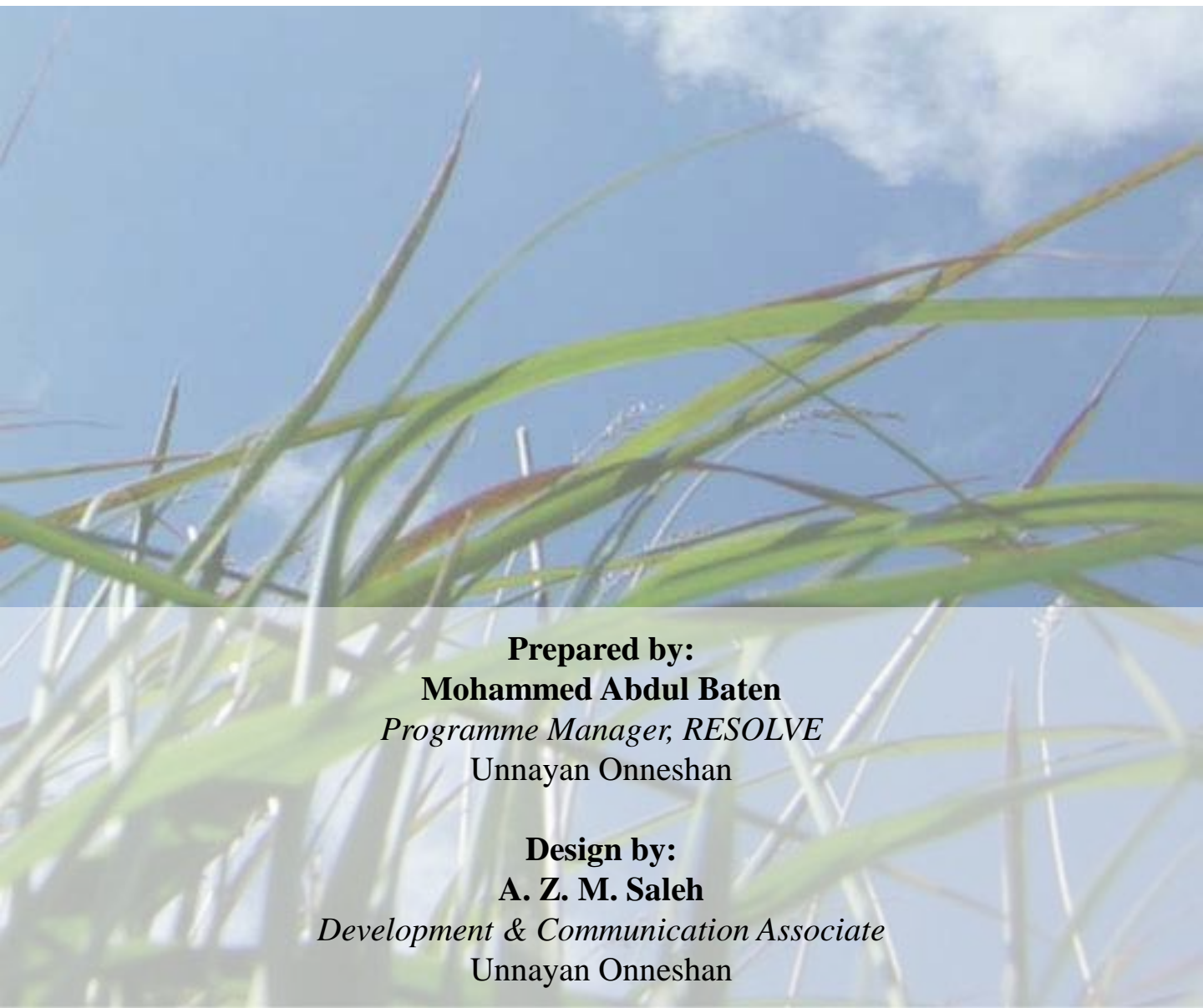




Report on

**Regenerative Agriculture and Sustainable Livelihoods
for Vulnerable Ecosystems (RESOLVE)**

Year 2010



Prepared by:
Mohammed Abdul Baten
Programme Manager, RESOLVE
Unnayan Onneshan

Design by:
A. Z. M. Saleh
Development & Communication Associate
Unnayan Onneshan

Background

Geographically, Northern and Central region of Bangladesh are flood plain, formed through siltation carried by three mighty rivers namely Padma, Jamuna and Bramhaputra from upstream. Historically, the regions observe flood every year and local ecosystems are influenced by periodic flooding. In spite of people's sufferings, flood makes the agriculture land fertile through siltation and there by shapes the life and economy of the areas. However, climate change has modified the scenario. Different climate change impacts such as recurring floods, river bank erosion, drought in dry season, salinity increase as a result of back water effect, downing ground water level have been contributing to augment the vulnerability of the regions. Nevertheless, the regions remain outside the ambit of climate change related actions. Contextual analysis suggests that unless urgent actions are taken, climate change will undermine efforts to ensure the food security of the region. Thus, immediate actions by employing innovative approaches on climate change adaptation and community resilience are of utmost importance that simultaneously ensures food security and livelihood stability. Under the circumstances, the proposed project selects Sirajgonj, Gaibandha, Shariatpur and Rajshahi districts due to their graving vulnerability to climate change.

