Pros and Cons of Mangrove Protection Strategies in Mangreen Project, India

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India
Project Location
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Vision

Strategy of Mangreen Project is based on the vision of establishing healthy, mangrove seed banks in two northern Palk Bay estuaries called Agni and Ambuliar.
Advantages of MSBs

• Suitable for Estuarine or lagoon mouth in Densely Populated Coastal Areas, with highly degraded mangroves

• Enhances Natural Seed Dispersal as well as supplies seeds to nursery of local mangrove projects

• A platform for monitoring, educational field trips and training
Mangrove Seed Banks (MSBs)

- It is a physically defined, protected mangrove area, located on the mouth of estuaries in northern Palk Bay. MSBs are managed by local community groups.

**MSBs Allow limited access to**

1. Fishers – Generates income (job, mud crabs) & reduce exotic thorny plants
2. Research students – To study the mangrove ecology in MSBs
3. NGOs – To learn and initiate similar projects in other areas
February 2010
Mangreen

- Promoting Technical & Scientific Input
- Community Participation through Development
- Sharing Knowledge with other NGOs
- Education & Awareness
- Mangrove Restoration Sites (MSBs)
Strategies for Establishment of MSBs

1. Promoting Community Participation
2. Promoting Ecological Mangrove Restoration Pilot Sites for MSBs
3. Promoting Basic Scientific Research with international universities in Mangrove Restoration Sites
4. Promoting Mangrove Restoration technical tools & knowledge sharing with NGOs
5. Promoting Educational Tools and Environmental Youth Groups
**Strategy 1**

**Promoting Community Involvement**

- Binding Official Commitment of Villagers with Govt., and OMCAR
- Community Nursery Management
- Fencing, Plantation and canal management
- Ensuring Basic Facilities
- Site Extension & Shrimp Farm EMR
- Fishermen Aquatic Resource Council (FARMC)
**Strategy 1** (Promoting Community Involvement)

**Pros**

- Community participated in field work of Mangreen Project
- Fishers and women SHGs are trained in mangrove restoration field work
- Government sponsors 70% through NNT scheme for social programmes
Cons

Community supports Mangreen (until the end of our social programmes!!!)
Slow progress in NNT scheme
Changing village leaderships and their support to Mangreen
Shrimp farm Ecological Mangrove Restoration is not successful
Promoting Ecological Mangrove Restoration Sites for MSBs

- Site Selection and ownership
- Fencing, facilitating natural water flow
- Canal management
- Sequential Photography
- Support from Villagers
- Plantation, where natural seed dispersal is low
Strategy 2 (Promoting Ecological Mangrove Restoration Sites for MSBs)

**Pros**

- Gradual development of natural mangroves as well as planted seedlings in MSBs
- All the Sites (15 acres) have dense forest thickets than ever before
- Fish Bone Canals connect the mangroves with estuary *(natural seed dispersal)*
- Mangrove filed work team is formed in Mangreen Villages
- Growth of Mangroves in F.B. canals is visually documented best, by S. Photography

**Used PVC pipes for Mangrove Nursery**
Strategy 2 (Promoting Ecological Mangrove Restoration Sites for MSBs)

**Cons**

- Site Management of 15 acres is a continuous field work and expensive
- Mangreen Project needs next 4-5 years with steady financial support
- Seasonal flood and seagrasses make the canal maintenance as a laborious field work
- Mangreen is not 100% EMR method due to fencing and Nursery Development

February 2008 → 22 months → December 2009
15 University Students from Germany, Australia, Croatia were visited in 3 yrs

Documentation of Project activities in various universities is a strength for the Project

Students make easy publicity of our project in schools, villages and in their Universities

Mangrove growth monitoring is documented from 2005 to 2009

GPS mapping of F.B.Cs

Topic: Comparison of Growth Dynamics, associated fauna and soil characteristics of Protected and Unprotected Mangroves in Southeast Coast of India

Figure 22: crab burrow distribution along the transects at the protected area

Figure 23: crab burrow distribution along the transects at the unprotected area

Marco Langer, University of Eberswalde (2008)
Universities increased the duration of practical training from 2 to 5 months

Students need a staff’s full time assistance (travel, food, field work, health)

Individual performance in field research affect the mangrove monitoring data

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**Reports**

- **Average**: 40%
- **Good**: 34%
- **Not yet submitted**: 16%
- **Not fit for reference**: 10%
Strategy 4 (Promoting technical tools & knowledge sharing with NGOs)

Pros

Output of field experience as presentations, training prg & consultancy

Introduced to a list of NGOs in our region as a resource NGO

- Sediment Sampling
- Seq. Photography
- Line Transect Method
- Quantum GIS Mapping
Cons

Mangreen Project strategies and actions are site specific.

Physiochemical conditions in other areas challenges the success rate and timely progress of the project.

Availability of key project staffs and technical persons for follow up and modifications...

GPS Mapping Training Programme
**Strategy 5** (Promoting Mangrove Educational Tools and Environmental Youth Groups)

**Pros**

Monthly environmental education classes reached all coastal schools /Dist.

Great exposure to OMCAR team to local community, especially youths

Helped to get volunteers in every village

Helped to coordinate educational programmes with Governt. departments
Cons

Schools require basic facilities, a part of project fund goes for the provision of school gates, fences etc.,

Still we have no infrastructure facilities (a scientific interpretation centre)...
• Mangrove Protection Strategies are site specific, thus have to be developed with the consultation and participation of local NGOs, community and ecologists.

• There should be a flexibility in mangrove protection strategies to adopt new sub-strategies during the project period.

• Research, Monitoring and Documentation with universities has to be one of the main strategies of mangrove conservation projects.

• Binding the Government Social Programmes is also an essential strategy for community based mangrove protection.

• Capacity Building of NGO staffs on GPS mapping and application of user-friendly GIS softwares (Quantum GIS) will create an accurate data collection and technically skilled project staffs.
Thank You