

Summary slides

ECONOMICS OF FOREST RESTORATION AS CARBON RESTORATION AND NATURE-BASED SOLUTION IN BANGLADESH

IUCN Bangladesh and Asia Centre for Development

Contact

Second Legal, Policy and Institutional Frameworks to Forest and Climate Change

Forestry Sector

- Legal Framework:
 - Forest Act, 1927; (ii) Wildlife (Conservation and Security) Act, 2002; (iii) Bangladesh Biosecurity Act, 2017
- Policy Framework:
 - National Forest Policy, 1984 (updated Draft of 2004); (ii) Forest Based Enterprise Promotion and Exchange Policy, 2016; (iii) Social Forestry Policy, 2016
- Institutional Framework:
 - Department of Forest of AICTEC; (ii) Bangladesh Forest Research Institute (BFRI); (iii) Forest Management Corporation (FMC)

Other policy directives for restoration

- Mujib Respective Plan:
 - Identifies NBS including forestry as climate change response
- Nationally Determined Contribution (NDC):
 - heavily emphasized afforestation and reforestation as mitigation options
 - SD committed to reduce emissions by 0.37 GtCO₂e by 2030
 - mitigation actions include 150,000 ha of afforestation and reforestation in coastal areas, islands, and degraded areas, among other interventions
- 8th Five Year plan:
 - Puts emphasis on ecosystem restoration

Bangladesh-a champion on coastal afforestation

Coastal afforestation

Mangrove rehabilitation by IUCN and partner NGOs

2013

Started with 25 Hectare Mangrove plantation in 2013-14

Union Parishad (UP) shares responsibility with a 35 member forest management committee

Community gets 40% of benefits (fruits, honey, nursery), UP gets 40% and 20% used to maintain the forest

Contribution of IUCN and MFF

2013 to 2020

425+ ha of mangrove plantation

20+ Village Conservation Forums under Sakshin Soudurban Co-management Committee engaged

Forestry and gender issues

Forest Restoration has received a greater 'gendering' of village community through household level and site based participatory and involvement. The natural forest management system has been replaced by a more structured approach. In order to make the existing approach, and the restoration of natural forest management, the role of women has been emphasized. The role of women has been emphasized in the restoration of natural forest management. The role of women has been emphasized in the restoration of natural forest management.

The research project

Research objective

The research aims at generating evidence needed to design and implement effective forest restoration in Bangladesh. The research objectives are:

- Understand the extent of forest degradation, their drivers and natural regeneration in a forest based approach within the region.
- Assess the role of women in forest management and restoration, and the impact of forest restoration on women's livelihoods.
- Identify and propose alternative interventions for restoring forest ecosystems, and an integrated approach to forest management and restoration, including the role of women.
- Prepare appropriate institutional arrangements for scaling up forest restoration.
- Apply the results of analysis and emerging evidence to conduct policy relevant research in the future.

Approach and Methodology

The research methodology involves a participatory approach, starting with a baseline assessment of forest degradation and natural regeneration. This is followed by a series of focus group discussions and interviews with forest users, including women. The research also involves a series of field visits and data collection, leading to a final report and policy recommendations.

Research Methods

- Field experiments:
 - Randomized control trial (RCT) not considered
 - Natural Experiments - yes
 - Cost benefit analysis - no
 - Choice experiments - no
 - Quasi experimental impact evaluation methods
 - Thematic analysis - no
 - Steward Analytical Framework (SAAF) and UNREDD Framework

Research Methods ...

Biophysical Aspects: Carbon sequestration, Soil fertility, Biodiversity, etc.

Socioeconomic Aspects: Livelihoods, Gender, etc.

Methodology: Randomized control trial (RCT), Natural Experiments, etc.

