| Pilot Program for Climate Resilience<br><br>Program Approval Request | | | |
|---|---|---|---|
| 1. **Country/Region:** | *Bangladesh/ South Asia* | 2. **CIF Project ID#:** | (Trustee will assign ID) |
| **3. Source of Funding:** | ☐ FIP | ■ PPCR | ☐ SREP |
| **4. Project/Program Title:** | *Technical Advisory Services for Investment Project 1 "Promoting Climate Resilient Agriculture and Food Security" and Feasibility Study for a Pilot Program of Climate Resilient Housing in the Coastal Region* | | |
| **5. Type of CIF Investment:** | ☐ Public | ■ Private | ☐ Mixed |
| 6. **Funding Request in million USD equivalent:** | *Grant: USD 3,400,000 (for advisory services)* | *Non-Grant:* | |
| **7. Implementing MDB(s):** | *IFC* | | |
| **8. National Implementing Agency:** | *Ministry of Environment and Forests* | | |
| 9. **MDB Focal Point and Project/Program Task Team Leader (TTL)**: | *Headquarters- Focal Point:*<br><br>*PPCR Focal Point:*<br><br>*Joyita Mukherjee (jmukherjee1@ifc.org)* | *TTL:*<br><br>*Rita Lohani (Rlohani@ifc.org)* | |
| 10. **Program Description (including objectives and expected outcomes):** | | | |

**1. Program Description:**

This Program Approval Request responds to the advisory services/technical assistance (grants) component of the IFC-Managed PPCR Program for Bangladesh, which includes Investment Project-1 "*Promoting Climate Resilient Agriculture and Food Security*" and Technical Assistance Project-2 "*Feasibility Study for a Pilot Program of Climate Resilient Housing in the Coastal Region*" as listed in Bangladesh's SPCR, endorsed by the PPCR Subcommittee in November 2010. The program will be implemented across 12 polders in the following districts of the coastal regions: Satkhira, Khulna, Bagherhat, Pirozpur, Barguna, Patuakhali, Bhola, Noakhali, Lakshmipur, Feni, Chittagong and Cox's Bazaar.

Investment Project 1 - *"Promoting Climate Resilient Agriculture and Food Security"* has a technical assistance/ advisory services component (grants) and an investment component (concessional loans).

IFC proposes to start implementation of Investment Project 1 with an advisory program (technical assistance) to clients (farmers, agribusiness companies and/or financial institutions), which is expected to generate demand for investments and subsequently, leverage private sector

contributions. The advisory program will develop and pilot interventions that can improve resilience of agribusiness companies and their supply chains; improve adaptive capacity of farmers, facilitate access to finance across the agricultural supply chain, and identify aggregated investment opportunities to provide solutions to climate-vulnerable areas, particularly in selected polders. The advisory program will work with clients to pilot climate-smart agricultural technologies and practices suitable for promoting climate resilient agriculture and improving farmer livelihood.

Twelve to eighteen months after commencement of the advisory program, IFC expects to submit a *second Program Approval Request* to the PPCR Subcommittee detailing the investment component of the program with potential investee clients in real and/or financial markets sectors
. In preparation for the investment component, IFC has completed a scoping study prepared with PPCR project preparation grant that identified crops with productivity and market potential specifically in the polder areas. The study identified that in the PPCR Bangladesh context, due to high risks (operational, financial, and political), current weak capacity of the banking sector to provide agri-financing, and the fact that many agri-business companies are in nascent stage, it would not be possible to carry out any investments immediately.

IFC has commissioned an agri-business sector mapping study (to identify major agribusiness companies with investment potential) and a market analysis for selected crops in Bangladesh. This information will help the advisory program prepare the stage for the investment program.

The scoping study process to design the program involved research in the polder areas and held intensive discussions with key stakeholders (private sector, public sector, development partners) to identify climatic risks specific to agriculture and aquaculture. The four subsectors recommended through the process were: Promotion of stress tolerant (salinity, flood and drought) rice and selected edible oil (sunflower), selected vegetables (chili, okra, gourd) and pulses (lentils, grass pea). Specific interventions proposed to assist farmers in benefiting from growing these climate-resistant crops in the polder areas include:

1. Development of market linkages at input and output levels with dealers, retailers, traders, aggregators, processors for farmers to have better access to input and output markets;
2. Enhancement of climate change risk management capacity of the private sector (including farming communities) by developing an early warning system to have access to weather and crop related information, improvement of farming practices, and introduction of innovative technology;
3. Development of innovative financial products for farmers and other agri supply chain members in collaboration with financial institutions.

