

**Central Region Water Resources Sector Project
TA -6031-REG
Promoting Effective Water Management Policies and Practices
Pilot and Demonstration Activities for Viet Nam:
Development of Pro-poor Rural Water Actions in Collaboration with an NGO**

Mid-term Progress Report

**Initial Proposal for a Participatory Methodology
and Additional Interventions
in Binh Dinh and Quang Ngai provinces**

CARE International in Vietnam

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Executive summary

CARE International in Vietnam (CARE) has been carrying out a Pilot and Demonstration Activity in connection with two sub-projects under the Asian Development Bank's Central Region Water Resources Sector Project (CRWRSP). CARE's project is being implemented in Binh Dinh and Quang Ngai provinces. One of the two purposes of the work is to broaden the scope and potential of participation of end users in the CRWRSP sub-projects. The other objective is to analyze the need for additional project activities that will ensure that the poor in particular benefit from the improved irrigation systems. This is the Mid-term Progress Report on that work.

Since the submission of the Inception Report at the end of June, CARE has been implementing the planned Participatory Rural Appraisals and institutional analyses in both provinces. These four reports are available from CARE at request, but have not been annexed to this report due to their large volume.

The findings from the PRA and institutional analyses are summarized in this report. The PRAs underscored the crucial importance of upgrading the provision of irrigation water for the livelihoods of farming households, but also showed that many other groups will benefit from the project. Farmers indicated strong needs for agricultural and animal husbandry extension training in order to fully benefit from the increased flow of water in the systems.

The institutional analysis concluded that the current legal framework to some extent represents a barrier to effective local participation in construction projects, unless they are reduced in size and contain a substantial contribution from the beneficiaries. However, there are opportunities for building a participatory model on existing and emerging regulation on user groups and other local representation of beneficiaries. Serious institutional issues were identified in the system that manages irrigation systems at present, leading to a recommendation of institutional reform.

The Mid-term Report presents for the first time a complete draft participatory model for inclusion of end users in project preparation, construction and management under the CRWRSP. The model is described and illustrated step-by-step in what could be developed into a manual for the provincial implementation units.

Finally, the report presents a number of agricultural, social and institutional development projects that are recommended for funding alongside the CRWRSP. The project outlines are designed to meet the needs identified in the PRA exercises as well as some of the conclusions from the institutional analysis.

The work is taking place alongside and in coordination with World Vision International, which is implementing a similar contract in two other provinces.

Abbreviations and acronyms

ADB	<i>Asian Development Bank</i>
CARE	<i>CARE International in Vietnam</i>
CBO	<i>Community-based Organization</i>
CPC	<i>Commune People's Committee</i>
CRWRSP	<i>Central Region Water Resources Sector Project</i>
DARD	<i>Department of Agriculture and Rural Development</i>
DOLISA	<i>Department of Labor, Invalids and Social Affairs</i>
DPC	<i>District People's Committee</i>
DOLISA	<i>Department of Labor, Invalids and Social Affairs</i>
DPI	<i>Department of Investment</i>
FU	<i>Farmers' Union</i>
HEPR	<i>Hunger Eradication and Poverty Reduction (Program)</i>
HLS	<i>Household Livelihood Security</i>
IMC	<i>Irrigation Management Company</i>
INGO	<i>International NGO</i>
IWRM	<i>Integrated Water Resource Management</i>
LoA	<i>Letter of Agreement</i>
NGO	<i>Non-governmental Organization</i>
ODA	<i>Official Development Assistance</i>
PC	<i>People's Committee</i>
PDA	<i>Pilot and Demonstration Activity</i>
PIM	<i>Participatory Irrigation Management</i>
PMU	<i>Project Management Unit</i>
POA	<i>Plan of Action</i>
PPC	<i>Provincial People's Committee</i>
PRA	<i>Participatory Rural Appraisal</i>
PSB	<i>People's Supervision Board</i>
SPIO	<i>Sub-project Investment Owner</i>
SPSS	<i>Statistical Package for Social Sciences</i>
TA	<i>Technical Assistance</i>
TOR	<i>Terms of Reference</i>
VAC	<i>Vietnamese acronym for farming system consisting of gardening, animal husbandry and aquaculture</i>
WRMB	<i>Water Resources Management Board</i>
WU	<i>Women's Union</i>
WUG	<i>Water User Group</i>
WVI	<i>World Vision International</i>

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1 Introduction

The Asian Development Bank (ADB) and the Ministry of Agriculture and Rural Development (MARD) in Vietnam are now in the planning stages of the Central Region Water Resources Sector Project (CRWRSP). The CRWRSP aims at sustainable improvement of water resources management in six provinces in the central region of Vietnam, including Thanh Hoa, Quang Binh, Quang Tri, Thua Thien-Hue, Quang Ngai and Binh Dinh provinces. The project will focus on irrigation, drainage and flood control, but will also include other aspects of water management where these are considered a high priority. Selection of the project activities is based on criteria to address poverty reduction, environmental sustainability, economic feasibility and disaster mitigation. The project aims to change the current emphasis on area-based planning to an Integrated Water Resource Management Approach (IWRM).

As the IWRM approach suggests, the CRWRSP sets out to address broader development issues such as poverty reduction and gender equity through not only improvement of access of target groups to water resources, but also to other related resources and services required to achieve a sustainable intervention. Therefore, all sub-projects under the CRWRSP and any additional support services identified, should be planned and managed through an inclusive, consultative and participatory mechanism, that enables all identified target groups too participate at all stages from project identification through to implementation.

Given the extensive experience of INGOs in implementing participatory programs in Vietnam, CARE International and World Vision Vietnam were invited by ADB to provide technical assistance to four of the six target provinces, to develop a participatory management methodology and pilot program in the selected areas under CRWRSP. In addition, both organizations are to identify a set of 'add-on' projects that complement and extend the benefits of the sub-project implementation initiative, through an effective and appropriate participatory approach and increase the potential for sustainable poverty reduction.

CARE was awarded a service contract by the ADB, through the Pilot and Demonstration Activity for the Development of Pro-poor Rural Water Actions (the PDA) as part of the CRWRSP. Under the PDA, CARE has been working since mid May 2004 in the central provinces of Binh Dinh and Quang Ngai. An Inception Report was submitted to ADB on 25 June 2004.

The purpose of this Project Mid-term Progress Report is to review the performance and finding of the PDA over the last five months since the Inception Report. The Mid-term Report provides:

- a summary of the initial findings from the PRA and institutional analyses;
- recommendations for a participatory methodology for the CRWRSP sub-projects; and
- outlines of potential additional interventions to ensure the broader project objectives of poverty reduction and gender equity.

The report provides a review and analysis of the program activities and outcomes to date relating to the participatory rural appraisal (PRA) and the institutional analysis carried out in both provinces. The report summarizes the initial findings and makes recommendations for a potential CRWRSP participatory methodology framework and potential add-on complementary project activities. The individual reports from the provincial PRA and institutional analysis exercises are available from CARE on request.

The also contains an updated work plan for the PDA. The last stage of the work will be to refine the participatory framework proposed through consultative workshops with project stakeholders in the two provinces and with project partners in Hanoi in December 2004 a January 2005, respectively.

2 Approach and methodologies

CARE has carried out a social and institutional analysis in the two target provinces in order to establish the feasibility and potential outline for a participatory management mechanism under the CRWRSP and identify complementary interventions to this project to ensure the project achievements in poverty reduction and gender equity development. The two described approaches provide a full spectrum analysis, from current water resource policy, legal frameworks, through institutional arrangements, management responsibility to the needs and priorities of end user groups.

2.1 Social analysis

The social analysis approach is based on a Participatory Rural Appraisal (PRA) methodology. The PRA methodology includes identification of all social groups included, or excluded from, the current process of planning, implementation and maintenance of water resources management projects. The interest and needs, the advantages and constrains of all stakeholder groups have been identified and assessed through the PRA. This community profiling provided the information to ensure that the PRA design was fully inclusive as it allowed identification of both potential direct and indirect beneficiaries. The objectives of the PRA exercises were to:

1. Introduce the objective of CRWRSP to the local communities;
2. Identify different target groups within project areas, defining different water sources and use for irrigation and drainage for each of the identified groups, establish for each group the relationship between water utilization and economic activities, special emphasis was placed on the identification of disadvantaged groups within this process;
3. Establish the interests, concerns and priorities for each beneficiary group in relation to water resource requirements and broader development issues relating to sustainability;
4. Assess the feasibility of poverty reduction against beneficiary expectation of potential benefits of the proposed intervention and their motivation and willingness to participate;

5. Identify the potential gap between a project design of single objective (e.g. water resource sector development) and the potential multi-objective priority concerns of identified target groups (e.g. new crop seeds, new animal breeds, technical training, credit loans, cost of other production inputs, marketing of agricultural outputs, other infrastructure such as road and power supply, relevant reforms in management of irrigation schemes, etc.);
6. Establish the interest and potential for cooperation in developing a participatory framework that enables active inclusive participation in the project cycle (identification, project development, implementation, monitoring operation and maintenance);
7. Establish and record existing baseline indicators for future project monitoring and evaluation.

2.2 Institutional analysis

Whereas the PRA is intended as a bottom-up analysis from the point of view of end users, the institutional analysis approach provides a broader view of the legal framework and the institutional arrangements at the central, provincial, district and commune levels. The institutional analysis also looks at the interactions between the identified institutions and organizations and their interface with planning, implementation and maintenance of water resources projects.

The institutional analysis included a desk review of policies and other legal documents relating to water resources management of both national line agencies and local government authorities. The responsibilities and accountabilities of various institutions and organizations involved in the project management cycle have been established and verified through extensive consultation with the relevant provincial and district agencies.

The institutional analysis engaged key stakeholders from the provinces, districts and communes in participatory discussions. Provincial-level working groups were formed to review CARE's initial findings and to formulate recommendations for the resulting participatory methodology.

Three strategic concepts underpin the institutional analysis: capacity building, decentralization and strengthening of civil society. The recommendations are intended to emphasize the management and participation at the lowest possible level. Besides being effective and transparent management units, user groups are also in effect strengthening rural civil society to take on more responsibility for local development issues.

3 Overview of program activities to date

CARE completed the proposed activities as per the activity plan that was included with the project Inception Report in June 2004. The work was broken down into five stages:

1. Project inception
2. PRA training and implementation

3. Institutional analysis
4. Participatory model formulation
5. Documentation

At this juncture and with the completion of this report, CARE will have essentially concluded stages one through four, even if adjustments will still be made to the participatory methodology. The final activities of the project are currently being planned. It is expected that all activities of the project will be completed within the agreed timeframe. The following is a summary of the activities carried out under each of the first four phases.

Stage 1 – Project inception

CARE and ADB representatives, together with the technical assistance (TA) consultants from Royal Haskoning involved in the development of the PDA initiative by reviewing the CRWRSP strategy and objectives, the ADB policies and experiences in implementation of participatory programming and identify potential partners in the process (April-June 2004).

The CARE team collected and reviewed available documentation related to implementation of participatory approach through poverty reduction and infrastructure development projects in Vietnam. This included the relevant policies and legal documents related to water resources management, participation and grassroots democracy and the experiences and results from participatory initiatives funded by the Government of Vietnam, multilateral institutions, international donors and international NGOs (May-June 2004).

