

1 Women's Vulnerabilities due to the Impact of Climate Change: 2 Case from Satkhira Region of Bangladesh

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7 **Abstract**

8 Bangladesh is recognized as one of the worst affected countries of the world due to climate
9 induced disasters. The disadvantageous geographical setting along with various socioeconomic
10 factors is triggering the vulnerabilities of people. The impacts of climate change are
11 multifaceted and disproportionately distributed regardless of race, caste, ethnicity, sex and
12 level of income. The perception and impact of climate change is completely gender
13 differentiated. Women are ever more vulnerable to the impact of climate change than men,
14 because they have very limited access to financial resources, land, education, health services
15 and in decision making process. All these insufficiencies make women vulnerable to climate
16 induced disaster than men. This study has found an appealing relationship between climate
17 change impact on women's livelihoods and health. Climate change adversely impact on
18 women's livelihoods and health and create extra burden on women.

19

20 **Index terms**— climatechange, gender, livelihoods, health, coastal area.

21 **1 Introduction**

22 Bangladesh is recognized as one of the worst affected countries of the world due to climate induced disasters.
23 The disadvantageous geographical setting along with low and flat topography makes this country physically
24 vulnerable to climate change. Moreover, various socio-economic factors like high population density; high levels
25 of poverty; gender inequality; dependency on climate sensitive livelihoods sectors, especially agriculture, fishing,
26 and hunting and gathering forest resources; lack of adaptation fund and other institutional insufficiency are
27 triggering the vulnerabilities of people. The impacts of climate change are multifaceted, it is not static rather
28 it is disproportionately distributed regardless of race, caste, ethnicity, sex and level of income, its impacts are
29 more heavily felt by poor nations and communities. Climate change magnifies existing inequalities. The IPCC
30 concluded: "Poor communities can be especially vulnerable, in particular, those concentrated in high-risk areas.
31 They tend to have more limited adaptive capacities, and are more dependent on climatesensitive resources such
32 as local water and food supplies" (IPCC 2007:9).

33 Author: Researchers, East West University, Dhaka, Bangladesh. e-mail: mshaquem@gmail.com Now-a-days,
34 women and climatic risk is a much talked matter. The perception and impact of climate change is completely
35 gender differentiated. Women are ever more vulnerable to the impact of climate change than men, because they
36 have very limited access to financial resources, land, education, health services and in decision making process.
37 All these insufficiencies make women vulnerable to climate induced disaster than men. Besides, a significant
38 number of female headed households are found in coastal areas who are mostly depends on primary economic
39 activities. Considering the vulnerability and inequality of women, it is a proposition that climate change adversely
40 impacted on women's likelihoods and health.

9 INCREASED BURDEN ON WOMEN

41 2 a) Women and climate change

42 Climate change affects everyone. But, women are the most vulnerable to the impact of climate change, because
43 they have limited access to resources that are required for preparedness and adaptation. UNFCCC ??2005)
44 reported that during natural disasters more women die than men because they are not warned, cannot swim or
45 cannot leave the house alone.

46 Moreover, women are being affected in their multiple roles as food producers and providers, as guardians
47 of health, care givers, and economic actors. As access to basic needs and natural resources, such as shelter,
48 food, fertile land, water and fuel, becomes hampered, women's workload increases. Drought, deforestation and
49 erratic rainfall cause women to work harder to secure resources and livelihoods. Depletion of natural resources
50 and decreasing agricultural productivity may place additional burdens on women's health and reduce time for
51 decision-making processes and income-generating activities. 1. To identify the impact of climate change on
52 women 2. To analysis reasons behind those impacts and vulnerabilities 3. To recommend some specific measure
53 to address the impacts.

54 3 b) Methodology

55 The study involves multistage analytical process of analysis. Both primary and secondary data on the impact of
56 climate change on women have comprehensively been used in this study. The primary data was collected through
57 focus group discussion and in-depth interviews with the women.

58 4 c) Sample size

59 This study was exclusively focused on female headed households, divorced, tiger widows, and widows (husband
60 died from disasters or during fish collection). 6 FGD (10 women participated in each FGD) and 2 in-depth
61 interviews were conducted in the study area. Purposive sampling was employed to select the respondents.

