NEWSLETTER #18 NOVEMBER-DECEMBER 2010



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Dear Secretariat,

Welcome to the Mangroves for the Future (MFF) newsletter.

The MFF newsletter aims to keep MFF National Coordinating Bodies, partner organisations and other stakeholder groups, around the region and internationally, up-to-date on MFF activities and other marine and coastal news.

We warmly welcome your contribution!

Regional activities

Inaugural regional learning event promotes knowledge sharing



Sharing MFF knowledge at the RSC 7 learning event © MFF Secretariat 2010

In the first week of November 2010 the MFF Regional Steering Committee met in Wadduwa, Sri Lanka for its seventh meeting.

To give MFF Phase 2 (2010-13) a stronger regional focus on information and knowledge-sharing, the now annual Regional Steering Committee (RSC) meetings will also include a learning event designed to encourage member countries and partners to exchange knowledge and share experiences from MFF activities.

The RSC 7 Learning Event had the theme "Building environmental and livelihood resilience in coastal and other vulnerable communities", and featured results and lessons learned from the MFF projects in 2008-2010.

The event took the form of a Knowledge Exhibition and a series of discussions held over two days. The Knowledge Exhibition showcased knowledge products that provided information from MFF projects in all the focal countries of Phase 1. Each country had a booth where representatives from small grants and large projects were present to engage with other participants and visitors. The Regional Secretariat also had a booth displaying the Four-Step Guide to Climate Change, which featured interactive Climate Proof footprint step-boards for participants to explore. MFF partners, including UNDP Sri Lanka, CARE, and IUCN Sri Lanka, also participated in the exhibition

A structured half-day discussion session with two lead presentations was included on day one to stimulate a regional dialogue and information-sharing among RSC members and other regional partners. The first presentation began with IUCN Sri Lanka sharing their experience in implementing the Small Grant Facility (SGF) projects, followed by UNDP Thailand who discussed the participatory and consultative processes used by MFF Thailand. During the open discussion, other MFF National

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Coordinators shared their insights on implementing SGF projects and large projects, building partnerships, and recognizing the role they play in achieving healthy ecosystems.

The second presentation was delivered by CARE and IUCN on their collaboration in Sri Lanka, as a case study of partnership-building and a demonstration of the achievements that partnerships can generate. In this regard, CARE emphasized the importance of continued outreach to partners and multi-stakeholders of the MFF initiative.

On day two of the Learning Event, MFF Sri Lanka hosted an open learning day with a national focus. The participants included members of the Sri Lanka National Steering Committee; MFF Sri Lanka project grantees; organizations from Sri Lankan civil society; IUCN Sri Lanka, and the Department of Tourism Sri Lanka.

Building capacity for coastal managers in Integrated Coastal-zone Management in the region was a recurring theme in the presentations delivered by MFF Sri Lanka, IUCN Sri Lanka, and the Department of Tourism Sri Lanka.

Overall, the regional and national learning days were widely acknowledged as a highly valuable opportunity for country-to-country sharing of knowledge products and communication activities.

RSC visit to the mangroves of the Maduganga Estuary, Sri Lanka



RSC 7 participants visit Maduganga Estuary, Sri Lanka © MFF Secretariat 2010

The MFF Regional Steering Committee (RSC) meeting,01-04 November, invited participants to view a local area of significance to the MFF initiative in the host country Sri Lanka. Around 50 RSC participants joined a field trip to the Maduganga estuary in Balipitiya. Upon arrival, the group was welcomed by Mr. Anil Premaratne, the Director General of the Coast Conservation Department (CCD), and Mr. Gunadasa de Silva, Founder and Vice President of the Maduganga Development Foundation.

The participants first stopped at the Ma Duwa multipurpose visitor center to view a film that narrated the history, cultural significance, and economic importance of the Maduganga ecosystem, in particular its mangroves. Mr. Premaratne

described how the local community benefits from the visitor centre and from the livelihood opportunities sponsored by the Maduganga Development Foundation (MDF). He also explained that all of the proceeds from visitor fees go to the community.

