
HighARCS PROJECT COMMUNICATION STRATEGY

including

FIELD GUIDE TO PROJECT
COMMUNICATION PLANNING

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COMMUNICATION PLANS PER FIELD SITE

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1. CME STRATEGIC FRAMEWORK

- Serve as nexus of information banking and exchange among Project beneficiaries
- Facilitate communication planning per field site and monitor the implementation of the plans
- Communicate findings and results (electronic, print and broadcast) of regional reports and plans in support of country beneficiaries (e.g. summary of regional findings, etc.) and to promote partnerships with international institutions (e.g. peer reviewed publications, etc.)
- Communicate progress of the Project based on field monitoring activities
- Develop history of Project experience (using the appropriate media) based on Project assessments and evaluation

Components	Activities	Main Collaborators
1. Nexus of information banking, exchange and dissemination	1.1. Set up project website and discussion forum linked to website of FIN	1-10
	1.2. Update regularly database	1-10
	1.3. Firm up Communication Strategy during project meeting or workshop	1-10
	1.4. Agree on communication, monitoring and evaluation design as system of cooperation and collaboration cutting across all project levels	1-10
	1.5. Identify and phased recruitment of personnel	1-10
	1.5. Organize the production of directory of beneficiaries-partners and major stakeholders	1-10
	1.6. Identify main target audiences of communication media-materials	1-10
	1.7. Coordinate production and distribution of information package that will introduce project to stakeholders and mass media	1-10
	1.8. Coordinate production and distribution of information package that will introduce project sites (using Situational Analysis) to stakeholders and mass media	1-10
2. Country Communication Plan	2.1. Agree with Project beneficiaries on major points in developing communication plans per country	2,3,4,5,9
	2.2.. Coordinate assessment of current media interest and use on highland aquatic resources at local and national levels	2,3,4,5,9
	2.3. Coordinate identification of types of information and information materials intended for partners, interest groups and mass media	1,6,7,10
	2.4.. Coordinate workshops for the development of communication plan per country, emphasizing who are the target audiences of Project communication and the feedback mechanism from target audience to Project	2,3,4, 5,9
	2.5. Update project beneficiaries on overall results	1,6,7,8 &

Components	Activities	Main Collaborators
	of country communication plans and monitor implementation of the plans	2,3,4,5,9
3. Regional Reports and Plans	3.1. Access <i>Situational Appraisal Report [month 11]</i> and develop information materials (overview and summary) per field site and aggregated	2,3,4,5,9
	3.2. Access Site Project Reports and develop package of information materials based on these reports <ul style="list-style-type: none"> • <i>Report on institutions, policy context and markets</i> [month 18] • <i>Report on highland aquatic ecosystem services and biodiversity values</i> [month 21] • <i>Report on livelihoods dependent on highland aquatic resources, derived goods and services</i> [month 22] • <i>Report on stakeholder evaluation of highland aquatic resources</i> [month 22] • <i>Report on approaches with stakeholders to implement and monitor CAPs</i> [month 25] 	2,3,4,5,9
	3.3. Access Site Action Plans from 5 field sites and develop appropriate information materials based on these plans <ul style="list-style-type: none"> • <i>Conservation Action Plans</i> [month 23] • <i>Livelihood Action Plans</i> [month 23] • <i>Policy Action Plans</i> [month 25] 	2,3,4,5,9
4. Communicating Progress	4.1. Develop package of information materials on Project progress based on periodic activity and management reports	2,3,4,5,9
5. Communicating Impact	5.1. Develop package of information materials (e.g. lessons and better practice guide; etc.) based on aggregate findings from Project assessments <ul style="list-style-type: none"> • <i>Report on Change in ecosystem indicators</i> [month 43] • <i>Report on ecosystem-based outcomes</i> [month 43] • <i>Report on implementation, impact, and effectiveness of CAPs and LAPs from a sustainable livelihoods perspectives</i> [month 43] • <i>Report on institutional and policy impact of action plans formulated and implemented at field sites</i> [month 43] • <i>Report on effectiveness of PAPs with respect to formulating policy in support of conservation and wise use of highland aquatic resources</i> [month 43] 	1-10
	5.2. Document proceedings of regional workshops [month 46] and develop information package based on results	1-10

1.1 CME Procedures

- FIN of WP2 will manage a system (nexus) that banks, exchanges and disseminates information of the Project. The primary communication medium will be the internet. A website dedicated to this form of cooperation and collaboration has been established.
- Project beneficiaries operating in the 5 field sites will manage respectively a system of information-giving and feedback with primary stakeholders. This system will be reflected in the Communication Plan in each field site.
- WP2 will coordinate Communication Planning in the 5 field sites. It will collaborate with Project beneficiaries in 5 field sites in monitoring the implementation of the Communication Plan.
- Reports and Plans generated in the 5 field sites will be stored at the nexus. Information from reports and plans will be communicated to all Project beneficiaries and may be used as the subject of internal discussion for purposes of monitoring progress and analysis.
- Reports, in parts or aggregated, from the 5 field sites will be used and packaged as information materials that will serve the purposes of the Project.
- Assessment of project experience in all 5 field sites will be documented and will be communicated to Project beneficiaries.
- Evaluation of the Project will be documented and communicated to Project beneficiaries.
- The documented results of assessments and evaluations will be used to develop information materials.

1.2 Content Outline of Information for Stakeholders and Mass Media Practitioners

The modules can be packaged as a whole or into combined materials for project stakeholders and mass media practitioners using electronic, print and audio-visual media:

- The significance of Aquatic Resources and Biodiversity
- Rationale of the Project
- Main Participants and their Roles
- Profiles of Project Sites
- Objectives and Expected Outcomes that will benefit target groups
- Approaches to be applied and Main Project Activities
- Glossary of Terms

1.3 Content Outline of Information Indicating Resource Biodiversity Conditions in Project Sites to Stakeholders and Mass Media

- species distribution
- assessment of species threatened status

- identification of major threats
- species of livelihood and economic importance
- competitions or conflicts for resources
- current and traditional practices on conservation and sustainable management

1.4 Content Outline of Communication Plan per Project Site

- who are the communications stakeholders
- what are current knowledge and attitudes towards highland aquatic resources, biodiversity and ecosystem services
- what are causes of competition or conflicts related to aquatic resources
- what are demands and expectations of primary stakeholders (disaggregated according to well-being, age and gender), and local and national institutions
- what new knowledge or products from the project could possibly benefit them
- what types of information and media support could help address the demands expressed by the groups
- who will implement the plan, what are project resources required, and when are results expected
- what is the feedback mechanism from target groups to project and who will be responsible in making it functional

2. FIELD GUIDE TO CME PLANNING AND IMPLEMENTATION

2.1 Identifying Stakeholders

Identify the stakeholders who will participate in the research, planning and implementation processes using the Situational Analysis Report. A useful method is to relate ecosystem services with groups of people or communities who benefit from these services or who are negatively affected when services become insufficient or seriously disturbed. Four different types of services are subject to investigation:

- Provisioning Services include food (production of fish, wild game, fruits and grains), fresh water (storage and retention of water for domestic, industrial, and agricultural use), fibre and fuel (production of logs, fuel-wood, peat, fodder), biochemical (extraction of medicines and other materials from biota), genetic materials (genes for resistance to plant pathogens, ornamental species and so on).
- Regulating Services are related to climate regulation (source of and sink for greenhouse gases; influence local and regional temperature, precipitation, and other climatic processes), water regulation/hydrological flows (groundwater recharge/discharge), water purification and waste treatment (retention, recovery, and removal of excess nutrients and other pollutants), erosion regulation (retention of soils and sediments), natural hazard regulation (flood control, storm protection) and pollination (habitat for pollinators).

- Cultural services are related to spiritual and inspirational (source of inspiration; many religions attach spiritual and religious values to aspects of wetland ecosystems), recreational (opportunities for recreational activities), aesthetic (many people find beauty or aesthetic value in aspects of wetland ecosystems), educational (opportunities for formal and informal education and training).
- Supporting Services of aquatic ecosystems mainly include soil formation (sediment retention and accumulation of organic matter), nutrient cycling (storage, recycling, processing, and acquisition of nutrients).

The stakeholders can be divided into five general categories:

- Those who are directly dependent on aquatic resources for livelihood and household needs (e.g. fisher folks);
- Those who have access to and use of the aquatic ecosystem but are not directly dependent on aquatic resources as traditional way of life (e.g. operators of factories and power plants; tourism operators; real estate developers; families that use the aquatic environment as outlet for sewage or for dumping garbage);
- Those who have no direct access to the aquatic ecosystem but benefit from aquatic resources (e.g. farmers who use water from ecosystem for irrigation; residents whose source of water supply are in the aquatic ecosystem; residents who acquire or purchase aquatic resources for food);
- Those who formally mediate and officially regulate the access and use of the aquatic ecosystem (e.g. local policy-makers; government authorities; concerned members of the academe; traditional community leaders); and
- Those who broker or facilitate the flow of information to the public regarding the state of the aquatic ecosystem (e.g. mass media practitioners; school teachers; religious leaders).

The groups in each category may vary in types from site to site.

Key stakeholders are to be identified. They are the groups whose participation in the research, planning and implementation processes is either crucial or indispensable. They are priority communication targets of the project:

- a. Those who are directly dependent on aquatic resources for the livelihood, food and household needs;
- b. Those whose social or economic activities are directly affecting (positive or negative) the quality of the aquatic ecosystem; and
- c. Those who are responsible in regulating access and use of the aquatic ecosystem and related ecosystems.

2.2. CME Objectives

There are specific CME objectives that are directly linked to two pillars of the project:

- the participation of stakeholders in the research, planning and implementation processes of the project, and
- the capability of key stakeholders to implement the joint plan.