62 Heritage Site, and covers an area of 5747 km². The main rivers are Morichap River, Kholpota River, Betna
63 River, Rainmangal River, Hariabhangha River, Ichamoti River Betrabati River and Kalindi Jamuna River.

64 Gabura Union is under the constituency of Shyamnagar Upazila. The area of this Union is 33 km². According
65 to BBS, 38825 people are living in this village among them 19307 male and 19518 female (BBS, 2011). Around
66 70% of the people depends on fishing and the rest 30% on agriculture (25%) and others (5%).

67 It is one of the most extreme southern Unions of Bangladesh has exposed to Bay of Bengal through two
68 rivers-Kholpetua and Kapatakkha.

69 Chakbara village is one of the villages of Gabura Union. The study was conducted in Chakbara village. This
70 village was severe affected by the cyclone Sidr (2007) and Aila (2009). The Gher system is also prominent in this
71 village. To fulfill the requirement of the study, the samples were drawn from this village.

72 5 d) Source of data

73 Focus Group Discussion (FGD) and interviews were conducted to collect qualitative information. Besides,
74 secondary information were collected from various reports focusing on disaster and women; BBS, journals, books,
75 newspaper, gender specific publications of GO, UN, INGO and NGO etc. The primary data was collected in
76 the month of February. collection, small trade and household maid. Livelihoods of women in coastal area are
77 extremely nature depended. It was hypothesized that the burden of women increased in manifolds. Women were
78 asked to identify their burden on three broad categories like producers, caregivers and breadwinners. All the
79 respondents were engaged in different income generating activities to feed their families.

80 6 II.

81 7 Discussion and Results

82 8 a) Occupation of the participants

83 The participants of FGD were women and they engaged in different livelihoods like day labor, shrimp fry Fig.
84 ?? : Triple burden of women d) The most vulnerable work for women Women in the discussions also asked to
85 identify three most vulnerable works for women. All of them were agreed and prioritized the following works as
86 most vulnerable for them. They ranked shrimp fry collection in river as top. To collect the shrimp fry they need
87 to stay in saline water. Saline water is detrimental for health especially for reproductive health and often they
88 are facing skin diseases.

89 9 Increased burden on women

90 Fig. ?? : Most vulnerable work for women e) The impacts climate change on the livelihoods and health of women
91 Women participated in the discussion identified their vulnerabilities that fragile their livelihoods and health. The
92 key issues are discussed in the following table 1

93 **10 Crop production loss**

94 Women, who control homestead-based livelihoods, lose income when crops are blown or washed away. Most of
95 the homesteads are now fallow and unsuitable for cultivation. For this reason, they have to buy vegetable from
96 the market with a high price. Thus expenditure increased in manifolds. And, finally women are facing chronic
97 nutritional deficiency. Limited access to market Communication systems in Gabura union have collapsed after
98 the cyclone Sidr and Ayla. Markets are located far away from their village, where women have very limited
99 market access to buy or sell their goods. Women are forced to trade within the village or accept lower prices
100 offered by male buyers from other areas. Loss of income, savings and employment Climate change affects every
101 sector adversely. Sources of income especially for women have reduced. Less income opportunities leads to less
102 earning which further hamper the food security of the family. The net loss in income leads to a loss in

103 **11 Fragile condition**

104 Women's vulnerability savings, thus making it even harder for households to cope with disasters (case story
105 of Rizia Khatun is in box 2) Increase disease and sickness Frequency of sickness has increased. Women who
106 are involved in fish fry collection, has to stay in saline water for long time. During menstruation period, fish
107 fry collectors faced severe gynecologic diseases. Most of the cases these women needs to go to cities for having
108 treatment, which is financial burden for them. There was very limited or no saline intrusion in agricultural land
109 before 20-25 years and during that time women were engaged in agriculture and they had not experienced such
110 health hazards. Now most of the agricultural land is employed for shrimp cultivation and as a result job market
111 for women has been shrinking. Therefore, women are forced to involve in fish fry collection to maintain their
112 families.