Mr. de Silva described how the MDF has raised environmental awareness through its MFF Small Grant Facility project by producing a monthly environmental magazine that features activities promoting environmental and coastal resource awareness. He said that this project supported activity had raised local appreciation of the Maduganga's importance.

The RSC members also visited another Small Grant Facility project supporting fish cage cultures of sea bass (*Lates calcarifer*) and tilapia (*Oreochromis* spp.) managed by the local community groups Ampe Mithuru Freshwater Fisheries Cooperative Society Ltd. and the NGO Sewalanka Foundation. The fish cage culture project aims to increase local community incomes and introduce sustainable management practices.

In October 2009, the first harvest of sea bass (428 kg) fetched LKR 107,000, equivalent to an income of LKR 26,750 per fisherman per cycle (5.5 months). The first harvest of tilapia (682 kg) fetched LKR 136,400, or LKR 34,100 per fisherman per cycle (4 months). The success of this project prompted the Sri Lankan government to provide 100 cages to the Ampe Mithuru Freshwater Cooperative Society - leveraging funds for the continuity and expansion of this project.

On the return trip, Kothduwa island was visited to see the Bo tree (*Ficus religiosa*), a temple tree that was planted from one of the 32 sacred buds of Jaya Sri Maha Bodhi in honor of the Lord Buddha in Anuradhapura. The island also has a Buddhist temple that once sheltered the sacred relic tooth of the Buddha. It was acknowledged that Kothduwa represents the ecological importance of the Maduganga ecosystem and how closely it is linked to the cultural and religious significance of local resources.

Indonesian Ministry of Marine Affairs and Fisheries visit MFF Regional Secretariat and Bangkok mangroves



MMAF group from Indonesia at Ban Ko Kham © MFF Secretariat 2010

In December, representatives of Indonesia's Ministry of Marine Affairs and Fisheries (MMAF) came to Thailand to meet with the MFF Secretariat to finalise the grant agreement for Indonesia's MFF large project in Demak, Central Java.

The delegation from MMAF comprised members from the Directorate of Coastal and Ocean Affairs (Mr. Rusman Haryanto, Section Head); the Sub-Directorate of Coastal and Ocean Rehabilitation and Optimization (Mr. Titus Pramono); and the Directorate General of Marine, Coastal and Small Islands Affairs (Mr. Joko Harmanto, Section Head; Mr. Muhammad Noor Hamid, Secretariat; Mrs. Myrna Asteria Mamahit, Secretariat; and Mr. Agus Sapari, Staff on Directorate General); Mr. Agus Sapari is also a member of MFF Indonesia's National Coordinating Body.

The six-member MMAF team visited the Ban Khun Tien district and the Ko Kham bamboo fencing coastal rehabilitation project in the inner Gulf of Thailand, which has similar challenges to those in Demak. Ban Khun Tien is located west of Bangkok and this site and particularly the Ko Kham area, is of common interest for MFF and WWF Thailand. The site was featured as a case study for coastal ecosystem-based approach climate change adaptation during the second Learning and Sharing Seminar of the AIT/UNEP Adaptation Knowledge Platform in June 2010.

The coastal issues in Ban Khun Tien are a result of the destruction of mangroves for shrimp farm construction, coastal erosion/land subsidence, and sea level rise. The issues also show the impact of previous excessive groundwater removal, which has resulted in severe land subsidence (approximately 3-4 cm a year) and seawater intrusion. The famous Ban Khun Tien 28th kilometer marker that originally marked the edge of the coastline, but is now standing in the seawater, shows that in 30 years the sea has invaded approximately 800 meters inland.