Considering experiences on local context, four Non-Government Development Organizations and one research organization grouped together to implement the project. Having long-standing experience in the selected areas, these organisations will implement proposed activities; Ashrai in Rajshahi, Gana Unnayan Kendra (GUK) in Gaibandha, Gono Kalyan Sangstha(GKS) in Sirajgonj, and Shariatpur Development Society (SDS) in Shariatpur; and Unnayan Onneshan will provide technical to the implementing organizations.

Having the ultimate goal of making communities more resilient to adverse impact of climate change and to ensure food security the RESOLVE programme aimed at implementing a pilot project in the aforementioned districts for the duration of 2 years (2011-2012), which will follow another two programme phases of 3 years each; phase 1 (2013-2015) and phase 2 (2016-2018). In each phase the model will be replicated and scaled up in different locations in the same AEZs (districts) in phase 1 and in other AEZs (districts) in phase 2. Since a graduation cycle of a household generally takes 3-5 years, therefore each new phase will start replication and /or scaling up keeping continuation with existing beneficiaries through a phase out strategy.

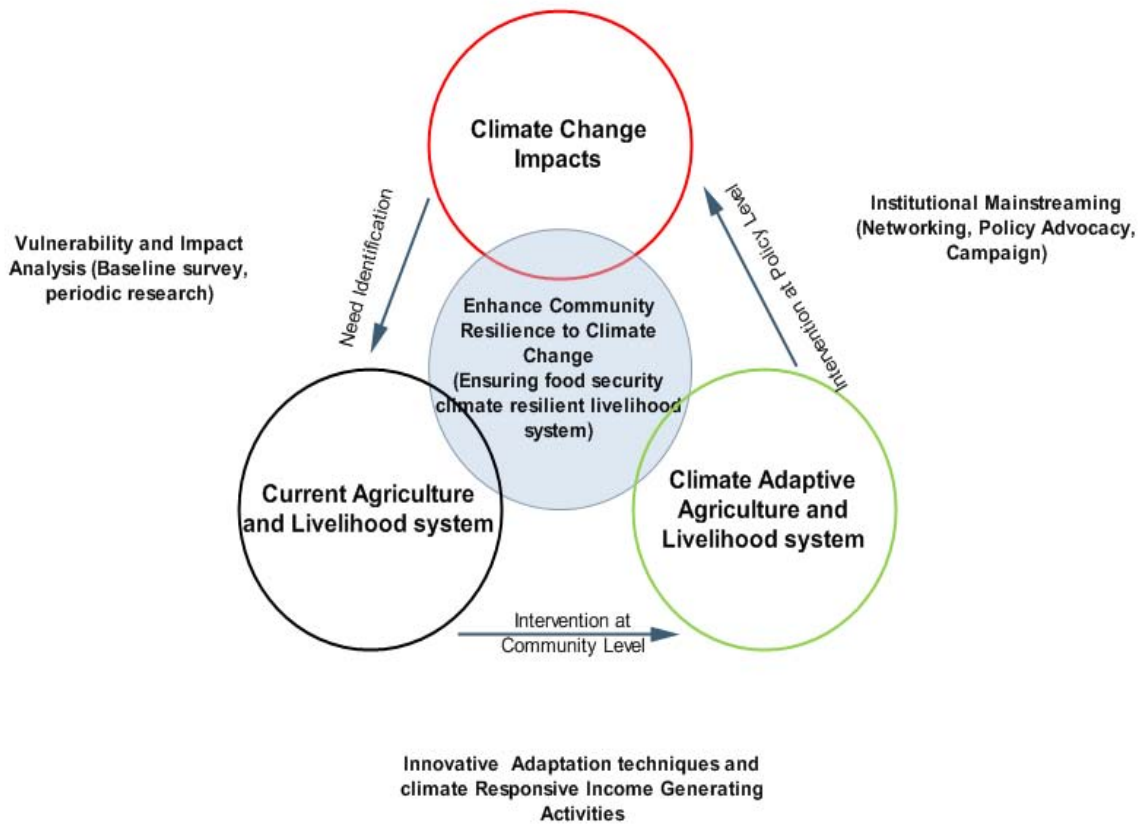


Figure 1: Conceptual framework of the RESOLVE project

Objectives and Planned Outputs

Main Goal

To make communities more resilient towards adverse impacts of climate change and increasing food security

