

SAIME

SUSTAINABLE AQUACULTURE
IN MANGROVE ECOSYSTEMS

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...in a nutshell

International Foundation for Environment and Nature

Non-profit, non-governmental organization

founded 1998

Offices in Radolfzell, Bonn, Berlin

Currently 26 employees

Network with around 100 partner organisations worldwide

Programmes:

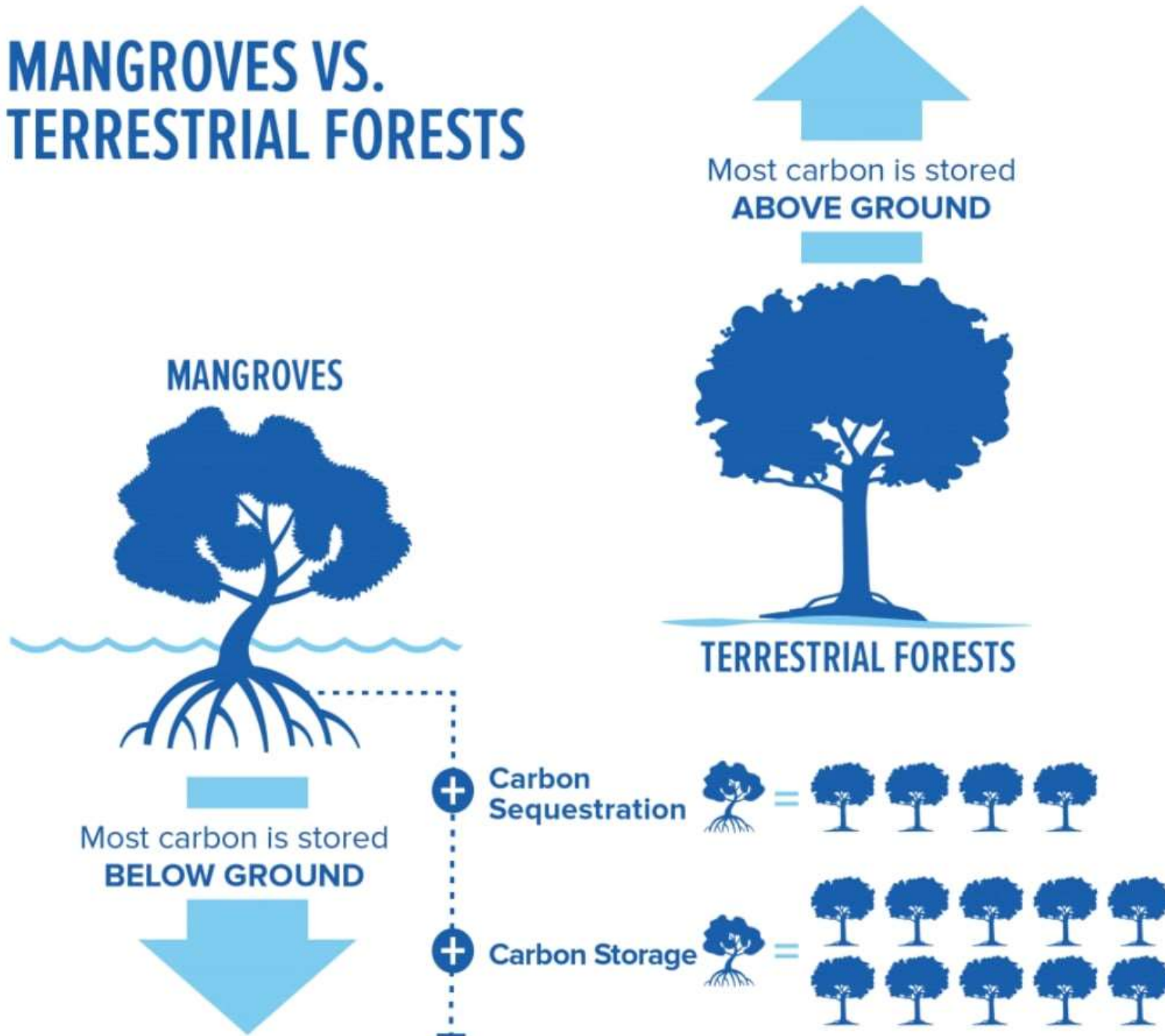
Water, Nature Conservation, Business & Biodiversity,

