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Community Based Ecological Mangrove Restoration (CBEMR) Initiative By BEDS

Bangladesh Environment and Development Society (BEDS)

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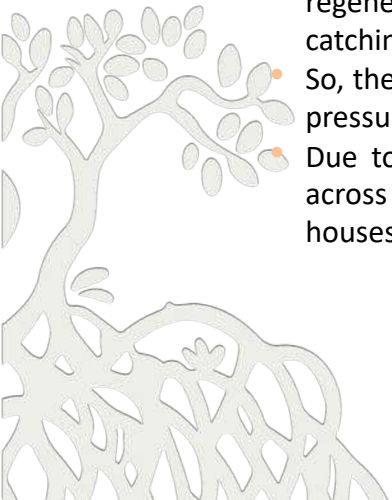
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Background of the CBEMR in Bangladesh

- Once there were plenty of mangroves in the Sundarbans periphery that created a buffer zone which was beneficial for coastal protection as well as for habitat of the wild animals and birds.
- But that buffer zone is no longer existed due to random cutting of mangroves for agricultural land extension, shrimp cultivation, household making, collecting fuel wood and free grazing of livestock.
- Apart from this, coastal people are also disturbing the mangrove regeneration process by destroying the seedlings; seeds while catching shrimp fry as well as collecting seeds for cooking fuel.
- So, the mangrove ecosystem in Bangladesh have come under severe pressure due to climatic and anthropogenic reasons.
- Due to the lack of mangrove protection, tropical cyclones sweep across the Sundarbans, which are claiming many lives, destroying houses, damages agricultural crops and lands.



Information Regarding BEDS' Mangrove Restoration

- So far BEDS has regenerated **3,15,770** mangrove approximate 30 hectare through plantation in the **Sundarbans coastal region of Bangladesh** together with the local community since **2013** at the public and private land.



At Dacope

Scenario in 2016



At Shyamnagar



Scenario in 2022



Year wise CBEMR record with Donor & Partner's name

Year	Number of planted mangroves	Donor & Partner's name	Year	Number of planted mangroves	Donor & Partner's name
2013 to 2016	4,000	KNCF, JEEF	2020 to 2021	20100	BMZ, GNF
2016 to 2017	15,000	AEON, JEEF	2017 to 2021	95000	MOFA, JEEF
2018	5,000	SDM, JEEF	2015 to 2021	103,000	KGF
2019 to 2020	5000	JFGE, JEEF	2020	1,000	Legal council
2020 to 2021	26000	GlobalGiving	2021	34,670	Milkywire
2020	1000	Give2Asia	2022	2000	Onetreeplanted

Steps for successful mangrove restoration

- ❑ STEP-1: Site selection
- ❑ STEP-2: Ensure the involvement of local community
- ❑ STEP-3: Land preparation
- ❑ STEP-4: Fencing of plantation site
- ❑ STEP-5: Species selection
- ❑ STEP-6: Ensure the quality of the saplings/seeds
- ❑ STEP-7: Mangrove saplings plantation according to land alleviation
- ❑ STEP-8: Regular nursing, monitoring and guarding
- ❑ STEP-9: Ensure the long term benefit of the local people like mangrove based livelihood



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STEP-1

Site selection

Select the suitable mangrove plantation site by observing present vegetation as well as collect the information of the previous vegetation etc.

The following condition should be consider for mangrove plantation.

- Regular water inundation of the site
- Brackish water
- Humid climate
- Soil with a mixture of mud and gravel sediments

Note: Try to avoid sandy soil or sandy sediments

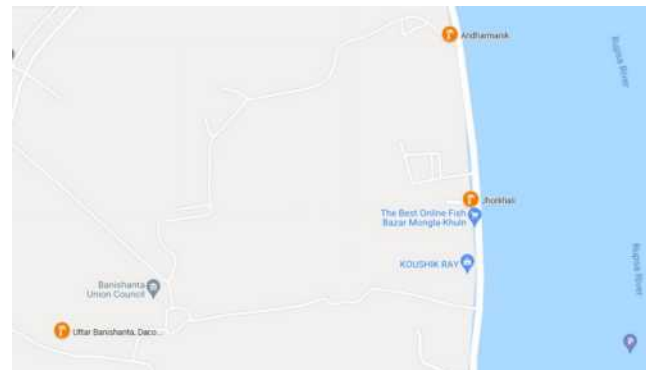
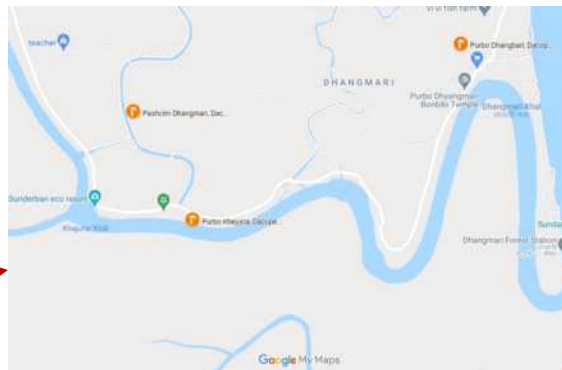


Where we plant

- River bank side
- Public or private land through highly maintaining land agreement and regulation
- Introducing Integrated Mangrove Aquaculture (IMA) at the Fish farms by by motivating and capacity building training of the farmers
- Land is selected by motivating the local community and negotiation with local government, local administration, political leader and local community



The location of the CBEMR by BEDS



Shyamnagar, Satkhira

Dacope, Khulna

STEP-2

Ensure the involvement of the local community

- Relationship build up with the local community
- Motivate them for mangrove restoration
- Identify interested people among the local community
- Prepare plan for mangrove restoration activities with the active participation of local community

We believe that any kind of conservation initiatives becomes successful and sustainable when local communities are on board; fully understand the value of their participation and long term benefits.



