

Responsibility in Processes: Stakeholders Mobilize for Integrated Water Resources Management in Red River Basin, Vietnam

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This study reviews the success of the process used in the Second Red River Basin Sector Project. That Project concerned Integrated Water Resources Management (IWRM) in the Red River Basin of northern Vietnam and cut across the issues of institutional capacity-building, public awareness, poverty alleviation, gender, and stakeholder participation.

Stakeholder involvement was highlighted in the study by a combination of two processes: from the province level upward initially, and then from the province level downward into local community involvement. First, the stakeholder involvement process was used to successfully set up a procedure for consensus-building in 25 provincial workshops, followed by clustering into five sub-basin workshops and finally by stakeholder interaction with the national-level administration to identify priorities and possible solutions for IWRM in the whole basin. The highest priority issues identified by stakeholders were irrigation agriculture, water supply and sanitation, flood control, and environment/biodiversity. Second, from the first stakeholder process, stakeholders were deeply involved in the process of water-sector planning in the priority water sub-sectors. This process was developed and successfully implemented beyond the expectation of most, given the scale. The facilitation process allowed stakeholders to interact in a transparent way, by building capacity and awareness and by setting up a rigid interaction process, with decisions taken stepwise. This method proved very empowering for participants because it even allowed consensus to be reached in highly resource-competitive situations on a strictly logical basis.

In this stakeholder process, the case studies were carried out stepwise within two selected provinces in the northern Upland and then downward into smaller sub-basins until the commune and village levels were finally reached. Throughout, active stakeholder involvement took place in three main streams, aiming at informed decision-making over IWRM priorities. The stakeholder streams were (1) local authorities and (2) stakeholders at the province, district, and commune/village levels being the decision-makers and utilizing (3) technical experts providing specialized assessments. To begin with, the decision-makers, consisting of (1) and (2), succeeded in combining their views on water resource management and socio-economic development plans, thus taking responsibility for IWRM directed at poverty reduction. Local authorities and water users thereby set up informed decision-making process drawing on the technical experts' specialized assessments. This facilitation process in the case study project embodies the following lessons on institutional and local community involvement and learning through carefully structured stakeholder interaction: (i) stakeholder interaction processes in IWRM are essential in terms of shifting responsibility for project formulation and implementation toward the water users; (ii) the developed and tested participatory investment planning process has the potential to be scaled- up into broad applications; (iii) sub-projects could be formulated in this way at the pre-feasibility level in the two selected provinces; (iv) a priority list of potential sub-projects, prioritized by technical feasibility and poverty-reduction capacity can be set up; and (v) the selection process must involve awareness-raising and capacity-building.

Key words: IWRM, stakeholder participation, responsibility, informed decision-making, poverty

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Introduction

This study is based on first and second phases of the Second Red River Basin Sector Project that was carried out during 2003–2005. It concerned how to apply Integrated Water Resources Management (IWRM) and also concerned how the poverty reduction issue was dealt with, and to what degree this was successful in the Red River Basin, northern Vietnam. One of the issues was to make priorities for potential investment in water sub-sectors (ADB, 2004a). The technique has been to cut across the sub-sectors with common themes; institutional capacity-building, public awareness, poverty alleviation, gender, and stakeholder participation. The design, with its participatory IWRM, emphasized a combined participatory process and the collection and analysis of technical information to establish an integrated knowledge base that can inform stakeholders' decisions.

The scale of the full project was very large. The total area of the Red River Basin is about 170,000 km², of which almost 50% is located in China. The basin in Vietnam consists of 25 provinces* in which

* The division of Lai Chau (into Lai Chau and Dien Bien) in 2004 did not impact on the project.

Delta region consists of 11 provinces and covers 17% (15,000 km²) of the basin in Vietnam. The Upper Basin, divided into North-West and North-East highlands covers 70% of the northern highland region, including eight complete provinces and parts of seven more. The total population of the basin is about 25 million, of which about 10 million (40%) are poor (national average poverty rate was 37% in 2003). In the project, 25 provinces in the basin were grouped (in the interaction with relevant ministries) into five regions or sub-basins based on the hydrological principles (Fig. 1 and Table 1).

The present study revisits the process and results of stakeholder involvement in the two phases of the Project in light of the question, "What are the priorities if the project is to optimize poverty reduction?" This issue of targeting the poor is generally recognized to be a complicated one in development policy (Cf. Sen, 1981; Narayan, 2000). The poor do not appear as a group of people but form a category of scattered individuals (Vietnam, 2002a). In the mountainous areas of Vietnam, the poor make up a high proportion of all inhabitants, but in absolute numbers, most live in the lowlands of the project area.