The CARE team undertook an initial visit to Quang Ngai and Binh Dinh provinces and the selected sub-project sites to consult with the project stakeholders including the People's Committee (PC), Department of Agriculture and Rural Development (DARD), Department of Planning and Investment (DPI), Department of Labor, Invalids and Social Affairs (DOLISA), Farmers' Union (FU), Women's Union (WU) at both provincial and district levels. In addition, meetings were held with the Commune People's Committees (CPC), village heads and representatives of farmers. This let do the identification and preliminary capacity assessment of project stakeholders in terms of participatory processes. Project stakeholders were informed about the project scope and objectives. The team also carried out a preliminary assessment of the views and concerns of individuals and groups of end users in respect of the proposed program (May-June 2004).

A program planning session was held in Hanoi together with ADB, Royal Haskoning, WVI and the independent consultants to ADB. The initial findings of the inception mission were discussed and the development of the participatory methodology begun. Pulling all the findings together, the CARE project team developed a detailed implementation plan and descriptions of the methodology and expected outputs in the project Inception Report. The report was submitted to ADB on 25 June 2004.

Stage 2 – PRA training and implementation

CARE decided to ask the Farmers' Union (FU) and Women's Union (WU) at the provincial-level to carry out the PRA activities. External consultants conducted training in PRA facilitation to staff provided by the FU and WU and generally guided the process. Staff from DARD were also included. The use of the local WU and FU staff will increase the sustainability of the project by building capacity in PRA at the local level. It will be possible to build upon this nucleus of community-based PRA facilitators in future CRWRSP sub-projects in the two provinces.

Criteria for the selection and establishment of the PRA team included ensuring a gender balance and that the teams represented diversity in economic, social educational and professional backgrounds. The team members had varying degrees of prior PRA experience. Details of the PRA team composition for Binh Dinh and Quang Ngai are given in annex 1.

The implementing of the PRA activities entailed the following process:

- Preparation;
- PRA training for facilitators;
- Formation of PRA facilitator groups and selection of villages;
- Planning of PRA field work;
- Pilot PRA exercise in one village;
- Adjusting and finalizing PRA action plan and methodologies;
- PRA field work implementation, data processing and on-going review of process;
- Reporting PRA findings and recommendations.

Team members and other stakeholders were involved in the process of planning the implementation in each of the provinces.

Target villages were selected to be representative of various geographical locations, socio-economic conditions and potential sites for the proposed sub-projects. The following types of communities were included in the selection for the PRA:

- Villages situated within the upper, middle and lower reaches of irrigation systems;
- Villages situated on main and branch canals;
- Villages of different social economic status;
- Villages in upland and lowland areas;
- Villages where the upgrading or building of new irrigation systems is planned.

A detailed breakdown of the villages included in the Binh Dinh and Quang Ngai PRA exercises is given in annex 2.

The following community groups and individuals were targeted in the PRA exercises:

- Key informants in target communities;

- A full socio-economic spectrum of households based on the analysis of household wealth ranking;
- Village leaders;
- Representatives of the Commune People's Councils and other relevant commune level organizations.

Stage 3 – Institutional analysis

During the period July-September 2004, the CARE Program Advisor carried out an analysis of the policies of the Government of Vietnam and the institutional arrangements for water resource management at both national and provincial levels. The objective of the study was to identify opportunities and constraints for project stakeholders to participate in the project preparation, implementation and maintenance of the water resource systems through:

- Identification of the stakeholders in the process of planning, implementation and maintenance of the water resources projects;
- The responsibilities and mandate of each of the identified stakeholder organization, including the legal, institutional and financial framework under which the organizations operate; the current status of the framework enforcement and implementation;
- Analysis to establish, to what extent poverty reduction and gender focus has been mainstreamed in the current project design, management and implementation process;
- Preliminary human resources capacity assessment of the relevant organizations in order to establish capacity building recommendations for the successful introduction of participatory, poverty-focused and gender-mainstreamed approach.

A desk study was carried out of all available documentation relating to water resources project management. In addition, qualitative interviews were carried out with the staff of relevant organizations at provincial, district and commune levels to establish the responsibilities of these agencies and organizations in the project management cycle. This analysis resulted in two preliminary reports for Binh Dinh and Quang Ngai, respectively, which were used as input to the next stage of discussions.

Stage 4 – Participatory model formulation

In both provinces, a working group was established for participatory formulation of the methodology. The first workshops in the working groups were carried out in Binh Dinh on 11-12 October 2004 and in Quang Ngai on 3-4 November 2004. Members of the working groups are senior staff from the CRWRSP Project Preparation Boards, DARD, the Management Board of Irrigation Projects, DPI, DOLISA, the Department of Natural Resources and the Environment, the Department of Finance, the provincial treasury, the Irrigation Management Company (IMC), and from the provincial WU and FU.

The CARE Program Advisor and the PRA consultant facilitated discussions in the working group. The first group discussion was on the report of the PRA activities organized in the province. The following discussion was centered on the report on the institutional framework for water resources management. On the second day of each workshop, the working groups received briefings on participatory concepts and recommendations for a potential participatory framework for the CRWRSP. The workshop participants subsequently developed a draft participatory framework based on the particular context of the province and the CRWRSP.

The participatory framework for Binh Dinh province was produced first and was used for the preparation of the draft Reports and Recommendations of the President prepared by Royal Haskoning in October together with inputs from the work of WVI. This led to the development of the first part of the proposed CRWRSP participatory methodology.

Stage 5 – Documentation

The final stage of the project includes a joint workshop for the two provinces and a workshop involving national-level partners of the CRWRSP. CARE will also synthesize its findings with the consultants and WVI in a lessons learned document. The final milestone for the work will be the Project Completion Report, which is due in March 2005. Please refer to the updated work plan for the project in annex 3.

4 Summary of PRA findings

This section summarizes the main findings from the PRA exercises in Binh Dinh and Quang Ngai provinces. The PRA studies were carried out by different teams, as explained in section 3, which accounts for the small variations in the format of the findings. The two PRA reports are available from CARE on request.

4.1 PRA in Binh Dinh province

Water utilization for irrigation

An important finding of the PRA is that land tenure patterns at the village level are highly fragmented. Due to efforts in the past of equitable distribution of land of the same production quality, families are now working multiple plots of land of ranging quality. Plots are distributed around the villages. This implies that at least some households are water users at different secondary canals.

The PRA participants were asked to analyze the current patterns of water utilization for irrigation. It was found that in the majority of cases, *gravity-fed water from irrigation systems* is the only source of water that is available and used regularly for irrigation. Participants clearly favor traditional surface irrigation systems that transport water to the site. It is expected that the planned large irrigation scheme will be able to consistently deliver the required amount of water. Water provided by irrigation systems is seen as being unpolluted (see concerns about other sources below) and suitable for cultivation. It has the added advantage over other sources that management arrangements are already in place.

Participants expressed the well-known fact that the quantities of water presently supplied by the system are insufficient. For example, it was reported the water is not sufficient in many areas to produce an autumn rice crop due to irregularities in flow at that time of year. Also due to the overall lack of water outside the main cropping season, there are no cases where irrigation is currently being utilized for growing animal feedstuff crops.

Groundwater extracted from tube wells is considered by participants as a reliable and easy to maintain alternative to gravity-fed irrigation. However, it was reported that water from most of the drilled wells in the area is affected either by aluminum or salt. In many of the villages groundwater is being utilized when other options are limited. Participants reported that the cost of well construction is high. The cost is stated to be VND 1-1.5 million per well. In these areas, households without access to wells may buy water from households that have wells at VND 3,000 per pumping hour, plus 10kg paddy rice at harvest.

Rainwater still plays an important role in local agriculture, especially for late autumn rice crops. The quality of rainwater is perceived to be high and described as a “gift from God”. Land that is irrigated by rainwater is often large fields. In some cases rainwater is stored in local reservoirs for use in irrigation. Participants also recognized the instability of local rainfall and noted that rainfall patterns had changed in recent times. The quantity of rain is increasingly seen as either too small, resulting in crop underproduction, or too big, resulting in flood damage.

Surface water from streams and ponds is rarely utilized for crop irrigation in the surveyed area. The main reason, according to the participants, is insufficient availability. Still, in some cases surface water is used where additional water is required and/or when traditional sources fail, such as during droughts. However, streams also tend to dry up in the dry season. A particular problem relates to De Gi Lake, which is reported by participants to contain salty water that often overflows at high tide and inundates surrounding fields. It was reported that water from the lake regularly has destroyed crops and forced many farmers in area to sell their land.

Participants’ priorities regarding irrigation and water resources

It is generally accepted and appreciated that the current irrigation and drainage system needs to be improved. It was considered that the size and capacity of reservoirs must be increased along with improvements in the primary canal and infield delivery infrastructure system. The improvement of the irrigation system is seen as the primary need, with other needs flowing from that. Consequently, the consensus among the participants was that there is a need to (i) increase the irrigated area, (ii) diversify local cropping patterns, and (iii) develop livestock and aquaculture activities.

Participants in upper and middle areas of irrigation schemes expressed the additional need for improved pumping stations to secure the flow of water. They also mentioned that earth dykes and dams need to be upgraded to more durable concrete structures.

The PRA findings also highlight the differing needs of the different socio-economic groups in the sample. Higher-income households expressed the need for more water mainly to achieve multiple rice crops per year and intercropping of diversified crops. Lower-income families with poorer quality of soil mainly expressed the need for more

irrigation water to neutralize the effect of salt in water sources and to establish ponds for aquaculture.

Expected benefits from the project

Regardless of social and geographical stratification, PRA participants agreed that the main benefit of an upgrade of the irrigation system would be an increase in food production and diversification of crop production. This is expected to lead to increased household income and increased economic opportunity. There is also an expectation that the costs of agricultural inputs will decrease as a result of the reduced cost for irrigation and canal and dam maintenance brought about by the project.

The major other sectors that is expected to benefit from the project is animal husbandry. VAC models (farming system of gardening, animal husbandry and aquaculture) can be practiced by substantially more households than today. Households currently engaged in aquaculture expect to be able to use increased access to irrigation water access to enlarge their areas under aqua-production.

Benefits could also extend to those businesses supplying agricultural-based services and supplies, such as crop seeds, fertilizers and pesticides. In general, the immediate socio-economic development within the project area is expected to have potentially wide-ranging positive impact on cultural and social development for a whole range of as yet unidentified beneficiaries.

Factors contributing or inhibiting poverty reduction by the project

The PRA highlighted the issue that higher-income groups will be in the best position to benefit from the project than those with lower incomes. Participants emphasized that the potentially negative social impact on socio-economic equity must be addressed in the program design. Additional projects aiming at low-income participants will be required to enable them to make full use of the proposed improved and expanded irrigation systems.

The key factors that determine the broad poverty reduction effect are all related to access to certain resources, including farming land, sources of credit, technical knowledge from extension and other training, and agricultural machinery and tools (not all of these can be addressed directly by add-on projects). Table 1 below summarizes these trends for poor and medium households and better-off households, respectively.

Table 1 – Access factors related to poverty reduction

Access to...	Poor and medium households	Better-off households
Farming land	Limited land-holdings both in terms of quality and size Trend towards decreasing land holdings as poor are forced to sell land	Good quality and sufficient land Trend towards increasing land holdings as they buy land
Credit and capital	Little or no own capital for investment Limited access to loans; loans are mainly small loans from the HEPR program	Own investment resources Substantial amount of credit from the banks; own assets that can be mortgaged
Technical and other training	Not invited to participate in any training opportunities Not very active in community-based groups Generally low education status	Often invited to training as examples for other farmers Usually active in community-based groups Well educated
Agricultural machines and tools	Reliant on manual labor and basic tools	Sufficient machines and tools; often also service providers using own machines and tools

As can be noted from the table, there is an unfortunate trend towards diversification in *land holdings* as poorer households are forced to sell their land as a last resort. The poorer groups express a clear need to stabilize their livelihood conditions in order to maintain a land-based livelihood. However, for those who are unable to generate sufficient income from cultivation, there is also a need for stimulating more off-farm employment, e.g., through vocational training and support to local, traditional trades.

