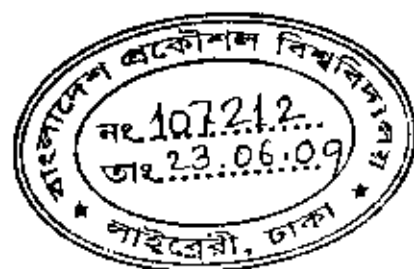


# Gender Impact Assessment in Two Small Scale Water Resources Development Projects

By

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MASTER OF SCIENCE IN WATER RESOURCES DEVELOPMENT



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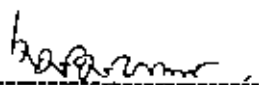
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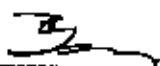
The thesis titled "**Gender Impact Assessment in Two Small Scale Water Resources Development Projects,**" submitted by Abu Zafar Md. Taufique Hasan, Roll no. M10062815P, Session: October 2006, has been accepted as satisfactory in partial fulfillment of the requirements for the degree of Master of Science in Water Resources Development in March 18, 2009.

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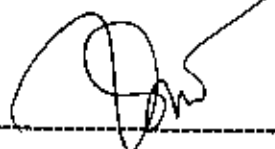
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It is hereby declared that this thesis or any part of it has not been submitted elsewhere for the award of any degree or diploma.



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## ABSTRACT

This study aims to assess the impact on gender issues in two small scale water resources development sub-project areas situated in Sadar upazila of Chuadanga and Meherpur district under phase I and II of "Small Scale Water Resources Development Sector Projects (SSWRDSP)" with comparing the scenario of base site where no development intervention in water sector as resource has been made. There is a growing recognition nationally and internationally that development objectives such as accelerated economic growth, poverty reduction and employment generation can not be achieved without the contribution and participation of women. In this regard Government of Bangladesh has taken concrete steps to ensure women's participation in development process thereby women's participation has been highlighted in National Water Policy. Water resources projects' implementing organization and institutions has taken it as their mandate to ensure women's participation in water management (WM) for gender equality. SSWRDSP has made an attempt to make participation of women like men in different stages of sub-projects during implementation and in water management activities through formation of water management co-operative association (WMCA). This project aimed at production increase in agricultural sector for poverty reduction and minimize the gender inequality through proper water management and extensive training works involving the local community.

Data were collected from 150 respondents of 75 households including both women and men in three study areas through personal interviews by a well structured questionnaire. This study was aimed at exploring the gender awareness (GA) of the respondents by some pre selected indicators and focused on gender roles in enhancing water sector projects. In both phase of SSWRDSP WMCA has been formed to ensure women's involvement in all stages of water sector activities and to provide trainings regarding GA as well as income generating activities. In order to assess gender impact few indicators on GA and socio-economic issues like women employment status, major assets & owning ratio, water & sanitation condition, credit taken etc. have been used during interview of women and men separately in all three sites and finally a comparison on the scenario has been made.

These efforts would help to achieve a recognition that level of gender awareness among women would be higher where a well managed WMCA confirm water management activities through active participation of beneficiary women.

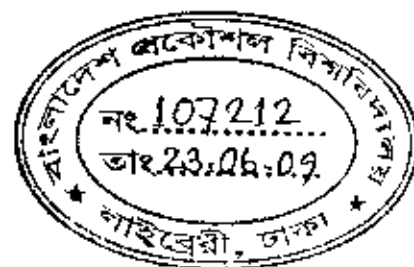
## LIST OF ABBREVIATIONS

ADB	Asian Development Bank
BARD	Bangladesh Academy for Rural Development
BBS	Bangladesh Bureau of Statistics
BIDS	Bangladesh Institute of Development Studies
BS	Base (Control) Site
BUET	Bangladesh University of Engineering and Technology
BWDB	Bangladesh Water Development Board
CDSP	Char Development and Settlement Project
CPP	Compartmentalization Pilot Project
DPHE	Department of Public Health and Engineering
DU	Dhaka University
FCDWC	Flood Control, Drainage & Water Conservation
FMD	Flood Management & Drainage
GA	Gender Awareness
GAD	Gender and Development
GAE	Gender and Empowerment
GB	Gomara Beel (Site)
GIA	Gender Impact Assessment
GOB	Government of Bangladesh
GoN	Government of the Netherlands
GPWM	Guidelines of Participatory Water Management
GWA	Global Water Alliance
HH	Household
HRQOA	Highest Respondents with same Quality of Answer
IFAD	International Fund for Agricultural Development
IGA	Income Generating Activities
IPSWARM	Integrated Planning for Sustainable Water Resources Management
IWRM	Integrated Water Resources Management
ICS	Labor Contracting Society
LGED	Local Government Engineering Department
MC	Managing Committee
MDGs	Millennium Development Goals

MIS	Management Information Service
MoWR	Ministry of Water Resources
NG	Nabo Ganga (Site)
NGO	Non-Government Organization
NSFGPRSD	National Strategy for Economic Growth, Poverty Reduction and Social Development
NWDP	National Women Development Policy
NWMP	National Water Management Policy
NWP	National Water Policy
O & M	Operation and Maintenance
PDO	Project Development Office
PRSP	Poverty Reduction Strategy Paper
QOA	Quality of Answer
RDA	Rural Development Academy
SP	Sub-Project
SSWRD	Small Scale Water Resources Development
SSWRDSP	Small Scale Water Resources Development Sector Project
SSWRDSP-I	Small Scale Water Resources Development Sector Project –Phase 1
SSWRDSP-II	Small Scale Water Resources Development Sector Project- Phase 2
UDCC	Upazila Development Coordination Committee
UNDP	United Nations Development Programme
UP	Union Parishad
UPPRP	Urban Partnerships for Poverty Reduction Project
WID	Women in Development
WM	Water Management
WMA	Water Management Association
WMCA	Water Management Cooperative Association
WMF	Water Management Farmers
WMC	Water Management Groups
WSS	Water Supply and Sanitation

# CHAPTER ONE.....

## INTRODUCTION



### 1.1 Preamble

Bangladesh is one of the densely populated with overwhelming rural and extremely poor countries of the world. The country has a current population of 145 million. The population density is over 1160 persons per square kilometer (BBS, 1999). Almost 75% of the total population lives in the rural areas and 50% of them live below poverty level, where the per capita income is about BDT 30,000 only. The percentage of poor households is higher in the rural area than in the urban area. Women constitute almost half of the total population of the country and it is extremely important that they are involved in the mainstream of development activities.

In Bangladesh, women suffer more than men to chronic poverty due to gender inequalities in various sectors such as social, economic, political and many more. Data from various sources show that women are the most disadvantaged and vulnerable group of the country. As a result, women have less access to education, property, employment, various development resources, credit & health facilities, food etc either in family or in community. The impact of such inaccessibility explores the inequalities in the andocentric distribution of income, access to decision-making process, control over income/property, access to resources, rights and entitlements. Comparing to the other resources, women also have limited access to and control over water resources.

In Bangladesh, women play a vital role as water drawers and water managers. They are responsible for collecting water and for controlling its domestic use and oversee the sanitary arrangements. They have considerable knowledge about water resources, including quality and reliability, restrictions and acceptable methods. Women and children provide nearly all the water for the household in the rural areas. Domestic water is used for drinking, washing, bathing, cooking, watering gardens and livestock. It is the women who have knowledge of the location, reliability and quality of the local water



resources. It is, therefore, essential that water planners recognize the importance of mainstreaming women in water resources development and management and their knowledge gained as water managers at the household and community levels be utilized properly. In fact, increased female participation in water sector not only improve women's crops and livestock production including less time consuming in collecting, storing, protecting & distributing water but also improve the standard of livelihood of their family.

However, the Government of Bangladesh (GOB) has taken initiatives to improve the status of women. Constitution of Bangladesh mandated in many articles that men and women are equal, article number 10, 11, 19(2), 27, 28(1), 28(2), 28(3), 28(4), 29(1), 65(3), etc. Bangladesh has given considerable importance to the women development, like any other country in the world. GOB declared National Women Development Policy (NWDP) in 1997, which is a significant step towards women in development and as complementary the policy the evidence of National Water Policy (NWP) was declared in 1999 where women's participation was recommended with high importance. It appears that GOB is very keen for women development and relevant aspects as women's participation is utterly integrated with the development process as a whole. Despite the fact in most of the cases, women are the most disadvantaged and vulnerable group of the community.

"Though women constitute nearly half of the population of Bangladesh their situation has traditionally been adverse on account of complex cultural factors shaped by historical evolution and traditional socio expectations. However, significant changes have been taken place over the years and the presence of women is being felt more and more in different areas of life. Their increased involvement can be observed in all sectors of the economy. The Government of Bangladesh realizes that there is still quite a long way to go to ensure women's equality in development and empowerment. Government has undertaken initiatives to monitor women related issues in all spheres of life to realize the broad objectives of development and empowerment of women by strengthening the institutional capacity of various national machinery" (BBS, 1999)

## 1.2 Background of the Study

Participation is, now a days, considered as the driving force of development. There is a growing recognition nationally and internationally that development objectives such as accelerated economic growth, poverty reduction and employment generation cannot be achieved without the contribution and participation of women. After independence of Bangladesh, the international development partners stretched their scope of cooperation in the rural infrastructure development sector with a vision to enhance the upliftment of rural livelihood through increased economic growth as well as to make gender equality & women empowerment and thus to reduce poverty.

Globally there is a marked commitment towards achieving gender equality at all levels of the society. The rights of women and girls have been admitted in a series of international conferences. For example, the Human Rights Conference (Vienna, 1993) affirmed the interconnectedness of rights from a gender perspective which was reiterated at Fourth World Conference on Women (Beijing, 1995).

As GOB addressed gender issues in its National Water Policy (MoWR, 1999) IGED, in connection of this vision, has been working to promote gender equity and in course of time has been giving greater importance to Gender and Development (GAD). Small Scale Water Resources Development Sector Project (SSWRDSP) is one of the most remarkable projects of IGED that reflects the GAD policies in all stages of subproject development such as planning, implementation and O&M activities with a vision to promote gender equity in participation, decision making and power exercising etc.

Under SSWRDSP for the first time has been selected the subprojects in Small Scale Water Sector through a detailed feasibility study/survey in the proposed subproject areas ensuring the participation of all the stakeholders and thereby incorporating the consensus based decisions/suggestions in all stages of design and implementation phase. At the end the completed subproject was handed over to the stakeholders forming a Water Management Cooperative Association (WMCA) with a mandatory of 33% female

members at the minimum to develop the sense of women ownership of the subproject. In 2003, thirty subprojects under SSWRDSP-I have been reviewed by BUET and others and observed that women have been benefited largely by the micro-credit facilities and the training but played subdued roles in WMCA's activities (BUET and others, 2003). Ashrafi (2007) assessed three subprojects in Rajbari District under SSWRDSP-I and expressed her satisfaction about positive trend in women empowerment in all three sites compared to base (control) site. As a succession of the success of first phase SSWRDSP-I (1995-2002), ADB financed for the second phase (2002-2009) as SSWRDSP-II which is almost at the end of its journey. In phase -I, SSWRDSP gender related shortcomings and learning points were that in most of the case there was no upward trend in female membership as the project evolved, the importance of persuading men to support involvement of their wives and other women in the WMCA, the need to recognize that women are interested in exploring the opportunities offered by the project. In phase-II, these shortcomings have been dealt with through project management improvements (LGED, 2003). So, it is the demand of time to make an assessment of Gender Impact in subprojects of both phases to assess the status that to what extent and how much the target of institutionalization the gender equity and women empowerment have been possible so far.

The aim of the study will be to assess gender impact in two LGED SSWRD subproject areas, having almost same social and cultural characteristics under SSWRDSP-I & II with a base (control) site where no water sector development intervention as resource was made. For this purpose, "Nabo Ganga Khal Flood Control, Drainage & Water Conservation (FCD & WC) Subproject" (under SSWRDSP-I) and "Gomara Beel Flood Management & Drainage (FMD) Subproject" (under SSWRDSP-II) in Sadar Upazila of Chuadanga and Meherpur districts respectively were selected for the study including in between a base (control) site in the Meherpur district. Preliminary assessment about the gender status by field visits in proposed sites apparently revealed that women engagement in WMCA, access to agriculture, fisheries etc., related practical trainings have been achieved almost satisfactorily although some inequalities between men and women seems to be existed in decision making, leadership activities, easy access &

control of water resources etc. It is presumed that significant positive changes have been made in gender equity in the field of participation, communication, mobility, power exercising etc ranging from phase I to II of SSWRDSP compared to the situation of base site.

### **1.3 Objectives of the Study**

The aim of the study is to assess the gender impact in two small scale water resources subprojects of phase – I & II of SSWRDSP compared to a base site with the following objectives :

- a) To investigate the role of gender in enhancing water projects.
- b) To compare the impact on gender issues in two water resources development subprojects under phase-I & II of SSWRDSP in terms of Base Site (Control Site)
- c) To identify the scopes of enhancement of opportunities and institutionalization of gender equality as envisaged

### **1.4 Scope of the Study**

The study is based on two almost same type of sub-projects covering mainly six unions under Sadar upazila of Chuadanga and Meherpur districts belong to phase-I and II of SSWRDSP respectively and one base (control) site, where no development intervention in water sector as resource. covering mainly one union under Sadar upazila of Meherpur district. The scope of the study is concerned to gender impact assessment of two subprojects site compared to base site. To identify the gender equity of the sites the socio-economic position, poverty situation, livelihoods of women as well as men among the stakeholders/beneficiary households have been tried to know. As here impact means any change in gender concern and as it depends on socio-economic position of women with respect to men, so an attempt has been made to assess position and status of women in family as well as in community of the study areas.

## 1.5 Limitations of the Study

The limitations of the study are as follows:

- 1) The study has been conducted in only a few households under a few villages of three study areas of which two were sub-project sites and one was base (control) site so, it was inadequate to focus the overall scenario of gender impact
- 2) Concepts on gender and women's empowerment in some respects were not clear to people. As a result, the study has been stumbled a little bit due to lack of information from the respondents resulting from less knowledgibility.
- 3) Interviews have been conducted on women and men separately. Under same household where the answers/attitudes of them against the same questions were contradictory then it was tough to assess the actual scenario of the household in that respect. So, in those cases the meanings of the questions have been defined repeatedly so that they could be realized the significance of the answers of respective questions/indicators.
- 4) In the first phase of SSWRDSP, gender was seen as cross-cutting issue only in water management.
- 5) There are no direct methods to assess the gender impact due to development interventions. In this study, a comparison has been made based on the simple scoring system following the quality of answer of the respondents
- 6) Only forty strategic indicators under ten factors under three domains have been used for gender impact assessment of the study areas which are not adequate to precisely portray the overall scenario of change in gender perspective.
- 7) Three sites under seven different unions of two adjacent districts have been considered as study areas. So, the respondents were not biased by other nearby respondents in delivering their opinions/views but the dissimilarity, to some extent, of two districts regarding socio-economic condition, political situation, geographical position etc. may have affect the study results to some extent.
- 8) For the study purpose, the total sample for three areas has been limited to Landless (LL), Marginal Farmers (MRF) and Small Farmers (SF) only keeping in mind the fact

that these households represent comparatively poorer and lower sections of the community. In a broad sense, it is not sufficient to portray the overall scenario of gender impact of those study areas.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Gender Impact:**

##### **2.1.1 Meaning of Gender**

The concept of "Gender" has not yet been well defined and is not well understood. The definitions of Gender have rather been the subject of exhaustive debate despite huge numbers of international seminars, symposiums, conferences etc.

Some of the major comments/definitions regarding Gender are as follows:

- i) Gender refers to the socio-economic definition of man and woman, the way in which they are differentiated and assigned socially acceptable roles. Gender refers to a) The social differences between men and women b) Gender is learned and enforced behavior c) Gender varies with culture d) Gender varies within culture e) Gender changes over time ( Kamla Bhasin.2000)
- ii) Gender is a socially constructed definition of woman and man. It is not the same as sex (biological characteristics of woman and man) and it is not the same as woman. Gender is determined by the conception of tasks, functions & roles attributed to men and women in society and in public and private life (SAIDC, 2007)
- iii) Gender refers to the social attributes associated with being/ living male and female and the relationship between women, men, boys & girls as well as the relation between women and those between men ( IUOC,1999)
- iv) Gender determines what is expected allowed and valued in a woman or a man in a given context. In most of the societies, there are differences and inequalities between woman and man in responsibilities assign, activities undertaken, access to and control over resources as well as decision making opportunities (ITUC, 2000)
- v) The Gender approach distinct in that it focuses on woman and man and not on women in isolation (Wijk and Francis, 1999)

vi) Gender equity requires equal enjoyment by women and men of socially valued goods, opportunities, resources and rewards. Gender equity does not mean that women and men become the same but that their opportunities and life chances are equal.

Analyzing the definition and comments the Gender may be termed as:

The socially constructed definition of woman and man referring social attributes associated with relationship between female and male unlike the biological characteristics within a given context of expectation, allowance, opportunities and value in a woman and man.

### 2.1.2 Meaning of Impact

As far as impact is concerned, there are also at least two dimensions of meaning of impact. In different literature, it is defined in quite different ways and perspectives. Generally, the basis of one of the two dimensions is "force based" and another is "effect based". The following are the major comments/definitions of impact:

- The effect or change caused by some factors; for example, social or environmental change that improves or deteriorates the welling of people or ecology. (UNESCO-2007)
- Changes in outcomes that can be attributed to a particular project, program or policy in a situation where there may be many other influences on outcomes. (WB, 1996)
- Positive and negative, primary and secondary long-term effects produced by a development intervention directly or indirectly, intended or unintended (OECD, 2002)
- Impact means any effect caused by a proposed activity (Europe, 2007)
- The net result of a project beyond the immediate effects on it's direct beneficiaries (The Highland and Island Partnership Program)
- Can be defined as a long-term systematic change which is expected to take place on a result of the program. (American Internal Health Alliance)

So the "Impact" termed as:

The long-term systematic change either, positive or negative, direct or indirect, intended or unintended as a result of the intervening input or combination of intervention and other



inputs beyond the immediate effect on the direct beneficiaries as desired before the intervention.

### **2.1.3 Meaning of Gender Impact**

The gender and impact is defined earlier. The gender impact may generally be defined as the combination of these two definitions, although there are mammoth numbers of definitions in different documents and websites worldwide. Some of those are as follows

- 1) Gender Impact means the difference between the current situation and trend with the expected development resulting from the introduction of proposed policy (Paris, 1992).
- 2) The affect of a policy on woman and man differently in neutralizing the discriminatory effects and promotion of gender equality (Women Equality Unit, UK).

Combining all the above facts, the Gender Impact is termed as:

The long-term positive or negative, direct or indirect, intended or unintended systematic change in the socially constructed definition of man and woman referring to the social attributes associated with relationship between female and male as a result of the intervening input or combination of intervention and other inputs in a given context of expectation, allowance, opportunities and values in a woman and man.

## **2.2 Gender Impact: World Perspective**

### **2.2.1 Origination and Development Stages of Gender**

Although from the very beginning of human civilization, there was the existence of men and women. Throughout the regime of the history, the social structures have been constantly changing with the large sphere of cultural heritage, reformation and adaptation. The concept regarding the women in society have seldom changed without very minor examples especially in under developed countries.

In the developed world since 1970s, the concept of "gender" was institutionalized and even formally recognized. The inclusion of women in development perspective was first time nomenclated as a symbol of the acknowledgement of the necessity of women in the development era and constructed as a foundation for the concept. Thus, the first

published book related to women participation in development was “Women’s Role in Economic Development” in early 70s and the terminology “Women in Development (WID)” was formally articulated by “American Liberal Feminists”. (E.M.Rathgeber, 1990)

The concept has been evolved basically from the modernization theory of 1950s-70s. By the 1970’s, it was realized by development partners and thinkers that benefits of modernization irrespective of issues, time, place and person had not been reached to the women society and was rather undermined ( E. M. Rathgeber, 1990).

In course of time, the WID was in the whirl of criticism from different corners even from the women society. They have finally agreed to redefine WID as Women and Development (WAD) in the late 70s. This reformation was basically the output of the criticism of the modernization theory.

Criticism and trials / experiments were going on and are also going on till to date and possibly will be going on up to the undefined boundary of time. Nevertheless in the 1980s, the WAD approach has been transformed to Gender and Development. No doubt this version of development does well fit the latest definitions of gender and other gender related terminologies.

The following Table 2.1 illustrates the total reformation from WID to GAD highlighting the areas like origins, theoretical base, focus, contribution and leading features.

**Table 2.1: Reformation from WID to GAD**

Sl No.	Areas	Concepts		
		WID	WAD	GAD
1	Origins	1. Early 1970s: "Women's role in the Economic Development" by Ester Boserup 2. The American liberal feminists	1. Late 70s: Criticism of modernization theory.	1 1980s: Alternative development of WAD
2	Theoretical base	Linked with the modernization theory	Linked with the dependency theory.	Influenced by socialist feminist thinking
3	Main focus	1. Women's productive role emphasized. 2. Strategies were thought to reduce the disadvantages of women in the productive sector	Focused the relationship between women and development	1. Holistics perspective offered at all aspects of women's lives. 2. Specific gender roles to different sexes had been assigned
4	Contribution	Women's questions became visible in the area of development and practice.	1. Women accepted as important economic persons. 2. Women worked in public and private sectors. 3. Looked at the nature of integration of women in development	1. Female solidarity did not emphasize solely-men's contribution welcomed 2. Women's contribution recognized in inside & outside the household, i/c non commodity production.
5	Features	1. Women were not integrated in development process. 2. Women's subordination & oppression existed in social structures 3. Non-confrontational approach. 4. Women had not benefited from development strategies 5. Women treated as undifferentiated category where influence of class, race and culture were overlooked. 6. Women's work assessed only as productive aspects ignoring/minimizing the reproductive side of women's lives	1. Failed to analyze the patriarchy and women's subordination and oppression. 2. Discouraged a strict analytical focus on the problems of women independent of those of men since both sexes were disadvantaged with oppressive global structure based on class & capital. 3. Assumed that, in future, international structures would become more equitable, women's position would improve 4. WAD didn't question the relations between gender roles.	1. The public/private dichotomy rejected 2. Women's oppression in the family was emphasized 3. Women's emancipation was promoted by emphasizing the state's duty 4. Women considered as agents of change rather than as passive recipients of development assistance 5. Organization of women to make more effective political voice are stressed. 6. Focused on strengthening women's legal rights 7. Discussion made on upsetting the existing power relations in society between men & women.

Source: Adapted from Eva M. Rathgeber (1990)

### 2.2.2 UNDP and Gender

Reviewing the literature, it is seen that the United Nations Development Program (UNDP) determines that the search for development has led to a compromise that sharing

by both women and men is essential for sustained interventions. This realization has promoted the use of gender-sensitive approaches in water and sanitation programs and more recently in Integrated Water resources Management (IWRM) Forums such as the International Drinking Water Supplies and Sanitation Decade Review (1990), the Dublin Conference (1992), the World Summit on Sustainable Development (1992), the Beijing Conference (1995) and the World Water Conference (2000) have endorsed these concepts.

The strategy developed by UNDP, drawing on such global thinking on issues of IWRM, is linked to some focus areas of which gender equality is one of the vital area. The UNDP Gender Equality Strategy is grounded in the premise that the development objective of equality between men and women, or gender equality, is absolutely indivisible from the UNDP human development goal of real improvements in people's lives and in the choices and opportunities open to them. By empowering women to claim their internationally-agreed rights in every development sphere, and supporting governments to be both pro-active and responsive in advancing the realization of these rights, UNDP will leverage the broadest possible expansion of choice and opportunity for all.

UNDP understands gender equality to be an irreducible condition for inclusive, democratic, violence-free and sustainable development and as such it is articulated in the updated UNDP Strategic Plan 2008-11 (SP) as an "integrating dimension" of UNDP's work. The Gender Equality Strategy (GES) describes how the required integration will take place.

The GES follows broadly the structure of the SP, setting out in three parts, viz: Part A, Part B, and Part C. In Part A, the contextual issues of mandate and value that have guided the selection of priorities. In Part B: the substantive content of UNDP's work on Coordination in the UN system and in operationalizing its four Focus Areas is laid out from a gender perspective. In Part C: the various institutional arrangements that will support the full integration of gender equality considerations into UNDP's work are outlined.

As “gender” and “gender equality” imply concern for both men and women, and the relationships between them so specific attention to women’s needs and contributions is typically required in order to address the array of gender gaps, unequal policies and discrimination that historically have disadvantaged women and distorted development in all societies. The GES therefore focuses on UNDP’s responsibility to support the empowerment of women to achieve the gender equality that will benefit society as a whole. However, this does not preclude activities that address men’s specific needs, where doing so will contribute to gender equality.

### **2.2.3 Asian Development Bank (ADB) and Gender**

In August 1999, ADB’s Board of Directors approved a new country operational strategy (COS) for Bangladesh. This strategy represented a major shift in ADB’s approach to its lending operations to Bangladesh, primarily because it shifted the emphasis to poverty reduction. under this context four key areas were made priority sectors namely as i) promoting economic growth, ii) creating better development opportunities for the poor, iii) improving human development, and iv) protecting the environment.

The main objective of ADB’s (ADB, 2001) contribution in Bangladesh is poverty reduction where gender strategy aims to

- i) support the implementation of the National Action Plan (NAP) for advancement of women,
- ii) support to access of women to land;
- iii) help increase women’s access to resources and services and promote women’s employment and income generation;
- iv) ensure the participation of tribal women in development; and
- v) support the provision of supportive infrastructure and services for women.

Among all the project one of the largest project contributing in water sector with the major financial assistance of ADB in Bangladesh is SSWRDSP, where the above strategies and aims have been incorporated as gender and development strategy to empower women specially pro-poor groups. As absolute majority of Bangladeshi, women

work in agriculture so of all their assets the most important is land especially where they carry out economic and household activities. But to lack of women's rights to hold homesteads and/or land place them in a very insecure position, especially in the event of crises which caused to them deprived to get benefits of development. Realizing the situation, ADB realized to adopt the above gender issues in SSWRDSP throughout the project period so that women in the project areas should have benefited regarding human development as well as gender aspect due to development intervention in water sector.

