ICR Review

Operations Evaluation Department

Report Number : ICRR11169

1. Project Data:		Date Posted : 03/19/2002		
PROJ ID : P005213			Appraisal	Actual
Project Name : Sistan Flood Ctrl		Project Costs (US$M)	100	75.06
Country : Iran		Loan/Credit (US$M)	57	57
Sector(s): Board: WS - Flood protection (92%), Sub-national government administration (7%), General agriculture fishing and forestry sector (1%)		Cofinancing (US$M)	0	0
L/C Number : L3478				
		Board Approval (FY)		92
Partners involved :		Closing Date	12/31/1998	06/30/2001

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2. Project Objectives and Components

a. Objectives

The objectives of the project were to:
(a) reduce the risks to human life and prevent damage to public and private properties and infrastructure due to major floods;
(b) minimize disruptions to the local economy;
(c) provide protection against major floods for habitats and cultural property; and
(d) mitigate environmental degradation and health hazards caused by floods and by ad hoc development in the project area.

b. Components

Original Components:

1. Civil works for upgrading the Sistan River 130 km flood protection dikes and 42 km Niatak floodway; improving the capacity of the existing 3.8 km long feeder channel to Chahnime reservoirs; rehabilitating and upgrading the 100 km dike along the southern shore of Hirmand lake; and providing and upgrading seven bridges; and developing a rock quarry for the supply or rip-rap material;
2. Land acquisition for rehabilitating flood control works;
3. Procurement of equipment for maintaining the Sistan river, Niatak floodway and Hirmand flood protection works; and improving the central workshop located at Zabol;
4. Institutional strengthening of SBRWB (Sistan Baluchistan Regional Water Board) and its sub-regional office in Zabol;
5. Physical and mathematical modelling of the Sistan river for optimizing design and maintenance of flood control and training works; and
6. Technical assistance for institutional strengthening of the SDO (Sistan Development Organization) and of the local offices of the DOE (Department of the Environment) and CHO (Cultural Heritage Organization).

Revised Components:

1. Civil works were modified along the following lines:
   - The length of the dikes along the southern shore of lake Hirmand was reduced from 100 to 67 km and along the Sistan river was reduced from 130 to 105 km.
   - Number of bridges to be upgraded/constructed was reduced from 7 to 4. A weir at the inlet of the Niatak floodway was added.
   - The contract to develop a rock quarry for the supply of rip-rap material for slope protection was terminated.

Lean sand asphalt was introduced as a feasible alternative.

- Construction of waterway connecting Chamine 3 to Chamine 4 reservoirs.

2. Procurement of instruments and equipment for flood warning and emergency plan was dropped from the project.
3. The provision of institutional strengthening was limited to training of SBRWB staff with special emphasis on developing an adequate capacity for operation and maintenance of relevant works. In comparison with the original component, the scope of training program was reduced as a result of the delays in its initiation.
4. The preparation and implementation of a program for flood warning and emergency response was dropped due to delays. An action plan for implementing the resource management program was formulated by a local consultant and its implementation is being carried out outside the project.

c. Comments on Project Cost, Financing and Dates

The actual cost of the project is US$75.06 million compared to appraisal estimate of US$100 million. The Government counterpart funds decreased from US$43 million to US$21.37 million. About US$3.31million of the loan was undisbursed at project closing. The project closed on June 30, 2001, two and a half years after the original closing date.

3. Achievement of Relevant Objectives:

The project achieved all its major objectives.

- By eliminating threats of widespread flood damage, the project has reduced the risks to human life, infrastructure, and environmental degradation.
- The project provided the critical investments necessary for construction/rehabilitation of key flood protection infrastructure.
- The revised targets for civil works were achieved: (i) 105 and 67 kms of dikes were upgraded along the Sistan river and Hirmand Lake; (ii) waterway connecting Chamine 3 to Chamine 4 reservoirs was constructed; and (iii) civil works for 30 km of dikes, floodway weir and four bridges were completed for Niatak floodway/river.

4. Significant Outcomes/Impacts:

(i) By building and upgrading the flood protection structures, the project has significantly reduced the risks to population, private properties, infrastructure and environment due to major floods.
(ii) The project has also increased the availability of water for irrigation.

5. Significant Shortcomings (including non-compliance with safeguard policies):

1. Project implementation was very slow at the outset. It took more than two years after the project effectiveness to finalize the design and to award the first civil works contract. Several design changes and delays in the execution of contracts occurred during implementation.
2. The project seemed to have focused primarily on physical flood control structures and less on improving the institutional capacity of SBRWB and DOE:
    - The training program was limited to operation and maintenance of flood protection assets. Training on proper utilization of the flood warning and emergency systems did not occur.
    - The preparation of flood warning plan was initiated under the project but it was not finalized at project closing. No training was provided and the necessary instruments and equipment were not purchased.
    - A Plan for sustainable development of local resources and prevention of environmental degradation and soil distress was prepared. However, the plan was not implemented.
3. Lack of comprehensive resettlement plan for the land acquisition sub-component.
4. The project did not develop the Monitoring and Evaluation (M&E) Program proposed in the SAR and included in the covenants. There is therefore no basis for concluding that the physical outcomes and impacts of the project are being monitored and evaluated, as would be essential for the management of the facilities.

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome:	Satisfactory	Moderately Satisfactory	The project achieved most of its major relevant objectives efficiently but with significant shortcomings including the lack of implementation of the flood warning and emergency plan and the M&E plan.
Institutional Dev .:	Modest	Modest	
Sustainability :	Likely	Non-evaluable	The physical construction of flood

			protection structures is not sufficient to sustain the long term benefits of the project. The government commitment to provide sufficient funds for operations and maintenance and to implement the flood warning and emergency plan and resource management program is vital for the sustainability of the benefits from the project. According to the ICR, there is some uncertainty regarding this. Also, the project had a limited impact on improving the institutional capacity of SBRWB and DOE
Bank Performance :	Satisfactory	Satisfactory	
Borrower Perf .:	Satisfactory	Satisfactory	
Quality of ICR :		Satisfactory	

NOTE: ICR rating values flagged with ' * ' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

- Readiness for implementation is crucial for completion of the project on schedule and achievement of its objectives. Detailed designs and tender documents (for the first year) need to be ready before the loan becomes effective so that construction can start without delay.
- The experience from this project suggests that implementation of civil works component (which is a large share of total costs) takes precedence over the implementation of institutional component. Implementation of institutional reforms requires full commitment from the government. The Bank needs to ensure timely implementation of institutional reforms.
- There should be a congruence between project objectives and components.

8. Assessment Recommended? ○ Yes ● No

9. Comments on Quality of ICR:

The ICR is rated satisfactory. It covers all the relevant issues relating to the implementation experience and the outcome of the project. However, the ICR does not provide adequate evidence that the involuntary resettlement carried out under the project complied with the Bank's OD 4.30 policy requirements on involuntary resettlement. It also does not discuss the Monitoring and Evaluation Program proposed in the SAR and included in the covenants.