

Overview of IIMI Research Activities under the FMIS Program

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The objectives of the FMIS Program are to: 1) facilitate the development of knowledge and international exchange of information about conditions which enhance the performance of farmer-managed irrigation systems and 2) facilitate the development of knowledge and international exchange of information about which support services are needed and what kind of assistance strategies are successful. During Phase II of the FMIS Program, from 1991 to 1993, a third objective was added, which was to assess and report on key research and development issues for groundwater and lift irrigation, with particular emphasis on South Asia and West Africa.

The Research Component of the FMIS Program currently has five research activities underway. Two of the activities deal specifically with groundwater or lift irrigation (one for Bihar, India and one in West Africa). All deal with management performance assessment and support services for FMIS.

The first research activity is a study of groundwater irrigation development and management within the command area of the Gandak Scheme, a large-scale canal system in northern Bihar, India. Bihar is located within the largest concentration of people in absolute poverty in the world (250 million people). Given its favorable natural resources and rainfall it has considerable untapped potential for development. But it is plagued with institutional and management problems. This activity was a follow-on to an earlier IIMI-India study on conjunctive irrigation water use in Bihar, done in collaboration with the state Water and Land Management Institute (WALMI). The current activity aims to document the extent, nature and performance of farmer-managed groundwater irrigation within a sample command area of the Gandak Scheme and to examine the potential to improve overall performance and sustainability of the water resource base through linking the farmer-managed groundwater sector with the agency-managed surface canal water sector through conjunctive management. This involved several direct-hire research staff working in the field for nine months. A research report is currently being finalized and will be ready later in 1993.

The second, more modest activity is a review paper on the status of groundwater and lift irrigation in West Africa, which, after South Asia, is the second area in the world characterized by severe poverty and high dependence on groundwater and lift irri-

gation. The paper identifies the current stresses and challenges facing farmer-managed lift irrigation in West Africa, providing data on the extent of irrigation, types of technologies used, water environment, socio-economic influences and development, management and research issues. The paper will be completed before the end of 1993.

Research activities three and four deal specifically with support services for the FMIS sector. The third is a comparative assessment of the status of the FMIS sector in Sri Lanka and Nepal. The cases analyze which organizations provide which types of support services, through what arrangements and with what patterns of specialization and coordination existing among other providers of services. The more innovative and successful programs will be examined in detail, particularly in terms of the arrangements and processes for delivering support services to farmer-managed irrigation systems (FMIS's). Programs included are government organizations, non-government organizations and user or community-based organizations. Recommendations and a short guide for planning and implementing support services programs will be produced.

The fourth activity is the Irrigation Resource Inventory, in collaboration with IIMI Nepal and the Institute of Agricultural and Animal Sciences, at Rampur. This is an action research experiment to develop and apply a participatory method of acquiring an information base as a decision-support tool to enable providers of support services to plan and implement programs which are more comprehensive, equitable and locally appropriate. A large number of irrigation systems in two districts of Nepal will be included in the inventory which will obtain information on performance levels and problems, technology and management methods used, potential for development and types of support needed. A computer database will be developed into a practical decision-support tool for support service organizations. A report which displays the data and important findings will be prepared at the end of 1993.

The fifth research activity is an action research study in the Bicol region of the Philippines, wherein farmers periodically assess irrigation management performance for both the agency-managed main canal of the irrigation system and their own farmer-managed sub-system. Object-oriented assessment forms have been developed and used by the farmers involved to show levels and trends of perform-

ance. This is being used as a feedback correction-response mechanism by the National Irrigation Administration (NIA). A report with an assessment of findings and recommendations will be prepared before the end of 1993.

Others conducting research on farmer-managed irrigation are invited to submit short articles to the FMIS Newsletter.

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