

ICR Review
Operations Evaluation Department

1. Project Data :		Date Posted : 06/27/2000	
PROJ ID : P010348 OEDID:			
OEDID : C2144		Appraisal	Actual
Project Name : Second Bhairawa		US\$M)	
Project Costs (US\$M)		52.7	59.43
Lumbini rehabilitation project			
Country : Nepal		Loan /Credit (US\$M)	
Loan/ US\$M)		47.2	52.6
Sector, Major Sect .: Irrigation & Drainage ,		US\$M)	
Cofinancing (US\$M)			
Agriculture			
L/C Number : C2144			
		FY)	
Board Approval (FY)			90
Partners involved :		Closing Date	06/30/1999
			06/30/1999
Prepared by :	Reviewed by :	Group Manager :	Group :
George T. K. Pitman	Ridley Nelson	Ridley Nelson	OEDST

2. Project Objectives and Components

a. Objectives

(i) raise agricultural production and farm incomes through expansion of irrigated area thus raising annual agricultural

production of cereals and oilseeds by 54,000 tons directly benefiting 42,000 farmers;

(ii) promote privatization and farmer participation in irrigation development to reduce government costs and improve

their operation, maintenance and sustainability; and

(iii) strengthen irrigation subsector institutions .

b. Components

(a) construct 73 new deep tubewells (DTWs) serving 8,600 ha, complete 16 DTWs covering nearly 2,000 ha carried

over from the stage II project, turnover to farmers 38 completed stage II DTWs, and modify 64 DTWs covering 7,680

ha from stage I to accommodate farmer management;

(b) expand an existing Irrigation Line of Credit (ILC) pilot project to cover 6,600 ha in the western regions; and

(c) institutional development support for the Department of Irrigation (DOI) to strengthen internal management/administration and enhance capacity to implement and manage irrigation sector programs and prepare

projects under the framework of government's 1988 irrigation policy.

c. Comments on Project Cost, Financing and Dates

Apparent cost overrun is covered by appreciation of the SDR and \$ 84,997 was canceled. Farmers' contribution to

the project increased from \$0.5 million at appraisal to \$2.67 million at completion.

3. Achievement of Relevant Objectives :

The first two objectives were substantially achieved and many component targets were exceeded .

Private sector and

water user/farmer institutional development was in line with targets while government irrigation institutions

generally continued to perform below expectations .

4. Significant Outcomes /Impacts :

(i) Agricultural production was raised by 144,000 tons exceeding appraisal estimates primarily because of greater than anticipated yield improvements and irrigation intensity, even though only 60% of the irrigation target area was achieved. Farmers' net incomes were substantially increased (but less than appraisal estimates) and FRR were satisfactory at >20% for DTWs and artesian wells.
 (ii) the demand-led ILC significantly exceeded its targets with 276 surface water supplied schemes irrigating 28,355 ha and 217 wells irrigating 4,210 ha ILC farmers contributed on average 12% of capital costs. Under the Bhaiwara Lumbini DTWs, capital cost contribution by farmers was small (<2%) but at appraisal levels, and
 (iii) The project formed a Central WUA and four Regional WUAs . Under Bhaiwara Lumbini 168 WUAs were formed and under ILC over 300 farmer irrigator groups were legalized . In addition, 108 women's groups were formed covering literacy, sanitation and environment training, basic agro -technology and financial management . A new DOI HQ building and seven District Offices were completed and a computerized MIS and library were installed . DOI regional staff successfully updated the national Irrigation Master Plan and databases, and several feasibility studies and studies (groundwater, marketing, WID) were completed .

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

Government's sector institutions were poorly -coordinated between center and field and this jeopardized piloting of Participatory Joint Management schemes . Five changes of government and many untimely changes of senior staff adversely affected inter-ministerial coordination, delayed ICB /LCB contracts and nullified training efforts . There is uncertainty about who (government or private sector) will be responsible for maintaining technical support following the project. The annual budget release process is not linked to the main construction season and slows construction activities. Lack of adequate monitoring of financial flows caused late and qualified audit statements .

6. Ratings :	ICR	OED Review	Reason for Disagreement /Comments
Outcome :	Satisfactory	Satisfactory	
Institutional Dev .:	Substantial	Modest	Government's coordination and longer term technical support roles are unclear as government adjusts towards greater private sector involvement.
Sustainability :	Likely	Likely	
Bank Performance :	Satisfactory	Satisfactory	
Borrower Perf .:	Satisfactory	Satisfactory	
Quality of ICR :		Satisfactory	

7. Lessons of Broad Applicability :

In countries where social and institutional capital are low, the Bank needs a long term plan of engagement

(possibly over several project cycles) to allow sufficient time for these to develop and ensure sustainability .

Engineering interventions (tubewells) need to be sized according to social manageability rather than to economies of scale.

There has to be trade-off between hydrogeology and socially appropriate well construction - difficult drilling

conditions (boulder beds) preclude the small-scale private sector groundwater development feasible in nearby

Bangladesh that has almost identical agro -ecological and social conditions .

8. Audit Recommended? Yes No

Why? This project marks a new departure in Nepal towards demand -driven development for the irrigation sector; while PSD initiatives were substantial it is unclear how far these will be sustainable without continued government subsidies, and support which is patchy - particularly intersectoral coordination . Some issues remain unresolved (security of power lines, O&M of rural roads) that provide market links etc.

9. Comments on Quality of ICR :

OK. A major omission is the status of covenants - a fault of the new computer-based format, not the region.