

The Reducing Vulnerability to Climate Change (RVCC) Project: Reflecting on Lessons Learned

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The RVCC Project is implemented in partnership with the following organizations in southwest Bangladesh:

AOSED-An Organization for Socio-Economic Development, BCAS- Bangladesh Centre for Advanced Studies, BRRI- Bangladesh Rice Research Institute, CDP-Coastal Development Partnership, DDJ-Dak Diye Jai, GMK- Gono Milon Kendra, GUS-Gono Unnayan Sangstha, IDEAL-Institute of Development Education for Advancement of Landless, Nabolok, Prodipan, Rupantar, Sushilan, Samadhan, SUS-Satkhira Unnayan Sangstha, Uttaran, WRDS-Wetland Resource Development Society

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List of Acronyms

ALS	Alternative Livelihood Strategy
BCAS	Bangladesh Center for Advanced Studies
BRRRI	Bangladesh Rice Research Institute
BWDB	Bangladesh Water Development Board
CBO	Community-Based Organization
CC	Climate Change
CDP	Coastal Development Partnership (a partner NGO of the RVCC Project)
CIDA	Canadian International Development Agency
COP-10	10 th Conference of Parties to the UNFCCC
DAE	Department of Agricultural Extension
DC	Deputy Commissioner
DDJ	Dak Diye Jai (a partner NGO of the RVCC Project)
DLS	Department of Livestock
DoF	Department of Fisheries
DoWA	Department of Women Affairs
DoYD	Department of Youth Development
DPHE	Department of Public Health Engineering
DTW	Deep Tube Well
ED	Executive Director
EIA	Environmental Impact Assessment
FGD	Focus Group Discussion
GUS	Gana Unnayan Sangstha (a partner CBO of the RVCC Project)
HH	Household
ICZMP	Integrated Coastal Zone Management Project
IPCC	Intergovernmental Panel on Climate Change
IPM	Integrated Pest Management
KAB	Knowledge, Attitude and Behavior survey
LFA	Logical Framework Analysis
LoI	Letter of Interest
MOU	Memorandum of Understanding
MP	Member of Parliament
NAPA	National Adaptation Program for Action
NGO	Non-Governmental Organization
NWMP	National Water Management Plan
OCAT	Organizational Capacity Assessment Tool
PIP	Project Implementation Plan
PL	Post Larvae of shrimp
PNGO	Partner Non-Governmental Organization (of RVCC project)
PSF	Pond Sand Filter
RVCC	Reducing Vulnerability to Climate Change Project
RWH	Rain Water Harvest
SMC	School Management Committee
SW	Southwest
ToT	Training of Trainers
TRM	Tidal River Management
UCC	Union Parishad Climate Change Committee
UNO	Upazila Nirbahi Officer (used interchangeably with TNO)
UP	Union Parishad (a root level administrative unit of local government)
VA	Vulnerability Assessment
VDG	Vulnerable Group Development
WRDS	Wetland Resource Development Society (a partner NGO of the RVCC Project)

Glossary

<i>Adivashi</i>	Indigenous people.
<i>Beel</i>	A saucer-shaped depression that normally retains water all year round, an open water body.
<i>Gher</i>	A pond that has been created by building embankments and flooding a rice paddy. <i>Ghers</i> are usually privately-owned, and are often used for raising prawn, shrimp and/or fish.
<i>Gram Sarker</i>	A recently formed village level-government structure in Bangladesh.
<i>Khas land</i>	The lands that were previously owned by the Zamindars, char lands, non-cultivable lands in the Chittigong Hill Tracts areas and forest lands are known as <i>khas</i> land. Agricultural <i>khas</i> lands outside city areas are allocated among landless people according to government policy.
Measure	Approaches or ways to implement an adaptation strategy. A particular measure generally consists of a cluster of individual PNGO activities.
<i>Mele</i>	A reed (<i>Cyperus Tagetiformis</i>) that is grown in saline or fresh water. The reeds are harvested, dried, split into 2 or 3 strips and woven into mats that are popular for sitting or sleeping on.
Pot song	A traditional folk song that used to be very common in the southwest region. A series of pictures based on a theme are painted onto a long strip of canvas and rolled around two spindles. The pictures are scrolled while a song is sung that explains the pictures, together with dancing and instrument playing.
Strategy	Combination of measures that is considered a “package” to reach a certain goal.
<i>Union Parishad</i>	A council body of elected persons below the sub-district level.
Vulnerability	Sensitivity to certain events and/or lack of capital assets or lack of access to resources in order to cope with events. In this report, vulnerability is used in relation to specific indicators of well-being that represent the basic requirements at a household level to ensure quality of life.
Vulnerability context	External conditions of change that impact the dynamics of the household environment. These conditions may consist of: shocks (e.g., cyclones); seasonal variations (e.g., seasonal labour); or trends (e.g., environmental degradation). These changes are typically beyond the control of households. The vulnerability contexts being addressed in this project are: salinity (including tidal flood), flood, storm, waterlogging (including siltation and heavy rainfall), drought, cyclone, and loss of biodiversity.
Well-being indicator	A measure of household well-being. The well-being indicators being addressed in this project are: income, food, potable water, health and personal safety, and housing and safety of property.

