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**Participatory Irrigation Management and the
Factors that Influence the Success of Farmer
Water User Communities: A Case Study in
Cambodia**

Bandeth Ros

2010

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Factors that Influence the Success of Farmer
Water User Communities: A Case Study in
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Abstract

The Participatory Irrigation Management approach was introduced into Cambodia in 2000, which was called the Participatory Irrigation Management and Development (PIMD). The goal of PIMD is to establish Farmer Water User Communities (FWUCs) to take over the management of irrigation schemes in their district in order to improve the performance of irrigation schemes and farmers' livelihoods. The implementation of FWUCs has resulted in both failure and success. Several studies have identified factors that influence the failure of FWUCs, but little research has focused on their success. By employing a single embedded case study approach, this research selected the most successful scheme in Cambodia to identify factors that influenced the success of the FWUC in irrigation management. The findings of this research could provide concrete assistance to the government, donors, and non-governmental organisations in improving the performance of less successful FWUCs in Cambodia.

The result of this research showed that the success of the O-treing FWUC was influenced by five internal and two external factors. The internal factors were: 1) the level of local participation, 2) the governance and management of the scheme, 3) the value of the benefits that flow from the irrigation scheme, 4) the quality of the irrigation infrastructure, and 5) the characteristics of the farmer members within the scheme. The external factors were: 1) the level of external support provided to the scheme, and 2) market access.

The success of the FWUC required farmer participation and this participation was enhanced when farmers obtained benefits from it. This research also found that access to markets was critical to make the benefits that flowed from the irrigation scheme more profitable to farmers, leading to farmer participation. Similarly, it was also important to make sure that the irrigation infrastructure was of a high quality to ensure the delivery of an adequate and timely supply of water to farmers so that they could grow crops that provided them with the benefits. This required external support from the Ministry of Water Resources and Meteorology, NGOs, and local authorities to help rehabilitate the scheme. External support was also critical for enhancing the governance and management of the scheme through assistance with the formation process, provision of financial resources, capacity building, rule enforcement, and conflict resolution. The governance and management of the scheme, in particular the leadership capacity of the FWUC was another critical factor because it ensured the maintenance and development of the irrigation infrastructure, the timely and adequate supply of water to farmers, farmers' trust and respect for leaders, and farmer participation. Finally, the success of the FWUC could not be viewed independently from farmer characteristics within the scheme. Farmers tended to participate in irrigation management when they had a history of self-organisation, when they were relatively homogenous, and when they were dependent upon farming for their livelihoods.

This research suggests that the successful implementation of FWUCs requires a focus on the seven factors and the interactions that occur between these factors. Irrigation stakeholders such as the Ministry of Water Resources and Meteorology, donors, NGOs, local authorities, local leaders, and farmers should work together to enhance these factors in order to ensure the success of FWUCs.

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Abbreviations

ADB	Asian Development Bank
CBNRM	Community-Based Natural Resource Management
CPRs	Common Pool Resources
DoWRAM	Department of Water Resources and Meteorology
FAO	Food and Agriculture Organisation
FWUC	Farmer Water User Community
IMT	Irrigation Management Transfer
ISFs	Irrigation Service Fees
MoWRAM	Ministry of Water Resources and Meteorology
NGOs	Non-Governmental Organisations
OECD	Organisation for Economic Co-operation and Development
PIM	Participatory Irrigation Management
PIMD	Participatory Irrigation Management and Development
RGC	Royal Government of Cambodia
TWGAW	Technical Working Group on Agriculture and Water
UNDP	United Nations Development Programme
WB	World Bank
WFP	World Food Programme
WUAs	Water Users' Associations