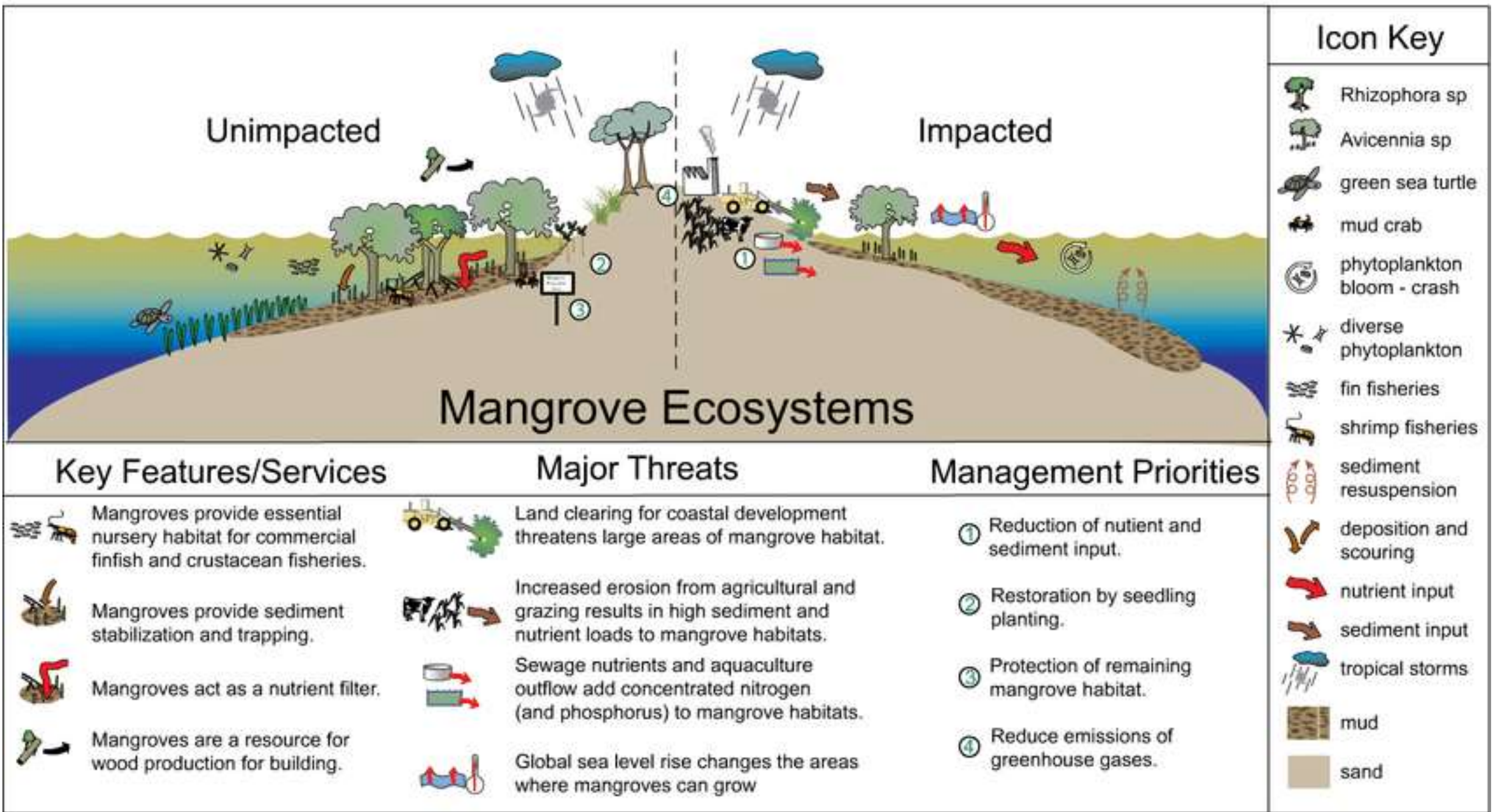
Development Cooperation

Global Distribution of Blue Carbon Ecosystems



MANGROVES VS. TERRESTRIAL FORESTS







Since the post-tsunami project in Sri Lanka (2005-2008), the GNF has been active in the field of mangrove protection and has been able to continuously expand its expertise. It is important to emphasize that GNF only implements projects together with local partners. Besides nature conservation aspects, the living conditions of the people are always in focus. It is important to involve them so that measures can be implemented sustainably.



