

EVALUATION STUDY SERIES NO: MADRAS-2

**DUGWELL IRRIGATION IN
PUDUKKOTTAI AND NORTH ARCOT
DISTRICTS-TAMILNADU**
(AN EX-POST EVALUATION STUDY)



**NATIONAL BANK FOR
AGRICULTURE AND RURAL DEVELOPMENT**

REGIONAL OFFICE : MADRAS-600 034.

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The National Bank for Agriculture and Rural Development (National Bank) was established on July 12, 1982. The Agricultural Refinance & Development Corporation (ARDC) ceased to exist from that day and its functions were taken over by the National Bank. The subject schemes were sanctioned by the erstwhile ARDC. For the sake of convenience, the report refers to ARDC although it does not exist anymore.

FOREWORD

This report brings out the results of an evaluation of two schemes for financing minor irrigation investments in Pudukottai and North Arcot districts of Tamil Nadu. The schemes covered by the study were implemented by the Tamil Nadu State Co-operative Land Development Bank and refinanced by the erstwhile ARDC.

The study revealed that the investments on minor irrigation structures viz., energised wells, non-energised wells and deepening of wells were found to be viable with the financial rates of return varying between 19 and 38% across different investments and districts. The repayment performance by sample beneficiaries was also found to be satisfactory with the overall recoveries being about 77% of the demand.

Notwithstanding the above good features, certain deficiencies were observed in the scheme implementation. An unrealistic estimation of unit costs, implementation of the sanctioned programme over an extended period and partial disbursements had resulted in severe underfinancing of the investments. Similarly, due to inadequate command area, the viability of the investments was in jeopardy in as many as 25% of the sample farms. Hence, the implementing banks would do well to realistically estimate the unit cost, implement the sanctioned programmes within the approved phasing and also strictly adhere to the technical norms relating to physical dimensions of the minor irrigation structure.

The study also revealed that the proportion of debt service liability to incremental income was disproportionately high in the case of wells in Pudukottai district which is drought prone. Hence, the policy makers should think of subsidising minor irrigation investments to all eligible beneficiaries in dry areas.

The responsibility for the facts cited and the views expressed in this publication are those of the authors' alone.



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LIST OF ABBREVIATIONS USED

ARDC	-	Agricultural Refinance & Development Corporation
DOW	-	Deepening of wells
DOWPS	-	Dugwell with pumpset
DRDA	-	District Rural Development Agency
FRR	-	Financial Rate of Return
GCA	-	Gross Cropped Area
GDP	-	Gross Domestic Product
HYV	-	High Yielding Variety
IRDP	-	Integrated Rural Development Programme
MI	-	Minor Irrigation
NA	-	North Arcot
NW	-	New well
NWPS	-	New well with pumpset
PASMA	-	Programme of Assistance for Small and Marginal Farmers for Increasing Agricultural Production
PDU	-	Pudukottai
PLDB	-	Primary Land Development Bank
Pre	-	Predevelopment situation
Post	-	Post development situation
REC	-	Rural Electrification Corporation

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BASIC DATA SHEET

Districts	:	Pudukkottai and North Arcot
Agency	:	Tamil Nadu State Land Development Bank Ltd.
No. of schemes	:	2
Implementing PLDB'S	:	PLDB, Ponnamaravathi (Pudukkottai) PDDDB, Cheyyar (North Arcot)
Date of sanction	:	July 1979 and February 1981
Date of closure	:	June 1986
Reference year	:	1986 - 87

	New wells	New wells with Pumpset		DOWPS	
	PDU	PDU	NA	PDU	NA
Size of the sample	16	28	18	10	28
Average size of holding(ac)	2.75	2.94	4.15	3.26	4.03
Average benefitted area(ac)	1.63	2.12	3.09	2.69	3.31
Of which addition to net irrigated acreage	1.31	1.03	2.33	0.68	0.97
Average cost of MI structures at historical prices(Rs.)	12481	16130	14166	4780	5015
Average financial assistance(Rs.) for MI structures	7307	7133	10799	3204	3211
Average cropping intensity(%)					
Pre-development	104	112	115	142	155
Post-development	166	170	193	197	217
Farm business income(Rs.)					
Pre-development	2141	2735	3847	5406	8011
Post-development	5260	7895	10725	9388	14431
Net Incremental Income(Rs.)	3119	5160	6878	3982	6420
Financial Rate of Return(%)	20	20	28	28	38
Percentage of recoveries to demand(%)	44	73	94	62	77