



Report Number : ICRR0021492

## 1. Project Data

<b>Project ID</b> P111272	<b>Project Name</b> BD:Emergency 2007 Cyclone Recovery & Rest		
<b>Country</b> Bangladesh	<b>Practice Area(Lead)</b> Social, Urban, Rural and Resilience Global Practice	<b>Additional Financing</b> P122014,P146500	
<b>L/C/TF Number(s)</b> IDA-45070,IDA-48190,IDA-53420,TF-93588,TF-99305	<b>Closing Date (Original)</b> 30-Jun-2013	<b>Total Project Cost (USD)</b> 323,975,761.77	
<b>Bank Approval Date</b> 06-Nov-2008	<b>Closing Date (Actual)</b> 30-Jun-2018		
	<b>IBRD/IDA (USD)</b>	<b>Grants (USD)</b>	
Original Commitment	109,000,000.00	26,794,718.75	
Revised Commitment	349,927,351.04	24,857,698.02	
Actual	323,975,761.77	26,134,313.54	
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## 2. Project Objectives and Components

### a. Objectives

The Project Development Objective (PDO) as stated in the Financing Agreement (Schedule 1, page 4) and the Project Paper (page 9) was similar.



**"To assist the recipient to facilitate recovery from the damage to livelihoods and infrastructure caused by Cyclone Sidr and to build long-term preparedness through strengthened disaster risk reduction and management"**

**b. Were the project objectives/key associated outcome targets revised during implementation?**

No

**c. Will a split evaluation be undertaken?**

No

**d. Components**

There were five components (Project Paper, pages 9-11). The actual cost of components is from the Implementation Completion and Results Report (ICR, page 46) so as to incorporate the costs added to the project through the two Additional Financings (AFs) for the project.

**One. Recovery of Agriculture Sector.** Appraisal estimate US\$16.00 million. Actual cost US\$29.68 million. This component aimed at improving resilience of communities and households in cyclone prone areas through introducing technologies for improving land use and through introduction of high-yielding crops. This component also aimed at providing support to the fisheries and livestock sub-sectors. The actual cost of this component was about 87 percent higher than estimated at appraisal, due to the significant increase in scope of agricultural support activities provided through the first AF. (The original credit covered only a small part of the damages caused by the cyclone).

**Two. Reconstruction and Improvement of Multipurpose Shelters.** Appraisal estimate US\$40.00 million. Actual cost US\$193.17 million. This component aimed at providing greater protection to vulnerable population and livestock in cyclone-prone areas. Activities included: (i) construction of 50 new multi-purpose shelters; (ii) rehabilitation of existing shelters that were damaged; (iii) rehabilitation of roads to provide access to the shelters; and (iv) supervision of design and construction of shelters.

**Three. Rehabilitation of Coastal Embankments.** Appraisal estimate US\$20.00 million. Actual cost US\$80.90 million. This component aimed at reducing cyclone damage through rehabilitating coastal embankments. Activities included: (i) emergency repair of over 100 kilometers of coastal embankments damaged during the 2007 cyclone; and (ii) supervision of design and construction of embankments. The almost five-fold increase in the actual cost of this component was due to the significant increase in cost of rehabilitating coastal embankments (discussed in section 2e). The increase in cost was covered through the first AF.

**Four. Long-Term Disaster Risk Management.** Appraisal estimate US\$16.00 million. Actual cost US\$20.80 million. This component aimed financing activities associated with preparation and implementation of the government's long-term disaster risk reduction program. Activities included: (i)



capacity building of the Disaster Management Bureau for preparing a multi-hazard risk vulnerability modelling and assessment and strengthening emergency preparedness at community levels; (ii) helping in preparing future projects for River Bank and Coastal Embankment Improvements, updating the River Restoration Programs and preparing future projects for disaster shelters.

**Five. Monitoring and Evaluation and Project Management.** Appraisal estimate US\$17.00 million. Actual cost US\$5.00 million. This component aimed at financing activities associated with Monitoring and Evaluation (M&E) and providing implementation support (including establishing a financing facility to fund disaster recovery, which was subsequently dropped after the first AF in 2010). The ICR does not provide disaggregated information on how much of the appraisal estimate was to have gone for the financial facility and how much for financing M&E activities.

Changes were made to the project scope following the approval of two AFs for the project (discussed below).

#### **e. Comments on Project Cost, Financing, Borrower Contribution, and Dates**

**Project cost.** The appraisal cost estimate of the original project was US\$141.85 million. Estimate after AFs was US\$356.85 million. Actual cost was US\$329.55 million.