Specific Objectives

1. to demonstrate food secured adaptive agriculture to climate change

Output: Climate adaptive agriculture based production and consumption increased at household level

2. to diversify livelihood options for reduction in poverty of the climate vulnerables giving more emphasis on women headed households

Output: Climate adaptive, culturally appropriate income generating activities are promoted (on firm, off firm and non firm)

Free and fair market access developed for right holders

3. to strengthen community resilience to absorb, recover and reorganize to, and from, climatic shocks

Output: Strengthened community resilience through appropriate preparedness, recovery and reorganization measures

4. to increase pro-poor and pro-development responsiveness of the government to the climate change

Output: Increased government's (pro-poor and pro-development) responsiveness to the climate vulnerable people

5. to amplify linkages, learning through research based advocacy on cross boarder (regional and international) actions for reduction of impacts of climate change, and low carbon development pathways

Output: Strengthened participation and engagement in regional and international networks for learning, evidence sharing and creating effective pathways towards change

Cross cutting objective

6. to establish adaptive management through learning by doing for scaling up (practicing resilience theory)

Activities in 2010

Foundation Training:

A six day long (18-23 December 2010) foundation training on RESOLVE (Regenerative Agriculture and Sustainable Livelihoods for Vulnerable Ecosystems) has been organized at Unnayan Onneshan conference centre. Total 24 participants from 3 different project partners (SDS, GUK & GKS) attended the training workshop. Oxfam Novib is sponsoring the RESOLVE project and Unnayan Onneshan is engaged with the project as technical partner. Mr. Mohammed Abdul Baten, Research Associate and Coordinator of Climate Change, Biodiversity and DRR unit of Unnayan Onneshan, facilitated the training as lead trainer. Experts on different fields such as agriculture, climate change, negotiation, project management trained the participants under different modules. The training was conducted in 16 sessions including climate change, agriculture, livelihood diversification, methodology, data collection process and analysis techniques, project management strategies and designing monitoring and evaluation tools relevant for the project.

Objectives

- ❑ To build capacities of the staffs to better achieve the goals and carry out the activities planned under different project objectives to make the communities more resilient towards adverse impacts of climate change and increasing food insecurity.
- ❑ To provide opportunities to develop solidarity and space for learning and experience sharing among project partners
- ❑ To develop the expertise on the data collection methods and use of statistical tools as per the demand of the project

Schedule of the training:

Day 1 (18 December 2010)

Session 1

- Inception, Registration and Distribution of training materials



Session 2

- Overview of the RESOLVE project
- Clarifying concepts (Climate Change, Adaptation, Adaptive Agriculture, Disaster risk reduction, Resilience, Ecosystem Approach, Sustainable Livelihood, Adaptive Management, Gender mainstreaming)

Resource person: Mohammed Abdul Baten (Research Associate, Unnayan Onneshan and ILC focal point to UNCBD)



Session 3

- Seed management in face of Climate Change

Resource person: Mr. Jahedul Islam (Scientific officer, Genetic Resources and Seed Department, Bangladesh Rice Research Institute)



Day 2 (19 December 2010)

Session 4

- Designing strategies for achieving project goals
- Redefining project activities

Facilitator : Mohammed Abdul Baten, A.Z.M. Saleh



Session 5

- Gender mainstreaming in the RESOLVE project

Trainer: Ferdousi Akter (Gender specialist)



Day 3 (20 December 2010)

Session 6

- Divergence and Convergence between DRR and CCA: implications for theory and application

Resource person: Mizanur Rahman Bijoy (Coordinator, Climate Change and DRR unit of Nabalok)

Facilitator: Mohmmaed Abdul Baten



Session 7

- RESOLVE Beyond Scale

Resource Person: Mr. Rashed Al Mahmud Titumir (Chairperson, Unnayan Onneshan)

- Ins and Outs of Climate change negotiation: Rio to Cancun

Resource person: Mr. Kamrul Islam (President, Bangladesh Environmental Journalist Association & Lead Spokesperson, LDC Adaptation group)