There is also a felt need for expansion of *credit services* specifically aiming at the needs and abilities of the poor. Credit should be combined with appropriate agricultural extension and training opportunities to ensure impact.

Agricultural information and training services are also an area that deserves attention according to the PRA participants. The services currently provided by the local departments of agriculture or other agencies are not found to effectively meet farmers' needs. Farmers generally say they need:

- information about quality and prices of agricultural inputs and outputs;
- advice on crop protection and warning about pests and diseases;

- improved veterinary services.

The lack of clean drinking water is a concern for many. In addition to the specialized agricultural services, there is a strongly felt need for basic communal services such as provision of clean water, safe sanitation and solid waste disposal. Farmers also lament the lack of infrastructural services such as effective rural transportation, communication systems, and social housing for the poorest.

An interesting finding relates to the value of membership of community-based groups and organizations, such as farmers' clubs, interest groups, and other groups that are usually organized by the local chapters of mass organizations or CPCs. The community-based organizations provide members with social capital and better technical knowledge that can be translated into better household income.

PRA participants noted a need for improving the scope and quality of services provided by the local agencies and organizations. The need for institutional change and increased capacity is also noticed in the area of *irrigation management*. The current agricultural cooperatives are considered as too weak and ineffective to provide sufficient and appropriate services to farming households.

Agricultural seasonal calendar

A particular PRA exercise was carried out to better understand the agricultural responsibilities of participants against the potential participation in proposed project. The annual climate conditions in the Central Region of Vietnam can generally be divided into dry and wet seasons. It was established that November, December, February and May are the busiest months in the agricultural calendar. Periods available for off-farm activities include January, March, April, June, July, the first half of August, September and October. These are the periods before harvesting of rice and other crops or when weather conditions are unsuitable for farming activities.

The main windows of opportunity for people's participation in implementing irrigation construction or repair work include the months of March and April and the two months from early June to early August. Irrigation construction work should be completed by the end of July to reduce damages caused by annual heavy rains, floods and storms.

Willingness of the beneficiaries to contribute to the project

Overall, participants showed a high level of interest in any proposed intervention relating to improvements in general infrastructure, service provision and better access to irrigation. People living in the surveyed area are generally interested in improving the infield irrigation infrastructure provided that enough water will be supplied by the main system to service their needs. The low-income groups suggested the need for external financial support for infield ditches from the local government whether in the form of grant or credit.

4.2 PRA in Quang Ngai province

Water utilization for irrigation

The gravity irrigation scheme in the survey area is considered the most effective source of water for agricultural production as other sources are unreliable and difficult to utilize. However, at its current capacity, the system is unable to meet total demand. The local residents noted that the problem was a poor design of the primary infrastructure that does not make effective use of available water resources.

Groundwater is also used by local people as a source of water for irrigation. It was noted as a problem that wells are constructed without control. As a consequence, water that was traditionally used for drinking water and other household purposes is overexploited and is increasingly unreliable and short supply.

In areas where irrigation is not available, paddy rice production is low and yields unreliable. Poor families without access to irrigation were reported to be obliged to lease or rent their land to others.

The current use of irrigation water has little relation to animal husbandry activities. No participants reported the use of irrigation water for the production of animal feedstuff.

Water pollution is considered to be problematic in some areas. The PRA participants said that neither local authorities or the affected people had not taken sufficient remedial measures to address the problem.

Participants' priorities regarding irrigation and water resources

The PRA participants all indicated their support for the development of irrigation services in order to increase agricultural production, diversify the crop portfolio and develop animal husbandry activities in the area. Reservoirs in the area have limited capacity and are in disrepair. Participants noted that the facilities need to be more regularly maintained, in particular following the storm season. There is a strong need to develop a maintenance plan to protect the structures and areas down stream of the dams. In some particular areas, there was an expressed need for pumping stations to provide water to higher-lying areas.

Specific issues were raised in some localities. In the Dien Truong and Nui Ngang area, there is a need to upgrade all parts of the system, including reservoir capacity, primary canals and infield trenches. The Chop Vung reservoir was said to need increased capacity to be better able to service the western part of the village.

Some differences in priorities among beneficiary groups were noticed. Higher-income households are mainly interested in increasing to larger scale of cultivation and animal husbandry on enlarged farms. The medium and low-income households see an opportunity for increasing productivity of crops and animal husbandry on a household scale. Particularly around An Khe Lake and in the area on the sea coast, households aim for developing aquaculture and offshore fishing.

Expected benefits from the project

The PRA participants expected that the most direct benefits will accrue to those households involved in agriculture through an increase in overall food production. Sufficient water supply is expected to lead to an increase of agricultural yields, a diversification of the crop portfolio, and to allow greater commercialization of local agricultural products. Agricultural input costs are expected to be reduced as the result of a reduction of irrigation service and canal maintenance fees.

Families involved in animal husbandry and aquaculture are also expected to benefit from the project, although to a lesser extent than rice farmers. Increased provision of irrigation will increase the likelihood of integrated systems of gardens, fishponds and animal husbandry (VAC). Households involved in aquaculture can utilize irrigation to enlarge their ponds and increase their output.

Those households providing agricultural services, such as selling seeds, breeding animals and supplying fertilizers and pesticides will potentially benefit indirectly from the project through increased agriculture activities. The improvement of the system is also expected to have a positive impact on the surrounding environment due to the reduced need to exploit forest land and upper watersheds in the area.

The project also has a potential, however, to create disparities between the benefits for high and low-income families. The PRA identified those that are already involved in activities and community-based organizations by local mass organizations and line agencies as the most likely to benefit because of their better access to loans and agricultural technical training. Still, the project is expected to have broad economic benefits that will trickle down to increase local employment opportunities. The benefits to the broader community are expected to include (i) reduction in unemployment; (ii) reduction in out-migration; and (iii) reduction of labor requirements of agricultural households.

Need for supporting services for poverty reduction

The PRA exercise showed that participants in the study area depend on low and often irregular income from agriculture. Unemployment and migration in search of work are on the increase with negative impact on vulnerable groups such as women and children.

The causes of poverty are complex and it may be necessary to add certain development activities to broaden the impact of core project activities. Given the minimal amount of land owned by households and lack of access to capital for investment, stand-alone agricultural improvements on their own will only have a limited impact.

The existing agricultural cooperatives are not considered to be effective in providing the required support services to farmers. The cooperatives are seen as hampered by insufficient funds, limited technical knowledge and poor management. Agricultural services provided by the DARD and mass organizations are of given low ratings in the PRA with inadequate coverage due to budgetary and personnel constraints.

PRA participants in Quang Ngai suggested the following potential services and other support to enhance the impact of the irrigation sub-project:

- Introduction and supply of new appropriate varieties of crops;
- Local seedling production to reduce seed prices;
- Providing timely information about prices of agricultural inputs and outputs;
- Improved crop protection services;
- Improved local veterinarian services;
- Easier access to credit for low-income families in combination with savings schemes and effective training on cultivation and animal raising techniques;
- Support for non-farm jobs, e.g., through vocational training at the local level and preservation of traditional skills;
- Provision of safe, reliable and accessible drinking water supply;
- Other services also need to be developed, such as rural transportation.

Models and mechanisms promoting community participation

The PRA participants were also asked to give their input on existing and potential means of participation in irrigation services.

It was noted that participation by users in irrigation construction, maintenance and operation is generally poor. The responsibility for irrigation planning, survey, design, construction and maintenance at present is held by district and provincial authorities, while commune and local groups do not have any responsibility. In the analysis of villagers, this leads to a passive role that only entails using the water, paying fees and providing labor when required.

People generally pay irrigation water fees and value the service. However, some participants were concerned that some households who do not have access to irrigation water from the system still have to pay irrigation fees. Those who did receive benefits from the system found that the rates charged for irrigation were relatively high compared with other systems and the national average.

Agricultural cooperatives are presently responsible for managing the infield canals. However, the results of these arrangements have not been satisfactory. Many farmers are interested in developing local irrigation management teams at the village level that would enjoy greater trust of the villagers than the present set-up.

5 Summary of the institutional analysis

The institutional analysis looks at the possibilities for participation in irrigation project construction and management, respectively. While section 6 outlines the concrete steps in the participatory methodology proposed by CARE, the following sections contains the analysis of legal and institutional constraints and opportunities, including some recommendations at the general level for how to make the Central Region Water Resources Sector Project more inclusive and participatory. The institutional analysis reports for Binh Dinh and Quang Ngai are available from CARE on request.

5.1 Legal and institutional issues in construction

In Vietnam there is a plethora of legal documents that are relevant to planning construction, operation and maintenance of irrigation schemes. Generally speaking, and regardless of whether the projects are funded from Overseas Development Assistance (ODA) or directly from state coffers, there is little or no opportunity for participation by local individuals or groups within the current legislative frameworks. The People's Committees at all levels are officially considered the rightful representatives of the people in construction and management processes.

The important exception is when projects include (partial or full) financial contributions from local people. In these cases, the current regulation allows for community participation. Examples of legal documents that facilitate participation include:

- Decree no. 24/1999/ND-CP of 16 April 1999 from the Government of Vietnam stipulating the regulations on mobilization and management of volunteer contributions from the local population to infrastructure constructions at the commune level;
- Decision no. 29/1999/TT-BTC of 19 March 1999 by the Ministry of Finance on guidelines for public awareness on the utilization of funds contributed by the local people to infrastructure projects;
- Decree no. 29/1998/ND-CP (known as the "Grassroots Democracy Decree") of the Government of Vietnam on Regulation of the Exercise of Democracy in Communes, with later amendments.

These regulatory documents represent some basic opportunities for including communities more in construction (and management) processes within the current framework, i.e., without having to suggest changes to the overall framework. The degree and fervor of implementation vary greatly depending on the local authorities. There is a lot of scope for strengthening the implementation of these regulatory documents as part of the CRWRSP implementation process.

Splitting large projects into smaller components

An important piece of regulation is Decree no. 12/2003/ND-CP of the Government of Vietnam on infrastructure projects with funding from the state or ODA. This regulation divides projects into three different categories labeled A, B and C. Irrigation projects with a total investment exceeding 400 billion dong (currently about USD 25 million) belong in group A. Projects budgeted at below 20 billion dong (USD 1.3) are category C projects, while those in-between fall in category B.

For projects in groups A and B, implementation of the investment project must conform to a long range of centrally determined rules and regulations pertaining to the state budget. The required tender process, for example, makes it very difficult to include any kind of participation by end users in the process. In the case of category C projects, local project implementers are given wide flexibility to approve all the tender process and contract details, quality checks, and financial arrangements. The main advantages from a local point of view are that:

- no feasibility report is required, only a simple investment report to be prepared by the commune for the district level approval;
- no separate technical design is required if standard designs of irrigation and drainage canals are used;
- no tender process is prescribed (but may be applied).

