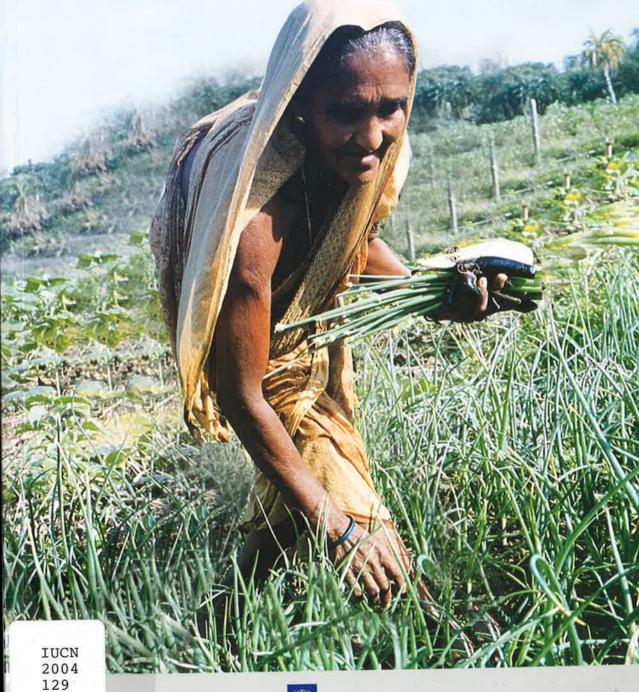
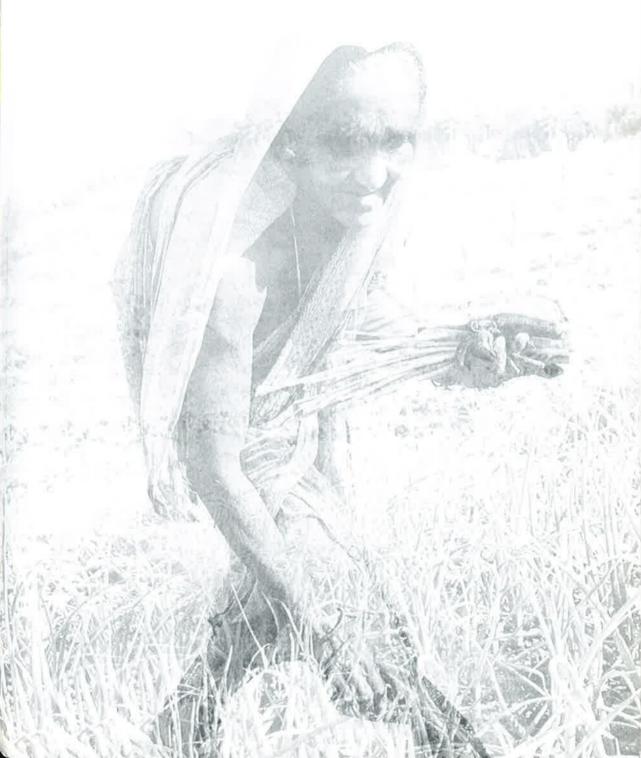
Community Based Haor and Floodplain Resource Management: The Gender Perspectives







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Foreword

Gender – the socially constructed roles and characteristics assigned to men and women in a specific culture– is a key factor shaping people's access to, use of and control over natural resources. The different gendered realities of men and women mean that women and men often have different priorities and benefit differently from natural resource use, technology development, and resource management. However, such realities are not acknowledged in many development initiatives, resulting in serious inequities in the distribution of the benefits of natural resource use, affecting the sustainability of natural resource management. For this very reason, the Community Based *Haor* and Floodplain Resource Management Project has, since inception been keen to address the gender issues within the project perspective. In fact, gender consideration has been one of the main approaches for implementation of this project.

This publication documents the gender analysis findings in the project area, which will help the concerned develop an understanding of the gender issues in regard to natural resource management specially wetland resource management, I hope that in future, this document will guide and help mainstreaming gender issues in sustainable of natural resource management in Bangladesh.

Dhaka August 2004 Dr. Ainun Nishat Country Representative IUCN-The World Conservation Union Bangladesh Country Office

Preface

Over the centuries, rural women have successfully engaged themselves in natural resource management. They are simultaneous users, consumers and producers of natural resources and protectors of ecosystems. But unfortunately, it is again women who happen to be the worst victims of environmental degradation, their role of conservationist-cum-sustainability manager notwithstanding. The situation is even worse in countries like Bangladesh, wherein environmental degradation, especially natural disasters affect women most adversely who are amongst the poorest of the poor, considering every index of `development'. As development, environment and gender issues are interlinked, sustainable development initiatives relevant to natural resource management must incorporate gender issues.

This study is an attempt made toward identifying the gender issues at the sites of Community based Haor and Floodplain Resource Management Project (SEMP component 2.2.1 A and B) being implemented by IUCN Bangladesh under the aegis of the Sustainable Environment Management Programme (SEMP).

The study is based on the analyses of the primary and secondary data gathered from the SEMP project sites. Both qualitative and quantitative research methods viz. survey, observation, focus group discussions, case studies etc. were deployed in data collection, with pronounced emphasis on the qualitative modes. Also, available literature sources on gender related issues were tapped. Various documents already prepared as by products of the project viz. project proposal, progress reports, problem census reports etc. were consulted while preparing this study report.

The study findings reveal that poor rural women have been traditionally, compulsively and significantly engaged in managing the natural resource management in our country. It has been reconfirmed that women are the prime sufferers due to any environmental degradation occurring anywhere inhabited by humans. Necessarily, the study outlined and recommended further actions for sensitizing the concerned quarters involved in the project about the gender issues.

Dhaka August 2004

Dr. Babar N. Kabir Program Coordinator, SEMP Ministry of Environment and Forest

Acknowledgements

This study report is an attempt towards incorporation of gender issues in to the `Community Based *Haor* and Floodplain Resource Management Project (SEMP Component 2.2.1/A and B)'.

We would like to recall the valuable supports of Ms. Rawshan Rahman, who shared her initial experiences and provided necessary guidance.

We are thankful to Dr. Ram Dulal Bhawmik, Ph. D. Research Fellow of Medical Science who focused on gender and social aspects of arsenicosis in his study. He reviewed the draft report and provided necessary comments and suggestion for such a social study.

We are grateful to Ms. Lorena Aguilar, Senior Gender Advisor, IUCN HQ, Switzerland and Dr. P. Balakrishna, Head, Regional Biodiversity Programme (RBP), IUCN Asia who kindly rendered his supports for reviewing the draft of this report and endowed with crucial comments on the draft report.

I personally appreciate Ms. Shuriya Farzana, the Gender Focal Person of IUCN Bangladesh for her painstaking efforts towards conducting the study and preparing the draft report. Very special thanks are extended to Mir Waliuzzaman of IUCNB, who collaborated and supported at the every step of developing the study report, with his knowledge of gender, linguistic proficiency. Without his painstaking critique and editing work, this study report would not never been completed. Similarly, we would like to thank Munjurul H. Khan for his vital comments and guidance.

We are thankful to Mr. Anisuzzaman Khan, Ms. Farida Shahnaz, Ms. Krajai Chowdhury, Ms. Sharmin Sultana, Mr. Rakibul Haque, Mr. Arif M. Faisal, Ms. Shiban Khan of IUCN Bangladesh for their valuable inputs. Our appreciation goes to Moniruzzaman Khan of IUCNB for providing necessary supports in conducting social research.

In the process of preparing this study report, we needed to reach the study object, the rural poor women. The field staffs of our partner organizations viz. Bangladesh Centre for Advanced Studies (BCAS), Nature Conservation Management (NACOM) and Center for Natural Resource Management (CNRS) assisted us with their necessary support in this connection. Ms. Olena Reza and Mr. Nasimul Haque of BCAS, Mr. Sachin Halder, Mr. Annisul Islam and Mr. Naymul Kabir Chowdhury of CNRS and Mr. Abdul Mannan of NACOM supported us in drawing up the portrait of rural women in miseries. IUCN Bangladesh gratefully acknowledges the financial support received from Sustainable Environment Management Programme (SEMP), Ministry of Environment and Forests, Government of the People's Republic of Bangladesh and UNDP for implementing the Community Based *Haor* and Floodplain Resource Management Project and publication of this Book.