**Project financing.** The original project was designed as a US\$200.00 million IDA credit, but lack of IDA availability reduced the project size to US\$109.00 million. US\$106.00 million was disbursed. Additional Financing of US\$75.00 million was approved on September 7, 2010. US\$72.29 million was disbursed. A second AF of US\$140.00 million was approved on November 21, 2013. US\$127.48 million was disbursed. The cumulative credit for the project was US\$324.00 million. Due to exchange rate changes between the SDR and the US\$, the value of the three IDA Credits expressed in US\$ terms shrunk compared to the value at the time of approval from US\$324 million to US\$305.90 million equivalent. The cumulative IDA credit disbursed was US\$298.31 million.

There was co-financing of the project from two Bank-administered trust funds: : (1). The Bangladesh Climate Change Resilience Fund; Appraisal estimate US\$25.00 million; Amount disbursed US\$23.06 million. US\$1.94 million of this financing was cancelled; (2) The Global Facility for Disaster Reduction and Recovery: Appraisal estimate US\$3.00 million. Amount disbursed US\$3.00 million. There was parallel financing for complementary disaster risk reduction activities from the Kreditanstalt Fur Wiederaufbau (KfW). Appraisal estimate US\$4.85 million. Amount disbursed US\$4.85 million.

**Borrower contribution.** None was planned at appraisal. There was no contribution from the borrower during implementation.

**Dates.** The original project was approved on November 6, 2008, became effective on December 24, 2008 and scheduled to close on June 30, 2013. These changes were made to the project scope following the



first AF approved on September 7, 2010: (i) The scope of agricultural support activities was expanded to include direct support to beneficiaries, as the original amount covered only a small part of the damages caused by the cyclone; (ii) Rehabilitation of 350 existing shelters, construction of 110 new shelters and increased allocation of funding for the activity associated with rehabilitation of coastal embankments (as the original allocation for this component was insufficient for the damages caused by the Cyclone in 2007 and also there were additional damages to the embankments, due to the Cyclone Aila that hit Bangladesh in May 2009); (iii) developing hazard maps to better inform disaster response; (iv) replenishing a block allocation to respond to future disasters; and (v) The closing date of the original credit was extended 12 months to coincide with the closing of the AF on June 30, 2014.

Following the AF in 2010, the cost of constructing new multi-purpose shelters increased due to a combination of factors, including an increase in the cost of construction materials, annual revisions in the Local Government Engineering Department's rate schedule and inclusion of a 15 percent price escalation clause for contracts over 18 months. Given the government's priority to construct new multi-purpose shelters to increase the geographical coverage of shelters, the scope of the activity associated with rehabilitating existing shelters was reduced. These changes were made to the project scope through the project restructuring on June 27, 2013. (i) The number of new multi-purpose shelters that were to be constructed was increased from 110 to 230; (ii) The scope of the activity associated with rehabilitating coastal embankments was increased, from 180 kilometers to 270 kilometers; (iii) The number of existing shelters that were to be rehabilitated was reduced from 350 to 240; and (iv) the activity associated with establishing a Disaster Fund Facility was dropped; (v) the Results Framework was modified to align the indicators with the restructured activities; and, (vi) The closing date for the original credit was extended by six months to December 31, 2014 and that of the AF by eighteen months to December 31, 2015.

The second AF was approved on November 21, 2013 and scheduled to close on December 31, 2017. The following changes were made through the project restructuring on December 16, 2015. (i) Cost savings were identified from activities associated with construction of disaster shelters. The cost savings were reallocated to component four activities (Long-term disaster risk management program); (ii) The project closing date for AF 1 was extended by a year to December 31, 2016. Through an Level 2 restructuring on December 4, 2017, the project closing date for the second AF for the project was extended by six months from December 31, 2017, to complete the ongoing activities that were affected due to weather conditions. The project closed on June 30, 2018.

### 3. Relevance of Objectives

#### Rationale

Before appraisal on November 15, 2007 Cyclone Sidr (classified as Category IV) hit Bangladesh, in the wake of a natural disaster due to monsoon floods six months before. The cyclone caused extensive damage to lives (the death toll exceeded 3,000, about 100 were missing and more than 55,000 people were injured due to the cyclone). The total damage and losses estimated to be around Bangladesh Taka of 115.60 billion



(equivalent of US\$1.70 billion) (PAD, paragraph 8). More than two-thirds of this was physical damage, with damage concentrated in the housing, public infrastructure and productive sectors and the remaining one-third, economic damage, since the cyclone hit at crop harvesting time (with over one million ton of aman rice lost). The cyclone also killed a large number of livestock and heavily impacted production in the fisheries sectors. The disaster disproportionately affected some of the poorest groups in the country, given that effects of the disaster were highly concentrated in districts with 35 to 50 percent of the population classified as poor.

