

**EVALUATION STUDY OF MINOR IRRIGATION  
SCHEMES IN MAHARASHTRA STATE**  
With Special Reference to Drought Prone Areas  
of Beed and Osmanabad Districts of  
Marathwada Region

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**C. S. GAJARAJAN**

A Study Sponsored and Financed by  
National Bank for Agriculture and  
Rural Development

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**GOKHALE INSTITUTE OF POLITICS AND ECONOMICS**  
**PUNE - 411 004**

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## FOREWORD

Since 1984, the National Bank for Agriculture and Rural Development has been supporting studies relating to various aspects of rural credit and rural development being carried out at the Institute by financing the Research Cell for NABARD Studies of the Institute. The present study on "Evaluation of Minor Irrigation Schemes of Maharashtra State : With Special Reference to Drought Prone Areas of Beed and Osmanabad Districts of Marathwada Region", is the second of the studies completed by the Institute under this arrangement. Two other studies carried out by this Cell are in the final stages and are expected to be published shortly. We take this opportunity to express our thanks to NABARD for their generous support.

The present study was carried out by Dr. C.S. Gajarajan of the Institute. The study evaluates the performance of the scheme for extending loans for investment in wells and pumpsets, introduced by Maharashtra State Cooperative Land Development Bank in 1981, for which 95 per cent refinance was provided by ARDC/NABARD. This has entailed an evaluation of the financial benefits accruing to the recipients of loans under the scheme and has, in the context of their experience, involved an examination of the problems of financing and implementation of minor irrigation projects in the State. The study has further narrowed its focus to understanding the problems of financing minor irrigation peculiar to hard rock zone of drought prone areas of Beed and Osmanabad districts of Marathwada region of Maharashtra State.

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The study assumes significance as minor irrigation occupies an especially important place in the State's irrigational development and as large parts of Marathwada and some other regions in the State are prone to periodic droughts.

Apart from bringing out the salient features and profiles of the scheme and of the selected areas and farmers, the report has monitored the implementation of the scheme, especially investigating the problems of alarmingly large proportion of infructuous investment in the case of dug wells. As the initial survey for this study was carried out when the schemes were in pre-optimal stage and affected by drought, a supplementary survey was undertaken subsequently to cover the full development stage of post-investment period. This has made it possible to evaluate the financial benefits of the schemes under the situations of drought as well as normal conditions. In addition to highlighting the constraints on the scheme, especially during the drought period, the study arrives at the significant conclusion that the schemes are financially viable not only under normal conditions but even after allowing for periodically recurring drought situations.

Gokhale Institute of  
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Pune-411 004

September 26, 1988

V. S. Chitre  
Director

## PREFACE

The successful implementation of minor irrigation projects in Maharashtra assumes special importance, for the State does not have abundance of surface water resources. It is even more significant in certain parts of Marathwada region of the State. Although, the estimated potentiality of groundwater resource is vast and the State can exploit the same for years to come, the implementation of schemes, in drought prone semi-arid areas characterized by hard rock condition, is fraught with peculiar problems. Beed and Osmanabad districts of Marathwada region belong to this peculiar agro-climatic zone. The present study, based on empirical investigations in these two districts, has attempted to monitor and evaluate several schemes supported by MSCLDB credit under NABARD refinance programme. Apart from the aspects covering salient features of the scheme, methodology, and the general profiles of the selected zone and beneficiary farmers, the study attempts to analyse facets of infructuous investment, financing of investment and, evaluation of post-investment benefits including cash flow and financial rates of return under normal as well as drought conditions.

At the outset, I must express my sincere gratitude to NABARD for providing me an opportunity to carry out this study. I am also thankful to the concerned officers of Economic Analysis and Publication Division of NABARD for their valuable suggestions on the earlier draft which enabled

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me to conduct a supplementary survey to make the present study more comprehensive and meaningful. In particular, I am grateful to Dr. M.V. Gadgil, Mr. C. Ramalingam, Dr. H.P. Singh, Mr. R.G. Shaligram and Dr. B.N. Kulkarni who have been very helpful to me throughout.

I am thankful to my colleagues at the Institute for their encouragement at various stages of the study. In particular, I am grateful to Prof. V.S. Chitra, the Director, for his unstinted support. My thanks are due to Shri S.N. Gadam for his invaluable suggestions at all stages. Amongst the others deserving my gratitude, mention may be made of Shri Bhaskar Mujumdar, Shri Dilip Mane, Shri S.B. Kate and Shri V.G. Kasbe for their valuable assistance in the project work.

Also acknowledged are the valuable cooperation and facilities received from the officials of Maharashtra State Cooperative Land Development Bank at various levels and the sample farmers in Beed and Osmanabad districts.

C.S. GAJARAJAN

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