The Field Teams may adapt or modify the objectives mentioned herein in their CME field plans.

- To engage key stakeholders in the research, planning and implementation processes of the project

Communication exchange between Field Team and the target stakeholders will be established and maintained to facilitate participation of key stakeholders, usually through their representatives, in the research, planning and implementation processes. Only through active participation and collaboration can stakeholders learn to own and manage the processes that will allow them to find solutions to their problems.

- To facilitate the mobilization of resources by stakeholders for information dissemination and plan implementation

The research studies in conservation, livelihood and institutional reform will reveal the various factors contributing to the problem situation. This deeper understanding of circumstances will help stakeholders, especially the fisherfolk, devise strategies and interventions to address the issues and to include these in action plans. The implementation of these plans will require resources that are available locally and can be generated through networking activities. A broad social and political exposure of the project will increase the chances of shaping public opinion and achieving vital results.

- To build the capacity of core groups among key stakeholders

Priority will be given to improving the ability of the fisherfolk to organize, advocate for and collaborate with other stakeholders in implementing plans related to ecosystem conservation; livelihood opportunities, and enforcement of policies.

2.3 Information Needs of Stakeholders

Seriously consider information needs of each group or cluster of stakeholders if they are to participate in the research, planning and implementation processes in the field sites.

Information Package	Purpose	CME Engagement
A. Research		
<ul style="list-style-type: none"> • Purpose and function of HighARCS • The Project process and the role of partners 	<ul style="list-style-type: none"> • Introduce or familiarize target stakeholders with the project e.g. <ul style="list-style-type: none"> - site selection - village entry 	Meetings and consultations (formal or informal)
<ul style="list-style-type: none"> • The relationship of conserving the aquatic ecosystem to socio-cultural and economic development of the people • The livelihoods and the way of life that are at risk if the quality of the aquatic ecosystem deteriorates • Laws and regulations on the access and use of the aquatic resources that apply to the field site 	<ul style="list-style-type: none"> • Educate target stakeholders on the importance of using a research framework involving conservation, livelihood and policy-making e.g. <ul style="list-style-type: none"> - forum to get support of local authorities; local leaders; members of mass media 	Lecture & discussion
<ul style="list-style-type: none"> • Introduction of research methods, of guidelines on how stakeholders will participate, and of schedules of research activities 	Prepare lead persons in every group of stakeholders who will be involved in research activities e.g. <ul style="list-style-type: none"> - PRA, interviews, focus group discussion, etc. 	Orientation briefing
B. Planning		
<ul style="list-style-type: none"> • Feedback on research findings per stakeholder group or per cluster of stakeholder groups 	<ul style="list-style-type: none"> • Validate research findings • Facilitate analysis 	Presentation & discussion (possibly per stakeholder group or per cluster of stakeholder groups)
<ul style="list-style-type: none"> • Guidelines on multi-stakeholders planning per stakeholder group or cluster of stakeholder groups 	<ul style="list-style-type: none"> • Set targets and strategies; define activities and tasks; design management structure; identify monitoring and evaluation indicators; and determine required resources 	Lecture & workshop (possibly per stakeholder group or cluster of stakeholder groups)
<ul style="list-style-type: none"> • Guidelines on consolidating stakeholders' plans 	<ul style="list-style-type: none"> • Consolidate multi-stakeholders plans 	Workshop on synchronizing and harmonizing plans with representatives from various stakeholders involved
C. Plan implementation		
<ul style="list-style-type: none"> • The advantages of being organized and how to organize to fulfill roles in the action plan 	<ul style="list-style-type: none"> • Organize fisherfolk and those directly dependent on aquatic resources themselves into an association or informal group for plan implementation, for networking, and for mobilizing necessary resources 	training-seminar for fisherfolk and stakeholders directly dependent on aquatic resources (including women and youth)

Information Package	Purpose	CME Engagement
<ul style="list-style-type: none"> The importance of forming a management mechanism among stakeholders to monitor and advocate for the implementation of the integrated plan 	<ul style="list-style-type: none"> Form management mechanism comprising of partners-stakeholders 	Seminar-workshop involving representatives of partners-stakeholders
<ul style="list-style-type: none"> The importance of conducting an evaluative survey on implementation of action plans 	<ul style="list-style-type: none"> Form an evaluation group comprising of Field Team members and project partners-stakeholders 	Seminar-workshop

There is no substitute to face-to-face interaction in communication exchange. This has to be stressed in the conduct of CME engagements. Brochures, flyers and other information materials support the retention and further understanding of the messages conveyed to stakeholders. Such information materials also help bolster the relationships formed between Field Team and stakeholders during face-to-face meetings, consultations, seminars and workshops.

Mass media and institutional support to the research and planning activities has to emerge as a result of close and continuous collaboration among fellow stakeholders. Hopefully, this will prevent raising false expectations that HighARCS is in a position to mount a media blitz or a promotion campaign, and has the resources to do so. Eventually, the scale and intensity of stakeholders' support to the research, planning, and implementation processes will increase the chances of the project in fulfilling its goal.

Here is a review of CME engagements and the basic tools required by the Field Team. Each engagement fosters rapport and increases opportunities for cooperation between the Field Team and the target stakeholders.

Information Package	CME Engagement	Media Tools
A. Research		
<ul style="list-style-type: none"> Purpose and function of HighARCS The Project process and the role of partners 	Meetings and consultations (formal or informal) with stakeholders to introduce or familiarize them with the project	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board; brochure; website
<ul style="list-style-type: none"> The relationship of conserving the aquatic ecosystem to socio-cultural and economic development of the people 	Lecture & discussion to educate stakeholders on the importance of using a research framework involving conservation, livelihood and policy-making	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board;

Information Package	CME Engagement	Media Tools
<ul style="list-style-type: none"> The livelihoods and the way of life that are at risk if the quality of the aquatic ecosystem deteriorates Laws and regulations on the access and use of the aquatic resources that apply to the field site 		<ul style="list-style-type: none"> printed handouts
<ul style="list-style-type: none"> Introduction of research methods, of guidelines on how stakeholders will participate, and of schedules of research activities 	Orientation briefing of lead persons in every group of stakeholders who will be involved in research activities (e.g. PRA, interviews, focus group discussion, etc.)	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board;
B. Planning		
<ul style="list-style-type: none"> Feedback on research findings per stakeholder group or per cluster of stakeholder groups 	Lecture & discussion with stakeholders. The Field Team gives feedback on the research, facilitates analysis	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board
<ul style="list-style-type: none"> Guidelines on multi-stakeholders planning per stakeholder group or cluster of stakeholder groups 	Lecture & workshop among planners from different sets of stakeholders to set targets and strategies; define activities and tasks; design management structure; identify monitoring and evaluation indicators; and determine required resources	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board
<ul style="list-style-type: none"> Guidelines on consolidating stakeholders' plans 	Workshop on synchronizing and harmonizing plans of stakeholders	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board
C. Plan implementation		
<ul style="list-style-type: none"> The advantages of being organized and how to organize to fulfill roles in the action plan 	Training-Seminar for fisherfolks, including women and youth, on organizing themselves into an association for plan implementation, for networking, and for mobilizing necessary resources	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board; printed handouts
<ul style="list-style-type: none"> The importance of forming a management mechanism among stakeholders to monitor and advocate for the implementation of the integrated plan 	Seminar-Workshop involving representatives of stakeholders who will form the management mechanism	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board
<ul style="list-style-type: none"> The importance of conducting an evaluative survey on implementation of action plans 	Seminar-Workshop involving Field Team members and project partners on evaluation	<ul style="list-style-type: none"> Powerpoint presentation; flipchart and writing board

There are three main considerations in the conduct of such activities:

- the language of the audience (attending stakeholders);
- appropriate technology used depending on local conditions (e.g. availability of electricity); and
- the ability of assigned team members to communicate with the audience (skills, knowledge and attitude).

2.4 Formulating Core Messages

Core messages are brief statements that convey to a broad public the concerns of the project related to the ecosystem. It is important to communicate core messages because research studies may be too voluminous or complex for target stakeholders to go through.

There will be two types of core messages:

- messages that describe the problem(s) to be confronted, the extent of the problem(s), and the urgency of the situation; and
- messages that describe efforts to effectively address the problems.

Inherent in these messages is the vital connection between ecosystem and human well-being.

2.5 Monitoring the CME Plan

The CME plan is all about stakeholders' participation in the research, planning and implementation phases of the project through a process of communication and interaction with the Field Team. Participation of stakeholders is key to achieving project goals. Thus, monitoring indicators geared towards determining the quantity and quality of stakeholders' participation must be assessed regularly.

Monitoring is about guided implementation of activities. It is about supervision through the project period. The project may employ a mix of quantitative and qualitative indicators.

- Number of CME engagements and participating stakeholders
- Defined role of principal stakeholder and their activities (conservation and livelihood)
- Defined role women in the planned activities
- Defined mechanism for cooperation/collaboration of stakeholders for plan implementation
- Implemented activities per stakeholder group
- Actual activities wherein stakeholders collaborate or cooperate
- Capacity-building activities for principal stakeholder (those directly dependent on aquatic resources)

In monitoring and evaluating the project, there must be a “mechanism” or group of people who represent the Project (member of the field team); the principal stakeholder or member(s) of the community or groups whose livelihood and culture depend on the aquatic environment; regulators or policy-makers who are significantly involved in conservation and in use of aquatic resources. It might be a bigger group. But Project must make sure that the voice of the principal stakeholders will not be drowned. So what is needed:

- principal stakeholders need to be organized for implementing the project and would need to build their capacity to be organized and manage the aquatic resources; and
- principal stakeholders have adequate representation in mechanism for cooperation and collaboration among stakeholders.