The PDO which aimed at facilitating recovery from the damage to livelihoods and infrastructure and to build long-term preparedness for managing disaster risks was highly relevant to the government strategies articulated in: (i) National Strategy for Accelerated Poverty Reduction for the 2009-2011 period; and (ii) Bangladesh Climate Change Strategy and Action Plan of 2008. The PDOs remained relevant to the Government's priorities outlined in the current, Seventh Five-Year Plan for 2016-2020. The plan highlighted the need for a shift in approach - from "conventional response and relief" to a "comprehensive risk reduction culture", to reduce the impact of natural disasters and make Bangladesh more resilient (ICR, paragraph 15).

The PDO was well-aligned with the Bank's Bangladesh country strategy. The Country Assistance Strategy (CAS) for the 2006-2009 period highlighted the vulnerability of the economy to natural disasters and highlighted the need for improving capacity to respond to disasters through interventions like rehabilitating coastal embankments, polders (according to the ICR (page 12) the Dutch term "polders" refers to designated areas that are enclosed on all sides by dykes or embankments, separating them hydrologically from the main river system and offering protection against floods, salinity intrusion and sedimentation) and other cyclone mitigation measures. The CAS also emphasized the need to mainstream disaster management activities in the relevant government institutions. The second pillar of the CAS for the 2011-2014 underscored the need for reducing environmental degradation and vulnerability to climate change and natural disasters. The PDO continued to be relevant for the Country Partnership Framework (CPF) for 2016-2020. The CPF outlined climate and environmental management as one of its three pillars.

The original PDO was over-ambitious given the resources, in view of the extent of the damage caused by the Cyclone Sidr. These were however rectified with the two AF's for the project.

## Rating

Substantial

## 4. Achievement of Objectives (Efficacy)

### Objective 1 Objective

To facilitate recovery from the damage to livelihoods and infrastructure caused by Cyclone Sidr



## Rationale

**Theory of Change.** Rehabilitating damaged coastal embankments and existing disaster shelters and constructing new multi-purpose disaster shelters, were relevant for restoring the damaged physical infrastructure. Alongside this, activities aimed at providing recovery assistance (such as providing agricultural inputs, livestock, aquaculture packages and mechanized fishing boats), were relevant for restoring the economic infrastructure. The combination of these activities could be expected to facilitate the recovery from the damage to livelihoods and infrastructure caused by the Cyclone Sidr.

**Outputs** (ICR, pages 32-43).

- 2,969 items of agricultural equipment (power tillers, power threshers and hand sprayers) had been provided by closure, exceeding the target of 2,530. Other agricultural inputs were provided, including 501 million tons of improved seed varieties distributed by closure, slightly exceeding the target of 500 million tons; 6,894 million tons of fertilizers distributed, exceeding the target of 6,682 million tons; 26,247 seed/grain silos distributed to farmer households, representing a potential storage capacity of 2,231 million tons of paddy or 3,307 million tons of rice grains. (ICR, page 24). There were no targets for the storage capacity indicators.
- 240,681 livestock (cows, goats and sheep) were distributed at closure, exceeding the target of 280,500.
- 30,957 dairy and poultry production facilities (cattle sheds and portable poultry sheds) were distributed, exceeding the target of 32300.
- 24850 aquaculture packages (Carp, Golda, Bagda, Tilapia) and 93 fishing boats were distributed, as targeted.
- 2848 Farmers' associations were established, as targeted.
- 352 new multi-purpose shelters were constructed, slightly short of the target of 353 (One shelter was dropped due to land disputes). The ICR (page 15) notes that unlike the existing (pre-project) disaster shelters which could withstand 144-250 Kilometers per hour (Kmph), the newly constructed shelters could withstand cyclones with windspeed of up to 260 kmph. The new shelters had an increased average capacity to provide shelter to 1500 people as compared to 900 in the existing shelters. The new shelters were equipped with rainwater harvesting, solar panels and had separate rooms for pregnant women and ramps for the disabled. At least 38,000 livestock could be accommodated during a cyclone in 191 shelters (out of 352), due to separate spaces for livestock. This reduced the need to have a "Killa" (refers to artificially built mounds or hillocks in the coastal regions traditionally used as cyclone shelter for livestock), as the Killas were deemed to be too costly and infeasible, due to the limited availability of land.
- Accessibility to shelters was improved by the construction of a total of 343 kilometers of evacuation roads above flood levels and 1200 meters of bridges and culverts. There were no targets for this indicator.
- 459 existing shelters were rehabilitated at project closure. This exceeded the original target of 250 but was marginally short of the revised target of 460 shelters. The ICR (paragraph 27) reports that both the new shelters and the rehabilitated shelters created under the auspices of this project, were used by beneficiaries during subsequent disasters like Cyclone Mahasen (2013), Cyclone Mora (2017) and during the tidal surge in August 2017).