Technical assistance Project 2 - *"Feasibility Study for a Pilot Program of Climate Resilient Housing in the Coastal Region,"* will involve a study and a pilot intervention program. The main areas to be addressed in the project are:

- Establishing the housing/ finance needs and affordability of lower income population groups living in poor quality structures;
- Developing a multi-pronged approach for housing and housing finance that corresponds to each income segment; and
- Developing a business model for the private sector to enter the market for lower income disaster-resilient housing and housing finance in coastal areas.

**A. Project 1: Promoting Climate Resilient Agriculture and Food Security (US$3 million grant**

**for Advisory Services)**

## 1. Context

Bangladesh is a low-lying delta with a population of about 160 million (2010 data), and one of the most vulnerable countries in the world with respect to climate change. As noted in the Bangladesh Climate Change Strategy and Action Plan, the combination of frequent natural disasters, high population density, poor infrastructure and low resilience to economic shocks, makes Bangladesh especially vulnerable to climatic risks. The high incidence of poverty and heavy reliance of poor people on agriculture and natural resources increases their vulnerability to climate change.

Bangladesh is experiencing a variety of climate-change related challenges, particularly in the southern coastal belt. The coastal regions make up 32% of the total land area of Bangladesh and 28% of the country's population. The majority of districts in the coastal region are frequently challenged by a combination of extreme cyclones, hurricanes, tidal surges and consequent flooding, heavy rainfall, and saline intrusion. Lack of resilience mechanisms, such as infrastructure (polders, dykes, cold-storage, climate-resilient housing), effective drainage, early warning systems, and financing (to fund risk-mitigation and recovery/rehabilitation initiatives) makes coastal inhabitants exponentially more vulnerable to loss of life and economic assets. ( Bangladesh NAPA, 2005)

*Agriculture Sector*- The agriculture sector in Bangladesh accounts for about 20% of GDP. While the sector as a whole employs about 65% of the labor force, in polder areas this average is as high as 80%; coastal inhabitants are extremely dependent on the agriculture sector for their livelihoods. Considering all climate impacts cumulative rice production is expected to decline by 80 million tons (about 3.9 percent each year) over 2005–50, driven primarily by reduced *boro* (winter) crop production. Agricultural GDP is projected to be 3.1 percent lower each year ($36 billion in lost value-added) and total GDP $129 billion lower due to climate change over the 45-year period 2005–50. (Economics of Adaptation to Climate Change: Bangladesh, World Bank, 2010).

While cropping intensity has increased across the country in the last 40 years, crop yield has not proportionately increased due to poor agricultural practices such as the indiscriminate use of inputs, low seed replacement rate, and single cropping patterns particularly in the coastal areas. These are exacerbated by failing infrastructure (broken embankments and faulty sluice gates), making water management difficult and intensifying the impacts of climate hazards. Given this context, the development of appropriate climate response strategies for farmers living in coastal polders and SMEs in agri-business operating in those areas is very important. The Government has taken several credible initiatives in climate change adaptation, with special focus on agriculture, water resources, and comprehensive disaster management. Given the scale and complexity of climate change impacts the participation of the private sector is critical.

*Agriculture in the Polder Areas*- The scoping study and consequent stakeholder workshop organized by IFC as part of the program preparation phase were instrumental in identifying key challenges in the agriculture and aquaculture sectors in the polder areas most affected by climate change. Based on a number of parameters (e.g. land types, bio-physical and socio-economic characteristics, etc.), the study identified several crops viable in the polder areas, during specific seasons:

- *Aman* rice is suitable in all the polders when there is sufficient fresh water available (during the monsoon season). Growing high-yielding (HYV) and early maturing *aman* rice should help rice harvest before the salinity level increases; *rabi* crops also have more time to grow.
- Edible oils (e.g. sunflower) and pulses (lentils, grass pea) are sturdy, drought and salt tolerant crops and are suitable for all polders during the *rabi* season.
- Okra is suitable during the pre-*kharif* season in low salinity areas of south central polders under irrigated conditions.