Category C projects will typically include contributions from local community members in the form of investment capital, labor or construction materials. The flexible rules for such projects can thus be combined with the government's encouragement of people's participation in supervising the construction, operation and maintenance of projects that use people's contributions. The funding agency (e.g., ADB) can still monitor and examine the investment implementation in line with the investment decision and financial management arrangements. The entire sub-project may still be covered by a single feasibility study. In this report, the division of investment ownership to the province, districts and communes could be defined. After approval of the project, the implementation of the sub-project would be carried out concurrently at different PMU levels.

Given the scale of the sub-projects under the CRWRSP and the "system approach" promoted by the ADB, all CRWRSP sub-projects belong to group A. While there may be a good rationale for this approach for large projects, it also presents a barrier to involving communities in their implementation.

One option for the CRWRSP is that certain parts of the sub-projects are divided into smaller component projects. For example, an irrigation sub-system construction or upgrading project can be broken down into its constituent parts of reservoir construction, primary, secondary and tertiary (infield) canals, and other related infrastructure. Large and expensive structures, such as reservoirs, dams, primary and most secondary canals should be implemented in line with the rules governing large projects, while parts of secondary canals and infield structures lend themselves better to community participation in planning and construction.

Commune authorities would be responsible for implementation and project management. The increased participation would increase the chances that sub-projects are in line with the needs of end users. Beneficiaries would also be more likely to contribute both labor and financial resources towards the construction activities. Finally, this decentralization would also entail – and require – the strengthening of institutional and operational capacity at the commune level, which is currently not strongly involved in the CRWRSP.

Capacity and other issues

It was found in the institutional analysis that there is a generally felt need for developing the capacities of virtually all the institutions involved in the sub-projects. For example, it was found that no staff of the Irrigation Construction Management Board has had any training on social development issues. In order to achieve the broader objectives of poverty reduction, gender equality and community participation, there is a need to build

capacity of relevant organizations to address such issues in the context of sub-project implementation.

The existing guidelines for sub-project preparation do not give sufficient attention to social development issues. For example, there is no requirement for a social impact assessment in the design, selection and proposal preparation process. The outline of the feasibility report includes a discussion under the heading of livelihood security. However, since there is no definition or explanation of what needs to go into this section and how it should be presented, the results are very limited. It was noted that the consultancy companies only conduct assessments of the technical aspects of project feasibility and that the budget allocation for these studies is only sufficient to cover the technical aspects. Thus, it is necessary to provide detailed guidelines for social impact analysis and to ensure that an adequate budget is allocated for this purpose.

Participants in the provincial working groups on the institutional arrangements identified the unclear role of the State Treasury as a weakness in the CRWRSP set-up that often causes delays in disbursements. The Treasury withholds funds transfers with reference to the need for additional information and unfulfilled requirements on the part of the local authorities. According to the working groups, all approvals are supposed to take place under the coordination of the Ministry of Planning and Investment. ADB will transfer funds to the Treasury when work plans and activities are approved. According to the working group members, there is no need for any additional approvals by the Treasury. They examples of other infrastructure construction projects that allow direct transfers of funds from the donor to local contractors once the contracts are approved by the governing agencies and the donor.

5.2 Legal and institutional issues in operation and maintenance

Following completion and handing over of construction projects, issues of the daily operation and maintenance take. While community participation in the construction phase may be constrained by large-scale construction, there is ample scope for participation in both operation and maintenance. In practice, however, such participation is limited in the case of the existing institutional set-up for irrigation systems.

Irrigation Management Companies

The IMC is responsible for centralized management of operation and maintenance of almost all irrigation schemes in the provinces and reports to DARD. The IMC has sub-offices responsible for collecting irrigation fees and maintaining irrigation systems at district and commune levels.

IMC sub-offices typically have contracts with cooperatives to collect irrigation fees on their behalf. In return, the cooperatives retain a commission of 4.4% of the collected fees. The IMC is responsible for maintaining the primary as well as secondary canals that cross commune boundaries. For secondary and tertiary canals within a commune, the cooperative(s) of the commune are responsible for maintenance.

While the PRA exercises with local water users showed that users often consider the costs of irrigation water to be too high in relation to their benefits from it, the management companies and cooperatives often find that the available resources are

insufficient to maintain the system. Water user fees are fixed by provincial decisions. Representatives from the cooperatives claim that they only have enough funds to pay for salaries of their staff (an average five staff per cooperative) and administrative costs.

The IMC rely heavily on subsidies from the state budget for maintenance. Even in areas where the IMC is allowed to retain all fees for operation and maintenance, it still needs additional transfers from the government budget. This dependency often results in delays and inadequate funding.

CARE's analysis suggests that the current organizational set-up of the IMCs is ineffective and that it is a drain on resources. Table 2 below shows the fees collected by the IMCs of the two provinces and the amounts that are reported to have been used for maintenance investment over the past seven years.

Table 2 – Irrigation fees and maintenance expenditure

Year	1997	1998	1999	2000	2001	2002	2003
Irrigation fees collected	8,865	11,508	11,962	10,195	7,523	9,248	7,820
Expenditure on maintenance	2,365	3,325	3,009	2,721	2,667	1,830	1,492
Percentage	27%	29%	25%	27%	35%	20%	19%

(Unit: million VND)

The IMCs themselves explain the low rate of maintenance investment with reference to high operational costs and poor financial management. According to IMC officials, the provinces have used revenue from existing irrigation schemes for construction of new schemes or large-scale repairs that were considered priority provincial investments. Used in this manner, irrigation fees amount to a general taxation system and the linkage between user payments and operation of the system is broken. It is highly detrimental to user confidence and participation in the operation and management of the scheme if locally contributed funds are used as discretionary funds elsewhere.

The problem is not limited to the end users. Local authorities in communes, districts and even provinces share the perception of the end users that maintenance of irrigation systems is the responsibility of the central government. Local officials are not encouraged to take a proactive role in transparent and effective maintenance and operation of irrigation schemes.

Cooperatives

As mentioned above, agricultural cooperatives are responsible for the collection of irrigation fees and to pass a proportion of them on to the IMC. The remainder is intended for management and maintenance of the canals that fall within their mandate. However, many cooperatives utilize the revenue to make up for their financial shortfalls rather than the intended maintenance investments. Representatives of the cooperative report that late payment of irrigation fees and long-running debts of irrigation users are common. In some cases, non-payment is still linked to disputes over whether contributions if farmers to socialist cooperatives should be returned. The collection of irrigation fees is consistently below target. In Binh Dinh, for example, cooperatives collected only 7.8 billion dong against the planned 8.5 billion for 2003.

At the institutional level, the cooperatives are problematic because they are still considered as part of the local administration by both water users and local officials. When radical changes were introduced for cooperatives with the Law on Cooperatives from 1996, cooperatives in Binh Dinh and Quang Ngai were reported to undergo a transformation and modernization process. Local people note, however, that very little has changed. The cooperatives still have very large memberships (up to 2,000 members). Interference in management decisions from the CPC is frequent.

The cooperatives are still to be transformed to so-called “new-style” cooperatives with voluntary membership, decisions made by shareholders, and market-based operations. In comparison with cooperatives in other parts of the country where CARE works, the

cooperatives in Binh Dinh and Quang Ngai remains "old-style". There are also indications that the cooperatives are generally economically ineffective. According to a 2004 report from DARD in Binh Dinh, only a third of the 209 cooperatives in the province were considered to perform well. 18 cooperatives were in the process of forced dissolution due to their poor results.

The existing cooperatives are thus in clear need of reform or replacement by more bodies that are more representative of water users in order to develop a sense of ownership to the irrigation systems. There is currently a debate going on within the two provinces about the future role of the cooperatives in participatory irrigation management.

Potential for user groups

Realizing that some of the above-mentioned problems can be addressed through more community involvement in management and maintenance, CARE found a real perceived need among both users and local government officials to develop community-based irrigation management entities at the commune and village levels. The provinces are keen to pilot the government's Participatory Irrigation Management (PIM) policy in the context of the CRWRSP.

Some villages in Binh Dinh and Quang Ngai have already established local irrigation boards. Their members are elected by users with the task of maintaining local irrigation systems. However, these associations do not yet have official recognition from the IMC and must to operate under the existing cooperatives format.

A cornerstone in a reform of the institutional structure for irrigation management could be the Water User Groups (WUGs), WUGs cover a well-defined part of the irrigation system and includes all users in that area. A cap should be set on the size to allow for real participation in the WUGs.

At the next level up it is proposed to have Water Resources Management Boards (WRMB). The members of WRMB would be elected representatives of the WUGs. The WRMB could potentially replace the cooperatives by signing contracts directly with the IMC on operation and maintenance of irrigation canals in the areas under the WRMB.

The process of forming the groups can be facilitated by existing associations and volunteer groups such as the FU and WU, as shown in the PRA exercises made for this project. However, the FU and WU should not become intermediaries or otherwise be included in the structure. The roles, tasks and coordination mechanisms between the WUGs, WRMBs and IMC can be defined in guidelines developed as an add-on project activity.

6 Proposed participatory methodology

Based on the results from PRA and institutional analyses and the discussions of the provincial working groups, CARE proposes a participatory methodology for CRWRSP as described in annex 4. This detailed presentation of the methodology is a step-by-step guideline for how participation can be introduced in various phases and steps of the construction and management of the sub-projects.

In general, the construction project management cycle consists of three basic phases: (i) investment preparation; (ii) construction implementation; and (iii) construction completion, followed by operation and maintenance. The first phase is further subdivided into sub-phases:

- a. preparation of investment proposals
- b. selection of investment projects
- c. investment decision approval
- d. pre-feasibility and feasibility study reports
- e. appraisal of feasibility study reports

The phases and sub-phases are defined in accordance with the legal framework for infrastructure construction in Vietnam. Please refer to annex 4 for the description of the methodology.

7 Recommendations for additional activities

In line with the TOR for the PDA, CARE has found that in order for local communities and households to realize the potential of the irrigation sub-projects, they must also acquire access to and management responsibility over other necessary resources in addition to the irrigation services.

The PRA process and the institutional study demonstrated that there is broad-based consensus both among water users and decision-makers in the provinces for the need for special support in particular for the poorer households in the sub-project areas. It is a commonly held value that all members of the community should benefit from the large investments in infrastructure.

Some needs for additional activities, such as improved agricultural extension services, were clearly expressed and shared among both poor and better-off households. Such interventions are expected to have a broad impact on agricultural production and livelihoods in the area.

The main challenge lies in defining interventions that target the poorer families on the periphery of agricultural activities, where impact from the main project has been shown to be minimal, and specialized add-on activities will be required. Further work will go into this task in the remaining period of CARE's PDA contract.

The following is an initial list of potential interventions additional to the CRWRSP sub-projects that should be considered for detailed design and funding to maximize the impact of CRWRSP.

7.1 Diversification and intensification of agricultural crops

Throughout the PRA exercises, participants expressed a need for an upgrading of the current farming systems and introduction of new technologies, crops and approaches for increased production and income from farming. Application of more productive farming systems will be crucial for realizing the benefits of the increased flow of water expected from the upgrade of the irrigation system.

The *objective* of these add-on activities would be to improve the knowledge and capacity of farmers, including the poorer groups, to increase their income from cultivation activities through intensification and diversification of farming practices.

The main *activities* could be to:

- Strengthen the capacity and outreach of DARD extension services through provision of training and technical assistance to extension staff at commune, district and provincial levels.
- Forming networks of farmers' interest groups and voluntary peer trainers at the village level. The training should be based on concepts from the Farmer Field School approach.
- Facilitate farmer-led field trials of farming system improvements in cropping systems, intercropping and new crops to determine suitability to local soil and water conditions, while increasing local adoption. Training could include Integrated Pest Management approaches for sustainable intensification of production.
- Development and dissemination of extension materials for wider sharing of knowledge.

