

NGO's ROLE IN BIODIVERSITY CONSERVATION



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M.S.SWAMINATHAN RESEARCH FOUNDATION

Centre for Research on Sustainable Agriculture
and Rural Development



M.S.SWAMINATHAN RESEARCH FOUNDATION

M. S. Swaminathan Research Foundation (MSSRF) was registered in 1988 as a non-profit Trust.

The basic mandate of MSSRF is to impart a pro-nature, pro-poor and pro-women orientation to a job-led economic growth strategy in rural areas through harnessing science and technology for environmentally sustainable and socially equitable development.

The approach was based on strategic and participatory research, capacity building, networking and partnership building, based on the principles of social inclusion in access to technologies which help to enhance income and environment.

Research and outreach strategies were devised to bridge the rich-poor and gender divides in the areas of information, knowledge and skill empowerment

Programme Areas

- Coastal Systems Research
- Biodiversity
- Biotechnology
- Ecotechnology
- Food Security
- Education, Communication, Training and Capacity Building

Coastal Systems Research

The aims of Coastal Systems Research Programme are

- To strengthen the ecological infrastructure of the coastal area and their sustainable management.
- To demonstrate opportunities available for the enhancement of the quality of life of poor people and environment and
- To create an enabling condition which will lead to local communities having major stake in safeguarding their coastal environmental assets.

Coastal Systems Research

Though focal coastal ecosystem chosen is mangrove wetland some of the on going activities are related to conservation of health and wealth of the Gulf of Mannar, which is rich in marine biodiversity and fishery resources, alternative income generating activities for poor fishers and nuclear and biotechnological tools for coastal systems research.

Coastal wetlands: mangrove conservation and management

The following are the major achievements of this Joint Mangrove Management programme.

- Developed and demonstrated a science-based, community-centred and process-oriented approach to restore and sustain mangrove wetlands
- Established 33 village level institutions (VLIs) namely, Village Mangrove Councils for Joint Mangrove Management with about 5240 mangrove user families as members; many of these VLIs are currently working with the Forest Development Agency to restore and conserve mangrove wetlands

Coastal wetlands: mangrove conservation and management

- Restored about 1500 ha of degraded mangrove wetlands through the Village Mangrove Councils. About 6.8 millions mangrove saplings planted in the restored area, of which nearly 75-80% survives.
- A number of activities to reduce poverty among the mangrove user communities were implemented.
- Women and women groups, men and youth are empowered both technically, socially and economically to participate in JMM activities.