#### **2.2.4 Gender in Millennium Development Goals (MDGs)**

Eight goals have been identified as Millennium Development Goals (MDGs) at the Millennium Summit held in 2000 where 189 governments made a promise to achieve the goals. The third goal among the eight involves in gender equality as well as women's empowerment. If the global community is to make up for lost time and accelerate the pace of progress toward Goal 3, immediate attention must be paid to the following four priorities that will help fulfill decades of promises to women (Heyzer, 2004)

First, achieving gender equality – in education, labor markets, political life, and social opportunities – is fundamental to achieving all MDGs, including reducing poverty, ensuring environmental sustainability, and developing global partnerships for development.

Second, investing in the education, health, health, safety, and economic well-being of adolescents, especially girls, is a priority. Priority actions include opportunities for secondary education (which is itself a strategy to stimulate higher enrollment and continuation at primary levels); support for a successful transition to work; access to sexual and reproductive health information, education, and services; and protection from violence.

Third, reducing women's and girl's time-poverty through well-designed, gender-sensitive infrastructure investments and public policies that support women's care responsibilities, is critical. In every country that has time-use data, studies show that women work significantly longer hours per day than men. In low income countries, the lack of adequate infrastructure forces women and girls to spend many hours in tasks such as collecting fuel and water.

Fourth, sex-disaggregated data are keys to catalyzing and monitoring progress towards the MDGs. At the international level, monitoring progress toward Goal 3 is a necessary part of optimal allocation of aid resources. At the national and local levels, data are required for planning, as well as for assessing the effectiveness of policy and program changes.(ADD, 2004 )

### **2.2.5 Gender Emphasis in PRSP**

The Poverty Reduction Strategy Paper (PRSP) is the 'national roadmap' for reaching longer-term MDG targets through short/medium-term policy reforms and budget restructuring

A sourcebook prepared by the World Bank (WB) as lead agency for PRSPs where the chapter on gender outlines how gender analysis can be used in poverty diagnosis and in defining priority public policy responses. It also provides guidelines for monitoring and evaluating men's and women's involvement in PRS programs and for evaluating gender differences in outcomes and impacts of these programs.

In September 1999, a new framework developed by the World Bank and IMF for providing the low interest loans and debt relief to 42 poorest countries in the world where it was conditional on countries developing a Poverty Reduction Strategy Paper (PRSP) PRSP is about prioritizing budget allocation in order to achieve poverty reduction objectives. The PRSP is matched by national level medium term expenditure framework (MTEF). Gradually the MTEF and PRSP could be the basis for all donor assistance (CPD, 2004).

In March 2003, the national strategy for economic growth, poverty reduction and social development (NSEGPRSD, 2003) was released, where government recognizes women's contribution to economic and human development in the most recent policy on poverty reduction. Gender equality has been incorporated into some key sections of the analysis, and gender disparities are recognized in several areas.

The NSEGPRSD identified the impact of the deteriorating law and order situation on women and how gender-based violence is limiting the capacity of women to participate in market activities and to access social services such as education and health. It also identified the need to strengthen women's capacities to participate fully in local governance and in decision making.

In reducing gender gaps where it needs to empower women, the government has also set targets to be realized by 2015 that correspond to the MDGs which would ensure positive effects on lower fertility rates, improvements in child and maternal nutrition, and the greater welfare of the women themselves and of society as a whole. The government pledges to incorporate measures into the three-year rolling plan to address the following areas:

- Negative sex ratios;
- Violence against women;
- High maternal mortality;
- Restrictions on women's employment and economic opportunities;
- Formal equality;
- Quotas and affirmative action at all levels and in all spheres;
- Woman-friendly institutional environments,
- Statistics disaggregated by sex.

## **2.3 Gender Perspectives in Bangladesh**

### **2.3.1 Introduction**

In Bangladesh, the data from various sources show that women are the most disadvantaged and vulnerable group of the country specially women belong to landless (LL), marginal farmer (MRI) and small farmer (SF) household categories in rural areas. As a result, in rural areas, women have less access to the employment, property, food, health and sanitation facilities, education etc. in the family as well as community which keep women with lack of access to decision making process and/or access to and control over resources. But their contribution from household to society is substantial. Women are generally overburdened by their twin responsibilities, household work and economic



effort. They are working both in formal and informal sectors of our economy but the contribution has little exposure as compared to men and it is poorly portrayed to economic contribution.

### **2.3.2 Women and Constitution of Bangladesh**

In order to make development cooperation more sustainable and more cost-effective, it is necessary to pay greater attention to the female half of the populations in our country. As it is extremely important that women to be involved in the mainstream of development activities, so the GOB has clearly expressed its commitment for actions leading to women's empowerment and realization of their human rights. The principles of gender equality are embedded in the Constitution of the People's Republic of Bangladesh. Women's rights to equality and affirmative action in support of equality are guaranteed in the Constitution. According to the Constitution, all citizens are equal before the law and are entitled to equal protection of law (Article 27). Article 28(1) states the principles of non-discrimination: "The State shall not discriminate against any citizen on grounds only of religion, race, caste, sex or place of birth". Women's human rights and basic freedoms are incorporated in Article 28(2): "Women shall have equal rights with men in all spheres of the state and of public life". Article 29(1) requires that "there shall be equality of opportunity for all citizens in respect of employment or office in the service of the Republic". The principle of non-discrimination with regard to employment is stated in Article 29(2). The Constitution makes clear that the principles of affirmative action for the advancement of women and other sections of the citizenry who are deprived is not contradictory to the principle of equality. In Article 29(4) it is stated, "Nothing in this article shall prevent the State from making special provision in favour of women or for the advancement of any backward section of citizens".

### **2.3.3 Women and Govt. Policies**

Following the Fourth World Conference on Women at Beijing in 1995, the Ministry of Women and Children Affairs (MoWCA) took the lead in initiating a sectoral needs assessment process in 15 line ministries including the Ministry of Local Government, Rural Development and Cooperatives. Each line ministry then developed an Action Plan,

which form the basis of the National Action Plan for Women's Advancement and was adopted by the government in 1997. Based on the sectoral needs assessment, the MoWCA also drafted the National Policy for the Advancement of Women, which was adopted by the Government in 1997 (MoWCA, 1997).

The primary goal of the policy is to establish equity between men and women in all sector of national life. It aims to work towards ensuring women's active role and equal rights in the national economy. The policy has emphasized the need to ensure women's safety at the workplace, equal wages for both men and women labourers and eliminate discrimination in employment. It has also suggested increasing women's quota, ensure equal facilities, provision of special training for women and the creation of a congenial environment to increase women's employment and contribution. The National Action Plan sets clear guidelines and activities for integration of women's development into national development

### **2.3.4 Gender Approach in Water Sector of Bangladesh**

#### **2.3.4.1 National Policies/Attempts**

Government of Bangladesh (GOB) has taken initiatives to improve the situation and declared National Women Development Policy in 1997, which are a step towards women in development. In 1999, GOB declared the National Water Policy where women's participation was highlighted (MoWR, 1999). In order to realize the broader objectives of development and empowerment of women, necessary steps have been taken to strengthen the institutional capacity of various national machineries. In 1999, BBS published "Gender Dimension in Development" where stated that "The government of Bangladesh realizes that there is still a big way to go to ensure women's equality in development and empowerment. Government has undertaken measuring relating to women issues in all spheres of life. In order to realize the broad objectives of development and empowerment of women, necessary measures have been taken to strengthen the institutional capacity of various national machinery." (BBS & MoWCA, 1999).

In water resources management, an uncoordinated and sectoral approach has resulted in environmental degradation from over exploitation of water resources, inappropriate allocations among competing uses, inequitable distribution of benefits and burdens, and inadequate operations and maintenance of infrastructures. Inadequate involvement of both men and women has hindered program and projects aimed at addressing sustainability in water resources management. Community participation and management approaches have failed to address these issues, largely because communities are often seen as collection of people with common purpose (GWA, 2005). So, gender perspective in water resources management is a key to ensure sustainable water management, as people centered approaches do not always ensure gender sensitiveness in resources management.

Integrated water resources development which is a cross sectoral holistic approach to water management for sustainable development illustrates in principle “women should be recognized as central to the provision, management and safeguarding of water”. Philosophy, policy and implementation guideline of IWRM also addressed “gender and social disparities in terms of equitable access to and control over resources, benefits, cost and decision-making between women and men”

On the other hand, “NWP-1999” is aimed at:

- i) To bring institutional changes that will help decentralize the management of water resources and enhance the role of women in water management
- ii) To develop a state of knowledge and capability that will enable the country to design future water resources management plans by itself with economic efficiency, gender equity, social justice and environmental awareness to facilitate achievement of the water management objectives through broad participation.

In the gender mainstreaming, NWP is undoubtedly a great leap forward to establish discipline and direction to the water management of the country. The policy looks at

water resources and its multiple uses in a comprehensive manner and also clearly spells out the rights and responsibilities of various stakeholders.

Guideline for Participatory Water Resources Management was approved in 2000 (MoWR, 2001) while National Water Management Plan (WARPO, 2001a) emphasized on women's participation in water resources management. As a reflection of all these policy and guidelines, Bangladesh Water Development Board (BWDB) and Local Government Engineering Department (LGED) have been incorporating women in large and small scale water resources development and management projects in all stages ranging from planning to operation and maintenance via implementation.

### **2.3.4.2 Gender Exercising in Water Sector**

#### **2.3.4.2.1 Gender Exercised by Individual Researchers**

i) Hoque, et al (1994) stated that women's direct involvement in water supply and sanitation (WSS) project as well as their participation in all stages of the project brought a significant achievement. The study findings had significant policy implications for effective involvement of rural women towards the development of sustainable WSS programs.

ii) Nahar (2002) stated that, in terms of water supply and sanitation projects, women are the main users of water as they are mainly water collector as well as user at household level. Women are involved in care taking of hand tubewell, sanitary latrine, family health, vegetables production and all sorts of water uses at household work. Lack of sufficient water supply and lavatory facilities affect them in many ways. She also focused on some key areas of National Water Policy (NWP) by which the needs of women and poor in this sector as well as active participation of women have been highlighted.

iii) Ahmed and Jahan (2000) attributed women's participation in water supply and sanitation. They have been tried to ascertain some concern and way forward for women in WSS. The authors depicted the state of gender equality in water supply and sanitation system and also opined for a gender sensitive approach in WSS.

iv) Kabir and Faisal (2005) portrayed some key areas where women can contribute a lot like household water management, health and wellbeing, irrigation water management in their study on "Analysis of Gender-Water Nexus in Rural Bangladesh".

v) Ashrafi (2007) assessed of women's empowerment through their participation in three small scale water resources development sub-project areas comparing with a base (control) site where no development intervention in water sector existed and portrayed the scenario that water intervention must have contribution in women empowerment

#### **2.3.4.2.2 Gender Exercised in NGOs/Projects**

There are a good number of successful water supply projects, where women's participation acts as a key tool to undertake the activity.

i) Dushto Sastha Kendra (DSK) an NGO has revealed the success of women in WSS. Women were involved and entitled to do the entire activity through a cooperative community. Where the poor slum dwellers have a 100% repayment and no late payment, they successfully run the project. Women understood the economics and also appreciate the opportunity cost of having walked to collect water. Women can really value the water (ADB 2006).

ii) Women are involved directly in few projects in Bangladesh like Compartmentalization Pilot Project (CPP), Char Development and Settlements Projects (CDSP), Integrated Planning for Sustainable Water Management (ongoing) implemented by Bangladesh Water Development Board (BWDB) and Small Scale Water Resources Sector Projects (SSWRDSP) implemented by Local Government Engineering Department (LGED) which have linked women in water resources management as active participant in different ways. BWDB and LGED both are implementing water resources development projects targeting the above mentioned aspects of NWP

iii) Compartmentalization Pilot Project (CPP), Tangail, Bangladesh implemented under Flood action Plan (FAP) through BWDB with the assistance of government of Netherland and Germany where women's participation at all stages of project activities was one of the main issues. Women were actively participated in the three tire institutions of the water users and holding office bearer positions as a part of decision-making process. Employment opportunity was created while poor women were benefited directly and women were involved for embankment maintenance for few years as a regular basis which made them able to buy land and build houses

### **2.3.4.2.3 Gender Issues in Bangladesh Water Development Board (BWDB)**

As a pioneer Govt. organization, BWDB is engaged in implementing large scale water resources development projects since independence of Bangladesh through its well organized fleet of qualified workers. The major projects where participatory activities were involved are GK project, Deep Tube Well project and DND project etc. At the beginning BWDB and Flood Plan Coordination Organization (FPCO), Ministry of Water Resources invented and adopted the Guidelines for People's Participation in water management for realizing the future need in water sector projects.

Consequent upon the declaration of the NWP in January, 1999 a common Guideline for Participatory Water Management (GPWM) for all water sector agencies has been prepared by an inter-Agency Task Force under the leadership of Ministry of Water Resources published in April, 2001 describing in detail the stakeholders participation, Water Management Organization (WMO) & their composition, participatory process, legal status of WMO and capacity development of different stakeholders etc.

BWDB institutionalized the participation of stakeholders to ensure the sustainable development in water sector through forming of 3 tiers of WMO such as Water Management Group (WVG), Water Management Association (WMA) and Water management Federation (WMF) by incorporating beneficiaries (both men and women) of different occupation where WMO may consisted 2 or 3 levels belong to tiers depending on project size ranging from 1000 ha to above 5000 ha.

Very recent BWDB has approved a Guideline for Integrated Planning for Sustainable Water Resource Management (IPSWARM) which will be used throughout the country for medium size Flood Control and Drainage (FCD) projects (BWDB, 2008). where specific gender provisions included as shown in Table 2.2

**Table 2.2: Specific Gender Provisions in the IPSWARM Process**

Step	Activity	Gender Provisions
1	Selection	Carried out by a multi-disciplinary team, including Gender Expertise. Consultation with female and male Union Parishad members.
2	Data collection	Full participation of women and men (separately and jointly) in consultation at bari, para, and village level.
3	Organization	Women encouraged to join WMOs and potential women leaders given "Gender and Leadership" training. Women constitute > 30% of WMG managing committees and 50% of WMA membership. Extensive training provided to women and men.
4	Plan Finalization	Women and men WMG members participate equally in discussions for plan finalization.
5	Rehabilitation	LCs comprising women and men participate actively in rehabilitation earthwork, and derive benefits in terms of poverty reduction. Women and men participate in Quality Monitoring, and receive special training for this purpose.
6	O & M and Monitoring	Women and men participate actively in WMGs which cooperate with each other and with the BWDB to carry out effective operation, maintenance and joint monitoring

Source: BWDB, 2008

#### 2.3.4.2.4 Gender Issues in LGED

##### *Gender and Infrastructure in LGED*

The Local Government Engineering Department (LGED) works under the Local Government Division (LGD) of the Ministry of Local Government, Rural Development and Co-operatives. LGED is responsible for the implementation of a number of development projects funded by Government and various Development Partners (DPs). LGED is currently responsible for implementation of a wide range of rural and urban infrastructure development projects. So, it has many opportunities to address gender equity issues in socio-economic program of infrastructure development activities. As the role of women is no longer confined in the households has to be strengthened by providing appropriate support so the development projects can change the role of women to make them more effective in contributing towards the national development. Management and staff of LGED have demonstrated their commitment to this work. LGED's program approach has been innovative both in relation to Bangladesh and in the region. Its Labour Contracting Societies (LCs) address the needs of both women and men. LGED has developed a range of projects aimed specially at women; participation and employment have been the focus of a number of general program as well as pilot

schemes. Its works on participation, women's market sections, tree planting schemes and other areas have been highly innovative and are seen as positive example for the other sectors. This strategy builds on many successes of LGED and leads way for further innovation and achievement in the area of gender equity. LGED has a Gender Development Forum which provides a focus by gender equity work within LGED.

### ***Gender and Water Structures in LGED***

In our country, various steps have been taken to provide adequate supply of drinking water, to improve agricultural production and to facilitate the waterway transportation through the implementation of water resources development projects with the assistance of GOB funds, loan/grant of development partners and a little bit local contribution. The main implementing agencies for water sector projects in the country are Bangladesh Water Development Board (BWDB), Department of Public Health Engineering (DPHE) and Local Government Engineering Department (LGED).

Water resources development projects may be categorized in two ways, i.e. i) water supply, sanitation and hygiene promotion and ii) water resource management that works for improvement of agriculture production. LGED mainly involves in water sector by implementing small scale water resources development projects where the command area are considered not more than 1000 hector.

Under SSWRDSP the water resources management activities include the construction of regulators, culverts/bridges, embankments, excavation of canals, resection of khals etc. named as Flood Control & Management Sub-project or Water Conservation & Drainage or Water Conservation Sub-projects. Under SSWRDSP, LGED selects (selection criteria table 4.2) the subprojects in Small Scale Water Sector through a detailed feasibility study/survey in the proposed subproject area ensuring the participation of all the stakeholders and thereby incorporating the consensus based decisions/suggestions in all stages of design and implementation phase. End of the day the completed subproject was handed over to the stakeholders forming a single tier Water Management Cooperative



Association (WMCA) with a mandatory of 33% female members at the minimum to develop the sense of women ownership of the subproject

### ***Gender Concerns in SSWRDSP-I***

Through the financial assistance of Asian Development Bank (ADB) , Government of Netherlands (GoN) , International Fund for Agricultural Development (IFAD), Government of Bangladesh (GOB) and a little bit beneficiary contribution the first phase of Small Scale Water Resources Development Sector Project (SSWRDSP-I) implemented 280 subprojects in 37 districts of western part of Jamuna river where the primary object of the project was to facilitate a sustainable increase in agricultural production and incomes for small-holders in the subproject areas in western of Bangladesh, where more than half of the population falls below the poverty line. In the water sector in Bangladesh SSWRDSP-I played a vital role in rural areas by developing infrastructure and enhancing water resource development, while also giving importance to the formation of local institutions with some degree of gender awareness.

The goal of the SSWRDSP-I's gender and development was to promote gender equity, which was "a process of being fair and providing equal opportunity to women and men" according to the Ministry of Women and Children Affairs. The initial women in development (WID) shifted to a broader gender and development (GAD) approach as SSWRDSP-I evolved. Initially the Project's concern with women was limited to helping the poorest. Over the course of SSWRDSP-I women of poor and middle-income households were given practical training (e.g. in fisheries, seeds, vegetable production as table 4.3), enhancing their homestead-based productive capacity and providing some with new income generating opportunities. The most significant gender related activities of SSWRDSP-I were:

- i) Women engagement in First Management Committees of the Water Management Cooperative Association (WMCA) - thus integrating women into water resources development from the beginning all the way through to O & M committee participation
- ii) Provision of practical training of women in large scale

- iii) Arrangement for employment of poor women as LCS members in earthworks and as tree plantation caretakers
- iv) Arrangement of WMCA micro-credit and savings programs also benefited women along with men
- v) Inclusion of training on Gender Sensitivity for male and female staff of LGED and others associated with the Project, including WMCA leaders and female WMCA members.
- vi) Institutional support focused on supporting LGED's project management capabilities

The project design also included a number of special features to facilitate a direct focus on mitigating environmental impacts, reducing poverty and involving women. To increase the role (visibility) of women in the project, several initiatives were put in place. Few areas are as follows:

- a) First initiative was to promote the participation of disadvantaged women in LCSs with the intention that long-term support would be provided.
- b) Second initiative was to provide women with opportunities to participate in income generating activities such as planting and caring of trees on newly constructed or rehabilitated embankment, pond aquaculture.
- c) Third initiative was to encourage the water management cooperative association to employ women for maintenance activities on subproject infrastructures.

All these initiatives are taken as initial intent of the project with regard to women in development approach "to benefit women, particularly landless and destitute women through provision of employment opportunities during construction and subsequent O & M work and income generating activities such as tree cultivation, fish fingerling production."

### ***Gender Concerns in SSWRDSP-II***

As the succession of the success of the Phase-I the development partners financed for the Phase-II (2002-2009) named as SSWRDSP-II which is under implementation throughout the

61 districts of the country except 3 hilly districts with an aim to implement 300 subprojects. Since the millennium declaration (UN, 1989) all the development partners globally hold the strand to incorporate the GAD in all of development program to ensure gender equality and women empowerment. Basically LGED being an upright institution has been incorporating this concept in its diversified projects including the SSWRDSP-II which is in the end of its journey.

The SSWRDSP's second phase includes a gender action plan which defines key gender issues and identifies related roles and responsibilities of project personnel. There are scopes, by men and women, to participate simultaneously and equally in all stages of sub-project development such as identification, implementation, and operation & maintenance. Project related staffs confirm to communicate about this to short and long term beneficiaries, especially those who utilize water resources and / or those who are eager to utilize them in future. The SSWRDSP-II thinks that participation of local people with their experiences, local contribution as part of estimated cost of the sub-project, active involvement by physical labour and the technical knowledge of professionals are very essential for the acceptability, smooth implementation and survival of the Project. Women's experiences and involvement in decision making have given importance as part of this process.

The SSWRDSP-II also feels that women cannot contribute simply by appearing at meetings etc. in large numbers but they must work to implement sub-project decisions. They must express their own thinking and develop themselves. If decision making opportunities are given to women, they will learn how to deliberate and what to realistically expect from participation. Social development will also be benefited when women got such opportunities to share in decision making process as on an equal basis with men. Their involvement relates directly to the Project goal of encouraging the poor, vulnerable, and landless and involving people in income related affairs.

A Memorandum of Understanding (MOU) was signed between LGED and the Department of Women Affairs on 22 July 2003, thanks in large part to the efforts of Project's staff which contributed in maintaining the project to focus on gender goals. The following Table 2.3 shows how gender equity is introduced at each stage of project implementation and Table 2.4

presents the Project's Gender Action Plan (GAP) as per elements of LGED Gender Equity Strategy.

**Table 2.3: Gender Equity Action Plan at Subproject Implementation Stages under SSWRDSP-II**

(Source: SSWRDSP, LGED)

Step & Activity	Gender Provisions
Stage 1: Subproject Identification and Feasibility	Every PRA team should recruit female staff
	Training on gender equity for PRA teams
	Separate meetings with men and women at village level during PRA work and data collection
	Gender-specific data collection and write-up in technical feasibility reports Training for Union Parishad chairmen and members, to review guidelines for project proposal in the Upazila Development Committee, includes attention to gender issues
Stage 2: Design and Institutional Establishment	Inclusion and implementation of gender issues in recruitment and training of Facilitators
	In forming By-law Drafting Committee, a minimum of one-third committee members should be women; they should be trained
	In proposing mitigation measures (to assist persons negatively affected by subprojects), information on different impacts on men and women should be collected and recorded.
	In WMA formation and membership promotion, a minimum of one-third members should be women. Women from all social categories should be recruited, e.g., from farming, fishing, and landless laborer families.
	In the First Managing Committee of the WMA, a minimum of one-third members should be women. Women should be represented among office-bearers.
	In preparing beneficiary lists, female-headed households should be listed separately.

Step & Activity	Gender Provisions
Stage 3: Construction and First Year Operation & Maintenance	In training WMA members, both female and male members should be selected as trainees, and women and men both should receive training.
	When implementing mitigation/compensation measures, affected women and men both should be treated in the same way; i.e., both should get similar access to alternative livelihood opportunities or other mitigation arrangements.
	Adherence to new LCS guidelines in formation of earthworks crews is carefully monitored
	Guidelines for LCS training include session on gender issues; LCS trainers are to receive IOI including gender session
	LCS training is to be implemented at field level as per guidelines, including session on gender issues
	Equal wages are to be paid to women and men who do earthworks. Earthworks supervisors will ensure adherence to this policy.
	One-third of O&M Committee members and those who plan O&M activities should be women.
	The MIS will document details of the first year's O&M (annual plan preparation, follow-up for year-round work) in a way that demonstrates the levels of participation of both women and men.