Capacity-building for principal stakeholders (community or community groups whose livelihoods depend on aquatic resources) on the following is needed:

- how to become organized (e.g. imperative in China site);
- how to plan;
- how to implement or manage plan;
- how to evaluate plan
- how to engage in advocacy activities

The principal stakeholders need to network with other stakeholders whose interests are aligned with them (e.g. fishers and tourist operators). This can include mass media practitioners and even policy makers.

Evaluation of the CME plan will be viewed within the framework of stakeholders’ participation after each monitoring period.

There is another evaluation that will take place towards the end and/or after the project period. This end-project evaluation is about determining the overall effect or impact of the project on the key stakeholders (the specific groups or communities who directly interact with the aquatic resources).

The end-project evaluation should include CME indicators which are about the participation, capacity-building, and collaboration among key stakeholders:

- e.g. number and quality of organizations of principal stakeholders
- e.g. involvement in planning process
- e.g. representation in management mechanism

3. CME PLAN FOR THE SHAOGUAN FIELD SITE

3.1 Area Focus

- Beijiang River ecosystem in Shaoguan City, Guandong province

3.2 Goal

- Conservation and sustainable utilization of aquatic resources in Beijiang River through the new development strategy options

3.3 Situation Analysis

Fishing activity in Beijiang River has declined from 8,000 tons annually in the 1950s to 2,000 tons since 2000. According to the fish investigation in the 1990s, there were 144 species in Beijiang River. However, most of the fish species captured in recent years are of lower commercial value. Conservation species, such as the Asian giant soft-shell turtle, the marbled eel, hilsa herring, wattle-necked soft-shelled turtle, and the *Luciobrama macrocephalus* have become very rare.

Hydroelectric dams, sand mining, and pollution are the main factors that have influenced the current state of aquatic resources. The dams have caused the following effects:

- cut off the migration routes of various fish species;
- reduced the shallow breeding sites of many fishes and eliminates some hydrophytes; and
- slowed down the water flow into a static situation.

Sand mining is destroying the river bed which is the habitat of many fish and aquatic plant species. Shallow sand beds, which serve as egg-laying sites of several species, have disappeared in many portions of the river. Pollution from domestic and commercial sources has also significantly contributed to the deterioration of water quality.

Of the 500 households directly dependent on fishing and gathering of aquatic resources, only 180 families have acquired fishing licenses. Only those with license can avail of fuel subsidy for fishing vessels. Because most fishers don't own land, their sources of livelihood are not as diversified as farmers. Elderly fishers do not have insurance (compared to farmers). There are no formal or informal organizations of fishers. Fishers are usually husband and wife working together. All fishers do not hope their children to take on fishing as a livelihood. Generally children of fishers go to the urban areas to find a job after they finish junior secondary high school.

The government has established nine conservation areas of 3,780 hectares in order to protect the biodiversity in Shaoguan. Government has also imposed strict regulations to minimize commercial and domestic pollution. However, the attempts to contain the damage to the environment has been insufficient, given the continued decline of aquatic resources and the growing socio-economic difficulties being encountered by families directly dependent on the river for their livelihood.

3.4 Research Concerns and Objectives

The Field Team identified four major concerns. These are presented in relation to Project Objectives:

Concerns	Objectives
The decline of the fish population and other aquatic resources	To investigate and evaluate biodiversity of aquatic resources and ecosystem services in Beijang River
Causes of decline initially related to dam building, sand mining, pollution	To analyze the key factors that contribute to the decreasing aquatic resources
	To identify stakeholders, their roles and linkages in relation to highland aquatic resources in Beijang River
The poor and insecure life of fisherfolk (households or communities largely dependent on catch or harvest of aquatic resources)	To identify who they are, where they are located, and what is their current livelihood situation
	To identify possible development strategies to improve livelihood of households dependent on aquatic resources
Efforts to control the damage to aquatic resources have been done by both government, industries and other stakeholders, however, these are not enough	To formulate and implement action plans to enhance aquatic resource conservation and the livelihood of poor communities dependent on aquatic resources

The deterioration of the aquatic ecosystem has far reaching consequences. If the loss of aquatic resources is perceived to be the problem only of fisherfolk or communities directly dependent on aquatic resources, there's a risk that other key stakeholders will not be sympathetic to conserving the threatened ecosystem and will not feel the urgency to participate in the project processes.

3.5 Specific CME Objectives

- To engage key stakeholders in the research, planning and implementation processes of the project

Communication exchange between Field Team and the target stakeholders will be established and maintained to facilitate participation of key stakeholders, usually through their representatives, in the research, planning and implementation processes. Only through active participation and collaboration can stakeholders learn to own and manage the processes that will allow them to find solutions to their problems.

- To facilitate the mobilization of resources by stakeholders for information dissemination and plan implementation

The research studies in conservation, livelihood and institutional reform will reveal the various factors contributing to the problem situation. This deeper understanding of

circumstances will help stakeholders, especially the fisherfolk, devise strategies and interventions to address the issues and to include these in action plans. The implementation of these plans will require resources that are available locally and can be generated through networking activities. A broad social and political exposure of the project will increase the chances of shaping public opinion and achieving vital results.

- To build the capacity of core groups among key stakeholders

Priority will be given to improving the ability of the fisherfolk to organize, advocate for and collaborate with other stakeholders in implementing plans related to ecosystem conservation; livelihood opportunities, and enforcement of policies.

3.6 Main CME Activities for Field Teams

Identify Stakeholders as Target Audiences

Stakeholders will be identified by relating ecosystem services with groups of people or communities who benefit from these services or who are negatively affected when services become insufficient or seriously disturbed. The Field Team selected four different types of services and what these mean to people:

- Supporting Services of aquatic ecosystems mainly include (a) transportation passage; (b) habitat for flora and fauna and sustains biodiversity; (c) soil and water quality
- Provisioning Services include food, water for drinking and irrigation, fuel, biochemistry products, gene resources; power generation (through hydroelectric dams); minerals for industries, etc.
- Regulating Services are related climatic regulation, hydrological regulation, natural flood control, soil erosion control, etc.
- Cultural Services are related to religious practices, sports and entertainment, tourism, the arts, etc.

There are five types of stakeholders that avail or access these services:

- a. Those directly dependent on aquatic resources for livelihood and household needs
 - fisherfolks
 - families whose cultural practices are directly linked to the presence of the aquatic ecosystem
- b. Those who have access to and use of the aquatic ecosystem but are not directly dependent on aquatic resources as traditional way of life
 - operators of factories, power plants, sand quarrying, restaurants

- c. Those who have no direct access to the aquatic ecosystem but benefit from aquatic resources
 - farmers who use water from ecosystem for irrigation
 - residents whose source of water supply are in the aquatic ecosystem
 - residents who acquire or purchase aquatic resources for food

- d. Those who formally mediate and officially regulate the access and use of the aquatic ecosystem
 - local policy-makers and government authorities
 - concerned members of the academe
 - traditional community leaders

- e. Those who broker or facilitate the flow of information to the public regarding the state of the aquatic ecosystem
 - mass media practitioners
 - leaders of social and educational institutions

Among the fisherfolk, those directly involved in fishing commonly are both husband and wife. Both equally participate in fish catch and in the distribution of the catch. They usually fish at night and market their catch early morning. The same women are also mainly responsible in seeing to it that the children are taken cared of and the household chores are done. Research and communication activities involving stakeholders directly involved in fisheries have to include both husband and wife.

Engagements with Stakeholders

The Project proceeds in phases. At each phase the stakeholders will need information to be able to dialogue and make decisions. Preparing information packages by the Field Team is invaluable in making these engagements with stakeholders fruitful.

Information Package	Purpose	CME Engagement
A. Research		
<ul style="list-style-type: none"> • Purpose and function of HighARCS • The Project process and the role of partners 	<ul style="list-style-type: none"> • Introduce or familiarize target stakeholders with the project e.g. <ul style="list-style-type: none"> - site selection - village entry 	Meetings and consultations (formal or informal)
<ul style="list-style-type: none"> • The relationship of conserving the aquatic ecosystem to socio-cultural and economic development of the people • The livelihoods and the 	<ul style="list-style-type: none"> • Educate target stakeholders on the importance of using a research framework involving conservation, livelihood and policy-making e.g. <ul style="list-style-type: none"> - forum to get support of local 	Lecture & discussion

Information Package	Purpose	CME Engagement
<p>way of life that are at risk if the quality of the aquatic ecosystem deteriorates</p> <ul style="list-style-type: none"> Laws and regulations on the access and use of the aquatic resources that apply to the field site 	<p>authorities; local leaders; members of mass media</p>	
<ul style="list-style-type: none"> Introduction of research methods, of guidelines on how stakeholders will participate, and of schedules of research activities 	<ul style="list-style-type: none"> Prepare lead persons in every group of stakeholders who will be involved in research activities <p>e.g.</p> <ul style="list-style-type: none"> PRA, interviews, focus group discussion, etc. 	<p>Orientation briefing</p>
B. Planning		
<ul style="list-style-type: none"> Feedback on research findings per stakeholder group or per cluster of stakeholder groups 	<ul style="list-style-type: none"> Validate research findings Facilitate analysis 	<p>Presentation & discussion (possibly per stakeholder group or per cluster of stakeholder groups)</p>
<ul style="list-style-type: none"> Guidelines on multi-stakeholders planning per stakeholder group or cluster of stakeholder groups 	<ul style="list-style-type: none"> Set targets and strategies; define activities and tasks; design management structure; identify monitoring and evaluation indicators; and determine required resources 	<p>Lecture & workshop (possibly per stakeholder or cluster of stakeholder groups)</p>
<ul style="list-style-type: none"> Guidelines on consolidating stakeholders' plans 	<ul style="list-style-type: none"> Consolidate multi-stakeholders plans 	<p>Workshop on synchronizing and harmonizing plans with representatives from various stakeholders involved</p>
C. Plan implementation		
<ul style="list-style-type: none"> The advantages of being organized and how to organize to fulfill roles in the action plan 	<ul style="list-style-type: none"> Organize fisherfolk and those directly dependent on aquatic resources themselves into an association or informal group for plan implementation, for networking, and for mobilizing necessary 	<p>Training-Seminar for fisherfolk and stakeholders directly dependent on aquatic resources (including women and youth)</p>
<ul style="list-style-type: none"> The importance of forming a management mechanism among stakeholders to monitor and advocate for the implementation of the integrated plan 	<ul style="list-style-type: none"> Form management mechanism comprising of partners-stakeholders 	<p>Seminar-workshop involving representatives of partners-stakeholders</p>
<ul style="list-style-type: none"> The importance of conducting an evaluative survey on implementation of action plans 	<ul style="list-style-type: none"> Form an evaluation group comprising of Field Team members and project partners-stakeholders 	<p>Seminar-workshop</p>

The media tools required by the Field Teams are quite basic and are not expensive: power-point presentation; HighARCS brochure; flipcharts and writing boards; and occasionally, printed hand-outs. Copies of the research study (executive summary) and the plans will have to be disseminated to the stakeholders.