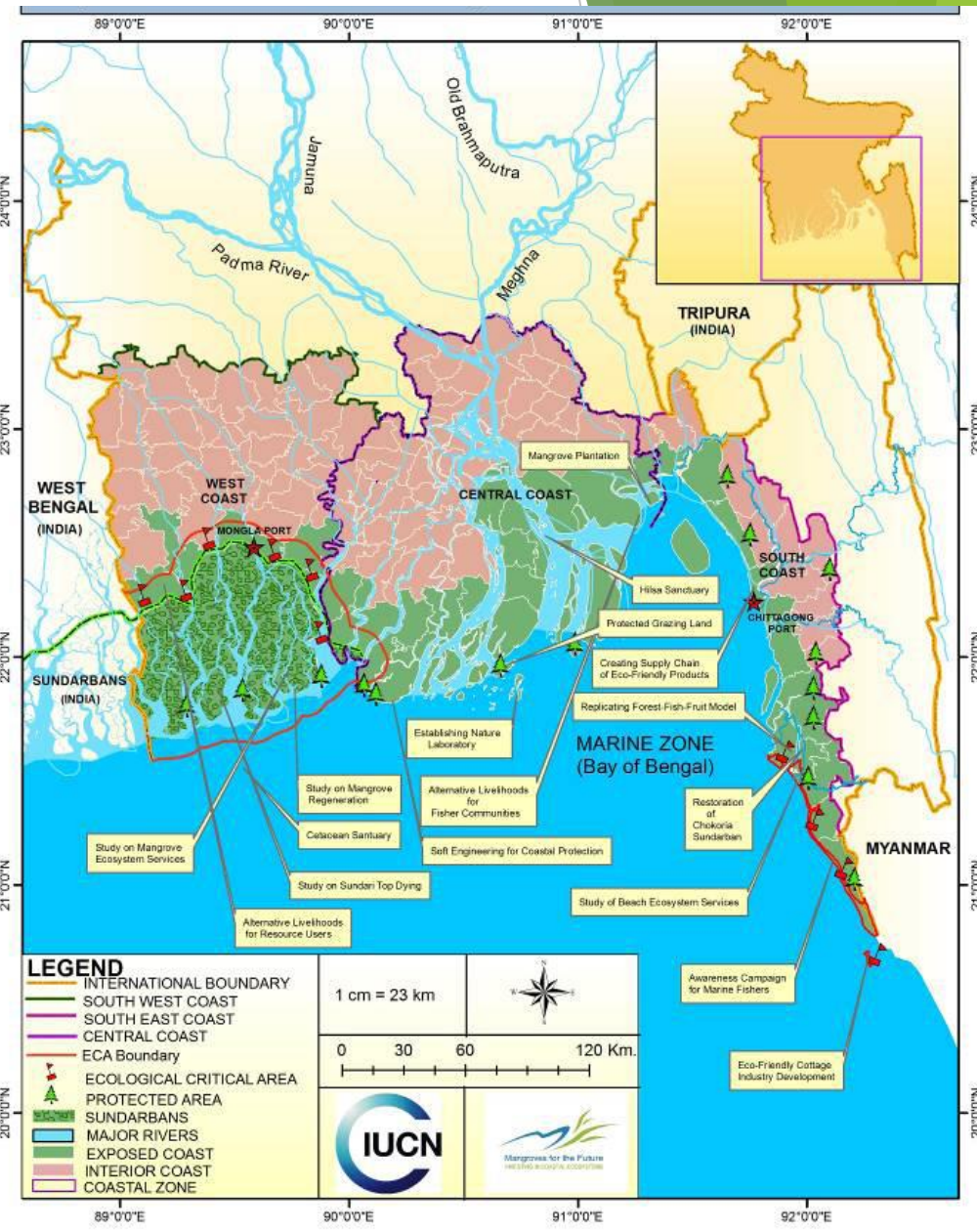
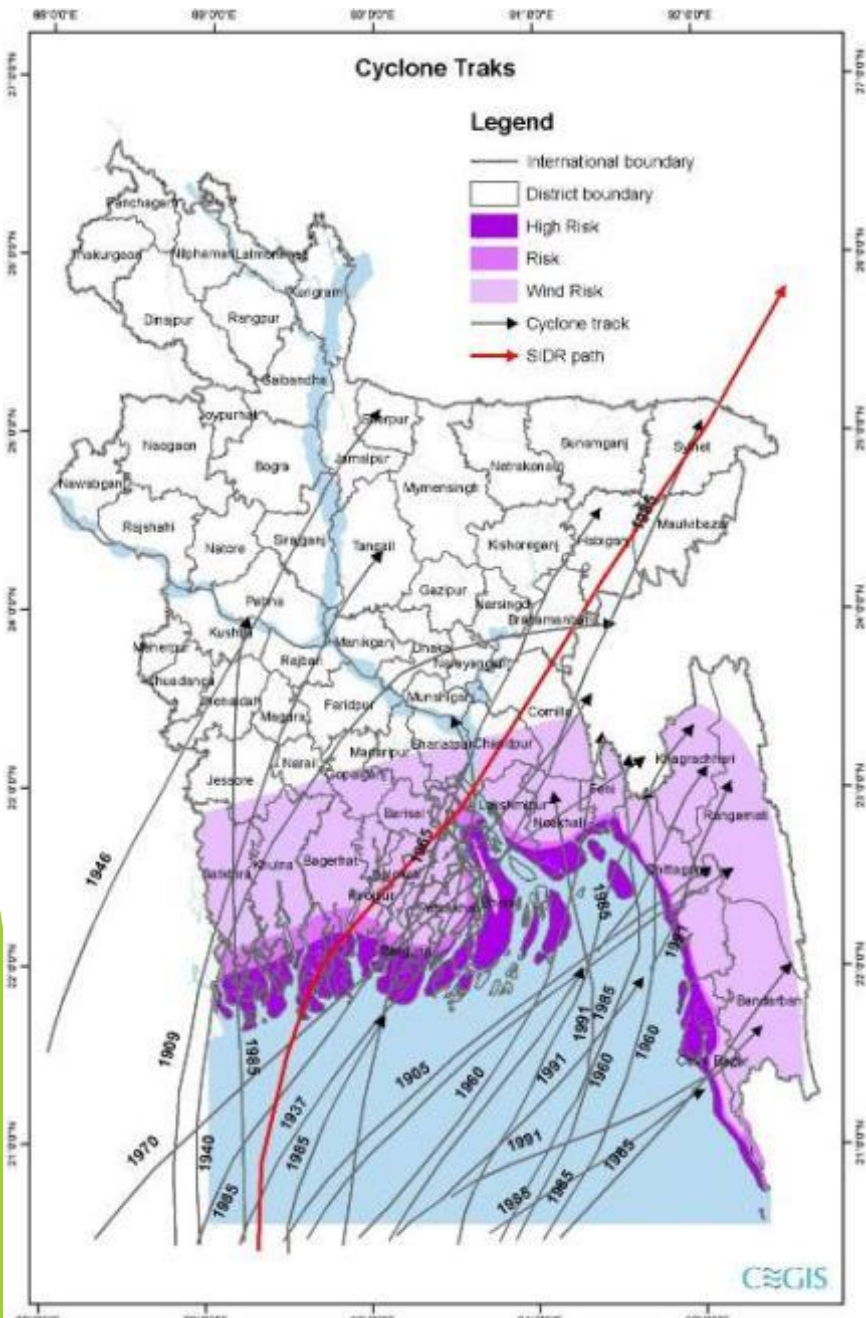
Thank You