1. Introduction

Bangladesh has always been vulnerable to extreme environmental events but climate change has the potential to magnify its environmental problems. Being a low-lying delta with much of its land barely above sea level, Bangladesh has the possibility of losing a significant area of its land mass within the next 50 years due to rising sea levels. Drought in the dry season may be more severe while rain in the wet season may be more intense. The livelihoods of the ten million people living in the southwest region of the country are highly dependent on the natural resource base, and therefore are extremely vulnerable to environmental changes such as increasing salinity and waterlogging. In addition, this region is prone to natural disasters such as tropical cyclones, floods, unusual high tide, and riverbank erosion. Models of the predicted impacts of climate change and observations to date indicate that this region will be increasingly vulnerable to the adverse impacts of climate change, including sea level rise.

The Reducing Vulnerability to Climate Change (RVCC) Project is implemented by CARE Bangladesh with the support of the Canadian International Development Agency (CIDA). The project was launched in January 2002, and the first phase of activities was completed in March 2005.

The RVCC Project is working in partnership with local non-governmental organizations (NGOs) and community-based organizations (CBOs) in the six districts of the southwest region of Bangladesh, with a goal *to increase capacity of communities in the southwest region of Bangladesh to adapt to the adverse effects of climate change*. The expected impacts of the project are:

- Vulnerable Bangladeshi communities understand and are better able to respond to adverse climate change effects.
- Local organizations (NGOs and CBOs) are better able to understand and explain climate change and have the skills and knowledge to advocate on climate change.
- Agencies of local and national government are sensitized to the need for strategic interventions to enhance adaptation to climate change for vulnerable communities.

The project is undertaking activities at the household and community levels along with awareness and advocacy initiatives. In March 2005, a number of workshops were held with key stakeholders to identify the major lessons learned through the implementation of the first phase of this pilot initiative. This report presents the findings of these workshops.

2. The RVCC Approach

The RVCC approach addresses vulnerability to climate change through awareness, action and advocacy. The following sections describe the approach in more detail.

2.1. Awareness

The RVCC Project carried out a study on Knowledge, Attitudes and Behavior (KAB) related to climate change to set a baseline for awareness activities. Target audiences for the study included students, teachers, local government representatives, and NGO workers. The study revealed that on average 13% of respondents have unprompted knowledge on effects of climate change. After prompting 61% showed knowledge about climate change effects. The study revealed that respondents' main sources of knowledge on climate change effects were their own experiences/observations (74%). Considering this situation, an awareness

campaign was designed to build awareness of climate change issues and adaptation measures to sustain their livelihoods.

The majority of activities under this project component have focused on increasing awareness on current climate-related vulnerabilities, their linkages with the livelihoods of grassroots people in the southwest of Bangladesh, potential adverse impacts of climate change, and potential coping options available. The project undertook a number of activities to raise awareness, including grassroots cultural activities, working with local Eco-clubs for sensitization of mass audiences, dissemination of information for the literate population through newsletters and other publications, and the development of a school program on climate change.

2.2. Action

RVCC has focused on building capacity to undertake concrete actions to reduce vulnerability at the household and community levels.

Household-level Activities

The RVCC approach at the household level consists of building the capacity of beneficiaries to cope with a particular vulnerability context as it impacts on a specific indicator of household well-being. The well-being indicators and vulnerability contexts were chosen on the basis of a participatory vulnerability assessment that was conducted early in the project, and have been refined as field realities have emerged. The vulnerability contexts identified are: salinity, flood, storm, waterlogging, drought, cyclone and loss of biodiversity. The project is addressing the impacts of these vulnerability contexts on the well-being indicators of income, food, housing, health and potable water.

In order to address specific combinations of vulnerability contexts and well-being indicators, a number of strategies have been identified:

1. Increase food through agriculture
2. Increase income through alternative livelihoods
3. Increase food availability/storage
4. Improve health and personal safety
5. Increase access to safe water
6. Improve safety of housing and other property

Within these strategies, different adaptation measures have been selected for implementation based on the needs of grassroots people vulnerable to current climate-related complexities, and the experience of the partner NGOs (PNGOs) in the project area. Measures being piloted include: drought-resistant crops, floating gardens, duck and poultry rearing, rainwater harvesting, cottage industries, introduction of portable cooking stoves and flood-proof food storage, and storm-resistant housing, among others.