- Chili crop is a low water intensive crop and can grow well under moderate salinity conditions, and hence is suitable during the pre-*kharif* season in all polders.
- Eggplant and bottle gourd are suitable in all three polder regions during rabi season.
- Watermelon can grow well in the *rabi* season in the low salinity areas of the south central polders under irrigated conditions.

The selected commodities offer a mix of rice and high value vegetable crops which also contribute to food security as well as enhanced farmers' revenue. Attempts to address declining crop yield during the *Boro* season will also be made, taking into account climate change projections. IFC experience on an existing IFC Agri-Seed project in Bangladesh has shown that providing farmers with better inputs and skills to improve farm productivity and adapt to changing climatic, soil and water conditions will result in improved yield and farmer revenue. The potential for productive engagement of private sector both in terms of delivery of inputs and downstream value chain linkages have carefully been considered while selecting the subsectors.

The study also suggested that aquaculture is an important intervention in the southern coastal belt of Bangladesh, particularly in the south-central and south-east regions. Shrimp cultivation has been concentrated in the area for more than 40 years, with shrimp and fish bound for domestic and export markets. Salinity and frequent flooding affects production, and diseases especially amongst shrimp varieties are persistent. However, in some areas, intense cultivation has further exacerbated salinity issues in soil and fresh water bodies. There are a number of social and environmental compliance issues, as well as complex land, water management, and socio-economic conflicts that need to be addressed to successfully engage in the sector. However, additional livelihood options for farmers will be explored when circumstances are relevant.

*Inclusiveness* – The program will include gender considerations, focusing on integrating women into the agriculture supply chain. IFC's experience with its existing efforts in the Agri-Seed project has shown that rural women's participation in agriculture/agribusiness can significantly increase the income of their families.[1] Women and their families who were trained to grow and sell rice seeds have experienced a 35% increase in income while those growing and selling vegetable seeds experienced up to 358% increase[2] in income. (Women in Seed Entrepreneurship, WISE model).

*Agri-Finance*- Adequate financing is a key need to develop and deliver climate-resilient inputs and climate-smart technology to farmers and rural communities. Agri-finance penetration in Bangladesh is low at 5% whereas in India it is 16% and in Sri Lanka around 13%.[3] This is due to the inefficiency of public sector banks, limited reach of private sector banks and weak infrastructure. Local banks need

[1] I In Bangladesh, rural women play a significant role in agricultural activities making up about 80% of the informal (unpaid) labor force and 58.6% of the formal (paid) labor force. They are primarily involved in post-harvest agricultural activities, such as farmer- retained seed preservation..

[2] There is higher market demand for vegetable seeds due to higher prices for the crop.

[3] There are 3 major suppliers of AgriFinance in Bangladesh, each with challenges on the supply side: 1) State owned and Specialized banks comprise 88% (BDT 225 billion=USD 2.78 billion) of total outstanding AgriCredit, have wider distribution channels, however currently about 27% of the loan is overdue; 2) Private and Foreign banks contribute to 12% (BDT 30 billion=USD 370 million) of outstanding AgriCredit, have fewer distribution channels, but only 4% of the loan is overdue; 3) Micro-Finance Institutions (MFIs) supplies AgriFinance to the tune of BDT 168 billion (USD 2.07 billion) through their expansive distribution network, and while overdue loans are only around 4%, credit is provided to farmers at 22%-24% high cost to farmers.

to be capacitated with knowledge and made aware of the needs in the market on agri-lending and the right models, risk management strategies, and best practices in agri-lending.[4] IFC will focus on leveraging the policy environment to develop the right modalities through which to provide lending to farmers and agribusiness companies.

## 2. Description of Market Barriers

Key barriers that need to be addressed to promote climate resilient agricultural technologies and practices in the polder areas:

1. Limited availability of (public and private sector) products, services and technology to adequately address the challenges to climate-resilient agriculture (input, practices, farm-related infrastructure, financing);
2. Lack of access (farmers, agri-business companies) to critical knowledge (e.g. inputs, processing, storage), technology, and application of technology (e.g. stress tolerant seed varieties, irrigation systems, agri-machinery);
3. Weak supply chain in polder areas due to remoteness and poor transportation[5] results in high operational costs and risks to operating in the polder areas, and low awareness/interest on business potential in the polder areas;
4. Weak weather information delivery and early warning systems make farmers and private sector in polder areas vulnerable to the impacts of extreme weather events;
5. Socio-cultural conditions in the polder areas do not offer an enabling environment for rural women to more productively and gainfully engage in economic activities - particularly in agriculture.
6. Limited financial products are offered by local banks to farmers and agribusiness companies to pilot innovative technology, strengthen supply chain, or recover from loss due to natural disasters.
7. Lack of affordable financing available to farmers; and
8. Interest Rate ceiling of 13% imposed by Bangladesh Bank for commercial banks in primary agri-lending is perceived by local banks as unprofitable for agri-lending.

