



SUMMARY BRIEF

# PROMOTING CLIMATE ADAPTATION IN COASTAL BANGLADESH

*Catalyzing Private Sector Participation to Champion Climate-Resilient Agriculture and Food Security*

// October 2022

## DEVELOPMENT CONTEXT

Bangladesh is highly vulnerable to the effects of climate change. The country is densely populated, and about 24 percent of its 150 million inhabitants lived below the poverty line in 2016. Much of Bangladesh's territory is situated on a river delta at near-sea level, making it susceptible to flooding. In particular, Bangladesh's 123 polders — home to around eight million people — are especially vulnerable. These tracts of land, lying at or below sea level, are bounded by earthworks to hold back the water that surrounds them. The effects of climate change on the polders include sea-level rises and the resulting salinification of the rivers surrounding the polder areas. Saltwater intrusion, particularly during the dry season (*bari*), threatens the livelihoods of smallholder farmers in the polders.

## CLIMATE DELIVERY INITIATIVE SERIES //

CIF Program: PPCR

### TOPICS

- Adaptation
- Climate Resilience
- Climate-Smart Agriculture
- Coastal Resilience

### PROJECT NAME:

Climate-Resilient Agriculture and Food Security (CRAFS)

### PROJECT COST:

USD 3.1 million

### PARTNER ORGANIZATION:

International Finance Corporation (IFC)

### PROJECT DURATION:

2014–2020

### COUNTRY:

Bangladesh

## IMPLEMENTING MDB



## CLIMATE-RESILIENT AGRICULTURE AND FOOD SECURITY PROJECT

The Climate-Resilient Agriculture and Food Security (CRAFS) project in Bangladesh sought to build farmers' resilience to the effects of climate change in the polders by promoting sustainable climate-smart agriculture (CSA) technologies and practices in both private-sector agribusiness firms and among the farmers. This project was carried out by the International Financial Corporation (IFC), with financing from the Climate Investment Funds' (CIF) Pilot Program for Climate Resilience (PPCR).

**To promote CSA, IFC worked with local agribusiness firms (referred to as lead firms). The lead firms were the main clients whose business was intended to provide a variety of important goods and services to smallholder farmers in the polders, including:**

- agricultural extension and advisory services;
- demonstration of CSA practices and techniques through dedicated field days and community capacity-building workshops;
- development and application of digital agricultural extension tools and services;
- establishment of weather forecast stations and weather-related services for farmers;
- identification of insurance schemes; and
- provision of (subsequent) support for climate-focused small and medium enterprises (SMEs) and start-ups.

## DELIVERY CHALLENGES AND SOLUTIONS

### **CHALLENGE 1: Business Environment: Risk and Reward Perception**

In part because of the polders' isolation, poverty, and poor infrastructure, many private-sector firms were initially reluctant to work in these areas, which they perceived as offering elevated risks and operating expenses for unproven returns in an impoverished market. Identifying lead firms and securing their participation in the project was thus a critical aspect of the intervention.

**SOLUTION: Demonstrating the Business Case.** To tackle this challenge, the IFC team presented a strong business case that was refined over time, with feedback from partner firms, and supported by technical assistance to help cushion the risk for private firms. During implementation, through learning by doing and acquiring first-hand experience in the field, the lead firms became more convinced of the viability of doing business in the polders. The business case for investing in climate adaptation in the polders rested on the prospect of gains both for lead firms, who could benefit from increased sales and new markets, and for farmers, who could benefit from increased productivity of their crops and ultimately resilience to climate change. To convince both firms and farmers, this business case would need to be demonstrated through increased farm productivity using the climate-smart seeds supplied by the lead firms.



## TRACING THE IMPLEMENTATION PROCESS

In Phase One (2014–2016), the first critical step was to recruit lead firms. IFC initiated cooperation with two agribusiness companies — Supreme Seed Company Ltd. (SSCL) and Advanced Chemicals Industries Ltd. (ACI) — in 2015. The lead firms rolled out training packages to provide farmers with information on the characteristics and advantages of climate-smart seeds (in particular, salt-resistant seeds) and CSA techniques. Delivered in local vernacular, the trainings were focused on concrete demonstrations of the benefits of CSA seeds and planting techniques. The trainers also worked with selected farmers to set up demonstration plots that were planted with climate-smart seeds to show firsthand the advantages of these seeds.