Day 4 (21 December 2010)

Session 8

- Agriculture and Climate Change: search for sustainability

Trainer: Jayanta Kumar Basak (Agriculture expert and Research Assistant, Unnayan Onneshan)



Session 9

- Resilience in Practice: Nature to Society

Trainer: Mohammed Abdul Baten (Research Associate, Unnayan Onneshan; specially trained in Resilience Approach from Stockholm Resilience Centre, Sweden)

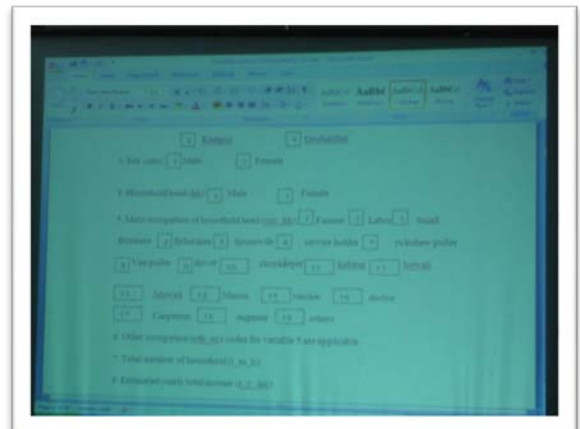


Day 5 (22 December 2010)

Session 10

- Data Collection, triangulation, analysis techniques

Trainer : Nepolean Dewan (Economist & Project Associate, Unnayan Onneshan)



Session 11

- Using statistical tools to analyse data (Training on SPSS)

Trainer : Mustifzur Rahman (Population scientist and specially trained in SPSS)



Session 12

- Community Based Adaptation to Climate Change

Resource person: Golam Rabbani (Research Fellow, Bangladesh Centre for Advanced Studies)



Session 13

- Strategies to increase pro-poor responsiveness: searching for sustainability unitedly

Resource Person: Ziaul Houque Mukta (Coordinator , Campaign for Sustainable Rural Livelihoods-CSRL)



Day 6 (23 December 2010)

Session 14

- Designing activity cycle (from planning to implementation)
- Preparing gender checklist for RESOLVE

Facilitator: Mohammed Abdul Baten (Research Associate, Unnayan Onneshan)



Session 15

- Foundation Training on RESOLVE: Way ahead

Facilitator: A.Z.M Saleh



Foundation Training in action



Training on the way...

Community Based Adaptation (CBA) Framework Some Key Participatory Tools Needed for CBA

Tools	Uses
Community Mapping and Modeling	<ul style="list-style-type: none"> Resources and capitals Types and causes of risks and threats Extent of vulnerable areas Vulnerable households and individuals Planning DRR/CC adaptation measures
Seasonal Calendar	<ul style="list-style-type: none"> Seasonality and links with livelihoods Can be combined with timelines to show perceived changes in seasonality over time
Stakeholder analysis	Institutions, relationships.....
Participatory Video	<ul style="list-style-type: none"> Awareness raising Farmer to farmer communication Advocacy
Theater, poems, songs	<ul style="list-style-type: none"> Awareness raising of risks and risk reduction measures Advocacy
Consultation	<ul style="list-style-type: none"> hazards, impacts, vulnerabilities and adaptation options
Ranking	<ul style="list-style-type: none"> Vulnerabilities and hazards Coping and DRR strategies, e.g. water management options,

Resilience in Agriculture

Agricultural resilience involves an ability to deal with everything from climate change and pest outbreaks to changes in policy and increased costs of inputs.

A number of recent global reports claim that future agriculture must be based more on diversity and local inputs than monocultures and fossil fuels to become resilient. Such agriculture is about reducing energy consumption and preserving a variety of farming systems and crop diversity in order to increase resistance to pests and disease, and help farmers adapt to climatic changes. By reduced nutrient and water loss (through e.g. water harvesting, high organic matter content and soil covers) soils can become more resilient to floods and droughts.

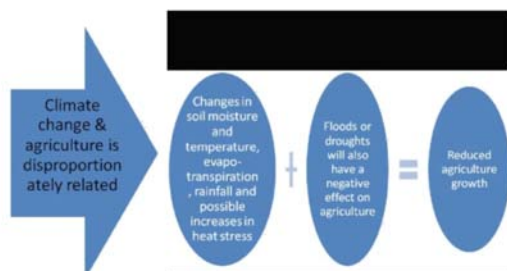
Resilient farms never stop learning and adapting. They strive to ensure that the ecosystem services that underpin agricultural production do not collapse, e.g. services that maintain pollination, erosion control and soil carbon and water holding capacity.