**Table 2.4 SSWRDSP-II Gender Action Plan under LGED's Gender Equity Strategy**

<b>LGED Gender Strategy Element/Activity</b>	<b>Gender Provisions</b>
<b>1. Data/Information</b>	<ul style="list-style-type: none"> <li>a. Routine data collection on gender indicators: quantitative, qualitative</li> <li>b. Review gender disaggregated and gender sensitive data/information; prepare reports on them</li> <li>c. Identify research areas &amp; conduct studies</li> <li>d. Analytic reports (annual/ongoing).               <ul style="list-style-type: none"> <li>- EME</li> <li>- Gender component</li> </ul> </li> </ul>
<b>2. Human Resources Development/Training</b>	<ul style="list-style-type: none"> <li>a. Provide district, upazila, and field level training on new LCS guidelines regarding equal pay for both men and women laborers doing earthworks</li> <li>b. Ensure equal pay through implementation of guidelines and policies stipulating equal pay for equal work</li> <li>c. Increase knowledge and skills of women and men through specific training, both strategic and practical.</li> <li>d. Conduct special training to orient Project staff and beneficiaries on gender issues</li> <li>e. Include gender sensitivity training modules in any other training activities</li> </ul>
<b>3. Participation</b>	<ul style="list-style-type: none"> <li>a. Motivate and involve women in the subproject identification phase</li> <li>b. Increase effective participation of men and women in all stages of the project implementation cycle: i.e., Planning, Implementation, and O&amp;M</li> </ul>
<b>4. Water-related Governance</b>	<ul style="list-style-type: none"> <li>a. Contribute to national policy development [no specific Project activity planned]</li> <li>b. Engage female UP members through district-level workshops and in field visits</li> </ul>
<b>5. Communication</b>	<ul style="list-style-type: none"> <li>a. Incorporate gender issues in Project orientation film, and arrange for all concerned to view film</li> <li>b. Incorporate gender issues into quarterly newsletter and distribute it</li> <li>c. Conduct gender sensitivity campaign through songs and dramas performed by RUPANTOR</li> </ul>

LGED Gender Strategy Element/Activity	Gender Provisions
6. Income Generating Activities	a. Practical training for poor women and men in subproject areas b. Training arranged conducted in collaboration with other Governmental departments, such as Agricultural Extension, Fisheries, Environment, Women Affairs
7. Monitoring and Evaluation	a. Identify MIS indicators, and develop checklist questions for qualitative studies b. Prepare evaluation reports on gender issues in SSWRDSP-2
8. Contracting	a. Follow sector guidelines to increase numbers of poor women taking part in LCS or similar work b. Provide equal pay for equal work
Support Facilities	a. Implement programs taking into account the need for appropriate facilities, including toilets, first aid services, and child care
9. Program Areas	a. Training. <ul style="list-style-type: none"> <li>- Gender sensitization and orientation training for Project/LGED officers and staff</li> <li>- Gender-based Training of Trainers (TOT) for Project/LGED and other Governmental departments' officers and staff</li> <li>- Practical and Strategic training for beneficiaries</li> </ul> b. Improve relationship with Union Parishads <ul style="list-style-type: none"> <li>- Training for U.P. Chairmen and members</li> <li>- Increased membership of women in WMAs with assistance of female U.P. members</li> </ul> c. Gender sensitive data collection <ul style="list-style-type: none"> <li>- Collection of appropriate data through monthly and quarterly field reports</li> </ul> d. Model subprojects <ul style="list-style-type: none"> <li>- Identify five gender and development model subprojects</li> <li>- Offer special training to women of model subprojects</li> <li>- Assist to build up equitable relationship between men and women through regular follow-up</li> </ul> e. Research studies <ul style="list-style-type: none"> <li>- Identify research areas and conduct studies</li> <li>- Implement new programs, if needed, based on research findings</li> </ul> f. Income generating activities <ul style="list-style-type: none"> <li>- Provide training for poor women as per local needs</li> <li>- Assist with starting up IGA/small businesses</li> <li>- Evaluate success in terms of poverty reduction impacts</li> </ul>

## **2.4 Gender Impact Study**

### **2.4.1 Justification of Gender Impact Study**

A Gender Impact study investigates the expected impact of a project on women and assesses whether, and to what extent, the project responds to the exact benefits and need of various categories of women as compared to men.

The Global Platform for Action, adopted at the Fourth World Conference on Women in Beijing 1995, requests Governments and other actors "to mainstream a gender perspective into all policies and programs, so that, before decisions are taken, an analysis is made of the effects on women and men respectively. Gender Impact assessment is a tool for realising this. It enables policy makers to picture the effects of a given policy more accurately and to compare and assess the current situation and the trends with the expected results of the proposed policy.

In order to make development cooperation more sustainable and more cost-effective it is necessary to pay greater attention to the female half of country's population as the incorporation of women's interests in development planning and implementation will also promote the interests of women as equal partners in development. To succeed in making development cooperation more gender conscious Gender Impact assessment has been widely used in the area of development cooperation, where appropriate training and tools have been applied.

### **2.4.2 Methods of Gender Impact Study**

To assess the Gender Impact it is essential to explore and highlight the differences and relationships of men and women in society which is possible by Gender analysis. Gender and development work is based on gender analysis. This involves promoting equity between men and women; key to this is placing the issues that women say are particular concern to them on the main agenda of those institutions which shape women's and men's lives. In all types of work done by men and women, a distinction can be made between productive work



(production) and reproductive work (reproduction) Productive works include the production of goods and services for income or subsistence i.e. it recognized and valued as work by individuals and societies but not valued or rewarded in the same way though both women and men perform productive work whereas reproductive works include care and maintenance of households and its members, such as cooking, washing, cleaning, nursing, bearing children and looking after them, building & maintaining shelter etc. which are necessary, mostly done by women, but normally unpaid and are not counted in conventional economics statistics.

**Gender Analysis (GA):** is a tool for examining the differences between the roles that women and men play, the different levels of power they hold, their differing needs, constraints and opportunities, and the impact of these differences on their lives.

**Women Empowerment (WE):** Concept of women's empowerment is more dynamic and comprehensive than the status of women. It's a process and attribute for both the individual and groups. Women's status means their position in family and society relative to men and women of other classes. But empowerment means "women should be given freedom of choice for self-fulfillment and self development as well as equal access to domestic and community resources, opportunity and power (UNDP, 1994)".

**Gender Equity & Equality:** is the process of being fair to women and men. To ensure fairness, measures must often be available to compensate for historical and social disadvantages that prevent women and men from otherwise operating on a level playing field. **Equity leads to equality.** Whereas gender equality means that women and men enjoy the same status. Gender equality means that women and men have equal conditions for realizing their full human rights and potential to contribute to national, political, economic, social and cultural development, and to benefit from the results.

There are different methods or frameworks are available for gender analysis, women empowerment assessment and gender equality. All of them recognize & emphasize the existence of reproductive works along with productive activities. The methods or frameworks are as follows (Table 2.5).

**Table 2.5: Methods associated with GA/GEA in brief**  
(GA= Gender Analysis GEA=Gender Empowerment Assessment)

Sl No	Method / framework	Background & Aims	Tools/ Concepts/Objectives
1.	Harvard Analytical Framework	Published in 1985. Developed by researchers at the Harvard Institute for International Development in the USA Aims to help planners design more efficient projects and improve overall productivity. Designed to demonstrate that there is an economic case for allocating resources to women as well as men.	<b>Tool 1</b> : The Activity Profile:-Identifies all relevant productive and reproductive tasks and finds the involvement/ responsibilities of women/girls and men / boys <b>Tool 2</b> : The Access and Control Profile:-resources and benefits :- Identifies the resources that people use to carry out the tasks identified in Tool 1 It indicates whether women or men have access to resources, who control their use and who controls the benefits. <b>Tool 3</b> : Influencing factors -It makes some factors which influence the differences in the gender division of labor, access, and control as listed in Tool 1 & 2 <b>Tool 4</b> : Checklist for Project-Cycle Analysis :- Assist to examine a project proposal or an area of intervention from a gender perspective.
2.	Moser Framework	Caroline Moser developed as method of gender analysis at the Development Planning Unit(DPU), University of London, UK in the early 1980s. Aims to set up 'gender planning' as a type of planning in its own right. It was a methodology to meet the need for strategies to integrate gender in all types of intervention and to confront power relations in organisation, communities, and social institutions.	<b>Tool 1:</b> Gender roles identification/Woman's triple role - It involves mapping the gender division <b>Tool 2:</b> Gender needs assessment - It distinguishes between practical and strategic gender needs <b>Tool 3:</b> Disaggregating control of resources and decision-making within the household - It links allocation of resources within the household with the bargaining process which determine Who has control over what resources within the household, and who has what power of decision making? <b>Tool 4:</b> Planning for balancing the triple role:- It examines whether a planned programme or a project will increase a woman's workload in one of her roles, to the detriment of her other roles <b>Tool 5:</b> Distinguishing between different aims in interventions: the WID/GAD Policy Matrix - A tool for evaluation, to examine what approach been used in an existing project and can also be used to consider what would be most suitable approach for future work Welfare, Equity, Anti-poverty, efficiency and Empowerment approach are analyzed to know what extent they meet practical and/or strategic gender needs <b>Tool 6:</b> Involving women, and gender-aware organizations and planners, in planning:- Finally this tool asks users to think about the

			importance of involving women, gender-aware organization, and planners themselves in planning.
3.	Gender Analysis Matrix	Developed by Rani Parker in collaboration with development practitioners working for a Middle Eastern NGO in 1993 Aims to help determine the different impact development interventions have on women and men, by providing a community-based technique for identifying and analysing gender differences	<b>Tool 1:</b> Analysis at four 'levels' of society.- It analyses the impact of development interventions at four levels: women, men, households and community. The four categories appear vertically on the GAM matrix <b>Tool 2:</b> Analysis of four kinds of impact- It looks at impact on four areas: labour, time, resources(considering both access and control), and socio-cultural factors. These categories appear horizontally on the GAM matrix.
4.	Women's Empowerment Framework	Developed by Sara Hlupekile, a consultant on gender and development based in Lusaka, Zambia The framework is intended to help planners questions what women's empowerment and equality means in practice and from this point, to assess critically to what extent a development intervention is supporting this empowerment	<b>Tool 1:</b> Levels of equality:- Five 'levels of equality' such as Welfare, Access, Participation and Control are considered here to indicate the extent to which women are equal with men, and have achieved empowerment The levels of equality can be used to assess the likelihood of particular development interventions promoting equality and women's empowerment. <b>Tool 2:</b> Level of recognition of 'women's issues':- It identifies the extent to which the project objectives are concerned with women's development, to establish whether women's issues are ignored or recognized.
5.	Social Relations Approach	Developed by Naila Kabeer at the Institute of Development Studies, Sussex University, UK, in collaboration with policy makers academics, and activists The approach is intended as a method of analyzing existing gender inequalities in the distribution of resources responsibilities, and power, and for designing Policies and programmes which enable women to be agents of their own development.	<b>Concept 1:</b> Development as increasing human well-being:- Development interventions must be assessed not only in terms of technical efficiency, but also in terms of how well they contribute to the broader goals of survival, security, and human dignity. <b>Concept 2:</b> Social relations :-It describes the structural relationships that create and reproduce systematic differences in the positioning of different groups of people. <b>Concept 3:</b> Institutional analysis :-Here four key institutional realms-the state, the market, the community, and the family are considered for analytical purposes <b>Concept 4:</b> Institutional gender policies: depending on the degree to which gender issues recognise and address Kabeer classifies policies as gender-blind, gender-aware, gender-neutral and gender-specific policies <b>Concept 5:</b> Immediate, underlying and structural factors which cause the problems, and their effects on various actors involved
6.	Norwegian Policy for Gender & Empowerment	Developed by Norwegian Agency for Development Cooperation (NORAD) in 1999 intended to assess gender empowerment by	<b>Tools:</b> Gender Empowerment Assessment(GEA) assesses development impact on women and men in terms of 10 (ten) strategic empowerment factors such as

	Assesment	recording how a development project affects women and men in terms of empowerment	"Involvement/participation with development activities, Barriers/opportunity Control on resources/technology Democratic right Access to basic resources, Access to technology, Health issue, Education/Training, Income opportunity and Opportunity to organize "
7.	CIDA s Framework for Assessing Gender Equality Results	Developed by Canadian International Development Agency (CIDA) in 2005 responds to the need to assess gender equality as an impact due to an investments in development sector in shaping sustainable development	<p><b>Objective 1:</b> Decision making domain- where more equal participation of women with men as decision makers in shaping the sustainable development to be assessed</p> <p><b>Objective 2:</b> Rights domain- under which women and girls more able to realize their human rights to be evaluated</p> <p><b>Objective 3:</b>Development resources and benefits domain- under which reduction of inequalities between women and men in access to and control over the resources and benefits of development to be estimated.</p>

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Assessing Gender Impact

##### 3.1.1 Selection of the Study Area

The project area covered by SSWRDSP-I was only the western part under 37 districts of the country (Fig 4.1), whereas SSWRDSP-II covers the whole country except three hilly districts (Fig 4.2). According to study objectives, two subprojects under the areas of almost same characteristics regarding social, cultural, geographical such as Chuadanga and Meherpur, have been randomly selected among the various subprojects within Districts under SSWRDSP –I & II respectively and a fair comparison on impact in gender equity due to water interventions comparing the base site has been tried to prepare. As Meherpur & Chuadanga are adjacent districts and situated almost at the middle of the western part of the country, so the assessment apparently may be the representative of western part of the country.

So, for study purpose two subprojects, one from each phase (Phase – I & II ) such as “Nabo Ganga Khal Flood Control, Drainage & Water Conservation (FCD & WC)” under SSWRDSP-I and “Gomara Beel Flood Management & Drainage Subproject (FMID)” under SSWRDSP-II under Sadar upazila of Chuadanga and Meherpur district respectively along with nearby a base (control) site at Ashrafpur Kola under Sadar upazila of Meherpur district have been selected.

##### 3.1.2 Questionnaire Formulation

There are various methods available for gender analysis that are followed by different organizations to analyze the gender status as well as women's empowerment but no specific method is identified to assess Gender Impact due to development interventions in water sector. I.GFD, being a public organization, has been widely working in water sector through

SSWRDSP round the country and has meanwhile developed an agency-based Gender Equity Strategy and related Action Plan following the gender issues addressed by GOB in its National Water Policy. In this study, Gender Impact assessment has been made following “CIDA’s Framework for Assessing Gender Equality Results (2005)”, NORAD’s Policy (1999) and by author’s formulation on the basis of “LGED’s Gender Equity Strategy and Action Plan (2008)”.

To assess the Gender Impact in study areas (here includes sub-project areas where development interventions in water sector have been made and non project area where no such intervention - known as base or control site), it is required to formulate a questionnaire that are relevant to the socio-economic sector of both rural women & men and to the activities by which they are benefited/affected due to development intervention in water sector compared to the non interventional area.

**CIDA’s Framework:** Here 3 (three) domains listed to assess gender equality such as i) decision making, ii) rights and iii) development resources & benefits under which some discrete elements as tools are included. The framework, by adapting these tools intervening area, responds to the need to assess gender equality as an impact due to an investments in development sector in shaping sustainable development.

**NORAD’s Policy:** Here 10 (ten) strategic empowerment factors such as i) Involvement/participation with development activities ii) Barriers/opportunity, iii) Control on resources/technology iv) Democratic right, v) Access to basic resources, vi) Access to technology, vii) Health issue viii) Education/Training, ix) Income opportunity and x) Opportunity to organize.” are intended to assess gender empowerment by recording how a development affects women and men in terms of empowerment.

**AUTHOR’s Formulation:** Following the concept of CIDA’s framework and NORAD’s Policy, to assess the gender impact in two SSWRD projects under LGED, it is required to select and calibrate some indicators (questions) keeping in mind the “LGED’s Gender Equity Strategy and Action Plan (LGED, 2008) in Water Sector. In this study, 40 (forty) indicators have been selected and calibrated under the above 10 factors and 3 domains on the basis of the issues such as mobility, autonomy, economic security, rights have also been

considered and finally after a long consultation with the \*experts, a questionnaire composed of indicators, factors and domains has been formulated for interviewing both men & women in a household for study areas including base (control) site.

The answers from women and men under household (randomly selected) were separately accumulated and scrutinized on the basis of relevancy to gender equity and finally the highest respondents with same quality of answers, both for women and men of the 3 study areas, have been rated from 0 to 4 on the basis of degree of impact to make a comparison (tabular form) of the scenario of gender impact due to development intervention in water sector. The procedure for assessing the gender impact has been described later in detail.

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a) *Total Earnings and Women's Income*

To assess how the family members are engaged and in what type of occupation, employment status, working hour, total earnings etc. from where women's involvement in occupation/earnings can also be evaluated.

B) *Part - II: Socio-economic Sector*

In assessing the socio-economic condition of the family, the following issues of the respondents have been evaluated keeping in mind that how women/girls are treated in the family as well as in the society.

The category of respondent's household (HH) has been assessed using the classification.

LF	= Large Farmer (owning > 750 decimal of cultivated land)
MDF	= Medium Farmer (owning > 250 to < 750 decimal of cultivated land)
SF	= Small Farmer (owning > 99 to < 250 decimal of cultivated land)
MRF	= Marginal Farmer (owning > 49 to < 100 decimal of cultivated land)
LL	= Landless (owning 0 to 49 decimal of cultivated land)

followed BBS classification, as follows:

land holding categories used for the study was based on the area of own cultivated land household category (as per BBS) of the respondent have been addressed in this section. The identification of sub-project and general information of respondent along with the

#### A) *Part - I: General / Background Information*

Details of questionnaire are as follows:

The contents of questionnaire include a) Part-I -(General/Background Information: Respondent's and sub-project's identification have been reflected, b) Part-II - Socio-economic Sector: Total earnings, Assets, Water & Sanitation facility, Credit taken etc. of the households have been focused and c) Part-III - Strategic Gender Impact Assessment Factors: under 3(three) domains and 10(ten) factors 40(forty) indicators have been set as questions for interviewing both men & women in a household for project and non-project (base site) areas.

### 3.1.3 Contents of Questionnaire



**b) Major Assets and Owner's Identity**

To know total assets of the family as well as how the assets had been owned and used in that family and to identify whether a nearby WRD Projects has any contribution or not in this sector.

**c) Credit (loan) Taken**

To evaluate that among the family members whether in case of taking loan who receives the loan, who takes the decision for loan, source, purpose of loan, use of loan, loan used by whom etc and due to taking loan whether the dignity enhances in family as well as society

**d) Water Collection and Sanitation Facility**

To know who collect the water. how much distance and time is taken for water collection, whether the girls are affected or not etc. what type of sanitation used by the family, whether the females get sanitation facility at work site. whether it is hygienic or not, etc.

**e) Women's Participation in WMCA & SSWRDSP**

Under this part, at first, it has been tried to give an idea about WMCA & SSWRDSP to the respondents .if necessary , and then asked whether women's participation in WMCA & SSWRDSP is needed or not . what will be the % of female members with respect to male members in WMCA etc.

**C) Part – III: Basic & Strategic Gender Impact Assessment Indicators**

In implementing water resources sub-projects one of the main goal of I GED by SSWRDSP is to ensure the participation of stake holders to make development cooperation more sustainable and more cost effective as well as to improve gender equity. The integration and incorporation of women's interests and involvements in development planning and implementation will promote the rights of women as equal partners in the development. These will help the female to be more conscious about their living standards, dignity, right in family as well as in society.

So, it is necessary, to assess the gender impact due to water intervention, to make a strategy by which we can assess: i) more equal participation of women with men as decision makers in shaping the sustainable development of their societies ii) women and girls more able to realize their full human rights and iii) reduced inequalities between women and men in access to and control over the resources and benefits of development.

Keeping these in mind, under Part-III, 3 (three) domains such as A) Decision & Involvement domain, B) Rights domain and C) Development Resources & Benefits have been identified under which 10 (ten) empowerment factors relevant to assess impact on women and men have been selected. The 10 (ten) empowerment factors are i) Involvement with development works, ii) Barriers /Opportunity (Decision making), iii) Control over resources/technology, iv) Citizen's rights & equity, v) Access to infrastructures, vi) Access to resources/technology, vii) Health issues, viii) Education & Training, ix) Income opportunities and x) Opportunity to organize.

After extensive consultation with the experts and reviewing literature, 40 (forty) basic & strategic indicators have been chosen. To make fit for the study, the indicators have been calibrated and then set under the 10 (ten) empowerment factors. The indicators which are only sub-project activity concerned treated as "Direct Indicator (DI)" and others are treated as "Indirect Indicator (II)". The integration of domains, factors and indicators have been summarized as follows:

**A) Decision & Involvement domain (Domain -1)**

**i) Involvement with development works (Factor-1)**

1. Involvement in any phase of implementation activities of Sub-project (DI)
2. Involvement in O&M activities of Sub-project (DI)
3. Involvement in WMCA of Sub-project meeting for decision making as member (DI)
4. Involvement with any other nearby development project(s) (II)
5. Women's participation in SSWRISP is needed (DI)
6. Women's participation in WMCA is needed (DI)
7. Local contribution for WRD Project is needed for successful implementation and it's running (II)

**ii) Barriers /Opportunity (Decision making) (Factor-2):-**

8. Barrier in participating project activities (DI)
9. Barrier in receiving project information (DI)
10. Decision taking and applying about family affairs (II)

- 11. Decision regarding purchase of non household items (II)
- 12. Shared opinion about family planning (II)
- 13. Decision regarding visited to market for shopping & selling (II)

iii) Control over resources/technology (Factor-3):-

- 14. Ownership of share & savings in WMCA (DI)
- 15. Controlled on family income/assets (II)
- 16. Control on long term lease for in/out (II)

**B) Rights domain (Domain-2)**

iv) Citizen's rights & equity (Factor-4)

- 17. Freely Vote casting in election (II)
- 18. Getting equal preference in credit/loan (II)
- 19. Compete in election (WMCA/local/national) (II)
- 20. Choosing job/professional carrier (II)
- 21. Equal wage facility as LCS worker (DI)
- 22. Family Court for victimized women (II)
- 23. Early marriage of girls (II)
- 24. Sons priority over girls (II)
- 25. Equal right for divorce (II)
- 26. Entertainment through media (II)

**C) Development Resources and Benefits domain (Domain-3)**

v) Access to infrastructures (Factor-5)

- 27. Reached to basic infrastructures (II)
- 28. Visiting to non govt. offices/ cooperatives (II)

vi) Access to resources/technology(Factor-6):-

- 29. Access to natural resources (II)
- 30. Access to equipments (II)

vii) Health issues (Factor-7) -

- 31. Situation of malnutrition & duration of illness (II)

32. Situation of maternal mortality & vaccination facilities (II)

viii) Education & Training (Factor-8) –

33. Participation in SSWRDSF training/workshop (DI)

34. Getting education opportunities (II)

ix) Income Opportunities (Factor-9): –

35. Getting benefits from selling agricultural/aquaculture goods/practices (DI)

36. Getting benefits by using water (DI)

37. Association with & benefited from post harvest activities (II)

x) Opportunity to Organize (Factor-10):–

38. Engagement/Participation with modern trade union/workers association (II)

39. Engagement/Participation with any political party's programs/association (II)

40. Engagement with any social club/saving club (II)

#### **3.1.4 Selection of Respondents**

For the study purpose, the total sample size for three areas has been limited to 75 households (HH) out of which 19 (25.33 %) were Landless (LL), 34 ( 45.33 %) were Marginal Farmers (MRF) and 22 (29.33 %) were Small Farmers (SF) keeping in mind the fact that these categories represent comparatively poorer and lower sections of the community. In case of sub-project areas HH list has been taken from WMCA. The households listed under WMCA are known as beneficiary household (BHH). All members of WMCA must be under any BHH but all BHH not listed as member under WMCA. For base (control) site, where no development intervention in water resources existed, the household list under the villages was taken from local concerned offices

A systematic random purposive sampling (first HH was selected from the list and then adding 10/20 every 10<sup>th</sup>/20<sup>th</sup>, as per list of HH, was taken) has been followed for the selection of the sample households. Then both men and women under the sample 75 households have been considered as respondents for the gender interviews.

The guiding factors for determining the sample size were i) the survey objectives , ii) available resources including time for traveling /local movement and iii) data collection.

### **3.1.5 Questionnaire Clarification**

Before interviewing, the purpose of study detail has been clarified with considerable preference to the explanation of queries of respondents. The questions/indicators of the questionnaire have been explained clearly in Bangla. To obtain the non-biased or self initiative/independent views the woman and man of same household were interviewed separately.

### **3.1.6 Answer Arrangements**

The answers of respondents have been listed in respective columns of the indicators in the questionnaire following the gender equality awareness concerned. There were freedom for the respondents to make any comments or share opinion against each indicator and have also been listed carefully in the respective columns.

### **3.1.7 Assessing Answers**

The awareness thus obtained have been in quantitative (major cases) and qualitative (minor) category under all the three study areas have been checked, analyzed and verified and then summarized according to the quality of answers. The highest respondents with same quality of answers against each indicator have been accumulated individually under the corresponding factors. According to the quantity and quality of answers the degree of impact along with scores has been assessed for the indicators of each factor under the respective domains. For the three study sites the degree of impact and scores accumulated in same table under the factors individually so that a comparison can be made according to factors as well as domains at the end of the day.

The results have been analysed graphically, so as to focus the comparative increasing or decreasing pattern of impact of three sites. The result derived in such way has been assessed for three sites for both women and men individually and finally overall conclusion has been made. The whole assessment has been made by calibrating the procedures of "NORAD's Policy", "CIDA's framework", "LGED's Gender Equity Strategy & Action Plan" and author's formulation so as to fit the present study.

### 3.1.8 Rating Scale

#### 3.1.8.1 Coding of Degree of Impact (DOI)

The answers of the respondents (both for women and men) in each site were analyzed with respect to gender equality & awareness concern against each indicator and logical sequences were made following NORAD's Policy and author's formulation to frame up the Degree of Impact (DOI) depending on the quality of answers against the indicators. The degree of impact (DOI) was coded as follows:

Considerable Impact (Positive impact) = VS (Very Satisfactory)

Some Impact (Positive impact) = S (Satisfactory)

Less than Some Impact (Negative impact) = U (Unsatisfactory)

Very Poor Impact (Negative impact) = VU (Very Unsatisfactory)

No Answer/Never Done (Negative impact) = ED (Extremely Disappointing)

#### 3.1.8.2 Coding of Quality of Answer (QOA)

The indicators of the questionnaire were generally capable to measure the level of awareness on gender issues of respondents. The indicators were represented (in few cases) some "specific activities" or "some specific benefits or opportunities" from a "source" or "control on family issues" or "some statements (+ve or -ve traits)" etc. The respondents were asked whether she/he participated/involved/controlled in/with the concerned activities and also asked whether took decision for such participation/involvement/control by own (self)/jointly or it was imposed on her/him. There were scopes for respondent to provide answer as "Yes (or Always or Strongly Agreed)" / "Sometimes (or Agreed)" / "No (or Never or Disagreed or Don't Know or Can't Say)" along with the freedom for the respondents to make any comments or share opinion against each indicator. Before going to categorization, the Quality of Answers (QOA) of the respondents were assessed with respect to the level of gender equality and awareness. Here "Jointly" means whether she/he took the decision with consultation to the spouse or other male members and "Imposed" means whether she/he was bound to do it. To understand and analyze easily the QOA of respondents has been coded as follows:

i) If the respondent's (she/he) answer was "Yes (or Always or Strongly Agreed)" in participation/involvement/support in/with the concerned activities or with the statement along

with took the decision by "him/herself" then QOA was coded as "YS against the respective column of the indicator where Y for "Yes" and S for "Self"

Similarly

ii) If QOA was "Yes" and "Jointly" then it was coded as "YJ"

iii) If the QOA was "Yes" and "Imposed" then it was coded as "YI"

iv) If the QOA was "Sometimes" and "Self" then it was coded as "StS"

v) If the QOA was "Sometimes" and "Jointly" then it was coded as "StJ"

vi) If the QOA was "Sometimes" and "Imposed" then it was coded as "StI"

vii) If the QOA was No (or Never) then it was coded as "NO"

In cases where the pattern of indicators in the questionnaire were such that the answers of respondents were concerned to "Yes (or Always or Strongly Agreed)" or "Sometimes (or Agreed)" or "No (or Disagreed or Can't Say or Don't Know)" then the answers of the respondents were coded as "Y" or "St" or "N". It was in reverse order in the cases of negative traits (-ve traits).