At the end of Phase One, based on feedback from the partners, the project underwent a restructuring to adjust approaches before scaling up. Key adjustments included focusing the intervention on polders with commercial potential, along with identifying and targeting markets where beneficiaries would sell their crops. These refinements were crucial in adjusting the business case to ensure long-term business engagement.

In Phase Two (2018–2020), CRAFS scaled up training, with SSCL playing a pivotal role as the main lead firm. The project also introduced additional services to support farmers and small and medium enterprises (SMEs) and start-ups in the polders. A key service was the provision of digital extension services in partnership with mPower — a social enterprise focused on ICT for development. This component included weather forecasts, weather-based crop advisory services, and a call center-based farmer query service.

The project also worked with SEAF Ventures, an impact investor company in Bangladesh, and Better Stories Limited, a start-up accelerator, to provide risk capital and capacity-building coaching to SMEs and start-ups working in the polders, both in the agricultural and non-agricultural sectors, and whose business models were relevant for climate adaptation.

### **CHALLENGE 2: Skills and Human Resource Misalignment**

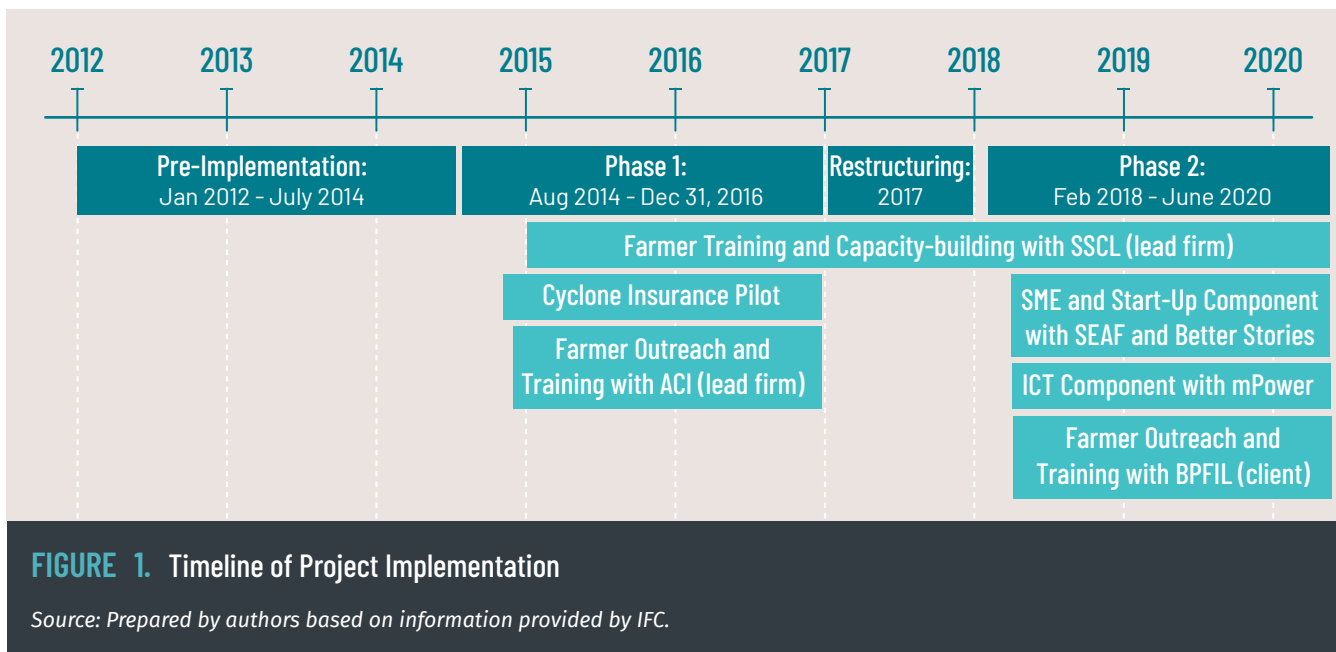
Many farmers lacked information on CSA practices. Even when interested in participating, some farmers did not have access to information about climate-smart crop varieties and were unaware of the potential benefits, while others said they did not have information on where to buy climate-resilient seeds.