Finally, we are indebted to the distressed women of the project sites named Ella Folio, Alomoti Gain, Hasina Begum, Omela, Parul Halder, Reena Das, Nujera Begum and Priya Bala Das, who gave us time and shared their sufferings instead of their daily heavy work load.

Dhaka August 2004

Rashiduzzaman Ahmed Task Manager SEMP, IUCN Bangladesh Country Office

Local Terms

Aman Rice planted before or during the monsoon beginning July/August and harvested in November Rice planted during March-April and harvested during July Aus and August Baor An oxbow lake or wetland formed in an abandoned arm of a river Beel A saucer-shaped depression which generally retains water throughout the year Baira A types of Hydroponics (floating garden) made by piling up water hyacinth in the form of a platform **Boro** Winter rice planted in December and January and harvested before the onset of monsoon in April and May Char land A newly formed island, middle bar or a side bar Ezmali property Common property resources A back swamp or bowl-shaped depression located between the Haor natural levees of rivers and may comprises of a number of beels [heel A fresh water marsh Ridges that are higher than the haor basin but lower than Kanda homestead land Khal Bengali term for a drainage channel usually small, sometimes man-made Khas land Public lands not registered in the name of any individual of corporate body, regarded by land administration officials as belonging to the state Kooa is the deeper site in the flat agricultral fields that contin-Kooa ues to carry water during dry periods Katha Pile of branches of trees in the water bodies

Abbreviations and Acronyms

ADB	Asian Development Bank
ASA	Association for Social Advancement
BADC	Bangladesh Agriculture Development Corporation
BCAS	Bangladesh Centre for Advanced Studies
BRAC	Bangladesh Rural Advancement Committee
BRDB	Bangladesh Rural Development Board
CAP	Country Assistance Plan
CARE	Cooperation of American Relief Everywhere
CBD	Convention on Biological Diversity
CCDB	Christian Community Development Board
CEDAW	Convention on the Elimination of all forms of Discrimination Against
CEESP	Commission on Environmental Economics and Social Policy
CIDA	Canadian International Development Agency
CNRS	Center for Natural Resource Studies
COSS	Country Operational Strategy Studies
CSO	Civil Society Organization
DAC	Development Assistance Committee
EIA	Environmental Impact Assessment
FRMC	Floodplain Resource Management Committee
FWCW	Fourth World Conference on Women
GAD	Gender and Development
GIDP	Gender in Development Programme
GUP	Gano Unnayan Prochesta
HRMC	Haor Resource Management Committee
HYV	High Yielding Variety
IGA	Income Generating Activities
IUCN	International Union for Conservation of Nature and Natural Resource
LGED	Local Government Engineering Department
MoEF	Ministry of Environment and Forests
NACOM	Nature Conservation Management
NCS	0
	National Conservation Strategy
NEMAP	National Conservation Strategy National Environment Management Action Plan

NFLS	Nirobi Forward Looking Strategy
NGO	Non Government Organization
NRM	Natural Resource Management
NWDP	National Women Development Policy
OAW	Officer for Advancement of Women
PDG	Programme Development Group
PFA	Plat Form for Action
RMP	Rural Maintenance Programme
SDC	Swiss Agency for Development and Cooperation
SDO	Strategic Development Objective
SEMP	Sustainable Environment Management Programme
SIDA	Swedish International Development Cooperation Agency
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
VGD	Vulnerable Group Development
WID	Women in Development
WMTC	Wetland Management Training Centre
WSSD	World Summit on Sustainable Development

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Chapter 1
Introduction



1.1 Background

The word 'environment' can be broadly classified into two categories viz. the natural environment and the built environment. The natural environment includes flora, fauna, soil, air, water and rock. On the other hand, the built environment is related to settlements in which human activities are concentrated. The reciprocal actions of the natural and the built environments constitute the rural ecology. In Bangladesh, the rural ecology is vulnerable to a number of environmental pressures viz. decreasing soil fertility, receding water table, arsenic contamination in ground water, shrinking biological diversity, decreasing wetland area, increasing deforestation, natural disasters and pollution etc. The present deterioration of the rural ecology has occurred mainly due to unsustainable use of natural resources to meet the demands of the increasing population and other development requirements. The rapidly expanding population is contributing towards making the situation more and more vulnerable everyday by polluting, destroying, damaging and exploiting the country's meagre natural resource base.

The Ministry of Environment and Forest (MoEF) is implementing the Sustainable Environment Management Programme (SEMP), which, among its 26 relevant components, has one that concerns wetland resources management titled "Community Based Haor (2.2.I/A) and Floodplain (2.2.1/B) Resource Management". IUCN Bangladesh Country Office has been implementing the component with its partner organizations BCAS, NACOM and CNRS based at the haor and floodplain project sites.

Considering the fact that women are the key managers of the wetlands¹ resources and also that they happen to be the worst victims of the process of degradation of wetland, participation of women in project planning, implementation and monitoring is being done through the SEMP activities. It is stated in the project document (viz. LoA) "...Wetland rehabilitation measures will be taken in selected sites with 50% women participation, these sites will be planted with swamp forest species, grasses and reeds. Pilot flood/erosion proofing measures will be undertaken and pilot demonstration of appropriate farming systems initiated. Community awareness programmes will be initiated with community groups and women's groups on environment and sustainable use of wetland resources". This report has been dealt with women's role in wetland resource management, thrashing out the gender aspects of the project in general.

1.2 Objectives

The overall objective of this study is to determine, ascertain and highlight the gender aspects/issues of wetland resource management. The specific objectives of the report are:

- Highlight the major gender and natural resource management related global commitments; and explore environment related aspects of the National Women Development Policy of Bangladesh;
- Identify the problems faced by women in the study area and recommend necessary mitigation measures as appropriate;
- Highlight on the gender dimensions of wetland resource management in the project sites;
- Evaluate the gender sensitivity of the project; and
- Suggest for future actions to address the gender issues at the project sites.

¹The RAMSAR Convention has defined wetlands as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowering, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres."

3 Methodology

The study areas have been selected considering the vulnerability of the ecosystems at the project sites and various other organizational and resource facts. The following villages from the three sites have been selected as the study areas to look into the gender issues:

- i) Beel Chanda and Kadambari in the Madhumati floodplain² in Gopalganj district
- ii) Majam Para and Maluchi in the Padma-Jamuna floodplain in Manikganj district
- iii) Rajapur and Fenarbak in the Hoar3 region in Sunamganj district

The study is based on both primary and secondary data. Both qualitative and quantitative research methods have been employed for the data collection and emphasised the qualitative method on purpose.

Primary data: Survey, observation, focus group discussion and case study methods have been used for primary data collection. A questionnaire containing both closed-ended and open-ended questions has been used for the survey.

On an average, 30 interviews have been conducted at each project site. The households have been selected on the basis of stratified random sampling. The respondents have been selected on the basis of the following criteria: i) females, preferably aged 20 years and over, ii) female household head or mainly female inhabited households and iii) direct stakeholders of the project, all coming from families directly dependent on the *beel* for livelihood.

Focus group discussions, observation and case studies have been conducted with selected poor rural women with a view to having a better insight into their problems.

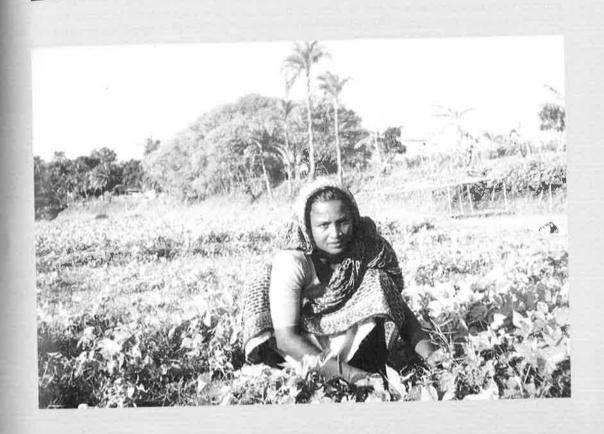
Secondary data: The secondary data sources has included literature on the global and Bangladesh perspectives related to gender issues, government's plans and policy on gender etc. and various relevant books, articles, reports, documents etc. In addition, other necessary information on the subject has been gathered from different project documents viz. project proposals, progress reports, problem census reports etc, which have been prepared under the project.