To our view recent attempts (Sullivan, 2001;



Fig. 1. Map of Red River Basin, showing the five groups of regional sub-basins

Table 1. The 25 provinces in the Red River Basin, grouped into five groups of regional sub-basins

Highlands 1 (North-West)	Highlands 2 (North-East)	Day River sub-basin	Left Delta	Cau River sub-basin
Lao Cai	Ha Giang	Ha Tay	Thai Binh	Bac Can
Lai Chau	Tuyen Quang	Ninh Binh	Hai Phong	Thai Nguyen
Yen Bai	Cao Bang	Ha Nam	Hung Yen	Bac Giang
Son La	Lang Son	Nam Dinh	Hai Duong	Vinh Phuc
Phu Tho	Quang Ninh	Hoa Binh	Bac Ninh	Ha Noi

Soussan, 2004) to develop a water poverty index have not made it any easier to reach the poor in the current Project. The approach taken by the Project —to interact with stakeholders on an experiential basis —was intended to be operational for specification of suitable sub-projects for investment and poverty reduction. It was tested in the uplands, and the current study assesses both process and results. The identification of stakeholders, what they represent (see World Commission on Dams, 2000), and their capacity and their motivation are all central concerns. As the current study will show, the IWRM notion can mean different things depending on perspectives. Even if policy clearly emphasizes the meaning of the “I” in “IWRM” to be “Integrated”, implementation is far from straightforward. On the contrary, the integrative side of IWRM may mean different things to different categories of stakeholders.

The different perception is one reason why stakeholder analysis before interaction at all levels is so important. Since stakeholders involve in data formation, the concern spills over to data formation, and the use of data and information when approaching a development process. The joint interpretation of this process needs to be fed into the governance for regional development (Allan, 2003; Vietnam Development Report, 2004).

However, stakeholding must not only be transparent in its representation. There must also be a clear purpose (ADB, 2004b), such as in the current Project. In a technical sense, this purpose was to lift priority water sub-sectors toward implementation of the technical side of the Project. The targeted interaction process is also the means of raising awareness and introducing long-term thinking (United Nations, 2000). Our study shows how intensive facilitation has brought a range of stake-

holders, of varying relevance depending on their situation, together around the key issues. It also shows how the various water sectors identified by these stakeholders can be integrated for a specific purpose. Facilitation has largely concerned bridging between the different stakeholders’ expectations on the Project and the differences in perceiving what IWRM should stand for.

Interactive Water Resource Management

Stakeholder involvement has been crucial throughout the whole process during 2003–2005 to connect IWRM with human well-being and poverty reduction. The overall design has been to combine two stakeholder processes during this project period by using the provincial level as a pivotal point for stakeholder participation. The Phase 1 process was directed upward, initially at the province level, then at the sub-basin (approximated with groups of provinces), and finally at the whole Red River basin. The direction of Phase 2 (ADB, 2005) went the other way, from the province level downward into the district, commune, and village levels, with in-depth involvement of stakeholders in the process of water-sector planning (Fig. 2). The focus of the current article is on the management of these two processes.

The participatory process began with an extensive analysis of potential stakeholders in the 25 provinces. Development of the Participatory Plan was initiated early in the Project when a schedule of stakeholder workshops was agreed upon. The World Commission on Dams criteria (World Commission on Dams, 2000) and framework for decision-making were applied to the design of the plan. In the next part of the process, a series of 25 provincial workshops (one per province) were successfully carried out to achieve broad stakeholder