## 3. Summary of Project 1

The advisory services under the proposed project will use the lead firm approach (see approach described below) to reach out to farmers and supply chain members In supply/value chains where lead firms are not operating, smaller players within the supply chain will be included. The project will closely collaborate with financial institutions and relevant government agencies (e.g. Bangladesh Rice Research Institute, Department of Agricultural Extension, Bangladesh Agricultural Development Corporation, Soil Research and Development Institute, etc.). The project will also look for forging effective partnerships with other development partners to mobilize the right mix of expertise and resources and also for achieving scale.

The specific objective of this project is to promote climate-resilient agriculture contributing to the country's food security, by:

1. Increasing cropping intensity in the selected polders
2. Reducing declining agricultural productivity
3. Increasing farmers' and SME revenue

[4] One of the reasons for BB's directive is that despite an increasing trend of agricultural credit disbursement and outstanding balance, the percentages of agricultural credit in terms of total bank credit were found to be more or less static.

[5] Transportation challenges are partly addressed by World Bank's project Coastal Embankment Improvement Project.

Key components of the project are:

1. *Capacity building and training of farmers and agricultural supply chain members, and piloting of innovative practices and technologies*
   a. Field demonstrations and field days for farmers and supply chain members to demonstrate new seed varieties, agronomic (cropping patterns, sustainable cultivation) and soil management practices to polder areas;
   b. Pilot climate-smart technology (inputs, soil testing technology, water-efficient irrigation, storage), and processing (post-harvest) in partnership with agribusiness companies and development partners; and
   c. Strengthen contract farming capacity (seeds and crops) through lead firms.

2. *Improvement of climate risk management capacity of farmers and agribusiness companies*
   a. Train farmers on post-harvest processing and storage techniques for specific crop/ produce to reduce wastage and ensure it reaches markets;
   b. Train supply chain/value chain members (of specific crops/ products) and link them to lead firms at the output market level (traders, processors) to strengthen farm-to-market linkages; and
   c. Pilot an early warning system (EWS) in collaboration with mobile telephone operators to facilitate clients' access to customized weather and crop related information.

3. *Facilitating better access to finance for farmers and agri-business companies*
   a. Technical assistance in financial literacy to farmers;
   b. Technical assistance to selective banks/financial institutions on designing financial products suitable for farmer uptake of climate-smart products, processes and technologies;
   c. Identify target farmers as High Risk, Medium Risk and Low Risk, in terms of ability to access financing;
   d. Conduct pilot program with at least two FIs on financing the farmers; and
   e. Explore the potential for an Index Based Weather Insurance (IBWI) system for farmers in Bangladesh.

Lead Firm Approach- IFC is currently working with four of the largest seed companies in Bangladesh to improve their R&D capabilities, distribution of high yielding and stress-tolerant seeds, and raising awareness of the supply chain members on long term negative impacts of adulteration of seeds. At the same time, IFC has also trained farmers on the use of specific varieties of seeds suitable to agro-climatic conditions, as well as seed production (hand pollination, open- pollination, storage and preservation). During the project preparation for PPCR Bangladesh, IFC further engaged with its existing clients who expressed their interest to be part of this program. In addition to seed companies, IFC anticipates working with other types of companies offering key inputs and climate-smart technology solutions to farmers such as irrigation technology providers, etc.