In both the situation there were scopes available for the respondents to make comments or recommendations freely against the indicators which were also listed in respective columns of the indicators in the questionnaire for reviewing the quality of answers when assessing the DOI.

### **3.1.8.3 Assessing DOI with respect to QOA**

Following the above procedure the quality of answers of respondents against each indicator has been assessed & coded and the Highest Respondents with same Quality of Answer (HRQOA) were accumulated and related with DOI (Degree of Impact) for both women and men. In making relation with HRQOA to DOI the following concepts have been considered:

i) Highest respondent with same quality of answer (HRQOA) against each indicator were accumulated.

ii) If the QOA was "YS" and highest respondent with this answer exceeded 33% of the total respondent then DOI was considered as very satisfactory i.e. VS [sub para 3.2.8.1]

(Here it is followed that in national as well as local policies there are at least 33% inclusion of women in any forum/committee considered as an achievement in our society. Even according to Muslim rules sons and daughters should have 2/3 and 1/3 right to their parental property )

**Table 3.1 DOI with respect to HRQOA**

Sl. No.	Quality of Answer (QOA)	Code of QOA	Limit of % of Highest Respondent with same QOA	DOI
1				S
01	a) Yes and Self	YS	i) HRQOA > 33%	VS
			ii) HRQOA < or = 33%	S
	b) Yes and Jointly	YJ	i) HRQOA > 50%	VS
			ii) HRQOA < or = 50% but > or = 33%	S
			iii) HRQOA < 33%	U
	c) Yes but Imposed	YI	i) HRQOA < or = 33%	S
			ii) HRQOA > 33% but < or = 50%	U
			ii) HRQOA > 50%	VU
	02	a) Sometimes and Self	StS	i) HRQOA = or > 33%
ii) HRQOA < 33%				U
b) Sometimes and Jointly		StJ	i) HRQOA > 50%	S
			ii) HRQOA < or = 50% but > or = 33%	U
			iii) HRQOA < 33%	VU
c) Sometimes but Imposed		StI	i) HRQOA < or = 33%	U
			ii) HRQOA < or = 50% but > 33%	VU
			ii) HRQOA > 50%	ED
03		No ( or Never)	NO	i) HRQOA > 50%
	ii) HRQOA < or = 50% but > or = 33%			VU
	iii) HRQOA < 33%			U

iii) If the QOA was "YJ" and highest respondent with this answer exceeded 50% of the total respondent then DOI was considered as very satisfactory (VS). As respondents took the decision jointly so in viewing gender equality and awareness there were considered more than 50% respondent of such type (Here 50% was taken following the simple majority concept).

Following the above concept and assessment framework the DOI was related with the QOA as shown in Table: 3.1



In cases where the pattern of answers (for the positive traits) of the respondent's were concerned to "Yes (or Always)" or "Sometimes" or "No" where the answer is in favor of gender equality and awareness sense and already were coded as "Y" or "St" or "N" the DOI were related with the QOA as shown in Table 3.2. It was just in reverse order in the cases of answers for the negative traits as Table 3.3.

**Table 3.2: DOI with respect to HRQOA**  
(where the answer is concerned to Y/St/N) (in +ve traits)

Sl. No	Quality of Answer (QOA)	Code of QOA	Limit of % of Highest Respondent with same QOA	DOI
1	2	3	4	5
01	Yes (or Always or Strongly Agreed)	Y	i) HRQOA > 50%	VS
			ii) HRQOA < or = 50% but > or = 33%	S
			iii) HRQOA < 33%	U
02	Sometimes (or Agreed)	St	i) HRQOA > 50%	S
			ii) HRQOA < or = 50% but > or = 33%	U
			iii) HRQOA < 33%	VU
03	No (or Never or Disagree)	N	i) HRQOA > 50%	FD
			ii) HRQOA < or = 50% but > or = 33%	VU
			iii) HRQOA < 33%	U

**Table 3.3: DOI with respect to HRQOA**  
(where the answer is concerned to N/St/Y) (in -ve traits)

Sl. No	Quality of Answer (QOA)	Code of QOA	Limit of % of Highest Respondent with same QOA	DOI
1	2	3	4	5
01	No (or Never or Disagree)	N	i) HRQOA > 50%	VS
			ii) HRQOA < or = 50% but > or = 33%	S
			iii) HRQOA < 33%	U
02	Sometimes (or Agreed)	St	i) HRQOA < 33%	S
			ii) HRQOA < or = 50% but > or = 33%	U
			iii) HRQOA > 50%	VU
03	Yes (or Always or Strongly Agreed)	Y	i) HRQOA > 50%	FD
			ii) HRQOA < or = 50% but > or = 33%	VU
			iii) HRQOA < 33%	U

#### **3.1.8.4 Setting Score with respect to DOI**

Assessing the category of degree of gender impact with respect to highest no. of same quality answers the scores or points for the answers according to weight of degree of impact have been set out using a simple 5(five) point scale (0 to 4) so that a clear comparison of results of three sites could be made. The scores are as follows:

- i) "VS" belongs to 4 out of 4
- ii) "S" belongs to 3 out of 4
- iii) "U" belongs to 2 out of 4
- iv) "VU" belongs to 1 out of 4
- v) "ED" belongs to 0 out of 4

Considering the scores of each indicator the subtotal of scores under each factor were ascertained and finally the total score under each domain has been derived.

### **3.2 Data Collection**

For the collection of data and information various methods are available although a combined method was chosen. The method included questionnaire survey, participant's observation, key informants etc. Both quantitative & qualitative information were collected through questionnaire survey as survey were made door to door with homely atmosphere so that women as well as men did not feel any hesitation to make her/his comments. Prior to data collection, reconnaissance survey was conducted in different regions of the study areas. This survey helped to observe gender status and to realize the existing condition in the study regions. To complete the study both primary and secondary data were extensively used

#### **3.2.1 Primary Data:**

Before the primary data collection a questionnaire was developed and the necessary corrections and modifications were made according to the instructions of the experts in the relevant field. The relevancy of indicators, factors and domains with respect to gender impact assessment was also accomplished by the experts opinion. Before going to final data collection arrangements were made in both sites for validity assessment of the questionnaire

and necessary corrections were also made after consulting with the experts. Both men and women as an individual household were considered as unit of analysis. For primary data collection systematic random sampling was made for selecting sample households among the households under WMCA of the project areas and the households of the concerned villages of base (control) site. To avoid biasness in applying systematic random sampling the first HH was selected randomly from list and then adding 10 every 10<sup>th</sup> HH sample was taken. In case of base (control) site having no list of HH the latest voter list was used for sampling.

Total households (HH) were around 75, out of which 25 households from each study area were selected for extensive questionnaire survey for both men & women separately.

Primary data were collected from field by interviewing women and men separately under the selected HHs through questionnaire (guided) in the 3 study areas to obtain individual men's and women's response for different issues regarding the gender equity and awareness. The responses along with the comments, if any, were carefully listed in the respective columns of the questionnaire. Some parts of the questionnaire were related to know their socio-economic conditions in such way so that family attitudes to showing honor to women/girls could be technically assessed.

### **3.2.2 Secondary Data:**

The appraisal reports of SSWRDSP –I & II helped me to know the data regarding location, type, physical components, gross area, net area etc. of the subprojects. The soil type, hydrology, land types, agricultural and fisheries practices of the project area were also collected from the appraisal reports. Total number of villages, population, socio-economic condition etc were known from concerned local office and the people who are considered as beneficiaries of the project was collected from project MIS on general subproject information. The secondary data also had been collected through the comments, experiences, views, suggestions of the beneficiaries/stakeholders, prevailing documents, study reports, inception reports journals etc. Internet materials shall be used extensively. Other important

information were also collected from different published and unpublished reports/research reports/journals of Bangladesh Bureau of Statistics, Local Government Engineering Department (Dhaka), Bangladesh University of Engineering and Technology, Asian Development Bank, Action Aid Bangladesh, Bangladesh Global Water Partnership, Bangladesh Academy for Rural Development (BARD), and other government and non government organization.

## CHAPTER FOUR

### OVERVIEW OF THE STUDY AREA

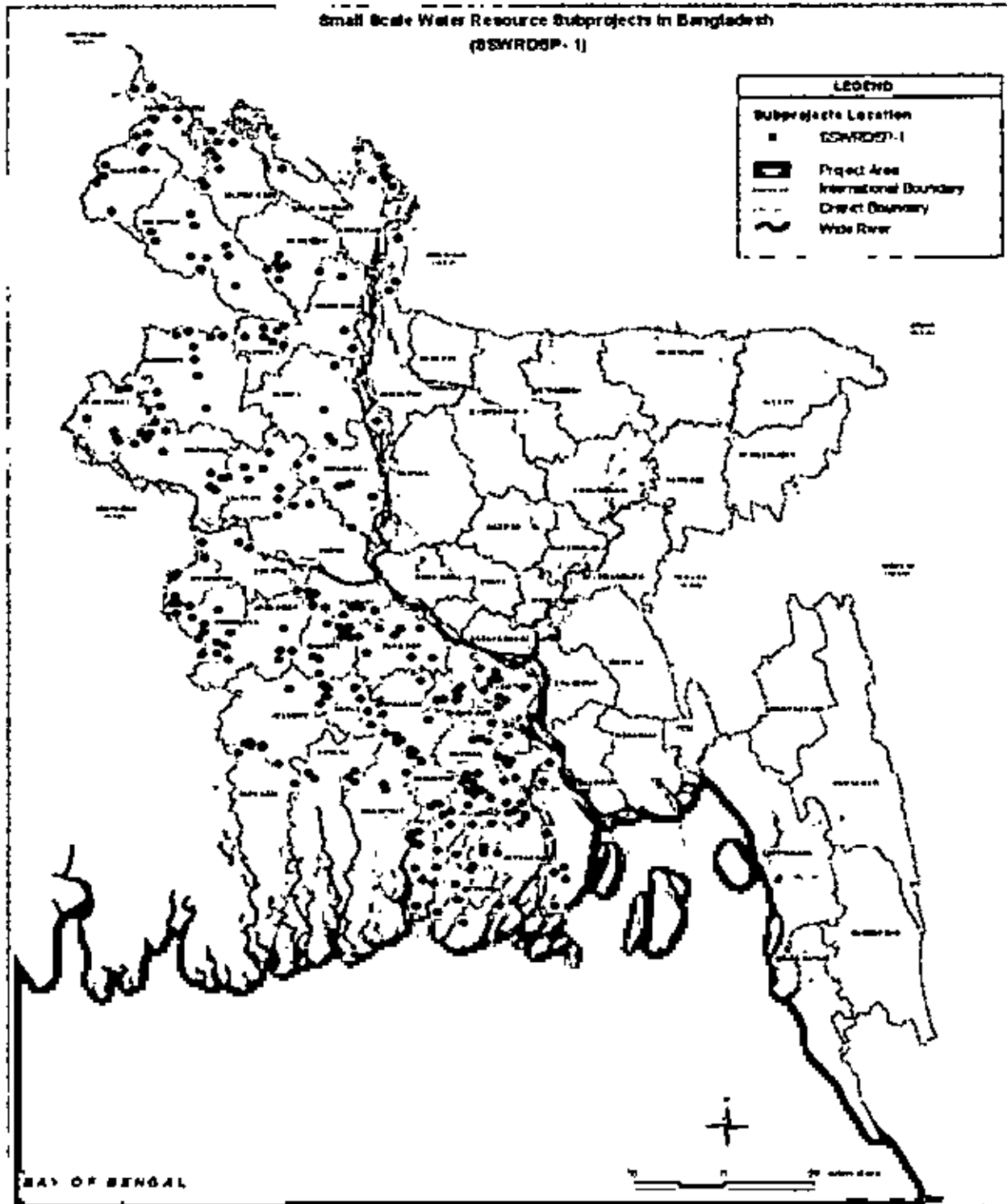
#### 4.1 Background

Small Scale Water Resources Development Sector Project (SSWRDSP) playing a vital role in rural areas by developing infrastructures with ultimate purpose of flood management, drainage improvement & irrigation, water conservation, increase in agricultural production, environmental mitigation and fisheries development. It is one of the biggest projects working in the water sector in Bangladesh. This is called small scale because each project (subproject) is covered not more than 1000 hectares agricultural land. SSWRDSP is one of LGED's more remarkable projects which enhancing water resource developments giving importance to the formation of local institutions with some degree of gender awareness. Till now there are two phases under the program such as SSWRDSP-I and SSWRDSP-II.

##### 4.1.1 SSWRDSP-I Identification

The Local Government Engineering Department (LGED) implemented the first Small Scale Water Resources Development Sector Project (SSWRDSP-I) during the period from April 1996 to December 2002 under the financial assistance of ADB, IFAD, GON & GOB including beneficiary contribution. Almost 280 small scale water control systems, called sub-projects, in 37 districts at western part of Bangladesh, (Fig 4.1) have been completed at a cost of Taka 1.725 million. The net area impacted by these sub-projects was estimated at 165,000 hectares. The sub-projects comprised flood management, drainage improvement & irrigation, water conservation and command area development schemes.

The Project aimed at introducing sustainable operation and maintenance (O & M) activities in each sub-project and included agricultural development, floodplain fisheries, environmental mitigation measures, stakeholder and beneficiaries involvement, poverty reduction and gender development as core elements. (Source: LGED)



**Fig 4.1: Location of Subprojects implemented under SSWRDSP-1**

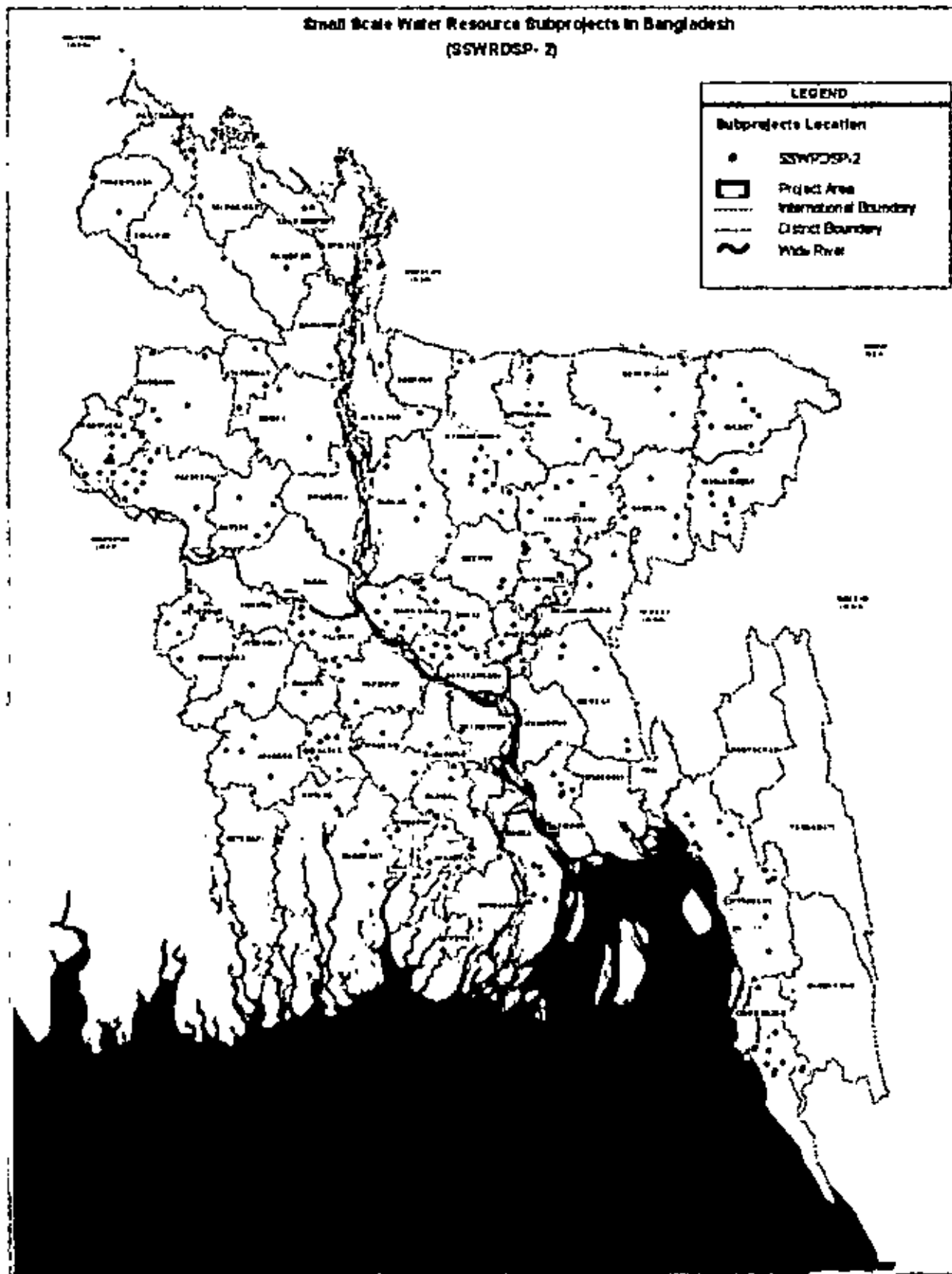
### **4.1.2 SSWRDSP-II Identification**

During the period from July 2002 to June 2009, under SSWRDSP-II, about 300 subprojects will be implemented throughout the country except three hilly districts (Fig-4.2) with the financial assistance from ADB, GON & GOB including beneficiary contribution, which will be expected to result in sustainable water management benefiting some 180,000 hectares of land cultivated by over 280,000 farm households at a total cost Taka 4,273.40 million. The sub-projects comprised flood management, drainage improvement & irrigation, water conservation and command area development schemes.

The overall goal of the Project is to support the Government's poverty reduction effort through the increase of sustainable agricultural and fishery production. The Project's objective is to develop sustainable stakeholder-driven small-scale water resources management systems with special attention to the poorer section of the population. This objective have been achieving by (i) constructing water management infrastructures and establishing sustainable management systems; (ii) strengthening operation and maintenance by institutionalizing beneficiary participation; (iii) strengthening Government institutions and facilities by establishing sustainable water management systems; and (iv) enhancing the access of the landless poor in the subproject areas to employment opportunities and to public natural resources.( Source: DPP, SSWRDSP-II,2001)

### **4.2 Study Areas**

The aim of the study is to assess Gender Impact in two small scale water resources subprojects within almost same social & cultural characteristics areas under phase -I and II of SSWRDSP with a base (control) site where no development intervention in water sector was made. For this purpose "Nabo Ganga Khal Flood Control, Drainage & Water Conservation (FCD&WC)" under SSWRDSP-I and "Gomara Beel Flood Management & Drainage Subproject (FMD)" under SSWRDSP-II in Sadar Upazila of Chuadanga and Meherpur district have been selected respectively for the study including nearby a base (control) site at Ashrafpur Kola under Sadar upazila of Meherpur district.



**Fig 4.2: Location of Sub-projects Included under SSWRDSP-II**



As the study aims to make a comparison on gender equality and gender awareness of the local people so two adjacent districts having almost same condition regarding livelihoods, socio-economy, culture and climate have been considered purposively. Keeping these in mind that two sub-projects under two adjacent districts such as Nabo Ganga FMD subproject under Sadar upazila of Chuadanga district under Phase –I (Phase-I covered only the western part of the country) and Gomara Beel FMD sub-project under Sadar upazila of Meherpur district under Phase –II have been selected randomly along with a Base (control) Site where no water resources development interventions has been made. As the two districts situated at almost mid of western part of the country so the study areas would be apparently representative of western part of the country – which was the main reason in selecting the districts for the Sub-projects. The study areas at a glance are as follows:

**Table 4.1: Study Areas at a glance**

Sl No.	Sub-project Name / Study Area	Sub-project No & Type	Upazila & District	Unions	*No. of SH/ BIHH	Area (ha)	
						Gross	Net
1	2	3	4	5	6	7	8
1	Base (Control) Site (Ashrafpur Kola)	-	Sadar, Meherpur	Amda	480	-	-
2	Nabo Ganga FCD & WC	SP 13044	Sadar, Chuadanga	Momenpur, Padmabila, Shankaachandra, Pourashava	746	703	562
3	Gomara Beel FMD	SP 24135	Sadar, Meherpur	Pirojpur, Amjhupy	445	840	731

\*Column 6: SH=Stake holders, BIHH=Beneficiary household

The brief descriptions of the study areas have been discussed in the next section.

#### **4.2.1 Description of the Study Areas**

##### **a) Location**

##### **i) Nabo Ganga Khal Flood Control, Drainage & Water Conservation (FCD & WC) Sub-project**

Nabo Ganga Khal Sub-Project is located in the Sadar upazilla under Chuadanga district and lies between latitude 23° 37' 04" to 23° 41' 15" North and longitude 88° 50' 25" to 88°52' 40" East. A map of the sub-project area is provided in **Fig 4.3** It mainly covers Momenpur,

Padmabila and Shankachandra Union under Sadar Upazila and a major portion of Pourashava of Chuadanga District.

The Sub-project is bounded by metalled road on the west and northeast and by rural roads along the remaining perimeter on the southeast side. At its offtake the Naboganga khal was closed by BWDB to control flooding. As a result farmers were depriving from water during monsoon period.

To control flooding of aman crops from Mathabanga River, to improve post-monsoon drainage by re-excavation of Naba Ganga Khal and to retain water in the Khal for supplementary the physical works associated to the Nabo Ganga Khal FCD&WC Sub-project were

- i) Construction of a 3-vent Regulator (1.5mx1.8m) at Ch: 0+00 km of Nabo Ganga Khal at the closure built by BWDB
- ii) Re-excavation of badly silted up Nabo Ganga Khal for a length of 3460 m.
- iii) Construction of some pipe sluices of 1-vent 900 mm dia at different chainage 0+945 m, 0+975m(left), 0+975m (right) and 1+580m.

The total sub-project cost was 61,52,795.

#### ***ii) Gomara Beel Flood Management & Drainage (FMD) Sub-project***

Gomara Beel Sub-Project is located in the Sadar upazilla under Meherpur district and lies between latitude 23° 42' 18" to 23° 43' 58" North and longitude 88° 41' 15" to 88° 43' 20" East. It covers Pirojpur and Amjhupi Union and is situated at a distance of 14 km South-East of Meherpur District Headquarters and 4 km south from Meherpur-Chuadanga Highway. The Gomara Khal is the only Khal of the sub-project area, which originates from Gomara Beel and falls into the Sewtia River which ultimately falls into the Bhairab River. A map of the sub-project area is provided in Fig 4.4

The Gomara Beel is a very old beel in the subproject area. The subproject area is drained through Gomara Khal into the Sewtia River. The Gomara Khal originates from Gomara beel and falls into Sewtia River to the east. The upstream of Sewtia River is connected with Aro Khal to the northeast which ultimately falls into Bhairab River and downstream of Sewtia river again connects with Bhairab River far southeast. So the WL of the Sewtia River at Gomara Khal confluence is greatly influenced by WL of Bhairab River.

The subproject area at the west is relatively high and water is drained towards east through Gomara Khal into Sewtia River. The length of Gomara Khal from the Gomara Beel up to its outfall Sewtia River is 0.84 km with an average width of 12m and depth of 1.50m. The drainage catchment of the Khal is 1174 ha, the gross benefited area of the subproject is 840ha and net benefited area is 731ha.