There are three main considerations in the conduct of the engagement activities:

- the native and spoken language of the stakeholders;
- appropriate technology to be used (e.g. availability of electricity)
- the ability of assigned team members to communicate with the audience (skills, knowledge and attitude) and facilitate engagement activities

Formulate Core Messages

There are four core messages that can be communicated to a broad public based on the initial research of the Field Team.

- The fish population and other aquatic species are decreasing through the years in Beijiang River and this has made the lives of poor communities dependent on aquatic resources more insecure.
- The loss in aquatic resources in Beijiang River can be attributed mainly to the construction of dams, continued sand mining, and pollution.
- The action of government, industries and local communities to contain the damage to the aquatic ecosystem remains inadequate.
- If the deterioration of aquatic resources continues, it will have far reaching consequences not only on communities directly dependent on aquatic resources but other stakeholders who indirectly benefit from aquatic ecosystem services.

In the latter part of the project, the core messages will be related to addressing the problems and eventually, actual results:

- strategies and planned project interventions;
- policies and organized action among stakeholders; and
- accomplishments in conservation, livelihood and policy-making efforts.

Build Capacity of Stakeholders

As indicated in the Situational Analysis, the fishers are constrained by their lack of organization. A communication and education activity will therefore involve the capacity-building of fisherfolk to organize themselves for purposes of representation, planning and action.

The Project team will assist representatives of stakeholders in forming a management mechanism that will monitor and advocate for plan implementation, even after the life of the project. In this regard, it is necessary to assist stakeholders in forming this mechanism

and in maintaining it. Such a mechanism should not supplant or diminish the authority of existing institutions that already assume significant responsibilities regarding the aquatic ecosystem. Ideally, it should facilitate continued dialogue, study and action among the various stakeholders based on the goal previously agreed upon in the project.

3.7 Monitoring and Evaluation

The monitoring indicators are the following:

- Number of CME engagements and participating stakeholders
- Defined role of women in the plan
- Defined management mechanism of stakeholders that will implement the plan
- Implemented activities per stakeholder group
- Activities wherein stakeholders collaborate or cooperate
- Capacity-building activities for key stakeholders

Evaluation will focus on the implementation of the action plans. A survey will be conducted together with the representatives of stakeholders who will form the mechanism for plan implementation and advocacy.

4. CME PLAN IN NAINITAL FIELD SITE

4.1 Area Focus

- Nainital in Uttarkhand, India with focus on Lake Nainital

4.2 Goal

- Conservation of natural resources and sustainable development of livelihoods

4.3 Situation Analysis

Naini Lake (0.54 square kilometer) is located in Nainital district of Uttarkhand at an altitude of 1,938 meters above sea level. The lake is the basis of many tourism-based livelihood that includes boating, tourist shops and horse-riding. Nainital has a rich tradition of religious festivals, mostly Hindu. In 2003, an estimated 424,000 tourists visited the area; this increased to 518,000 in 2005.

There are ten slum areas in Nainital. The slum population accounts for 21% of the total population. Many of them reside in the catchment area of the lake. The expansion of the population and commercial tourism is exerting strong pressure on the forest ecosystem. Commercial and residential sewage that drain into the lake is polluting heavily the aquatic ecosystem. This is aggravated by reckless solid waste disposal. The garbage from the hotels

is generally disposed on the lake. It has been commonly observed that many parts of the lake are littered by plastic bags and rubbish. It has been noted that many poor communities in the lake area get their supply of drinking water from the lake. Nearby rural communities also rely heavily on the lake for irrigation water.

There is an existing Nainital Lake Conservation Project. Concern for the well-being of the lake is historical. In 1995 the Supreme Court of India made a judgment in response to a public interest litigation and recommended that specific measures be implemented to restore the quality of the lake. Fishing is limited on the lake by legal restrictions and is only permitted with a license.

4.4 Concerns and Research Objectives

There are four major concerns based on the Situational Analysis.

- Pollution of the lake remains unchecked posing a threat to the ecosystem and to those who derive their livelihood from the lake (e.g. fishing, tourism, etc.)
- Deforestation is linked to massive soil erosion that is seriously affecting the lake
- Slum communities in the lake area lack access to basic services and are poor
- Government and community efforts to conserve the lake ecosystem remain inadequate

The main research objectives include:

- To examine and assess diversity of lake-aquatic resources
- To identify and assess ecological services of ecosystem
- To evaluate the main factors that affect the highland aquatic resources
- To identify different groups of stakeholders, their roles and association with the available aquatic resources
- To recognize the feasible livelihood development strategies of local inhabitants dependent of these aquatic resources
- To formulate action plans for enhancing livelihood of the poor as well as conserving aquatic resources
- To properly implement and manage the formulated action plans

4.5 Specific CME Objectives

- To facilitate the participation of key stakeholders in the research, planning and implementation processes of the project

Communication exchange between Field Team and the target stakeholders will be established and maintained to facilitate participation of key stakeholders, usually through their representatives, in the research, planning and implementation processes.

Only through active participation and collaboration can stakeholders learn to own and manage the processes that will allow them to find solutions to their problems.

- To facilitate cooperation among key stakeholders to generate resources for information dissemination on the importance of plan implementation

The results of research studies and action plans on conservation, livelihood and institutional reform will have to be communicated to a broad public. This will require resources that are available locally and can be generated in collaboration with the government.

- To build the capacity of core groups among key stakeholders

Priority will be given to improving the ability of the fisherfolk and boat operators to organize, advocate and collaborate with other stakeholders in implementing plans related to ecosystem conservation; livelihood opportunities, and enforcement of policies. Capacity-building of core groups at community level will be needed to set up a multi-stakeholder mechanism that will support the implementation and will monitor the action plans.

4.6 Main CME Activities for Field Teams

Identify Stakeholders as Target Audiences

A useful way of identifying stakeholder is by relating ecosystem services with groups of people or communities who benefit from these services or who are negatively affected when services become insufficient or seriously disturbed. The Field Team selected four different types of services and what these mean to people:

- Supporting Services of aquatic ecosystems mainly include (a) transportation passage; (b) habitat for flora and fauna and sustains biodiversity; (c) soil and water quality
- Provisioning Services include food, water for drinking and irrigation, fuel, biochemistry products, gene resources; power generation (through hydroelectric dams); minerals for industries, etc.
- Regulating Services are related climatic regulation, hydrological regulation, natural flood control, soil erosion control, etc.
- Cultural Services are related to religious practices, sports and entertainment, tourism, the arts, etc.

There are five types of stakeholders that avail or access these services:

- a. Those who are directly dependent on aquatic resources for livelihood and household needs
 - fisherfolk
 - boat operators and their families
- b. Those who have access to and use of the aquatic ecosystem but are not directly dependent on aquatic resources as traditional way of life
 - residents and operators of commercial establishments on the lakeshore
- c. Those who have no direct access to the aquatic ecosystem but benefit from aquatic resources
 - shop owners and local vendors
 - tour operators
 - hotel and restaurant operators
 - horse owners people with occupations indirectly associated with the lake
- d. Those who formally mediate and officially regulate the access and use of the aquatic ecosystem
 - policy-makers and government executives at municipal, district and state levels
 - officials of development agencies
 - researchers from government and academic institutions
 - religious leaders
- e. Those who broker or facilitate the flow of information to the public regarding the state of the aquatic ecosystem
 - mass media practitioners
 - school teachers
 - leaders of social institutions

Engagements with Stakeholders

The Project proceeds in phases. At each phase the stakeholders will need information to be able to dialogue and make decisions. Preparing information packages by the Field Team is invaluable in making these engagements with stakeholders fruitful.