**EU Asia Pro-Eco
II Post Tsunami
Project**
(2005-2008)

**Mangrove
Reforestation at
six Lakes in Sri
Lanka**
(2009-2010)

**Mangrove
Reforestation at
Lake Pulicat in
India**
(2009-2011)

**Mangrove
Swamp
Restauration in
Sri Lanka**
(2010-2011)

**Mangrove
Protection in
Asia / India, Sri
Lanka, Cambodia
and Thailand**
(2014-2016)

Closed Projects in the context of Mangrove Protection & Restauration



Sustainable
Aquaculture in
Mangrove
Ecosystems
(SAIME I)
(2018-2023)

Transnational
partnership for
resilience of
coastal
populations in
South Asia
(2021-2024)

Sustainable
Aquaculture in
Mangrove
Ecosystems
(SAIME II)
(2023-2027)

ongoing Projects in the context of Mangrove Protection & Restoration

English Name - Avicennia officinalis
Scientific Name - Avicennia officinalis

The Sundarbans – the world's largest mangrove forests



© NASA image created by Jesse Allen

The Sundarbans in Bangladesh, Dacope

© BEDS, Bangladesh Environment & Development Society, 2022

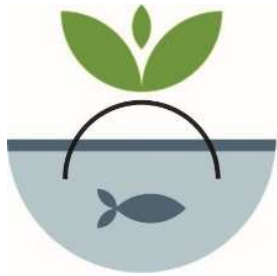


Traditional intensive farms in Ca Mau, Southern Vietnam

© <https://medium.com/sustainable-seafood/thailands-shrimp-aquaculture-revolution-9ab934ef4864>

Vision of Sundarbans in the year 2030

To collectively make shrimp production more sustainable,
protect mangroves and improve livelihoods!



SAIME

SUSTAINABLE AQUACULTURE
IN MANGROVE ECOSYSTEMS



NATURE ENVIRONMENT
& WILDLIFE SOCIETY



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Sustainable Aquaculture in Mangrove Ecosystems (SAIME)

Implemented by
Nature Environment & Wildlife Society
(NEWS)

In cooperation with
Global Nature Fund (GNF) in consortium with
Naturland e.V.