**SOLUTION: Building Skills through Agricultural Extension and Training.** The lead firms provided information and training to farmers across the polders. This helped to build the farmers' skills and knowledge, with the resulting engagement helping to spur the adoption of CSA technologies and techniques.

### **CHALLENGE 3: Geographic Access and Transportation**

The polder areas are remote and infrastructure connections with other parts of Bangladesh are poor. Private-sector actors were often reluctant to engage in these areas, since the infrastructure challenges could lead to higher operating expenses. Project implementers also faced difficulties in carrying out face-to-face engagements in these areas.

**SOLUTION: ICT for Cost-Effective Digital Extension Support.** To address this challenge, the project mobilized information and communication technology (ICT) to deliver cost-effective and customized remote farm extension support to beneficiaries, thus reducing the need for face-to-face engagement.



## PROGRAM RESULTS

CRAFS largely met or exceeded its goals and targets, generating important improvements in the well-being of thousands of smallholder households. Farm yields for major crops (that is, rice, potatoes, and vegetables) and farm revenues increased by 38 percent and 18 percent, respectively (exceeding their initial targets of 20 percent and 15 percent, respectively). More than 96,000 smallholder farmers, including over 11,000 women, benefited from capacity building on climate-smart agriculture, and over 73,000 farmers indicated that they were using at least one CSA practice. Crucially, the project demonstrated that the private sector could do business in the polders and catalyze climate adaptation and resilience through climate-smart agriculture.

## LESSONS LEARNED

- 1 **The project demonstrated that the private sector could play a key role in adaptation and building resilience to climate change.** For the project to do this in a geographic area often seen as unprofitable by the private sector, it needed to demonstrate a strong business case to involve private firms and incentivize them to work with the project. The knowledge and technical support that IFC provided, with funding from PPCR, helped to mitigate risk and encouraged firms to participate.
- 2 **The project demonstrated the critical importance of creating space for flexibility and responsiveness when designing and implementing projects.** The project built in flexibility and modularity through a phased approach. It began with a pilot phase to test relevant climate-resilient practices and technologies, disseminate knowledge, establish trust among key stakeholders, and demonstrate a business case. This approach enabled the project to build knowledge and pause to take stock and adjust before scaling up. Thus, the IFC team was able to adjust its strategies when it encountered delivery challenges and when it acquired new information during implementation.

3 | **Integrating and mobilizing innovative ICT and digital services was crucial for overcoming geographic barriers.** Implementers realized early on that, given the inaccessibility of the polders, it would be difficult to carry out a significant number of face-to-face engagements and data collection. In response, they developed digital tools and applications that were critical to extending the reach of the project in a cost-effective way by enabling the provision of remote support.

4 | **South-South learning from a similar, contemporaneous project helped spur the adoption of solutions.** Learning from other PPCR projects, including IFC's roughly contemporaneous Promoting Climate-Resilient Agriculture Project in Nepal, around implementation approaches helped accelerate learning on issues, such as agricultural techniques, using ICT, and how to engage with the private sector.

# THE CLIMATE INVESTMENT FUNDS

The Climate Investment Funds (CIF) is one of the largest multilateral climate funds in the world. It was established in 2008 to mobilize finance for low-carbon, climate-resilient development at scale in developing countries. 14 contributor countries have pledged over US\$10 billion to the funds. To date CIF committed capital has mobilized more than \$62 billion in additional financing, particularly from the private sector, in 72 countries. CIF's large-scale, low-cost, long-term financing lowers the risk and cost of climate financing. It tests new business models, builds track records in unproven markets, and boosts investor confidence to unlock additional sources of finance.



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