Information Package	Purpose	CME Engagement
A. Research		
<ul style="list-style-type: none"> • Purpose and function of HIGHARCS • The Project process and the role of Partners 	<ul style="list-style-type: none"> • Introduce or familiarize target stakeholders with the project <p>e.g.</p> <ul style="list-style-type: none"> - site selection - village entry 	Meetings and consultations (formal or informal)
<ul style="list-style-type: none"> • The relationship of conserving the aquatic ecosystem to socio-cultural and economic development of the people • The livelihoods and the way of life that are at risk if the quality of the aquatic ecosystem deteriorates • Laws and Regulations on the access and use of the aquatic resources that apply to the field site 	<ul style="list-style-type: none"> • Educate target stakeholders on the importance of using a research framework involving conservation, livelihood and policy-making <p>e.g.</p> <ul style="list-style-type: none"> - forum to get support of local authorities; local leaders; members of mass media 	Lecture & discussion
<ul style="list-style-type: none"> • Introduction of research methods, of guidelines on how stakeholders will participate, and of schedules of research activities 	<ul style="list-style-type: none"> • Prepare lead persons in every group of stakeholders who will be involved in research activities <p>e.g.</p> <ul style="list-style-type: none"> - PRA, interviews, focus group discussion, etc. 	Orientation briefing
B. Planning		
<ul style="list-style-type: none"> • Feedback on research findings per stakeholder group or per cluster of stakeholder groups 	<ul style="list-style-type: none"> • Validate research findings • Facilitate analysis 	Presentation & discussion (possibly per stakeholder group or per cluster of stakeholder groups)
<ul style="list-style-type: none"> • Guidelines on multi-stakeholders planning per stakeholder group or cluster of stakeholder groups 	<ul style="list-style-type: none"> • Set targets and strategies; define activities and tasks; design management structure; identify monitoring and evaluation indicators; and determine required resources 	Lecture & workshop (possibly per stakeholder or cluster of stakeholder groups)
<ul style="list-style-type: none"> • Guidelines on consolidating stakeholders' plans 	<ul style="list-style-type: none"> • Consolidate multi-stakeholders plans 	Workshop on synchronizing and harmonizing plans with representatives from various stakeholders involved
C. Plan implementation		
<ul style="list-style-type: none"> • The advantages of being organized and how to organize to fulfill roles in the action plan 	<ul style="list-style-type: none"> • Organize fisherfolk and those directly dependent on aquatic resources themselves into an association or informal group for plan implementation, for networking, and for mobilizing necessary 	Training-Seminar for fisherfolk and stakeholders directly dependent on aquatic resources (including women and youth)
<ul style="list-style-type: none"> • The importance of forming a management 	<ul style="list-style-type: none"> • Form management mechanism comprising of 	Seminar-workshop involving representatives of partners-

Information Package	Purpose	CME Engagement
mechanism among stakeholders to monitor and advocate for the implementation of the integrated plan	partners-stakeholders	stakeholders
<ul style="list-style-type: none"> The importance of conducting an evaluative survey on implementation of action plans 	<ul style="list-style-type: none"> Form an evaluation group comprising of Field Team members and project partners-stakeholders 	Seminar-workshop

The media tools required by the Field Teams are quite basic and are not expensive: power-point presentation; HighARCS brochure; flipcharts and writing boards; and occasionally, printed hand-outs. Copies of the research study (executive summary) and the plans will have to be disseminated to the stakeholders.

There are three main considerations in the conduct of the engagement activities:

- the native and spoken language of the stakeholders (3 ethnic groups);
- appropriate technology to be used (e.g. availability of electricity)
- the ability of assigned team members to communicate with the audience (skills, knowledge and attitude) and facilitate engagement activities

Formulate Core Messages

There are two core messages that can be communicated to a broad public based on the initial research of the Field Team.

- The increasing pollution of the lake is posing a threat to livelihood and to health of the people.
- The lake can provide decent and sustainable livelihoods, if the lake and its surroundings can be properly conserved.
- In the latter part of the project, the core messages will be related to addressing the problems and eventually, actual results:
 - Strategies and planned project interventions;
 - Policies and organized action among stakeholders;
 - Accomplishments in conservation, livelihood and policy-making efforts.

Build Capacity of Stakeholders

Fisherfolk and boat operators have to organize that they may be able to device a common agenda, negotiate with other stakeholders, and participate confidently in action planning. They may have to be trained to form a common association or separate organizations.

The Project team will assist chosen representatives of stakeholders in forming a mechanism that will monitor and advocate for plan implementation, even after the life of the project. In this regard, it is necessary to assist stakeholders in forming this mechanism and in maintaining it. Such a mechanism should not supplant or diminish the authority of existing institutions that already assume significant responsibilities regarding the aquatic ecosystem. Ideally, it should facilitate continued dialogue, study and action among the various stakeholders based on the goal previously agreed upon in the project.

4.7 Monitoring and Evaluation

The monitoring indicators are the following:

- Number of CME engagements and participating stakeholders
- Defined role of women in the plan;
- Defined management mechanism of stakeholders that will implement the plan
- Implemented activities per stakeholder group
- Activities wherein stakeholders collaborate or cooperate
- Capacity-building activities for key stakeholders

Evaluation will focus on the implementation of the action plans. At an agreed period, a survey will be conducted together with the representatives of stakeholders who will form the mechanism for plan implementation and advocacy.

5. CME PLAN IN BUXA FIELD SITE

5.1 Area Focus

- Buxa in West Bengal, India with focus on 16 villages

5.2 Goal

- Conservation of aquatic and forest resources to sustain the livelihood of local communities

5.3 Situation Analysis

Buxa in West Bengal is in the highland region and is part of a government-designated reserve. Water flow in the local rivers is highly seasonal. The aquatic ecosystems are restricted to some second and third order seasonal tributary streams. Nevertheless, Buxa contains the highest level of fish diversity in West Bengal. Fishing was heavily relied upon 20 years ago, but much knowledge and skills have been lost in more recent times. Aquatic resource dependency is limited. Most households are engaged in daily labour related to the forestry. Animal husbandry is an important occupation but exerts additional pressure on the local water resource, which is used for drinking, because of pollution.

The project is focused on 16 villages and 681 numbers of households with a population of 3,685. Among the three communities, each can be characterized in the following manner: (i) Most deprived community – 160 households that migrated from Bhutan; (ii) Marginalized community-182 households that migrated from Nepal and other parts of India and (iii) Dwindling Tribal community – 339 households that migrated from Bihar and Jharkhand / Ranchi.

The aquatic and forest ecosystems are inter-dependent. The quality of aquatic resources is connected to the quality of forest resources. Here is a comparative description of resources over a period of time:

1985	2010
<ul style="list-style-type: none"> • Previously there was sufficient water in the rivers so fishes were plenty • Forest products, water source, wild animals were abundant • River water was clear • The river bed was 30-40 ft low, the river was deep, water used to stay all throughout the year in the river • Water availability was more so, agriculture produce was more • Various kinds of the wild animals like Royal Bengal Tiger, Bear, Wolf, Wild Buffalo. Various kinds of deer. Different type of birds (Pakhi) such as Pali Hash (duck), Pani Wood etc. Fishes like Kodlay, Chaptey, Bwhitey, Kalurey, Hillay etc., were available. • Rivers were narrow • Boulder collection was stopped because of effect on river 	<ul style="list-style-type: none"> • Due to scarcity of water now the quantity of fish is decreasing • But now forest and aquatic resources are decreasing • Now the river water is getting polluted • But presently the river bed is getting high and the water does not stay all throughout the year • Now water is less and the agricultural work is also diminishing. • Only 40% of the natural resource sustained in this area • Rivers are wide • Collection of large stones and boulders has started again.

5.4 Concerns and Research Objectives

There are four major concerns based on the Situational Analysis.

- Aquatic and forest ecosystems are inter-connected. The reduction of aquatic resources is related to the conditions of forest resources.
- Household needs and livelihoods are directly linked to aquatic and forest ecosystems.
- The communities of Dukpas, Nepalis and Indian tribals who depend on aquatic and forest resources have no formal agreements or collaboration regarding the ecosystems that sustain them.

- Government conservation plan requires the active involvement of the highland ethnic communities.

Key research objectives for the Buxa site are:

- To examine and assess diversity of aquatic-forest resources
- To identify and assess ecological services of both ecosystems
- To evaluate the main factors that affect the highland ecosystems
- To recognize the feasible livelihood development strategies of local inhabitants dependent of these aquatic resources
- To formulate action plans for enhancing livelihood of the poor as well as conserving ecosystems
- To properly implement and manage the formulated action plans

5.5 Specific CME Objectives

- To facilitate the participation of key stakeholders in the research, planning and implementation processes of the project

Communication exchange between Field Team and the target stakeholders will be established and maintained to facilitate participation of key stakeholders, usually through their representatives, in the research, planning and implementation processes. Only through active participation and collaboration can stakeholders learn to own and manage the processes that will allow them to find solutions to their problems.

- To facilitate cooperation among key stakeholders to generate resources for information dissemination and plan implementation

The results of research studies and action plans on conservation, livelihood and institutional reform will have to be communicated to a broad public. This will require resources that are available locally and can be generated in collaboration with the government.

- To build the capacity of core groups among key stakeholders

Priority will be given to improving the ability of the fisherfolk and boat operators to organize, advocate and collaborate with other stakeholders in implementing plans related to ecosystem conservation; livelihood opportunities, and enforcement of policies. Capacity-building of core groups at community level will be needed to set up a multi-stakeholder mechanism that will support the implementation and will monitor the action plans.

5.6 Main CME Activities for Field Teams

Identify Stakeholders as Target Audiences

A useful way of identifying stakeholder is by relating ecosystem services with groups of people or communities who benefit from these services or who are negatively affected when services become insufficient or seriously disturbed.