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**B. Project 2- "Feasibility Study for a Pilot Program of Climate Resilient Housing in the Coastal Region," (USD 400,000 in grants)**

**1. Context**

The Bangladesh coastal community has over the years adapted community-based activities to better cope with natural hazards. Most of the houses in coastal areas are at high risk from damage due to cyclones because they are poorly built. Several indigenous coping techniques have been developed,

such as raising the plinths of houses and structural retrofits to make homes more resilient to cyclones and flooding. There is tremendous demand for affordable yet quality climate-resilient housing in Bangladesh. The formal housing market currently addresses less than a tenth of the demand; and private housing developers typically cater to the richest income groups. The market for lower income disaster-resilient housing is thus under-explored, but has massive potential from the viewpoint of both, market profitability for the private sector, and disaster mitigation and preparedness for the vulnerable communities in the southern coastal belt of Bangladesh.

For people to invest in climate resilient housing, financing will need to be available with attractive incentives. The vast majority of Bangladeshis have little or no access to formal sector housing and housing finance. The challenge in coastal Bangladesh is in providing housing finance to low- income groups for either new homes or retrofitting current home to climatic hazards. A viable business model needs to be established to induce private sector involvement in the lower income housing market so that, eventually, the vast majority of the population has access to decent and safe, yet affordable, shelter.

## 2. Description of Market Barriers

Both developers and financiers have not ventured to meet the requirements of low-income climate resilient market of Bangladesh. The specific market barriers for lack of private sector intrusion are:

1. Both developers and financiers lack information on the market potential and economic profile of climate affected communities.
2. Developers lack information on appropriate technologies.
3. Financiers perceive the market highly risky, untested and expensive due to higher transaction cost.

## 3. Summary of Project 2

The overall objectives of the feasibility study for low-cost climate resilient housing are:

1. Conduct a study to assess the potential for low-cost climate resilient housing for low- income communities.
2. Pilot a Low-Cost climate resilient housing business model with availability of finance.

*1st Phase –Scoping study:* The scoping study will have the following three components:

1. Market Potential analysis
   a. Vulnerability assessment, including social-economic analysis and economic analysis of disaster related housing costs.
   b. Stakeholder engagement. Stakeholders include: relevant government agencies, bi- and multi-lateral donor agencies, NGOs, MFIs and other financing institutions venturing into HMF and Housing developers.
   c. Housing Market Assessment, which will identify demand-supply gaps, regulatory constrains, availability of supply of finance, as well as assessment of different technologies.

2. Approach/ Recommendations/ Business Model

A Business Model will be prepared for private developers and financiers to make a viable case for lower income housing. This study will clearly lay out the different income groups and propose a multi-pronged approach to housing and housing finance products that can be offered to lower income groups, along with some government-supported incentives, and can serve as a good starting point for the private sector developers and financiers to consider venturing into the market.

3. Identification of Pilot Intervention(s)

The study will indentify housing development companies and financiers that are interested in entering this market, as well as possible pilot intervention(s) that target primarily low and lower-middle income housing that are disaster resistant. In addition, the study will propose an appropriate results measurement framework.

*2nd Phase –Pilot Interventions Implementation:*

1. Pilot Implementation

Based on the recommendations and information from the study, the PPCR project will design appropriate pilot interventions. The objective of these interventions will be to facilitate market actors intrude in the climate-resilient housing space that will lead to market sustainability.

2. Dissemination and Awareness Building

The PPCR project will conduct a series of workshops to share the findings and demonstrate the success of the pilot interventions in order to promote awareness regarding climate change adaptation and disaster resilience among stakeholders in the housing industry. This will include engagement with developers, bankers, government officials, and participants from the donor community.

## 11. Consistency with Investment Criteria:

The program description above has outlined the overall consistency of the program with the PPCR investment criteria. Additionally, there are specifically consistency issues that need to be addressed.

The program proposal is embedded in the broader context of sustainable development, food security and poverty alleviation contexts as elaborated in the SPCR for Bangladesh. The activities planned propose innovative climate adaptation and risk management mechanisms through private sector engagement, specifically in the agriculture and housing sectors, to enable coastal communities' better cope with climate change and improve the livelihoods for farmers that are among the poorest in the country.

The development of the program interventions will build on the initial work where IFC undertook a scoping study and carried out further identification missions and discussions with key market players, government, sectors experts, other development agencies, PPCR partners and target communities. IFC will continue to work closely with key partners and relevant departments within government ministries, such as the Ministry of Agriculture and Ministry of Environment and Forest. IFC will also work closely to create a broader platform of partnership with private sector partners, development agencies and community organizations to implement the program. Additionally, the program builds on the experiences and lessons learned from existing IFC efforts in the agribusiness sector in Bangladesh as well as in other countries that share similar context and challenges (for example India and Nepal).