STEP-3

Land preparation

- Weeds, debris, invasive species and wastages should be removed from the selected site
- Level the land to avoid water logging for long time



STEP-4

Fencing of plantation site

Fencing of the plantation site is necessary to protect the mangroves by the grazing of cattle and human interpretation.



STEP-5

Species selection

Species of the mangroves vary from the soil type and soil salinity level.



STEP-6

Ensure the quality of mangrove saplings/seeds

- Mangrove saplings /seedlings are the prime need for successful mangrove restoration process.
- Women lead mangrove nurseries have established.
- Now the demand of nursery raised mangrove saplings is increasing day by day.



Mangrove Nursery establishment

- So far BEDS has established 6 Community Based Mangrove nurseries, 5 at Dacope and 1 at Shyamnagar.
- Cooking fuel (mangrove seeds) have become mangrove saplings.
- Local community are getting both ecological and economic benefit.



STEP-7

Mangrove saplings plantation according to land alleviation



Mangrove plantation together with local people



STEP-8

Regular nursing, monitoring and guarding

- Community based monitoring plays an important role for the long term result of mangrove plantation.
- Mangrove number, height and leaf number is measured by the local people.
- After all the steps, mangrove mortality rate reduces and it becomes 10% to 20%.
- Then the empty spot of dead mangroves is filled by replanting.



STEP-9

Ensure the long term benefit of the local people like mangrove based livelihood

- Creating alternative livelihood opportunity for the local community
- Ensure the sustainable use of the forest resources



Kawra pickle



Honey



Nipa palm molasse



Deer by honey wax

Integrated Mangrove Aquaculture (IMA)

- Pioneer to introduce IMA in Bangladesh
- 20 pilot farm of IMA at Paschim Dhangmari, Dacope, Khulna
- Introducing IMA among 1250 fish farmers of adjacent area of Sundarbans (Dacope sub district of Khulna district; Rampal and Mongla sub district of Bagerhat district and Shyamnagar sub district of Satkhira district)
- Promoting multi actor partnership to improving value chain of Shrimp farmers





1 \$ for 1 mangrove



Present scenario of some mangrove plantation site

BEDS Future Plan for CBEMR in Bangladesh

- Establish Central Mangrove Nursery
- Regenerate 2,50,000 mangroves at the river bank side of Pashur river of Dacope

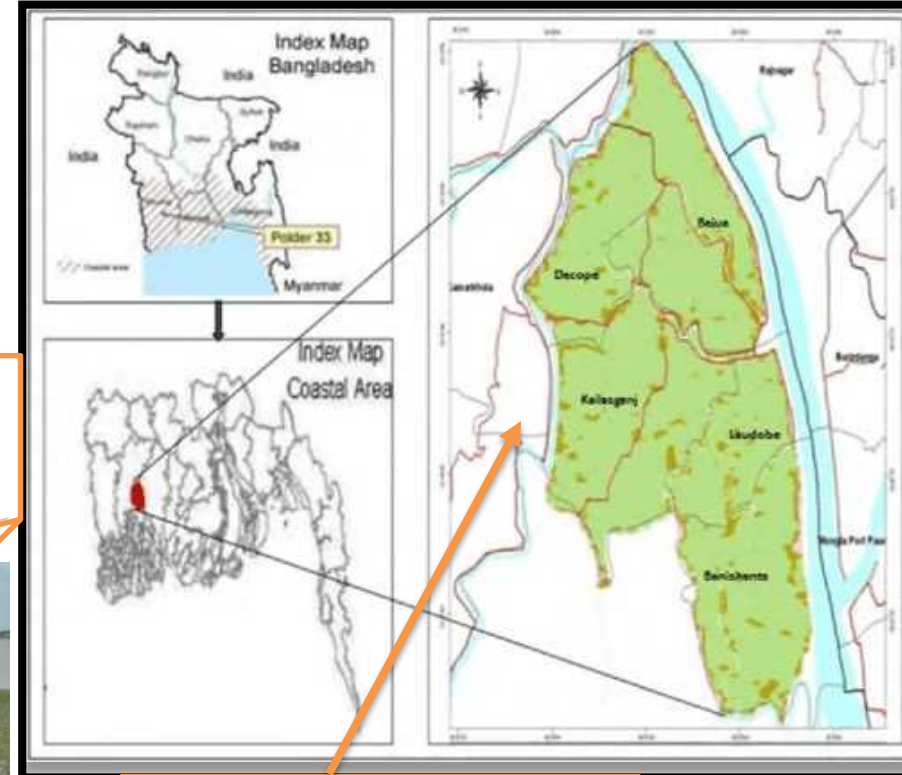
2022

2023-2027

- Regenerate mangroves at 500 acre areas at the river bank side of 33 no. polder of Dacope sub district

2023-2033

- Create buffer zone in the periphery of 33 no. polder of Dacope Sub district
- Regenerate mangroves in 10 hectare areas at Shyamanar sub district of Khulna district



33 no. polder of Dacope





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**Let's Work Together for the Betterment of
Humans and Nature**

Thank You

very much for
your kind attention