There are three major types of stakeholders that avail or access these services:

- a. Those who are directly dependent on aquatic-forest resources for livelihood and household needs
 - Those that migrated from Bhutan are known as Dukpas. Many of the families do not have permanent houses. Animal husbandry and daily labour are main sources of income. They fish for own consumption in an area where there are no legal restrictions on fishing. Potable water is available throughout the year. They have no access to basic health service and there are no persons with special ability to provide traditional herbal treatment. The means of communication are poor, even between villages, in the rainy season.
 - The communities of Nepali descent depend on daily labour and tourism for income. Agriculture is a major occupation. Most households get training from government agency on improved cultivation and productivity. They fish for their own consumption. Most of the rivers, however, dry up during the summer. Health service is provided by local persons with special ability to use traditional forms of healing. Medicinal plants are gathered from the forests.
 - The mixed communities of tribals depend on tourism, daily labour and forest production for their income. Most of them are engaged in various forms of agriculture and have access to government assistance. They fish mainly for family consumption. There are seasonal restrictions on fishing imposed by the government. Because of the proximity to forest areas, some communities face threat of wild animals.
- b. Those who formally mediate and officially regulate the access and use of the aquatic ecosystem
 - policy-makers and government executives at municipal, district and state levels
 - officials of development agencies
 - researchers from government and academic institutions
- c. Those who broker or facilitate the flow of information to the public regarding the state of the aquatic ecosystem
 - mass media practitioners
 - school teachers;
 - leaders of social institutions

Engagements with Stakeholders

The Project proceeds in phases. At each phase the stakeholders will need information to be able to dialogue and make decisions. Preparing information packages by the Field Team is invaluable in making these engagements with stakeholders fruitful.

Information Package	Purpose	CME Engagement
A. Research		
<ul style="list-style-type: none"> • Purpose and function of HIGHARCS • The Project process and the role of partners 	<ul style="list-style-type: none"> • Introduce or familiarize target stakeholders with the project <p>e.g.</p> <ul style="list-style-type: none"> - site selection - - village entry 	Meetings and consultations (formal or informal)
<ul style="list-style-type: none"> • The relationship of conserving the aquatic ecosystem to socio-cultural and economic development of the people • The livelihoods and the way of life that are at risk if the quality of the aquatic ecosystem deteriorates • Laws and regulations on the access and use of the aquatic resources that apply to the field site 	<ul style="list-style-type: none"> • Educate target stakeholders on the importance of using a research framework involving conservation, livelihood and policy-making <p>e.g.</p> <ul style="list-style-type: none"> - forum to get support of local authorities; local leaders; members of mass media 	Lecture & discussion
<ul style="list-style-type: none"> • Introduction of research methods, of guidelines on how stakeholders will participate, and of schedules of research activities 	<ul style="list-style-type: none"> • Prepare lead persons in every group of stakeholders who will be involved in research activities <p>e.g.</p> <ul style="list-style-type: none"> - PRA, interviews, focus group discussion, etc. 	Orientation briefing
B. Planning		
<ul style="list-style-type: none"> • Feedback on research findings per stakeholder group or per cluster of stakeholder groups 	<ul style="list-style-type: none"> • Validate research findings • Facilitate analysis 	Presentation & Discussion (possibly per stakeholder group or per cluster of stakeholder groups)
<ul style="list-style-type: none"> • Guidelines on multi-stakeholders planning per stakeholder group or cluster of stakeholder groups 	<ul style="list-style-type: none"> • Set targets and strategies; define activities and tasks; design management structure; identify monitoring and evaluation indicators; and determine required resources 	Lecture & workshop (possibly per stakeholder or cluster of stakeholder groups)
<ul style="list-style-type: none"> • Guidelines on Consolidating stakeholders' plans 	<ul style="list-style-type: none"> • Consolidate multi-stakeholders plans 	Workshop on synchronizing and harmonizing plans with representatives from various stakeholders involved

Information Package	Purpose	CME Engagement
<i>C. Plan implementation</i>		
<ul style="list-style-type: none"> The advantages of being organized and how to organize to fulfill roles in the action plan 	<ul style="list-style-type: none"> Organize fisherfolk and those directly dependent on aquatic resources themselves into an association or informal group for plan implementation, for networking, and for mobilizing necessary 	Training-Seminar for fisherfolk and stakeholders directly dependent on aquatic resources (including women and youth)
<ul style="list-style-type: none"> The importance of forming a management mechanism among stakeholders to monitor and advocate for the implementation of the integrated plan 	<ul style="list-style-type: none"> Form management mechanism comprising of partners-stakeholders 	Seminar-workshop involving representatives of partners-stakeholders
<ul style="list-style-type: none"> The importance of conducting an evaluative survey on implementation of action plans 	<ul style="list-style-type: none"> Form an evaluation group comprising of Field Team members and project partners-stakeholders 	Seminar-workshop

The media tools required by the Field Teams are quite basic and are not expensive: power-point presentation; HighARCS brochure; flipcharts and writing boards; and occasionally, printed hand-outs. Copies of the research study (executive summary) and the plans will have to be disseminated to the stakeholders.

There are three main considerations in the conduct of the engagement activities:

- the native and spoken language of the stakeholders (3 ethnic groups);
- appropriate technology to be used (e.g. availability of electricity)
- the ability of assigned team members to communicate with the audience (skills, knowledge and attitude) and facilitate engagement activities

Formulate Core Messages

There are three core messages that can be communicated to a broad public based on the initial research of the Field Team.

- The well-being of upland communities depends on the quality of aquatic and forest ecosystems.
- Those whose livelihoods depend on the highland ecosystems are in the best position to conserve aquatic and forest resources.
- Government and the highland communities have to cooperate to achieve a common goal on livelihood and conservation.

In the latter part of the project, the core messages will be related to addressing the problems and eventually, actual results:

- strategies and planned project interventions;
- policies and organized action among stakeholders;
- accomplishments in conservation, livelihood and policy-making efforts

Build Capacity of Stakeholders

The three ethnic communities of Dukpa, Nepali and Indian tribal have to organize that they may be able to device a common agenda, negotiate with other stakeholders, and participate confidently in action planning. They may have to be trained to form a common association or separate organizations.

The Project team will assist chosen representatives of stakeholders in forming a mechanism that will monitor and advocate for plan implementation, even after the life of the project. In this regard, it is necessary to assist stakeholders in forming this mechanism and in maintaining it. Such a mechanism should not supplant or diminish the authority of existing institutions that already assume significant responsibilities regarding the aquatic ecosystem. Ideally, it should facilitate continued dialogue, study and action among the various stakeholders based on the goal previously agreed upon in the project.

5.7 Monitoring and Evaluation

The monitoring indicators are the following:

- Number of CME engagements and participating stakeholders
- Defined role of women in the plan
- Defined management mechanism of stakeholders that will implement the plan
- Implemented activities per stakeholder group
- Activities wherein stakeholders collaborate or cooperate
- Capacity-building activities for key stakeholders

Evaluation will focus on the implementation of the action plans. At an agreed period, a survey will be conducted together with the representatives of stakeholders who will form the mechanism for plan implementation and advocacy.

6. CME PLAN FOR QUANG TRI FIELD SITE

6.1 Area Focus

- Quang Tri province with focus on Trieu Phong district

6.2 Goal

- Sustainable development and wise use of aquatic biodiversity and enhance livelihood opportunities for the poor

6.3 Situation Analysis

There are three main river systems in Quang Tri province: Ben Hai (65 kilometer length; 809 square kilometers of watershed; 14 estuaries); Thanch Han (156 km length; 2,660 square km of watershed; 34 estuaries); and O Lau or My Chanh (65 km length; 900 square km; 9 estuaries). The dry season is from January to August Floods due to heavy rain occur from September to December. This province was hit by a strong typhoon in 2009, causing widespread destruction.

The province has a population of 635,700 belonging to three ethnic groups. They are residing in 8 districts, 2 towns and 139 communes. Quang Tri was heavily devastated during the war in the 1960s-70s. The bulk of fishery catch comes from the coastal areas of the province. There is significant fishery production, however, in the river systems that total 668 tons of fish and 87.3 tons of shrimps annually (2006?). Aquaculture harvest total 2,600 tons of fish and 1,605.8 tons of shrimps (2006?).

There is tourism potential in the highland areas: the Dakrong national preserve for ecotourism; the La Vang holy land for cultural tourism; and the Vinh MOC tunnel, Quang Tri old wall, Macnamara fence and the Ho Chi Minh road for historical tourism.

Many of the lakes in the river systems have been created through the construction of hydropower dams. There are signs that fish species in the wild have been depleted by the changes in habitat and water flow due to the dams. In Dakrong district, where there is a national preserve, an entire fishing village had to look for livelihood alternatives because aquatic resources have been exhausted.

In Trieu Phong district many fishing families have resorted to aquaculture. However, local communities are disturbed by the continued reduction of aquatic resources. Heavy sedimentation has damaged fish breeding grounds. In addition, it is difficult to enforce the prohibition on damaging fishing practices, such as the use of fine-meshed nets and of electric charges.

6.4 Concerns and Research Objectives

There are four major concerns based on the Situational Analysis.

- Ecosystem changes due to dam construction are depleting aquatic resources. This aggravated by continued practice of damaging fishing methods (e.g. use of electricity and use of fine-meshed nets).
- The livelihoods of people directly dependent on aquatic resources are being seriously affected.
- There is no operational system at community level to conserve aquatic resources.
- There is a threat that poverty will increase as ecosystems are damaged

Key research objectives are:

- To investigate and evaluate biodiversity of aquatic resources and ecosystem services
- To analyze the key factors negatively affecting aquatic resources
- To identify stakeholders, their roles and linkages in relation to highland aquatic resources in Quang Tri, with particular focus on Trieu Phong district
- To identify possible development strategies to improve livelihood of households dependent on aquatic resources, especially related to tourism
- To formulate and implement action plans on aquatic resource conservation and on livelihood opportunities among poor communities dependent on aquatic resources

6.5 Specific CME Objectives

- To facilitate the participation of key stakeholders in the research, planning and implementation processes of the project

Communication exchange between Field Team and the target stakeholders will be established and maintained to facilitate participation of key stakeholders, usually through their representatives, in the research, planning and implementation processes. Only through active participation and collaboration can stakeholders learn to own and manage the processes that will allow them to find solutions to their problems.

- To facilitate cooperation among key stakeholders to generate resources for information dissemination and plan implementation

The results of research studies and action plans on conservation, livelihood and institutional reform will have to be communicated at community, commune, district and provincial levels. This will require resources that are available locally and can be generated in collaboration with the government. Cooperation among stakeholders is crucial in communicating the core messages and in getting needed results.