Lessons learned from the program will be captured in both projects (in particular Project 1 which has a robust monitoring and evaluation component) and disseminated to enable improvements and replication.

## 12. Stakeholder Engagement

This program builds on the stakeholder engagement process that was conducted during the development of the SPCR for Bangladesh. In addition, during the pre-design phase of the program, IFC has carried out identification missions and discussions with key market players, government, sectors experts, other development agencies, PPCR partners and communities to develop the program interventions. IFC has also engaged and will continue to engage with target farmers and prospective partners companies in areas of possible intervention in order to assess needs, interests, farmers' socio-economic benefits and concerns over program implementation and participation.

IFC Performance Standards will be applied and therefore stakeholder engagement will continue as the basis for building strong, constructive, and responsive relationships that are essential for the successful management of the program. For information on IFC's Performance Standards see: www.ifc.org/sustainabilityframework.

## 13. Gender considerations

Rural women play a critical and potentially transformative role in the agricultural sector of developing countries. Typically engaged in a variety of tasks that include domestic and agricultural activities (mostly post-harvest), women are considered to be informal players in the agriculture sector. Important is the fact that women in rural areas are disproportionately affected by climate change due to the following reasons: Incidences of poverty amongst rural women are higher than men; they are more dependent on natural resources for livelihoods; unequal access to resources and decision-making processes; and limited mobility.[6]

Farming must be recognized as a household business that involves both spouses. IFC has found that there is very low engagement of women in training activities unless they are targeted due to a variety of socio-cultural reasons. IFC has also found that involving both husband and wife in training activities helps address mobility and gender inclusion barriers and potentially helps in families allocating resources required by trained women to start agri-businesses and contribute to household income.

IFC intends to incorporate gender-sensitive strategies into supply chain- strengthening programs to identify and pilot strategies through which to better integrate women into the agriculture supply-chain to contribute to overall household income.

## 14. Indicators and Targets (consistent with results framework):

| Core Indicator | Target |
|---|---|

[6] United Nations Factsheet: Women, Gender Equality and Climate Change http://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf

| | |
|---|---|
| (a) Extent to which communities' businesses use improved PPCR supported tools, instruments, strategies, activities to respond to Climate Variability and Climate Change. **(this is a qualitative and quantitative indicator)** | **Output**<br>- 75,000 farmers and agri-supply chain members introduced to climate resilient technologies and practices (including ICT based early warning system);<br>- 5,000 rural women trained on improved post-harvest practices for crops or seeds;<br>- 1 ICT based early warning system to disseminate climate related information to farmers; and<br>- 5 workshops held at regional and national levels with policy makers; and other private and public sector stakeholders to disseminate lessons learned.<br><br>**Outcome**<br>- 45,000 farmers (60%) adopt climate resilient agricultural technologies/practices (e.g. stress tolerant and high yielding seed varieties, improved irrigation systems, soil management practices, etc);<br>- 3,000 rural women (60%) adopt improved post-harvest practices for crops or seeds;<br>- 30,000 farmers adopt ICT based climate change early warning system; and<br>- 5 organizations (e.g. NGO, private sector) adopt the lessons learned through the project and replicate amongst their farmer groups.<br><br>**Impact**<br>- Farmer cropping intensity (total cropped area / net cultivable area; number of crops grown in a year) increased to 150%;<br>- Treatment farmers get 20% higher yield compared to the control farmers<br>- Farmer incremental revenue increased by 15%; and<br>- Farmer household income increased by 20%. |

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| (b) Leverage of PPCR funding against private investments in climate sensitive sectors - Increased availability of finance for climate smart technologies in agribusiness to farmers and agri supply chain members (facilitating better access to finance) | **Output**<br>- 2 pilot programs/ training programs for selective banks/financial institutions on financing farmers for specific crops;<br>- 2 pilot programs/ training programs for selective banks/financial institutions on designing financial products for agribusinesses; and<br>- Develop 1 bundled financial product for purchasing inputs, potentially linking with seed companies.<br><br>**Outcome**<br>- 2 Financial Institutions interested to take PPCR loans (though disbursement cannot be ensured until IFC's Financial Markets team is involved in the investment component of the project); and<br>- USD 200,000 of financing accessed by farmers and agricultural supply chain members for climate smart technologies in agribusiness through trained banks.<br><br>**Impact**<br>- Increase agri-lending to at least 2% (of total portfolio) in 2 banks; |
| (c) Quality and extent to which climate responsive instruments/ investment models are developed and tested (Better understanding of low cost climate resilient housing options) | - 1 (one) market assessment conducted for low-cost climate resilient housing; and<br>- 1 pilot program on low-cost climate resilient housing business model. |