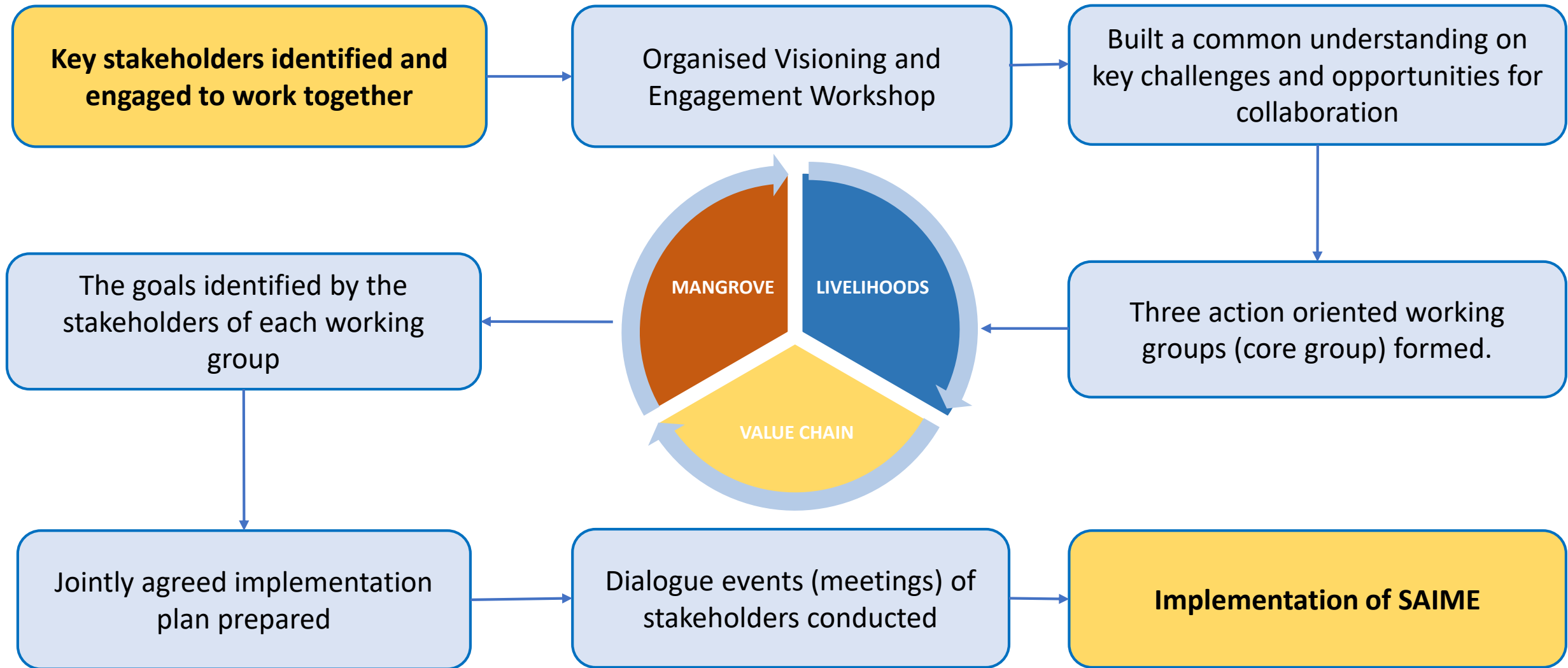
Mercedes-Benz



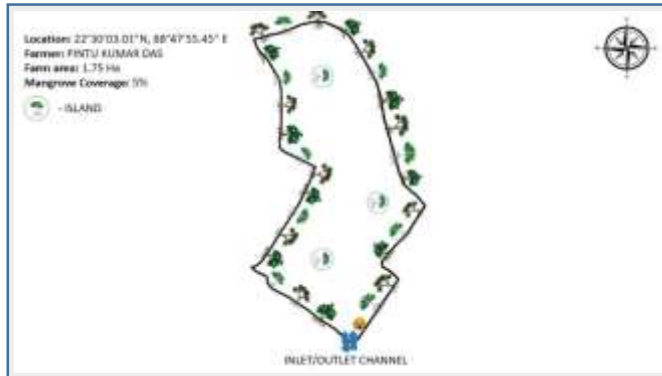
Process of collaboration toward our vision-2030



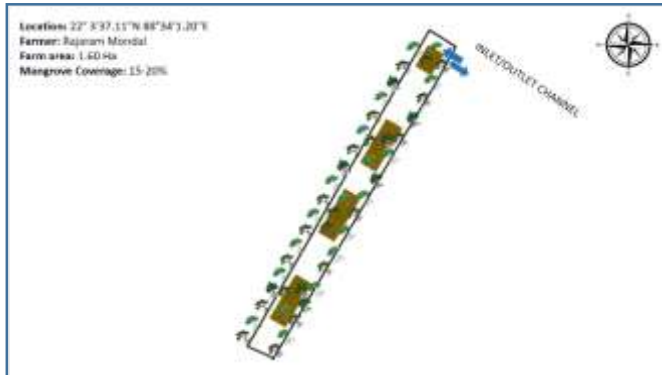
“Healthy mangroves, thriving coastal communities, and robust aquaculture value chains in the Sundarbans”



Strategy for SAIME



Basic SAIME
Integration of mangrove coverage in 5-10 % farm area



Standard SAIME
Integration of mangrove coverage in 20-30 % farm area



Mangrove Species Planted:

Avicennia officinalis, *Avicennia alba*,
Avicennia marina, *Heritiera fomes*,
Rhizophora apiculata, *Bruguiera gymnorhiza*, *Xylocarpus moluccensis*,
Sonneratia apetala, *Nypa fruticans*,

Major Aquaculture Species:(Extensive Brackishwater Polyculture with no feed)

Shellfish species- (*Penaeus monodon*,
Macrobrachium rosenbergii, *Penaeus indicus*)
Finfish species- (*Chelon parsia*, *Liza tade*, *Mugil cephalus*)