1. 4 Organization of the Report

The report contains five chapters as follows: Chapter 1: Introduction, which includes background, objectives, methodology and organization of the report. Chapter 2: Gender and natural resource management, which includes, articulation of Agenda 21, and Convention on Biological Diversity (CBD), Fourth World Conference on Women (FWCW) and World Summit for Sustainable Development (WSSD) concerning gender issues and natural resource management. Chapter 3: Introduction to the community based wetland resource management project, which includes brief on project background, objective, sites, approach, activities and key environmental issues of the project sites. Chapter 4: Gender perspectives in wetlands resource management, which includes the separate depiction of the status, problems, activities of women at different project sites, their role in wetland resource management and a number of case studies of the rural poor women at the project sites. Chapter 5: Evaluate the gender sensitivity of the project and recommendations for further action. As annexures, different supporting documents have been furnished viz. institutionalisation of WID/GAD policy; experiences of donors (Annex-1); IUCN's efforts of mainstreaming gender in its policies; programmes and projects (Annex-2 and 3) etc.

Chapter 2

Gender Issues and Natural Resource Management



2.1 Gender and Natural Resource Management (NRM)

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There exists a close relationship between woman and nature, as the former has to depend on nature for the nourishment and sustenance of her family. Outside the urban centres, almost everywhere else, it's women who have to collect and harvest various commodities from nature viz. fruits, vegetables, medicinal herbs, spices, fuel wood, water, fodder etc. for the sustenance of the communities all over the world.

On the other hand, they are also the key protectors and managers of natural resources. They are the managers of the *ex situ* gene banks, pioneers of sustainable utilization and conservation of biodiversity and also the think-tank of indigenous knowledge of natural resource management. Women play a very vital role in managing natural resources such as soil, water, forests, energy etc. Their tasks in agriculture and animal husbandry as well as in the household make them the daily managers of the living environment. They preserve and conserve seeds and plants for which they may be regarded as managers of gene banks (Khan, Khatun & Sultana, 1992).

To understand, consider and make use of the gender perspectives of NRM, the following issues may be considered:

(a) Gender roles

To better understand the gender roles regarding NRM, it is important to address the triple roles viz. reproductive, productive and community roles of women, which place specific demands on women's time and energy. Proper time budgeting is essential for women to involve themselves in the activities related to natural resource management as they have to take care of their family needs first and also participate in the conservation related activities.

(b) Use, access and control over resource

Men and women usually use different resources for different purposes. Often women's contribution to managing certain resources is not recognized as particular resources are assumed to be vested exclusively with the male, viz. land and other properties. Besides, men and women have different calibers and extent of access to and control over the resources. Compared with men, women have very limited access to either economic or non-economic resources.

(c) Gender knowledge

Women's knowledge of NRM is hardly recognized or legitimized. Their knowledge and skill of NRM are ignored. The social, cultural and legal norms happen to limit women's ability to participate effectively in sustainable use of natural resources.

(d) Decision making

In most rural societies, formal decision-making mechanisms within the communities have usually a male bias. Women do not have the decision making power in resource management, household health, community activities etc. Women's non-participation in the decision making process jeopardizes their capacity as community natural resource managers.

(e) Gender equality

Gender equality in terms of ownership, use and control over resources is a very important consideration in the activities related to NRM. Women and other disadvantaged communities at the village level must be involved in natural resource management. It should be ensured that women have access to and control of land and other ecological resources, the process of knowledge formation, new skills and experience in biodiversity management.

2.2 International Articulations on Gender and Natural Resource Management

2.2.a Agenda 21

The United Nations Conference on Environment and Development (UNCED) held in June, 1992 in Rio de Janerio of Brazil, which is termed as the 'Earth Summit' / 'Rio Summit' is the milestone of the history of mankind, having highlighted the global environment and development issues very successfully.

The UNCED adopted a number of action programmes called Agenda 21 for coping the challenges of the 21st Century. The 3rd part of Agenda 21, has emphasized the role of special interest groups viz. women, trade unions, indigenous people, and other non-governmental agents in the areas of environment and development. The phrase 'gender-balance' has been mentioned in several places of Agenda 21. It has been stated in the chapter 24 of this part that the government's responsibility regarding increasing the ability of women for their full fruitful participation in sustainable development is to ensure their role in the national and international 'ecosystem management' and activities related to 'preventing environmental depletion'.

2.2.b Convention on biological diversity (CBD)

In May 1992, the United Nations adopted the Convention on Biological Diversity (CBD) in view of ensuring: i) conservation of the biological diversity of the world, ii) sustainable use of biological resource and iii) equitable sharing of the benefits arising from the use of genetic resource. Afterward, during the UNCED in Rio de Janerio, about 150 States signed the instrument for implementing the above commitments.

The CBD affirms the conservation of biological diversity and also the protection of the sovereign rights of



Kid harvesting wetland fruits

nations over it. It emphasizes on equity in sharing benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components.

Besides, the CBD recognizes the vital role that women play in the conservation and sustainable use of biological diversity and affirms the need for the full participation of women at all levels of policy-making and implementation of strategies and program.

2.2.c Fourth world conference on women (FWCW), Beijing 1995

FWCW held in 1995 in Beijing recognized that women's experiences and contribution to an ecologically sound environment must be central to the agenda for the twenty first century. It had adopted the Beijing Platform for Action (PFA), which dealt with 12 critical areas of concern, of whom Women and Environment was one of the key issues. The PFA had delineated the following three key strategic objectives (to address the lack



Home-grown vegetables

of adequate recognition and support for women's contribution to conservation and management of natural resources and safeguarding the environment):

- Involve women actively in environmental decision-making at all levels;
- Integrate gender concerns and perspectives in policies and programmes for sustainable development; and
- Strengthen or establish mechanisms at the national, regional and international levels to assess the impact of development and environmental policies on women.

2.2.d World summit on sustainable development (WSSD), Johannesburg, 2002

WSSD -the ten years anniversary of the Rio Earth Summit UNCED was served as a wake-up call on a wide range of development and sustainability issues. It recognized, in particular the specific role of youth, women and indigenous and local communities in conserving and using biodiversity in a sustainable way. The WSSD adopted a Plan of Implementation for achieving Sustainable Development where, gender issues were reflected. The Section IV of the plan of Implementation titled "Protecting and managing the natural resource base of economic and social development" called for transferring technology, promoting best practice and supporting capacity-building for water and sanitation infrastructure and services development, ensuring that such infrastructure and services meet the needs of the poor and are gender-sensitive. Women's access to public information and participation in policy and decision-making related to water resources management and project. Implementation was emphasized. Participation of women in all aspects and at all levels relating to sustainable agriculture and food security was underscored. Gender sensitive policies and programmes on mountain ecosystem and biodiversity conservation were also stressed.

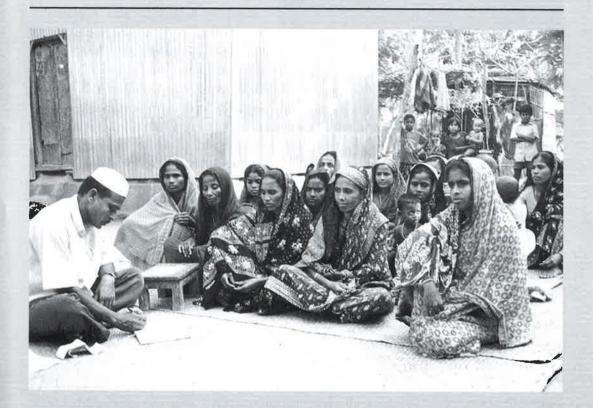
2.3 Relevant Government Policy Mandates

Bangladesh, as a signatory of CBD, is committed to address gender aspects of environment and development of the country. In 1999, Bangladesh adopted the 'National Policy for Women's Advancement'. The Article 12 of the Policy titled 'Women and Environment' states:

- Recognizing the roles of women in 'natural resource conservation management' and 'environmental security', equal participation of women and reflection of women aspect in 'environmental conservation policies and programmes' should be ensured.
- Participation of women in 'decision-making' and 'implementation of programmes' related to 'environment management' and 'pollution control' should be ensured.
- The victim women and children due to 'river erosion' and 'natural disasters' should be rehabilitated.
- Women should be encouraged to participate and provided with equal opportunities in agriculture, fisheries, animal husbandry and forestry activities.

