



ICM Solutions

Demonstrating Integrated River Basin Management at the Local Level in the Houay Champi Sub-Basin, Champasak Province, Lao PDR

- Integrated River Basin Management (IRBM) is not just a concept or practice that is restricted to large rivers and institutions with abundant resources. It can be employed at the ground level to address the practical needs of the villages in sub-basin areas, within their available capacities, both human and financial.
- The systematic process of setting up the IRBM at the sub-basin level needs to be participatory and adaptive. It takes time and continual effort on the part of IRBM managers and implementers to engage stakeholders in the process as the implementers themselves are also learning the process. Progress can be made in the short-term by engaging those stakeholders that are ready to act, and, over time, expanding the breadth, understanding, and capacity of all stakeholders.
- Livelihood projects, such as establishing a village fund for alternative livelihoods, not only benefit households socially and economically, they also enhance people's understanding of the advantages derived from restoring and safeguarding their community's principal resources, the rivers and the forests..



Context

Several government agencies and economic sectors (i.e., industrial, agricultural, tourist, domestic) have been involved in the development and management of water resources in the Houay Champi sub-basin, with each having a separate and distinct development plan and management mechanism. The mechanism to harmonize development across the sectors in the sub-basin area was weak, resulting in conflicting plans and uses among the different sectors.

There was no forum for discussion and consultation, with fragmented information-sharing arrangements among concerned agencies and levels of government. Moreover, law enforcement was essentially ineffective due to lack of resources among the various regulatory agencies. As a result, illegal activities were prominent. Encroachment due to expansion of agricultural activities and human settlements was causing deforestation of the headwater area, resulting in negative impacts on the river system, including increasing sediment and pollutant loadings.

Conflicts were also evident among the different stakeholder groups, including industrial and household water users during the dry season. Limited infrastructure on the Houay Champi River, including water reservoirs, meant that there was a limited water supply available for the different users during the dry season.

Solutions

In response to the identified concerns, a demonstration project was developed by the Department of Water Resources and the Province of Champasack to gain knowledge and experience in river basin governance and management at the local level. The Houay Champi River sub-basin was selected as the demonstration site. The project was supported by the Swiss Agency for Development and Cooperation (SDC). The following are considered priority steps in the IRBM process in Houay Champi project.

Set up a coordinating arrangement that includes primary stakeholders. The project was implemented by Department of Water Resources (DWR), Ministry of Natural Resources and Environment (MoNRE) in collaboration with Provincial Natural Resource and Environment Office (PNREO) of Champasack Province and District Natural Resources and Environment Office (DNREO) of three districts, Pakxong, Bachieng, and Sanasomboun, as well as local community and private sectors within the Houay Champi sub-river basin (fig. 1).



Rapid appraisal for the development of the Sedone Integrated River Basin Management Project.

A multisectoral Steering Committee and a coordinating office were established in Pakxong district. Each district assigned representatives to the project steering committee to supervise and advise on project planning and implementation. The Steering Committee provided guidance on the implementation and facilitated collaboration among the three districts in the sub-basin. A delineation of functions between national, provincial, and district governments was agreed to as part of the setting up of the institutional mechanism.

Develop the capacity of core staff. Training courses were organized to strengthen the capacity of the technical staff at the national, provincial, district, and village levels. At the national and provincial levels, the training was more focused on project management and technical concerns, while at the district and village levels training addressed practical matters of livelihood and regulation development and basic functioning of the water resources management groups. A learning-by-doing approach was employed. By engaging the core team in key project activities, an opportunity was provided for the team to learn the different strategies and methodologies of implementation. Provincial, district, and village members gained knowledge and skills through direct experience from carrying out the tasks, usually under supervision and as part of a training or induction process. For instance, local staff members were involved in determining water quality by using portable equipment. After several supervised field activities, local staff members were able to conduct the water quality monitoring by themselves.

Determine baseline conditions. A participatory process was employed for gathering baseline information on the Houay Champi sub-basin. The information was assessed and packaged into the Houay Champi Sub-Basin Report.

Data sheets were prepared, and the data collection team was trained in the methodology of data collection, data analysis, and report writing. By engaging the team in data gathering and analysis, the team developed a better understanding of the local situation and were able to see the socioeconomic and environmental dynamics in the sub-basin. The report was reviewed and refined based on data availability and in consultation with the stakeholders at the district and provincial levels.