In addition to promotion of adaptation measures at the household level, activities to market the products produced through agriculture and livelihoods measures have been undertaken, along with research activities on hydroponics and waterlogging/flood-tolerant rice varieties.

Community-level Interventions

Two community-level adaptation strategies, and corresponding measures, have been identified that complement the work being done at the household level. The community-level strategies are to:

7. Increase access to common property resources
8. Reduce threats through community-based initiatives

Access to common property was identified as a need for landless beneficiaries in order to implement measures under the agriculture and livelihoods strategies. Activities under this strategy support local-level advocacy to ensure rightful access to these resources by beneficiaries.

For reducing threats at the community level, the approach taken is to work with *Union Parishad* (UP) chairs, members and community leaders to build their capacity to plan and implement community-level measures that will reduce threats from the vulnerability contexts of flood, salinity, cyclone and waterlogging. The measures promoted include Tidal River Management (TRM), raising embankments, cyclone shelters and canal excavation. Implementation of the measures to reduce threats is not within the scope and resources of the RVCC project, however the aim is for each UP to develop an action plan for the measure within the project's lifetime.

2.3. Advocacy

An advocacy campaign is being undertaken by RVCC in partnership with a local NGO, along with the *Pani* Committee, a civil society organization dedicated to addressing water issues in the region. The advocacy issue chosen by the RVCC project and its partners is the potable water crisis in the context of increasing salinity in southwest Bangladesh. The objectives of the advocacy campaign are: to incorporate drinking water issues in the context of increasing salinity in the southwest region into the National Water Policy and National Policy for Safe Water Supply and Sanitation; and to ensure that the issue of saline drinking water is incorporated into the final National Water Management Plan (NWMP). Key messages and target audiences have been selected by the campaign partners, and the messages are being communicated through grassroots mobilization, persuasion and lobbying, and a media campaign.

Activities for national-level advocacy have begun with a review of relevant Government of Bangladesh national policies for linkages to climate change and to the salinity and potable water issue. Other activities undertaken include educating civil society, political leaders and Members of Parliament on climate change, and holding a series of workshops and round table discussions in collaboration with advocacy campaign partners.

3. Methodology for Reflecting on Lessons Learned

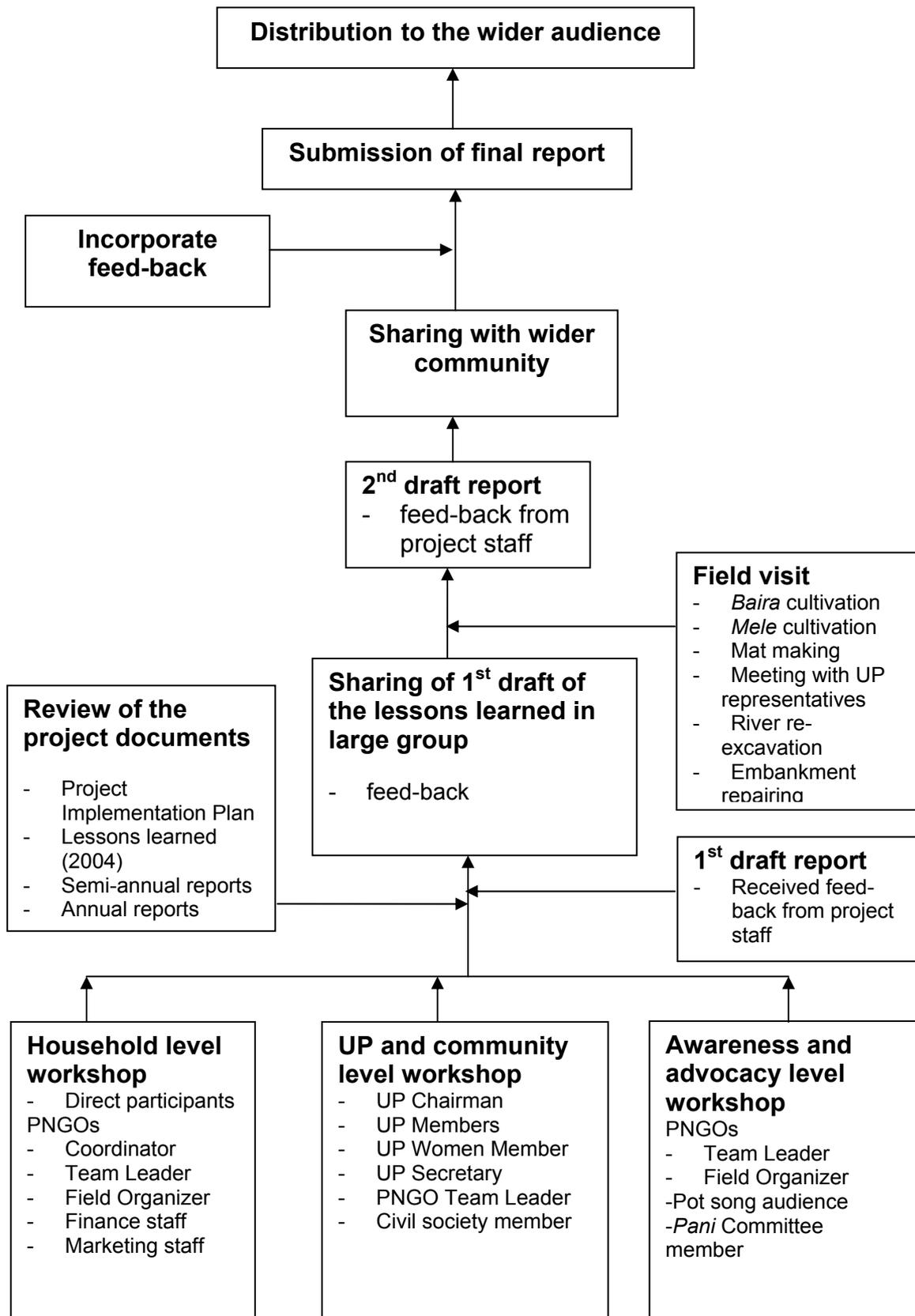
The RVCC Project undertook a participatory process to identify the lessons learned through the implementation of the project. In March 2005, a series of workshops were held with different stakeholders to capture learnings and recommendations at all levels. Workshop participants included: project participants both female and male, PNGO staff, CBO members, community leaders and UP members, and members of target audiences for awareness and advocacy activities. These stakeholders were invited to share their successes, learning and difficulties faced through the implementation of project activities.