- 501 coastal embankments (including appurtenant structures) were rehabilitated to prevent saline inundation. This exceeded the original target but was marginally short of the revised target of 502.
- 18 emergency vehicles were distributed at project closure as targeted, for responding to disasters.

### **Outcomes.**

According to the information provided by the Bangladesh Water Development Board, about 4.8 million people were protected in the areas affected by Cyclone Sider and Aila at project closure. This exceeded both the original and revised targets of 1.3 million and 4.3 million respectively. The ICR (page 14) notes that the project targeted the most affected people and those who required immediate support to recover livelihoods. According to the ICR, the targeted households were those that did not receive similar assistance from previous and ongoing projects or programs, providing the same type of livelihood rehabilitation and agricultural support in the cyclone-affected area.

The project activities contributed to restoration of livelihoods through improved land use during the Boro season (dry winter season when the irrigation water becomes saline) of the targeted 107,500 farmers in 13 target upazilas (sub-districts), as measured through increase in yield and shown by the following data:

- The agricultural yield of the households in the selected sub-districts increased to 230,000 metric tons relative to the baseline. This exceeded the revised target of 224,000 metric tons.
- The yield in the fisheries sector in the selected sub-districts increased to 38,000 metric tons, relative to the baseline. This exceeded the revised target of 33,000 metric tons.
- The yield in the livestock sector (meat, eggs, milk and other by products) increased to 37,000 metric tons, relative to the baseline. This exceeded the revised target of 26,700 metric tons.

Although the outcome targets were exceeded, given that some output achievements fell short of the target, efficacy of this objective is rated as Substantial.

**Rating**  
Substantial

### **Objective 2** **Objective**

To build long-term preparedness through strengthened disaster risk reduction and management

### **Rationale**



**Theory of Change.** Alongside the activities associated with constructing and rehabilitating disaster shelters, capacity building activities for establishing the Damage and Needs Assessment Cell, developing Multi-hazard Risk and Vulnerability Assessment Modelling and Maps, training the staff of the Department of Disaster Management and of the Cyclone Preparedness Program, both at the national and at the local level to prepare for future projects for river bank and coastal embankments, disaster risk shelters and rural road networks in disaster-prone areas, were all relevant for implementing the government's long-term disaster risk reduction program.

**Outputs** (ICR, pages 38-41).

In addition to the activities described above (construction and rehabilitation of disaster shelters and coastal embankments and distribution of emergency vehicles to respond to disasters). The following outputs were relevant to this objective:

- The Multi-Hazard Risk and Vulnerability Assessment (MRVA) maps and risk atlas were developed to provide districts with hazard and exposure maps. At project closure, the Bangladesh Planning Commission was developing a tool to use MRVA data to determine hazard vulnerability of areas before approving development projects.
- The Coastal Embankment Improvement Program and the Multipurpose Disaster Shelter Program were implemented as targeted. The former program provided recommendations for systematic upgrading of coastal embankments over a period of twenty years. The River Bank Improvement Program aimed at protecting against flooding and river bank erosion, was being negotiated when the project closed.
- 2035 staff of the Department of Disaster Management across 64 districts were trained. There were no targets for this indicator.
- A Geo-Node web portal was established for access at local level for visualizing the multi-hazard risk information. District level and district level technical officials were trained on multi-hazard modelling. There were no targets for this indicator.
- 70 community-based cyclone preparedness simulation workshops were conducted for Cyclone Preparedness Program volunteers and local communities on topics pertaining to cyclone warnings, first aid, evacuation and shelter management. No targets were specified for this indicator.
- The community-based early warning system was set up as targeted.

**Outcomes.**

- The ICR (paragraph 17) notes that total fatalities from a severe cyclonic storm in 2009 (Cyclone Aila) were estimated at around 190, whereas very severe cyclonic storms, Roanu (in May 2016) and Mora (on May 29, 2017) resulted in an estimated only 24 fatalities and seven in 2017, respectively, despite much higher wind speeds and storm surge patterns.
- The Disaster Needs Assessment (DNA) cell and software established under the project reduced the time required to make impact data available from three days to a few hours. The software also contained critical cyclone shelter data that allowed the Cyclone Preparedness Program volunteers to mobilize people at the time of the cyclone and move them to disaster shelters.





