



1. Project Data :			
OEDID:	C2430		
Project ID:	P010406		
Project Name:	Sunsari Morang Headworks		
Country:	Nepal		
Sector:	Irrigation & Drainage		
L/C Number:	C2430		
Partners involved :	None		
Prepared by :	George T. K. Pitman, OEDST		
Reviewed by :	Alice Galenson		
Group Manager :	Roger Slade		
Date Posted :	06/29/1998		

2. Project Objectives, Financing, Costs and Components :			
Approved: November 1992, Effective: January 1993, Closed: December 1997 (on schedule)			
Project Costs (US\$ million)	<u>Appraisal</u>	<u>Actual</u>	<u>Canceled</u>
Total	29.7	26.3	
IDA credit	28.0	23.8	4.2
Objectives:			
* Provide the irrigation system with silt-free water during the monsoon through construction of a desilting basin equipped with continuous dredging facilities .			
* Eliminate dry season blockage of the intake through construction of a new intake .			
Components:			
* Construction of the new intake 1.3 km upstream and linking it by a culvert to a new pre-settling basin in front of the existing intake.			
* Modification of the existing intake.			
* Improvements in the desilting basin constructed under the Sunsari Morang second phase project .			
* Provision of electrically powered dredgers and a micro -hydropower plant.			
* Management, O&M, and training.			
* Technical assistance for construction, supervision, and training in dredger and water management .			

3. Achievement of Relevant Objectives :	
The project fully achieved its objectives of providing reliable and silt free water . The civil engineering works were completed satisfactorily and project staff were trained in the operation of the dredger equipment and in water management of the rotational water supply system .	

4. Significant Achievements :	
Water Supply : The project proved the wisdom of forming a panel of Experts to impartially review the technical viability of the dredger solution that had been the subject of debate with government since IDA's first credit for Sunsari Morang in 1978.	
Water User Groups (WUGs): The project rejuvenated farmers' interest and confidence . Extension officers and consultants embarked on a more participatory approach to forming WUGs . Over 90 percent of the project's WUGs have joint management agreements with the project authorities for operation and management (O&M) of the tertiary level distributary system, a third of which have been fully handed over to WUGs .	

5. Significant Shortcomings :	
Management: Frequent changes of senior staff jeopardize the successful management of this technically complex project. The project's O&M budgeting system has no priorities and disbursement is <i>ad hoc</i> and some essential O&M tasks are not done. The micro-hydro station has not been taken over by the Nepal Electricity Authority .	
Dredger Operations : The current operational policy for the dredgers is unsatisfactory : it decreases the basin's trapping efficiency and increases the risk of siltation should one of the dredgers fail . Importation of spare parts is a problem.	

Budget for O&M : Once IDA funding ceased it fell to half of needs in 1997/98.

Cost Recovery : Only 26 percent of the 1995-96 assessment was collected and has since declined . About a third of farmers refuse to pay water charges because adjacent areas are not asked to pay, and penalties are not enforced by project management despite covenants in the credit . A recent court decision challenged the WUGs' right to manage water and undermines their authority and effectiveness . Part of project management's indifference to water charges is that it does not directly benefit: half goes to the users' groups and half to the central revenue . Keeping all fees collected within the project would be a substantial incentive and improve funding for O&M .

6. Ratings :	ICR	OED Review	Reason for Disagreement /Comments
Outcome :	Satisfactory	Satisfactory	
Institutional Dev .:	Partial	Substantial	Participatory institution strengthening efforts were introduced (learning from the failures of the preceding credits), WUGs cover almost all the project area and are effective at managing O&M.
Sustainability :	Uncertain	Uncertain	
Bank Performance :	Satisfactory	Satisfactory	
Borrower Perf .:	Satisfactory	Satisfactory	
Quality of ICR :		Satisfactory	

7. Lessons of Broad Applicability :

- * WUGs will not be sustainable unless government and project management uphold WUGs' authority to manage water and collect irrigation service fees .
- * The Bank must be more vigilant in imposing covenants regarding water user fees and their recovery .
- * Incentives to induce cost recovery apply to WUGs and project management, and it is essential these are fully explored and agreed at appraisal .

8. Audit Recommended? ☒ Yes ☐ No

Why? To determine the factors leading to the eventual success of the Sunsari Morang project under the headworks project compared with the two preceding credits that were unable to resolve the water and sediment problems nor form viable water user groups . A cluster audit of the two earlier projects and this project was undertaken in January 1998.

9. Comments on Quality of ICR :

Very thorough. It would have been difficult to understand this project without a good knowledge of the problems highlighted by the preceding credits . Fortunately, the ICR gives a concise account of how the headworks project evolved and, unusually, also calculates the ERR for several scenarios including not treating the earlier investments as sunk costs. Under all scenarios the ERR is greater than 20 percent, and for the stand alone project it is estimated at 49 percent.