The format for the workshops included: a project overview presentation and discussion, plenary discussions, small group activities, and question and answer sessions. Following the stakeholder workshops, a draft report and presentation were prepared and the lessons were shared with the partner NGOs, *Union Parishads*, Government officials and RVCC project staff for feedback and evaluation.

In addition to the workshops, the consultants undertook a review of project documents, including the Project Implementation Plan and progress reports, as well as a visit to the field to interact with project participants and observe project interventions. Consultants reviewed and incorporated information from an early lessons learned exercise which was undertaken in June 2004. Please see Figure 1 for a visual representation of the lessons learned process.

The lessons which were identified through this process have been segregated into operational lessons which are specific to the RVCC context and operational environment, and strategic lessons which would apply to other similar types of projects, in Bangladesh or elsewhere. This document presents the strategic lessons, and provides some recommendations for future work in grassroots adaptation to climate change.

Figure 1: Process for Reflecting on Lessons Learned



4. Strategic Lessons Learned

The following sections present the major strategic lessons that were identified by stakeholders during the lessons learned reflection process. Explanation and examples are included to demonstrate the lessons.

4.1. Lessons Relating to RVCC's Approach

An integrated approach to implementation of activities at household and community levels, as well as awareness and advocacy, increases impact of interventions.

Originally, the RVCC Project planned to undertake household- and community-level activities in different areas of the southwest region. As project implementation proceeded, it was found that it was better to work with Union Parishads in communities where household-level activities were being undertaken. It was also found useful to target awareness activities in these same areas to reinforce the group-based work being done. Accordingly, awareness activities such as pot song and drama performances were targeted to project working areas.

Allowing sufficient time for project design, inception and implementation will increase the sustainability of the interventions.

As the RVCC Project is funded through the Canada Climate Change Development Fund (CCCDF), there was a limited time frame for completion of the project, and therefore the inception phase was rushed. As a result, the methodology to address the vulnerability issues at household and community level was not sufficiently developed in advance. To address this, the project has adopted a "learning by doing" approach, but it would have benefited from more time at the beginning to elaborate the methodology.

A participatory approach to implementation increases capacity of all stakeholders and creates a sense of ownership.

The project has attempted to involve the PNGOs and, in some cases, the participants in every step of design and implementation of the project. Issues to be addressed and methods to address them were identified through the Vulnerability Assessment, Knowledge, Attitudes and Behaviour Survey and the Organizational Capacity Assessment, all participatory exercises conducted during the design of the project. Due to the participatory approach that the RVCC project has taken, the activities are being implemented very successfully at the field level and stakeholders, particularly the partners, feel ownership of the project.

