



<b>1. Project Data:</b>		<b>Date Posted :</b> 09/15/2004	
PROJ ID: P034081		<b>Appraisal</b>	<b>Actual</b>
<b>Project Name:</b> Xiaolangdi Multi. II	<b>Project Costs (US\$M)</b>	2248	2251
<b>Country:</b> China	<b>Loan/Credit (US\$M)</b>	460	350.6
<b>Sector(s):</b> Board: RDV - Power (98%), Central government administration (2%)	<b>Cofinancing (US\$M)</b>	74	74
<b>L/C Number:</b> L4200			
	<b>Board Approval (FY)</b>		97
<b>Partners involved :</b>	<b>Closing Date</b>	12/31/2003	12/31/2003
<b>Prepared by :</b>	<b>Reviewed by :</b>	<b>Group Manager :</b>	<b>Group:</b>
Richard Berney	Fernando Manibog	Alain A. Barbu	OEDSG
<b>2. Project Objectives and Components</b>			
<b>a. Objectives</b>			
a. to provide flood protection for 103 million people in North China Plain ;			
b. to control sediment accretion in the lower reach of the Yellow River for a period of about 20 years;			
c. to supply water to several large and medium cities and major industrial centers, cities and industries;			
d. to supply reliable irrigation water to 2 million hectares, and ensure a more stable water supply for downstream use;			
e. to generate hydropower to meet peak power requirement of the Henan Grid .			
<b>b. Components</b>			
1. Construction of a 154 m dam with a crest length of 1,340 m, associated structures and hydropower plant with 1800 MW installed capacity.;			
2. Training for operation of this multi-purpose hydro project;			
3. Implementation of Environmental Monitoring Plan;			
3. Modernization of the flood and sediment forecasting and water dispatch system;			
5. Water institutional Reform.			
<b>c. Comments on Project Cost, Financing and Dates</b>			
This was the Bank's second loan for the Xiaolangdi multipurpose dam . The first loan (Phase I) was for \$460 million. The project was completed one year early with savings of \$ 170 million in interest during construction (IDC). The Bank loan included \$30 million in IDC.			
<b>3. Achievement of Relevant Objectives:</b>			
All the objectives were achieved.			
a. Flood Control: The dam is now capable of regulating the flows of the Yellow River during the flood and dry seasons. Flood forecasting institutions have been greatly enhanced . Starting in 2000, flood damage, which had in the past cost economic losses in the billions of Yuan, has been avoided . The reservoir has proven capable of also regulating water flows to eliminate costly ice accumulations .			
b.Silt Control: Over 1 BCM of silt has been prevented from being deposited in the downstream river channels in the past three years through the judicious release of water to flush out the silt and to prevent further aggregation in river channels.			
c. Water supply for cities and irrigation : In the severe drought of 2000 some 800 MCM of water was released from the reservoir to meet the needs of key cities . Water supply has become a more important objective than power generation during the dry season .			
d. Water for irrigation: The project has made available an average increase of 1.6 BCM for irrigation purposes, with an increase in water productivity of about 5 percent due to the better timing of its availability .			
e. Power Generation: All turbines are installed and working, but severe drought conditions have kept generation below original expectations.			
<b>4. Significant Outcomes/Impacts:</b>			
<ul style="list-style-type: none"> <li>Flood control is expected to eliminate a repeat of such disasters as that of 1996, when 250 ha were inundated,</li> </ul>			

800,000 people were trapped, and 2.4 million people were affected by flood waters.

- Siltation in the Yellow River will be greatly decreased, and reversed in some areas where river flow had been decreased by up to two thirds in the past 40 years.
- Greater water availability is expected, which will increase grain production by an average of 2.4 million tons per year.
- Better water management has allowed operators to maintain water flowing in the lower reaches of the Yellow River, where previously the river had stopped flowing in the dry season .
- The river is clear and silt free, which has significantly reduced water treatment costs and has improved the diversity of fish.

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

According to the ICR, the number of accidental deaths was within the range of 0.05% (of what, is unclear from the ICR) based on FIDIC statistics on similar projects, but this appears to be quite high, given the number of people working on such projects in China. The ICR has insufficient information on this matter to draw any conclusive judgements.

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

- Project success was greatly assisted by having in place the implementation organization with full decision-making authority, and accountability for implementation performance, prior to the start of the project .
- The use of an international panel of experts substantially reduced the time needed for resolving conflicts on technical issues.
- The panel on environmental management issues and the establishment of an office of the environmental supervising engineers ensured that contractors followed all environmental requirements and that early corrective actions were taken when needed. This is particularly important for projects that have significant environmental management risks.
- The use of a disputes review board to resolve claims issues proved to be extremely useful and resulted in most claims being expeditiously resolved.
- Training of staff in financial and business management and tariff negotiations prior to completion of the project added significantly to project sustainability .

**8. Assessment Recommended?**  Yes  No

**9. Comments on Quality of ICR:**

The ICR generally complies with the guidelines and is satisfactory overall except for its excessive length (44 pages). Although the graphs and tables were useful, the report could have tried to segregate better the important from the trivial, with more focus on key findings and lessons . An ICR of this length detracts from its objective of serving as a tool for lesson-learning. For example, the detailed information about individual construction components (page 10) could have been relegated into annexes, while the sketchy and imprecise information provided on the critical safeguards issue of worker safety (page 12) was insufficiently specific to allow the reader to understand the magnitude of the problem (i.e. how many workers died) or the corrective action taken by the implementing agency .