

Impact case study on women's empowerment in the context of climate change and environmental and disaster risk reduction

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1. Introduction

The Char Development and Settlement Project (CDSP) was initiated in 1994 as a follow up project of the Land Reclamation Project (LRP) funded by the Government of Bangladesh and the Government of the Kingdom of the Netherlands. During 1994 to 2011, CDSP's three phases (I, II and II) were implemented successfully using grant funds. In 2011 the United Nations International Fund for Agricultural Development (IFAD) came forward with a loan fund for CDSP Phase IV, which has been implemented successfully during 2011-2018. The current phase CDSP B (AF) is being implemented by five Government agencies with additional loan and grant funds and will be completed by 2024.

2. Project components and implementing agencies

CDSP has had several government implementing agencies (IAs) and NGOs as partner agencies. The components by implementing agencies are as shown below.

CDSP Components by Implementing Agencies (IAs)

- 1. Protection from Climate Change (2 sub-components 1.1 & 1.2)**
 - 1.1 Water management-Lead IA: Bangladesh Water Development Board (BWDB)**
 - 1.2 Social Forestry-IA: Forest Department (FD)**
- 2. Climate resilient infrastructure (2 sub-components 2.1 & 2.2)**
 - 2.1 Internal infrastructure-IA: Local Govt. Engineering Department (LGED)**
 - 2.2 Water and sanitation-IA: Department of Public Health Engineering (DPHE)**
- 3. Land settlement and titling-IA: Ministry of land (MoL)**
- 4. Livelihood supports (2 sub-components 4.1 & 4.2)**
 - 4.1 Agricultural support-IA: DEpartment of Agriculture Extension (DAE)**
 - 4.2 Social & livelihood support-IA: partner NGOs**
- 5. Institutional development 6. Knowledge management**

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3. The rationale for inclusion of protection from climate change and climate resilient infrastructure

Though primarily CDSP was a land-based development project to give settlers security and facilities, later on it has widened its mandate to work on many more sectors and the following components have been included:

- protection from climate changes that includes water management and social forestry;
- climate resilient infrastructure including internal infrastructure, water and sanitation.

To complement the protection provided by the embankments and other infrastructure, CDSP in cooperation with the Forest Department (FD), established protective plantations of trees on mud flats, foreshore and embankments using a social forestry approach. The Bangladesh Forest Department (FD) has pioneered coastal afforestation through mangrove plantation in newly accreted char land along the coastal belt, to provide better protection from tidal surges and cyclones for coastal communities.

4. Major achievements of CDSP with regard to protection from climate change and climate resilient infrastructure

Coastal plantation as a protective “green belt” can significantly reduce the damage from cyclones – both to the embankment itself and to the surrounding area. In general, trees provide effective protection from strong winds, whether planted on roadsides or around homesteads. In addition to protection from tidal flooding and storm surges, forestry activities, including roadside plantations and social forest block plantation, provide income earning opportunities. Planting mangroves on mudflats may also accelerate accretion of new land.

Social Forestry Plantation by Types across CDSP Phases Year 2005-2011

CDSP Phases	Social Forestry Groups (SFGs)	Types of Plantations						Institution (nos.)	Killa (nos.)
		Mangrove (ha)	Foreshore (ha)	Block (ha)	Embankment (km)	Roadside (km)	Canal (km)		
CDSP III	118	500	-	-	28	120	85	-	-
CDSP IV	630	7400	200	100	50	268	150	95	16
CDSP B(AF)	44	1150			5	42	42		
Total	792	9050	200	100	83	430	277	95	16



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CDSP

Due to the Forest Department's experience with coastal afforestation, CDSP has been very successful in implementation of social forestry sub-component activities such as raising nurseries of both mangrove and non-mangrove seedlings, several types of plantation and engaging social forestry groups (SFGs) as a part of field level institution development. The contributing key social forestry programmes and interventions and approaches of CDSP are:

- **Homestead plantations** for physical protection, income generation, and production of fuel wood to alleviate the severe fuel shortage that exists in the project areas;
- **Embankment, roadside, canal, foreshore and block plantation** for the protection of inhabitants and internal infrastructure from cyclonic surge and storm as well as for the development of an environment friendly ecosystem;
- **Mangrove forest management** protects chars from storms and cyclones and helps in the development of newly accreted chars. Such plantations stabilize newly accreted coastal chars taking a lead time of a minimum of 20 years.



Foreshore Plantation at Boyer Char, CDSP



Mangrove Plantation by CDSP



Road Side Plantation at Char Nangulia



Canal Plantation at Char Nangulia

Social Forestry Groups (SFGs): A total of 792 social forestry groups (SFGs) having 19,800 members (40% women) have actively participated in the plantation work after signing a legally registered tripartite agreement having a 21-point code of conduct, by which SFGs have the right to a 55% of share in the final harvests from mature plantations. The others' rights are: Forest Department (10%), Landowner (20%), Replanting Fund (10%) and local Union Parishad (5%).



Besides, by Section 3/21 of the agreement, SFG members have grown papaya, okra, pigeon pea etc., and also get the forest twigs and branches, obtained from pruning, thinning, and other maintenance of plantations. All SFG families are now using forest twigs and branches as firewood. As a result cooking by the use of kerosene oil has almost disappeared.

Development of Coastal Char lands: CDSP has developed 44,620 ha as net cultivable agricultural land out of a gross 62,673 ha during three decades of CDSP intervention.



Coastal Char at Post Project Stage CDSP

Water control and drainage structures: CDSP has built many water control and drainage structures e.g. 200 bridges and culverts; as a result the water logging and salinity conditions have significantly improved compared to pre-project stages.