- 4.8 million people benefitted from reduced risk to cyclones due to the rehabilitation of protective infrastructure. This exceeded the revised and original targets of 4.3 million and 1.3 million respectively.

### **Rating**

Substantial

### **Rationale**

Given that the outcomes were realized, it is reasonable to conclude that the project substantially contributed to realizing the PDOs.

### **Overall Efficacy Rating**

Substantial

## **5. Efficiency**

**Economic analysis.** The PAD (paragraph 38) notes that an economic analysis was not undertaken at appraisal, as the specific locations of investments were not known. A Cost Benefit analysis was conducted at project closure for activities associated with construction/rehabilitation of disaster shelters and rehabilitation of coastal embankments. These activities accounted for 83 percent of the actual cost. The main benefits of the project were assumed to come from the human lives saved and reduced risk to population and livestock. The overall ex-post Economic Internal Rate of Return (EIRR) was 22 percent and the overall Benefit Cost Ratio (BCR) was between 2.2 and 3.7 percent.

**Administrative and Operational Issues.** There were significant administrative and operational shortcomings. Even though Cyclone Side hit in November 2007 and the project was processed under emergency procedures, the preparation team did not envisage Bank approval until September 2008 (ICR, paragraph 87). The project was eventually approved on November 6, 2008 and became effective on December 24, 2008, more than a year after the disaster. Implementation effectiveness was undermined by delays in initial contracting for works. For example, consultants for embankment works were mobilized only in November 2009 and the first contract package was awarded only in October 2010, almost two years after the project became effective. There were other factors associated with contract management issues of shelter and embankment works, such as fraudulent practices by bidders in a few shelter packages and delays due to the process associated with land acquisition and resettlement, which further contributed to implementation delays. Given that livelihood interventions began over two years after the cyclone, it is not clear if the benefits reached the intended target beneficiaries on time (ICR, paragraph 26). The ICR (paragraph 31) notes that delays in completion of activities associated with embankment works adversely affected beneficiary farmers in terms of access to irrigation facilities, incurring loss of production and associated revenue.



Over the ten-year implementation period, there were cost overruns. The ICR (paragraph 48) notes that between 2008-2017, average unit cost of new shelters increased by 52 percent and the costs for rehabilitation of existing shelters increased by 41 percent. The unit costs for embankment works increased by 111 percent and for water control structures by 37 percent. The cost overruns were due to a combination of factors, including improvement in design, increase in construction costs (material and labor costs), over- appraisal estimates, increase in per unit cost of land area by up to 150 percent, annual revisions in the rate schedules of implementing agencies and inclusion of a 15 percent price escalation clause for contracts over 18 months.

These factors contributed to the need for AFs. Delays in completion of contracts for embankment and shelter works in areas vulnerable to recurring disasters (delays of up to 35 months for new shelters and up to 46 months for rehabilitation of embankment) prolonged the vulnerability of population, agricultural land and assets to disaster risk far longer than intended (ICR, paragraph 49). Finally, when the project closed after ten years, there were residual safeguard risks pertaining to pending resettlement compensation (discussed in Section 10).

Given the administrative and operational shortcomings, including an emergency project becoming effective one year after the disaster, efficiency is rated as Modest.

**Efficiency Rating**

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	22.00	83.00 <input type="checkbox"/> Not Applicable

\* Refers to percent of total project cost for which ERR/FRR was calculated.

**6. Outcome**

Relevance of the PDO to the Government and Bank strategies is rated as Substantial. Efficacy of the two objectives - to facilitate recovery from the damage to livelihoods and infrastructure caused by Cyclone Sidr and to build long-term preparedness through strengthened disaster risk reduction and management - are rated as Substantial, given that the outcomes were realized. Efficiency is Modest, in view of the administrative and operational inefficiencies.



**a. Outcome Rating**  
Moderately Satisfactory

## 7. Risk to Development Outcome

**Financial risk.** There is Substantial risk to ongoing benefits, given that there is no clear evidence of adequate budget for the Operation and Maintenance (O&M) of the disaster risk shelters and coastal embankments. The ICR does not provide estimates of the O&M requirements of these activities but notes that "insufficient O&M budget allocation from respective ministries could likely pose a risk to the effectiveness of protective infrastructure in reducing risk to future disasters" (ICR, paragraph 100).