Chapter 3

Introduction to the Community Based Haor and Floodplain Resource Management Project



Degradation of the swamp forest, reed forest: The swamps and the reed forests of the haor are being degraded due to over harvesting of trees for fuel wood, conversion of *kandas* and fallow lands into cultivable lands etc.

Siltation and sand deposition: In the *Padma-Jamuna* site, the flow of the two major rivers i.e. the *Jamuna* and the *Padma* has been severely reduced in the recent years due to siltation of the river-beds. The process of drought has started along the banks of the river *Jamuna* in lean period. On the other hand, sizeable portions of the beels, canals and rivers in the *haor* have already been or are being deposited with silt due to unabated erosion taking place around the homestead lands, the edges of the water bodies etc.

Erosion of riverbank/ homestead lands: Overflow and heavy current in the *Padma* and the *Jamuna* during the monsoon months cause serious riverbank erosion. In the haor area, devastating wave action during flashflood has been identified as one of the threats to *haor* resources. Due to the scarcity or lack of erosion proofing supports (*chailla* grass, bamboo) and aquatic trees (*hijal, karoch*) and reeds in the haor area, the bane of erosion is rendered uncontrolled or unmanageable.

Flood: Due to overflow from the rivers, heavy rainfall during the monsoon and the lack of flood proofing measures, the areas are inundated every year. During flood, river water enters into the *beel* area through connecting canals, which create waterlogging, due to lack of necessary drainage system.

Energy shortage: Supply of fuel is inadequate in the wetlands area. Aquatic vegetation viz. *chailla, erail, futki ban, kewra* etc. of the *haor* are being destroyed due to over harvesting of these for use as fuel, fodder and house repairing materials.

Chapter 4

Gender Perspectives in the Wetland Resource Management



4.1 Women of the Madhumati Floodplain

4.1.a Social status of women

According to 1991 census, the total population of the project area was 58248, of whom 49% population is women. The Hindus dominates the 76% of the total population and the others are Christians and Muslims in the project area (IUCN & BCAS, 1999). So, the traditional *purdah* system, which is still commonly observed across the rural Bangladesh is almost absent here. Women here are allowed to participate in outdoor activities.

The literacy rate of women in the project site is moderate and women are aware of the necessity for education. The government initiatives i.e. compulsory primary education, scholarship for female students at higher secondary level and assistance of various NGOs in educating the female child are contributing towards raising the literacy rate of women. Schools of different NGOs i.e. BRAC, Gono Unnayan Prochesta, Nilmoti Dusthyo Nari Kallyan Shangstha have been set up in different localities in the area.

So, the overall social status of women here is a little elevated than that at the other SEMP sites, though there exists a number of prejudicial social customs and chores performed and observed by women viz. women are used to eating the leftovers (whatever spared by other family members) as a meal; they cannot go outside the homesteads without the permission of their male partners/ guardians; they have to put a coat of cowdung (mixed with water) in the yard at dawn everyday; they cannot marry without the consent of their guardians etc. etc. The incidents of persecution of the newly married as well as old wives for dowry by their in-laws and women committing suicide occur frequently (it is worthwhile to mention here that the dowry system has been traditionally and compulsively observed by the Hindu communities more). Needless to say that women are always the victims of such the promised or demanded dowry if their guardians fail to meet them.

4.1.b Major activities of women

Household activities: Just like in other rural areas, these women too have to remain overburdened with various household activities i.e. preparing (husking, winnowing and all) rice, cooking and serving the meals, cleaning house etc. Their major contribution in the family is bearing and rearing children. They help their families by means of providing labour, money, intelligence and inspiration. They are engaged in activities like looking after the kitchen/homestead gardens, feeding the livestock and poultry etc. They save money, crops and fuel against the rainy days.

Fuel collection: In the project area, women collect peat from the beel areas by digging soil depth of 6-10 feet or more. They dry peat ball for further use. They collect dung and make dung cake for using as fuels and some times for further selling. They also collect wood, twigs, water hyacinth and crop wastes for fuel.

Water collection: Women have to spend huge time in water related activities. They collect water from nearby ponds and tube-wells and some times from rivers, canals and beels for domestic use. Some of them also supply water to hotel, market etc. The laundry women were found in the area. In the winter, some of them have to be engaged in irrigation related activities.

Medicine and vegetable collection from different wetlands plant species: Women collect flowers from *Hygrophila auriculata* (Kulekada), *Nymphoides indicum* (Chandmala) *Nelumbo nucifera* (Padma), *Nymphaea nouchali* (Shapla), and leaves of *Hydrolea zeylanica*, *Polygonum* to cure from different disease.

They collect leaves and stems from *Amaranths aquatic, Alternanthera philoxeroides* (Helencha), *Ipomoea aquatica* (Kalmishak), *Nymphae nouchali* (Shapla), rhizomes and pedicels to use as vegetable; root of *Aponogetan natans* (Ghechu), fruits of *Ottelia alismoides* (Panikola) grain of *Hygroryza aristati, Oryza rufipogan* and seeds of *Nymphaea nouchali* and *N. stellat* a (Nilshapla) to use as starch food (IUCN & BCAS, 1999).

Fishing: Fishing is one of the main source of income at the project sites. Women belonging to the fishing community are popularly known as *Malo*. They catch fishes and also engage in a variety of related activities viz. making and mending fishnets and bamboo traps, processing and drying fish, selling fish in the market etc.

Agriculture: A number of women in the project sites are involved in agricultural work. They work in their own fields



Chanda beel housewife vending wetland vegetables

and also as hired hands. They are involved in all stages of crop production i.e. preparing the fields and the seedbeds for sowing seeds, weeding, irrigating, harvesting, threshing, soaking, parboiling, drying, husking and finally storing the harvest.

Most of the female workers prefer to work in groups, as it is easier for them to perform better that way. In groups, they venture to other villages to work as hired hands. But their wages happen to be very low compared with that of the male labourers. They get Tk 30/only per capita per day for sowing paddy seeds and transplanting paddy shoots and Tk. 20-30/- only for other agricultural work.

Cattle rearing: Though fodder is scarce and expensive, some women are engaged in cattle rearing. They are involved in grazing cattle, collecting fodder, cleaning cattle-shed and bathing the animals, milking and subsequently selling the milk to the local markets.

Poultry rearing and duckery: Most of the poor women are engaged in poultry business. They collect food (snails, husk, broken bits of rice etc.) and feed their poultry. They meet their daily needs by selling eggs of the layer birds. Sometimes they use the eggs for hatching.

Handicraft: A number of women at the project site are engaged in handicraft. They prepare baskets, drums, mats etc. using grass and date-palm fronds, sew and embroider *Nakshi kantha* (embroidered quilts) and earn money. They earn Tk. 60-70/- per capita per day by sewing *kantha*. Training in handicraft and provision of necessary capital/loan is essential for them.

4.1.c Women's problems

Scarcity of safe water: During the day, women have to spend most of their time in collecting drinking water or water for other household purposes. Most of the village households cannot afford installing a tubewell and the water available from a number of the existing tubewells happens to be contaminated by the presence of arsenic in it. In a recent study carried out by the UNDP, it was found that Gopalgani (where the project site situated) is one of the six districts that are reportedly most severely affected by arsenic contamination in Bangladesh. Many people, especially women are compelled to drink arsenic contaminated water, as at times, they cannot go to the far-off tubewells to fetch drinking water.

Scarcity of fuel: Scarcity of fuel poses a severe and acute problem for women especially during the dry season when straw, paddy husk, paddy roots and jute-stalks are hardly available because most of the agricultural activities are then suspended. Cowdung and other traditional sources of fuel also happen to be inadequate. A counted few women use peat as fuel. They collect the peat from the Beel Chanda in the project area. Use of peat may help to resolve their fuel crisis, but it is yet to be popularized. People generally believe that consumption of peat-cooked food might cause gastric problems.

