessed the implementation in three phases from 2016 to 2018. The research team interviewed 574 PMUY beneficiaries across 124 villages and 44 districts in India.

The assessments enabled MSC to:

- Understand the behavioral triggers that facilitate the adoption of a cleaner energy source;
- Identify the deterrents that prevent the regular refilling of LPG cylinders;
- Identify the reasons for the continued coexistence of LPG and unclean fuels;
- Determine the impact on gender equilibrium, as women are the program’s primary beneficiaries;
- Recommend measures to MoPNG to ensure the continued usage of LPG cylinders and permanent abolition of polluting cooking fuels.

Outcomes and impact

- MSC published the recommendations as a policy brief that was presented to the key stakeholders.
- After the study’s first phase, the Ministry accepted MSC’s recommendations and commenced the nationwide LPG safety campaign targeted at PMUY beneficiaries. It removed some of the operational barriers that affect LPG’s supply.
- The interventions helped the program enroll 92 million rural households up to April 2022. At this scale, MSC estimates that even a 30% permanent switchover to LPG will reduce CO2 emissions by 6.14 million metric tons annually.

Clients and partners

Financing energy-efficient technologies

Dissemination of insights on the nuances of financing energy-efficient technologies' adoption by MSMEs in India

The challenge

In 2013, the International Finance Corporation (IFC) undertook a project to promote capital access to MSMEs, which would enable them to adopt energy-efficient technologies. IFC identified that the key to this initiative's success was to encourage financial institutions to realize the potential opportunities, benefits, and returns in financing MSMEs willing to adopt energy-efficient technologies.

IFC's challenge was to elicit the Indian BFSI sector's genuine interest to finance MSMEs' energy efficiency needs.

Our engagement

MSC conducted primary research through engagements with MSMEs and financial institutions. We synthesized the findings into a strategy to finance MSMEs' adoption of energy-efficient technologies.

MSC successfully disseminated actionable insights to key stakeholders in the Indian BFSI sector through a knowledge series workshop in June 2013.

Clients and partners

Outcomes and impact

- A clear outcome of the workshop was a consensus on the need to utilize financing to encourage MSMEs to adopt energy-efficient technologies.
- The Small Industries Development Bank of India (SIDBI) launched the 4E (end-to-end energy efficiency) program in June 2014 to promote energy-efficiency investments in MSMEs. The program provides subsidized finance ranging from INR 1–15 million (USD 13,333–200,000) to MSMEs to implement the suggested energy conservation measures (ECM).
- The scale of environmental benefits to make more than 63.4 million MSMEs energy-efficient would be substantial for a developing like India.

Private sector engagements

Enhancing the climate resilience of marine fisherfolk

Support to an emerging Indian FinTech firm to extend livelihood finance to marine fisherfolk vulnerable to coastal floods

The challenge

The World Bank estimates that 15% of the world's annual marine catch volume is illegal and causes irreparable damage to marine biodiversity. Awareness of the adverse impact created by fisherfolk involved in illegal and indiscriminate fishing and their participation in creating solutions can potentially create balance and reduce the harm to coastal biodiversity caused by large fishing vessels that organized chains operate.

Numer8, an emerging FinTech firm in India, sought to build robust credit offerings for underwriting loans to increase the participation of vulnerable fisherfolk in marine fishing value chains across several countries. Numer8 believed that credit is essential for fisherfolk to scale their livelihood activities and enhance their resilience against climate shocks.

Our engagement

MSC supported Numer8 through qualitative insights into the marine fishing value chain's economics, the credit needs of fisherfolk, and the nuances of financing the low-income segment. MSC interviewed more than 220 fisherfolk and value chain participants to develop these insights.

MSC has also been developing a robust credit engine for Numer8 that could apply to diverse countries with minimum customization.

MSC offered services to Numer8 as part of its umbrella engagement as a technical advisory partner of CIIE.CO's Bharat Inclusion Initiative.

Clients and partners

BHARAT INCLUSION INITIATIVE BY CIIE.CO

numer8

Outcomes and impact

- Numer8 has successfully registered more than 2,000 fisherfolk in India. It has been running pilot programs in Bangladesh, Sri Lanka, and the Philippines.
- Numer8 has a robust credit engine and a sophisticated analytics architecture. It seeks to support marine fisherfolk in Bangladesh, India, Indonesia, Papua New Guinea, Sri Lanka, and the Philippines.
- Our intervention has helped Numer8 offer credit to fisherfolk and promote sustainable fishing. This initiative is expected to protect the livelihoods of a significant percentage of the 120 million people who depend on fishing for their incomes and livelihoods.

MSC

Climate impact and risk assessment tool

A self-service climate impact and climate risk assessment tool for financial services companies

The challenge

The banking and financial services sector is vital to help countries achieve nationally determined contributions' (NDCs) goals.

However, the BFSI sector in developing countries lacks the necessary tools to evaluate their business's climate impact and identify physical risk and transition risk of climate change.