Incorporation of gender issues at activity and organizational levels continues to be a challenge.

The project has made some important progress in promoting gender equality through project activities. The project conducted a gender-segregated vulnerability assessment, women-headed households have been targeted for household-level interventions, and activities such as training sessions have been designed to suit the particular needs of women. Progress has been made at the organizational level as well, including the hiring of female field staff for partner NGOs, promotion of a women-friendly policy and working environment, gender-segregated training needs assessments and career development opportunities for female

staff. However, a great deal remains to be done, both at the activity level and the project level, including hiring more female senior staff, ensuring women's priorities are emphasized in project activities, and ensuring effective participation of women in civil society and government organizations that are targeted by the project.

Incorporating risk assessment and mitigation into project planning would improve results.

The southwest region is highly political and prone to natural disasters, including cyclones and flooding. The risk that these situations pose to project activities was not adequately analyzed during project planning, and therefore mitigation measures were not effectively implemented. For example, it was not possible to provide relief and rehabilitation support to the disaster victims of the RVCC project area after the September 2004 flood. The risks of natural disasters should be analyzed and mitigation measures may be incorporated into project implementation, including a disaster contingency plan. Similarly, *hartals* (strikes) and political unrest hampered project activities at different points during its implementation. Adequate flexibility must be incorporated into project planning to deal with these realities.

All project activities must be planned with the participation of project participants and target audiences.

Despite RVCC's efforts to take a participatory approach, the project encountered some challenges in implementation that resulted from a lack of consultation with project participants during planning of project activities. For example, in the beginning, participation at training and learning sessions was sometimes lower than expected. It was found that the sessions conflicted with household responsibilities and/or working outside the home. The timing for the sessions was set in consultation with the groups and participation increased. Similarly, UP representatives are dealing with many competing priorities, so it is important to set dates for events in discussion with the UP members in well ahead of time to increase their participation rate. As well, it was found that some of the adaptation measures being promoted by the project were inappropriate in terms of local knowledge and experience. Finally, women's particular needs must be explored through consultation to ensure that project activities are designed to overcome barriers to their involvement. It is extremely important that participants are involved in all decisions regarding their participation in the project.

4.2. Lessons Related to Capacity Development and Partnership

Capacity development is a long-term process, and the project timeline should reflect this.

The goal of the RVCC Project is to build capacity of communities to adapt to the adverse effects of climate change. Expected outcomes relate to increased capacity of households, partners and Union Parishad members. Due to delays during the partner selection process, and a dynamic approach to implementation, the partners were only able to work in the target communities for approximately a year and half. In the case of the UP activities, due to a shift in focus, the time on the ground was even shorter. A great deal of time was required for RVCC staff and partners to understand climate change and its linkages to the livelihoods of people in the southwest. Despite these challenges, the project has been successful in developing capacity to reduce vulnerability, however a more realistic time frame would have increased the impact and sustainability of project activities.

Undertaking an organizational capacity assessment early in the project assisted PNGOs in identifying their strengths and weaknesses and helped in addressing the weaknesses.

RVCC assisted PNGOs in assessing their strengths and weaknesses using an Organizational Capacity Assessment Tool (OCAT), which provides a framework for review of seven broad elements of organizational capacity, including governance, management, finances, and sustainability. A similar assessment was done at the end of the project to measure the changes that have occurred as a result of working in partnership with the RVCC Project. Many of the partners had not done this type of assessment in the past and they found it useful to better understand their own organizations. Based on the findings, RVCC provided capacity building support to the partners in identified areas of weakness which were relevant to the project.

Selection of appropriate partners is crucial to effectiveness and efficiency of interventions.

The RVCC Project undertook a comprehensive partner selection process which considered the quality of the concept paper submitted by the organization, as well as organizational capacity. The organizational aspects were assessed using the following indicators: board and governance, management practices, financial resources, human resources, service delivery, external relations and sustainability. This process ensured partners with strong organizational capacity, which has positively contributed to project implementation. However, climate change issues were new to most of the partners, which lead to extensive training needs. As well, partners' comfort level with certain types of activities sometimes limited the project's ability to innovate in its approaches to reducing vulnerability.

Partnership is a mutual learning process, which enhances the capacity of both partners.

The partnership approach adopted by the RVCC Project has been a learning experience for both the PNGOs and the RVCC staff. Regular coordination and issue-based meetings with partners provide opportunities to share ideas and learn from each others' experiences. Partners have a wide range of expertise in agricultural extension, advocacy, and grassroots awareness, among other areas, and the project has benefited from their skills and ideas throughout implementation. At the same time, the partner staff have received a large amount of training and mentoring from project staff, and this has increased their knowledge of climate change and adaptation issues, as well as management, participation, and gender issues.