Develop a management plan. Guided by the baseline report, the Houay Champi Sub-river basin Management Plan for 2014-2020 was drafted in collaboration with concerned stakeholders to generate mutual agreement and ownership. The Plan was adopted by the three districts and the Director of PNREO, encouraging the three districts to

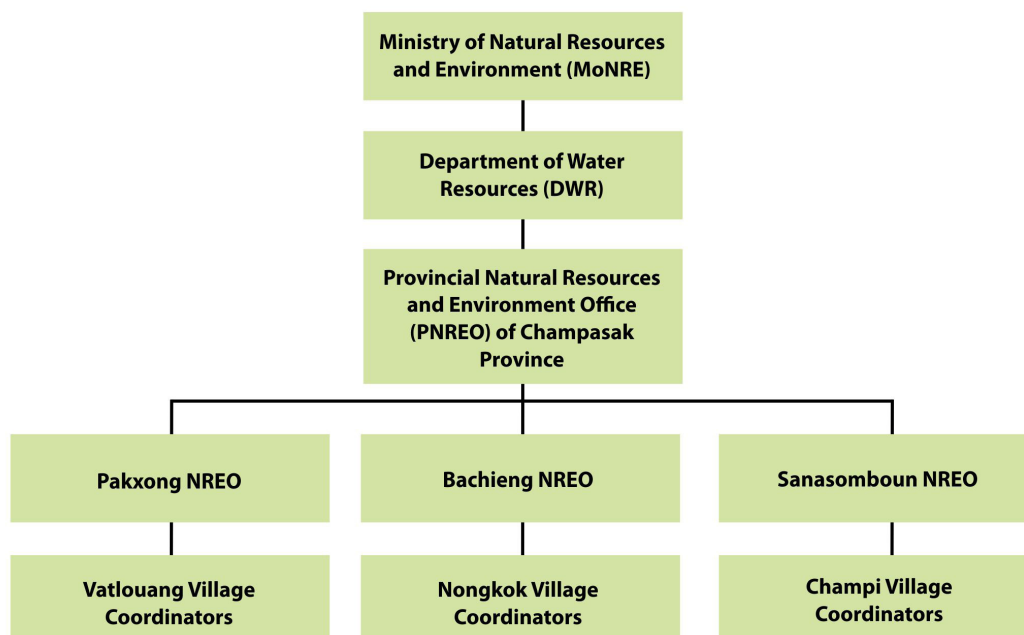


Figure 1. Organizational Structure of Houay Champi Integrated Sub-river Basin Management Project.



Community-led consultations on development of management plan.



Community discussion on livelihood improvement activities at Champi Village.

cooperate and coordinate in the implementation of the plan. The Plan will be distributed to potential funders, donors, developers and other private sectors within and outside of Houay Champi Sub-river Basin to generate support for its implementation.

Implement the Plan. As part of the practical implementation of the management plan, the following key activities were undertaken:

1. **Set up water resources management groups at the village level.** The groups are composed of volunteers from the villages and are tasked to monitor the use of water resources in their respective villages. The mandate of the groups was prepared by Department of Water Resources in cooperation with the Water Resources Section of Champasack Province. This was adopted at the District level and signed by the District Governor to provide a legal mandate for resources management. The water resources management groups of the targeted villages in three districts were established in consultation with the concerned communities in Vatouang Village (Pakxong District), Nongkok (Bacheng District), and Champi Village (Sanasomboun District) and endorsed by the district authorities.
2. **Set up a Water Conservation Fund at the Village Level.** The fund was set up and accessed by at least 78 families as initial capital in growing cash crops and in putting up small-scale freshwater aquaculture. A start up fund of US\$ 3,000 for each village was provided and a Village Committee was set up to manage the fund and review the proposals submitted by villagers who wanted to avail of the loan. Aside from individual loans, the villages could also propose collective activities to protect an area where income was being derived such as the rivers and forests. For example, three villages were able to establish four areas for small-scale fish traps. Similarly, each village identified and started protecting forest areas on the river banks so as to maintain water level and prevent erosion.
3. **Develop and disseminate village regulations on water use and supply management.** Through a series of consultations, a set of regulations to protect water sources were developed and approved by the village and district leaders. Billboards were then set up in key areas in the villages to inform every one of the permitted and prohibited activities in specific water supply areas. The regulation identified “illegal” activities such as throwing of wastes and chemicals or containers (i.e., from fertilizers and pesticides) in the river. Aside from these, cutting of trees along the riverbanks was also prohibited and any development activities required the approval of local

authorities. Information on the Village Fund including amount, mechanisms, interest rates and other related information were also included.