7.2 Support to livestock development and animal health services

Although crop cultivation is the mainstay, farmers are generally very interested in starting or expanding animal husbandry activities for raising buffaloes, cows, pigs, poultry, fish and shrimp.

The *objective* is to improve the knowledge and capacity of farmers, including the poorer groups, to increase their income through development of livestock and aquaculture activities.

The suggested main *activities* are to:

- Increase the capacity of DARD extension and veterinary services by training extension staff to assist farmers in applying best practices and safeguarding their investments in animals, including aquaculture.
- Provide training on farming systems that combine crop cultivation with animal husbandry, such as VAC.
- Form or strengthen networks of village-based veterinary workers that can administer and promote appropriate vaccinations to animals. Also train village veterinary workers on animal-to-human (zoonotic) diseases.
- Support specialized pig breeding households with credit and training.
- Support small-scale commercial chicken hatcheries at commune level with credit and training.
- Construct or upgrade fish fingerling hatcheries and establish an effective fingerling distribution system.

- Support the establishment of a vaccine cold chain from province to commune level through provision of cool storage equipment.

7.3 Increased access to micro-finance for the poor

The *objective* of the activities is to develop credit “products” that are suitable to the special needs of the poor and which will enable them to finance new income-generating activities.

The *activities* can include to:

- Develop and support savings and credit groups through provision of training, matching grants, incremental credit, etc.
- Capacity building of WU and FU for management of pro-poor micro-credit lines through training and technical assistance in micro-finance management and community development in connection with their involvement in the participatory methodology under the CRWRSP.
- Support the establishment of People’s Credit Funds (credit cooperatives based on shareholding membership) through provision of training, credit guarantees, market research and opportunities to study experiences elsewhere.
- Selective institutional strengthening of Vietnam Bank for Agriculture and Rural Development (VBARD) and the Vietnam Policy Bank through training and technical assistance in credit management.

7.4 Gender and women’s livelihood development support

The *objective* of this add-on activity is to ensure that women, particularly in poor households and communities, are secured access to and control over productive resources.

The proposed *activities* are to:

- Train CRWRSP implementation staff to ensure that gender is mainstreamed across all project activities.
- Provide gender awareness training to local officials, management of FU and WU, and CRWRSP staff.
- Support WU in facilitating Women’s Livelihood Clubs in each of village under CRWRSP to address the self-identified needs of women, e.g., in conjunction with a micro-credit program.
- Institutional strengthening of WU through provision of training, equipment and materials.
- Support to the monitoring and evaluation system of the CRWRSP to produce data disaggregated by gender and data on achievement of gender mainstreaming.

7.5 Institutional reform in irrigation management

The overall *objective* of this important add-on activity will be to support a reform process that can improve the effectiveness and responsiveness of institutions, systems and procedures related to management of irrigation resources. More specific targets need to be agreed upon with the local and central authorities whose backing and action will be needed to achieve real change.

The *activities* could take the form of:

- Document issues in the institutional and legal framework that need further study.
- Support the conversion of cooperatives involved in irrigation management to “new-style” cooperatives, e.g., by strengthening the capacity of DARD, the Cooperative Alliance and/or FU to support cooperatives.
- Pilot different models of Water User Groups and Water Resources Management Boards as an input to final decision on participatory model for the CRWRSP.
- Support the streamlining of local regulation and policies to create an enabling environment for implementation of Participatory Irrigation Management principles.
- Help integrate CRWRSP water sector investments with multi-sector poverty reduction programs of the government, donors and NGOs.
- Improve coordination and cooperation among government institutions, the private sector, and user associations in the provinces.

7.6 Increase social development capacity of sub-project management

The *objective* of the add-on activity is to ensure adequate inclusion of social development issues in the planning and implementation of CRWRSP sub-projects.

This may be done by implementing *activities* in order to:

- Provide general capacity building in project management to the provincial PMU at provincial level, District Project Management Units (DPMUs) and potential commune PMUs in the CRWRSP areas.
- Train project staff in social development issues and tools for analysis, such as PRA methods, gender analysis, and participatory development.
- Support the data collection and analysis required by the adopted CRWRSP participatory methodology.
- Conduct CRWRSP Participatory Impact Assessments on a regular basis.

Annex 1 – PRA team members

Binh Dinh province

Name	Sex	Title	Organization
<i>Team 1</i>			
Hang Thi Xuan Lan	Female	Consultant	CARE
Pham Thi Su	Female	Chairwoman	Phu Cat district WU
Vu Van Thia	Male	n/a	Phu My district DARD
Cao Van Be	Male	n/a	Phu Cat FU
<i>Team 2</i>			
Tran Trieu Ngoa Huyen	Male	Consultant	CARE
Trao Thi Bay	Female	n/a	Phu Cat district WU
Pham Van Trong	Male	n/a	Phu Cat district DARD
Dinh Ba Thiet	Male	n/a	Phu Cat district FU
<i>Team 3</i>			
Nguyen Thi Ngoc Le	Female		Binh Dinh irrigation project management board
Nguyen Thi Sang	Female	Chairwoman	Phu My district WU
Dao Thi Can	Female	n/a	Phu My district WU
Luong Ngoc Tan	Male	n/a	Phu Cat district FU
Pham Van Van	Male	n/a	Phu My district DARD

Quang Ngai province

Name	Sex	Title	Organization
Nguyen The Anh	Male	Irrigation Engineer	Irrigation Exploitation Company, DARD
Le Thi Thuy Phuong	Female	DSFPI Consultant	District WU
Dinh Duy Sung	Male	Agriculture Engineer	District FU
Vo Van Quang	Male	Agriculture Engineer	Provincial FU
Pham Duoc	Male	Agriculture Engineer	Mo Duc district FU
Nguyen Huu Tuan	Male	Agriculture Engineer	Duc Pho district FU
Huynh Thi Bich Ha	Female	WU deputy chief	Duc Pho WU
Tran Thi Hong Xuan	Female	WU chief	Mo Duc WU
Vo Van Truyen	Male	Irrigation Engineer	Land Management Office, Mo Duc

			district DARD
Do Tien That	Male	Officer	Land Management Office, Duc Pho district DARD

Annex 2 – Village selection for PRA exercises

Binh Dinh

Characteristics	Commune, District	Village
Upper part of irrigation system	Cat Son, Phu Cat	Thach Ban Dong
		Hoi Son
Middle part of irrigation system	Cat Hanh, Phu Cat	Vinh Truong
		Tan Xuan
	Cat Tai, Phu Cat	Vinh Thanh
	My Hiep, Phu My	Van Loc
		Binh Long
My Tai, Phu My	Van Ninh 2	
Lower end of irrigation system	Cat Minh, Phu Cat	Gia Thanh
		Trung Chanh
	My Chanh, Phu My	An Xuyen
	My Cat, Phu My	Chanh Hoi
		An My

Quang Ngai

Characteristics	Village, Commune
<i>Dien Truong Reservoir Sub-project</i>	
Severely poor	Pho Khanh Commune
Upper area of future , upgraded irrigation systems	Dien Truong village, Pho Khanh Commune
Middle area of future, upgraded systems	Trung Son village, Pho Khanh Commune
The lower and poorest area of future system	Vinh An village, Pho Khanh Commune
<i>Chop Vung Reservoir Sub-project</i>	
Upper area, medium wealth	Hien Van Village, Pho Hoa Commune
Middle area, medium wealth	Block 4 Duc Pho Town
Middle area, poor	Lo Ban village, Pho Ninh commune
Lower area, medium wealth with branch canals	Xuan Thanh village, Pho Cuong Commune
<i>Nui Ngang Reservoir Sub-project</i>	
The upper, mountainous and poor area	Vinh Xuan village, Pho Phong Commune
The lower, poor area, branch canals	Thanh Binh village, Pho Thuan Commune
The middle and poor area	Tu Son 1 village, Duc Lamcommune
The lower area, branch canals	Tu Son 2 village, Duc lam commune

The lower and poor area	Chau Me village, Duc Phong commune
The lower and poor area	Area IV, Mo Duc town

Annex 3 – Updated work plan

	2004								2005			
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
1 – PROJECT INCEPTION												
Inception mission	■	■										
Inception Report finalized		■										
<i>Inception Report</i>		X										
Methodology approved			■									
2 – PRA												
PRA plan, methodology and training materials prepared			■	■	■							
PRA plan, methodology and training materials to ADB					X							
PRA facilitator training and field work (BD)				■	■							
PRA report completed (BD)					■	■						
PRA facilitator training and field work (QN)						■	■					
PRA report completed (QN)							■	■				
3 – INSTITUTIONAL ANALYSIS												
Plan, methodology preparation.			■	■	■							
Documentation of methodology sent to ADB					X							
Field study and interviews (BD)				■	■							
Institutional report completed (BD)					■	■						
Field study and interviews (QN)						■	■					
Institutional report completed (QN)							■	■				

	2004								2005			
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
4 – MODEL FORMULATION												
Provincial workshop (BD)						■						
Provincial workshop (QN)							■					
Workshop for both provinces								■				
Documentation of model					■	■						
<i>Mid-term Progress Report</i>							X					
5 – DOCUMENTATION												
Workshop for national partners									■			
Documentation finalized										■	■	
<i>Project Completion Report</i>												X

Notes: Black color indicates achieved, gray planned activities
 BD = Binh Dinh province. QN = Quang Ngai province

Annex 4 – Proposed participatory methodology

This annex describes in greater detail the proposed methodology for an introduction of participation in the preparation, implementation and management of investments under the CRWRSP. The methodology is based on the studies of the local regulatory framework, the findings and experiences of the PDA activities, and the discussions of the provincial working groups. The methodology is formulated as a step-by-step model for participation in the three major phases of the investment projects: (1) investment preparation; (2) construction implementation; and (3) construction completion and operation and maintenance. The first phase is further sub-divided into sub-phases that reflect the steps involved in local regulation:

- a. preparation of investment proposals
- b. selection of investment projects
- c. investment decision approval
- d. pre-feasibility and feasibility study reports
- e. appraisal of feasibility study reports

The individual steps and actions of the methodology are summarized in the figures on the last pages of this annex.

Phase 1 – Investment preparation

a. Preparation of investment proposals

Step 1 – Stakeholders meeting on CRWRSP and availability of funds for sub-projects

The first batch of sub-projects (“core sub-projects”) have already been identified. The PMU has also been established by the provinces. When the province and the PMU is informed through MARD that the process of selection of the next (non-core) sub-projects should begin, the PPC, MARD and PMU will organize a meeting with stakeholders to inform about the on-going activities under CRWRSP, the availability of funds for its next sub-projects and request the involved agencies such as the DPCs in consultations with their CPCs, branch units of IMC in the respective districts to prepare proposals. The proposal should include the following major parts:

- i. The relevance between the proposed project and the regional or sectorial socio-economic development plan approved by the DPC.
- ii. The mechanism of project coordination with other development projects in the region aimed at poverty reduction and gender development, sustainable exploitation of national resources and technology advancement.
- iii. Mobilization of human and financial resources, especially the participation and contribution from the project beneficiaries.
- iv. Benefits to the local people, especially the poor groups and women

- v. Assessment of environmental impact, safety measures, resettlement issues, etc.