Bamboo poles reduce wave action, Ban Ko Kham © MFF Secretaritat 2010

The Ko Kham project uses bamboo to reduce wave action and increase sedimentation along the coastline to allow natural and assisted mangrove restoration. Five meter bamboo poles are buried two meters into the mudflat, creating large fences in a zig-zag pattern parallel to the coastline. Each fence is 10 to 20 poles thick. The bamboo fences allow water to pass through, breaking the force of the waves. The slow flow of water and the bamboo poles promote the settlement of fine sediment, ideal for mangrove seedlings to grow.

Two kilometers of bamboo fencing has been created along the coastline between the two villages Moo 3 Khok Kham and Moo 8 Phantai Norasing, extending about 100 meters from the shore. The project started in 2007, and the local manager explained that 150 centimeters of sediment have already been

trapped as a result of the fence. In ten years, the planted mangroves are expected to be large enough to continue trapping sediment and maintaining the coastal ecosystem on their own.

The project is funded by the Department of Marine and Coastal Resources (DMCR) and the Provincial Office of Samut Sakhon. The MFF Regional Secretariat, with the DMCR and WWF Thailand, is keen to monitor and promote this project as an example of ecosystem based adaptation to address coastal erosion problems using 'soft engineering' approaches (i.e. bamboo and mangroves). A representative from DMCR is chair of MFF Thailand's National Coordinating Body and WWF is also member of this National Coordinating Body.



Bamboo fence along the coastline, Ban Ko Kham © Siriporn Sriaram 2010

International Conference on Wetland Ecosystem Services: Biodiversity, Livelihoods and Sustainability



Don Macintosh, MFF Coordinator, presents H.E. Suwit Khunkitti with an MMF information package © Khon Kaen University 2010

The Department of Environmental Sciences, Faculty of Science, of Khon Kaen University organized the International Conference on Wetland Ecosystem Services held in Khon Kaen, Thailand, between 17-21 November.

The opening ceremony address and first keynote speech on Wetland sustainability: Its future and management direction, was given by H.E. Suwit Khunkitti, Minister of Natural Resources and Environment, Thailand. The a second keynote speech given by Prof Don Macintosh, the MFF Coordinator, entitled Wetland goods and services and their sustainable use: experiences from the Mangroves for the Future initiative.

The conference also featured presentations on the importance and value of wetlands in Thailand and several other MFF countries (India, Malaysia, Pakistan, Sri Lanka), as well as further afield, including Iran, Japan, Netherlands, Philippines and the United States.



Fieldtrip: Rafting on the Nam Pong River, Khon Kaen © Khon Kaen University 2010

In addition to the presentations, the conference also included a fieldtrip to wetlands in Khon Kaen and Mekong River, Nong Khai, where all participants could experience local livliehoods, including subsistence fishing, vegetable gardens along riverbanks, and water-based recreation activities. The excursions provided a good opportunity to learn and share with the local communities about sustainable wetland conservation practices.

For more information regarding the conference contact <u>Dr. Adcharaporn Pagdee</u>, Secretary, Department of Environmental Science, Khon Kaen University.

Country updates

This section provides a snapshot of activities and events in the MFF countries. Further details can be obtained from the National Coordinator in each country, please see the MFF website for their contact details.



Demonstrating growth of prawns on mangrove-based feeds, Sundarbans © Dr. Abhijit Mitra, Calcutta University 2010

MFF India

Mangroves of the Indian Sundarbans generate livelihood through alternative fish-feed preparation

Industries based in mangrove forests such as timber production, wax production, and honey production are well known. However the role of vegetation in erosion control, protection against tidal surges and coastal flooding has received little attention.

In a new twist, an innovative program from the Department of Marine Science, University of Calcutta, with the support from MFF India, has revealed the possibility of using salt marsh vegetation as a basis for producing fish-food and, importantly, as an alternative income generation activity.

The project started during early 2010 through a small group of beneficiaries in North 24 Parganas district of West Bengal. This group cultured fresh water prawns with feed prepared from

Porteresia coarctata, a common salt marsh grass of Gangetic delta region. Interestingly this particular salt marsh grass, found living in association with mangrove habitats, has a high protein content and based on this the researchers of University of Calcutta took the initiative of preparing fish feed from the salt marsh grass with the aim to develop a sustainable and environment friendly aquaculture practices.