Conduct water quality monitoring. The Department of Water Resources collaborated with District and Village officials to conduct the water quality monitoring along Houay Champi. Three locations were identified for monitoring water quantity and four locations for water quality monitoring. Initial monitoring was conducted to provide a reference for future management activities. The results of monitoring were shared with decisionmakers and stakeholders in order to enhance awareness and find the best solution to overcome poor water quality conditions.



Local regulation posted on a billboard in Nongkok village.



Installation of gauges for water monitoring.



Baseline data gathering for the Houay Champi Sub-Basin Management Project.

Results

The Houay Champi Sub-basin management was guided by the broader implementation and experiences in the implementation of the Sedone Integrated River Basin Management Project. With two years of implementation experience, there are a number of project results, including:

Better appreciation of a step-wise and a gradual approach to implementation. The IRBM process as applied in the Houay Champi sub-basin is systematic, transferable to stakeholders and staff at different levels of government, and adaptable to community dynamics and priority issues. For instance, the experience in implementing the basin-wide activities for Sedone guided sub-basin implementation, such as the setting up of institutional mechanisms for implementation, profiling/state of the sub-basin report, development of management plan, awareness building, and development of regulations, among others.

Foundations for IRBM implementation are established at the local and community level. With the Houay Champi IRBM Project, the district and village level team members are able to initiate actions in their respective villages, bringing the concept, practice, and benefits of IRBM closer to those most affected by the calamities of mismanagement. The process of generating information, collaborative planning, and ideas for implementation builds community cohesion which is necessary in achieving a shared vision of the sub-basin and for implementing agreed management actions. For instance, in developing the profile and management plans, the implementers themselves are able to gain a better understanding of the local situation and interact more with the villagers on the practical concerns that the project needs to address. This, in turn, generated trust in the implementers among the villagers.

Improved livelihood opportunities for the villages. Despite being in its early stage of implementation, the access to livelihood opportunities through the revolving fund is one positive result of the project. Prior to the project, there were no supplemental sources of income and villagers expressed that some of the families were prompted to do slash and burn cultivation. Aside from having start-up capital for small-scale livelihood activities, the village fund serves as an “incentive” for the monitoring and protection of water resources. While the project is at an early phase of implementation, households expressed that the supplemental source of income is providing additional food for their families and discouraging many to do slash and burn cultivation.



Lessons Learned

Multisectoral participation is essential in IRBM, but it takes time. One of the weaknesses of the current setup in the sub-basin is the limited participation of concerned sectors (for example, who is missing from the existing setup?). The process of developing a sub-basin committee takes a lot of time and much consultation to get the concerned stakeholders involved. However, the process needs to be initiated and, over time, further improved as part of an awareness building and consultation process with all concerned stakeholders.

Limited data and information are a constraint, but not a barrier to sub-basin management. Due to limited studies done in the sub-basin, there was limited scientific and technical information available at the district and provincial levels. To address this, the project compiled and analyzed available data and shared and discussed it with the different stakeholders. In preparing the sub-basin management plan, the best available information, mostly from secondary sources and testimonies of villagers, was used. The plan was completed using available information, recognizing that it will need to be reviewed and updated as more information becomes available during the implementation process.

An incremental and longer-term approach to capacity development makes for a sustainable program. The strategy for capacity development in the Houay Champi IRBM Project was to train national, provincial, district, and village level officials, based on their specific roles, responsibilities, and capacities over the longer term. Technical training aspects of the project (i.e., water quality and quantity monitoring, baseline report development, etc.) were conducted with provincial and national officials, while the practical activities, such as water use management and livelihood development, involved the villagers. The limitation of capacity, especially at the district and village levels, was identified as a challenge for the project. However, by building competence in capacity development at the provincial level first, the province was then tasked with transferring capacity and assisting the districts and villages in the longer term. This strategy recognized that the skills for effective planning and management at the local level will take time to transfer and be completely adopted by local communities. The role of the province is to provide training, mentoring, and assistance to the districts and villages to improve management, as may be required, beyond the life of the project.



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Reference

Department of Water Resources. 2013. Project Completion Report of Houay Champi Project. Unpublished report.

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