Step 2 – Preparation of sub-project proposal

DARD at the district level integrates proposals from the commune level into an investment proposal for sending to DPC. Upon approval by the DPC, the proposal is sent to the provincial PMU.

b. Selection of investment projects

Step 3 – Stakeholders meeting on selection of the sub-project of CRWRSP

Under the coordination of the PPC, DARD/PMU organizes a meeting to select the most appropriate project to be funded by the CRWRSP. Five criteria of sub-project selections agreed by the government and ADB will be used to exclude unqualified projects and justify for the best option, which should be agreed by at least 70% of the meeting participants.

Step 4 – Preparation of investment proposal of the province

PMU will prepare and submit the selected project proposal for CRWRSP funding through the PPC. Based on this proposal, the PPC asks for the provincial People's Council opinion before forwarding the project request to MARD and ADB asking for approval of the investment proposal.

c. Investment decision approval

Step 5 – Approval of the selected sub-project

The Line Agency (MARD) and funding agency (ADB) will evaluate and come to a consensus on the selection of the sub-project to be invested through the CRWRSP. Then the province will be informed about the selected sub-project for further elaboration of the feasibility study report.

d. Pre-feasibility and feasibility study reports

Step 6 – Subproject stakeholder identification

Following the selection of the sub-project by the MARD and ADB, PMU will lead a stakeholder identification and analysis exercise in each project area. This will define the key stakeholders in the participatory process, identify their current role and influence, estimate their capacity and assist determine their likely role and responsibilities in the participatory process.

Step 7 – Meetings with identified stakeholders of CRWRSP sub-project

When the stakeholders of the sub-project have been identified, the PMU and its consultation firm will meet with all the stakeholders representatives in the districts and communes involved in the water resource system covered by the sub-project. In particular, the meetings should include those who might be marginalized from the decision-making process. This will include the poorest households, women and ethnic

minority people. In addition, the process will identify those groups that may be most appropriate to be involved with the implementation of the community consultation process, with a particular aim of making the process replicable in the future using local human resources. Although each sub-project may have similar stakeholders, it is important that this exercise is completed in each sub-project area to carefully identify the particular groups in that area. This exercise will involve a series of meetings with key stakeholders from community to provincial level to develop a comprehensive picture of all the relevant stakeholders in the sub-project area.

Step 8 – Design of participatory consultation and information collection methodology

A draft methodology for the participatory consultation and information collection is developed, based on the initial stakeholder feedback and investigations. This includes the finalization of the stakeholder analysis, and the drafting of a sampling technique, proposed participatory methodology, and Plan of Action (POA) for the whole sub-project.

It is important that the participatory consultation and information collection methodology collects all information that is required for the different assessments, including technical, social, economic, environmental, gender, ethnic minority etc. If a well-designed and implemented participatory consultation and information collection process is used, it will reduce the need to complete additional survey exercises required for the feasibility report.

A **draft POA** needs to be designed based on feedback from the initial consultation meeting and stakeholder analysis. This will include details of the survey tools to be tested and used, number of meetings / workshops to be held, involvement of various stakeholders, timing of activities including training, and details of the process for aggregation and analysis of data.

Details of the **sampling technique** used in the consultation process will be an important element of the POA to detail which communities and households will be consulted. A large and comprehensive sample of the whole sub-project area needs to be used. However, the sample still needs to be of a manageable size. Based on the details of the sub-project design, communes in the project area need to be purposively, yet randomly selected to provide a suitable sample. A set of criteria for this selection will form part of POA and will address the issues specific to the sub-project. For example:

- Villages that are located nearby irrigation systems and directly impacted upon;
- Villages with a high poverty level;
- Villages that represent a sample of a whole irrigation system (those located at beginning of canal, middle of canal and at the end of canal).

It is recommended that the sampling technique targets at least 30-50% of communes affected and within those communes at least one representative hamlet. The number of households consulted within each hamlet should be at least 30.

Step 9 – Consultation and approval of process by province, district and commune authorities

Following the drafting of the sampling technique, proposed participatory methodology, and POA, official **meetings at provincial level** will be held with key officials to ensure they fully support the planned participatory process. In these meetings, the PMU will discuss the details of the Plan of Action, including the role of stakeholders, outline of the process, and they will obtain stakeholder feedback and make relevant amendments to the methodology before finalization. Participants at province level meeting should include:

- PPC
- IMC
- Provincial DARD
- WU
- FU
- DPC
- District DARD

Similarly, a series of **district level meetings** will be undertaken by the PMU to gain feedback and commitment from district level stakeholders and commune and hamlet representatives. The discussion at this level will focus on more specific issues – especially issues of how to select participants for the process at the commune and hamlet level and how to most effectively implement the process. Participants in these meetings will be:

- DPC
- District DARD
- CPC
- Commune FU
- Commune WU
- Hamlet representatives.

Step 10 – Capacity development and training

Once the methodology is approved by provincial, district and local stakeholders, a targeted training program will be implemented.

The PMU will select four participants in the province to be trained on the Statistical Package for Social Sciences (SPSS) and Microsoft Excel. This is necessary to ensure the provincial PMU has adequate skills to aggregate the information collected from all target communes, analysis and presentation and present it. The participants will be chosen from provincial and district DARD and the Statistic Data Department. These participants will need to be chosen based on their availability and their computer and

statistic data analysis skills. Technical resources to undertake this training can be obtained from the Hanoi Agriculture University. The training will take seven days to complete.

A seven-day training course will be conducted on PRA techniques for 25 participants selected through the stakeholder analysis process. Trainees are trained in possible PRA and survey tools that can be later used during the consultation process. Participants will be given the opportunity to practice these tools in a classroom environment and then test through a one day field exercise. The final day of the training will allow the participants to modify the use of the tools for use during the consultation

Step 11 – Data collection & initial analysis

The data collection process will involve two distinct stages: a secondary data collection and analysis and primary data collection.

The **secondary data collection and analysis** will be undertaken to ensure that the results of the community consultation process are triangulate with other data. A breadth of secondary data should be reviewed to gain a full picture of the target area. This will be collected and collated from provincial and district statistical reports, maps, government development plans, official records form key departments and mass organizations, journal articles, published materials and statistical data of cooperatives and communes in the study area and particularly from key project stakeholders (DARD, IMC, FU, WU, PPC). Again this process should be coordinated with the data collection activities as part of the preparation of the various reports as required under the feasibility study.

Once this data is collected, it will be carefully reviewed by the PMU before the community consultation process begins. This will provide a chance to modify the community consultation techniques to address any particular issues that emerged from the secondary date review and ensure the community consultation process is comprehensive. The secondary data should be carefully stored for future access again during the data analysis stage.

The **primary data collection** starts with the community consultation team selecting and modifying a suite of participatory tools, as part of a contextual and comprehensive participatory methodology. This will be based on the findings of the initial orientation meeting, stakeholder analysis, provincial and district approval process and capacity development and training. It will include tools that particularly target women, ethnic minority people, farmers and the poor affected by the sub-project, to ascertain the issues they face and obtain their proposed solutions to the problems they face.

This will be completed through a questionnaire, a checklist, observation, interviews and various PRA techniques. Before the use of any tools, a pre-test will be undertaken (particularly of the questionnaire) to help remove or modify questions that may be unclear or irrelevant to the respondent, and ensure the questionnaire is user-friendly. This should be carried out in one commune, with at least ten respondents,

PRA tools and the methodology developed should address important sub-project issues such as:

- Identify the needs of the communities in the sub-project area;
- In particular identify the needs that are related to water related issues;
- Ensure the poorest, women and ethnic minority people are actively included in the process;
- Identify community attitudes to the services provided by the sub-project;
- Obtain local opinion of the positive and negative impacts of the sub-project;
- Analyze community vulnerabilities, based on areas where they need the urgent intervention
- Gain solutions from the community to the issues raised by the sub-project or their needs generally, in particular seeking solutions that improve local people's livelihood;
- Mobilize the community generally for the following elements of the sub-projects:
 - Input into appropriate design;
 - Involvement in construction process;
 - Involvement in maintenance and minor repair;
 - Establishment of mechanisms for ongoing feedback and corrective response when systems fail or break down; and
- Involvement into planning and design of future new sub-projects.

Step 12 – Data integration and analysis and first identification of investment options and problems

Following the completion of all consultation activities, the standardized questionnaire data needs to be checked, verified and coded by the four-person team who was trained on SPSS. These participants will be responsible for the input and analysis of the household survey data for use in the Participatory Process Verification and Analysis Workshop. Data processing will be completed through the application of the Statistical Package for Social Sciences (SPSS) and use of Microsoft Excel for data presentation.

Step 13 – Stakeholder consultation to review analysis and initial investment options

After completing initial data integration and analysis by the SPSS team, a participatory process verification and analysis workshop will be conducted. This workshop will be attended by community representatives of all communes consulted, the DPC, WU, FU, DARD, PMU, DPI, DARD, IMC, DOLISA, NGOs and the donor (if possible). The workshop will focus on the verification, aggregation and analysis of the community consultation data to clarify any discrepancies, identify and rank key issues / needs and develop appropriate solutions to issues raised. Also it provides a chance to aggregate all the data from the field, with the secondary data collected, to provide a complete picture of the sub-project. The workshop will serve as an open forum for democratic

discussion between government and the community, a situation which is different to the more usual top-down systems.

Step 14 – Preparation of feasibility study and linked reports

Based on the above collected information and data a consultation firm led by the PMU will initiate formulation of the sub-project feasibility study according to the standard format.

Step 15 – Stakeholder consultation on the draft feasibility study report

Following the completion of the plans and investment strategies by the PMU, province and district workshops will be conducted to confirm the designs developed. Again this workshop will be attended by community representatives of all communes consulted the DPC, WU, FU, DARD, PMU, DPI, DARD, IMC, DOLISA, NGOs and the donor (if possible). The workshop will focus on modification and approval of the plans and investment strategies.

Step 16 – Finalization of the feasibility study report

PMU and the consultation firm will incorporate the comments from the stakeholder workshop into the final version and it to MARD for appraisal and approval.

e. Appraisal of feasibility study reports

If the sub-project categorized of Group A, MARD shall directly submit it to the Prime Minister and at the same time to MPI and MOF for appraisal. Only when the Prime Minister's written approval is obtained will the PMU continue making the feasibility study report.

Phase 2 – Construction implementation

The approval of the feasibility study provides decisions on the project investment ownership. In the case that the Feasibility Study Report proposed a division of the project into different sub-projects, the approval decision will specify who is the investment owner of each sub-project. The investment owners should follow the following steps:

Step 17 – Establishment of Water User Groups

As mentioned in the concepts of the participatory methodology, civil society group establishment is the way to empower the local people. The households who share the same secondary canal are encouraged to voluntarily join the Water User Groups. This establishment process is facilitated by the FU and WU at the commune level. Members of the WUG constitute its Operation Agreement, which specifies the role and functions of the WUG as well as rights and obligations of its member. The legal basis for the WUG is the Civil Code. MARD is under the process to specify this Civil Code for the agriculture community-based organizations (CBOs) through a governmental Decree. Similarly to any kind of CBO, the WUGs are registered with the CPC.

Step 18 – Consultation with Water User Groups on project design

The Sub-project Investment Owner (SPIO) invites express of interest from eligible design companies. Selection of the most suitable design company is based on the bidding process. For the small-scale project it could be based on decision of meeting between the SPIO and the sub-project stakeholders.