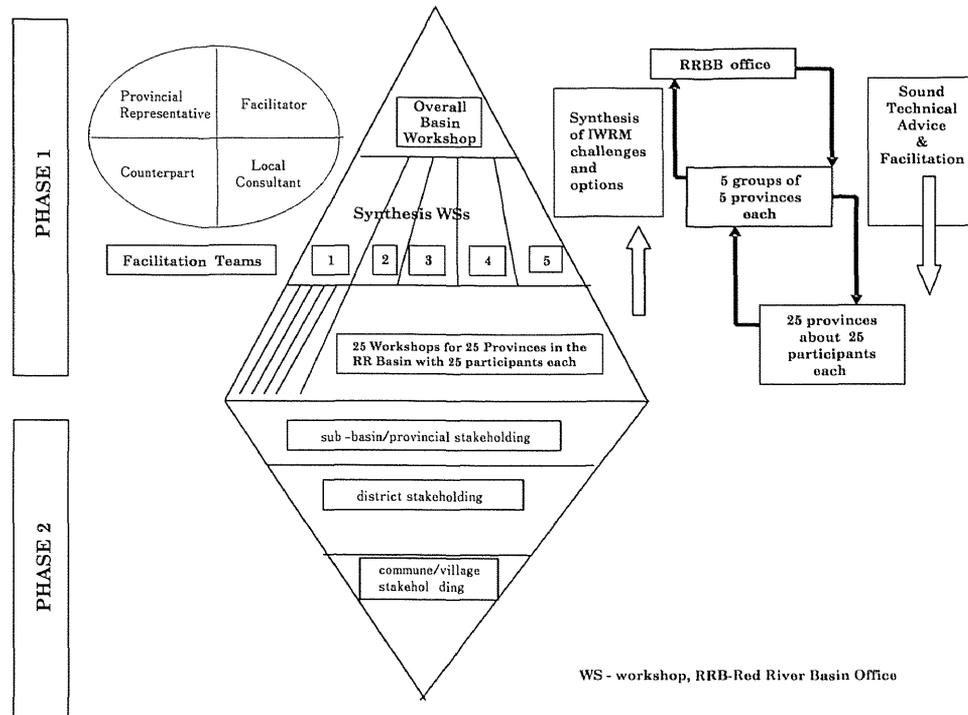


Fig. 2. The processes in Phases 1 and 2

consensus on priority water sectors and the range of management options for addressing these priorities within IWRM in each province. All issues and solutions were prioritized through the ranking methodology based on the criteria; economic, poverty and environment. Broad participation was achieved via provincial departments related to various water sectors, together with relevant society organizations (25 provincial workshops, each with 25 participants, overall representing the 25 million people in the basin). The conclusions from the series of provincial workshops from the stakeholders' point of view were validated before the next step. Each provincial set of top priorities was then taken to sub-basin decision-making on joint priorities. The five sub-basin synthesis workshops were organized according to the five regions/sub-basins (Fig. 1). Technical experts attended these workshops and provided technical information when needed in order to support the process of informed consensus-building. The goal with these sub-basin workshops was to build consensus on priority water sub-sectors for interventions in each sub-basins. The indirect effect was also that some projects lost out in the process, since they did not

exhibit prioritized problems. The consensus building was successful in spite of the potentially vested interests. The combined ranked priority list was finally taken to a river basin workshop with all 25 provinces represented. It refined the findings of the five sub-basin workshops to make a detailed design of the next phase of the Project, which focused on the priority issues and potential solutions in whole basin. This was the end of Phase 1.

Analysis of Phase 1: Putting interactive before integrated

The approach of stakeholder participation consisted of two major blocks. The so-called People's side was shaped by the series of participatory workshops at the provincial, sub-basin, and basin levels as accounted for. It expressed the perceptions of people living and working in the basin about problems related to water resources. The Experts' side participated through technical assessments (i.e. water demand and availability, irrigation and drainage issues, flooding and flood protection, environment, water quality and pollution, relationships between water poverty and health/diseases, and poverty/gender issues) as significant inputs to sup-

port informed decision-making and consensus-building. The role of Project was as a facilitating mechanism. It set up a process that integrated the people's side and the experts' side. By connecting the participatory and the technical perceptions of IWRM, the Project facilitated informed decision-making. Its role to guide and coordinate between stakeholders and administrative authorities succeeded all the way, so that the end result was consensus agreement between all provinces and national governments about the priorities on IWRM for the basin.

The way the Project addressed participatory IWRM resulted in a general process that can provide a mechanism for consensus building around priority issues related to water. After initial input by technical experts, it demonstrated how an informed consensus-building could identify priority issues and interventions to solve them. Transparent, open interactions and dialogue between stakeholders and experts became the key to both identifying and addressing conflicting resolutions. In this way the approach supported an informed decision-making process by which relevant stakeholders

could argue the benefits and drawbacks of each proposal and then come up with a logical consensus. Somewhat to the surprise of the participants themselves this straightforward approach to ranking interest conflicts proved very successful; interactive water resource management proved quite feasible.