ECONOMICS OF FOREST RESTORATION AS CARBON MITIGATION AND NATURE-BASED SOLUTION IN BANGLADESH

IUCN Bangladesh and
Asian Centre for Development

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Context



Sectoral Legal, Policy and Institutional Frameworks related to Forest and Climate Change

Forestry Sector

▶ Legal Framework:

- ▶ (i) Forest Act, 1927; (ii) Wildlife (Conservation and Security) Act, 2012; (iii) Bangladesh Biodiversity Act, 2017

▶ Policy Framework:

- ▶ (i) National Forest Policy, 1994 (Updated Draft of 2016); (ii) Forest related Information Preservation and Exchange Policy, 2019; (iii) Social Forestry Rules, 2014

▶ Institutional Framework:

- ▶ (i) Department of Forest of MoEFCC; (ii) Bangladesh Forest Research Institute (BFRI); (iii) Forest Industries Development Corporation (FIDC)

Other policy directives for restoration

- ▶ Mujib Perspective Plan-
 - ▶ identifies NbS including forestry as climate change response
- ▶ Nationally Determined Contribution (NDC)
 - ▶ heavily emphasised afforestation and reforestation as mitigation options.
 - ▶ BD committed to reduce emissions by 0.37 MtCO₂e by 2030.
 - ▶ Mitigation actions include 150,000 ha of afforestation and reforestation in coastal areas, islands, and degraded areas, among other interventions.
- ▶ 8th Five Year plan
 - ▶ Puts emphasis on ecosystem restoration