When the sub-project designer has been selected, the designer should consult with WUG members through meetings at the sub-project areas. The designer needs to review the PRA reports of the villages before the meetings. WUGs members will discuss together with the sub-project designer the following questions: (i) how the project should be designed to best meet the local demand of water resource; (ii) if the design is implemented, to what extent local people will have to be resettled and reimbursed of their impacts; (iii) should the final canals be constructed at once the sub-project is executed (supposed the CWRSP will not cover the final canals); (iii) what is level of contribution by labor or cash from each household to construction of final canals; (iv) when the construction of the water resource system is complete, how the WUG members will share their responsibilities for operation and maintenance of the scheme.

Step 19 – Finalization of sub-project technical design and budget

Based on the outputs of the consultations with the WUGs, technical design and relevant budget of the sub-project is prepared and sent to local authorities for approval.

Step 20 – Bidding of project sub-contractors

When the sub-project technical design and budget is approved by relevant authority, the CPIO will follow procedures of the contract public bidding process as stipulated in the Decree number 88/1999/ND-CP. Representatives from WUGs are invited to participate in all steps of this bidding process to ensure its principle of transparency.

Step 21 – Meetings of WUGs on election of members of People's Supervision Board (PSB)

Government Decree number 79/2003 on Grassroots Democracy has specified the mission of the PSB in technical and financial supervision of the infrastructure project. WUG meetings will inform the water users the objectives of the CRWRSP and the roles and responsibilities of the PSB. Then members of the WUGs will vote for members of the PSB. PSB works on behalf of the project beneficiaries and for social consultation purpose. PSB does not work as a party of the construction contract.

Step 22 – Training of People's Supervision Board

Candidates for the vote of PSB members should be those who have an understanding of construction-related issues. However, they should be trained on: (i) objectives and importance of the supervision system; (ii) construction supervision skills; (iii) basic construction techniques; (iv) Construction Law and sub-law regulations; (v) applicable standards of construction quality management.

Step 23 – People’s supervision of contract implementation

Regular monitoring and inspections conducted by the PSBs. Whenever they find any evidence of dissatisfaction of the project contract or technical standards, PSB on behalf of the WUGs will inform the SPIO for actions. If any action could not be organized by the SPIO, the PSB may organize meetings with FU and WU to discuss collective actions for the construction quality assurance.

Phase 3 – Construction completion and operation and maintenance**Step 24 – Approval of project completion**

The PSB reports to SPIO its assessment on the quality of the construction and the pending items or problems to be fixed by the sub-contractor for the project completion. SPIO should issue the approval of the project completion in consultation with the PSB.

Step 25 – Meetings of WUGs on establishment of WRMB

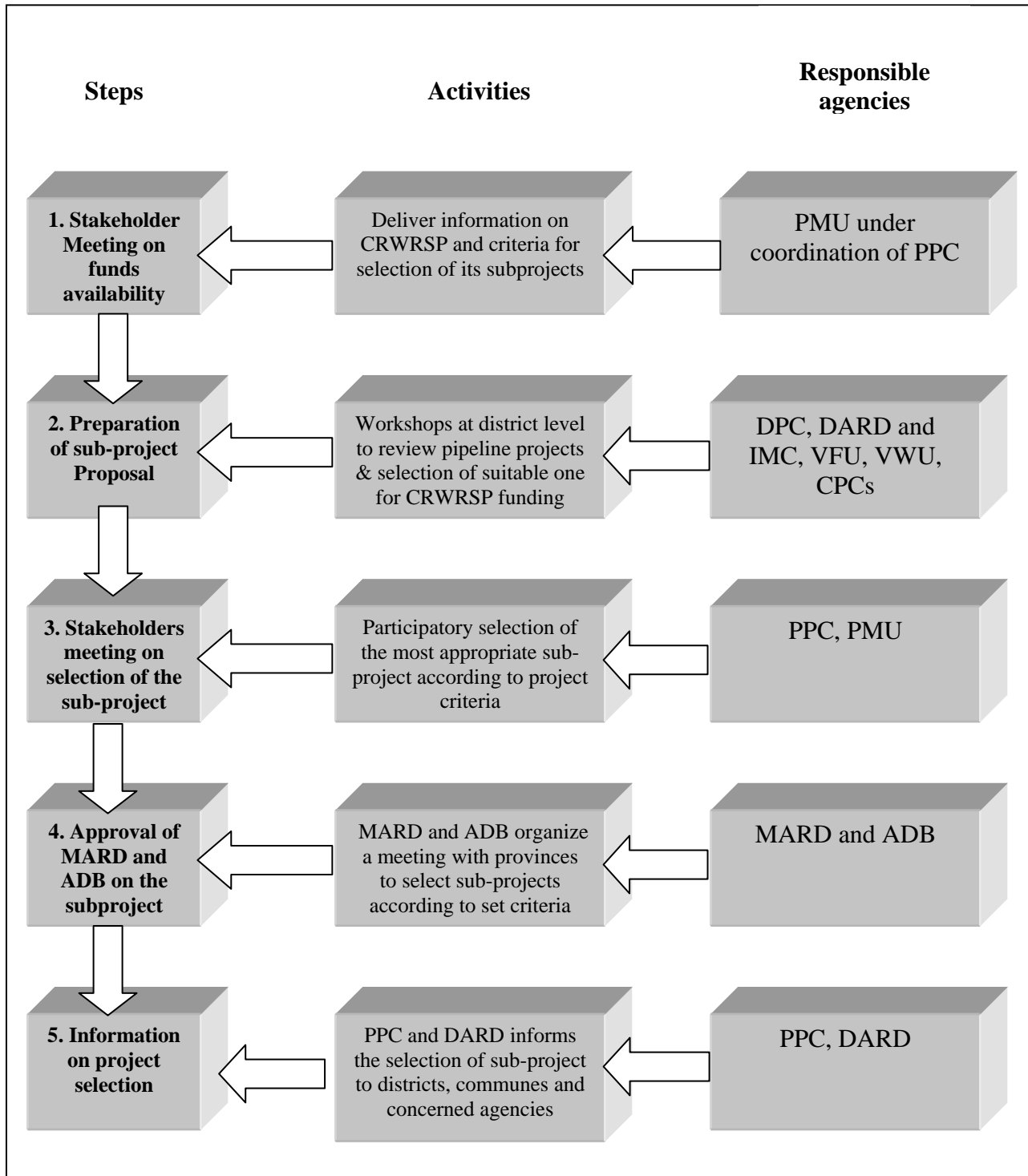
After the construction is complete, the ownership of the water resource system is transferred from the SPIO to the IMC. The IMC will decide to contract with agricultural cooperatives in the project areas on water-use fee collection and maintenance of the project if the cooperatives are working effectively in line with the 2003 Cooperative Law. If the cooperatives in the project areas do not exist or are unhealthy, the WUGs will establish Water Resource Management Boards (WRMB). Members of the WRMB are voted by members of the WUGs. WRMB is accountable to the IMC and responsible for operation management and maintenance of the water resource system in its respective commune. WRMB will sign annual contract with the IMC, in which the percentage share of water-use fee collection is negotiated and defined. It is encouraged that WRMB retain most of the amount for its self-maintenance of the water resource system in its commune areas. WRMB will lead the WUGs throughout the operation and maintenance process, which is based on decisions of the meetings of WUGs members.

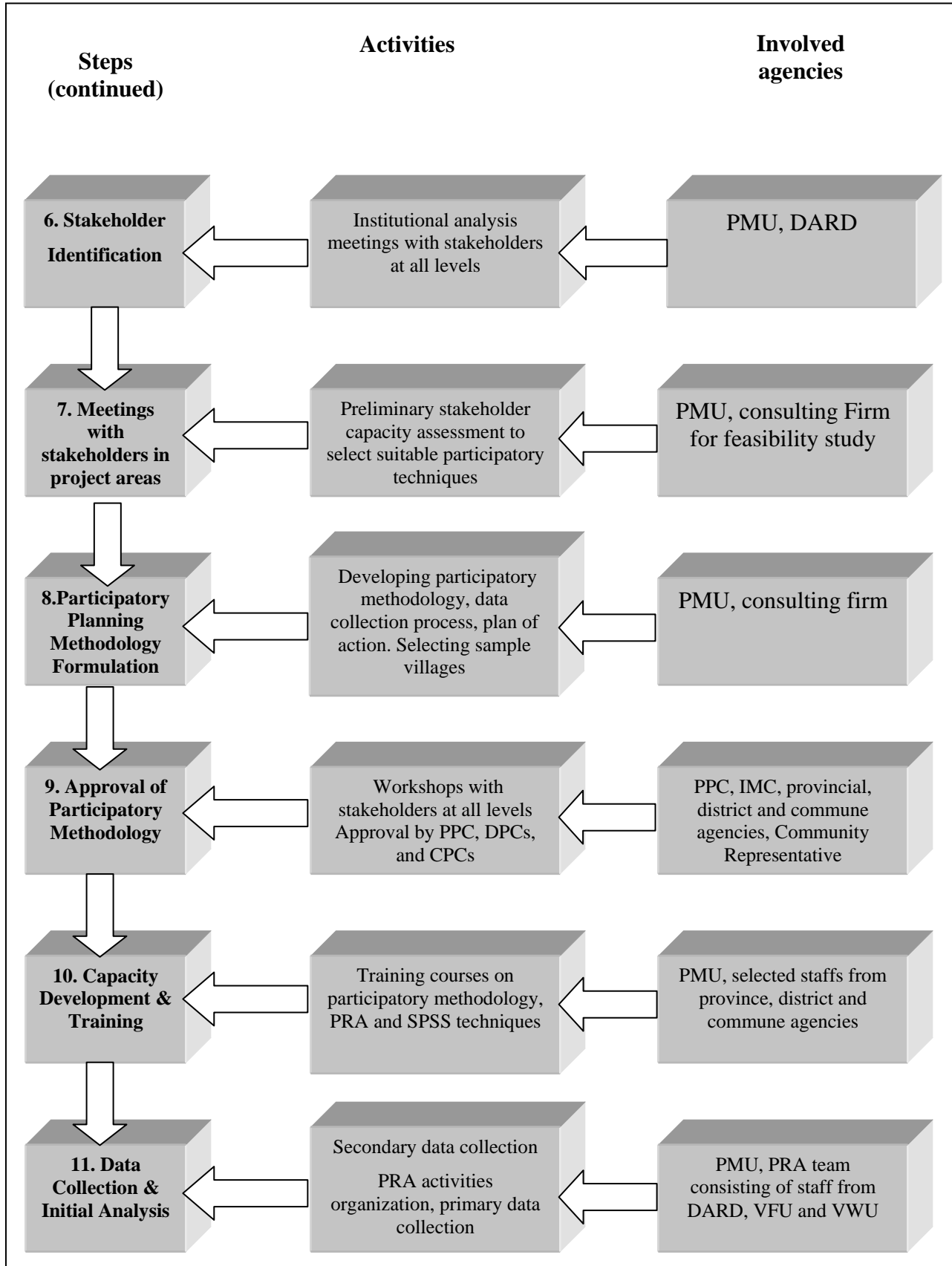
Step 26 – Institutionalization of WRMB and WUG