Case study -1 where miseries knows no bound

Mahamaya Baroi

Mahamaya Baroi is a fifty-five year old woman, living in the village Beel Chanda. Her husband, Jurun Baroi is an old man of seventy. Jurun cannot do any hard work now. In his youth, Jurun was a very strong and hardworking person. He used to work as a day-labourer in the agriculture field.

Mahamaya too was a very hardworking housewife. She used to be busy doing household chores from dawn to dusk. Additionally, she engaged herself in sewing kantha (patched quilts made with used saris and other fabrics), preparing puffed rice, polishing houses of her rich neighbours with cowdung mixture and earned money or goods to meet her family needs.

Mahamaya has one son and six daughters, of whom four (one son and three daughters) are married now. Their only son is a mason who works very hard to manage two square meals a day for the family.

Mahamaya has aged and so she is hardly able to do all the household work any more. Her daughter-in-law instead performs all the household activities and Mahamaya helps her as best as she can manage. She mainly looks after her grandchildren these days. Also, she looks after their kitchen garden and maintains the household seed-bank through the entire year.

Mahamaya has been a witness to the gradual depletion of natural resources of the village Beel Chanda during all these years in the recent past. While recalling her early days, she recounted that the village had been blessed with plenty of fruit trees viz. mango, jackfruit, black berry, guava etc. and as young children, they had enjoyed free access to them. But those fruit trees had gradually vanished and she really felt sorry for her grandchildren who didn't heve the opportunity of tasting so many kinds of fruits as she had and not even seen so many varieties of fruit trees. In addition, there had been a lot of plant species which yielded fruits, leaves and roots to be used as medicine. But those trees and bushes of herbs have also disappeared over the years. Mahamaya can rarely manage those erstwhile handy valuable herbal medicinal plants any more when her family members need them during illness.

Mahamaya, however, hasn't lost all hopes and she is still eager to help her family members tide over their rainy days. She says, "If I could lay my hands on some money, I would engage in poultry rearing and prove that I could still bring prosperity and happiness to the family."

Malnutrition: Most of the women as well as their children are malnourished. Food supply is not adequate in the area. Moreover, people don't have adequate knowledge of the nutritional value of the available foods viz. vegetables, wild fruits etc. The food consumed by the women is also insufficient, as most of the times, they are to take the leftovers and stale food.

Sanitation: Sanitary latrines are again rare in the area. Most people use unhygienic kutchcha latrines or just defecate in the open. The women and kids especially suffer from different waterborne diseases because they nonchalantly and also helplessly use the contaminated water of the nearby ponds and other waterbodies that they contaminate themselves unawares. Again, it is women who have the responsibility of cleaning the makeshift latrines, which expose them to doubly grievous health hazards.

Depletion of natural resource: Poor women are the worst sufferers due to the precipitous depletion of natural resources, as they have to gather and ensure food, fodder and fuel for their families and livestock from the nature. Due to the increasing scarcity of all kinds of natural wares and fares, it is becoming more and more difficult for women to make the two ends meet, so to say. They have to spend money to buy the required stuff from local markets, which create additional financial pressure on the family purse.

Lack of alternative income sources: Women have limited access to the income generating activities. Therefore, they are the poorer of the poor. Though they have keen interest in raising and operating poultry, small business and handicraft, they don't have the necessary starting capital and basic know-how or skill training to make a bold move. Government organizations and NGOs working in the area may come up to provide them with the seed money loans and required training, with a view to reducing both their poverty as well as the pressure on the local natural resource base.

Lack of decision making power: Though women have been contributing greatly to the family as well the society, they have not been granted access to or encouraged to take part in the decision making of the household or social affairs. Traditionally, the male breadearner are used to taking the vital decisions and the role of the females is just neglected in any decision making. Women's voices are not encouraged to be heard in the family or the society.

4.2 Women of the Padma-Jamuna Floodplain

4.2.a Social status of women

Though a male-dominated society, the Padma-Jamuna floodplain is not ridden with orthodox social practices. The observance of the *purdah* for women is not so stringently practised here. Women can go out of their homes without covering their face and body in a cloak (burqa). But compared with men, they happen to be less advanced in education and other aspects of making progress in the society.

The literacy rate of women is very low as the local people discourage education for girls. They believe that female education may pose an obstacle in the path of happy married life. So, most parents are interested in sending their male children only to the schools. Moreover, exclusive schools or other educational facilities for girls are not there.

Even today, child marriage is in vogue and people are not aware of the law that prohibits or discourages early marriage. The system of exacting dowry or marriage-money and other harmful traditions are also in common practice here. The NGOs are very active and the local women are getting small loans for starting various enterprises though. But many of them fail to repay the loans, as they have to spend the money for helping their families subsist somehow and meeting various other social demands, and also because they have hardly any control over the loan money. It's mostly their male partners or other guardians who actually use or spend the money.

The 'peers' or spiritual guides act as the social and religious leaders in the area. Many women happen to be the disciples of such peers and abide blindly by their opinions or directives in every step of life. Many a time, the illiterate rural women are cheated of all their possessions by the fraudulent peers.



Working on the embroidered quilt!

4.2.b Major activities of women

Household activities: Household activities of the women in all the project sites is more or less same.

Fuel collection: In the project area, women collect wood, twigs, water hyacinth and crop wastes as fuel. They collect dung and make dung cake for using as fuels.

Water collection: Women collect water mainly from tube-wells and ponds for domestic use. They also collect water from rivers, canals and *beels*. In the dry season they have to go faraway to fetch water from the river padma, ichhamati.

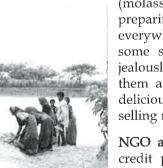
Medicine collection from different homestead plant species: Women collect petiole of Ulat Kambol (Abroma a ugusta); leaves of Bashok (Adhatoda vasica), Gritha kanchan (Aloe vera), Arhar (Cajanus cajan), Akonda (Calotropis gigantea), Thankuni (Centella asiatica), Tila kucha (Coccinea indica), Joggya dumur (Ficus racemosa), Karoch (Pongamia pinnata), Tulshi (Ocimum sanctum), Gandhavadulia (Paederia foetida), Pipool (Piper longum), Bishkatali (Polygonum orientale), Neem (Azadirachta indica); roots of Sharpagandha (Rauwolfia serpentina) etc. to cure from different disease.

Handicraft: A small number of women are engaged in handicraft. They mainly prepare mat with date-fronds, sew *nakshi kantha*, weave nets and produce different jute products. They need training and necessary loan/capital for attaining self-reliance by producing and marketing handicraft.

Cattle rearing: Some women are engaged in cattle rearing. Usually, they rear cattle under the barga (benefit sharing) system. In this system, women receive calf/calves on loan from the cattle owners. They rear the young's and sell them in the market when they mature. Then they pay the owners the purchase value (fixed earlier by mutual consent) of the cattlehead/s back and share the profits. Cattle rearing is a profitable business, experienced women confided; but they need cash loans and necessary training to be able to make the most of it.

Daily labourer: A number of women are engaged in earth cutting, land cultivation etc. as day labourers. Their wages are less than that of the male hands though. Some are engaged in road construction under Rural Maintenance Programme (RMP) of CARE.

Molasses business: A number of women trade in molasses during winter. They mainly prepare molasses with date-palm juice; the local product is widely known as *Jhitka gud*



Women as day labourers

(molasses). Although the technique of preparing molasses is generally the same everywhere, some families happen to use some special skills (which they guard jealously within the family) for making them additionally, utterly palatable and delicious. Collecting date-palm juice and selling molasses is, however, a man's job.

NGO activities: Women are engaged in credit programme activities of different NGOs. viz. Grameen Bank, BRAC, PROSHIKA, ASA, CCDB, etc.

4.2.c Women's problems:

Inadequate healthcare facility: Provision of healthcare services such as, ante-natal, post-natal, maternal care etc. for the poor women is inadequate. The Thana Health Complex situated at *Utholi* is far away from the project site. Due to poor communication, the poor, especially women can hardly reach the health complex. Qualified doctors (MBBS) are not available in the villages. People, at times, are bound to seek the services of a village quack.