Pichavaram

Before restoration

1998

After restoration

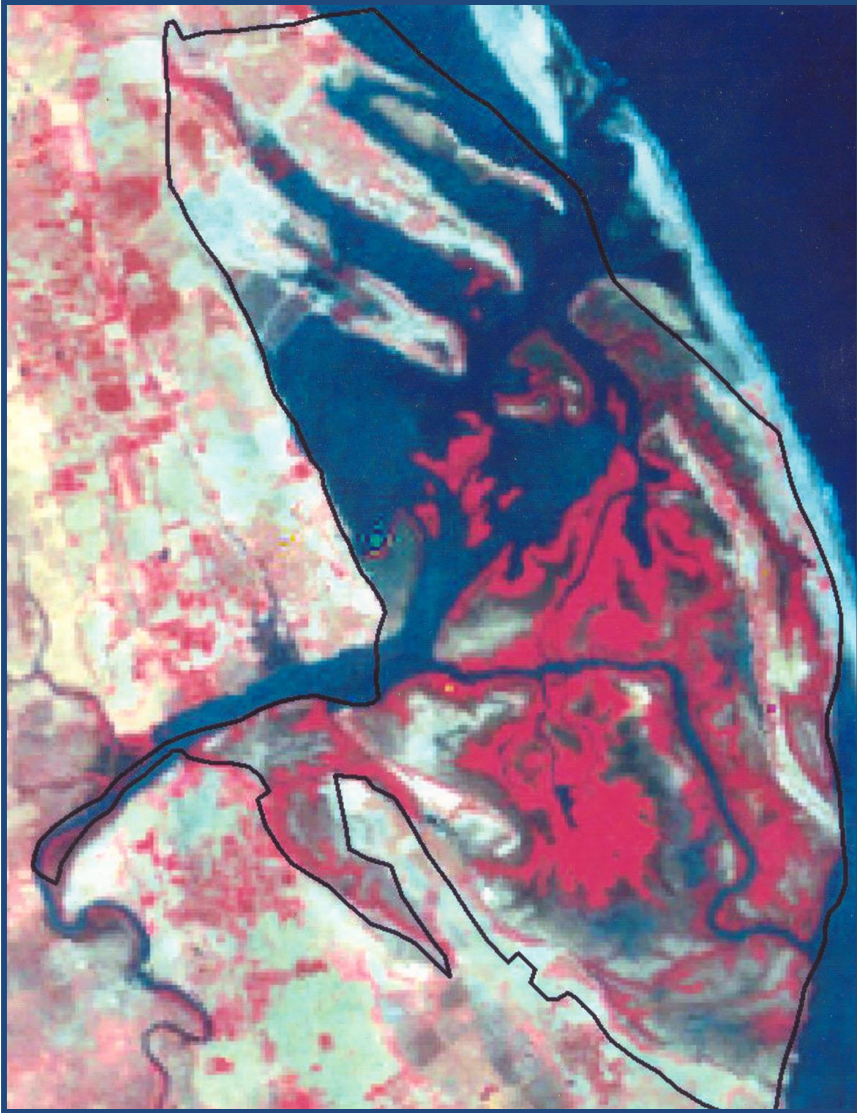
2004



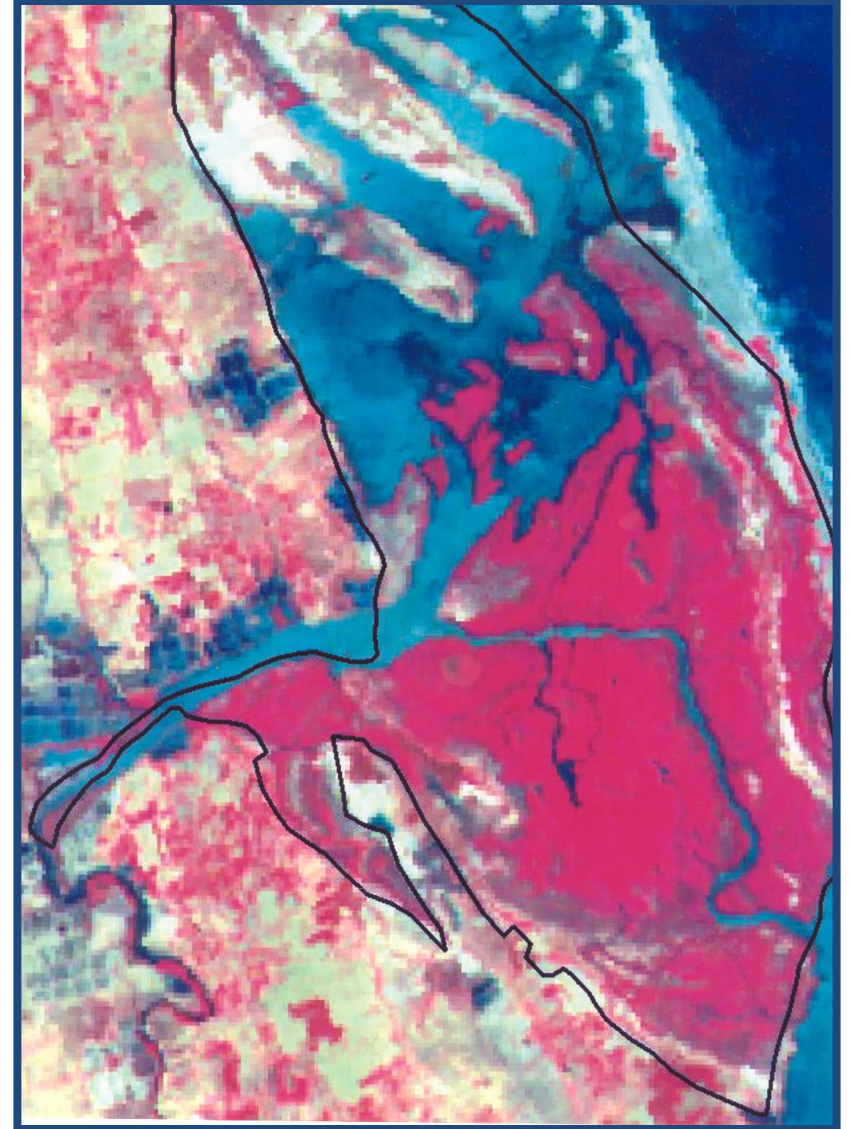
Courtesy: Dr. V. Selvam, MSSRF

Restoration of Pichavaram mangroves

1986



2007



Courtesy: Dr. V. Selvam, MSSRF

Integrated Mangrove-Halophyte-Fishery Farming System – proto type



Courtesy: Dr. V. Selvam, MSSRF

MUD CRAB FATTENING



Courtesy: Dr. V. Selvam, MSSRF

Coastal wetlands: mangrove conservation and management

- During 2004 tsunami, a lot of anecdotal evidences indicated that loss of human lives and damages to properties in the villages located behind restored mangrove ecosystem of Pichavaram in Tamil Nadu were comparatively less.
- This role of mangroves and other coastal vegetation in reducing the impact of tsunami was later scientifically proved, which led to the current bioshield programme of MSSRF.