After the trial experiment, it was observed that not only did the cultured prawn species show a unique and superior growth (about 120 gm in 7 months; when compared with growth rates from commercially available feeds), but there was no case of disease nor did the aquatic health of the cultured pond deteriorate.

The local people and conservationists encouraged this work because the prawn culturists in the region usually prepare fish feed by killing mussels and snails, which pollutes the water and encourages disease, while threatening the molluscan (such as shellfish and marine snails), biodiversity of the area.

This project has the potential to generate employment at several levels, starting from the development of a salt marsh grass nursery for a floral-based feed preparation for the culture of fresh water prawns. Increasing the use of natural-based fish-feed and minimizing pollution of the water bodies would be a positive step forward for the Gangetic delta region, which is noted for its unique biodiversity and is the homeland of the Bengal tiger. The development of local, natural fish-feed may have the capacity to increase the livelihoods of local communities while also maintaining the quality of the natural habitat.



Bachtiar, the head of the local fisherman group, Desa Lantebung © MFF Indonesia

MFF Indonesia

Community-based coastal mangrove area empowerment; the Makassar community-based climate adaptation project

Makassar is the provincial capital of South Sulawesi on Sulawesi Island in Indonesia. Desa Lantebung is located in a nearby area and is one of the very few villages remaining close to the provincial capital due to industrial expansion.

Previously, the provincial government paid little attention to the village of Desa Lantebung and this caused resistance from local people to external initiatives. Before MFF became involved in this area, the local government sent a truck of mangrove seedlings but the local community rejected the project and sent the seedlings away.

The Institut Penelitian & Pengembangan Masyarakat (IPPM) is leading this MFF Small Grants Facility project. As a result of conducting an assessment of the local situation and specific

needs IPPM has built a successful working relationship with the local community and raised awareness of the importance of mangroves in protecting the local environment, while enhancing the livelihood of the community.

The IPPM project has also increased the visibility of the Desa Lantebung at the provincial government level. Bachtiar, the head of the local fisherman group, and one of the most influential figures in the village, explained as follows: "since Pak Hidayat and his team from IPPM began working with us, we are now much more visible and recognized by the government. After the training held by IPPM, with MFF support, involving local government as one of the resource people, four fishermen from our group have been invited to participate in the training held by the Regional Marine and Fisheries Agency. This had never happened before" Bachtiar commented.

Bachtiar added that, "I have also been invited by a provincial radio station as a representative of a local fisherman association, to sit together with representative of regional marine and fisheries agency, sharing our view on utilizing eco-friendly tools in the fisherman activities."

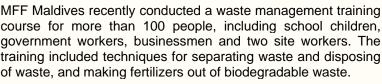
The positive exposure gained by Desa Lantebung and its champions at a local and regional level has also been a great benefit to this MFF Small Grants Facility project. Within four months of the community planting 80,000 mangroves in the village, residents noticed that the crab population (*Portunus pelagicus*) in the area had begun to increase.

Previously during the low season, residents may have caught a maximum of five crabs a day. Now residents can catch at least 2 kg of crabs in the rehabilitated mangroves, even during the low season. The increase in crabs helps sustain the livelihood of local women at Desa Lantebung, who work in the crab meat industry. Residents are encouraged to maintain the mangrove rehabilitation activity and continue to plant mangroves in addition to the activity supported by MFF.

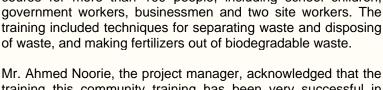
Bachtiar concluded: "We believe that in the long term, our mangroves will bring more benefit for us, the fishermen, and for the community in general, as they can also protect our village in the event of disasters".