Scarcity of fuel: Women in the project area suffer from acute shortage of fuel. The supply of traditional fuel i.e. straw, paddy husk, paddy root and jute-stalk etc. is insufficient, as cropping patterns have been changed due to the infertility of the soils and so many other related factors. Other fuels like cow-dung, bamboo and reeds (nal and khagra) are also scarce currently. Poor women are incapable of buying the necessary fuel from the market. Due to shortage of fuel, they fail to cook properly and consequently, they themselves as well their children eat dangerously undercooked or half-baked food, which affects their health adversely.

Scarcity of safe water: Supply of safe water is inadequate in the area. The number of tubewells is insufficient in comparison to the need of the people. Most of the existing tubewells are affected by arsenic and heavy quantity of iron. Women have to collect

water for drinking and household use from rivers and canals, which dry up during the dry months. They have very little knowledge of purifying the water collected from these open water sources. As a result, the women and their family members drink the untreated unsafe water and suffer from various waterborne diseases.

Erosion of homestead lands: Due to the continuously eroding river banks all over the country, considerable chunks of arable and homestead land disappear into the rivers every year. Women have to work hard to protect their homestead from this devastating natural disaster; sometimes, they fail too and then compulsively migrate to the nearby

Case study -2 Where miseries knows no bound

Hasina Begum

Hasina Begum is around thirty years old, living in Majam para village of Gopinathpur Union. She is a housewife and a part time labourer. She lives with her family in the Khas land of the village. Her husband Shaheb Ali Mirdha is engaged in agricultural work and other seasonal activities. They have four daughters, one of who is married with a child.

As mentioned earlier, she works as a day labourer (earth cutting etc.) in the dry season. However, in the monsoon, she along with her fellow village women remain unemployed, passing their days in acute poverty.

To Hasina monsoon is a parade of sufferings; lack of job, food, drinking water, fuel etc. She fetches drinking water from tubewells of her rich neighbourhood. But often they feel disturbed and rebuke her. That is why sometimes she collects water from ponds or beels, which is very unhygienic.

In the rainy season, her husband engages in seasonal activities i.e. buying sugarcane and selling it in local village market. But this year production of sugarcane is not satisfactory, so the business is no more profitable.

Hasina said that if she could get some capital, she would give it to her husband for any suitable business or she could culture fish in a pond owned by the Chairman of the Gopinathpur Union. Recently, the Chairman had declared that poor women of the village can culture fish in one of this ponds for reducing their poverty.

urban centres. Under such duress, it becomes difficult for women to play their traditional roles. They are often abandoned by their helpless husbands and have to pass their days in abject poverty-in the most acute conditions of starvation as well as social insecurity.

Depletion of natural resources: Due to degradation of nature, a number of medicinal plants, herbs, wild fruits, vegetables etc. have become extinct in the area. So, poor women now can hardly depend on nature as they used to collect them as 'free goods' in the past. Fish stock available in the nearby rivers and canals only years ago are decreased; so, the natural supply of protein to the family via womenfolk has tremandousely reduced.

Lack of decision making power: Due to illiteracy and disadvantaged position, women's social status is not at all strong. Women's, and especially young women's opinions are not considered in any decision making related to the family affairs. As mentioned earlier, a number of women are engaged in credit programme activities operated by different NGOs, but they have no control over the loan money. Their male partners and other guardians control the purse, which impedes their repaying loan and hence empowerment remains a far cry all the time.



A Woman of Malo Community (fishing community)

4.3 Women at the Haor Site

4.3.a Social status of women

The majority people in the *haor* site are orthodox Muslims and so, the society is conservative and male dominated. The local people have to abide by prejudicious and sometimes, evil customs, owing to the legacy and the tradition upheld by their elders; they are not prepared to accept or listen to any logical argument. Women are virtually treated as second-class citizens, expected to be subservient to the men. They have to observe the *purdah* customs strictly-that is, they must cover their face with their head-cloth and never speak aloud.

Though schools are there offering opportunities for education, yet the literacy rate of women is regrettably low, and the prevailing social environment does not encourage them to go to school, let alone higher education for girls. Other reasons of low literacy include poor transportation facility for women and inclement weather in the monsoon months rendering women's movement all the more difficult. Only 23 % women are literate in the Pagnar and Sanuar-Dakuar *haor* area (IUCN & CNRS, 2000).

Women are aware of their needs and problems and they sometimes have ideas about resolving them too, but they cannot act upon those because they perceive the solutions as unattainable.

Though women are aware of the laws for protecting them against possible harassment and abuse, their real opportunity of taking advantage of the law is very little due to their obvious vulnerability and perennially dependent status; hence their relentless and unabated sufferings.

Child marriage, dowry and harassment of women are still widely practised in the area. As women have very limited access to legal protection, they feel hardly encouraged to attempt availing of any kind of legal protection whatsoever.



Busy with household activity

dung cake for using as fuels and some times for further selling. They also collect wood, twigs, water hyacinth and crop wastes for fuel.

Water collection: Women have to spend huge time in water related activities. They collect water from nearby ponds and tube-wells and some times from rivers, canals and beels for



Cowdung fuel cakes and kebabs

domestic use. Some of them also supply water to hotel, market etc. The laundry women were found in the area. **Table:** Women Household members involved in Income generating activities (18+ age) (Source: Household Socio economic baseline report, IUCN and CNRS, June 2000)

Type of IGA	Pagnar haor (%)	Sanour haor (%)	Total (%)	
Handicraft	2.14	1.90	2.04	
Poultry Rearing	12.14	9.52	11.02	
Homestead gardening	1.43	2.86	2.04	
Earth cutting	3.57	2.86	3.27	
Maid-servant	12.14	4.76	8.98	
Collecting leftover rice paddy	5.71	1.90	4.08	
Service	2.14	0.95	1.63	
Selling Fuel	0.00	1.90	0.82	
Small business	2.14	0.00	1.22	
Midwife	0.71	0.95	0.82	
Drying fish	2.14	0.00	1.22	
Cattle rearing	1.43	0.00	0.82	
Гailor	0.71	0.00	0.41	

In the winter, some of them have to be engaged in irrigation related activities.

Malnutrition: Most of the women as well as their children are malnourished. Food supply is not adequate in the area. Moreover, people don't have adequate knowledge of the nutritional value of the available foods viz. vegetables, wild fruits etc. The food consumed by the women is also insufficient, as most of the times, they are to take the leftovers and stale food.

Sanitation: Sanitary latrines are again rare in the area. Most people use unhygienic kutchcha latrines or just defecate in the open. The women and kids especially suffer from different waterborne diseases because they nonchalantly and also helplessly use the contaminated water of the nearby ponds and other waterbodies that they contaminate themselves unawares. Again, it is women who have the responsibility of cleaning the makeshift latrines, which expose them to doubly grievous health hazards.

Depletion of natural resource: Poor women are the worst sufferers due to the precipitous depletion of natural resources, as they have to gather and ensure food, fodder and fuel for their families and livestock from the nature. Due to the increasing scarcity of all kinds of natural wares and fares, it is becoming more and more difficult for women to make the two ends meet, so to say. They have to spend money to buy the required stuff from local markets, which create additional financial pressure on the family purse.

Lack of alternative income sources: Women have limited access to the income generating activities. Therefore, they are the poorer of the poor. Though they have keen interest in raising and operating poultry, small business and handicraft, they don't have the necessary starting capital and basic know-how or skill training to make a bold move.

Homestead gardening: About 2.04% of women in the haor sites are involved in homestead gardening. Usually they plant fruit trees and sow vegetables seeds. They cannot plant valuable timber species due to the scantiness of their homestead land. In the haor area, human dwellings are on uplands and comparatively congested; on the other hand, the adjacent lands remain inundated most of the time of the year and can be used for gardening only during the winter.

Earth cutting: About 3.27% women are engaged in earth cutting under the road construction project of VGD (Vulnerable Group Development), LGED and CARE. In most cases, their wages are lower than that of the male workers.