Our engagement

Developing World Markets (DWM), an international development finance institution, engaged MSC to develop a tool that can be applied to various types of financial institutions and deliver insights contextualized to the organization's size and country of operations. The tool will help financial institutions evaluate their business's climate impact and identify climate change-linked physical and transition risks.

MSC developed a climate impact and risk assessment tool for DWM's portfolio companies. MSC referred to the following standards and guides to develop the tool for DWM:

- Task Force on Climate-Related Financial Disclosures' guidance on metrics, targets, and transition plans;
- European Microfinance Platform's Green Index 2.0;
- World Economic Forum's guiding principles for effective climate corporate governance;
- PCAF's global GHG accounting standard for the financial industry;
- The Greenhouse Gas Protocol's emission factor computation tools.

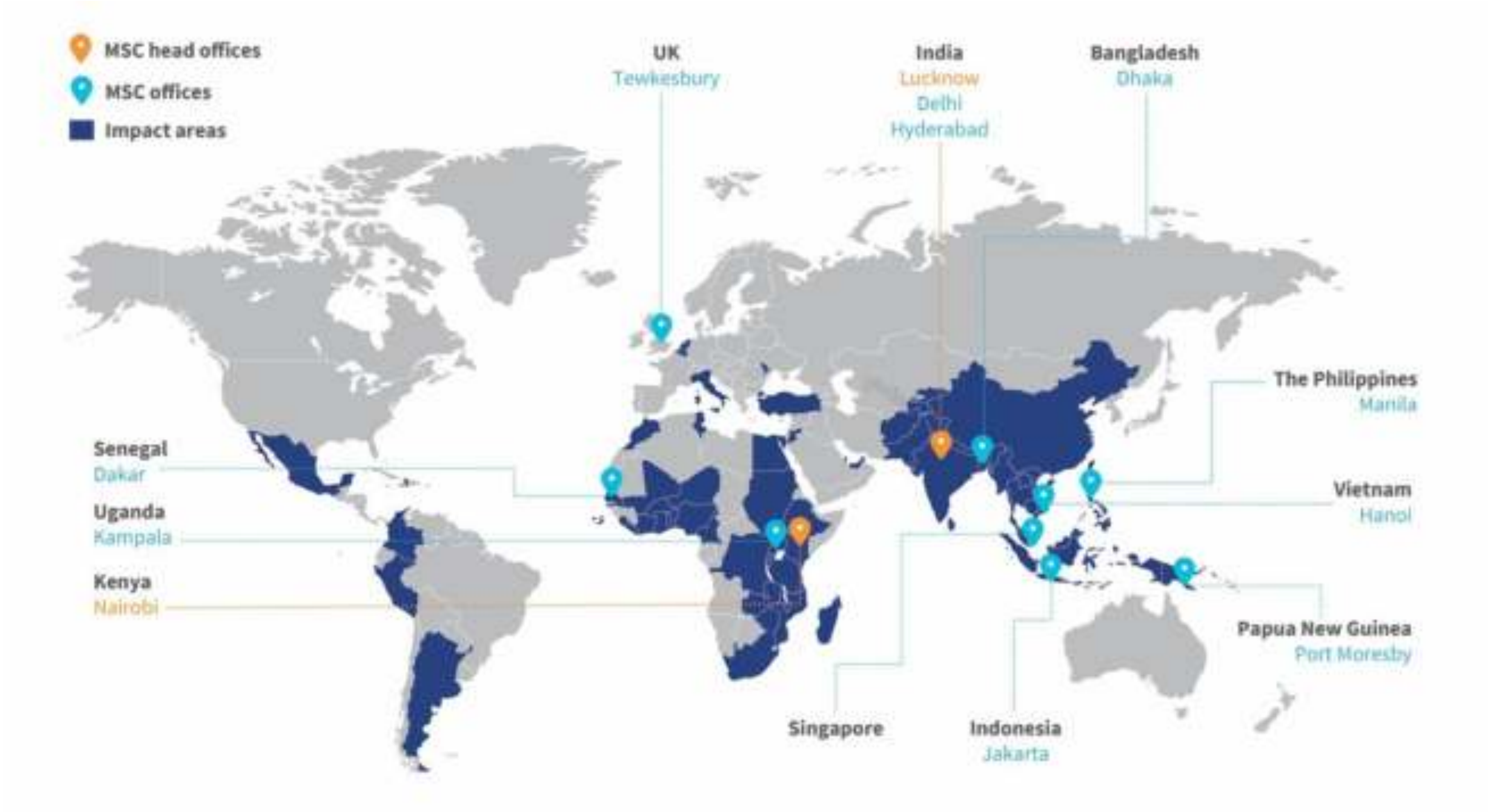
Clients and partners

Developing World Markets

Expected outcome

MSC expects DWM's investee institutions to test and scale up the tool in their organizations.

MSC will subsequently support the evaluation of the self-assessments' outcomes. DWM might seek MSC's support to potentially help some of its investee financial institutions enhance their climate action strategies.



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