**Social risk.** When the project closed, only about 2,614 of the 4,225 eligible land owners (65 percent in November 2018) and 983 out of the 995 (98 percent) eligible squatters, were compensated. The ICR (paragraph 99) notes that "given the lengthy government procedures and barriers for remotely located eligible recipients and those with poorly recorded land inheritance", the likelihood of compensation for the remaining eligible land owners and squatters remains uncertain.

**Technical risk.** There is technical risk to the infrastructure where emergency repairs were undertaken under the auspices of this project due to climate change considerations, in project areas situated in vulnerable coastal Bangladesh (ICR, paragraph 101).

## 8. Assessment of Bank Performance

**a. Quality-at-Entry**

The project was processed under OP/BP 8.0, given the immediate need for restoring physical and economic conditions in the wake of the cyclone. A quick-disbursing financial support of US\$100.00 million was approved by the Bank for reducing the fiscal pressure on the 2008 budget, for financing immediate recovery needs (PAD, para 21). The project was prepared based on prior Bank-financed operations in Bangladesh (Emergency Flood Restoration and Recovery Assistance Program and the Water Management Improvement Project) and from other projects supporting post-disaster recovery efforts elsewhere in the world (PAD, paragraph 48, 49 and 52). Lessons incorporated at design at the general level included, focusing efforts not only on rehabilitating the damaged infrastructure but also supporting the government's long-term goal of reducing overall disaster vulnerability. The lessons incorporated at design based on prior Bank-financed operations in Bangladesh included, a simple design for emergency recovery operations given the weak local implementation capacity and implementing short-term rehabilitation activities separately from medium to long-term hazard reduction and institutional capacity building activities (as the latter activities required additional preparation and longer implementation



periods) (PAD, paragraph 49). The underpinnings of the agricultural sector recovery activities were based on the Food and Agricultural Organization's (FAO) emergency recovery program, from a damage and loss assessment carried out by FAO in December 2007. The project was to be implemented by the Project Coordination and Monitoring Unit, in the Ministry of Planning, which was responsible for project coordination. The project was prepared in collaboration with other donors providing parallel financing for implementing reconstruction efforts (the Asian Development Bank, the European Community and the United Kingdom Department for International Development). Several risks were identified at appraisal including, weak implementation capacity, high procurement risks and governance risks associated with possible misappropriation of resources intended for recovery assistance. Several mitigation measures were incorporated at design including, independent procurement and close monitoring of project investments (PAD, paragraph 63). Appropriate arrangements were made at appraisal for fiduciary compliance (discussed in section 10b).

There were significant shortcomings at Quality-at-Entry. Given that Cyclone Side hit in November 2007 and the project was processed under emergency procedures, the project became effective only on December 24, 2008, more than a year after the disaster and the project's livelihood interventions began two years after the cyclone. (The ICR (page 14) notes that during this period, community support and support from Non-Governmental Organizations were contributing to the recovery efforts).

Although experience with prior projects had underscored the importance of simple implementation arrangements for emergency recovery operations, the implementation arrangements for this project which included five components and had six government implementing agencies (Ministry of Agriculture, Local Government Engineering Department, Bangladesh Water Development Board, Ministry of Water Resources, Ministry of Fisheries and Livestock) and the Planning Commission, was complex. This was particularly so, given that the Planning Commission, which was responsible for coordinating project activities through the Project Coordination and Management Unit, had no experience with Bank-financed projects (ICR, paragraph 89).

As indicated in section five, the costs were underestimated due to a combination of factors, including, increase in construction costs over appraisal estimates, increase in per unit cost of land area, annual revisions in rate schedule of implementing agencies and inclusion of a 15 percent price escalation clause for contracts with a duration over 18 months. The project overestimated the capacity of local contractors, particularly in activities pertaining to coastal embankment rehabilitation works.

Given the seasonality issues in Bangladesh that could impact implementation of works, the technical appraisal should have taken measures for including climatic and hazard contingencies. Delays in completion of most works in this project were exacerbated due to climatic conditions (ICR, paragraph 88).

There were shortcomings in M&E design (discussed in section 9).