Bangladesh-a champion on coastal afforestation



Coastal afforestation

Mangrove rehabilitation by IUCN and partner NGOs

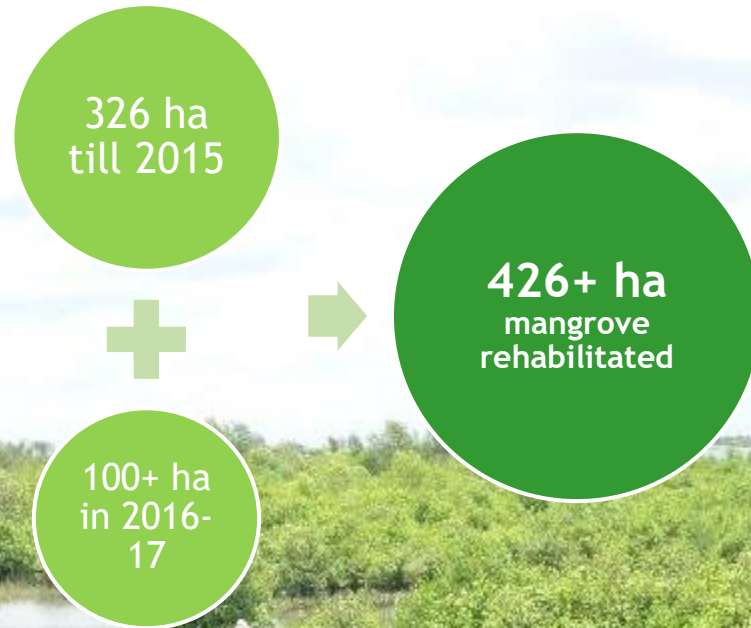
- Started with 25 Hectare Mangrove plantation in 2013-14
- Union Parishad (UP) shares responsibility with a 35 member forest management committee
- Community gets 40% of benefits (fruits, honey, nursery), UP gets 40% and 20% used to maintain the forest



2017



Contribution of IUCN and MFF



**20+ Village
Conservation
Forums under
Satkhira-
Sundarban Co-
management
Committee
engaged**

Forestry and gender issues

Rural Bangladesh has exhibited a **gradual 'greening' of villages** predominantly through homestead and road-side afforestation programmes and simultaneously, the national areas designated as **forest lands have experienced gradual denudation**. In view of both the contrasting experiences, the importance of homestead forestry practices – the majority of which is orchestrated and managed by rural women – is insurmountable towards attempting to bring environmental balance in land use patterns in the country.

In cases of **Social Forestry Programs**, women groups have been chosen as the custodian of such road-side forests, where women groups will enjoy a part of the proceeds from the sale of the trees following maturation.

Homestead forestry in Bangladesh confirms findings from other parts of the world that women play a significant role in natural resource management because of their diverse skills, their knowledge, and their experiences

Under **participatory social forestry**, till 2015-16, plantation has been undertaken on about 79,298 hectares and 66,472 km areas. There are 6, 27,627 beneficiaries involved in this process, out of them 1,14,336 (about 18 per cent) are **women** (MoEF, 2017).

According to the **Social Forestry Act**, there is a provision that 30 percent of beneficiaries are to be from destitute women in the community. In this regard, the no of destitute women as beneficiary is still under-represented. Training is provided to the participants and beneficiaries, out of all trainees provided by the Forest Department, 50 percent are women.