113 **12 Social security**

114 Women who engage in employment are facing social insecurity at their workplace and outside. They often fall
115 prey to local miscreants (mastans). Besides, everybody neglects the social dignity of working women. Moreover,
116 in cyclone shelter women have no separate facilities.

117 **13 Box 1:**

118 Moyna Khatun: Her homestead washed away by cyclone Ayla. After that she couldn't buy any land. She also
119 lost her sewing machine at that time and it was her only earning source. Now she is living in her parents' house.

120 **14 III. Conclusion and Recommendations a) Conclusion**

121 Changes in climate variability directly affect agricultural production and female headed households. Although
122 this study was conducted at a micro scale, the study found a significant relationship between climate change and
123 women livelihoods who are dependent on natural resources. Women are playing different role in their families.
124 In previous time women played only one role for their families as caregiver. Two other burdens have added with
125 their role-producer and breadwinner. Many development interventions implemented in this area, but few of them
126 can address women vulnerabilities, because the target oriented programs

127 **15 b) Recommendations**

128 In this study, the relationship of women vulnerability and impact of climate change has been mostly focus on
129 outputs not the outcomes. However, access to service from different service providers is still far reaching for
130 women. Therefore mainstreaming the gender in policies and development process is very urgent. examined on a
131 micro scale. The following recommendations are based on the outcomes of this study:

132 ? Conduct in depth gender specific vulnerability analysis in relation to climate change impact to unearth
133 women's situation.

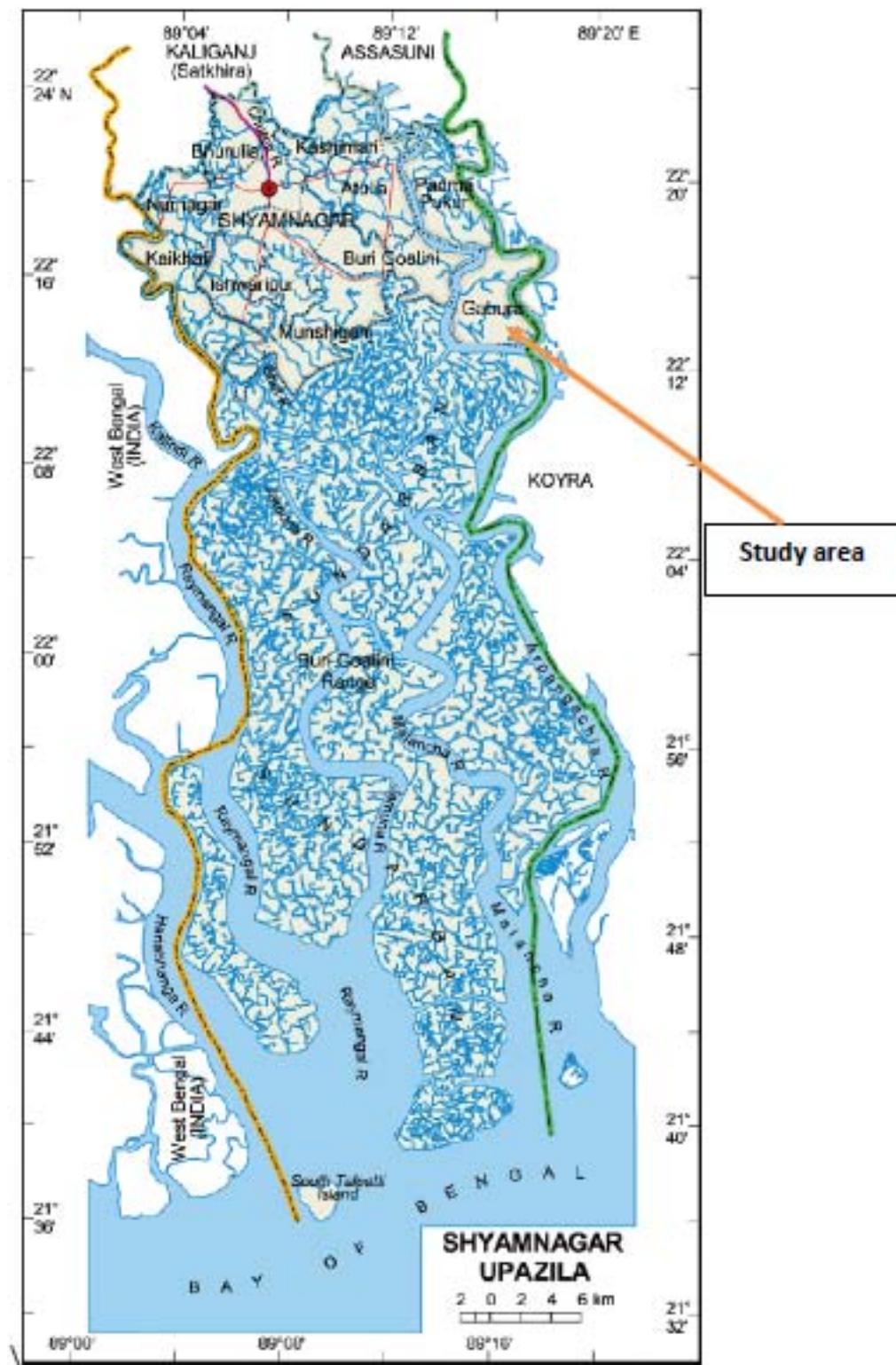
134 ? Create an enabling environment for women's participation in climate change process, and raise women's
135 voices at from micro level to macro level. ? Create gender-specific disaster reduction policies to address the
136 effects of climate change in disasterprone areas. ? Promote women's empowerment through capacitybuilding
137 before, during and after climate-related disasters, as well as their active involvement in disaster anticipation,
138 early warning and prevention as part of their resilience building.