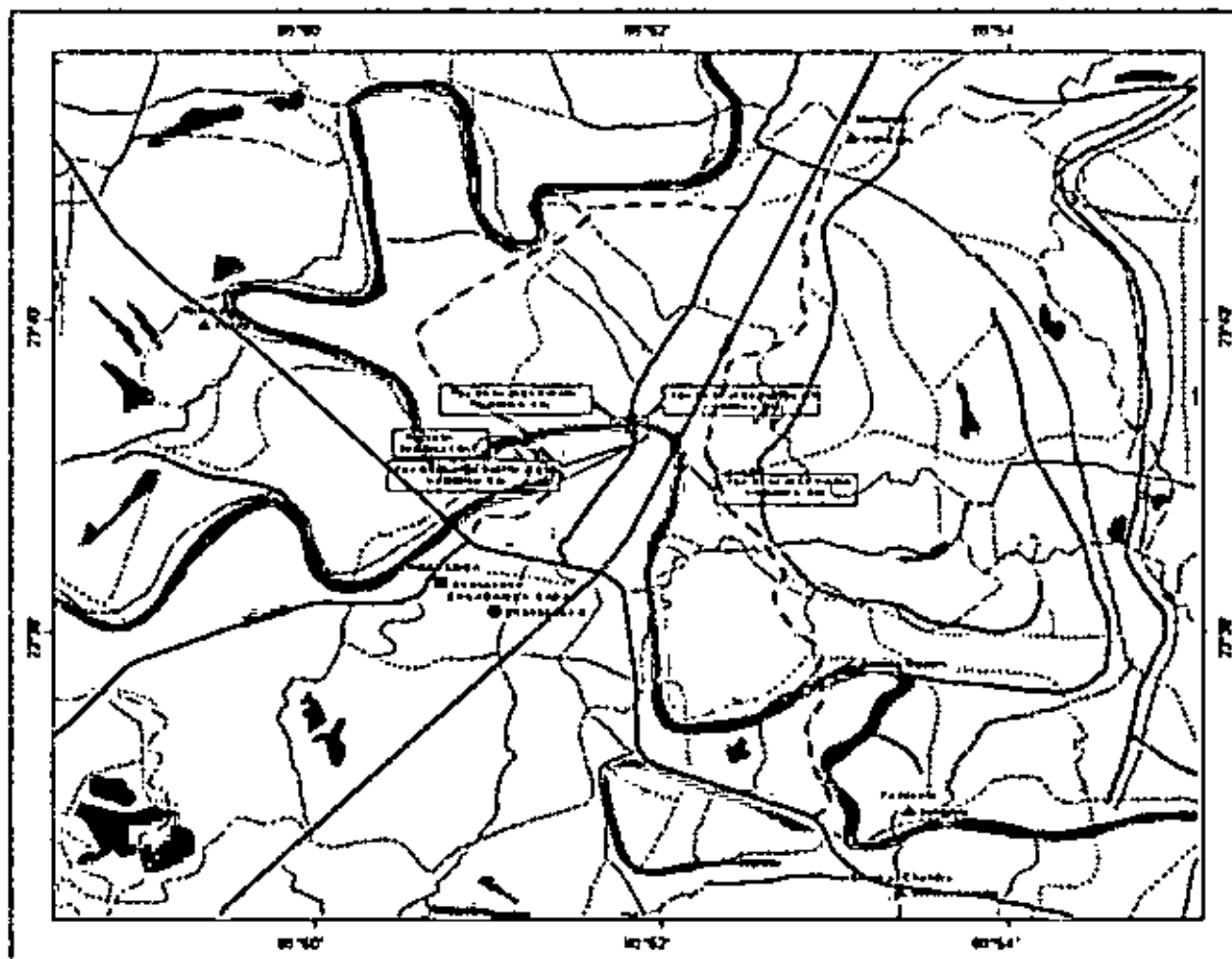
To prevent monsoon flooding from Bhairab River through Sewtia River as well as to improve post monsoon drainage congestion and dry season water logging the physical works associated to the Gomara Beel Sub-project are

- i) Construction of a 2-vent Regulator (1.5mx1.8m) at the site of existing culvert over Goharpur-Raghunathpur earthen road at Ch: 0+315km of Gomara Khal.
- ii) Re-excavation of badly silted up Gomara Khal for a length of 840 m from the Gomara Beel to its outfall at Sewtia River.
- iii) Re-sectioning of Raghunathpur-Goharpur road as embankment along the Sewtia river with a length of 2916 meter.

**iii) Base (Control) Site at Ashrafpur Kola under Sadar Upazila, Meherpur District**

A proposal of sub-project as Ashrafpur Kola lies between latitude 23° 42' 23" to 23° 44' 08" North and longitude 88° 37' 56" to 88° 40' 06" East and located at Amda union, Sadar upazila, Meherpur was submitted to authority under phase-II of SSWRDSP but due to the internal conflicts among the villagers the sub-project was not finalized for implementation. So the reason of selection of this site as " Base Site" was that after the study the stake holders of this sub-project area (as proposed ) would be realized the need of WRD project regarding gender aspects as well as positive change in agricultural production and socio-economic condition of the stakeholders.

Nabo Ganga Khal FCD Subproject, (Subproject No-13044)  
Upazila-Badar, District-Chuadanga.



LEGEND

Administrative HD		Physical Infrastructure		Subject Features	
District HD	□	National Highway	——	Subproject Area	●
Upazila HD	●	Regional Highway	——	Subproject Boundary	——
Union HD	▲	Zila Road	——	Embankment Re-sectioned	——
Administrative Boundary	—	Union Road Katcha	——	Re-Excavated Khal	——
Inter-regional Boundary	——	Union Road Pucca	——	Existing Regulator/Safe AVRBS	——
District Boundary	——	Upazila Road Katcha	——	Implemented Regulator/AVRBS/Safe	——
Thana Boundary	——	Upazila Road Pucca	——	Existing Culvert/Bridge	——
Union Boundary	——	Village Road Katcha	——	Implemented Culvert/Bridge	——
Natural Features		Village Road Pucca	——	Over Dam/Rubber Dam	○
Khal	——	Embankment	——		
Wide River	——	Rail Way	——		
Narrow Canal	——				

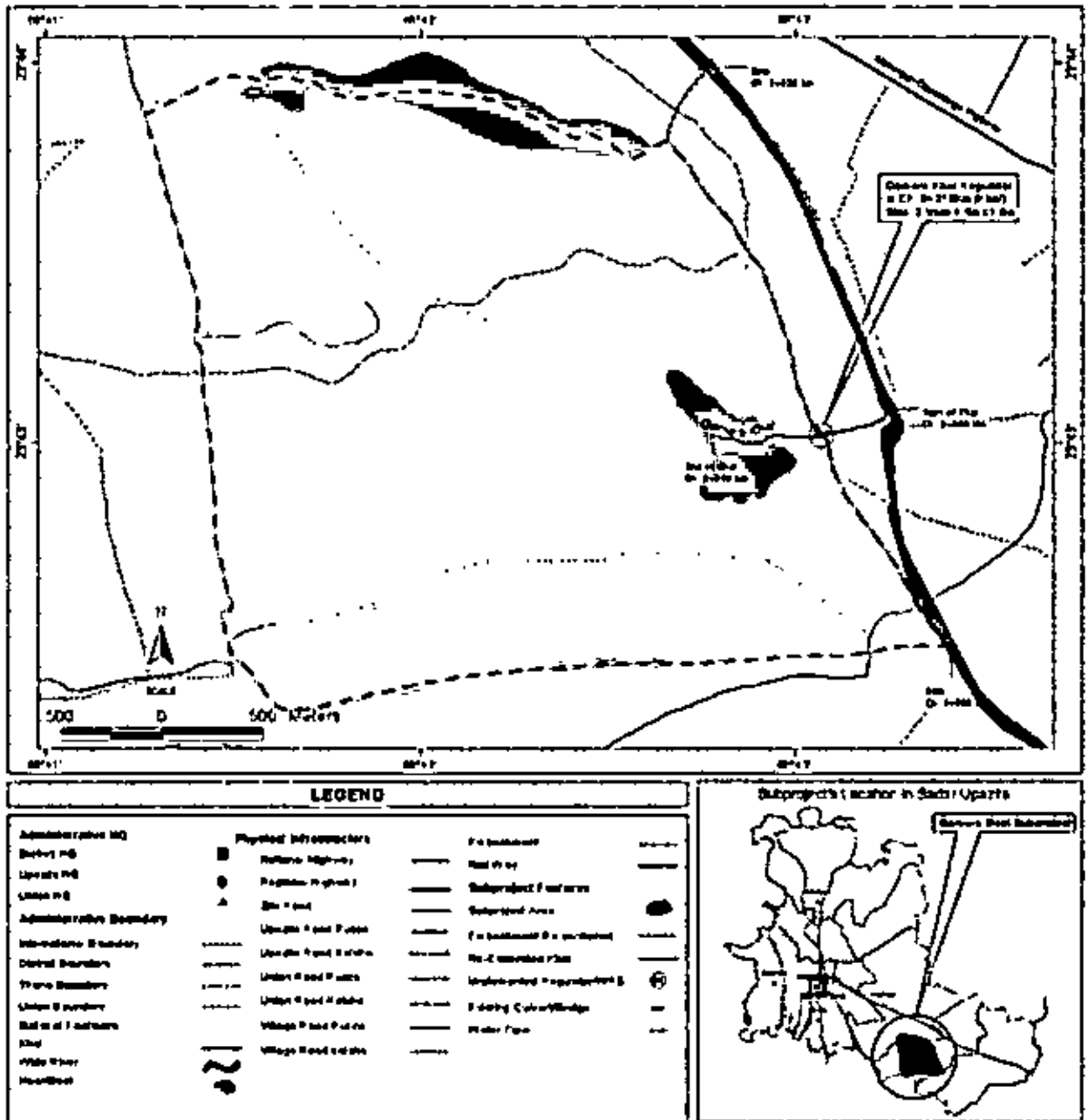
Fig 4.3: Nabo Ganga Khal FCD & WC Subproject Area



Government of the People's Republic of Bangladesh  
Local Government Engineering Department

Gomara Beel Subproject (Subproject No-24135)

Upazila-Sadar, District-Meharpur



Second Small Scale Water Resource Development Sector Project

UNEP/FAO/DFRC/UNEP/FAO/DFRC Agreement  
Date: Dhaka, Bangladesh, 1987

Fig 4.4: Gomara Beel FMD Sub-project Area



## **b) Demography and Gender composition of Two Districts**

### **i) Meherpur District**

The total number of households of Meherpur is 1,35,740 and population is 5 87 620 as per BBS 2003. Out of which male population is 3,01,060 and female 2,86,560. The average family size is 4.3, which is slightly less than the national average of 4.8. The population density is 820 compared to 839 per sq km for the country. The sex ratio male : female is 1.05:1.00.

The surveyed unions are located in Sadar upazila of Meherpur district where density of population is 883.17 per sq km. The area of Sadar upazila is 261.42 sq km where the total population is 2,30,880 out of which male is 1,19,140 and female is 1,11, 740.

Out of total house holds under district about 97.51% are Muslim, 1.28% Hindus, 1.08% Buddhist, 0.01% Christian and 0.02%% others. The gross area (GA) of the district is about 71,608 ha of which 81% is considered as net cultivable (NCA) for the entire district.

### **ii) Chuadanga District**

ii) The district has a population of 10,07,130 of which male is 5,18,188 and female is 4,88,942 with population density 855 persons per sq. km which is slightly higher than the country average. (Source: Population Census, National Series,2001). The average house hold size in the district is 4.47. The sex ratio male : female is about 1.06:1.00.

The surveyed unions are located in Sadar upazila of Chuadanga district where density of population is 962 per sq km. with a total area of 289.59 sq km where the total population is 2,78,726 out of which male is 1,43,249 and female is 1,35,477. (Source: Population Census, National Series,2001).

The gross area (GA) of the district is 1,15,742 ha where 88,809 ha are considered as net cultivable area (NCA) for the entire district.

## **c) Livelihoods of Two Districts**

The main occupation of the people under the study areas is predominantly agriculture-based. Among the gross area of two districts about 76.73% and 80.96% is considered as net cultivable area (NCA) for Chuadanga and Meherpur District respectively (Source: DAE & UAO of

respective district and upazila). In both districts majority of the farmers produce different types of crops under Kharif-I season such as HYV Aus, B.Aus, Jute, B.Aman, vegetables etc. where the crops in Kharif-II season are HYV Aman, vegetables, pulses etc. Under Rabi season the farmers are interested to produce HYV Boro, Wheat, Maize, Oilseeds, Potato, Sugarcane, Betel Leaf, Banana, Vegetables, Species etc where rice is the major and most important crop season of both districts. Due to project, the agricultural production has increased satisfactorily in the study area which has created employment opportunities for both men and women

The study areas are rich in fisheries resources both for open water as well as for close closed water sector while open water fishery scenario is not good enough in the project area except in rainy season. The view of closed water fishery in the study area is a prospective matter for beneficiaries in project area. In the study areas under project work Nabo Ganga Khal and Gomara Beel khals were excavated. These re-excavated khals, along with other close water bodies play vital role for fish habitat for the culture fisheries in the study areas. The popular income generating activities like livestock rearing, poultry rearing are very much common in the study areas where specially women are significantly involved in this activities. In the study areas women play a vital role under this agro-based society as they engaged in poultry rearing, goat farming, cow fattening & milking, garment making, fishnet making, agricultural, post harvest activities etc. where they associated with those household activities along with their male counterpart from dawn to night. Some women belong to LL are involved as labour in earth cutting works, rural infrastructure improvement works as well as agricultural works in the field. In some MRF and SF I household farmer level women are directly working in field other than post harvesting.

#### **4.2.2 Sub-project Preparation & Selection and Water Management Activities**

Under SSWRDSP any proposal of sub-project (SP) implementation is prepared by local upazila LGED office under assistance of district office through a detailed feasibility study/survey in the proposed subproject areas ensuring the participation of all the stakeholders and thereby ensured incorporation of their consensus based decisions/suggestions in all stages of design and implementation of the sub-project. Before implementation of Nabo Ganga Khal FMD&WC sub-



project under SSWRDSP-I and Gomara Beel FMD sub-project under SSWRDSP-II both had been qualified through some criterion listed in Table 4.2.

**Table 4.2: Selection & Preparation Criteria of SP under SSWRDSP**

Preparation & Selection Criteria of SP under SSWRDSP-I	Preparation & Selection Criteria of SP under SSWRDSP-II
i) The sub-project are included in the union or upazila development plan and approved by the Upazila Development Co-ordination Committee	i) The subproject shall be in line with the district strategies and guidelines for small-scale water resource interventions to the developed during the process of NWMP formulation in 2001,
ii) More than 50 percent of the beneficiary farmers in the sub-project must be marginal or small farmers (holding less than 1.0 ha) and priority are given to the sub-projects with higher percentages of small, marginal and landless farmers.	ii) More than 40 percent of the subproject benefit area will be operated by landless sharecroppers, marginal or small farmers (up to 1.0 ha), and within district priority will be given to subprojects with higher percentages of land operated by these farmers and subprojects located in food-deficit areas
iii) Each sub-project entails rehabilitating or upgrading an existing water control system which may include new supplementary structures in existing systems.	iii) Each subproject will entail rehabilitation/upgrading an existing water control system, which may include new supplementary structures in existing systems.
iv) The sub-project costs must not exceed \$500/ha without the Bank's prior approval	iv) Not more than 30 percent of the households depend on full-time or part-time capture fisheries within the subproject area.
v) The area served by the sub-project must be more than 50 ha and must not exceed 1,000 ha without the Bank's prior approval.	v) The subproject cost must not exceed \$ 1,000/ha for command area development (CAD) schemes and \$ 500/ha for other schemes without ADB's prior approval.
vi) Each sub-project is technically feasible, economically viable (the economic internal rate of return [EIRR] are more than 12 percent and priority was given to the sub-project with higher (EIRR); and socially and environmentally sound (requiring no or minimum displacement of people and not involving environmentally sensitive areas).	vi) The benefited area served by the subproject must be more than 50 ha and must not exceed 1,000 ha.
vii) Beneficiaries of each sub-project indicated support for the project and willingness to form a WMCA.	vii) Each subproject shall be technically feasible; economically viable (the economic internal rate of return [EIRR] should be more than 12 percent); and socially and environmentally sound (requiring no or minimal displacement of people and land acquisition, and not involving sensitive areas).
viii) Each sub-project do not conflict with any	viii) The IEE/EIA study has been undertaken

<p>BWDB projects that are being planned, implemented, or under O&amp;M; and</p>	<p>and appropriately approved after consulting the beneficiaries and project-affected people, concluding that the subproject is environmentally sound and the negative consequences can be mitigated</p>
<p>ix) Recurrent maintenance costs of each subproject (including reexcavation costs to maintain design performance of the sub-project) are covered by the O&amp;M budget of its WMCA</p>	<p>ix) Local stakeholders of each subproject must have indicated support for the proposed subproject and willingness to form a WMA, or in the case of a subproject with mainly fisheries benefit, those benefited from fisheries</p>
	<p>x) Recurrent maintenance costs of each subproject (including re-excavation cost to maintain) design performance of the subproject) will be covered by the O&amp;M budget of the WMA's O&amp;M Committee and funds collected from the subproject direct beneficiaries in proportion to the benefit they receive and</p>
	<p>xi) The subprojects will not be located in the Chittagong Hill Tracts. Subprojects in the deeply flooded area in the Northeast will be considered only if the beneficiaries can demonstrate the capacity of ensuring the sustainability of interventions.</p>

It is obvious from the Table 4.2 that from the beginning stage there have scopes for stake holders to provide their views, experiences, suggestive comments as well as participation in SP implementation. End of the day the completed subproject was handed over to the stakeholders forming a Water Management Cooperative Association (WMCA) with a mandatory of 33% female members at the minimum to develop the sense of women ownership of the SP.

#### 4.2.2.1 Formation of WMCA

Each of the subprojects is maintained and operated by a single tier management body such as water management cooperative association (WMCA) under which five committee and sub-committee are there to assist WMCA in different sectors such as in management, in agricultural, in fishery, in micro-credit loan program and in operation & maintenance (O&M). Each of the WMCA as well as committee and sub-committee comprise of female and male member both as beneficiaries and participants of the project with ensuring around 33% seat of is reserved for the women participant. It was known from field visit that in each site a well managed WMCA performing their duties with a view to changing the socio-economic condition of the beneficiary members specially for destitute women as well as to empowering the women through different type of trainings, providing equal loan facilities, monitoring loan using activities, creating scopes in involving & participating in decision making activities and so on

#### *Information Related to WMCA*

In accordance of Project mandate WMCA were formed and registered of both SP under the study areas to confirm the following issues:

- i) At least 70% BHH along with MRI and SF categories farmers would be included as members of WMCA.
- ii) All members must be maintaining share and savings program with WMCA so that own capital would be raised to a significant level.
- iii) For O & M activities of SP beneficiaries would be contributed and deposited money as 3% and 1.5% for earth work and structure work of SP respectively in a joint account operated by Executive Engineer of I.G.E.D and WMCA authority.
- iv) All functions of Committee and Sub-Committee should be operated as per rules and regulations prescribed in constitution of WMCA registered under District Cooperative Office.
- v) Around 33% seat of WMCA would be reserved for women members.

The following Table 4.3 shows the status of institutional information of both WMCA at a glance.

**Table 4.3: Information related to WMCA**

Gomara Beel Sub-project WMCA	Nabo Ganga Khal Sub-project WMCA	Name of WMCA	
		Total BHH (Nos)	BHH under Membership (Nos)
445	746	4	5
440	448	Male	Female
625	512	939	Beneficiary Contribution (Tk)
150	939	1,15,622.00	WMCA Formation
1.03,000.00	1,15,622.00	8	9
13/ 05/ 2005	06/ 06/ 2001	Male	Female
125	98	156	Training Received By (Nos)
150	156	Member (Nos)	Capital (Tk)
F+M= 417	F+M=1412	37,14063.00	Share(Tk)
2,80,490.00	37,14063.00	17,37,100.00	Savings(tk)
1,20,430.00	17,37,100.00	19,76,963.00	Loan Taken (F & M Times & Ratio )
1,60,060.00	19,76,963.00	F-2271 M=1360	Member (Nos)
F=45 M= 182	F-2271 M=1360	F:M=1.66:1.0	Capital (Tk)
F:M= 0.25:1.0	F:M=1.66:1.0	F+M= 1451	Share(Tk)
F+M=775	F+M= 1451	20,07,991.00	Savings(tk)
10,47,316.00	41,10,951.00	F=230 M=210	Loan Taken (F & M Times & Ratio.)
3,30,950.00	21,02,960.00	F:M= 1.09:1.0	
7,16,366.00	20,07,991.00		
F=230 M=210	F=2642 M=1643		
F:M= 1.09:1.0	F:M= 1.60:1.0		

#### 4.2.2.2 Capacity Development to Beneficiaries through Trainings

LGED with the assistance of other govt or non govt. organizations, to ensure the capacity development to beneficiaries, have been arranged and completed the different type of trainings where the need assessment of such trainings at field level have been made through an extensive analysis of necessity. The following trainings have been provided to beneficiaries with a view to improving their capacity in enhancing agricultural production, fish culture, management capability, income through income generating activities, self independency etc where women inclusion almost in all trainings was at least 33%. There were some training programs exclusively for female members of both WMCA. Many significant positive changes have been made on training issue for WMCA members from NG to GB sub-project as a demand of time such as in training materials, mode of training, subjects, number of trainings etc. The Table 4.4 and 4.5 (Source: SSWRDSP, LGED) show the training programs that have been received by the members in different time at NG and GB sub-project area through WMCA.

**Table 4.4: Training provided to Beneficiaries under Nabo Ganga SP under SSWRDSP-I**

Program	Participant
1. Training on SP implementation	LCS & WMCA members: male and female
2. Orientation Training on basic resources	WMCA members: male & female.
3. WMCA operation Practices	WMCA members: male & female.
4. Water management, Land & Soil use, IPM.	WMCA Farmers: male & female.
5. Training on Improved Vegetable Production, Seasonal Vegetable & Seed production, Poultry Development, Pond Fish Culture & Fingerling Production, Integrated Farm Management etc.	WMCA Women members.
5. Cooperative Management Training	WMCA members: male & female.
6. Fisheries Training	WMCA members & fishermen
7. Basic Management Training	WMCA Managing Committee
8. Cow Fattening, Mushroom Cultivation, Carp Nursery Training	WMCA members: male & female.
9. Fabric Design, Improved Handy Crafts goods Production Training	WMCA Women members
10. Computer Training	WMCA members: male & female
11. Operation & Maintenance Training.	WMCA managing Com. O & M Sub-committee

**Table 4.5: Training provided to Beneficiaries under Gomara Beel SP of SSWRDSP-II**

Program	Participant
1. Mobilization of Beneficiary Participation	
a) Training of WMCA members	
i) Basic Management Training for WMCAs	WMCA Member male & female.
ii) WMA Operation and Practice	
iii) Water Management and O&M Training	
ii) On-site O&M training & Supervision followup	
iv) Media an drama WMA Training input	
b) Training of LCS Members	
i) GM LCS training	WMCA LCS Member, male & female.
ii) WCS LCS training	
iii) rainage LCS training	
iv) CAD LCS training	
2. Water Management Oriented Resources Development	
a) Subproject agriculture programs package	WMCA Member; male & female.
b) Agriculture Training of WMCA members	WMCA Member, male & female.
c) Vegetable & Seed production program for Women	WMCA Women members
d) Fisheries Training Program	
i) Pond Fish, Galda Culture Training	WMCA Members & Fishermen
ii) Baor Fish Culture and Management Training	
iii) Production Tech. for Fisheries Training	
iv) Rice and Fish Production Training	
3. IPM Training	WMCA Members & Farmers
4. Training on Micro credit Loan Activities	WMCA Member; male & female.
5. Sustainable Training on Agriculture	WMCA Members & Farmers
6. Poultry Farming & Livestock Rannng Training	WMCA Women members
7. Poverty Reduction Training	WMCA Member male & female.
8. Operation & Maintenance, Gender & Environment	
9. WMCA Accounts Management Training	WMCA Chairperson, Secretary, Trasurer
10. Basic Cooperative Management Training.	WMCA Member, male & female.
11. Fabric Design, Improved Handy Crafts goods Production Training	WMCA Women members
12. Computer Training	WMCA Member, male & female.

## CHAPTER FIVE

### RESULTS AND DISCUSSION

#### 5.1 Introduction

A gender assessment study investigates the expected impact of a project on women and assesses whether, and to what extent, the project responds to the specific interests and needs of various categories of women, as compared to men. Moreover, it provides relevant general information for further project planning, in that it identifies activities that are apt to be particularly relevant to women (Gianotten & et al. 1994).

In connection with the definition of "Gender Impact" as mentioned earlier (Section 2.1.3) this research efforts have been made i) to assess the impact in two WRD project areas in terms of base area by comparing the changes in gender aspects and ii) to reveal the role of gender in enhancing water projects where the main challenge was to assess the trends in qualitative and quantitative framework.

This chapter mainly belongs to the findings and relevant discussion & comments on three major aspects of the research namely i) Investigation of the role of gender in enhancing water projects, ii) Comparison of the changes regarding gender aspects of two subprojects areas with a base (non project ) area and iii) Identification of the scopes of enhancement of opportunities and institutionalization of gender equality as envisaged.

#### 5.2 Role of Gender in Enhancing Water Projects

##### 5.2.1 General

In finding the role of gender in water projects as well as its significance it is required to focus on some issues which are considered as a vital part of water resources projects at the time of planning as well as construction and O & M stages for smooth implementation and sustainability of the projects.

It is not only simple involvement for women, as compared to men, in the water sector for their better health, higher productivity ,sanitation etc. and but also related to questions of

dignity, rights, responsibilities and participation at all levels. When women are not encouraged to participate in water management, they are simultaneously de-linked from the inevitable efforts to protect these vital natural resources. As women are sometimes unable to effectively participate in different phase/process in the development intervention process due to certain inherent and/or imposed constraints so extra efforts are needed to ensure their adequate and active participation along with men throughout the project cycle.

### **5.2.2 Reflection of Study supported by Results**

The role of gender in enhancing water projects have been determined by some issues which are reflected and supported by the results of 3 study areas. The results i.e. the answers of the questions (indicators) got from interview both from women and men have been accumulated. The score of the relevant indicators to the respective issues have been accumulated and finally the scores support the issues that sustain the role of gender in enhancing water projects. The respondents were generally spontaneous in answering question in all the sites. While regarding suggestive comments the respondents in the intervening areas were vibrant than the base site. The issues were as follows:

#### **5.2.2.1 Participation & Project Effectiveness**

As the interests of different type of stake holders are closely associated with the implementation of a WRD project so it is obvious that without consultation with the beneficiaries in selecting the site as well as in implementing and O&M activities there will remain a great uncertainty of project sustainability. Project effectiveness depends on good participation of stake holders as the local people have the great scopes to contribute their experience, merit and labor in selecting, implementing and good running of the projects.

Participation in equity basis throughout the project cycle permits women and men to choose site, technologies, maintenance & management activities systems that best fit their needs and potential that confirm equity in distribution of the resources, opportunities and benefits to women and men – thus to support that beneficiaries participation and project effectiveness are closely inter dependable in water sector



project. These have been supported by the study results which indicates that gender integration is needed in water sector projects

### Study efforts

Beneficiaries (both men and women) have been consulted to have the idea regarding their involvement in choice and opinions in scheme related activities within the project cycle; for example selection of sites. Similarly the intensity of involvement in the establishment of facilities like bathing, washing etc. has also been consulted.