Domestic worker: About 9% women are engaged as domestic worker or maid-servants. They work in the neighbouring rich households or sometimes-even venture outside the villages, usually to Dhaka and other cities in search of bread. Recently some of them are engaged as day laborer in sand mining.

Collecting leftover paddy: At times, farmers harvest whatever crops they can on a war footing, apprehending disasters like flash floods; a good quantity of grains is thus left in the fields. About 4.08% of the poor women are engaged in collecting such leftover grains from the paddy fields after the hurried harvesting by the landowner.

Service: About 1.22% educated women are engaged in teaching, NGO activities and other government services.

Small business: About 1.22% women are engaged in small business activities i.e. maintaining grocery in the homestead, trading *boro* paddy (they buy *boro* paddy from the farmers and sell the rice in the market after husking them).

Drying fish: About 1.22% women are engaged in drying fish during the post-monsoon months. They dry fish in the *kholas* (fish drying camp) managed by the *beel* leaseholders for commercial purpose.

Others: In addition to the above, a number of women are engaged in activities like selling fuel (0.82%), midwife job (0.82%), cattle rearing (0.82%) and tailoring (0.41%).

4.3.c Women s problems

Food insecurity: The supply of food is insufficient compared to the needs of the population in the *haor* area. In a study, it has been found that about 62% and 60% house holds of Rajapur and Fenarbak villages suffer



Women drying fish for business

from deficit of food occasionally (IUCN & CNRS, 2000). The reasons are: i) most of the lands are farmed for single cropping; ii) *boro* is the only one paddy cultivated here, and iii) production and supply of vegetables and other food staff is inadequate. As feeding the family is considered as women's responsibility, so they are worse sufferers than the other family members in this respect. Traditionally, they take the leftovers or stale foods, always making efforts to serve the other family members good or better stuff. The poor women pass most days in a year, just taking boiled *ghechu* (wild vegetables/fruit) only. As a result, women and children specially suffer from severe malnutrition.

Inadequate medical and healthcare facilities: In the Haor area, healthcare centre and other related facilities are inadequate. The local Thana Health Complex is far away from these villages. Moreover, the means of communication people avail of for reaching there are also cumbersome for the women, specially during the dry months. The patients suffer and often die due to lack of treatment. Ante-natal and post-natal cares are not available to the women living in the area. It has been found that mortality rate among children is about 6% in the villages of Pagnar haor, while it is 4% in Sanuar-Dakuar haor (IUCN & CNRS, 2000).

Poor transportation: Damaged roads due to wave action, absence of paved road and insufficient quantity of boats have rendered the local transport system most ineffective. The women again are the worse sufferers due to this. In the dry season, the only transport mode available to them are their own feet. People do travel long distances on foot, which is sometimes difficult for women to make.

Scarcity of fuel woods: Scarcity of fuel wood is an exclusive problem for women in the haor area. Due to declining swamps and reed forests, the traditional fuels i.e. branches and leaves of hijal, karoch, nol khagra etc. are not sufficient. In addition, the supply of cow-dung is also inadequate due to decreasing number of cattleheads.

Erosion of homestead lands: Erosion of homestead land is another major problem for women. Women have to struggle hard to protect their homestead from the devastating wave action. They have to reconstruct their damaged dwellings, replant trees and nurture them to recover the loss.

Scarcity of safe water: The number of tube-wells is insufficient in the *haor* area. There is no other source of safe water in the area. Women, especially poor women use water collected from rivers, ponds and beels for drinking and other domestic purposes. The water of these sources too dries up during the dry months, which further worsens the general health and sanitation situation. Water-borne diseases like diarrhoea, malaria, dysentery etc. break out every year in the villages.

Case study-3 where miseries knows no bound

Reena Das

Reena Das is a twenty-years old woman, resident in the village Rajapur. Reena's parents gave her in marriage while to a worthless idler, when, she was only thirteen years old. The husband eventually abandoned her when she conceived after marriage.

Reena duly gave birth to a male child and passed her days in abject poverty. She had to starve most days through the year, hardly ever having two square meals a day. Specially, when the supply of food would be most adequate in the village during the pre-harvest days, she would be compelled to eat *ghechu* (wildfruit) due to acute scarcity of a rice meal. She could never give her child sufficient quantities of milk and often she had to feed the baby rice water (water strained off from boiled rice) instead.

Reena's son is now six years old. Both the mother and the boy work together in a local plant nursery. Working together, they are somehow able to manage two square meals a day.

Reena does perform all her household activities, in addition to her income earning. She does not need much fuel for cooking as theirs is a very small family of two. She manages to collect fuel (tree branches, reeds etc.) from the nature. She collects water for drinking and other purposes from the faraway tubewells too.

Lack of income generating activities: In the conservative communities living in the *haor* area, women have limited access to the income generating activities. Under influence of the *purdah* culture, women are discouraged to venture out or work outside their homestead. It's again the poorer of the poor who adhere to these compulsive norms more. In a study, it has been found that women don't want to be involved in income generating activity due to prestige matter of the family and due to social obligations against women's mobility outside of the house. About 60% of households have mentioned that social criticism limits the women of both Pagnar and Sanuar-Dakuar *haors* in the involvement of income generating activities (IUCN & NACOM, 2000).

Lack of decision making power: In the male dominated society, women have no access to any decision making activities. They have no right of taking decision or volunteering any opinion at all.

4.4 Gender Dimensions of Wetland Resource Management in the Project Sites

Both men and women have role in wetland resource management in the study area. But, women in the project sites play very significant role in the wetland/natural resource management. Most of their household activities are based on the wetland environment. For example, they harvest various wetland products (aquatic vegetable, fish), collect water and plant products in and around the village ponds, ditches and other small perennial water bodies. Conservation and sustainable use practices in natural resource management effected by women are not always assessed properly. Therefore, this section will try to make a brief list of the diverse and substantial roles of women in wetland resource management, apart from that of men as follows:

Management of seed: Usually, it is women who plant trees in the homestead gardens. They select fruits for seed collection and accomplish the same using the ripened/mature fruits of valuable plants, herbs and creepers. Then they process and store the seeds in earthen pitchers, pots, bamboo buckets, rattan pots etc., conserving them for future use. In case of crops viz. paddy, oil plants, wheat etc., both men and women are engaged in harvesting, threshing and selection of seeds for storing. Storage of seeds is mainly done by women, where the male help them in preparing the big storage structure viz. *macha, golaghar* etc.

Management of biomass energy: It is again women who mainly manage the traditional or indigenous energy sources at home comprising biomass including fuel wood, twigs, leaves, crop residues, plant residues, jute stalk and animal dung. Male sometimes engaged in plantation/cultivation of fuel plants like dhaincha (Sesbania Sesban).

Homestead forest management: Women are the key managers of homestead forests including the shrubs and bushes skirting the neighbouring small ditches. The said duty or role, in whatever manner it may be defined, is invariably and socially attributed to the rural housewives. Though the said forests and small ditches do not usually hold any large tree or animal, still they are rich in their biodiversity values. The homestead forest possess diversified plants and animals. Common homestead plant species are hijal (Barringtonia acutangula), karoch (Pongamea pinnata), barun (Crataeva nurvala), kadom (Anthocephalus chinensis), dumur (Ficus hispida), tentui (Tamarindus indica), mango (Mangifera indica), jackfruit (Artocarpus heterophyllus), palm (Borassus flabellifer), coconut (Cocos nucifera), supari (Areca catechu), basok (Adhatoda vasica), akonda (Calotropis gigentea), datura (Datura metel), sharpogandha (Rawolfia serpentina) pathorkuchi (Bryophyllum calycinum), gandhovadal (Paederia foetida), nishinda (Vitex negundo), titbeguri (Solanum nigrum), ulatkambal (Abroma augusta), Arjun (Terminalia arjuna), horitoki (Terminalia chebula) etc.