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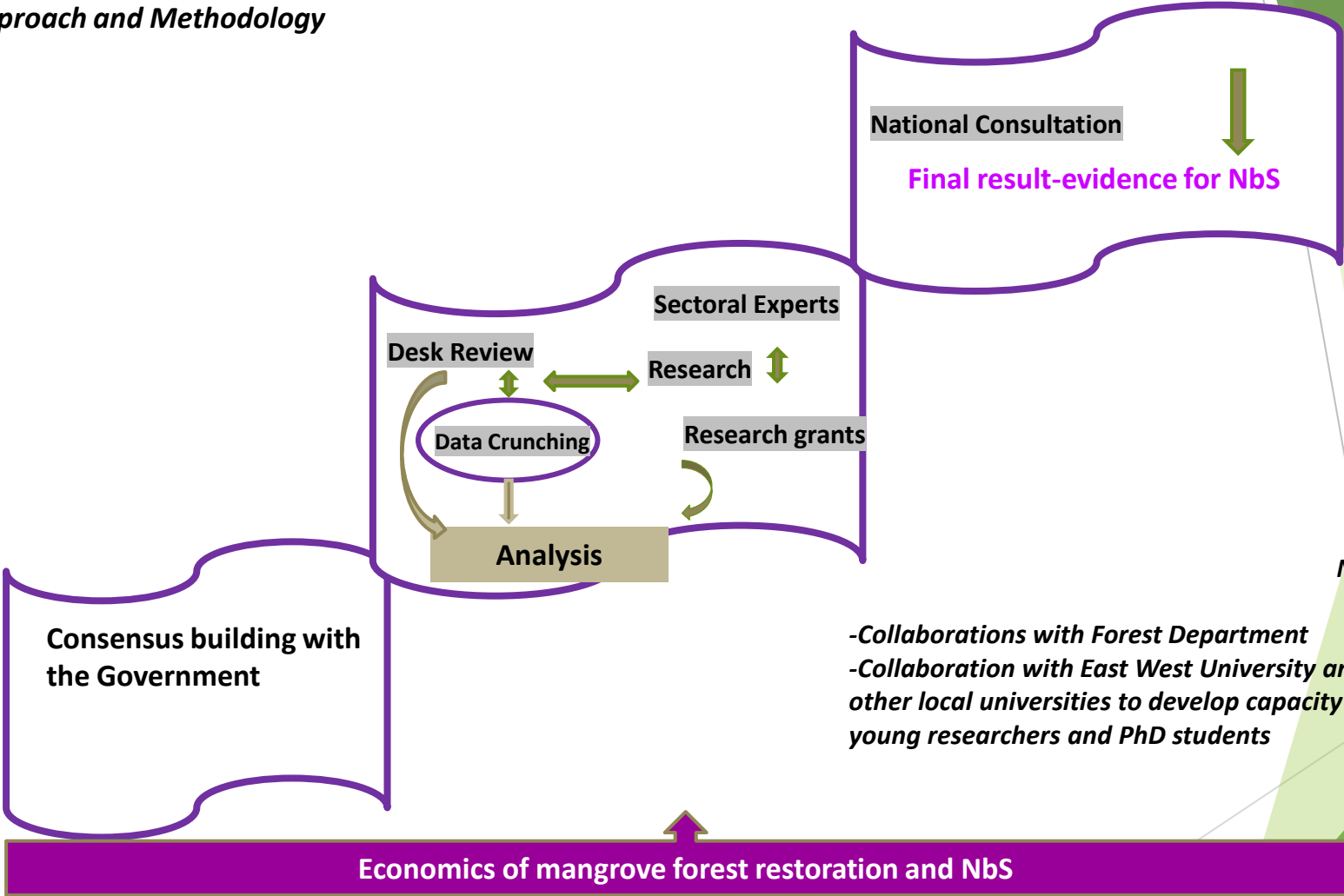
The research project

Research objective

The research aims at generating evidence needed to design and implement effective NbS and access financial resources to support forest restoration, especially in the coastal areas. In particular, the research intends to:

- ▶ Elucidate the economics of forest restoration (both plantations and natural regeneration) as a nature-based carbon mitigation option in Bangladesh.
- ▶ Examine if forest restoration can generate job opportunities for women, youths, and marginalized communities and support rural livelihoods of smallholder farmers as a pathway out of poverty.
- ▶ Identify and compare different interventions for promoting forest restoration, such as payment-based mechanisms versus alternative mechanisms (e.g., tenure reform, out-grower schemes, and technical support), to attain sustainable and green recovery and equitable resource use systems.
- ▶ Propose appropriate institutional arrangements for scaling up forest restoration.
- ▶ Build the capacity of younger and emerging researchers to conduct policy-relevant research on the topic.

Approach and Methodology



Notes

- Collaborations with Forest Department
- Collaboration with East West University and other local universities to develop capacity of young researchers and PhD students

Research Methods

- ▶ Field experiments
 - ▶ Pilot auctions - not considered
 - ▶ Randomized controlled trials[RCT] - not considered
 - ▶ Natural Experiments - yes
- ▶ Cost-benefit analysis - yes
- ▶ Choice experiments - No
- ▶ Quasi-experimental impact evaluation methods
- ▶ “Revealed Preference “ method
- ▶ Harvard Analytical Framework[HFA],and UNREDD framework

Research Methods ...

Biophysical Aspects	Institutions & Incentives	Socioeconomic Aspects
<p>1. Carbon measurement *Satellite images (before/after the intervention in all three types of land use) *Ground level data through sample plots (in all three types of land use)</p> <p>2. Biodiversity Assessment</p> <p>>> Cost-Benefit Analysis OR Estimating opportunity cost of forest restoration</p>	<p>1. Land Tenure 2. Institutional arrangement 3. Incentive mechanisms</p> <p>>> Examining the role of institutions in forest restoration >> Understanding the effectiveness of alternative incentives/financing mechanism</p>	<p>1. FGDs, KIs, Desk Review 2. Population and agricultural census 3. Socioeconomic Survey >> Choice Experiment >> Matching (with/without) to understand the impact of the afforestation on rural livelihoods (by gender/socioeconomic groups) >> (quasi-)natural experiments leveraging weather shocks and changing market access >> Regression Discontinuity Design leveraging discontinuities in policies</p>



Thank You