**15. Budget**

| **Expenditures**[7] | **Amount (USD) -** estimates |
|---|---|
| **1: Promoting Climate Resilient Agriculture and Food Security** | |
| 1.1 Advisory Component | **USD 3,000,000** |
| Capacity building and training of farmers and agricultural supply chain members. | 1,000,000 |
| Improvement of climate risk management capacity of farmers and agribusiness companies. | 1,000,000 |
| Facilitating better access to finance for farmers and agri-business companies. | 350,000 |
| Monitoring and Evaluation | 200,000 |
| Project Management | 450,000 |
| | |
| **2: Feasibility Study for Low Cost Climate Resilient Housing** | |
| 2.1 Advisory Component | **USD 400,000** |
| Feasibility Study | 150,000 |
| Pilot Intervention | 250,000 |

[7] Expenditure categories should be provided by the MDBs based on own procedures.

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|---|---|---|
| | | |
| **Total Cost** | **USD 3,400,000** | |
| Co-Financing[8]: | *Amount (USD million):* | *Type of contribution:* |
| • Government | N/A | N/A |
| • IFC | USD 500,000 | Cash |
| • Private Sector | $1 million | Cash contribution from advisory clients |
| • Others (please specify) | | |
| **Co-Financing Total** | **Up to USD 1,500,000 million** | |
| **TOTAL** | **USD 4,900,000 million** | |
| **16. Project/Program Timeframe** | | |
| Expected Board/ MDB Management Approval Date: December 2013<br>Expected Mid-Term Review Date: N/A<br>Expected Project closure Date: June 2019 | | |
| **17. Other** | | |

[8] This includes: in-kind contributions (monetary value), MDB loan or grant, parallel financing, etc.

**Role of other Partners involved in project/program9:**
IFC will seek to involve other national and international partners (NGOs, community organizations, and other private sector entities) in the implementation of the advisory component of this Program according to their specific expertise and Program needs. The project will also work with the Ministry of Environment and the agencies and departments of the Ministry of Agriculture.

This project will also complement other PPCR programs being implemented by the World Bank and the Asian Development Bank. In addition, the project will coordinate with other donor agencies currently implementing programs in the polder areas, for example USAID has a number of agriculture programs underway (or in the pipeline) under the "Feed the Future" umbrella- Cereals Systems Initiative for South Asia, Agricultural Value Chains, Agricultural Input Retailers' Network , Climate Resilient Ecosystems and Livelihoods projects.

**Implementation Arrangements** (incl. procurement of goods and services)**:**
Project activities will be implemented by IFC in coordination with the Ministry of environment and Forests. IFC will work closely with relevant departments within government ministries, such as the Ministry of Agriculture, and the Bangladesh Meteorological Department. IFC will also work closely with private sector partners, local government agencies and community organizations to implement the project.

In terms of procurement of goods and services, World Bank Group procurement guidelines will be followed. For more information, please see
http://siteresources.worldbank.org/INTPROCUREMENT/Resources/278019-1308067833011/Procurement_GLs_English_Final_Jan2011.pdf

**Monitoring and Evaluation**
In terms of monitoring and evaluation, a baseline study will be conducted, prior to project implementation, to capture information from target farmer groups. It will involve an in-depth survey of farmers (household and farm economics, cultivation practices, etc.) to be able to measure the impacts of specific interventions on farmer yields and revenue, and ultimately farmers' climate resilience. A control group will be interviewed, along with potential treatment farmers, to ensure that a comparative impact assessment will be possible. A midline assessment will be conducted to assess project effectiveness and confirm that project interventions are viable. The midline assessment will survey a robust sample size of farmers interviewed during the baseline study. An end-line survey will be completed within 1.5 years of project completion. The timing and duration of all assessments will largely depend on cultivation cycles of specific crops.

[9] Other local, national and international partners to be involved in implementation of the project/program.