Change of Temperature pattern in Bangladesh due to Climate Change

Month	Total Temp. change (°C) in 30 years from 1976 to 2005	Month	Total Temp. change (°C) in 30 years from 1976 to 2005
January	-0.700	January	-0.218
February	1.182	February	1.210
March	0.064	March	0.500
April	0.975	April	0.695
May	0.852	May	0.831
June	1.002	June	0.522
July	0.583	July	0.586
August	1.075	August	0.468
September	0.842	September	0.258
October	0.524	October	0.712
November	0.406	November	-0.183
December	1.065	December	0.571

Climate change & Agriculture



Autonomous or spontaneous adaptations occur as a reactive response to climatic stimuli, without the intervention of a public agency.

Institutional and economic parameters determine the vulnerability and adaptive capacity of societies.

Planned adaptations can be either reactive or anticipatory and are generally undertaken by governments on behalf of society. Some adaptations undertaken by individuals will be planned while others will be spontaneous or reactive to the changes related to resource use or to changing economic constraints or opportunities.

Training on the way...

Major Steps for Gender Mainstreaming

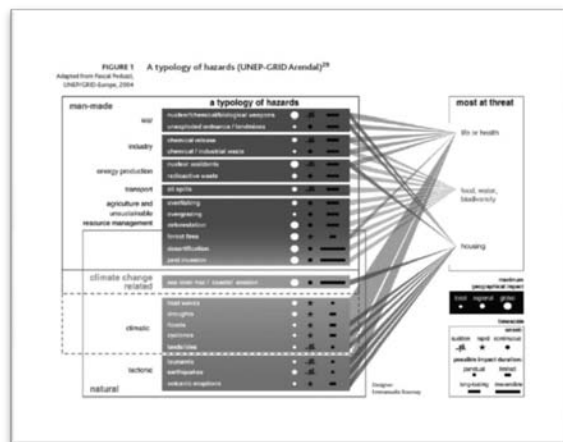
- Mainstreaming Approach to Stakeholders
 - Who are the Decision-Makers?
- Mainstreaming a Gender Agenda
 - What is the Issue?
- Moving Towards Gender Equality
 - What is the Goal?
- Mapping the Situation
 - What Information do we Have?
- Refining the Issue
 - Research and Analysis
- Formulating Policy or Project Interventions
 - From a Gender Perspective
- Arguing Your Case
 - Gender Matters!
- Monitoring
 - Keeping a (Gender-Sensitive) Eye on Things
- Evaluation
 - How Did We Do?
- Engendering Communication

Objectives of the project

- to demonstrate food secured adaptive agriculture to climate change
- to diversify livelihood options for reduction in poverty of the climate vulnerable giving more emphasis on women headed households
- to strengthen community resilience to absorb, recover and reorganize to, and from, climatic shocks
- to increase pro-poor and pro-development responsiveness of the government to the climate change
- to amplify linkages, learning through research based advocacy on cross boarder (regional and international) actions for reduction of impacts of climate change, and low carbon development pathways

Create SPSS Data File by Using Questionnaire

A1. District:	Shariatpur	1
	Sirajganj	2
	Rajshahi	3
	Gazirabad	4
	Khulna	5
	Dhaka	6
A2. Upland:		
A3. Area:	Rural	1
	Urban	2
A4. Name of the Respondent:		
A5. Sex:	Male	1
	Female	2
A6. Father/Husband's Name:		
A7. Mother's Name:		
A8. Household Head:	Male	1
	Female	2
A9. Occupation (Main):		
A9. Another Occupation (If Yes):		
A10. Total Family Member:		
A11. Household's Yearly Income:		
A11. Household's Yearly Expenditure:		



Baseline Survey

A baseline survey has been conducting in project areas to collect social, economic and environmental condition of the project areas. Under the baseline survey total 400 interviewees have been selected including 300 from project right holders and other 100 are randomly selected. A comprehensive questionnaire, which has been developed with nine months research and already applied in 8 different areas to test its effectiveness, is being used in the RESOLVE project to collect data.

Phases of Baseline Survey:

January to June 2010: Questionnaire Development

July 2010: Field Testing Started

August 2010: Adjustment to the field condition

September 2010: Replication started

October 2010: Questionnaire testing started in RESOLVE project areas

Adjustment to the field condition in RESOLVE project areas

November 2010: Redesigning questionnaire for data collection

December 2010: Data collection for Baseline Started