Major activities done so far

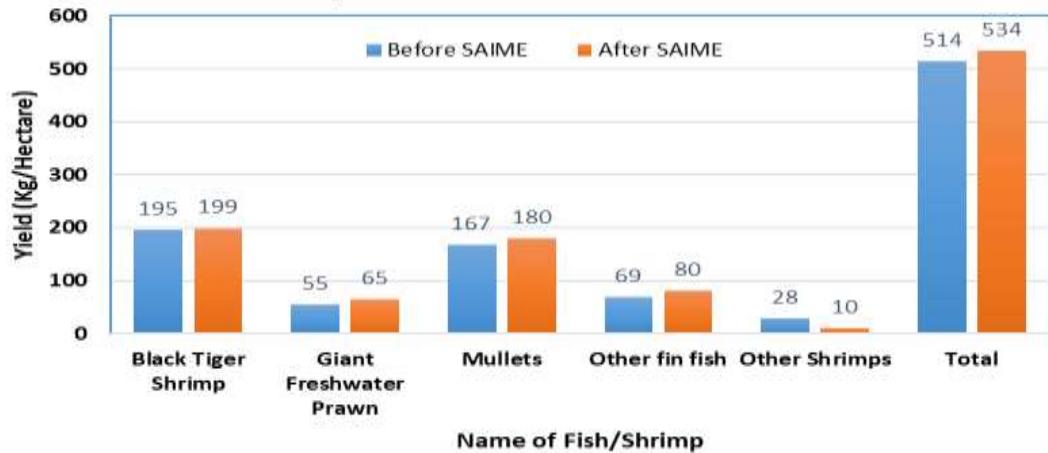


- Farm preparation and Implementation of SAIME in 29.46 hectares area integrating 42 farmers in 2 groups
- Technical capacity building of the farmers: Pond Preparation, Soil and water quality management, Mangrove plantation & monitoring
- Mangrove Integration: Development of Central mangrove nursery, Mangrove plantation and Post-plantation monitoring at SAIME farms
- Stocking of hatchery-bred Black tiger shrimp and Giant freshwater prawn seeds
- Water Quality Monitoring by the farmers at SAIME farms
- Growth Monitoring of Shrimps by the farmers
- Harvest and Sale of shrimp and fish species
- Farmers' Diary maintenance and monitoring by the farmers
- Linking with Badabon Farmers' Producer Company Limited (BFPCL) for better price realization
- Leaf Litter Dynamics study in collaboration with Centre for Excellence in Blue Economy (CoE-BE), IISER Kolkata
- Soil Carbon study in collaboration with Seacom Skills University at SAIME farms
- Publication of Articles on SAIME in local and national newspapers, Aqua International magazine