The partner organizations had strong background in their particular areas of expertise, however their level of knowledge and understanding of climate change issues occasionally hampered project activities.

The project's PNGOs have strong background and experience in particular areas, such as working with participants on agricultural extension activities, or using grassroots cultural activities to raise awareness. However, their technical knowledge of climate change, vulnerability, and the linkages between the environment and sustainable livelihoods was minimal. Their capacity to enter into a new field, to develop new approaches and to be innovative in their approach to climate change adaptation proved to be limited. The project attempted to address this with training and coaching on climate change and its links to livelihoods, however this continued to be a challenge, both in the household- and community-level action component and in the awareness campaign.

4.3. Strategic Lessons Relating to Awareness

As climate change is a technical issue, it has been challenging to communicate at the grassroots level in an accessible way.

It is difficult to develop materials that are scientifically accurate, yet simple and interesting enough for wider audiences. The use of a variety of different communication tools to reinforce key messages can improve the impact of awareness raising activities. The RVCC Project has used a number of different methods to raise awareness of climate change issues and potential coping mechanisms. Popular tools have included grassroots theatre and cultural activities, rural fairs and community events, a radio program, and a school program on climate change.

Awareness raising activities should be integrated into other project activities to increase impact.

As mentioned in Section 4.1, it was found that awareness activities had more impact when they were undertaken in conjunction with other activities at household or community levels. Awareness raising has also played an important role in the advocacy campaign. RVCC has attempted to integrate awareness into other components so that awareness can build a foundation for action, rather than being an end in itself.

Involving members of the target audience in the development of communication tools and testing the tools at the audience level can improve the relevance of the materials and the messages.

RVCC tested all of its communication tools at the field level before they were finalized, and in many cases, extensive revisions were required after field testing. Involving the target audience in development of tools is a participatory and efficient way to ensure that the materials are appropriate and relevant to the people they are trying to reach. Field testing is also important to ensure that tools are user-friendly and technically sound.

4.4. Lessons Relating to Action

Household-level Actions

Diversification of income opportunities and food production methods through measures that are appropriate to local environmental conditions can improve food and economic security in vulnerable communities.

Environmental degradation and natural disasters have radically reduced the scope for income generation opportunities for rural people in the southwest region, and these conditions are expected to be exacerbated by climate change. People have been forced to change their occupations to cope with their changing conditions, often leaving agricultural occupations to take up work as labourers, shrimp farm workers, or rickshaw pullers, sometimes migrating to the city in hopes of accessing better opportunities. This can lead to overcrowding in cities, break up of family units, and difficulties for the families left behind. RVCC has promoted alternative agricultural methods and income generating activities that are appropriate for the current and predicted environmental conditions. Project participants are testing these measures on a pilot basis, and many households have successfully increased their food and income security as a result. This has been particularly positive for women participants, as they are able to contribute to household economic activities and to become more involved in household decision-making.

Identification and dissemination of suitable rice varieties and agricultural practices for saline and waterlogged areas can contribute to increasing food security.

Rice production in saline and waterlogged areas is very low due to lack of suitable saline-tolerant varieties, limited seed availability and inavailability of appropriate technology. The indigenous rice varieties are gradually disappearing due to expansion of unplanned shrimp farms. In other areas of Bangladesh, farmers are successfully growing different varieties of rice that exhibit tolerance for waterlogging and salinity, and are achieving greater yields and better economic returns than with traditional varieties. There is a need to disseminate this knowledge of alternative varieties and practices throughout the saline and waterlogged areas to improve food security in these contexts.

Access to microcredit is an important consideration when selecting adaptation measures for implementation.

Poor participants often do not have access to micro-credit programs, which limits their ability to engage in some of the measures that have higher initial costs. Several of RVCC's PNGOs have extended credit to RVCC participants out of their own credit sources, and this has enhanced uptake of adaptation measures being promoted by the project.

Alternative livelihoods require an associated marketing strategy in order to be successful.

Initially, the project did not include a marketing strategy for different livelihood options at the household level, which limited the effectiveness of these options since participants were unable to sell all of their production. Rural markets and marketing systems of the southwest are not well organized. Farmers face challenges due to a lack of communications infrastructure, poor linkages between on-farm and off-farm market systems, lack of access to market information, and middlemen who try to keep poor producers out of the market. Women face particular challenges due to social barriers to selling their products outside the home. RVCC has tried to address some of these challenges through a pilot marketing program to provide project participants with market information, and to increase opportunities to sell their products at a fair market price.