Common fish species in homestead ponds are punti, tengra, danrhkina, chela, khalisha, koi, meni, shing, magur, taki, shol, bairn, kuichcha etc. and common wildlife found in homestead areas are frogs (Hoplobatrachus tigerinum), reptiles include house lizard (Hemidactylus brookii), Garden lizard (Calotes versicolor), Bengal monitor (Varanus bengalensis), Common vine snake (Ahaetulla nasutus), rat snake (Coluber mucosus), birds include Lineated barbet (Megalaima lineata), Indian roller (Coracias benghalensis), common kingfisher (Alcedo atthis), Green bee eater (Merops orientalis), Indian Pond heron (Ardeola grayii), Black-headed Driole (Oriolum Xanthorny), Black Drongo (Dicruruns macrocercus), Common Myna (Acridotheres tristris), Peid Myna (Steernus contra), House Sparrow (Passer dormesticus), and mammals include Fruit Bat (Pteropus giganteus), Indian Pipistrelle (Pipistrellus coromandra), Jungle cat (Felis chous), Fishing cat (Prionailurus viverrinus), Small Indian Mongoose (Herpestes auropucltatus). Smooth coated otter (Lutra perspicillate), etc.

Homestead gardening: Women are mainly engaged in planting trees, which have economic and food values i.e. fruits, vegetables etc. They mainly plant beans, leafy vegetables, papaya, banana, mango, jackfruit, wood apple, coconut, betel nut etc. Both men and women are engaged in planting timber tree viz. raintree (Samanea saman), gamar (Gmelina arborea) koroi (Albizzia procera), sissoo (Dalbergia sissoo), mahogany (Swietenia mahogony) etc.

Water resource management: Women also play very important role in water resource management. They collect water for the household and use the resource sustainably i.e. they use the best quality water available for drinking, cooking and personal cleaning, whereas, the low quality water is used in washing cloths, bathing cattle and watering plants etc. In addition, they also recycle the wastewater for accomplishing various other minor chores. They maintain and manage the backyard ditches and small ponds too. Men sometimes engage in cleaning these ditches and small ponds for the purpose of fish culture.

Disaster management: During disasters or natural calamities viz. floods, riverbank erosion, wave erosion etc., women have to manage the various emergent crises viz. food and water scarcity, shelter and health hazards etc. Under the most adverse circumstances, they continue to perform activities such as, rearing children, nursing the sick and the elders, preparing food, watching the house, fetching water, gathering fuel etc. Both men and women struggling minimizing the negative impact of the disasters on their dwellings, homestead gardens and other household assets. When a disaster passes, it is the women who come forward in the reconstruction and rehabilitation of the damaged dwellings, homesteads and replanting trees, in a bid to recover the losses as soon as possible. Men help them in the reconstruction activities.



Mother and daughter processing fish

Gender Sensitivity of the Community Based Wetland Resource Management Project: An Overview



Gender Sensitivity in Community Based Wetlands Resource Management Project: An overview

5.1.a Background

IUCN Bangladesh guided by its global gender equity policy (Annex-II), which call for integrating gender perspectives across the IUCN Programme. It is stated in the policy statement that:

- . The promotion of gender equality and equity as a crucial factor for environmental sustainability and an integral part of all IUCN efforts
- . An effective mainstreaming strategy to integrate a gender perspective in a broad socio-cultural context, into IUCN's project, programmes and policies.

The 'Community Based Haor and the Floodplain Resource Management Project implemented by IUCNB and its partners viz. (NACOM, BCAS and CNRS) is aimed at addressing the gender related issues perceived at the project sites.

5.1.b Approach

The project proposal has indicated (box 5.1) that the involvement of the rural women in the project planning, implementation and monitoring process would be ensured.

Box: 5.1 Project's Approach for Gender Consideration

Participation of women in the project planning, implementation, and monitoring process has been considered to realize through the following measures:

- (a) Increased involvement of the rural women in relevant resource inventory and project planning meetings,
- (b) Increased involvement of the rural women in resource enhancement/rehabilitation activities,
- (c) Positively encourage the rural women to participate in conservation training sessions and workshops,
- (d) In future project activities, participation of women in the project implementation and management will also be considered

5.1.c Gender responsive initiatives

A number of initiative have been undertaken to feed the project objectives. Followings are few examples of the achievements:

- IUCN B has assigned a 'Gender Focal Person' for addressing the gender issues of the project sites. Relevant ToR has been prepared.
- · Rural women have been involved in resource inventory exercise i.e. resource identification, mapping and assessment.
- Rural women have also been included in the resource monitoring team named Floodplain Resource Management Committees (FRMCs), Haor Resource Management Committees (HRMCs).

- Local women have participated in the Participatory Action Plan Development (PAPD) workshop at each site.
- The rural women have been involved in managing the small conservation areas established at the project sites.
- A number of female staffs have been employed in each project sites.
- The poor women at the project sites have been identified and a number of women's groups have been formed in the project sites.
- Capacity building training in nursery management, cattle fattening, fish culture, homestead vegetable gardening, bee keeping etc. have been organized for the women group members.
- The women's group members have been provided with the environment fund for alternative livelihood/ income generating activities viz. poultry/ duckery raising, cattle rearing and fish farming, improved earthen chulli preparation, food processing etc.
- A number of training workshops have been organized on management, environmental issues for the women's groups.

5.1.d Focus on the gender responsive activity: A case study

The Kushiar Char Suryamukhi Mohila Samity: One of the Women Groups formed under the Community Based Wetland Resource Management

Establishment: The Kushiar Char Suryamukhi Mohila Samity, one of the 20 women group in the Padma Jamuna Floodplain area (Manikganj site) was established on 23 December 2001.

Objective: The objective of the group formation was to assemble the poor and distress women folk in view of improving their livelihood.

Membership: The group is consists of 15 women of the Kushiarchar village. They are: Amena Begum, Ful Begum, Habeja Begum, Nuri Begum, Laljan Begum, Renu Akter, Safia Begum, Anju Begum, Laili Akter, Najiran Begum, Kulshum Begum, Bina Akter, Rasheda Begum, Saleha Begum and Rebeka Begum. Among them Nuri Begum, Anju Begum, and Laljan Begum have been selected as the Secretary, the Joint Secretary and the Treasurer respectively. The Samity members are not/were never involved with other NGOs activities.

Obligations: Though the group does not hold any hard and fast rule for membership and its operation matters, but the group members have to maintain some principles. For example, the group members have to be present in the group meetings regularly and have to deposit (taka twenty each) fortnightly and maintain other discipline of the Samity. It may be mentioned that two out of 17 membership has been cancelled due to breaking the rules.

Coordination: The group meetings are mainly hold at 10 o' clock at every alter Sunday. The meeting time is flexible for the group members. Usually, during the group meetings, the group members fix the time and place of the next meeting. A total of 26 meetings have been conducted as of 24 November 2002 (by one year). Different environmental issues viz. beel environment; reasons for environment pollution; ways to prevent environmental pollution; necessity for wildlife conservation; reasons for local fish decreasing; needs for local fish conservation (especially brood and mother fish conservation); impact of pesticides and chemical fertilizer etc. were discussed in the meetings for awareness raising. Some technical/operational matters viz. withdrawal of savings; cash deposit etc. was taught by the field staffs. In addition, awareness on different health and nutritional issues viz. environment friendly toilet, polio vaccine, seasonal vegetable gardening were raised in the meeting. The project field staffs are facilitating the above awareness raising and capacity building matters.

Savings: As mentioned earlier, taka forty saving per month is mandatory for the group members, now, at the end of year, they have risen savings amounting four thousands. Recently, on December '03, taka forty thousands has been disbursed to the group under the environment fund activity (activity code # 70.00) for cattle rearing. So, the total amount of savings for the group is now taka 61 thousands.

Income earning activities: The Samity members are now, set for income earning activity. The group members have decided that they would buy five cows for cattle rearing/ fattening. Training has arranged on cattle rearing for the group members for necessary capacity building. The purchased cows would be distributed to five-selected members. The relevant selection criteria will be based on ability for cattle rearing (considering land, place and time). The selection process will continue by-rotation. The cows will be sold in the next Eid-ul-Azha, when their price would be higher for religious animal sacrificing activities. Then comes, sharing of benefits. It is decided that the five-selected members will get two-third benefits and the rest one-third benefit would be deposited in the bank account of the group.

Future plan: The future plan of the group is to buy more cows or establish a dairy farm with the enlarged capital to cover maximum access of the group members.