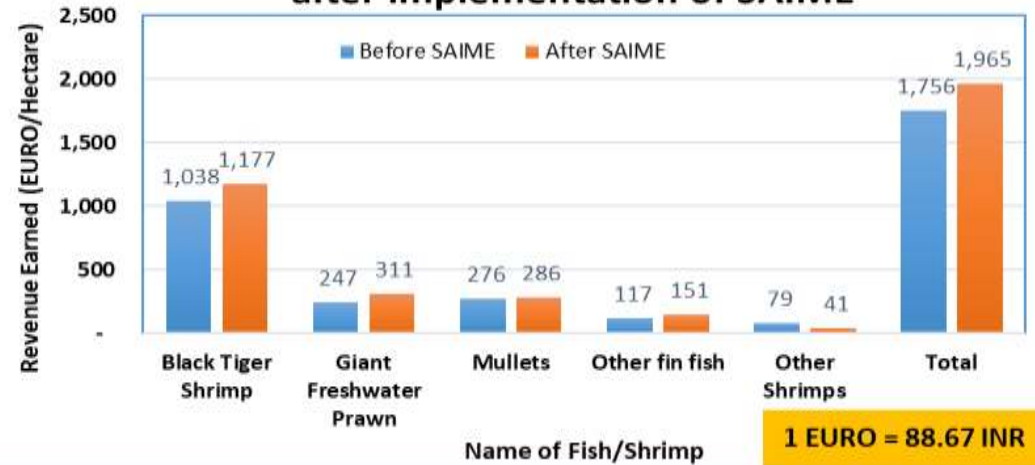
Economic fact sheet



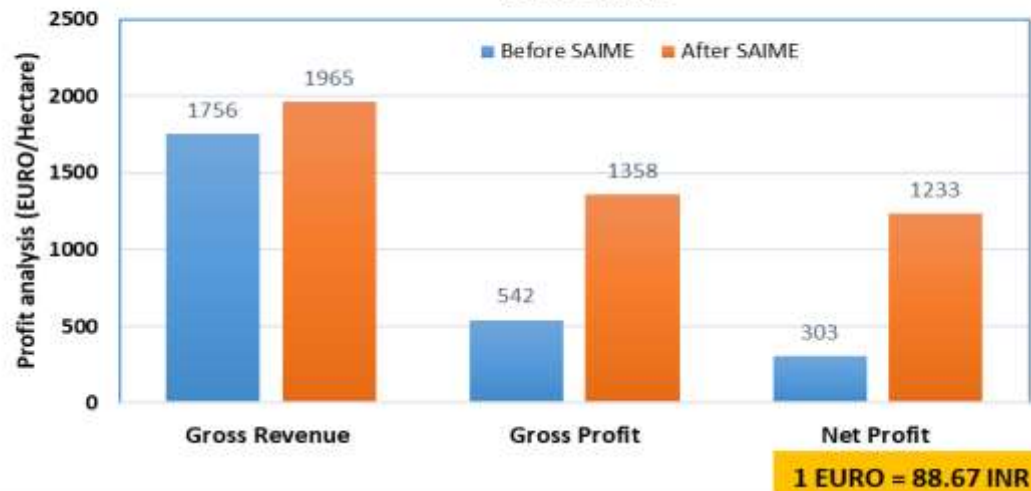
Yield comparison before and after implementation of SAIME



Comparison of revenue earned before and after implementation of SAIME



Profit analysis before and after implementation of SAIME



- Gross Revenue = Total sale value
- Gross Profit = Gross revenue - Total operational cost
- Net Profit = Gross revenue - (Total fixed cost + Total operational cost)

Activities Photographs





Thank you very much . . .



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BANGLADESH

Presented by

Md. Maksudur Rahman
Chief Executive of BEDS



An Organization for Excellence in Nature

Who we are

Bangladesh Environment and Development Society is a leading community based non-profit, environment and development-focused non-government organization.

Vision

Living in harmony with nature



History of BEDS

2010

2013

Area of Action

BEDS established on July 26, 2010 for solving complex social and environmental problems in Bangladesh which is committed to maintaining ecological balance and creating harmony between human and nature.

BEDS registered from the NGO Affairs Bureau, Prime Minister's Office, Government of the people's republic of Bangladesh

Our grass-roots initiatives are focused on rural reconstruction and mangrove restoration; mitigating the harmful impacts of human induced climate change; addressing the unsustainable use of natural resources; improving the relationship between humans and the mangrove ecosystem; and solving the crisis of electricity by solar energy, drinking water, reducing the poverty and issues of gender inequity and human rights

Our Active Donors & partners



Ongoing projects: 10

Implemented projects: 62



Sustainable Aquaculture in Mangrove Ecosystem in Bangladesh

Visioning and Engagement Workshop in 2020

MSP for achieving the vision 2030

Ecological and Economic value of IMA (Integrated Mangrove Aquaculture)
 ম্যানগ্রোভভিত্তিক মাৎস্য চাষের পরিবেশগত অর্থনৈতিক গুরুত্ব

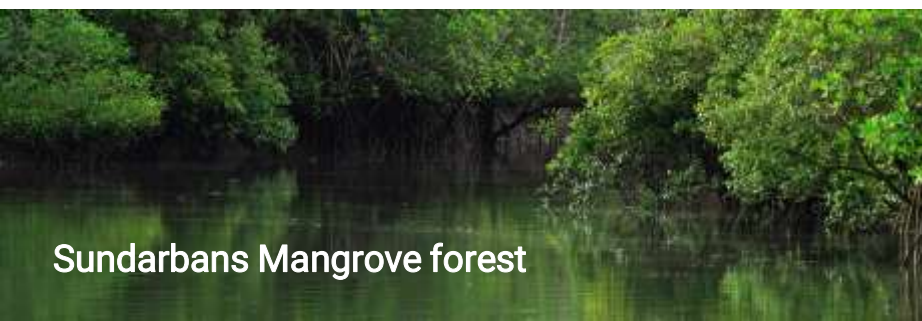
ম্যানগ্রোভ মাছ পাশাপাশি, মাৎস্য চাষীর মুখে হাসি।
 Integrated Mangrove Aquaculture ensures smiling face of the farmers



Vision 2030
 “Healthy mangroves, thriving coastal communities, and robust aquaculture value chains in the Sundarbans: India, Bangladesh and beyond”



Formation of mangrove working group, value chain working group and livelihood working group by involving civil member, relevant government representatives, activist/practitioners, researchers etc.