MFF Maldives

Increasing awareness on proper waste management in HA Hoarafushi Island, Haa Alif Atoll.



training this community training has been very successful in changing attitudes and behavior as demonstrated by many community members who are now separating waste prior to disposal.



Noon Atoll © MFF Maldives A community member, Ibrahim Faiz, acknowledged that broad community and government support and involvement is imperative to solve the waste problems. He added that, as demonstrated by the success of this training, solutions need to be practical as "simply giving people lots of information about waste won't necessarily change their attitudes or habits".



Beach clean up activity, Manadhoo Island,

MFF Pakistan

Turtle Exclusion Device for local fishermen; a major step major towards marine turtle conservation.

More than 40 local fishermen attended a two-day training in the use of Turtle Exclusion Devices or TEDs, as part of a four-day workshop in Karachi in late November. The training was organized by IUCN Pakistan under the Balochistan Partnerships for Sustainable Development Programme (BPSDP).

Dr. Nicolas Pilcher, Co-Chair of the IUCN Species Survival Commission's Marine Turtle Specialist Group, conducted the training with the support of MFF Pakistan. During the training Dr. Pilcher explained that even though the Turtle Exclusion Device was invented by a fisherman around 30 years ago, its usage is still not widespread.

The primary purpose of a Turtle Exclusion Device is to reduce the mortality of sea turtles caught in fishing nets. The

device allows the turtle to escape, which has the benefit of reducing damage to the fish or prawns in the net. An increase in the quality of the catch also reduces sorting time and the associated fuel costs of longer fishing trips. Therefore by installing a Turtle Exclusion Device, fishermen not only gain a direct increase in their income but this device also helps safeguard the livelihoods of the local fishermen.

In addition to financial incentives, the use of Turtle Exclusion Devices is mandatory under the World Trade Organization's environmental clauses. Pakistan is also a signatory of the FAO Code of Conduct for responsible fishing. The federal and provincial governments have assigned the task to the Maritime Security Agency to ensure Turtle Exclusion Device compliance on all the fishing boats.

With regards to broader marine turtle conservation, Dr. Pilcher said that setting up hatcheries for turtles is a positive step, but it is not the ideal solution. He suggested that the natural conservation of turtle eggs is the best option, which can be implemented with increased awareness of the wider community.



Dr Nicolas Pilcher (far right) with representatives of BPSD, IUCN Pakistan, and the Marine Fisheries Department © **BPSDP 2010**

The training was held at the Marine Fisheries Department, Government of Pakistan. A certificate presentation ceremony marked the end of the four day training (including a two-day consultative workshop) highlighting the benefits of using Turtle Exclusion Devices and practical trials using a Turtle Exclusion Device with the local fishermen. As a gesture of goodwill, Dr. Pilcher donated a Turtle Exclusion Device to a local fishermen's group representative.



MFF Seychelles

Following the path of soil erosion in the Seychelles

A new project will address the issue of soil erosion from the hillsides on the island of Praslin, the second largest island of the Seychelles.

Terrestrial Restoration Action Society of Seychelles (TRASS), the first environment Non-Governmental Organization on Praslin, will be leading the 12 month project "Ridge to Reef-Where does all the soil go? Raising awareness and engaging community to participate in measuring soil erosion at Anse Possession, Praslin, Seychelles".

The project aims to show what happens to the soil once it has been eroded from the hillside, into the river and lagoon. TRASS

also intends to raise awareness and understanding of the link between the mountain (ridge) and the sea (reef), how they interconnect and the understanding that whatever happens on the hills will affect the lower coastal zones.

TRASS launched its first soil erosion project with a workshop on Saturday 6 November on Praslin Island. The Principal Secretary for Environment Mr. Didier Dogley expressed his support towards the project when he officially launched the MFF project on Praslin island, with the support and participation of local youth and veterans from the island. The workshop also brought together members from different organisations and communities to introduce the project's aims and activities and seek their input.

