

EVALUATION STUDY SERIES NO. 16

**RIVER LIFT IRRIGATION SCHEME
IN KOLHAPUR DISTRICT
MAHARASHTRA
(AN EX-POST EVALUATION STUDY)**

**WORLD BANK FOR AGRICULTURE AND RURAL DEVELOPMENT
ECONOMIC ANALYSIS & PUBLICATIONS DEPARTMENT
BOMBAY
1982**

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With the establishment of National Bank for Agriculture & Rural Development (NABARD) effective from July 12, 1982, the Agricultural Refinance & Development Corporation (ARDC) has ceased to exist. All the assets and liabilities of ARDC have been taken over by the NABARD. The schemes referred to in the present report were sanctioned by the erstwhile ARDC. However, due to the establishment of the new institution, we designate the said schemes as NABARD schemes. For this reason, the reference to NABARD in the body of the report may be taken as a reference to the erstwhile ARDC.

FOREWORD

This is the sixteenth in the series of evaluation reports brought out by the National Bank for Agriculture and Rural Development (NABARD) so far and the second one on evaluation of River Lift Irrigation Units (RLIUs) in Maharashtra, the previous one having studied RLIUs in Pune district.

The scheme evaluated through the present report is a co-operative enterprise implemented by the Panchaganga Sahakari Pani Purvatha Mandali, Ltd., (PSPPM) in Wadange and Nigwe villages of Karveer taluka in Kolhapur district. The report provides estimates of costs, benefits and incremental on-farm employment with reference to the scheme.

The scheme had implicitly assumed that its beneficiaries would continue bullock farming even after commissioning of the RLIU. However, the present evaluation, which was conducted some 11 years after the scheme completion, showed that about 80% of the beneficiary-households used tractors, either owned or hired. The study, therefore, attempts estimation of benefits from the river lift irrigation 'with' or 'without' tractor use. For obvious reasons, the benefits from the conjunctive use of tractor and irrigation are larger than those from irrigation use on bullock-operated farms.

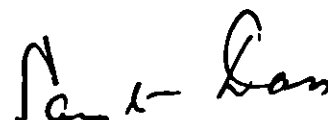
The principal motivation for the scheme was the development of sugarcane area and output. The cultivators in the scheme area did not, however, sell sugarcane to sugar factories but processed it into jaggery for sale. Due to the value-added in processing, the incremental income as well as the financial rate of return on the investment at 1980-81 costs and prices turned out to be much higher than might have been the case if the beneficiaries had sold sugarcane to some sugar factory. However, it is necessary to note that the price of jaggery during the year was quite favourable for the farmers. Given the year to year

fluctuations in the price of jaggery, it is not certain that the rate of return on investment in the river lift works would continue to be equally good at all times.

The scheme was implemented without any time overrun. The recovery performance of the PSCPM in respect of water charges from its members as also its own repayment of the long-term investment loan have been good. The society fully repaid the investment loan to the Maharashtra State Co-operative Land Development Bank (MSLDB) by January 1981, the due date.

A disquieting feature revealed by the study, however, is that the distribution of irrigation water among the members was not equitable, as those with large holdings were allowed to bring a higher proportion of their lands under sugarcane. It was also observed that irrigation water for the seasonal Kharif and Rabi crops was over-priced, while it was somewhat under-priced for sugarcane. This brings out the need for all lift irrigation societies for working out economic water rates for individual crops based upon the volume of irrigation water consumed and the cost incurred for providing a unit of irrigation.

The usual disclaimer about the responsibility of the NABARD as to the facts cited and views expressed in the report is implied.