**Table 5.1: Gender Involvement in Project Activities for Effective Implementation and Running**

Indicators	Respondents (Women & Men)		No. of Highest Respondents with Same Answer and it's Degree of Impact & Associated Score of 3 Study Areas											Total Score for Women & Men			
			Base Site (BS)			Nabo Ganga (NG) SP			Gomara Beel (GB) SP			Base Site	Nabo Ganga SP	Gomara Beel SP			
	No. of Highest Respsds	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respsds	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respsds	Respondents Answer	Degree of Impact				Respective Score		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Any involvement in implementation activities of the Sub-project (SP)	W	N/A	N/A	N/A	N/A	13	SU	S	3	14	YI	V	S	4	W=50% M=52.4%	W=79% M=87.4%	W=96% M=92%
	M	N/A	N/A	N/A	N/A	11	VS	VS	4	15	YI	V	S	4			
Any involvement in O & M activities of the Sub-project (SP)	W	N/A	N/A	N/A	N/A	10	YI	S	3	11	YI	S	3				
	M	N/A	N/A	N/A	N/A	12	SIS	S	3	14	SIS	S	3				
Women's participation in SSWRDSIP is needed?"	W	13	SU	S	3	19	Y	VS	1	21	Y	V	S	4			
	M	12	SU	U	2	18	Y	VS	4	17	Y	V	S	4			
Local Contribution is needed for successful completion and running for WRID Projects?	W	12	N	VU	1	12	Y	S	3	13	Y	V	S	4			
	M	11	Y	S	3	11	Y	S	3	12	Y	S	3				
Got benefits from SP by selling of agricultural goods/ aquaculture practices	W	N/A	N/A	N/A	N/A	11	Y	S	3	13	Y	V	S	4			
	M	N/A	N/A	N/A	N/A	14	Y	VS	4	15	Y	V	S	4			
Got benefits from SP by using water for washing / cooking/bathing	W	N/A	N/A	N/A	N/A	11	Y	S	3	13	Y	V	S	4			
	M	N/A	N/A	N/A	N/A	12	Y	S	3	15	Y	V	S	4			

### ***Results and Analysis***

Table 5.1 shows the detail results where it is evident that impact or change is convincingly positive comparing with the Base (Control) Site regarding participation and effectiveness. As an ultimate impact the changes (+ve) in the Nabo Ganga (NG) reveals 29 (79-50) % score for women and 25 (87.5-62.5) % score for men. On the other hand for the Gomara Beel (GB) site the changes are 46 (96-50)% score and 29.5 (92-62.5)% score respectively.

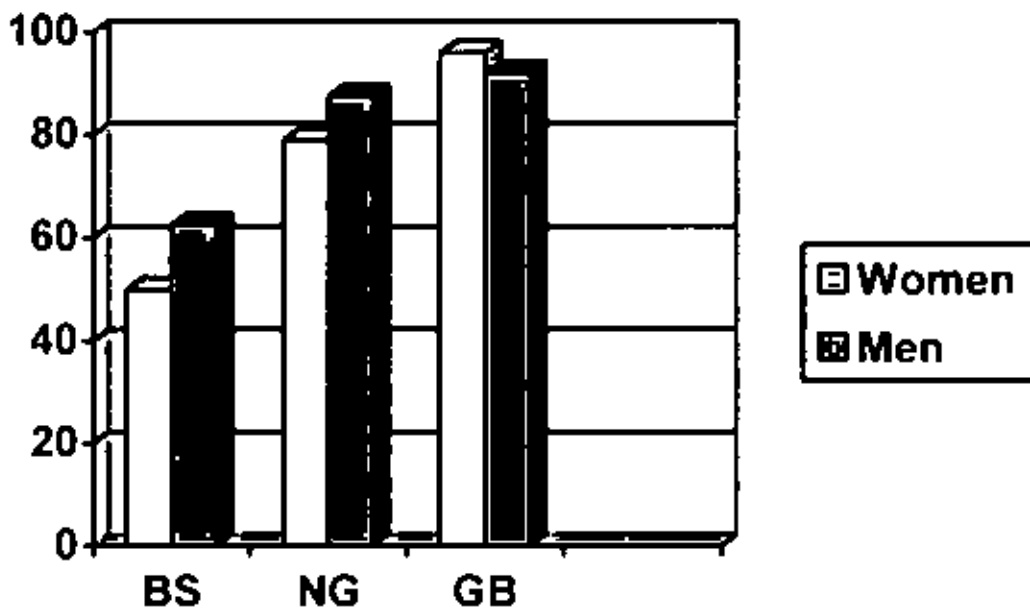
Here the answers of the indicators have been graded and scored as per methodology (Section 3.2.7 & 3.2.8). The results thus achieved under different indicators within the issue of participation and effectiveness are listed in tabular form in detail in Table 5.1.

Considering the relevant indicators the scenario of Base (Control) Site (having no development intervention) regarding scoring shows the level of participation and effectiveness on average as only 50% for women and 62.5% for men. On the other hand for Nabo Ganga (NG) the scores are 79% for women and 87.5% for men while for the Gomara Beel (GB) the scores are 96% and 92% respectively.

Considering the Base Site (BS) scores as the bench mark, the NG site shows a positive change in score 29(79-50)% for women and 25(87.5-62.5)% for men. On the contrary the GB site shows a positive change in score 46(96-50)% for women and 29.5(92-62.5)% for men. Fig 5.1 shows the trend of change in score both for women & men by which the necessity of participation & effectiveness in enhancing water project can be realized.

### ***Findings***

It is evident from the analyses that the impact is positive irrespective of the site as a result of development intervention in water sector although the changes in women regarding participation and effectiveness is substantial in both the sites. These changes for women are undoubtedly encouraging.



**Figure 5.1: Comparison of Scores both for women and men under the indicators that support "Participation & Effectiveness" role**

### 5.2.2.2 Human Development

The water resources projects or program often bring new resources such as training, tools, technology, credits etc. by which both women and men can take the advantages of the opportunities to develop her/himself. A good water resources project can contribute in the areas such as income, consumption, nutrition, health, water and sanitation, education, housing, crisis coping capacity, access to credit and other aspects of living where gender equity principal enhances the opportunity of equitable and sustainable human development.

#### 5.2.2.2.1 Study efforts

Beneficiaries (both men and women) have been asked to have the idea regarding their development by getting benefits from sub-project and its related activities. At Base (Control) Site only the indicators that were applicable for the stake holders were applied during interview both for women and men.

### ***Results and Analysis***

Table 5.2 shows the detail results where it predicts the impact or change is persuasively positive comparing with the Base (Control) Site regarding the issues related with human development.

Considering the scores owned by women and men in three sites the crucial change has been made from Base Site (BS) to Nabo Ganga (NG) SP to Gomara Beel (GB) SP area i.e. it reveals that the changes are positive (+ve) than BS by 25 % for women and 28 % for men at Nabo Ganga. On the other hand at Gomara Beel site the changes are positive by 39 % and 28% for women and men respectively

Here the answers of the indicators have been graded and scored as per methodology (Section 3.2.7 & 3.2.8). The results thus achieved under different indicators within the issue of human development are listed in tabular form in detail in Table 5.2.

After scoring the scenario of BS shows that regarding human development, the score owned are 50% and 58% by women and men respectively. On the other hand, for NG the scores are 75% and 86% for women and men while for the GB the scores are 89% and 86% respectively.

Considering the Base Site scores as the bench mark, the NG site shows a positive change in score by 25 (75-50) % for women and 28 (86-58) % for men. On the contrary, the GB site shows a positive change by 39 (89-50) % for women and 28 (86-58) % point for men. Fig 5.2 shows the trend of change in score both for women & men by which the necessity of human development in enhancing water project can be realized

### ***Findings***

It is evident from the analyses that the impact is positive irrespective of the site as a result of development intervention in water sector under human development issue and the changes in scores for women is definitely hopeful .

**Table 5.2: Gender Role associated with "Human Development" in Water Sector Project.**

Indicators	Respondents (Women & Men)	No. of Highest Respondents with Same Answer and it's Degree of Impact & Associated Score of 3 Study Areas												Total Score for Women & Men		
		Base Site (BS)				Nabo Ganga (NG) SP				Gomara Beel (GB) SP				Base Site	Nabo Ganga SP	Gomara Beel SP
		No. of Highest Respsdts	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respsdts	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respsdts	Respondents Answer	Degree of Impact	Respective Score			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Ownership of share & savings in WAICA	W	N/A	N/A	N/A	N/A	8	YS	S	2	10	YS	VS	4	W=50% M=58%	W=75% M=86%	W=89% M=86%
	M	N/A	N/A	N/A	N/A	16	YS	VS	4	12	YJ	S	3			
Accessed to agro/forest land/ fishing ground/wild produces land/fire woods /medicinal roots/ herbs /mushrooms)	W	15	St	S	3	19	St	S	3	14	Y	VS	1	W=50% M=58%	W=75% M=86%	W=89% M=86%
	M	12	Y	S	3	17	Y	VS	4	16	Y	VS	4			
Accessed to agri equipments/ tools(saws/tractors/ox-carts /silos/steel plough)/fisheries equipment/industrial equipments sewing machines/hammer mills	W	11	St	U	2	14	St	S	3	18	St	S	3	W=50% M=58%	W=75% M=86%	W=89% M=86%
	M	12	St	U	2	14	St	S	3	19	St	S	3			
Reduced malnutrition & duration of illness of family members than last year	W	12	St	U	2	13	St	S	3	15	St	S	3	W=50% M=58%	W=75% M=86%	W=89% M=86%
	M	13	St	S	3	14	St	S	3	15	St	S	3			
Reduced maternal mortality and increased health /vaccination facilities than last year	W	13	St	S	3	13	St	S	3	13	Y	VS	4	W=50% M=58%	W=75% M=86%	W=89% M=86%
	M	13	St	S	3	13	Y	VS	4	14	Y	VS	4			
Participated in SSW/SDSP training /workshop or any other training in other organization	W	11	St	U	2	15	St	S	3	13	Y	VS	4	W=50% M=58%	W=75% M=86%	W=89% M=86%
	M	13	St	S	3	12	Y	S	3	14	Y	VS	4			
Got education facilities (such as adult literacy classes /female teacher /gender neutral text books)	W	17	N	ED	0	15	St	S	3	13	St	S	3	W=50% M=58%	W=75% M=86%	W=89% M=86%
	M	16	N	ED	0	13	St	S	3	14	St	S	3			

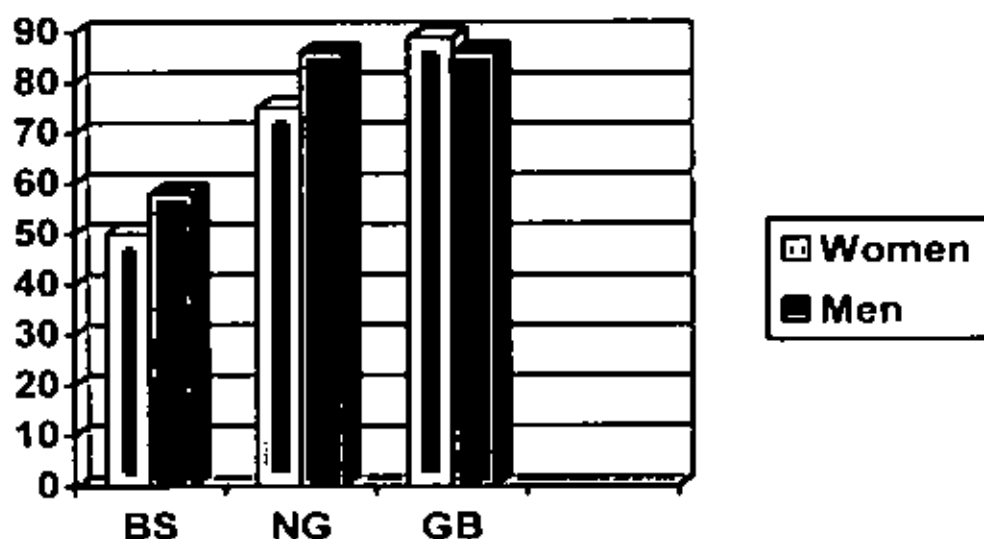


Figure 5.2: Comparison of Scores both for women and men under the indicators that support “Human Development” role

### 5.3 Gender Impact in some Socio-economic Sectors

To have an idea about the socio-economic condition of the beneficiaries/stake holders consultation have been made with them (both women and men under the IFF) by some identified issues and it has tried to make a comparison of how they are benefited /affected by the issues in gender perspective. These are summarized as follows:

#### 5.3.1 Household Category & Size

In the study areas the sampling for selection of households has been limited to LL to SF keeping in mind that these households represent poorer and lower sections of the community.

##### 5.3.1.1 Result and Analysis

The total sample size (Table 5.3) selected for 3 (three) study areas is 75 households of which according to category 19 (25.33%) are Landless (LL), 34 (45.33%) are Marginal Farmers (MRF) and 22 (29.33%) are Small Farmers (SF).

**Table: 5.3 Household Categories and Population of Study Areas(n=25 HH)**

Sl No.	Sub-project /Study Area	Sample Household (HH) Nos.	HH category			Avg. Population	
			LI	MRI	SF	Male	Female
1	2	3	4	5	6	7	8
1.	Base(Control) Site (BS)	25	08 (32%)	10 (40%)	7 (28%)	47.4%	52.6%
2	Nabo Ganga SP (NG SP)	25	06 (24%)	11 (44%)	8 (32%)	48.5%	51.5%
3.	Gomara Beel SP (GB SP)	25	05 (20%)	13 (52%)	7 (28%)	50.2%	49.8%

The average percentage of male population is in the range from 47.4% to 50.2% whereas the average population of female ranges from 49.8% to 52.6% in all study areas. The male population is slightly higher than female at GB site whereas it is reverse in case of Base (Control) Site and NG site.

### **Findings**

It is seen from survey findings that women in Gomara Beel area are playing better role than other two sites regarding sharing opinion about family planning (indicator 12. Table 5.8). It is known from site that men of GB area, in some extent, showed respect to women as they play effective role in family planning, family well beings etc. and thus to reduce family size thereby making an impact on male population which caused slightly higher at GB site than other two sites.

### **5.3.2 Women with Income**

Women's participation in economic activities shows great variations with respect to gender awareness though it depends on many other factors such as nature of activity, place of residence, infrastructural facilities, scope of works, etc (ADB, 2001). In the study areas, women's income generating activities (IGA) include poultry rearing, goat farming, cow fattening & milking, garment making, fishnet making, agricultural, post harvest activities, etc. These belong to self employed or own account IGA. Some women under

LL are involved in earth cutting works, rural infrastructure improvement works as well as agricultural works in the field which IGAs traditionally within the male domain.

### ***Result and Analysis***

Women with income through IGAs by which they are contributing assistance in family or capable to contribute have been assessed in the study areas and the results are presented in Table 5.4. The table also shows the average annual family income per household according to HH category. In Table 5.4 women's employment status shows that trend in involvement of women in self employment sector are increasing from BS to NG to GB. It is evident that the impacts or changes are convincingly encouraging comparing with the BS regarding involvement of women with self earning activities. As an ultimate impact, the changes in NG and GB reveal 20(68-48)% and 24(72-48)% increase in self employment status of women respectively and thereby reducing no. of women who are not involved with IGAs by 8(20-12)% (Column 10 Table 5.4)

### ***Findings***

During interview respondents were asked about it and it was known that WMCA has created scopes in getting loan and easy receiving of various trainings by which both women and men in project areas are more benefited by involving with different type of IGAs (indicator 18, Table 5.9 and 33, Table 5.10)

It is clear from the Table 5.4 that % of women engaged with earning activities has been increased from BS to GB site by which the mobility and self sufficiency of women in GB & NG sites then BS site are also being increased and thus improved their voice and choice in the community which made them more gender aware. A very good number of women as well as men in each site strongly supported that a good neighboring WRDP is very essential that would be helpful for them in creating the scopes of trainings, participation in development activities, easy loan facilities, IGAs etc.



**Table 5.4: % Women Involvement with Income (n=25 women in each site)**

Sl. No.	Study Area	HH by Types	Average Annual Family Income/HH (Taka)			Women Employment Status (%)			Need of WRD P for Women's Well being (%)		
			LL	MRF	SF	Self (Own Business)	Other than Own IGAs	Housewife	Strongly Agreed	Agreed	Can't Say
1	2	3	4	5	6	7	8	10	11	12	13
1	Base Site (BS)	LL=08 MRF=10 SF=07	54,000/	75,600/	98,400/	48	32	20	52	32	16
2.	Naho Ganga (NG)	LL=06, MRF=11 SF=08	62,400/	81,600/	1,10,400/	68	20	12	80	20	Nil
3.	Gomara Beel (GB)	LL=05 MRF=13 SF=07	63,600/	84,000/	1,12,200/	72	16	12	88	12	Nil

### 5.3.3 Major Assets & Ownership

The household major assets represent the physical capitals and determine the socioeconomic condition of the family. In study areas it has been tried through interview to understand the quantity of major assets along with its ownership. The ownership does not bear the meanings that the assets are used /cared by owner only in the family but means that by whose earnings/money it was purchased or by whose name it was registered after purchasing.

**Table 5.5: Major Assets & Ownership**

\*[BS (Base Site), NG SP ( Nabo Ganga), GB SP(Gomara Beel )] [n=25 HH in each site]

Assets	*Study Area	Types of Assets	Average Quantity / HH		Average Owning Quantity (%)				Average Owning ratio of Assets (W:M & M:F)		
			in decimal,	in nos.	Women	Men	Jointly	Others	Base Site	Nabo Ganga	Gomara Beel
1	2	3	4	5	6	7	8	9	10	11	12
Land	BS	Cropped, Non-cropped & Home- stead	75	-	10	60	15	15	Women : Men = 39.00:13.50	Women : Men = 33.00:16.70	Women : Men = 29.50:17.30
	NG		90	-	18	55	17	10			
	GB		110	-	22	50	23	5			
Livestock & Poultry	BS	Cows/Bufalos/Goats	-	1.5	15	55	30	0	Women : Men = 11.00:39.00 and Men : Jointly = 39.00:13.50	Women : Men = 16.50:33.00 and Men : Jointly = 33.00:16.70	Women : Men = 19.70:29.50 and Men : Jointly = 29.50:17.30
		Hens/Ducks	-	5.0	25	35	30	10			
	NG	Cows/Bufalos/Goats	-	3.0	22	35	35	8			
		Hens/Ducks	-	7.0	35	30	25	10			
	GB	Cows/Bufalos/Goats	-	3.5	25	30	40	5			
		Hens/Ducks	-	8.0	40	25	30	5			
Equipments	BS	Agricultural + Irrign.	-	3.0	15	60	15	10	Women : Men = 11.00:39.00 and Men : Jointly = 39.00:13.50	Women : Men = 16.50:33.00 and Men : Jointly = 33.00:16.70	Women : Men = 19.70:29.50 and Men : Jointly = 29.50:17.30
		Fishing +Others	-	2.0	15	60	15	10			
	NG	Agricultural + Irrign.	-	4.0	20	55	25	0			
		Fishing +Others	-	3.0	25	50	20	5			
	GB	Agricultural + Irrign.	-	5.0	25	50	25	0			
		Fishing +Others	-	4.0	30	45	15	10			
Transports & Others	BS	Van / Rickshaw	-	.25	15	60	15	10	Women : Men = 11.00:39.00 and Men : Jointly = 39.00:13.50	Women : Men = 16.50:33.00 and Men : Jointly = 33.00:16.70	Women : Men = 19.70:29.50 and Men : Jointly = 29.50:17.30
		Carts	-	0.2	15	60	15	10			
	NG	Van / Rickshaw	-	0.3	20	55	25	0			
		Carts	-	0.2	25	50	20	5			
	GB	Van / Rickshaw	-	0.4	25	50	25	0			
		Carts	-	.25	30	45	15	10			

**Result and Analysis**

For 3 ( three) study areas, BS, NG and GB the average total land size per household were 75, 90 and 100 decimals respectively and the average number of live stocks (cows/calves/goats etc ) per household were 1.5, 3.0 & 3.5 and in case of poultry / birds ranging which it was 5.0 , 7.0 & 8.0 respectively (Table 5.5). A significant changes (+ve) have been made in owning ratio of the major assets from BS to NG and GB i.e it is

Women:Men=11.00:39.00 and Men:Jointly=39.00:13.50 to Women:Men= 16.50:33.00 and Men:Jointly=33.00:16.70 and Women:Men=19.70:29.50 and Men:Jointly= 29.50:17.30 respectively (Table 5.5, column 10,11 and 12).

### ***Findings***

From the study results, it is obvious that average farmers in GB site are more resourceful regarding land position than other two sites. Here, it is mention that in finding the contribution of women on such assets- it has known that women of GB and NG areas than BS area were more contributing by their earnings and purchasing such type of household items/assets in their family. A very good number of women as well as men in each site strongly supported that near by a good WRDP by which they should have the opportunities through WMCA for share and savings thereby involving with different IGAs which would activate women to some extent in owning assets/household items. In the findings, it suggests that development intervention in water sector has an impact on these issue to show respect to women.

### **5.3.4 Credit (Loan) Taken**

Traditionally, women are largely involved in the non monetized sector (ADB, 2001). For women, credit based program enhanced access to productive resources as well as enhanced income and asset position. It widened economic activities, gained independence from male dominance and improved social status for women (Kabeer, 2005)

Taking the credit rural women involved in income generating activities like post harvest, cow fattening, vegetable production , goat farming, poultry rearing, handicrafts, fish net making, handloom, bamboo works, garment making etc. Some times loans are taken for house repairing works, farm equipments, debt repayments etc.

### ***Result and Analysis***

In the study areas the observation on credit taken by women respondent shows that the women of sub-project areas got additional advantages for WMCA as source of loan so the number of women loan taker was higher in these sites (Table 5.6). Out of 25 women in each site the number of women in BS , NG and GB were 10 (40%), 18(72%) and

19(76%) respectively where the women in BS taken loan from local NGO or money lenders or traders etc.

The % of women who decide by herself before taking loan was higher in NG and GB than BS. Before taking loan no. of women decided by own were higher in NG (33%) and GB(37%) than BS(20%).In using loan women by self decision in NG (44%) and GB(47%) areas were more higher than BS(20%).

The dissimilarity of the purpose and use of loan in case of BS was 40% which was significantly high than other two sites (17% and 16% in NG and GB areas respectively).

**Table 5.6: % Women Associated with Credit Program (n=25 women in each site)**

Sl No	Study Area	Loan Taken by Women Respondt	Before Loan Taking Consulted with or Decided by (%)			Loan Used by Whom (%)			Similarity in between Purpose & Use of loan (%)			Need of Association like WMCA for getting loan (%)	
			Husband	Other Members	Self	Self	Husband/ others	Both (Jointly)	Same	Not Same	Partially Same	Yes	Can't Say
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	BS	10 (40%)	70	10	20	20	50	30	30	50	20	72	28
2	NG	18 (72%)	57	10	33	44	12	44	61	17	22	100	Nil
3	GB	19 (76%)	53	10	37	47	11	42	63	16	21	100	Nil

### Findings

Women in sub-project areas (NG and GB site) as associated with WMCA as member so they enjoyed equal priority as men in getting loan and thus to reduce inequalities in accessibility to loan .

As women self involvement with IGAs were higher in NG and GB areas than BS (Table 5.4) so % of women who take decision by own for loan was higher in NG and GB than BS which indicates that women in project areas are more aware and play decision making role to some extent in their family. The similarity between purpose and use of loan was also significantly higher in NG and GB than BS because these issues were strongly monitored by WMCA. Due to well built management of WMCA women members in NG and GB areas become benefited in using loan money as they desired. It

was known from discussion that women, in project areas, take major portion of loan from WMCA by their own decision and they control the use of loan also and thus to enhance their dignity in family as well as society.

A very significant numbers of respondent both men and women in three sites strongly supported the need of a good WRDP. The % of supporter was also relevant to the other study results.

### **5.3.5 Water Collection and Sanitation**

In Bangladesh, women generally responsible for collecting water, for controlling its domestic use thereby play a vital role as water drawers and water managers. They also oversee the sanitary arrangements. In our country, in rural areas, it is seen that generally women and girls are the water collector for the domestic purposes. Domestic water is used for drinking, washing, bathing, cooking, watering gardens and livestock. Thus, where water supplies become scarce or contaminated, women and girls are the ones who look for alternative source of water (Wahaj, R. et. al , 2007).

It is, therefore, essential that water planners recognize the importance of mainstreaming women in water resources development and management and their knowledge gained as water managers at the household and community levels be utilized properly. In fact increased female participation in water sector not only improve women's crops and livestock production including less time consuming in collecting, storing, protecting & distributing water but also improve the standard of livelihood of their family.

Hygienic sanitation is a basic human right and indicator of human development index. This is one of the crucial practical needs where women suffer due to lack of access to these basic resources which caused them directly by costing more labour and indirectly by deterioration of health.

#### ***Result and Analysis***

From Table 5.7 it is seen that most HHs of the study areas collect their water for domestic purposes from their own tube well. They have collect water from other sources as 28%, 16% & 20% with covering the distance from houses as 1.5 km, 1.00km & 1.00km by the female persons( wife+ girls) as 88 (64+24)%, 72(52+20)% & 68(52+16)% of the study

areas BS, NG & GB respectively, 32%, 20% and 24% HH of the study areas in BS, NB and GB respectively were strongly agreed that girls child suffered in their study/school attendance due to lose of time for water collection.

In case of sanitation system the HHs mostly limited to SF and MRF categories used latrine like pucca and ring slab and others belong to kutchha and open/bush which are treated as most non hygienic. The table 5.7 shows the status of latrine used by the HHs of three study areas in column 8-9 and availability of sanitation facility at work site for female accessibility said by the women are listed in column 10-12.