139 ? Ensure that government policies and programs on human rights, women's rights and climate change are
140 coherent and reinforce each other. ? Gender specific indicator need to be added in national policies on disaster
141 and climate change to as a measure of gender gap.

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Figure 1: Fig. 1 :



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Figure 2: Fig. 2 :

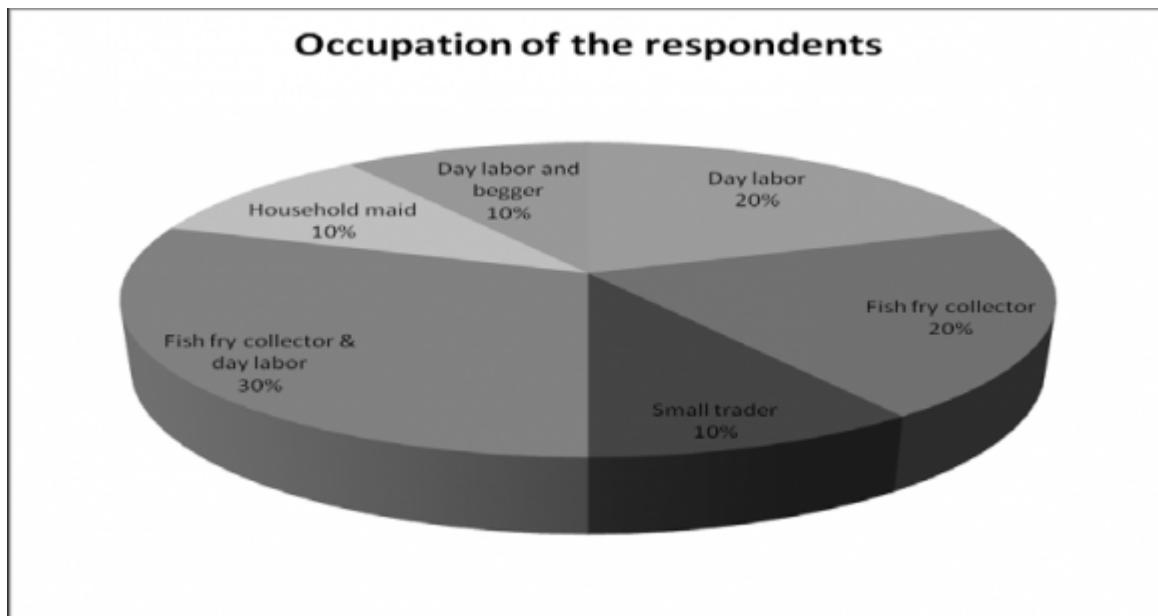


Figure 3:

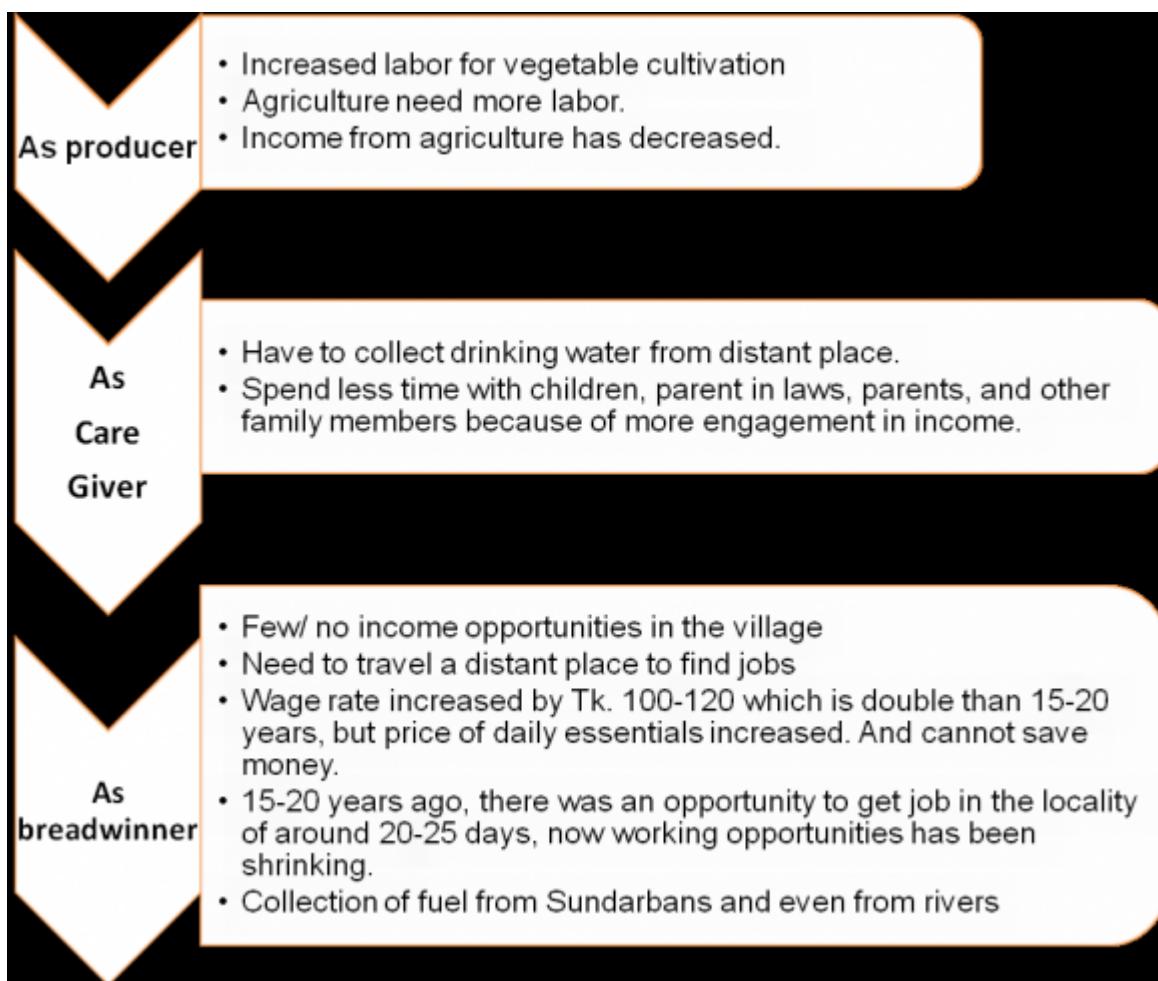


Figure 4:

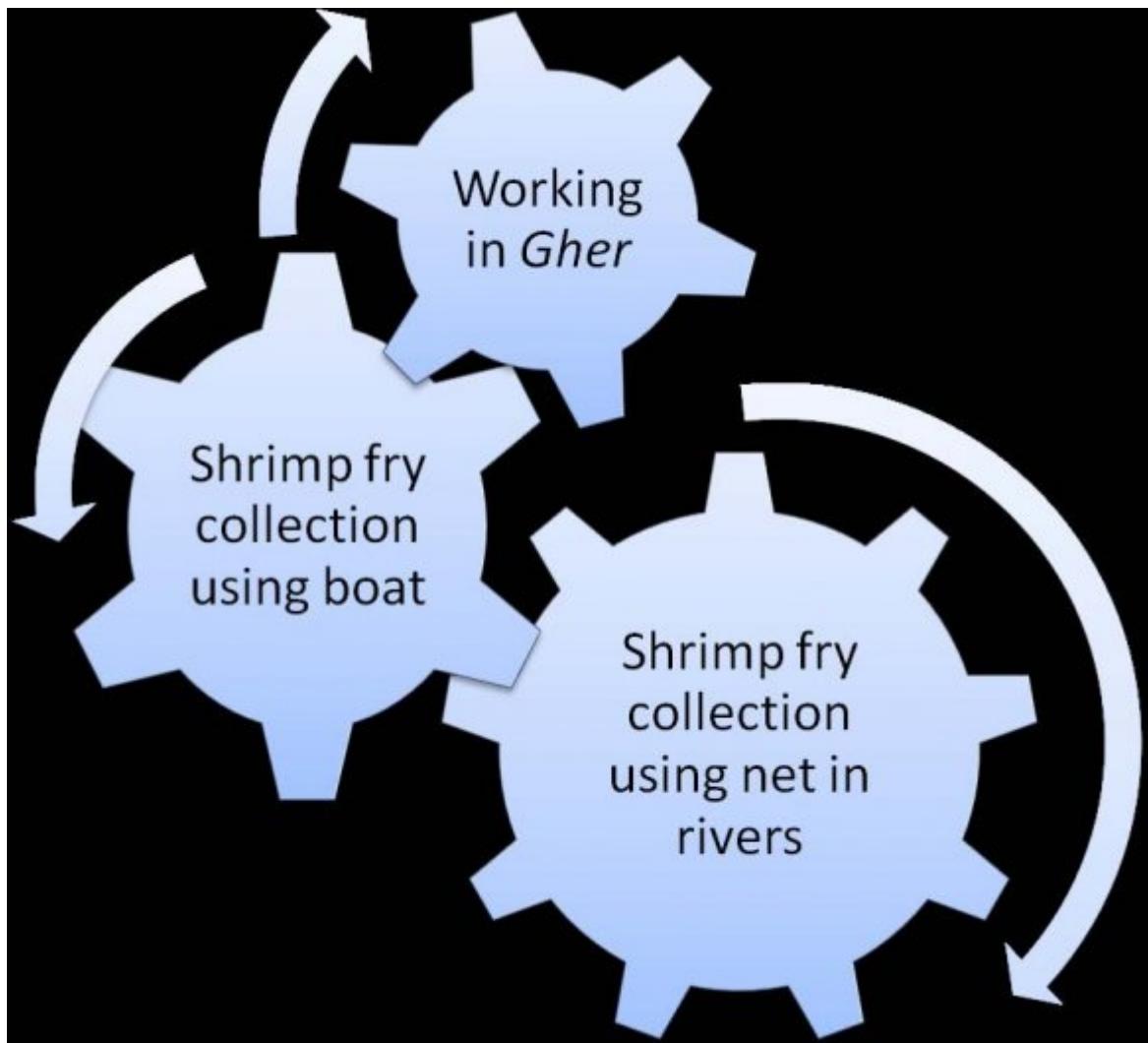


Figure 5:

1

Fragile condition	Women's vulnerability
Housing and homestead	Disaster destroys houses. Homesteads are now unusable for vegetable production because of salinity ingressions (case story of Ms. Moyna Khatun is described in box 1).

Figure 6: Table 1 :

15 B) RECOMMENDATIONS

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