SANT DASS
Managing Director

National Bank for Agriculture
and Rural Development
Bombay
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5. Jai-Hind, Nigwe-Dumala Vividh Karyakari Sahakari (Vikas) Seva Sangha, (Kolhapur)

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GLOSSARY AND ABBREVIATIONS

1.	APMC	Agricultural Produce Marketing Committee, Kolhapur
2.	BOFs	Bullock-operated Farms
3.	FRR	Financial Rate of Return
4.	GDP	Gross Domestic Product
5.	MSEB	Maharashtra State Electricity Board
6.	MSLDB	Maharashtra State Co-operative Land Development Bank, Ltd.
7.	NABARD	National Bank for Agriculture and Rural Development
8.	PSPPM	Panchaganga Sahakari Pani Purvatha Mandali, Ltd., Kolhapur
9.	RLI	River Lift Irrigation
10.	RLIU	River Lift Irrigation Unit
11.	THFs	Tractor Hirers' Farms
12.	TOFs	Tractor Owners' Farms

TABLE OF CONTENTS

		Page No.
		v
Basic Data Sheet		ix
Summary and Conclusions		1-5
Chapter 1	The Scheme	6-10
Chapter 2	Implementation of the scheme	11-14
Chapter 3	Water management of the PSPPM	15-22
Chapter 4	Methodology for the study	23-25
Chapter 5	Economics of River Lift Irrigation	26-40

LIST OF STATEMENTS & ANNEXURES

Statement No.	Title	Page No.
1.	Costs of investment (upto 30 June 1981)	41
2.	Area irrigated under RLIU and water rates charged by the PSPPM during the years 1970-71 to 1981-82	42
3.	Area under sugarcane and electricity bills	43
4.	Water rates estimated by the PSPPM for the year 1980-81 (Budget)	44
5.	Rates for water actually supplied by the PSPPM during the year 1980-81	45
6.	Expenditure of the PSPPM for 1980-81	46
7.	Operated holding per selected beneficiary household as on 30 June 1980	47
8.	Crop-pattern and value of produce during the year 1980-81	48-50
9.	Net income and incremental income during the year 1980-81	51
10.	Costs of cultivation during the year 1980-81	52
11.	Net income and incremental income during the year 1980-81 (Including value added in processing sugarcane into jaggery)	53
12.	Recovery performance of the PSPPM of water charges from members	54
13.	Repayment performance of the PSPPM	55
Annexures	Title	Page No.
I.	Some details of 9 lift irrigation units	56
II.	Operational details of working of the PSPPM	57
III.	Economics of lift irrigation as assumed in the scheme	58-60
IV.	Income and expenditure of the PSPPM assumed in the scheme	61
V.	Cash Flow Statement	62
VI.	Sensitivity Analysis	63
VII.	The Economics of jaggery production	64-65

BASIC DATA SHEET

1. Month/Year of sanction of the Scheme by NABARD	March 1968
2. Month/Year of commencement of investment work	February 1968
3. Month/Year of completion of investment work	January 1970
4. Costs of investment (Rs lakhs)	
(a) Anticipated	7.97
(b) Actual (upto June 1981)	11.42
5. Benefited area (acres)	
(a) Anticipated	800
(b) Actual (in 1980-81)	617
6. Financial Assistance from MSLDB (Rs lakhs)	7.95

Results of field study [Reference year : 1 July 1980 - 30 June 1981]

Item	BOFs	THFs	TOFs
1. Total number of beneficiary-households	60	289	25
2. Number of beneficiary-households selected for study	15	30	15
3. Average size of cultivated holding (Acres)	2.06	3.70	10.10
4. Average area benefited by selected RLIU (Acres)	1.43	1.53	4.47
(a) of which area under sugarcane (%)	50	75	80
5. Post-irrigation Cropping Intensity for benefited area (%)	241	254	262
6. Incremental Income (Rs per benefited acre)			
(a) Without value added*	733	1,891	2,128
(b) With value added*	2,309	4,444	4,875
7. Financial Rate of Return (%)			
(a) Without Value added*	19	39	41
(b) With Value added*	45	>50	>50
8. Additional on-farm employment** (no. of person-days per acre)	40	50	65
9. Scheme Impact (Net addition)			
(i) Net Irrigated Area (Acres)		617	
(ii) Area under sugarcane (Acres)		504	
(iii) Sugarcane production (Tonnes)		18,000	
(iv) Foodgrains production (Tonnes)		(-) 780	
(v) Oilseeds production (Tonnes)		(-) 20	
(vi) Incremental Income (Rs lakhs)			
(a) Without value added*		11.01	
(b) With value added*		15.18	
(vii) Employment (no. in '000)			
(a) Without processing activity		36	
(b) With processing activity		80	

* Value added in processing sugarcane into jaggery

** Exclusive of additional employment in processing activity