## **Quality-at-Entry Rating**

Moderately Unsatisfactory

### **b. Quality of supervision**

There were 28 supervision missions undertaken during a ten-year implementation period (implying an average of more than twice a year) (ICR, paragraph 92). The ICR provides no information on continuity of leadership on the part of the Bank. The supervision team had dedicated Bank staff for supporting each implementing agency and this aided in strengthening supervision. The supervision team also included an agriculture expert with experience in Bangladesh's agriculture sector and with the Food and Agriculture Organization and the Government's implementing departments. The Borrower's ICR (paragraph 164) notes that the supervision team provided useful feedback for remedial measures during implementation. For instance, guidance provided by the team helped the Local Government Engineering Department in identifying the schools that were to be converted to shelters (ICR, paragraph 89). Likewise, during implementation, the supervision team made improvements using a feedback-based adoption approach for addressing challenges. For instance, while activities such as providing technological inputs to farmers like mechanical rice dryers and new boat designs had to be dropped due to low adoption, packages were increased from one cow per three households to one cow per household and the number of target beneficiaries was increased based on household survey feedback (ICR, paragraph 64).

The Mid Term Review was delayed by over two years and was held on January 16, 2013, just six months before the completion of the original credit. This left little scope to adapt activities that were nearing completion under the original credit (like the agriculture component). For example, the Mid Term Review identified the need for better integration of crops, livestock and aquaculture activities. However, cross training of farmers was recommended only during the supervision mission in January 2014. The ICR does not provide any information on the quality of Bank's coordination with other or parallel donors during implementation.

There was non-compliance with issues pertaining to social safeguards at completion (discussed in section 10a).

## **Quality of Supervision Rating**

Moderately Satisfactory

## **Overall Bank Performance Rating**

Moderately Satisfactory

## **9. M&E Design, Implementation, & Utilization**



## **a. M&E Design**

The ICR (paragraph 71) notes that due to the emergency nature of the project, the original results framework was designed as a "best guess" in terms of the project's proposed achievements". The original indicators "recovery from damage to infrastructure and livelihoods" and "building long-term disaster preparedness" were not defined at appraisal.

The implementation of M&E was to be at two levels. First, the Project Coordination and Monitoring Unit was to be in charge of M&E of all project activities. Second, at the field level, the district officers of each component implementing agency were to be responsible for monitoring physical progress of project activities (such as delivery of production inputs and implements to the affected people) (PAD, paragraphs 30-32). Since the component one activities were to be implemented through the existing community organizations, the baseline information for M&E was to be generated at the community level (PAD, paragraph 32).

## **b. M&E Implementation**

During implementation, three key indicators were modified: One, reduced risk to cyclone affected population due to rehabilitation of protective infrastructure; Two, recovery of agricultural sector and livelihoods for cyclone affected populations; and, Three, strengthening the capacity for disaster risk management in government through improved response during emergencies. While the first and third outcome indicators were appropriate for monitoring activities financed by the project, as the ICR (paragraph 71) notes the PDO of "recovery of livelihoods" was not defined. Further, no appropriate proxies were used as targets for monitoring "recovery of livelihoods" (such as through targets for improvement in yield or income).

Data collection for monitoring performance during implementation, was as envisaged through agency-based reporting, centralized at the independent M&E consultancy firm housed at the Project Coordination Monitoring Unit. The ICR (paragraph 73) notes that due to the delays in mobilizing M&E consultants, the baseline study was only concluded in June 2011, (about two and half years after project effectiveness). This precluded the use of baseline data for determining the full impact of the project.

The ICR (paragraph 74) notes that after the Mid-Term Review, field household surveys were conducted only in 2013, 2014 and 2017 (as compared to the requirement of household survey every year) to assess the impacts of the project interventions. An Impact Evaluation survey was conducted in 2017 aimed at assessing the impacts of the project, which went beyond the results framework, by including indicators like income, expenditure, poverty incidence and effectiveness of utilization of shelters. The methodology entailed comparing a representative group of households in project-intervened areas with a control group (households in non-project-intervened areas). A total of 3018 households were included in the baseline household survey conducted in 2010 (including 2866 households in project-intervened areas and a control group consisting of only 152 households). The final household survey included 960 households (including 720 households in the treatment group and 240 in the control group). The results of the impact evaluation survey were less than



robust given that the same households in the intervened areas were not surveyed at the baseline and during the final survey.

### c. M&E Utilization

The ICR provides no information on whether the M&E framework was utilized for any other purpose, other than monitoring performance of project activities.

### M&E Quality Rating

Modest

## 10. Other Issues

### a. Safeguards

The PAD (paragraph 50) notes that given the emergency nature of the project (processed under OP 8.0) and that the project areas were not known at appraisal, a full-fledged Environmental and Social Assessment was not carried out. However, a rapid environmental and social assessment was undertaken as part of the damage, losses and needs assessments exercise at appraisal. Based on this assessment, the project was classified as a Category B project. The PAD (paragraph 51) notes that for all works (for both rehabilitation of damaged infrastructure and facilities and new construction), Environmental and Social Assessments were to be carried out and necessary environmental management and social management plans were to be prepared during implementation.