BIOSHIELD PROGRAMME

The objectives of this programme are

- To provide inputs to improve current practices in establishing mangrove and non-mangrove bioshield along the coastal areas and to develop and demonstrate of techniques to integrated bioshield development and income generating opportunities.
- This programme is being implemented in 14 villages in two districts each in Tamil Nadu and Andhra Pradesh.

CONSERVATION OF BIOSPHERE RESERVE

Prepared a long-term project proposal entitled Conservation and Sustainable use of the Gulf of Mannar Biosphere Reserve's Coastal Biodiversity for support by GEF and UNDP.

This proposal was jointly prepared by MSSRF and Tamil Nadu Forest Department. As per this proposal, a government owned trust namely, Gulf of Mannar Biosphere Trust has been formed, which implements this project.

ALTERNATIVE LIVELIHOODS

Implemented a project on Promotion of alternative livelihoods for the poor in the Biosphere of Gulf of Mannar.

This project was implemented by MSSRF with the support of Ministry of Rural Development, Government of India and UNDP.

It was implemented from May 2001 to December 2003 in 4 villages and demonstrated the feasibility of establishing community based commercial enterprises such as fish pickle unit, agar production, pearl culture and coastal resources enhancing system such as artificial reef. The artificial reef model is being replicated by the Tamil Nadu Fisheries Department.

CONSERVATION OF MARINE BIODIVERSITY

A special Project namely, Nuclear and Biotechnological tools for Coastal Systems Research is being implemented in the areas around Kudankulam Atomic Power station. This project is implemented by the Programme Area 200: Biotechnology.

GIS and Remote Sensing Laboratory

MSSRF has a GIS and Remote sensing Laboratory. Though it is a centralized service providing unit it is attached to Coastal Systems Research. It provides services to all programme areas as per their requirement.

Education, Communication, Training and Capacity Building

VKC & VRC

In 1992, M.S.Swaminathan Research Foundation (MSSRF) developed the concept of "Village Knowledge Centre" (community base).

Since, 1997, MSSRF is implementing the Village Knowledge Center (VKC) and Village Resource Centre (VRC) programme.

In 2003, the VRC and VKC programmes were further strengthened in the form of creating Jamsetji Tata National Virtual Academy for Rural Prosperity (NVA) through the collaboration with several international and national partners (including content and capacity building). All our VRCs are connected by ISRO uplink / downlink satellites.

VKC & VRC

The main aim of the programme is to empower vulnerable people in order to make better choices and achieve better control of their own development and to build skills and capacities of the rural poor with a view to enhancing livelihood opportunities.

The NVA programme is to bring together the experts and grassroots level communities in two-way communication with the objective that knowledge should reach every home and hut.

LIVELIHOOD ISSUES

ARTIFICIAL REEF

MSSRF launches a project to promote sustainable alternative livelihood systems using local resources for the benefit of people living off the Gulf of Mannar coast.

Artificial reef project to stimulate the natural system that has degraded over the years, in order to bring thousands of fishermen families out of poverty and misery.



LIVELIHOOD ISSUES

Second Component

The second component, which will comprise five activities - the recently launched artificial reef unit, a fish pickle unit, an agar plant, a pearl culture venture and village information centres- in six villages (Kunjarvalasai, Mundhalmunai, Vellapatti, Therespuram, Pamban and Thangachimadam), is under the care of the MSSRF. While the local communities will implement the projects, the MSSRF will act as a facilitator providing technical, managerial and marketing assistance.