By the end of Phase 1, when all 31 stakeholder workshops at the various levels were finished it seemed clear to participants that the I in IWRM could be spelled Interactive. The series had generated remarkable consensus, simply thanks to an approach that pays tribute to the involvement of multiple stakeholders in flexible consensus building. Four key water sub-sectors were the highest prioritized from the stakeholders' viewpoint: Irrigated Agriculture and Drainage; Water Supply and Sanitation; Environment/Biodiversity; and Flood Control (Fig. 3). This result followed a unanimous vote for irrigation and drainage works that extended beyond the desire to merely increase productivity and into the realm of conventional IWRM. Other dominating issues were management problems relating to hydraulic infrastructure, pollution,

Water sector priorities voted by the stakeholders in 5 regions of Red river delta

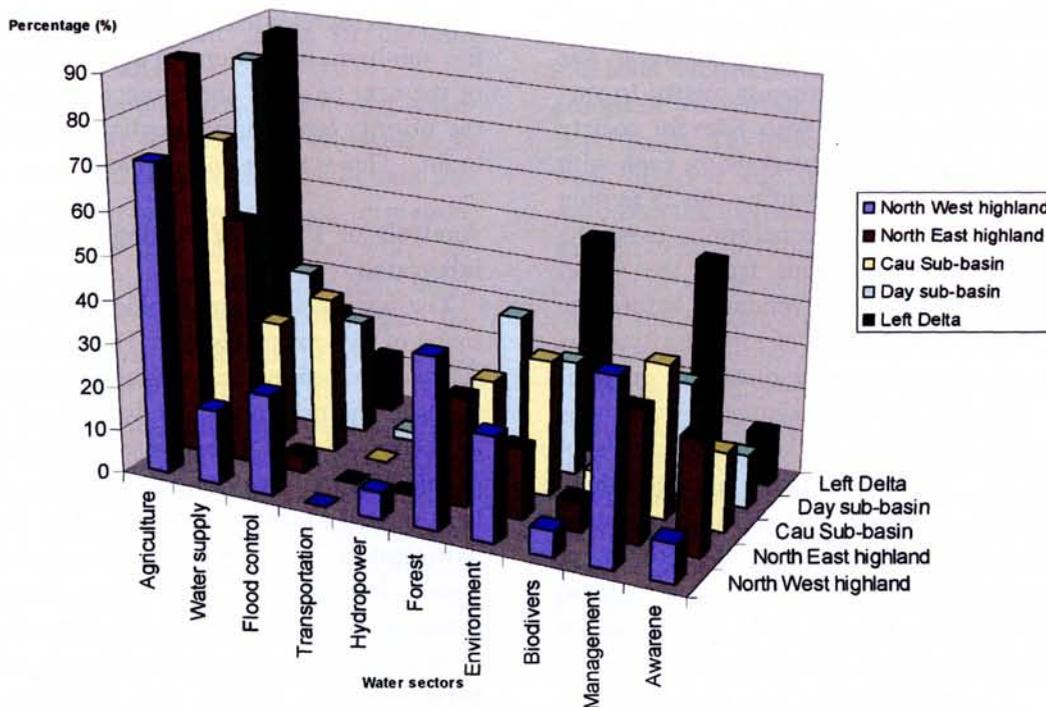


Fig. 3. Problem profiles expressed by participants in 25 consensus building provincial workshops

watershed management, and public awareness. As a result, these four priority water issues, in combination with technical assessments by the experts, have been reflected in the four Components designed for Phase 2 of the Project, with its reversed, down-top direction.

Analysis of Phase 2: Integrated stakeholder efforts to manage water resources

In the down-top direction of Phase 2, the participatory process has been highlighted, now through in-depth stakeholder involvement in the process of water-sector planning in the priority water sub-sectors derived in Phase 1. Case studies were carried out stepwise after government decision to select two provinces in the Upland. A process of water-sector planning and selection of potential sub-projects was developed and implemented by interaction between the three main streams: local authorities as the decision-makers, active stakeholders, and expert assessors (Fig. 4).

The figure summarizes the design and how different actors/stakeholders were ascribed specified roles and responsibilities. Throughout the steps, active stakeholder involvement took place with interaction between stakeholders, local government and technical experts. The aim was to reach informed decisions about priorities and water-sector planning. Local authorities and stakeholders at the province, district, commune, and village levels acted as the decision-makers, utilizing technical experts to provide specialized assessments. Due to the poverty reduction target, the facilitators' role was to integrate a number of sustainable develop-

ment goals; water availability, economic effective, poverty reduction effects and environmental implications. The decision-makers succeeded in combining their perspectives on water resource management, thus taking responsibility for IWRM. So here the notion Integrated of IWRM comes back, but as a prefix to the stakeholders' process and not to water resources.