- To build the capacity of core groups among key stakeholders

Priority will be given to improving the ability of the fisherfolk to organize, advocate and collaborate with other stakeholders in implementing plans related to ecosystem conservation; livelihood opportunities, and enforcement of policies. Capacity-building of core groups at community level will be needed to set up a multi-stakeholder mechanism that will support the implementation and will monitor the action plans.

6.6 Main CME Activities for Field Teams

Identify Stakeholders as Target Audiences

A useful way of identifying stakeholder is by relating ecosystem services with groups of people or communities who benefit from these services or who are negatively affected when services become insufficient or seriously disturbed. The Field Team selected four different types of services and what these mean to people:

- Supporting Services of aquatic ecosystems mainly include (a) transportation passage; (b) habitat for flora and fauna and sustains biodiversity; (c) soil and water quality
- Provisioning Services include food, water for drinking and irrigation, fuel, biochemistry products, gene resources; power generation (through hydroelectric dams); minerals for industries, etc.
- Regulating Services are related climatic regulation, hydrological regulation, natural flood control, soil erosion control, etc.
- Cultural Services are related to religious practices, sports and entertainment, tourism, the arts, etc.

There are five types of stakeholders that avail or access these services:

- a. Those who are directly dependent on aquatic resources for livelihood and household needs
 - fisherfolk
 - families whose cultural practices are directly linked to the presence of the aquatic ecosystem
- b. Those who have access to and use of the aquatic ecosystem but are not directly dependent on aquatic resources as traditional way of life
 - operators of hydropower dam
- c. Those who have no direct access to the aquatic ecosystem but benefit from aquatic resources
 - members of unions: farmers, women, youth, elderly
 - residents who depend on potable water supply from aquatic ecosystem sources
 - residents who acquire or purchase aquatic resources for food

- d. Those who formally mediate and officially regulate the access and use of the aquatic ecosystem
- policy-makers and government executives at commune, district, provincial level
 - researchers from government and academic institutions
 - village leaders

Engagements with Stakeholders

The Project proceeds in phases. At each phase the stakeholders will need information to be able to dialogue and make decisions. Preparing information packages by the Field Team is invaluable in making these engagements with stakeholders fruitful.

Information Package	Purpose	CME Engagement
A. Research		
<ul style="list-style-type: none"> • Purpose and function of HighARCS • The Project process and the role of partners 	<ul style="list-style-type: none"> • Introduce or familiarize target stakeholders with the project <p>e.g.</p> <ul style="list-style-type: none"> - site selection - village entry 	Meetings and consultations (formal or informal)
<ul style="list-style-type: none"> • The relationship of conserving the aquatic ecosystem to socio-cultural and economic development of the people • The livelihoods and the way of life that are at risk if the quality of the aquatic ecosystem deteriorates • Laws and regulations on the access and use of the aquatic resources that apply to the field site 	<ul style="list-style-type: none"> • Educate target stakeholders on the importance of using a research framework involving conservation, livelihood and policy-making <p>e.g.</p> <ul style="list-style-type: none"> - forum to get support of local authorities; local leaders; members of mass media 	Lecture & discussion
<ul style="list-style-type: none"> • Introduction of research methods, of guidelines on how stakeholders will participate, and of schedules of research activities 	<ul style="list-style-type: none"> • Prepare lead persons in every group of stakeholders who will be involved in research activities <p>e.g.</p> <ul style="list-style-type: none"> - PRA, interviews, focus group discussion, etc. 	Orientation briefing
B. Planning		
<ul style="list-style-type: none"> • Feedback on research findings per stakeholder group or per cluster of stakeholder groups 	<ul style="list-style-type: none"> • Validate research findings • Facilitate analysis 	Presentation & discussion (possibly per stakeholder group or per cluster of stakeholder groups)
<ul style="list-style-type: none"> • Guidelines on multi-stakeholders planning per stakeholder group or cluster of stakeholder groups 	<ul style="list-style-type: none"> • Set targets and strategies; define activities and tasks; design management structure; identify monitoring and evaluation 	Lecture & workshop (possibly per stakeholder or cluster of stakeholder groups)

Information Package	Purpose	CME Engagement
	indicators; and determine required resources	
<ul style="list-style-type: none"> Guidelines on consolidating stakeholders' plans 	<ul style="list-style-type: none"> Consolidate multi-stakeholders plans 	Workshop on synchronizing and harmonizing plans with representatives from various stakeholders involved
<i>C. Plan implementation</i>		
<ul style="list-style-type: none"> The advantages of being organized and how to organize to fulfill roles in the action plan 	<ul style="list-style-type: none"> Organize fisherfolk and those directly dependent on aquatic resources themselves into an association or informal group for plan implementation, for networking, and for mobilizing necessary 	Training-Seminar for fisherfolk and stakeholders directly dependent on aquatic resources (including women and youth)
<ul style="list-style-type: none"> The importance of forming a management mechanism among stakeholders to monitor and advocate for the implementation of the integrated plan 	<ul style="list-style-type: none"> Form management mechanism comprising of partners-stakeholders 	Seminar-workshop involving representatives of partners-stakeholders
<ul style="list-style-type: none"> The importance of conducting an evaluative survey on implementation of action plans 	<ul style="list-style-type: none"> Form an evaluation group comprising of Field Team members and project partners-stakeholders 	Seminar-workshop

The media tools required by the Field Teams are quite basic and are not expensive: power-point presentation; HighARCS brochure; flipcharts and writing boards; and occasionally, printed hand-outs. Copies of the research study (executive summary) and the plans will have to be disseminated to the stakeholders.

There are three main considerations in the conduct of such activities:

- the native and spoken language of the stakeholders (3 ethnic groups)
- appropriate technology to be used (e.g. availability of electricity)
- the ability of assigned team members to communicate with the audience (skills, knowledge and attitude) and facilitate engagement activities

Formulate Core Messages

There are four core messages that can be communicated to a broad public based on the initial research of the Field Team. The messages convey the problem that has to be confronted, the extent of the problem(s), and the urgency of the situation.

- The fish population and other aquatic species have been decreasing through the years and this has made communities dependent on aquatic resources insecure.
- The loss in aquatic resources can be attributed to damaging fishing practices (e.g. use of electricity, use of poison plants, etc.) but the greater threat are serious

changes in the aquatic ecosystem caused by dams. However, there is no comprehensive study on the possible effects of the dam on the aquatic ecosystem.

- There is no operational system at community level on conservation.
- If the deterioration of aquatic resources continues, it will have far reaching consequences on the fishery industry as a whole.

In the latter part of the project, the core messages will be related to addressing the problems and eventually, actual results:

- strategies and planned project interventions;
- policies and organized action among stakeholders; and
- accomplishments in conservation, livelihood and policy-making efforts,

Build Capacity of Stakeholders

The affected villagers and government authorities at community level have to organize to set up an operational system for conservation and livelihood. They may have to undergo a training-workshop to develop and manage this system.

Best practices in aquaculture will have to be documented and shared with vulnerable communities testing livelihood alternatives.

The Project team will assist in chosen representatives of stakeholders in forming a mechanism that will monitor and advocate for plan implementation, even after the life of the project. In this regard, it is necessary to assist stakeholders in forming this mechanism and in maintaining it. Such a mechanism should not supplant or diminish the authority of existing institutions that already assume significant responsibilities regarding the aquatic ecosystem. Ideally, it should facilitate continued dialogue, study and action among the various stakeholders based on the goal previously agreed upon in the project.

6.7 Monitoring and Evaluation

The monitoring indicators are the following:

- Number of CME engagements and participating stakeholders
- Defined role of women in the plan
- Defined management mechanism of stakeholders that will implement the plan
- Implemented activities per stakeholder group
- Activities wherein stakeholders collaborate or cooperate
- Capacity-building activities for key stakeholders

Evaluation will focus on the implementation of the action plans. A survey will be conducted together with the representatives of stakeholders who will form the mechanism for plan implementation and advocacy.

7. CME PLAN FOR SON LA FIELD SITE

7.1 Area Focus

- Da River ecosystem in Phu Yen district, Son La province, Vietnam

7.2 Goal

- Sustainable development and wise use of aquatic biodiversity and Enhance livelihood opportunities for the poor

7.3 Situation Analysis

There are two main river systems in Son La province: The Da River and the Ma River. 144 species have been identified in the two rivers. Comparing data of 1980s with those of 2000, the yield of fish in the Da River basin has declined by approximately 30% in composition and 50% in yield. Fishing is a secondary source of livelihood, next to farming, in most areas of the province. In the districts of Phu Yen and Song Ma, it is the main livelihood.

There are two hydropower dams located in the Da River. One is located in Hoa Binh province; the other, located in Son La, started construction in 2010 and is expected to be finished by 2012. A total of 13,000 hectares in 13 districts and 17 communes is going to be affected by the dam. About 12,000 households will have to be resettled. These people will not have cultivated land to own and will be searching for alternative means of livelihood. Meanwhile, the population near the construction sites has increased from 20 to 30,000. These are workers and families of workers. They are exploiting natural, especially aquatic, resources in the area and contributing significantly to pollution through uncontrolled solid and sewage waste disposal. While there are national and local laws on resource conservation, there is no government network that operates to enforce the laws and to monitor the ecosystems.

There are approximately 21,984 households belonging to 5 ethnic groups in 27 communes in Phu Yen district. The percentage of poor households in the district is twice as high as that of the province. Fisheries production has increased from 156 tons in 2000 to 306 tons in 2007, mainly because of aquaculture activities. There is no study yet on how the dam will possibly affect fisheries.