Gabtohi sluice (7-vents) built by CDSP III in 2009 still operational, but at risk of erosion

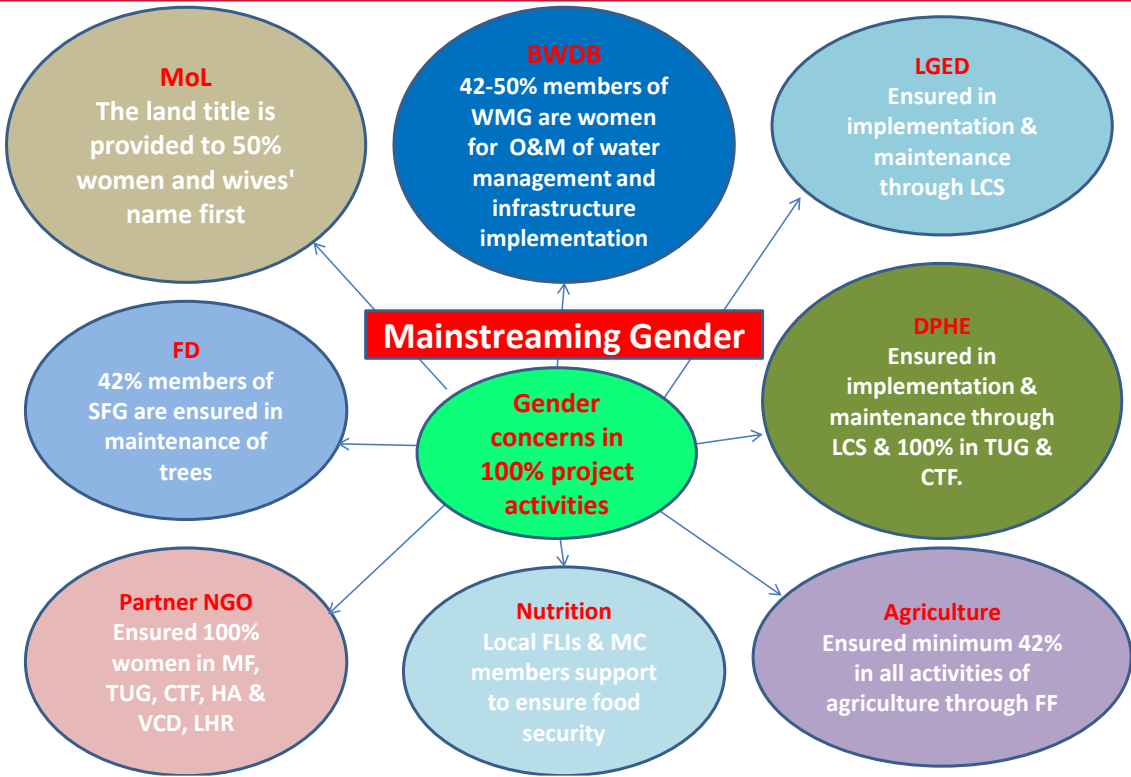


A culvert built by CDSP located at Mir somaj, 1 no. Horni Union Parishod, Boyer

Land titles and settlement: CDSP has distributed permanent land titles/*khatians* to 35,251 families with 50% share to men and 50% share to women, having women's names first in the deed. The title holders are developing their 45,825 acres of land for the future.

Participation of women in CDSP's development activities is a special focus and gender mainstreaming has been ensured as one of the project outcomes. CDSP has ensured participation in all of the six types of field level institutions (FLIs) i.e. water management groups (WMGs), 45%; farmers' forums (FFs), 42%; tubewell users groups (TUGs), 100%; social forestry groups (SFGs), 42%; labour contracting societies (LCS), 40%; and NGO Micro-finance Groups, 100%.

Women in Gender and Nutrition program



5. Recognition of CDSP

It is very encouraging for members of the project team: Government officers, and staff, NGO workers and the Technical Assistant Team, with their colleagues in Government Ministries, in the International Fund for Agricultural Development (IFAD) and the Embassy of the Kingdom of the Netherlands and, of course, the project beneficiaries and participants to have special recognition for CDSP's successes and achievements.

National Award for Tree Plantation 2016 and 2018

The Government of Bangladesh has awarded the National Tree Plantations Award twice - Award 2016 and Award 2018, presented by the Honorable Prime Minister Sheikh Hasina, to the Forest Department, implementing partner of CDSP, in recognition of the very successful plantations. The Forest Department was one of the six government implementing agencies involved and is establishing settlements to protect the coastal chars from storms and cyclones. During 2011 to 2017, the Forest Department has successfully established 7,400 ha of mangrove plantation, 200 ha of foreshore plantations and more than 260 km of roadside plantations, and 80 km along drainage channels.



National Tree Plantation 2016



National Tree Plantation 2018

IFAD Gender Award for Asia and the Pacific Region 2017

CDSP has received this because land titles are granted in the joint names of husband (50% owning share) and wife (50% owning share), with the wife's name coming first on the title deed. This is exceptional in the context of Bangladesh, where women are generally excluded from ownership of land. This often puts them in an extremely vulnerable, dependent, and disadvantaged position. Receiving an official title to land has far-reaching positive consequences. For example, divorce rates, polygamy and violence against women have significantly decreased. Furthermore, women's social status has increased as a result of their land ownership and they now enjoy more influence in the home. The practice of having the women's name first has now followed in other places in Noakhali district.



IFAD Gender Award for Asia and the Pacific Region 2017 awarded to CDSP