The facilitation process was implemented carefully, with the aim of helping stakeholders to elaborate on and refine their priority IWRM issues, define and assess a wide range of options, and select preferred options in the water-sector planning process. This process was developed and successfully implemented in a way that exceeded expectations, given the originally Red River scale and the amount of resources involved. The implication was that all parties in the Red River basin agreed to channel resources into a few well-financed proposals. This method proved very empowering to participants because it allowed consensus to be reached, even in highly resource-competitive situations, on a strictly logical basis. This strength was respected by the government who decided to support the proposals that emerged over regular budget, for want of interest from the regional bank to do it.

First stream - Integrating criteria for decision-making in the process of sub-project selection

As indicated above, the decision-making process unfolded step by step. It has entered from the selection of two targeted provinces in the Upland into a process of decision-making about sub-basin choice, and from within the two priority sub-basins onward into the selection of small catchments. In the first step two sub-basins were selected, each with an area of about 100 km², from among all the possible options that had been identified by the experts. This was followed by the identification of all possible options for small catchments with an agreed-upon size of about 10 km² in the final two sub-sub-basins prioritized by the stakeholders. A complete inventory—known in the Project as a “Long List”—of sub-projects within these catchments was established.

These priority small catchments were then evaluated from five aspects; water availability, economic feasibility, technical feasibility, positive pov-



Fig. 4. Design of the participatory investment planning process

erty reduction effects, and environment friendly. They were taken stepwise through each of these considerations on the basis of participatory interaction with local authorities at the district and commune levels. The inventory of sub-projects [0] was made regardless of whether a proposal was economic or whether sufficient water was available. The list [0] was ranked for priority by both local stakeholders (authorities and commune leadership) and technical experts in terms of water availability and technical feasibility.

As a result of the latter process, prioritization was carried out step by step, with stakeholder involvement and with the gradual input of technical and sociopolitical information. Convergence of the views of stakeholders with technical assessments of poverty reduction and environment carried through into a preliminary Short List. This was accordingly established in a transparent manner. It enabled decision-making in the final selection of potential priority sub-projects to be made by the participants in a final basin workshop. This last stage brought together local decision-makers, stakeholders, and technical people and national/provincial leadership. The viability of proposals in terms of safe water availability and benefit/cost ratio calculations were allowed to “kill” seemingly unviable proposals. This last step proved controversial, and the ministry requested a re-calculation that unfortunately never was done. This together the fact that the donor (Asian Development Bank) and the client (Vietnamese Ministry of Agriculture and Rural Development) initially had different views between them on province selection, has constrained the open decision-making process. Nevertheless, the similar process of shaping informed recommendations was clear and was appreciated by stakeholders, as expressed and documented at the final workshop. And, as stated above, the end result was project implementation; not on development aid but over regular budget.

Second Stream - Involvement by local stakeholders in the planning process

The local stakeholders' involvement in the planning process by a down-top approach is one of the three main streams of the Project's design (Fig. 4). A series of local meetings with all 375 heads of households from 17 selected villages (out of a total

of 28 villages) was held in the two pilot provinces; 33% of households of those households were females. Investment development planning was discussed and developed by local people in the villages, communes, and districts on the basis of their specific priorities and proposed solutions for rural development and water sectors. Poverty reduction was addressed in terms of a Comprehensive Poverty Reduction and Growth Strategy (CPRGS). The Long List of sub-projects was established in consensus with the local people. The experts, especially, contributed to awareness-raising and capacity-building activities. Detailed accounts have been made of the way these down-top activities were carried out. There were Training of Trainers programs, 16 village meetings, three commune meetings, interviews with key officials, a household survey (375 questionnaires), a gender survey (123 female household heads), and interviews with key officials. In parallel with the commune and district categories of stakeholders, the women heads from the 17 selected villages also got involved in a special survey of water supply, sanitation, and health, focusing on gender issues.

Participatory Rural Appraisal tools such as problem-cause diagrams (problem trees), priority issue rankings, possible solution rankings, and action plan matrices were applied during the meetings. A village/commune development planning method was applied to support the local people with the initial steps of the investment planning process at the village level. In the interaction process, the villagers initiated and got involved in the identification of main issues and difficulties in rural development and the water sector; possible solutions for these issues aimed at poverty reduction; and the development of a detailed plan of proposed solutions to the questions “What are the priority sub-projects and their solutions? When and where do the local people implement these solutions? Precisely who will implement them?” and “How can the local people contribute to this implementation?”