7.4 Research Concerns and Objectives

There are six major concerns based on the Situational Analysis.

- The construction of the dam is disturbing and will seriously affect the aquatic ecosystem
- The livelihood of people who are mainly dependent on aquatic resources will also be seriously affected
- Aquatic resources have been depleted by damaging fishing methods: use of electricity; use of poison plants; use of nets and powerful lights to attract the fish
- The arrival of migrant workers and the resettlement of households are exerting pressure on the natural environment, especially the aquatic ecosystem
- There is no operational system at community level to conserve aquatic resources
- There is a threat that poverty will increase as ecosystems are damaged

Consequently key research objectives are:

- To investigate and evaluate biodiversity of aquatic resources and ecosystem services in Son La
- To analyze the key factors negatively affecting aquatic resources
- To identify stakeholders, their roles and linkages in relation to highland aquatic resources in Son La, with particular focus on Phu Yen district
- To identify possible development strategies to improve livelihood of households dependent on aquatic resources
- To formulate and implement action plans on aquatic resource conservation and on livelihood opportunities among poor communities dependent on aquatic resources

7.5 Specific CME Objectives

- To facilitate the participation of key stakeholders in the research, planning and implementation processes of the project

Communication exchange between Field Team and the target stakeholders will be established and maintained to facilitate participation of key stakeholders, usually through their representatives, in the research, planning and implementation processes. Only through active participation and collaboration can stakeholders learn to own and manage the processes that will allow them to find solutions to their problems.

- To facilitate cooperation among key stakeholders to generate resources for information dissemination and plan implementation

The results of research studies and action plans on conservation, livelihood and institutional reform will have to be communicated at community, commune, district and provincial levels. This will require resources that are available locally and can be

generated in collaboration with the government. Cooperation among stakeholders is crucial in communicating the core messages and in getting needed results.

- To build the capacity of core groups among key stakeholders

Priority will be given to improving the ability of the fisherfolk to organize, advocate and collaborate with other stakeholders in implementing plans related to ecosystem conservation; livelihood opportunities, and enforcement of policies. Capacity-building of core groups at community level will be needed to set up a multi-stakeholder mechanism that will support the implementation and will monitor the action plans.

7.6 Main CME Activities for Field Teams

Identify Stakeholders as Target Audiences

A useful way of identifying stakeholder is by relating ecosystem services with groups of people or communities who benefit from these services or who are negatively affected when services become insufficient or seriously disturbed. The Field Team selected four different types of services and what these mean to people:

- Supporting Services of aquatic ecosystems mainly include (a) transportation passage; (b) habitat for flora and fauna and sustains biodiversity; (c) soil and water quality
- Provisioning Services include food, water for drinking and irrigation, fuel, biochemistry products, gene resources; power generation (through hydroelectric dams); minerals for industries, etc.
- Regulating Services are related climatic regulation, hydrological regulation, natural flood control, soil erosion control, etc.
- Cultural Services are related to religious practices, sports and entertainment, tourism, the arts, etc.

There are five types of stakeholders that avail or access these services:

- a. Those who are directly dependent on aquatic resources for livelihood and household needs
 - fisherfolk
 - families whose cultural practices are directly linked to the presence of the aquatic ecosystem
- b. Those who have access to and use of the aquatic ecosystem but are not directly dependent on aquatic resources as traditional way of life
 - operators of hydropower dam
 - resettled households

- migrant workers who affect ecosystem through uncontrolled dumping of their sewage or solid waste
- c. Those who have no direct access to the aquatic ecosystem but benefit from aquatic resources
- members of unions: farmers, women, youth, elderly;
 - residents who depend on potable water supply from aquatic ecosystem sources
 - residents who acquire or purchase aquatic resources for food
- d. Those who formally mediate and officially regulate the access and use of the aquatic ecosystem
- policy-makers and government executives at commune, district, provincial level
 - researchers from government and academic institutions
 - village leaders.

Engagements with Stakeholders

The Project proceeds in phases. At each phase the stakeholders will need information to be able to dialogue and make decisions. Preparing information packages by the Field Team is invaluable in making these engagements with stakeholders fruitful.

Information Package	Purpose	CME Engagement
A. Research		
<ul style="list-style-type: none"> • Purpose and function of HIGHARCS • The Project process and the role of partners 	<ul style="list-style-type: none"> • Introduce or familiarize target stakeholders with the project <p>e.g.</p> <ul style="list-style-type: none"> - site selection - village entry 	Meetings and consultations (formal or informal)
<ul style="list-style-type: none"> • The relationship of conserving the aquatic ecosystem to socio-cultural and economic development of the people • The livelihoods and the way of life that are at risk if the quality of the aquatic ecosystem deteriorates • Laws and Regulations on the access and use of the aquatic resources that apply to the field site 	<ul style="list-style-type: none"> • Educate target stakeholders on the importance of using a research framework involving conservation, livelihood and policy-making <p>e.g.</p> <ul style="list-style-type: none"> - forum to get support of local authorities; local leaders; members of mass media 	Lecture & discussion
<ul style="list-style-type: none"> • Introduction of research methods, of guidelines on how stakeholders will participate, and of schedules of research activities 	<ul style="list-style-type: none"> • Prepare lead persons in every group of stakeholders who will be involved in research activities 	Orientation briefing

Information Package	Purpose	CME Engagement
	e.g. - PRA, interviews, focus group discussion, etc.	
B. Planning		
<ul style="list-style-type: none"> Feedback on research findings per stakeholder group or per cluster of stakeholder groups 	<ul style="list-style-type: none"> Validate research findings Facilitate analysis 	Presentation & discussion (possibly per stakeholder group or per cluster of stakeholder groups)
<ul style="list-style-type: none"> Guidelines on multi-stakeholders planning per stakeholder group or cluster of stakeholder groups 	<ul style="list-style-type: none"> Set targets and strategies; define activities and tasks; design management structure; identify monitoring and evaluation indicators; and determine required resources 	Lecture & workshop (possibly per stakeholder or cluster of stakeholder groups)
<ul style="list-style-type: none"> Guidelines on consolidating stakeholders' plans 	<ul style="list-style-type: none"> Consolidate multi-stakeholders plans 	Workshop on synchronizing and harmonizing plans with representatives from various stakeholders involved
C. Plan implementation		
<ul style="list-style-type: none"> The advantages of being organized and how to organize to fulfill roles in the action plan 	<ul style="list-style-type: none"> Organize fisherfolk and those directly dependent on aquatic resources themselves into an association or informal group for plan implementation, for networking, and for mobilizing necessary 	Training-Seminar for fisherfolk and stakeholders directly dependent on aquatic resources (including women and youth)
<ul style="list-style-type: none"> The importance of forming a management mechanism among stakeholders to monitor and advocate for the implementation of the integrated plan 	<ul style="list-style-type: none"> Form management mechanism comprising of partners-stakeholders 	Seminar-workshop involving representatives of partners-stakeholders
<ul style="list-style-type: none"> The importance of conducting an evaluative survey on implementation of action plans 	<ul style="list-style-type: none"> Form an evaluation group comprising of Field Team members and project partners-stakeholders 	Seminar-workshop

The media tools required by the Field Teams are quite basic and are not expensive: power-point presentation; HighARCS brochure; flipcharts and writing boards; and occasionally, printed hand-outs. Copies of the research study (executive summary) and the plans will have to be disseminated to the stakeholders.

There are three main considerations in the conduct of such activities:

- the native and spoken language of the stakeholders (5 ethnic groups and migrant workers)
- appropriate technology to be used (e.g. availability of electricity)

- the ability of assigned team members to communicate with the audience (skills, knowledge and attitude) and facilitate engagement activities

Formulate Core Messages

There are four core messages that can be communicated to a broad public based on the initial research of the Field Team. The messages convey the problem that has to be confronted, the extent of the problem(s), and the urgency of the situation.

- The fish population and other aquatic species are decreasing through the years and this has made communities dependent on aquatic resources insecure.
- The loss in aquatic resources can be attributed to damaging fishing practices (e.g. use of electricity, use of poison plants, etc,) but the greater threat comes from the construction of the dam. However, there is no comprehensive study on the possible effects of the dam on the aquatic ecosystem.
- There is no operational system at community level on conservation.
- If the deterioration of aquatic resources continues, it will have far reaching consequences not only on communities directly dependent on aquatic resources but also on resettled families who do not have stable means of livelihood.

In the latter part of the project, the core messages will be related to addressing the problems and eventually, actual results:

- strategies and planned project interventions;
- policies and organized action among stakeholders; and
- accomplishments in conservation, livelihood and policy-making efforts.

Build Capacity of Stakeholders

As indicated in the Situational Analysis, the community and government authorities have to organize to set up an operational system for conservation and livelihood. They may have to undergo a training-workshop to develop and manage this system.

Given the situation of resettled families, training activities on appropriate livelihood activities may have to be developed.

The Project team will assist in chosen representatives of stakeholders in forming a mechanism that will monitor and advocate for plan implementation, even after the life of the project. In this regard, it is necessary to assist stakeholders in forming this mechanism and in maintaining it. Such a mechanism should not supplant or diminish the authority of existing institutions that already assume significant responsibilities regarding the aquatic ecosystem. Ideally, it should facilitate continued dialogue, study and action among the various stakeholders based on the goal previously agreed upon in the project.

7.7 Monitoring and Evaluation

The monitoring indicators are the following:

- Number of CME engagements and participating stakeholders
- Defined role of women in the plan
- Defined management mechanism of stakeholders that will implement the plan
- Implemented activities per stakeholder group
- Activities wherein stakeholders collaborate or cooperate
- Capacity-building activities for key stakeholders

Evaluation will focus on the implementation of the action plans. A survey will be conducted together with the representatives of stakeholders who will form the mechanism for plan implementation and advocacy.