

Institutional diversity, market pressure and performance of irrigation systems: Comparative perspective in Nepal and Thailand

Ganesh P Shivakoti¹, Ram C Bastakoti¹



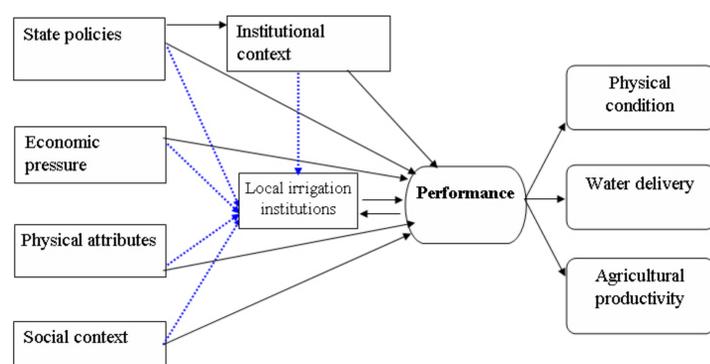
¹ School of Environment, Resources and Development
Asian Institute of Technology, Thailand

Introduction

The rapid economic development, and political and social changes in Asia has posed a new setting to irrigation management, which has influenced the collective action of farmers and also government's willingness to invest in agriculture (Lam, 2001). In many Asian countries irrigation management is most important concern due to significant contribution of agriculture in their national economy. But the performance of irrigation sector is not satisfactory despite of efforts on irrigation development and management (Barker and Molle, 2005). In this context the assessment of institutional dynamics and its influence on performance of irrigation systems is of utmost importance. This paper focuses on comparative analysis of irrigation sector of Nepal and Thailand.

Data and Methods

The analysis focused on both at cross-country and intra-country level. The discussions are based on extensive survey of 100 irrigation systems, 50 each from Nepal and Thailand. Irrigation systems have been selected in such a way that it covers major river basins across all regions of these two countries. Following analytical framework has been used for the assessment of performance of irrigation systems. According to the framework; state policies, economic pressure, physical attributes of the system, and other social and institutional variables influence the use of water resource and performance of irrigation systems; but their effect is mediated by local irrigation institutions that help guide human activities.



Irrigation development efforts at national level

Irrigation Development in Nepal: Important Milestones

The government's involvement in irrigation development began in early 1920s but at limited scale. The planned involvement of government in irrigation development started only after 1951. Since 1956 Nepal

entered into the era of planned development, and with the start of development plans, the government began its active involvement in irrigation development in the country. The various periodic plans focused on development of irrigation infrastructures. Later, the focus was on participation of users in irrigation management which was facilitated by various policy formulations. The new irrigation policies brought out after the political changes of 1990 laid emphasis on participatory approach of irrigation management in the form of transfer of management responsibility from government to users.

Irrigation Development in Thailand: Important Milestones

In Thailand, the first large scale water control projects were begun as private enterprises in the Chao Phraya plain in the 1890s. The systematic and modern development of irrigation management started only after 1950s through national development plans. Royal Irrigation Department (RID) mainly focused on infrastructure development especially focusing on Large-scale water storage projects mainly in the Central Region. During the past 10 years, there was a major shift in the approach to water resources development and the focus was on the construction of small-scale projects instead of large and medium-scale projects. These measures represented a new conceptual approach towards integrated water resources management in Thailand. Similarly, after adoption of participatory irrigation management policy, government encouraged people's participation in irrigation management.

Variations in irrigation infrastructure

The result showed considerable variations in terms of irrigation infrastructure in Nepal and Thailand. In general irrigation systems in Thailand are of larger size, except northern traditional systems, compared to Nepal. Most of them have permanent structures; headwork and canal linings. Another important feature of Thai Irrigation systems was that a large portion of irrigation systems have storage facility, where as in Nepal none of them have storage facility.



Market pressure, collective action, and performance of irrigation systems

It has been noted that market pressures and other related economic factors have significant influence on institutional arrangements. In Nepal the command areas of majority of irrigation systems include cereal-based subsistence agriculture with only few systems having commercial vegetable farming. But the market-led economy of Thailand has created condition for diversification in farming practices resulting into increased area under high water demanding commercial crops. The changing water demand scenario has ultimately influenced the collective action for irrigation systems management.

Among the various performance criteria (Lam, 1998) in terms of overall physical condition Thai irrigation systems are better. The short run economic-technical efficiency was almost similar. But, another indicator of performance, the cropping intensity, showed that Nepalese irrigation systems are performing well. The performance varied across the systems of different management, FMIS performing relatively better than large scale AMIS.

Conclusion

The result showed that traditional irrigation systems, both in Nepal and Thailand, have been effective to mediate the external influence through their local institutional arrangements thereby maintaining the performance of the systems.

Selected references

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Contact: ganesh@ait.ac.th