A water-sector planning process in the pilot sub-basins was thus developed step-by-step in response to the villagers' viewpoints. Local authorities and experts became partners with the villagers and provided advice on specific technical and administrative issues. Joint knowledge build-up emerged over half a year through the continuous interaction

among relevant stakeholders. The process that was facilitated built capacity also for future rights-based governance. This community-rights-based involvement proved efficient when people saw their contributions in the planning process. Local administrations learned about decentralization and the potential for local community interaction.

Third Stream - Expert assessment in selection/ranking of sub-projects

Consensus-building for priority investments was thus developed into a method that has technical assessment as one of its main pillars. Importantly, these assessments were used by stakeholders to make informed evaluations and to rank possible sub-projects. Technical inputs assessed by the experts under the five technical criteria—water availability, irrigation performance, economic, environmental, and water supply and sanitation/social/poverty (Fig. 4)—actively fed information into the participatory IWRM process and capacity-building.

The first step for the technical experts was to assess the Long List of sub-projects identified through the interaction with decision-makers at local levels. A Short List was produced as a result. It contained the options top-ranked from a technical point of view. The facilitators developed a scanning model for each technical assessment plus one for combining the result. Each of the five technical assessments set up a simple model for ranking through scoring. These scores, when combined, formed the combined technical assessment and were arranged in the form of a matrix for ranking and then decision-making. The outputs were a ranked list of potential sub-project groups and then were screened by both stakeholders and technical experts. The Short List of potential sub-projects was in that process ranked internally to identify priority sub-projects. The technical experts' conclusions did not take over the decision-making but served as advice to the local stakeholders.

This technical assessment of the sub-projects showed that there were no water shortages for any of the potential sub-projects, and that they all qualified as technically feasible (but to varying degrees). Environmental assessment of the potential sub-projects covered three aspects—physical, social

and environment—and revealed that no potential sub-project had severely negative environmental consequences. Economic calculations in the form of benefit-cost ratios suggested that only a few of the selected sub-projects would qualify. However, if they were grouped into a cluster of potential sub-projects, they could be accepted as economically viable. The social/poverty assessment, linked with gender and water supply and sanitation, reinforced the fact that potential sub-projects were suitable, although there was a large degree of variation. The irrigation performance criteria listed as number one of the potential sub-projects as technically feasible. All in all, the analysis has been transparent and has included examples to facilitate open debate. These aspects have been much appreciated by stakeholders, as was reported at the final workshop.

Results and Achievements: Investment in Water Resource Projects

The process of stakeholder interaction in the participatory IWRM implemented over one and half year period. This was essential for achieving a shift in responsibility in the water-sector planning process and in project formulation toward water users. The participatory investment planning of IWRM in the pilot sub-basins of the Red River Basin was developed and tested with regard to its potential for being out-scaled into broad applications. From the stakeholder involvement process, the list of five potential sub-projects was prioritized for investment in the two sub-basins studied through the interaction among relevant stakeholders. These priority sub-projects formulated at the pre-feasibility level have the highest priority in terms of technical feasibility, economic effectiveness and poverty reduction. It proved to be a transparent method of helping stakeholders to rank a wide range of options and to select their preferred interventions when addressing priority IWRM issues in the consensus-building process. The ranking methodology is general in design. It integrates technical analysis and the interpretation of results with the participatory IWRM process. The methodology has considered appropriate poverty indicators as well as economic and environmental impacts. These considerations are placed in the context of water availability and irrigation perform-

ance capacity. The selection process has also involved awareness-raising and capacity-building as a result of the informed decision-making process.

Conclusions

This study has moved from integrating water resources to interacting around a poverty reduction goal, and over to integrating management and investment. Stakeholders have mobilized according to competence and contributed to interaction from different roles. The effect has been an interactive process, going from key issues to concrete sub-project proposals. We have described this and our experiences with methodology development whereby IWRM and poverty reduction are integrated through stakeholders' consensus-building. This has been done as a process in which stakeholders at various scales have not only been involved and informed, but have also taken decisions towards water-sector planning and the selection of priorities in river basins. Through careful interaction, the process of decision-making by relevant stakeholders has incorporated the assessments by technical experts and by administrative authorities at different levels. This has been made possible through a transparent decision-making process. The methodology for this has been developed into a formal decision-making model whereby options are ranked through a universally applicable technique. This fact makes the Project particularly interesting, since an identical process can be set up, especially in the uplands of the country, where circumstances may be similar. The stakeholder involvement process in the Project has also been noticed with appreciation by the Vietnamese Government (Ministry of Agriculture and Rural Development) and by all stakeholders in the river basin.

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