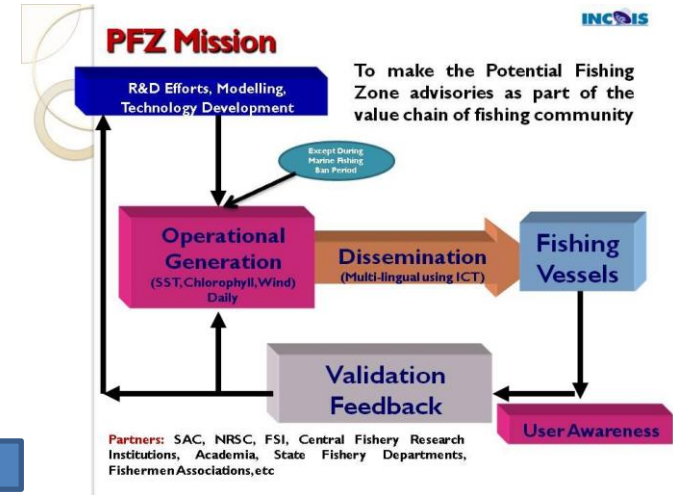
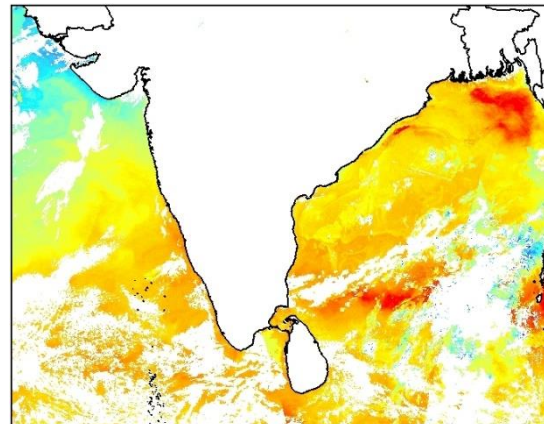
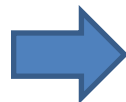
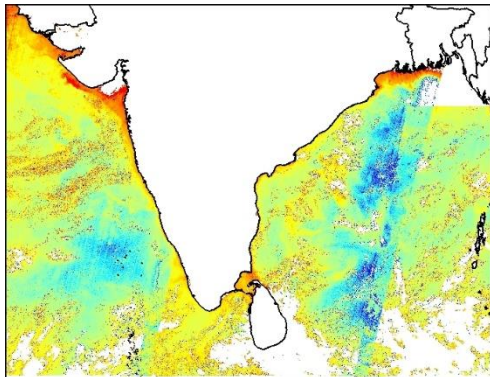
Says MSSRF project director Dr. V. Selvam: "All the projects are comprehensive - from concept development to marketing - as the idea is to make each activity economically sound and viable so that they are sustainable."

POTENTIAL FISHING ZONE ADVISORIES

The MSSRF jointly collaborated with ISRO and INCOIS in guiding the fishermen for potential fishing zone.

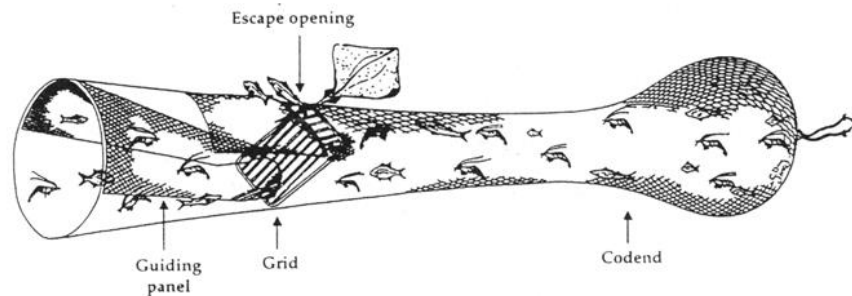


INCOIS సాగర సమాచార సూచిక				
చేపలు పట్టడానికి ఉత్తమమైన ప్రాంతాల సమాచారము				
సముద్రము	దినము	సముద్రము	సముద్రము	సముద్రము
దీపావళి	SW	193	039	084 094 100
దీపావళి	SW	183	055	060 094 100
మైదీ	SW	218	043	048 025 028
E - పూర్వము	W - పశ్చిమము	NE - ఉత్తరము	SE - దక్షిణము	SW - పశ్చిమము
N - ఉత్తరము	S - దక్షిణము	SR - ఉత్తరము	SW - దక్షిణము	SW - దక్షిణము
సూర్యగతం, సాగర				



TURTLE EXCLUDING DEVICE

MSSRF CREATE AN AWARENESS and given training about uses of TED for fishermen's.



Fish value added products



FISH OIL

FISH FERTILIZER

ANIMAL FEED

FISH BIO DIESEL



ALTERNATIVE LIVELIHOOD

Salicornia brachiata



Edible oil	28%
Protein	31%
Fiber	5%

Courtesy: Dr. V. Selvam, MSSRF

ALTERNATIVE LIVELIHOOD

Salicornia europaea



70 to 80 g/l

Used widely
as salad or
accompaniment of
seafood In Europe

Courtesy: Dr. V. Selvam, MSSRF

Batis maritima



High saline tolerant

Seed contains high quantities of proteins, oils and starches

“Extremely nutritious”

Courtesy: Dr. V. Selvam, MSSRF

ALTERNATIVE LIVELIHOOD

- Computer training.
- Education for school drop outs.
- Training on motor mechanics, electronics and electrical.
- Tailoring.
- Home Gardening
- Small scale industries