



1. Project Data:		Date Posted : 08/14/2002	
PROJ ID: P003597		Appraisal	Actual
Project Name: Taihu Basin Flood Co	Project Costs (US\$M)	497.32	521.42
Country: China	Loan/Credit (US\$M)	200.0	204.3
Sector(s): Board: ENV - Flood protection (100%)	Cofinancing (US\$M)		
L/C Number: C2463; L3560			
	Board Approval (FY)		93
Partners involved :	Closing Date	06/30/1998	12/31/2001

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2. Project Objectives and Components

a. Objectives

The project's main objective was to prevent recurring severe flooding in China's most industrialized and highly productive agricultural area through engineering measures to control floods and improve land drainage . The project was also to improve the quality and quantity of raw water used for the Shanghai City water supply, and expand and improve inland waterway transportation.

b. Components

The project's components were:

- construction of facilities to evacuate flood water from Tai Lake to the Yangtze River and Hangzhou Bay through two major enlarged river channels:
 - (a) the Taihu-Huangpu River System (US\$99.5 million - 25.3% of base cost);
 - (b) the Wangyu River (US\$101.9 million - 25.9% of base cost);
- construction of facilities to improve evacuation of water through the Hang -Jia-Hu South drainage system (US\$59.36 million - 15.1% of base cost);
- completion and strengthening of some 270 km of the perimeter dike around Tai Lake for more effective regulation of flood water (US\$67.69 million - or 17.2% of base cost);
- installation of a flood forecasting and operation system covering the whole basin with the use of modern telemetric and communication equipment (US\$6.76 million - or 1.7% of base cost);
- institutional development and strengthening of the Taihu Basin Authority (TBA) through technical assistance, staff training, equipment and facilities to improve operation and management, including water-related environmental management (US\$6.83 million or 1.7% of base cost).

c. Comments on Project Cost, Financing and Dates

The project cost estimate also included a total of US\$ 51.87 million (13.2% of base cost) for land and compensation.

During project implementation the dollar value of the yuan fell by about 50 percent. However, this was more than offset by inflation of local costs and, together with cost of supplementary work and delays, resulted in the final cost estimate being US\$518.7 million, an increase in dollar terms of just over 4 percent.

Bank funding was split into a loan of US\$ 200 million and an IDA credit equivalent to US\$ 200 million. Changes in the value of the SDR resulted in the total disbursement from the credit being equivalent to US\$ 104.3 million.

Project completion was delayed by three and a half years, from mid -1998 to the end of 2001.

3. Achievement of Relevant Objectives:

The Bank funded components were completed satisfactorily following an extension of three and a half years to the implementation period. During the summer of 1999, major flooding was experienced. The completed works performed as planned and helped to reduce the extent of flooding, flood depths and duration . Water supply to Shanghai City was improved by increasing the storage capacity of the Taihu Lake system, thus increasing the potential supply during periods of drought. The Taihu and Wangyu Rivers were dredged under the project and the channels improved. This will increase the safety and reliability of navigation, as well as the capacity of the waterway system to the west and south of Shanghai .

4. Significant Outcomes/Impacts:

The flood protection works immediately proved their worth in the extensive flooding experienced in 1999. It was estimated that the damages saved by the works exceeded US\$ 1 billion, or almost double the cost of the protection works themselves. In addition to the works themselves, the improved flood monitoring and forecasting system played a major role at the same time, including disseminating flood information to local governments and, thereby, enabling timely actions to be taken to reduce losses.

The studies and technical assistance provided under the project clearly strengthened the management and technical capacities of the TBA and the related elements of the local provincial authorities. TBA's technical capacity and capability in flood management for the whole Taihu basin have been strengthened and this was particularly apparent in the response to the 1999 floods.

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

The ICR does not indicate any significant shortcomings.

Note: The project was originally planned to be completed in five years but, in the event, completion was extended by three and a half years, an increase of 70%. While extended construction periods for major projects of this type are not unusual, the ICR does not specifically discuss any reasons for the major delay experienced in this case. It does report that construction of the Taihu pumping station was held up for three years, while additional environmental studies were carried out. The region was subject to major floods in 1999, but the ICR does not report whether the works sustained damage requiring any reconstruction or additional works. Furthermore, it is not clear whether either of these problems was the major cause of the extended implementation period. In the "lessons" section the ICR obliquely refers to other possible sources of delay; the problems of disposing of the large quantities of spoil materials; the difficulties of installing major equipment (such as pumping stations) and of undertaking dredging and other work in busy navigation channels; land acquisition and resettlement of affected persons; and the problems of intergovernmental coordination, and of timeliness of counterpart funding, but these are not discussed in the body of the report.

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome:	Satisfactory	Satisfactory	
Institutional Dev.:	Substantial	Substantial	
Sustainability:	Highly Likely	Highly Likely	
Bank Performance:	Satisfactory	Satisfactory	
Borrower Perf.:	Satisfactory	Satisfactory	
Quality of ICR:		Unsatisfactory	

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

7. Lessons of Broad Applicability:

The ICR notes several lessons that are of general applicability:

- adequate and timely counterpart funding is critical for timely project implementation;
- for resettlement programs, transparent and well disseminated policy, efficient and honest management staff, together with the participation of the affected people and local government are important to ensure smooth implementation; and
- Bank procurement procedures are seen by many not familiar with them as being complex, cumbersome and time-consuming. Procurement training by the Bank is important in avoiding problems in implementation.

The report also illustrates the importance of improvements to flood forecasting and monitoring systems in reducing the level of damage and losses resulting from floods.

8. Assessment Recommended? Yes No

9. Comments on Quality of ICR:

The ICR focuses particularly on the works completed and the overall planning for future management of the basin. However, the report does have a number of shortcomings and is rated as unsatisfactory:

- it does not discuss the achievement of the water supply/quality and navigation objectives, although these were clearly specified in the appraisal and in the ICR itself. The information noted in section 3 above was gleaned from the Borrower's completion report;
- the extension in time required for project completion was substantial. The report should have more clearly discussed the reasons for these major delays and also whether these delays resulted in some of the yuan cost increases that are reported. A number of factors that may have contributed to the delays are noted in the last of the project lessons. It would have been preferable if these problems (if that is what they were) were discussed in greater depth in the body of the report and not just referred to obliquely in the conclusions.
- the lessons section also touches obliquely on a number of points that may imply inadequacy in project

design, such as problems related to the delays in completion (noted above), the handling of spoil from dredging operations, and problems with resettlement. For example, in the context of substantial delays in completion, lessons such as "careful planning and selection of adequate spoil dump areas is important", suggests that, in this case, the planning of spoil dumps was inadequate. It is preferable that these issues are discussed clearly in the body of the report and not just slipped into the concluding sections leaving the reader unclear as to whether these were significant project design and/or implementation problems or not.