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Introduction

Given the magnitude of public investments and thrust in irrigation in Asia, there are few detailed assessments on environmental ramifications of irrigation that take into account the complex nexus of irrigation-natural resources management that pass through income and employment effects in the local economy. Past studies have mostly focused on the short run basis of adverse effects of irrigation on wetlands ecosystems functions, and also mostly in large irrigation schemes. The literature has not yet address the complementary of managing both wetlands and smallholder irrigation as one system.

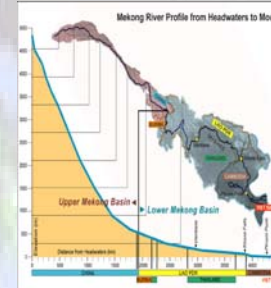
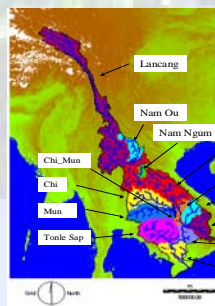
Therefore, this collaborative project between IUCN (through MWBP) and IWMI addresses impacts of small-holder irrigation on wetland management in the Lower Mekong Basin (LMB). From a series of case studies in selected schemes in Laos, Thailand, and Cambodia, this project plans to develop improved policy prescriptions and guidelines on joint management of wetlands and smallholder irrigation schemes. The project is divided into two phases (Phase A and B). Based on the findings of Phase A work, and in consultation with the local partners, the project activities for Phase B will be designed and implemented (Phase B proposal is being developed now).

Objectives

The main objective is to improve understanding of wetland livelihoods in the Lower Mekong Basin by analyzing all the positive and negative effects, including interlinkages, of smallholder irrigation (farming) on wetlands services and rural livelihoods.

The specific objectives (in Phase A and B) are:

- to improve understanding on cross-sectoral interlinkages between water uses for smallholder agriculture (irrigation) and management of wetland resources;
- to analyse and evaluate multiple-scale interactions between water withdrawal for agriculture and management of wetland resources;
- to develop and apply methodologies that enable explicit inclusion of the wetland management and sustainable use of wetlands in the catchment context, including environmental flows and climate change adaptation;
- to initiate capacity building activities by engaging local partners in developing, practicing, training, and transferring the improved methodologies and tools.



Methods

Considering the very complex interactions between irrigation and wetland Functions at livelihoods and ecosystem scale, the project activities are divided into two phases (Phases A and B).

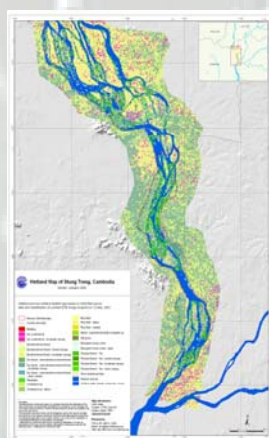
During the first phase (Phase A), stakeholders' consultations, scoping of policy issues and initial assessment are carried out. Then, a more in-depth study and action research based field activities are planned for phase B (of 2-3 years).

The project adopts a participatory research methodology, training and active participation of the provincial and local agencies in the project implementation activities in each of the project sites in the LMB.

Field study sites in LMB:

- Attapeu province of Lao PDR;
- Nam Songkham catchment of Thailand;
- Strung Treng province of Cambodia;
- In Phase B, study will be done in southern Vietnam province, as well.

During the Phase B (2-3 years): Selected longer term action research and field level implementation activities are planned in each of the four demonstration sites of MWBP. In consultation with the local stakeholders in each site, the detailed elaboration of Phase B will be done at the end of phase A.



Preliminary Results

The preliminary findings of the selected field studies have shown that there are possibilities to joint management of the small-holder irrigation and wetlands for environmental services and improving the wetland livelihoods. However, this involves careful planning and management of such smallholder irrigation schemes, and adjusting the water withdrawal time and season, and so on. This also includes designing the water infrastructure such that it will have minimum adverse impacts on the functioning of wetland ecosystem and the wetland depended livelihoods of the communities. In consultation with local partners, the project proposal for phase B is being developed now.

Implementing Strategy

This project is being implemented through active participation of local partners and in building up local research capacity in the LMB. Several local and central government agencies from water and wetlands sectors are collaborative partners of this project. Provincial office of MWBP in each country is the focal point for field work and project activity.



Study Implications

This findings from the project (Phase A and B) will improve the knowledgebase on interactions between smallholder irrigation and wetland resources, and it provides valuable information base for jointly managing the wetlands and small-holder irrigation in the basin context of water management. The households and community level activities provide critical information base for livelihoods of both farming and aquatic resources depended communities in the study areas.