Taking a "household" approach through the inclusion of male and female members of a household in project activities was found to be more effective than working with a single member of the household.

Within the RVCC participant households, some households had only one member of the household involved in project activities, while in other groups both household heads were involved. It was found that households with both male and female members involved in project activities were quicker and more likely to take up adaptation measures. It is felt that having both members involved allowed for joint decision making and shared responsibilities relating to the measures implemented, which impacted positively on households' ability to undertake new activities, in particular agricultural measures.

A functional and trained water management committee must be in place, and social, technical and environmental feasibility assessed, before any water system is installed.

The project has targeted access to safe water as a strategy for reducing vulnerability, through the installation of pond-sand-filters, rainwater harvesters, and deep tube wells. Experience has shown that the existence of a functional water management committee with appropriate training is a critical prerequisite to installation of water supply systems. Further,

selection of technology and site for water infrastructure must be done on the basis of adequate technical expertise and a thorough analysis of environmental and social issues related to the system.

Services from government service providers can be obtained by empowering participants and linking them directly to these agencies.

Currently, rural people do not have easy access to government service providers to get information and support. This situation can be improved through establishing contacts between project participant groups and government services agencies such as the Department of Agricultural Extension and the Department of Livestock. RVCC Participant households have received support from service providers in the form of vaccines, technical assistance and subsidized saplings as a result of linkages made by partner NGOs.

Community-level Actions

Addressing resource and capacity constraints would bridge the gap between awareness and capacity to take action.

The community-level activities have been focused on raising awareness of UP members of the climate-related vulnerability of their constituency, and on building capacity to plan for actions that can be undertaken at the community level to reduce this vulnerability. However, it has been found that the UPs are limited in their ability to take concrete actions by resource limitations, a lack of technical and/or political capacity, and competing priorities. Addressing these constraints could improve the success of community-level interventions.

Participatory resource mapping exercises can play an important role in the preparation of road maps for development by UPs.

A common reason cited by UPs for a lack of action on issues relevant to their constituents is a lack of resources, however in many cases they have not undertaken an analysis of the resources that are available to them, nor are they able to optimize these resources. The RVCC Project facilitated participatory resource mapping exercises by its target UPs to identify the resources and constraints existing in their area. Considering the available resources, each of the fourteen targeted UPs identified priority activities and prepared a road map for development. This type of exercise can be useful in optimizing available resources and analyzing resource needs.

In addition to working with UPs it would be practical to work at the Upazila and Zila (district) levels.

Union Parishads are the lowest tier of elected government, and are closest to their constituents, however they face significant resource and capacity challenges. Working at multiple levels to raise awareness of key issues and identify constraints faced by local governments can increase the impact of capacity development interventions with local institutions.

4.5. Lessons Relating to Advocacy

Partnering with a civil society organization has increased the momentum and reach of the advocacy campaign.

The *Pani* (Water) Committee¹ is working to raise the grassroots voice regarding water-related problems and crises related to river siltation, salinity and lack of potable water, reduction of freshwater flow from the north (due to water diversion by India), water-logging, and river management. Members include college and schoolteachers, lawyers, journalists, social workers and activists. Following a discussion with the project, the *Pani* Committee has taken potable water in the context of salinity and arsenic as its immediate issue to deal with, and has agreed to work with the RVCC Project on grassroots mobilization and advocacy. The project has worked with the *Pani* Committee to mobilize community people, local government representatives, civil society, district government officials, journalists, local MPs and Ministers to speak out about the drinking water crisis in the southwest region, and has been successful in getting the issue raised in Parliament, as well as a significant amount of media attention. The partnership with the *Pani* Committee has positively impacted results of the advocacy campaign.

Working in partnership with local and national level NGOs for advocacy activities is an effective approach.

The project has benefited from partnering with a local NGO on the advocacy campaign, and results have exceeded expectations. Partnering with a local NGO has ensured that the campaign is grounded in the grassroots reality, and that affected people are involved. However, it is felt that the campaign could be more successful if RVCC also had partnerships with national-level NGOs who have greater influence at the country level in order to engage the policy makers more effectively.

Advocacy should not only focus on climate change issues, but should consider other agents of change that contribute to vulnerability.

The vulnerability contexts addressed by the RVCC Project were selected on the basis that they were directly linked to climate change and sea level rise. However, many of the vulnerability contexts are also subject to changes in other external conditions, such as reduced inflow from upstream countries (affects salinity) or construction of roads and highways (contributes to drainage congestion), and in some cases the priority areas of vulnerability identified were not directly linked to climate change and therefore were not addressed (e.g. shrimp farming). Addressing climate change in the context of other priority issues would improve the scope to deal with these other conditions that contribute to vulnerability.