The ICR (page 25) notes that Involuntary Resettlement (OP/BP 4.12) was triggered. The ICR (paragraphs 78) notes that Social /Resettlement Policy Framework Social Management Plans were prepared early during implementation and Resettlement Action Plans were prepared for all 28 polders. The ICR (paragraph 79) notes that rehabilitation of coastal embankments caused involuntary resettlement in 28 out of the 29 polders and displacement of people in 12 of them. The ICR (paragraph 79) notes that resettlement of involuntary displaced squatters was completed at closure. Land acquisition was completed in seven polders when the project closed. 2,614 out of the 4,225 eligible land owners and 983 out of the 995 eligible squatters were compensated when the project closed.

### b. Fiduciary Compliance

**Financial Management.** An assessment of the financial management capacity conducted at appraisal, concluded that the financial management risk was High, due to the involvement of multiple implementing



agencies under different ministries, with limited financial management capacity (PAD, paragraph 45). A time-bound financial management plan was prepared at appraisal.

The ICR (paragraph 85) notes that interim unaudited financial reports, that were deemed to be satisfactory, were submitted to the Bank in a timely fashion. The ICR provides no details but notes (paragraph 85) that annual project financial statements expressed mostly unqualified audit opinions, "though there were a number of audit observations in each year's audit report, with no pending material audit observations".

**Procurement.** An assessment of the procurement management arrangements was conducted at appraisal. The assessment concluded that though the implementing agencies had experience in implementing IDA projects, procurement risk was rated as High, due to the need for monitoring and oversight at the agency level and weak procurement management capacity. Mitigation measures adopted at design, included preparing a procurement risk mitigation plan with a set of indicators for addressing fraud and corruption, a complaints-handling mechanism and disclosure of contract award information (PAD, paragraph 44).

The ICR (paragraph 82) notes that there were significant issues in contract management during implementation, such as non-submission of monthly statements of work progress. These issues were eventually resolved when the Local Government Engineering Department started using electronic procurement. The ICR does not report any case of mis-procurement.

**c. Unintended impacts (Positive or Negative)**

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**d. Other**

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**11. Ratings**

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Quality of M&E	Modest	Modest	---
Quality of ICR		Substantial	---

**12. Lessons**

The ICR draws the following main lessons with some adaptation of language.





**(1) Careful planning is required for multi-sectoral projects requiring multi-sectoral coordination and implementation arrangements.** This project had six implementation agencies, each under a different ministry, responsible for implementing the various components. The experience of this project demonstrated the importance of capacity building of the Coordination and Monitoring Unit to support the line ministries and clear delineation of roles between the coordination unit and among the different actors involved.

**(2) Land acquisition procedures need to be strengthened for emergency situations.** To balance the need for urgent infrastructure works and following due process, the Bank could either support country-level reforms in the land acquisition process or agree with the government to allow accelerated procedures for emergency works.

**(3) Well defined Results and M&E frameworks for emergency projects is needed for enhancing achievement of outcomes.** Given that teams find it challenging to establish a robust M&E framework, it would be useful to develop standardized guidelines to help bring about a more nuanced and fine-tuned M&E framework for disaster recovery projects. Also given that emergency projects are to be prepared quickly, baseline studies need to be conducted either before or just after project approval to capture the pre-project status required in order to measure the impact of the project.

**(4) Regular community consultations throughout the project can be useful for generating practical improvements to increase impact.** In livelihood recovery activities, constant beneficiary feedback can help in continuous improvements in design and implementation.

### 13. Assessment Recommended?

No

### 14. Comments on Quality of ICR

The ICR is reasonably well-written and candidly discusses the issues associated with implementation problems in the initial years. For example, delays in the initial contracting for works for coastal embankments, which led to livelihood interventions two years after the cyclone. However, acknowledging the delays, the ICR is not clear if the benefits reached the intended target beneficiaries in time. It is also candid in discussing the delays issues during implementation, which contributed to both time and cost overruns. The ICR is consistent with the OPCS ICR guidelines and draws reasonable lessons from the experience of implementing this project.

There are a few additional but not major shortcomings. It is not clear if the audits were unqualified or not. The ICR is unduly long (with the main text at 31 pages more than twice the recommended length of 15 pages) and would have benefitted from more stringent editing.



**a. Quality of ICR Rating**  
Substantial