Sundarbans Mangrove forest





Sustainable Aquaculture in Mangrove Ecosystem in Bangladesh

Piloting IMA from 2020 to 2023

Multipurpose cooperative building 2021 to 2023

Introducing IMA among 1250 farmers from 2021 to 2022



- Planted more than 20000 saplings in **5.18** hectare of shrimp farm
Support IMA pilot farm farmers



Constructed IMA information hub, Fish processing, storage and transportation facilities, ice production system



- Trained 1250 farmers on IMA at Sundarbans coastal region
- Monitoring the trained farmers



Capacity building of IMA farmers





Sustainable Aquaculture in Mangrove Ecosystem in Bangladesh

Mangrove nursery



- **7** community based mangrove nurseries established
- Raised **2,88,440** mangrove saplings by the women group
- Income generation of the local women



Mangrove restoration



- Planted more than **15000** saplings in the river bank side
- BEDS restored **87** hectare area by planting 0.5 millions saplings





Sustainable Aquaculture in Mangrove Ecosystem in Bangladesh



Future plan of SAIME

- Branding IMA shrimp nationally and internationally
- Increase the IMA area and IMA production (160 hectares among 1250 farmers)
- Raise 10,00,000 mangrove saplings by local women
- Improve the livelihood of the marginal farmers by promoting mangrove based products, eco tourism etc.



Mangrove based products



Thank you very much



PROJECT PARTNERS & SUPPORTERS SINCE 2005



Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety



SRI LANKA



NATURE ENVIRONMENT & WILDLIFE SOCIETY

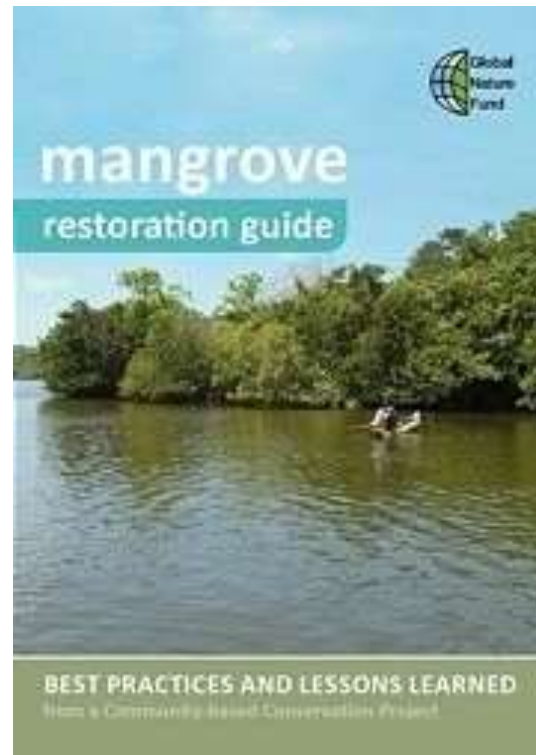
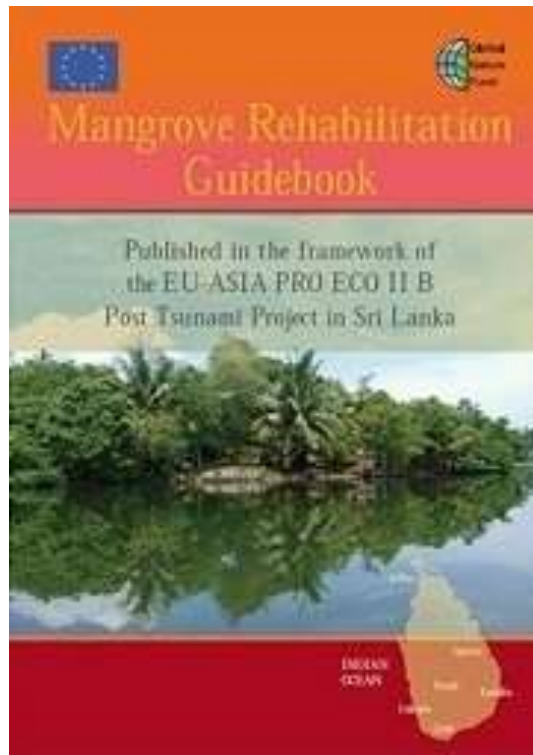
SaciWATERS
SOUTH ASIA CONSORTIUM FOR INTERDISCIPLINARY
WATER RESOURCES STUDIES



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Foundation Ursula Merz

PUBLICATIONS & FURTHER INFORMATION



www.globalnature.org/en/home

[...]

Thank you very much for your attention!

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