5. Recommendations for Future Phases or Similar Projects

The above discussions resulted in a number of recommendations to be taken into account when designing another phase of the RVCC Project, or in designing a project with a similar approach. These recommendations are as follows:

Project Approach

- Development of capacity of project partners should be recognized as an expected result of the project.
- Participatory monitoring and evaluation of project results should be mainstreamed into the project design and implementation plan.

¹ The structure of the *Pani* Committee includes a central committee, as well as committees at the Upazilla and Union levels. After forming a partnership with RVCC, the *Pani Committee* reformed its central committee taking three members from each of the 8 Upazillas and other professionals and reputed social workers for a total of 41 members.

- A new project or phase should be designed through active participation of participants, PNGOs, CARE and donors.
- Project activities and approaches to facilitation should value and build on participants' existing knowledge and experience.
- Project activities should be implemented using an integrated approach, rather than having vertical divisions between project components.
- Flexibility should be included in the project implementation plan to permit incorporation of new activities/measures.

Capacity Development and Partnership

- Approach and areas of focus should be finalized before partner selection so that partners with appropriate experience can be recruited.
- If partners are venturing into areas where they do not have adequate experience and/or expertise, external technical assistance should be provided.
- Establishment of a core team comprising specialized skilled technical persons from project, partner and government levels would contribute to skills development for project staff.
- Regular meetings and cross-visits should be held among the partners to ensure good coordination and sharing of experiences.
- Participatory research in support of project activities can be undertaken in collaboration with appropriate research organizations.
- Adult learning principles should be carefully practiced while designing and implementing training for project participants.
- Stronger linkages should be developed with government line agencies at the Upazila level to access support for UPs and project participants.

Awareness-Related

- A strategic plan can be developed for the awareness program, using the experiences, lessons and analysis of government, NGOs, and educational institutions.
- All materials developed by the project (whether by RVCC or PNGOs) need to be field-tested with the target audience to ensure that the message is clearly understood.
- Project educational materials should be developed with the participation of target audiences, with messages focused to the target audience, and with a clear strategy for dissemination.
- Gender equality and women's rights issues should be incorporated into all awareness messages and tools.
- For information dissemination, eye-catching media such as documentary films might be useful to educate people.
- The Central Information Centre on Climate Change should build strong linkages with other information centers (governmental and non-governmental) for better sharing of information.

Action-Related

- Market considerations must be analyzed before alternative livelihood strategies are promoted.
- Adaptation measures promoted should be selected based on their feasibility for implementation by targeted participants in terms of initial investment required. Alternatively, linkages could be created with credit programs to allow poor participants to undertake measures that require a larger initial investment. Seasonal loans would be more appropriate than traditional microcredit in this case.

- Improved linkages are needed between the government service providers and NGOs. This should be a priority activity in any extension phase or new project to ensure sustainability of initiatives.
- More time should be allocated to develop understanding of the approach by staff and partners to ensure appropriate linking of activities/measures with vulnerability contexts and well-being indicators.
- Project interventions relating to safe water should consider arsenic risks, as well as the long-term sustainability of the water supply in the context of climate change.
- More emphasis should be placed on opportunities for women.
- The Sundarbans mangrove forest is a fundamental component of the economy of the southwest region, and its conservation is vital to the adaptation of the region to climate change. Future work should consider conservation of the Sundarbans in the context of climate change.
- The health and nutritional status of women and children in rural areas is generally poor due to lack of dietary knowledge and unhealthy practices. The project's interventions to increase food security should also consider health and nutrition aspects.

Advocacy-Related

- There is a need to develop stronger linkages among concerned policy makers and institutions through advocacy at multiple levels, using different activities to reduce the policy gap.
- Expected results on advocacy initiatives should be in line with the timeline, resources, and context of the project.
- A women's network formed of membership from community women would be an important forum, which might help to improve communications and leadership for establishing women's rights and other entitlements.

6. Conclusions

The RVCC Project has achieved considerable success in piloting an approach to climate change adaptation at the grassroots level through awareness, action and advocacy. Significant results have been achieved in all areas: awareness of climate change issues has been raised at multiple levels throughout the southwest region; vulnerable households are testing agriculture and livelihood measures that will reduce their vulnerability to environmental change; UPs have greater capacity to address the vulnerability issues of their constituencies; and the issue of salinity and drinking water is gaining attention by decision-makers at local, regional and national levels.

The learning-by-doing process adopted by the project has generated significant lessons that can inform the design of future programming on adaptation to climate change, or of livelihoods projects aiming to incorporate climate change considerations.