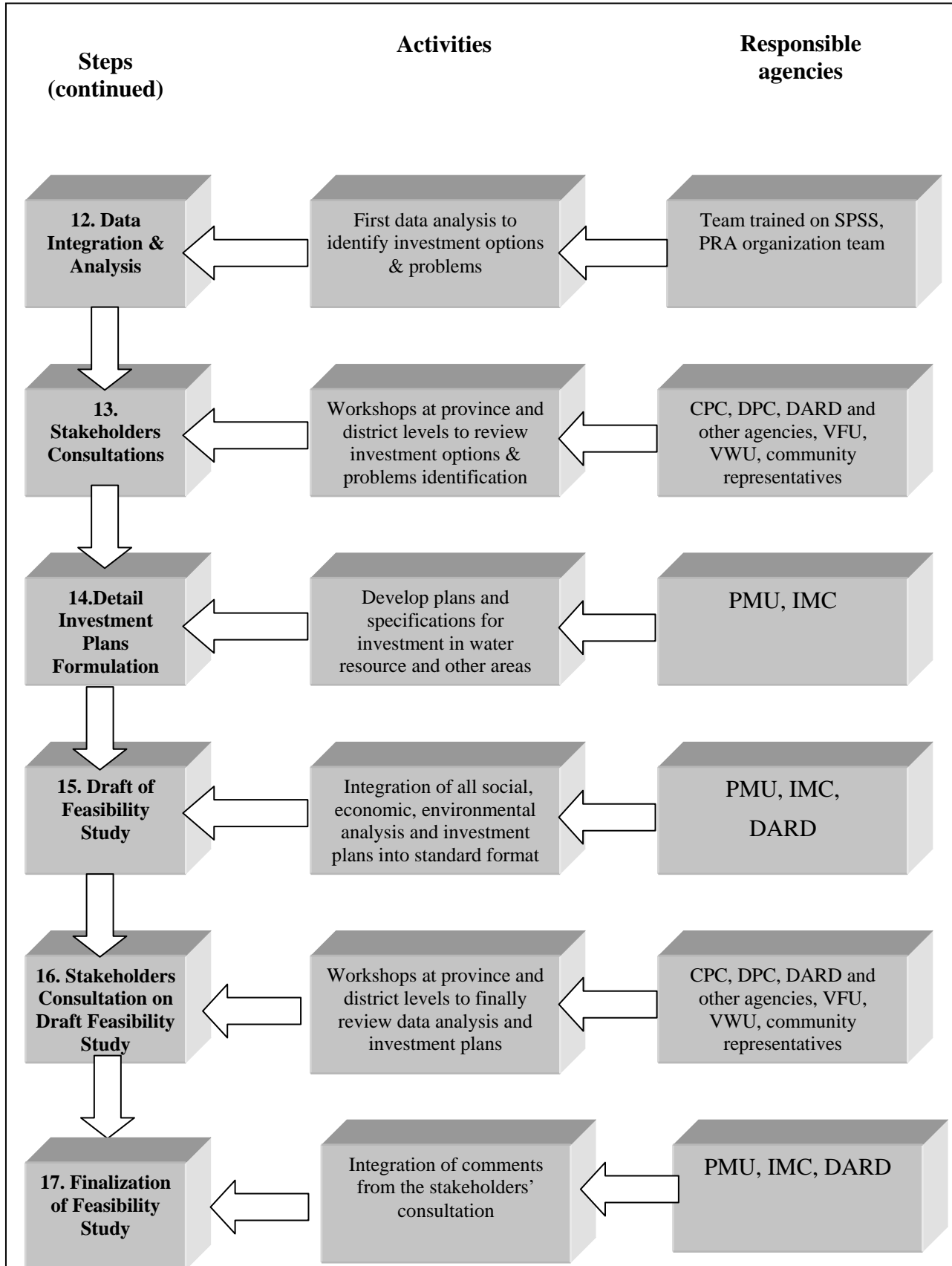
PPC issues a decision at the provincial level to stipulate an Operation Manual of WRMB and WUG in line with the policy of Participatory Irrigation Management (PIM).

The following pages contain the figures that illustrate the steps of the participatory model described above.

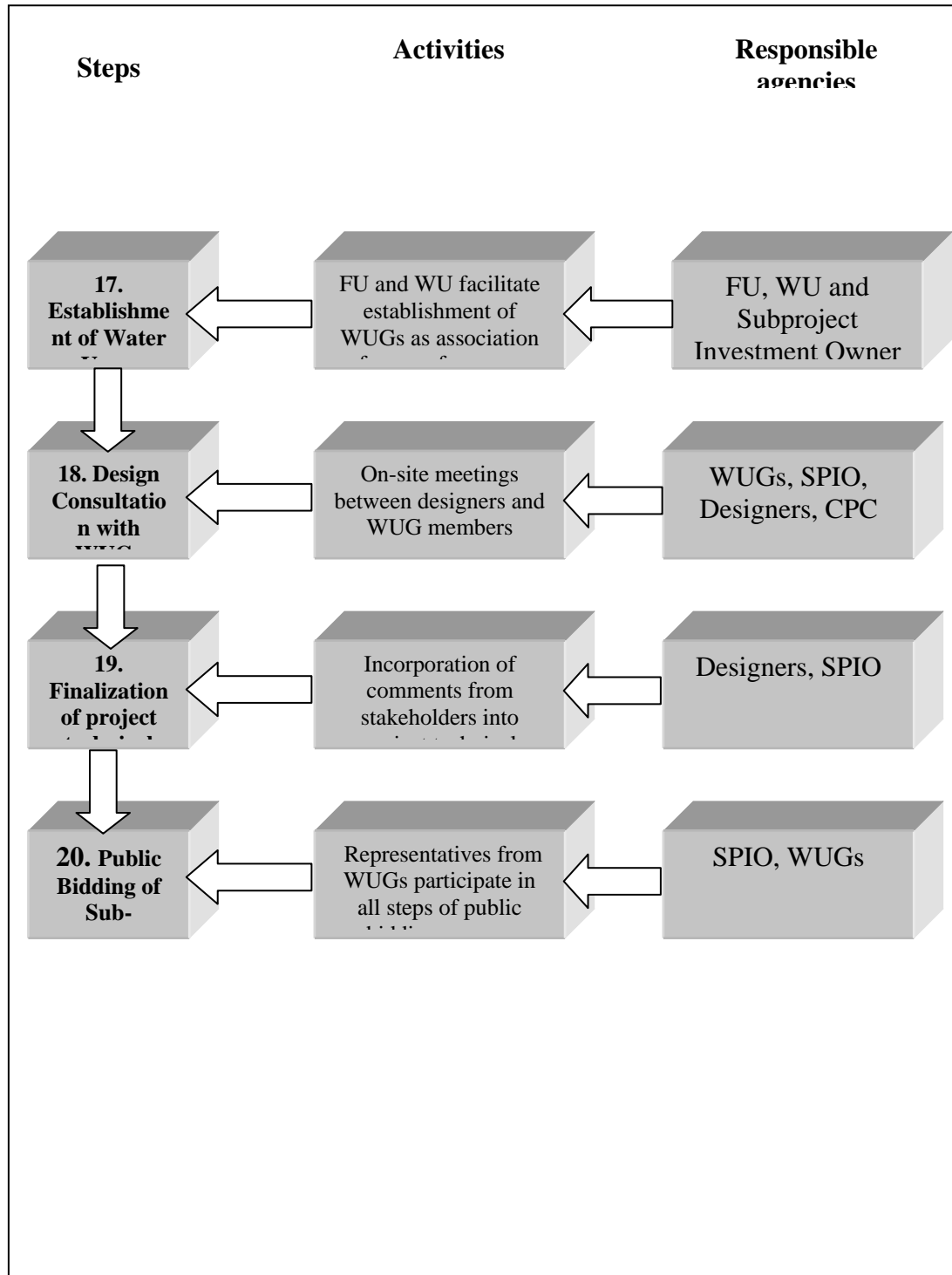
Phase 1 – Investment preparation

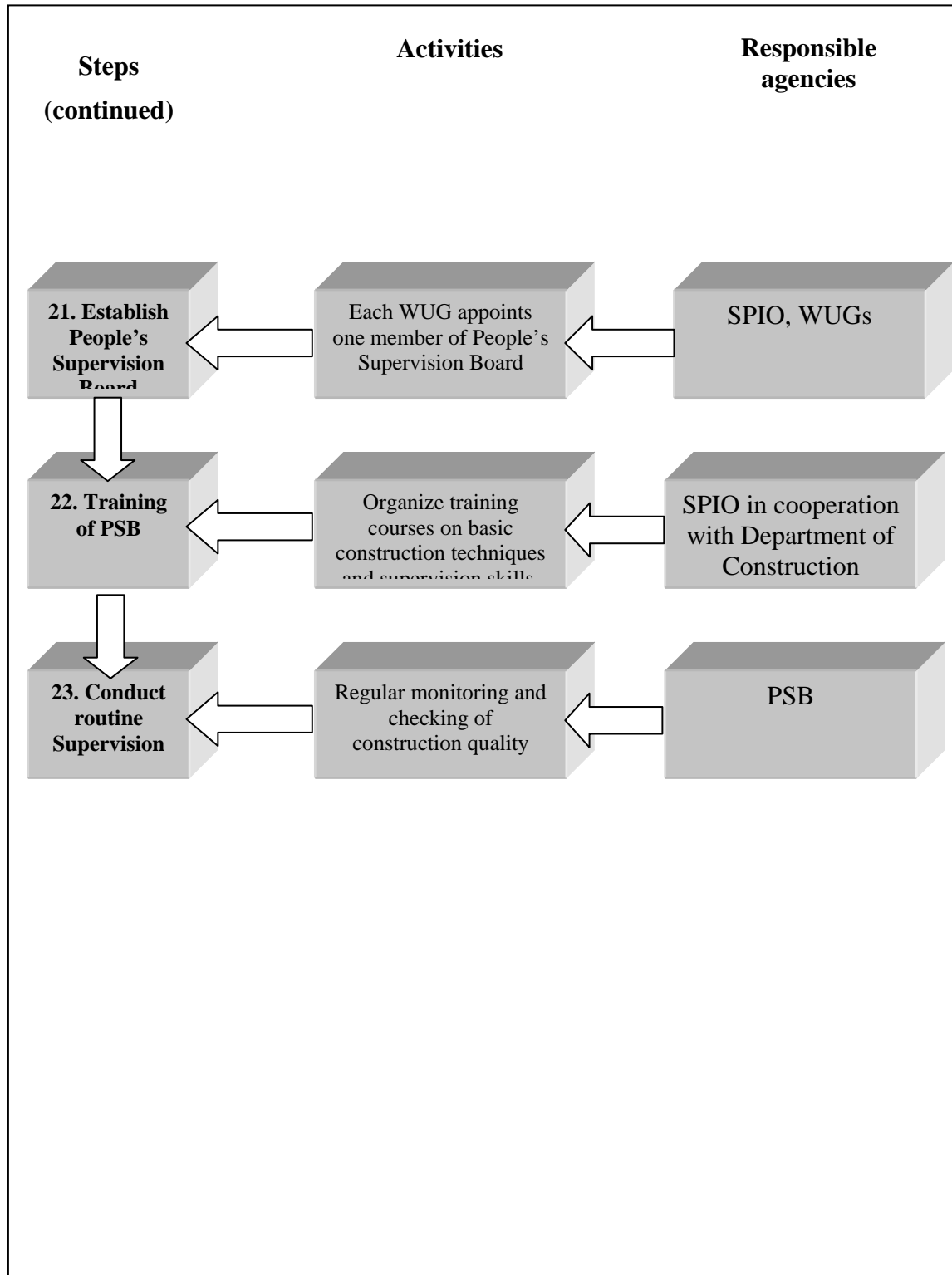






Phase 2 – Construction implementation





Phase 3 – Construction completion and operation and maintenance