**Table 5.7: Sources of Domestic Water, Water Collector & Distance of Sources (n=25 HH/site)**

Sl. No. & Study Area	Sources of Domestic Water Used by HH		Water Collector from Other Sources			Dist. of Other Water Source (Avg. in km)	Sanitation System Used by HH (%)		Female got Sanitation Facility at Work Site			No. of HH Strongly Agreed that for Water Collection (%)	
	Own TW (% HH)	Other Source (% HH)	Wife (%)	Girls (%)	Others (%)		Sanitary Latrine (Pucca & Ring)	Other than Sanit Latr.	Yes	Sometimes	No	Family Girls Suffered in School Attendance / Study	Nearby WRDP is Very Needed
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.BS	72	28	64	24	12	1.50	56	44	28	48	24	32	88
2.NG	84	16	52	20	28	1.00	72	38	32	56	12	20	100
3.GB	80	20	52	16	32	1.00	72	38	32	52	16	24	100

A good WRD project is needed to reduce water scarcity and to facilitate bathing, cooking, washing was strongly supported (Column 14) by all type of respondents where the respondents in project areas were vibrant and spontaneous in answering than the respondents in non-project area i.e. in BS

### **Findings**

During interview respondents were asked about supply and source of domestic water and it was known that almost all SF and MRF have the sufficient capacity regarding this but the level of insufficiency increases with decreasing land ownership.

Most of the HH collect their water from their own tube well and others from govt. tube well (provided by DPHE) , pond/khal/ river etc but the status is positively hopeful in GB and NB areas than BS as, it was known from the site, almost 16% women under these project areas installed their tube well by their earnings which indicates a great impact of WMCA where the purpose and use of loan was strongly monitored. The overall data related to water collection are relevant to each other in Table 5.7.

Financial solvency reflected the type of sanitation in all study areas. Mostly SF and MRF categories of HH are using sanitary latrine (pucca & ring slab). Considering the advantages of water intervention almost all the respondents were strongly agreed the necessity of a good WRD project.

### **5.3.6 Changes in Livelihood**

As the above five socio-economic issues related with family well beings, so women in water intervening areas (sub-project areas) at present feel comfort and happy in all respect. They hold better position/score than women in base area (non project area ). Through interview it became clear that the formation of WMCA in sub-project created many opportunities for women such as participation in trainings and meeting, acquiring knowledge on different gender issues, increasing in mobility, making confidence in decision making, increased knowledge on family well-beings, increase capability for IGAs by getting loan/credit easily, etc. Nevertheless before intervening the water resources project i.e. when no existence of WMCA, the condition and position of women and their family were almost same as the women in base area. The Tables 5.3 to 5.7 illustrated these situations in brief, so it is not necessary to show it in tabular form to describe the better condition/position of women in NG and GB areas than BS.

## **5.4 Gender Impact Assessment (GIA)**

In finding impacts regarding gender of three sites due to development intervention in water sector in two sites the beneficiaries/stake holders of the respective site have been consulted following 40 selected strategic indicators within 10 (ten) factors under 3 (three)

domains (Section 3.2.3 C) to have the information regarding their involvement, choice, options with scheme related/irrelated activities thereby the changes made in their livelihood caused by WRD intervention or not. Depending on the quality of answer along with the associated scores a comparison has been made both for women and men in 3 (three) study areas to have a scenario of gender impact

To get a fair idea regarding gender impact under the 3( three) domains of 10(ten) factors a total of 150 numbers beneficiaries/ stake holders (25 male and 25 female from each site) under 75 households have been consulted through 40(forty) pre selected indicators as listed in Table 5.8, Table 5.9 & Table 5.10. The respondents participation were generally dynamic in answering questions (indicators) in all three sites while regarding suggestive comments on gender awareness the respondents in the sub-project areas were vibrant than the Base Site. The answers thus obtained have been analysed and graded with score as per methodology and the details are tabulated in Table 5.8, Table 5.9 & Table 5.10. The assessments and comparison under the three domains are highlighted in the following sections.

#### **5.4.1 GIA under "Decision and Involvement Domain"**

##### **Study Efforts**

Beneficiaries / stake holders under 3(three) sites have been consulted under this domain following 16(sixteen) indicators within 3(three) factors among which some were direct and some were indirect indicators (Chapter - 3, Para - 3.1.3 C). To obtain the non-biased or self initiative/ independent views the woman and man of same household were interviewed separately in each site. The awareness regarding their involvement, choice, decision taking ability on family well-beings thus were obtained in quantitative (major) and qualitative (minor) category under all three sites have been assessed and compared with the scenario of Base (Control) area

##### **Results**

Table 5.8 shows the detail results, in terms of score both for women and men in three study areas under factors 1,2 and 3 associated with "Decision and Involvement Domain".



where it is evident that the impacts or changes are convincingly optimistic comparing with the Base Site (BS) regarding “involvement with development works”, “barrier/opportunity(decision making)” and “control over resources” factors.

As an ultimate impact the changes in Nabo Ganga (NG) reveals 29% (-ve), 13% (+ve), & 25% (-ve) for women and 17%(+ve), 8%(+ve) & 0 % (no change) for men under the factors respectively. On the other hand in case of Gomara Beel (GB) site the changes are 36%(+ve), 25%(-ve) & 33%(+ve) for women and 20%(ve), 8%(+ve) & 8% (-ve change) for men under the same factors respectively.

### *Discussion*

Following the score of Base Site the scenario shows the level of “Decision and Involvement” in favour of “involvement with development works”, “barrier/ opportunity (decision making)” and “control over resources” factors as 50%,63%, & 50% for women and 69%, 88% & 100% for men respectively. On the other hand for NG site the scores are 79%, 76% & 75% for women and 86%, 96% & 100% for men whereas for GB site those are 86%, 88% & 83% for women and 89%, 96% & 92% for men respectively.

Considering the Base Site scores as the bench mark the NG shows a positive change in case of all three factors as 29 (79-50) %, 13 (76-63) %, & 25 (75-50) % for women but for men the changes are positive in case of factor 1 and 2 such as 17 (86-69) % and 8(96-88) % respectively whereas no change [0 (100-100) % has been made for men in case of factor 3.

On the contrary, the GB shows the changes are positive as 36 (86-50) %, 25(88-63) % & 33(83-50) % for women but in case of factor 1 and 2, for men, the changes are positive as 20(89-69)% and 8 (96-88) % respectively whereas no change [0 (100-100) % has been occurred under factor 3.

Table 5.8: Gender Impact Comparison at 3 Study Areas: 'Decision and Involvement' Domain (under Factor 1, 2 & 3)\*

Factors	Sl. No.	Indicators	Respondents (Women & Men)		No. of Highest Respondents with Same Answer and it's Degree of Impact & Associated Score of 3 Study Areas												Total Score for Women & Men				
					Base Site				Nabo Ganga SP				Gomara Beel SP				Base Site	Nabo Ganga SP	Gomara Beel SP		
					No. of Highest Respts	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respts	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respts	Respondents Answer	Degree of Impact	Respective Score					
					4	5	6	7	8	9	10	11	12	13	14	15				16	17
1. Involvement with development works	DI	1 Any involvement in implementation activities of the Sub-project(SP)	W	N/A	N/A	N/A	N/A	13	St	S	3	14	YJ	VS	4	W=50% M=69%	W=79% M=86%	W=86% M=89%			
			M	N/A	N/A	N/A	N/A	14	YS	VS	4	15	YJ	VS	4						
	DI	2 Any involvement in O & M activities of the Sub-project(SP)	W	N/A	N/A	N/A	N/A	10	YJ	S	3	11	YJ	S	3						
			M	N/A	N/A	N/A	N/A	12	StS	S	3	14	StS	S	3						
	DI	3 Involvement in WMCA meeting for decision making as member	W	N/A	N/A	N/A	N/A	13	St	S	3	15	St	S	3						
			M	N/A	N/A	N/A	N/A	12	Y	S	3	11	Y	S	3						
	II	4 Involved in any other nearby dev. project(s) during any phase of implementation	W	12	St	U	2	9	St	U	2	10	St	U	2						
M			14	YS	VS	4	12	YJ	S	3	13	YJ	VS	4							
II	5 Women's participation in SSWRDS is needed	W	13	St	S	3	19	Y	VS	4	21	Y	VS	4							
		M	12	St	U	2	18	Y	VS	4	17	Y	VS	4							
II	6 Women's participation in WMCA is needed	W	12	St	S	2	19	Y	VS	4	21	Y	VS	4							
		M	12	St	U	2	18	Y	VS	4	17	Y	VS	4							
II	7 Local Contribution is needed for successful completion and running for WRD Projects	W	12	N	VU	1	12	Y	S	3	13	Y	VS	4							
		M	11	Y	S	3	11	Y	S	3	12	Y	S	3							
2. Barrier/Opportunity (Decision making)	II	8 Any Cultural Traditional barrier in participating dev project activities that would strengthen n'r social/economic position (-ve traits)	W	12	N	S	3	19	N	VS	4	22	N	VS	4	W=63% M=88%	W=76% M=96%	W=88% M=96%			
			M	20	N	VS	4	22	N	VS	4	24	N	VS	4						
	II	9 Barriers in receiving information about dev. project activities (-ve tr)	W	12	N	S	3	19	N	VS	4	22	N	VS	4						
			M	20	N	VS	4	22	N	VS	4	24	N	VS	4						
	II	10 Decision taking and applying about family affairs (spending money, children well-being)	W	12	St	U	2	13	St	S	3	15	St	S	3						
			M	11	YJ	S	3	13	YJ	VS	4	14	YJ	VS	4						
	II	11 Decision regarding purchase of non household items(land/shares)	W	7	St	U	2	12	St	U	2	14	St	S	3						
M			13	St	S	3	10	YJ	S	3	12	YJ	S	3							
II	12 Shared opinion about family planning	W	8	YJ	U	2	12	YJ	S	3	13	YJ	VS	4							
		M	11	YJ	S	3	14	YJ	VS	4	13	YJ	VS	4							
II	13 Decision regarding visited to market for shopping & selling	W	14	StS	S	3	11	YJ	S	3	12	YJ	S	3							
		M	20	YS	VS	4	18	YJ	VS	4	15	YJ	VS	4							
3. Control on resources/technology	DI	14 Ownership of share & savings in WMCA	W	N/A	N/A	N/A	N/A	8	YS	S	3	10	YS	VS	4				W=50% M=100%	W=75% M=100%	W=83% M=92%
			M	N/A	N/A	N/A	N/A	16	YS	VS	4	12	YJ	S	3						
	II	15 Controlled on family income/assets	W	12	St	U	2	10	Y	S	3	12	Y	S	3						
			M	16	Y	VS	4	15	Y	VS	4	14	Y	VS	4						
II	16 Control exercised for taking long term lease in / out (land/pond/khal)	W	12	St	U	2	10	Y	S	3	12	Y	S	3							
		M	16	Y	VS	4	15	Y	VS	4	14	Y	VS	4							

## *Findings*

As women in sub-project areas (NG and GB site) associated as member with WMCA they enjoyed accessibility as men in different stages of sub-project activities. They are also conscious about the impotency of participation in such activities and the number of respondents irrespective of sex in both sub-project areas are almost same and positive in majority than BS who considered that local contribution in implementing and running a good WRD project is compulsory by which the sense of ownership had been developed.

As women get loan facility easily from WMCA and self involvement with IGAs by using their credit were higher in NG and GB areas than BS (Table 5.4) so % of women was higher as men in NG and GB than BS in playing some sorts of decision making role to some extent in their family. So the difference in score between women and men reduced from BS 25% to 20% in NG site and to 8% in GB site which is a significant indication of NG and GB areas that women's accessibility in decision making at family and in associating with surrounding development activities are very bright.

In exercising the control on resources and technologies at family the position of men traditionally far higher than women. Generally women have access to resources and technologies but they have no control over it due to the existence of gender inequality that has created and running socially since long time. But due the water project intervention at sub-project areas the inequality have been reduced as lot of opportunities for women have been created like WMCA, trainings, ownership of sub-project as well as involvement with different types of IGAs.

## 5.4.2 GIA under "Rights Domain"

### *Study Efforts*

To have the idea about rights of citizen and equity in applying voice & choice at family as well as community level which enhance the dignity and strength of women the beneficiaries / stock holders under 3(three) sites have been consulted under this domain following 10(ten) indicators within citizen's rights and equity factor among which some were direct and some were indirect indicators (Chapter - 3, Para - 3 1.3 C). To obtain the self initiative/ independent views and opinion the woman and man of same household were interviewed separately in each site. The awareness regarding their (specially for women) voice & choice, decision taking ability on self well-being issues, having knowledge on some touchy women's welfare issues have been evaluated from their answers and comments and finally analysed in quantitative (major) and qualitative (minor) category under all three sites and compared with the scenario of Base (Control) area.

### *Results*

Table 5.9 shows the detail results, in terms of score both for women and men in three study areas under the factor 4 associated with "Rights Domain", where it is apparent that the impacts or changes are realistically bright comparing with the Base Site (BS) .

As an ultimate impact the changes in Nabo Ganga (NG) reveals 13% (+ve) and 7.5%(+ve) for women and men under the factor respectively. On the other hand at Gomara Beel (GB) site the changes are 15%(+ve) for women and 7.5%(+ve) for men under the same factors.

### *Discussion*

Following the score of Base Site the scenario shows (Table-5.9: Column 17-19) the level of "Rights" in associated with "citizen's rights and equity " factor as 66% and 75% for

Table 5.9: Gender Impact Comparison at 3 Study Areas: "Rights Domain (under Factor 4)"

Factor	Sl. No.	Indicators	Respondents (Women & Men)	No. of Highest Respondents with Same Answer and it's Degree of Impact & Associated Score of 3 Study Areas												Total Score for Women & Men		
				Base Site				Nabo Ganga SP				Gomara Beel SP				Base Site	Nabo Ganga SP	Gomara Beel SP
				No. of Highest Respdts	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respdts	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respdts	Respondents Answer	Degree of Impact	Respective Score			
				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
4. Citizen's Rights and Equity	DI	17 Can apply voting power? i) in National Election	W	11	YI	S	3	10	YI	S	3	12	YI	S	3	W=66% M=75%	W=79% M=82.5%	W=81% M=82.5%
			M	18	YS	VS	4	16	YS	VS	4	14	YS	VS	4			
		ii) in WMCA Election	W	N/A	N/A	N/A	N/A	12	YS	VS	4	15	YS	VS	4			
			M	N/A	N/A	N/A	N/A	16	YS	VS	4	14	YS	VS	4			
	DI	18 Got equal preference in micro-credit loans i) from WMCA	W	N/A	N/A	N/A	N/A	18	Y	VS	4	17	Y	VS	4			
			M	N/A	N/A	N/A	N/A	17	Y	VS	4	15	Y	VS	4			
		ii) from Other Organizations	W	10	Y	S	3	13	St	S	3	14	St	S	3			
			M	11	Y	S	3	12	Y	S	3	13	Y	VS	4			
	DI	19 Compete election i) in WMCA	W	N/A	N/A	N/A	N/A	11	YI	S	3	14	YI	S	3			
			M	N/A	N/A	N/A	N/A	12	YI	S	3	13	YI	VS	4			
		ii) in any Other Local/National	W	24	NO	ED	0	23	NO	ED	0	23	NO	ED	0			
			M	24	NO	ED	0	21	NO	ED	0	22	NO	ED	0			
	II	20 Chosen job/ professional carrier	W	13	St	S	3	11	YI	S	3	9	YS	S	3			
			M	16	YS	VS	4	13	YS	VS	4	11	YI	S	3			
	DI	21 Got equal wage facility as worker i) in LCS Work of Sub-project activities	W	N/A	N/A	N/A	N/A	13	St	S	4	18	Y	VS	4			
			M	N/A	N/A	N/A	N/A	11	St	S	4	20	Y	VS	4			
		ii) in any Other Work/Projects	W	18	N	ED	0	15	N	ED	0	14	N	ED	0			
			M	14	N	ED	0	15	N	ED	0	13	N	ED	0			
	II	22 Family Court is very important for Victimised Women	W	13	St	S	3	18	Y	VS	4	20	Y	VS	4			
			M	12	Y	S	3	19	Y	VS	4	20	Y	VS	4			
	II	23 Early Marriage for girl's between 14-17 is not bad (-ve traits)	W	12	N	S	3	17	N	VS	4	19	N	VS	4			
			M	10	N	S	3	13	N	VS	4	18	N	VS	4			
	II	24 Sons should get priority than daughters for food and health care (-ve traits)	W	11	St	U	2	8	St	S	3	10	N	S	3			
			M	10	St	U	2	10	N	S	3	9	N	S	3			
	II	25 Both husband and wife should have equal right for divorce	W	13	St	S	3	17	Y	VS	4	18	Y	VS	4			
			M	11	St	U	2	13	St	S	3	15	St	S	3			
II	26 Took entertainment through media/ tech. (radio/ tv/ newspaper/cell phone)	W	10	N	VU	1	12	Y	S	3	14	Y	VS	4				
		M	16	St	S	3	15	Y	VS	4	17	Y	VS	4				

women and men respectively. On the contrary for NG site the scores are 79% and 82.5% whereas for GB site those are 81% and 82.5% for women and men respectively.

Considering the scores of Base Site area as the bench mark the NG shows a positive change as 13 (79-66) % for women and 7.5(82.5-75)% for men .On the other side the GB shows the changes are positive as 15(81-66) % and 7.5(82.5-75)% for women and men as compared to Base Site respectively. The scenario when compared between two sub-project areas it is interesting that the scores achieving by the women in both sites are very close (79% and 81) to each other whereas no changes in score have been occurred in case of men i.e. it is 82.5% in both site.

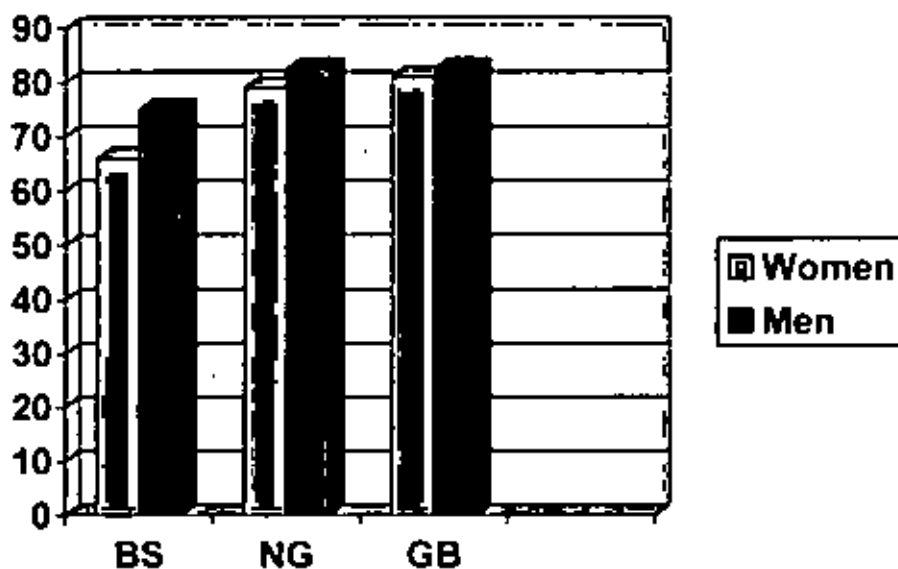


Fig 5.3: GI Comparison in terms of Score under "Rights Domain"

#### 5.4.2.4 Findings

Among the surveyed respondents men as well as women in sub-project areas had the opportunities in receiving trainings on various sectors as listed in table 4.3 and 4.4 so they had acquired multidimensional knowledge for which they became conscious about issues under citizen's rights and equity factor. It is known from the project site that there

are no alternatives of trainings by which they have been benefited in changing their livelihood in positive trend and thus to enhance their self awareness in applying voice and choice. The scores owned by women in project areas support these definitely in an increasing manner from BS to NG to GB with respect to men. (Fig 5.3)

### **5.4.3 GIA under "Development Resources and Benefit Domain"**

#### ***Study Efforts***

Beneficiaries / stake holders under 3(three) sites have been consulted under this domain following 14(fourteen) indicators within 6(six) factors among which some were direct and some were indirect indicators (Chapter - 3, Para - 3.1.3 C). This domain illustrated to make a scenario on the level of inequalities between women and men in access to and control over the resources as well as what sorts of facilities would have available for them if development intervention in water sector would happened. In both sites the women and men under same HH have been interviewed individually to obtain the non-biased or self initiative/ independent views. The scenario regarding 14 indicators under 6 factors in each site have been assessed and scored to have a comparison between women and men in the three sites

#### ***Results***

Table 5.10 shows the detail results, in terms of score both for women and men in three study areas under factors 5-10 associated with "Development Resources and Benefit Domain", where it is evident that the impacts or changes are convincingly encouraging comparing with the Base Site (BS) regarding all factors.

As an ultimate impact the changes are positive in Nabo Ganga (NG) as 12%, 12%, 12.5%, 50%, 8% & 16% for women and as 12%, 25%, 12.5%, 37.5%, 8% and 8% for men under the factors 5,6,7,8,9 and 10 respectively. On the other hand in case of Gomara

Beel (GB) site the changes are positive as 12%, 25%, 25%, 62.5%,17% and 25% for women and 12%, 25%, 12.5%, 50%, 17% and 8% for men under the same factors respectively.

### *Discussion*

After analyzing the results in achieved under different indicators within the framework of "Development resources and Benefit Domain" the answers have been graded and scored as per methodology (Chapter – 3 Para- 3.2.8) The detailed is tabulated in Table 5.10.

After scoring the scenario of BS shows the score owned are 88%, 63%, 62.5%, 25%, 75% & 17% by women and 88%, 63%, 75%, 37.5%, 75% & 42% by men under the factors 5-10 respectively. On the other hand for NG the scores are 100%, 75%, 75%, 75%, 83% & 33% and 100%, 88%, 87.5%, 75%, 83% & 50% for women and men respectively while for the GB the scores are 100%, 88%, 87.5%, 87.5%, 92% & 42% and 100%, 88%, 87.5%, 87.5%, 92% & 50% for women and men under the same factors respectively.

Considering the scores owned by women and men in three sites the vital change has been made from Base Site (BS) to Nabo Ganga (NG) SP to Gomara Beel (GB) SP area i.e. it reveals that the changes are positive (+ve) in all respect in NG and GB site than BS.

### *Findings*

From the site it is known that a good water WRD project benefited women in different levels such as personal, family and community. Under the domains the factors containing the indicators were dedicated to find out the impact on respondents by the development resources and thereby to measure the benefit regarding gender due to the development intervention in water sector.

Due to receiving various type of IGA training through WMCA from LGED women in sub-project areas have been more enabled to come out. Accessibility to some places like roads, housing, water, attending meeting, govt./non govt. offices, bank, market as well



Table 5.10: Gender Impact Comparison at 3 Study Areas: "Development Resources & Benefits Domain(Fac 5-10)"

Factors	Sl. No.	Indicators	Respondents (Women & Men)	No. of Highest Respondents with Same Answer and it's Degree of Impact & Associated Score of 3 Study Areas												Total Score for Women & Men		
				Base Site				Nabo Ganga SP				Gomara Beel SP				Base Site	Nabo Ganga SP	Gomara Beel SP
				No. of Highest Respdnt	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respdnt	Respondents Answer	Degree of Impact	Respective Score	No. of Highest Respdnt	Respondents Answer	Degree of Impact	Respective Score			
5. Access to Infrastructures	27	Reached or entered to basic infrastructure (water, roads, housing, transportation etc.)	W	15	Y	VS	4	20	Y	VS	4	22	Y	VS	4	W=88% M=88%	M=100% M=100%	M=100% M=100%
			M	20	Y	VS	4	21	Y	VS	4	23	Y	VS	4			
	28	Visited to gov't/non gov't offices/cooperative society	W	12	Y	S	3	17	Y	VS	4	10	Y	VS	4			
			M	11	Y	S	3	15	Y	S	4	17	Y	VS	4			
6. Access to Resources/ Tech.	29	Accessed to agri/forest land/ fishing ground/wild produces land(fire woods /medicinal roots/ herbs)	W	14	SI	S	3	19	SI	S	3	14	Y	VS	4	W=63% M=63%	M=88% M=88%	M=88% M=88%
			M	12	Y	S	3	17	Y	VS	4	16	Y	VS	4			
	30	Accessed to agri equipments/ tools (saws / tractors / ox-carts /tilas /steel plough)/fisheries equipment/industrial equipments	W	11	SI	U	2	14	S	S	3	18	SI	S	3			
			M	12	SI	U	2	14	SI	S	3	19	SI	S	3			
7. Health Issues	31	Reduced malnutrition & duration of illness of family members than last year	W	12	S	U	2	13	SI	S	3	15	SI	S	3	W=62.5% M=75%	M=87.5% M=87.5%	M=87.5% M=87.5%
			M	13	SI	S	3	14	SI	S	3	15	SI	S	3			
	32	Reduced maternal mortality and increased health /vaccination facilities than last year	W	13	SI	S	3	13	SI	S	3	13	Y	VS	4			
			M	13	SI	S	3	13	Y	VS	4	14	Y	VS	4			
8. Education & Training	33	Participated in SSWRDSP training /workshop or any other training in other organization	W	11	SI	U	2	15	SI	S	3	13	Y	VS	4	W=77.5% M=75%	M=87.5% M=87.5%	M=87.5% M=87.5%
			M	13	SI	S	3	12	Y	S	3	14	Y	VS	4			
	34	Got education facilities (such as adult literacy classes /female teacher /gender neutral text books)	W	17	N	ED	0	14	SI	S	3	13	SI	S	3			
			M	16	N	ED	0	13	SI	S	3	14	SI	S	3			
9. Income Opportunity	35	Got benefits from SP by selling of agricul.goods/aquaculture practices	W	N/A	N/A	N/A	N/A	11	Y	S	3	13	Y	VS	4	W=75% M=83%	M=83% M=92%	M=92% M=92%
			M	N/A	N/A	N/A	N/A	14	Y	VS	4	15	Y	VS	4			
	36	Got benefits from SP by using water for washing / cooking/bathing	W	N/A	N/A	N/A	N/A	11	Y	S	3	13	Y	VS	4			
			M	N/A	N/A	N/A	N/A	12	Y	S	3	15	Y	VS	4			
37	Associated (a) with & (b) benefited from post-harvest activities	W	11	Y	S	3	14	Y	VS	4	12	Y	S	3				
		M	9	Y	S	3	10	Y	S	3	11	Y	S	3				
10. Opportunity to organise	38	Engaged / Participate with any modern trade union or	W	18	N	ED	0	15	N	ED	0	13	N	ED	0	W=42% M=50%	M=50% M=50%	M=50% M=50%
			M	14	N	ED	1	11	N	ED	0	9	N	ED	0			
	39	Engaged/Participate with any political parties program	W	12	N	VU	2	10	SI	U	2	12	SI	U	2			
			M	10	SI	U	2	11	Y	S	3	12	Y	S	3			
40	Engaged/Participate with any social club or saving club other than	W	12	N	VU	1	12	SI	U	2	11	Y	S	3				
		M	10	Y	S	3	11	Y	S	3	12	Y	S	3				

as accessibility to natural resources/technologies have been increased in case of women in NB and GB areas than BS area where, in most cases, women's mobility alone is limited within the villages. The changes in acquiring scores by women in sub-project area under factors 5, 6, 8, 9 and 10 are convincingly positive comparing the women in BS area. It is known from sub-project areas that these achievements contributing obvious benefits in different manner in their personal life, family life as well as in community also.

#### **5.4.4 Final Comparison of GIA under Three Domains**

##### ***Study efforts***

Along with men women's involvement in water management has emerged as the latest paradigm. This study tried to express existing state of success and future plans for policy makers regarding enhancement of women's dignity through their participation in water sector activities and thus to reduce gender inequality.

##### ***Results***

Table 5.11 shows the detail results, in terms of score both for women and men in three study areas under domains 1,2 and 3 associated with 10(ten) different factors at a glance.

As an ultimate average total impact the changes in Nabo Ganga (NG) reveals 19% (+ve), for women and 14%(+ve) for men while in Gomara Beel (GB) reveals the changes are 27.5%(+ve) and 15%(+ve) for women and men respectively.

##### ***Discussion***

Following the score of Base Site the scenario shows the level, under all domains, 56% for women and 71% for men. On the other hand for NG site the scores are 75% and 85% while for GB site the scores are 83.5% and 86% for women and men respectively.

Considering the Base Site scores as datum the NG shows a positive change, in all respect, as 19 (75-56) % for women but for men the change is positive as 14 (85-71) % and as 27.5(83.5-56)% for women but only 15(86-71)% for men in GB site.

Analyzing the scores owned by women and men in three sites the vital change has been made from Base Site (BS) to Nabo Ganga (NG) SP to Gomara Beel (GB) SP area i.e. it reveals that the changes are positive (+ve) in all respect in NG and GB site than BS

### *Findings*

Finally the overall impact regarding gender by considering the grand total average scores owned by the respondents of all three sites have been analyzed keeping in mind the qualitative opinions as well as suggestive comments that received carefully during interview and the following findings have been made to strengthen the future plan for policy makers in incorporating the gender issues in development works under water sectors.

- a) A good water resources development project with well managed WMCA belong to contribute in socio-economic changes of beneficiaries by increasing agricultural production. This increased production has a positive impact on the family income of the individual and the women as well
- b) The increased in production has a positive impact on the family life as the increase in income enhanced living standard of the family which ultimately impacted gender status in positive direction as well.
- c).Due to the project the scopes or opportunities of employment have been created for vulnerable distressed women which made them economically strengthen in the locality and thus to reduce gender in equality
- d) Women, in sub-project areas, have made a changes in their lives through participation in water management activities by which they have entitled in meeting and sharing other's experiences as well as perceptions, knowledge on various domains and thus to reduce gender gap.

Table 5.11: Gender Impact Comparison in terms of Scores as a whole in 3 Study Areas under 10 Factors

Domains	Factor No.	Factors	Total Score for Women & Men			Average Grand Total Score for Women & Men		
			BS	NG	GB	BS	NG	GB
1	2	3	4	5	6	7	8	9
1. Decision & Involvement Domain	1	Involvement with development works	W=50% M= 69%	W=79% M=86%	W=86% M=89%	W=56% M=71%	W=75% M=85%	W=83.5% M=86%
	2	Barrier/Opportunity(Decision making)	W=63% M= 88%	W=76% M=96%	W=88% M=96%			
	3	Control on resources/ technology	W=50% M=100%	W=75% M=100%	W=83% M=92%			
2. Rights Dimain	4	Citizen's Rights and Equity	W=66% M=75%	W=79% M=82.5%	W=81% M=82.5%			
	5	Access to Infrastructures	W=88% M=88%	W=100% M=100%	W=100% M=100%			
3. Development Resources & Benefit Domain	6	Access to Resources/ Technology.	W=63% M=63%	W=75% M=88%	W=88% M=88%			
	7	Health Issues	W=62.5% M=75%	W=75% M=87.5%	W=87.5% M=87.5%			
	8	Education & Training	W=25% M=37.5%	W=75% M=75%	W=87.5% M=87.5%			
	9	Income Opportunity	W=75% M=75%	W=83% M=83%	W=92% M=92%			
	10	Opportunity to organise	W=17% M=42%	W=31% M=50%	W=42% M=50%			

e) Well managed WMCA monitored the loan using purposes for which women in intervening sites enjoyed the freedom in using loan in their particular purposes. In most cases no intervention of husband or other family members have occurred in their decisions. So women with self IGAs have increased in project areas and dignified as they can deliberate their decision in family as well as community level also.

f) Share and savings in regular basis in WMCA strengthen women economically and leadership capacity grown in them due to participation in WMCA as a routine work.

g) Increased opportunities in getting water from project reduced harassment and saved time in daily activities of women at project areas and thus to improve their daily lives.

h) As who earned money in family enjoyed liberty and decision making power so women in project areas have the opportunities as they have more scopes in involving self businesses using their loan money from WMCA where they have easy accessibility and control also.

i) Trainings on various sectors through WMCA from LGED are available for the members in project areas. So it is obvious man as well woman, as member, have great scopes to acquire knowledge on technical know-how regarding their IGAs and thus to reduce poverty as well as improve gender indiscrepancy.

j) Women have the opportunities to become literate on WM issues by participating in meeting of WMCA and receiving training from LGED. So women in project areas than in base area are in better position to strengthen them by taking all the above advantages that have been created by the development intervention in water sector.

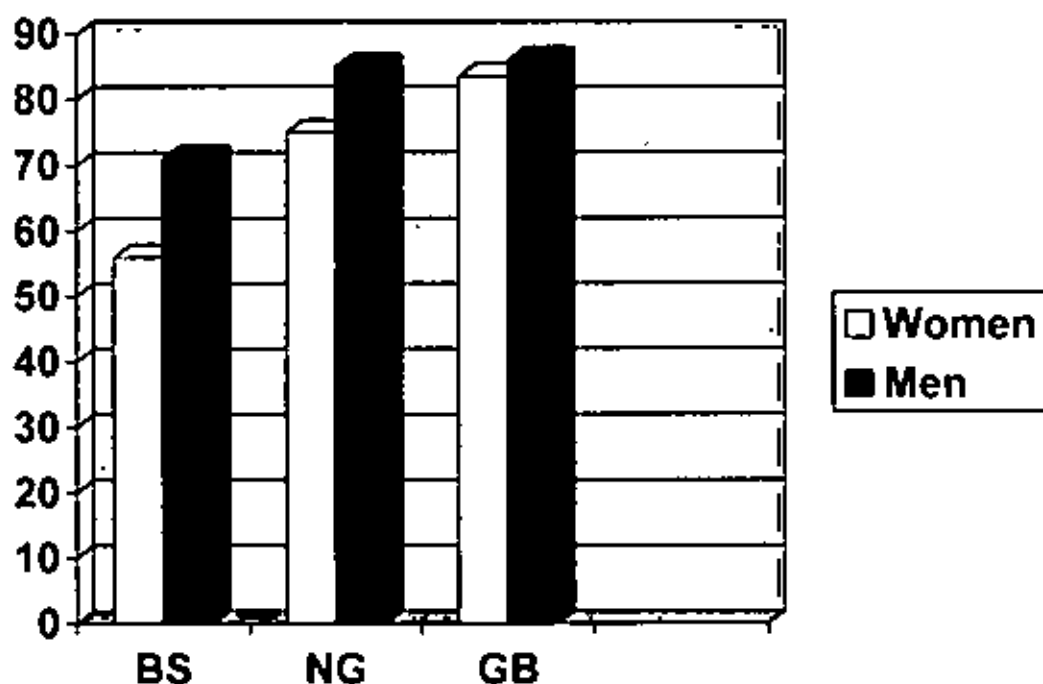


Fig 5.4: Gender Impact Assessment of 3 Study Areas: Final Comparison in terms of Average Grand Total Score under "3 Domains with 10 Factors of 40 Indicators"

## CHAPTER SIX

### CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 Conclusion

Regarding the impact on gender due to development interventions in water sector the following conclusions are drawn from the study:

- i) Women from non-beneficiary households i.e. in base area are looser from self-image, irrigation & drainage facilities, WMCA training & credit facilities, and active participation in decision making activities in WMCA meetings. They also suffer to collect domestic water from far distance at the cost of extra time and toil some efforts.
- ii) Women of sub-project areas i.e. from beneficiary households are generally benefited as a result of the introduction of different training activities of WMCA, less time consumption in domestic water collection, involvement in different types of income generating activities, getting loan from WMCA, increased opportunities to disseminate opinions in meeting etc. Their household income as well as their control over the income has also been increased considerably compared to women in base site.
- iii) In some cases women in the sub-project areas are directly involved with the reproductive as well as with the income generating activities where loan is generally taken from WMCA which support them strongly. So it is evident that women in the sub-project areas are more empowered than the base area.
- iv) A major portion of the women in base area also agreed and supported women's involvement in water resources development activities that proves women who participating in water resources development and management process are more forward in the process of empowerment than the women in base site where no water development interventions existed.

- v) As the women in the sub-project areas are more gender aware so men in these areas also show more respect to women than the men in base site.
- vi) The role of women of project areas in economic and social development is in good position than women in non project area and thus making a major contribution to poverty reduction. The result shows (Table 5.4) that women in project areas regularly contribute to household in cash from their income because of their widespread access to microfinance schemes. With higher incomes more women are able to access health services that has contributed to a decline in infant mortality rates and improved health of family members.
- vii) In project areas family attitudes to the value of girls in enrolling academic education with a right to learn on an equal basis with boys are better than the attitudes in base area (Table 5.7. Col 13).

In finding gender impact the gender equity and awareness level of women and men in the study areas were measured. The major factors have been identified that affect the gender equity and awareness are:

- i) Location of the study area by which demographic and physiological characteristics differ that affects gender equality and awareness.
- ii) Socio-economic condition of the households i.e. income, assets, type of occupation etc. especially the position of women contributing in income or sharing with well beings of HH.
- iii) Women associated with credit or having own source by IGA are more dignified and are more empowered.
- iv) Women having own regular income associated with having more share or input in acquiring assets.
- v) Women having own regular income associated with having more share or input in acquiring assets.

## **6.2 Challenges that affect women in participation water management activities**

The challenges that affect women's participation in water management (WM) activities in study areas were known during interview are as follows.

i) Men's Attitude: It is the attitude of men, the head of the HH, very often did not allow women in participation in meeting and in other activities of WMCA.

ii) Attitudes of Local Power Groups: Local Union Chairman, member and other elite groups prevented them from participation in water management activities and they created scandal over them (women)

iii) Social Security: It is a big problem for women to move alone outside specially in evening.

iv) Influence of Dowry: Women without or little dowry usually suffered to raise her voice and choice in husband's family and lack confidence as a whole and feel insecure. Very often they come under physical violence.

## **6.3 Recommendation**

Recommendations from the study are as follows:

- ❖ At Base site, where subproject planning was done, but due to conflict between villagers project not yet implemented, a strong information campaign with the assistance of Union Parishad (UP) and Upazila Development Coordination Committee (UDCC) for general population describing project necessity, suitability and people's interest in using the resources to their situation is suggested.
- ❖ At any cost proper toilet and bathroom facilities at household as well as at work site for women along with awareness training and facilities on female issues to prevent /handle the basic problems specially for adolescent girls and vulnerable women should be arranged.



- ❖ Gender awareness training from WMCA through LGED/NGO should be provided to local male representatives/leaders so that they would showed respect to women at all levels and thus to increase women's image.
- ❖ The WMCA must employ a manager under membership to carry out the regular different tasks associated with the operation of cooperative.
- ❖ To increase the number of female member as well as to come out and to involve in WM some incentives from WMCA's micro-credit program can be provided specially for the destitute women.
- ❖ At least 33% female chairpersons should be ensured by making amendment in project guideline regarding WMCA operation, to strengthen the women's position in managing committee as well as in sub committee.
- ❖ Micro-credit should be encouraged with credit recovery in time.
- ❖ At office of WMCA a special display board should be hanged for displaying the news on women's success at local, national and global level specially in water sector by which female members would be inspired and felt proud.
- ❖ Minimum level of technical know-how on WM should be provided to all female members and as a compulsory issue it should be included in WMCA operation manual.

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## Annexure A

### Gender Impact Assessment in Two Small Scale Water Resources Development Projects

#### Questionnaire for Interview for both Men & Women in study area

(Information would be used for research purpose only)

Interview Number, ----- . Household Category :  
( As per BBS)  
[put a tick for respondent]

Category	Owning of Cultivated Land
1) L = Landless	0 to 49 decimal
2) MFI = Marginal Farmer	> 49 to < 100 decimal
3) SF = small Farmer	> 99 to < 250 decimal
4) MDI = Medium Farmer	> 250 to < 750 decimal
5) LF = Large Farmer	> 750 decimal

#### Part - 1 : General / Background Information

1.1 Name & Location of the Sub-Project : \_\_\_\_\_

Union : \_\_\_\_\_, Upazila: Sadar, Meherpur / Chuadanga

1.2 Type & ID No. of Sub-Project : Type \_\_\_\_\_ SP No : \_\_\_\_\_

1.3 Name of the Household Head : \_\_\_\_\_

#### 1.4 Respondent's Information:

a) Name of Respondent's : \_\_\_\_\_

b) Father's / Husband's Name : \_\_\_\_\_

c) Sex : Male/Female.

d) Relation with HH Head : \_\_\_\_\_

e) Address of Respondent's Holding No : \_\_\_\_\_, Vill/Mou: \_\_\_\_\_, Ward: \_\_\_\_\_

Union : \_\_\_\_\_, Upazila \_\_\_\_\_

f) Marital Status : \_\_\_\_\_ if married: Conjugal Life Length: \_\_\_\_\_

g) Occupation (Main) : \_\_\_\_\_

1.5 Date of Interview : \_\_\_\_\_

## Part – II: Some Issues in Socio economic Sector:

### 2.1 All Household Members & Earnings (those who live & eat together- servants, guest & outsiders excluded) (Write A1/A2 ... B1/B2/ ... C1/C2/..., D1/D2/ ... E1/E2/... for mentioning code in respective Columns)

Sl/Code No	HH Member (Relation / Position) (code-A)	Age (Year)	Sex	Marital Status (Code-B)	Education (Code-C)	Occupation & Total Earnings					Remarks	
						Occupation/Print		Employment Status				Earning In Taka (per month)
						Type	Name (Code:D)	Self & how long (month) (Code:E)	Employed & how long time (months) (Code:E)	Working Hour		
				Day (Hr)	Night (Hr)							
1						Main						Do you think that nearby a good WRD Project can put some contribution on HH income? (Put a Tick) a) Strongly Agreed b) Agreed c) Not Agreed d) Can't Say and How? __
						Other						
2						Main						
						Other						
3						Main						
						Other						
4						Main						
						Other						
5						Main						
						Other						

Grand Total Earning=

#### Coding Instruction

CODE:A Relation/Position	CODE:B Marital Status	CODE:C Education	CODE:D Occupation/Employment	CODE:E Employment Duration
1 Household Head	1 Unmarried	1 Illiterate/Can't Read & Write	1 Farmer-Own	1 Below 12 yrs old
2 Husband/Wife	2 Married	2 Can Read & Write/Sign	2 Farmer-Own & Sharecrop	2 Fully Employed (12 months)
3 Son	3 Divorced	3 Primary Class (Class I-IV)	3 Farmer-Only Sharecrop	3 Adequately Employed (9 months)
4 Daughter	4 Widow/Widower	4 Secondary (Class VI-XI)	4 Farm Labourer	4 Partially Employed (6 months)
5 Father	4 Abandoned	5 Higher Secondary (XI-XII)	5 Non Farm Labourer	5 Sparsely Employed (3 months)
6 Mother	6 Separated	6 Technical (Vocational/Diploma)	6 Fisherman	6 Unemployed (< 1 month)
7 Brother		7 Madrasa (Dak, bil - Alim)	7 Fish Farming	
8 Sister		8 Graduate/Post Graduate	8 Artisan	
9 Daughter-in-law		9 Other	9 Service (Govt/NGO/Private/Co-operative)	
10 Other			10 Trading/Business/Shopkeeper	
			11 Housewife/Involve in Reproductive Work	
			12 Student	
			13 No Occupation	
			14 Others (Specify ___)	

## 2.2 Major Assets of the Family and Owners Identity:

Sl No	Asset Types	Quantity/Nos. of Asset Owning				Total Qty/Nos.	Present Value (in Taka)	Comments/Remarks
		Own	Spouse	Jointly	Others			
Land (in decimal)	1 Cultivated (cropped + non cropped)						Do you think that to some extent a neighbouring WRD Project is very helpful for women in owning assets if they involved with WMCA share & savings activities? (Put a Tick)  a) Strongly Agreed b) Agreed c) Not Agreed d) Can't Say and How? _____	
	2 Homestead							
	3 Pond/Ditch							
	4 Plantation							
	5 Others (specify _____)							
Livestock (Nos)	1 Buffalo/Bullocks							
	2 Bulls/Cows/Calves							
	3 Goats/Sheep							
	4 Poultry							
	5 Others (specify _____)							
Equipments (Agr.+ Irrig.) (Nos)	1 Plough/Tactor							
	2 Tiller/Weeder							
	3 Spray Machine							
	4 Harvester/Thresher							
	5 Drip/Water/Trickle W							
	6 Treadle/Rower Pump							
	7 Others (specify _____)							
Transport (Nos)	1 Motor/Bicycle							
	2 Bullock/ Push Cart							
	3 Rickshaw/ School Van							
	4 Country boat/Troller							
	5 Other (specify _____)							
Others								
<b>Grand Total =</b>								

## 2.3 Water used and Sanitation :

### a) 1. Sources of domestic water supply, distance (km) from house & collector and time spend :

Sl/Code No.	Source (Put a Tick)	Distance (Meter)	Water Collector					Water Collector on Time Spend (hr) per day	Q) Do U think that a neighbouring WRDP is needed to enhance the availability of domestic Water? (Put a Tick)  a) Strongly Agreed b) Agreed c) Not Agreed d) Can't Say
			Self	Spouse	Jointly	Girls	Boys		
1	Govt Tube-well								
2	Own Tube-well	00					00		
3	Others Tube-well								
4	River/Pond/Ditch								
5	Khal/ Well/Rain Water								

• Put 0 in Distance & a Water Collection Time... Column if it is owned by the family

### 2. Whether to collect water by girls are they suffered in their study/school attendance? (put a tick or specify comments)

Code, 1=Yes, 2= No, 3= Sometimes, 4=Other (specify) \_\_\_\_\_



b) Sanitary Facility (put a tick) :

1. Type of Latrine Used :

Member	Type of Latrine used by the family members (put a tick)				Comments
Female	1. Katcha/Open	2. Bush / Fields	3. Water Sealed/Sanitary	4. Others	
Male	1. Katcha/Open	2. Bush / Fields	3. Water Sealed/Sanitary	4. Others	

IF 4) Others then Specify : \_\_\_\_\_

2. Are there any separate sanitation arrangements at Work Site? (put a tick) 1=Yes 2= No 3= Sometimes

2.4 Credit (Loan) Taken :

1) Loan Situation (Write A1/A2,...B1/B2/...C1/C2/ for mentioning Code in respective Columns)

Code No	Loan Receiver/ Person(s) (put a tick)	Decision taken for loan by (put a tick)			Source (Institution/Non Institutional) (Code A)	Amount (Tak.)	Purpose of Loan (Code B)	Use of Loan (Code B)	Loan Used by Whom (Code C)	Comments
		Self	Spouse	Jointly						
A	Self									
B	Spouse									
C	Jointly									
D	Other Members									

Code A: 1) WMCA 2) Govt Bank, 3) NGO 4) Cooperative 5) Money Lender/Trader 6) Friend/Relative 7) Commercial Bank 8) Others (specify \_\_\_\_\_) [Code B: 1 Crop inputs 2 Farm Equipments 3 Animals 4 Food 5 House Repairing 6 Trade/Business 7 Land purchase/Mortgaged 8 Other (specify \_\_\_\_\_)] [Code C: 1 Self 2 Spouse 3 jointly 4 Other Members]

2) Do you think that your impotency enhances in family and as well as in socially due to taking loan? (put a tick) 1 Yes 2 No 3, Little bit

if Yes or Little bit then explain the reasons i) \_\_\_\_\_

ii) \_\_\_\_\_

2.5 Women's Participation in WMCA and SSWRDSP:

a) Do you think there are need for Women's Participation in Water Management Co-operative Association?

Code 1= Yes, 2=No, 3= Don't Know/Can't Say, if Yes/No Why? \_\_\_\_\_

b) Do you think there is need for Women's Participation in SSWRDSP activities?

Code 1= Yes 2=No, 3= Don't Know/Can't Say, if Yes/No Why? \_\_\_\_\_

c) According to your view what will be the % of women members comparing to of male members ? \_\_\_%

Signature, \_\_\_\_\_

Date: \_\_\_\_\_

**Part - III : Basic & Strategic Gender Impact Assessment Factors ( For both area in case of Men & Women )**

**A. Decision & Involvement Domain: [Indicators : DI=Direct Indicator/Sub-project Related], II=Indirect Indicator]**

SI No	Factors	SI No	Indicators	Respondent's Answers												Other Comments / Remarks, if any
				Yes/Always / Strongly Agreed			No / Never/Ds agreed/D Know/ Can't Say			Sometimes/Agreed						
				Self	Jointly	Imposed	Self	Jointly	Imposed	Self	Jointly	Imposed				
1		3	4	5	6	7	8	9	10	11	12					
1	Involvement with development works	1	Any involvement in impleme-ntati activities of Sub-Project(SP)													
		DI														
		2	Any involvement in O & M activities of Sub-Project(SP)													
		DI														
		3	Involvement in WMCAs meeting for decision making as member													
		DI														
		4	Any involvement with other hereby dev project(s) during implementation?													
		II														
		5	Women's participation in SSWRUSP is needed?													
		DI														
		6	Women's participation in WMCAs needed?													
		DI														
		7	Local Contribution is needed for successful completion and running for WRD Projects?													
		II														
		8	Any Cultural Traditional barrier in participating project activities that would strengthen or socio-economic position?													
DI																
2	Involvement with development works	9	Barriers in receiving information about Project activities													
		DI														
		10	Decision regarding about family affairs (spending money, children well-being)													
		II														
		11	Decision regarding purchase of non household items(land/shares)													
		DI														
		12	Shared opinion about family planning													
		II														
		13	Decision regarding visited to market for shopping & selling													
		II														
		14	Ownership of share & savings in WMCAs													
		DI														
		15	Control on family income/assets													
		DI														
		3	Control over resources/technology	16	Control exercised for taking long term leave in / out (land/pond/khal)											
II																

**B. Rights Domain: [Indicators . DI=Direct Indicator/Sub-project Related), (I=Indirect Indicator]**

SI No	Factors	Indicators	Respondent's Answers										Other Comments / Remarks, if any	
			Yes/Always / Strongly Agreed			No / Never/Disagree/Don't Know/ Can't Say			Sometimes/Agreed					
			Self	Jointly	Imposed	Self	Jointly	Imposed	Self	Jointly	Imposed			
1	2		5	6	7	8	9	10	11					
	3	4												12
	17	DI in National Election												
		ii) In WMCA Election												
	18	DI i) Got equal p. subsidies in micro-credit loans? ii) from: WMCA iii) from Other Organization												
	19	DI i) Compete election ? ii) in WMCA iii) in any Other Local / National												
	20	II Chosen job / professional career												
	21	DI i) Got equal wage facility as worker ii) in LCS Work of Sub-project activities iii) in any Other Work/Projects												
	22	II Family Court is very important for VGLMised Women												
	23	II Early Marriage for girls between 14-17 is not bad												
	24	II Sons should get priority than daughters for food and health care												
	25	II Both husband and wife should have equal right for divorce												
	26	II Took entertainment through media/tech (radio/tv/newspaper/cell phone)												

C. Development Resources and Benefits Domain: Indicators : DI=Direct Indicator(Sub-project Related), II=Indirect Indicator]		Respondent's Answers					
SI No	Factors	Indicators	Yes / Easily	No / Never	Sometimes / Not easy	Other Comments / Remarks, if any	
1	2	3	4	5	6	7	8
5	Access to Infrastructures	27 Reasoned or oriented to basic infrastructure (water, roads, lighting, communication etc) II 28 Visited to non govt offices/cooperative society II					
9	Access to resources/tech	29 Accessed to agri/forest land/ fishing ground/wild produce land/fire woods/medicinal roots/herbs/mushrooms II 30 Accessed to agri eq. (tractors, tanks, saws / tractors (ox carts/sulbasheel plough) / fisheries equipment / industrial equipments (sewing machines/hammer mills) II					
7	Health issues	31 Reduced malnutrition & duration of illness of family members during last year II 32 Reduced maternal mortality and increased health/vaccination facilities during last year II					
8	Education & Training	33 Participated in SSWRDSP training /w shop or any other training in other organization DI 34 Got education opportunities such as adult literacy classes/female literacy/gender neutral text books) II					
		35 Got benefits from SP by selling of agricultural goods/aquaculture practices DI 36 Got benefits from SP by using water for washing, cooking/bathing DI 37 Associated (a) w th & (b) benefitted from post- project activities II					
10	Opportunity to Organise	38 Engaged/participate with any modern trade union or workers association (a) II 39 Engaged/participate with any political parties program /associations II 40 Engaged/participate with any social club or saving club other than WMCA or NGO II					