Through a workshop, participants contributed new ideas and their thoughts on the main causes of soil erosion. Consequences of erosion were identified such as pollution of drinking water which can lead to health problems in human, impacts on coastal villages, water shortages, flooding, and poor soil for agriculture.

TRASS emphasized that benefits of preventing soil erosion included healthy coral reefs, healthy soil for tree plantations and food production to help reduce the likelihood and impact of landslides and flooding. More plants also absorb carbon dioxide that helps mitigate climate change.

TRASS is a local organization created by a group of individuals concerned with the situation on Praslin, where 40% of the island is degraded. They aim to take action against the degradation of sensitive tropical rainforest, mainly by rehabilitating areas and educating people about this alarming issue www.trass.org.sc. TRASS welcomes the active involvement of all levels of the society both nationally and internationally in its fight to restore degraded lands through its various activities and thanks all those who have supported the workshop especially MFF and local sponsors.

Rich fish resources, Talaimannar, Sri Lanka © Kumudini Ekaratne 2010

MFF Sri Lanka

Biodiversity survey in the Gulf of Mannar

IUCN Sri Lanka, with support from MFF, the University of Ruhuna and the Bay of Bengal Large Marine Ecosystem (BOBLME) project of the Food & Agriculture Organization (FAO) undertook a rapid biodiversity survey in the Gulf of Mannar and Palk Bay, the two bodies of water lying between the southeastern tip of India and the northernmost part of Sri Lanka. The study also included a socio-economic survey in the coastal Divisional Secretariat divisions bordering the Gulf of Mannar.

The survey findings revealed the richness of natural, cultural and archaeological wealth of the area and highlighted some issues related to extraction of these resources. As sharing these results with the state agencies, fisher communities and other stakeholders is an important component of this study, IUCN Sri Lanka organized three awareness raising events in Mannar. The first event was held in November, led by the

local government agent of Mannar, and targeted the local government officials.

The second program targeting school children, held in December at the Zonal Education Office in Mannar, was conducted through training of Master Teachers. Attendees included teachers of science, geography, history and social sciences (grades 9 to 11) from 31 schools in Mannar District. To assist teachers in sharing the key messages, various training materials were prepared including a training manual, an informative presentation and annotated photo collection.

The third event in the series targeted the fisher communities in Mannar district, also held in December, at the Local Government Office in Mannar. A total of thirty-two fishermen attended the workshop, the majority representing most of the fisheries societies across all six Fisheries Inspector Divisions, including eight officials from the Fisheries Department. Following the presentations on the fishery resources and related issues, discussions highlighted several important recommendations from the fishing communities on matters related to their livelihood.

The Gulf of Mannar is home to over 3,000 species of plants and animals, and is a haven for marine animals such as finfish, prawns and crabs, oysters, sea cucumbers, corals and dugongs. Vast seagrass beds are also common in the area. The need for protection of the biodiversity in the Gulf of Mannar is now evident and it is hoped that these awareness programmes will help to conserve these rich resources.

Recognizing the species diversity revealed in the study, the Government of Sri Lanka has assigned the Sri Lankan side of the Gulf of Mannar to be nominated as a Biosphere Reserve under the *Man & the Biosphere* programme of UNESCO.

MFF Thailand



Mr Yuxue Xue (left), Deputy Resident Representative of UNDP Thailand, presents award to Mr Watcharin Sawangkan, the Chumporn project manager © MFF Thailand 2010

Community takes first prize in climate change challenge

Thong Tom Yai community won first place in the UNDP GEF-led search for the best community project in adapting to climate change. The Thong Tom Yai community is part of the MFF network.

The Chumporn community won the prize in recognition of their innovative "eco-friendly tourism" that integrated climate change-sensitive strategies.

Mr Watcharin Sawangkan, a representative from the Thong Tom Yai community and the Chumporn project manager, presented the history of conservation efforts in their area and accepted the award on behalf of the community. As a result of winning this award, the Chumporn project has received national recognition for their community-led efforts and USD10,000 to support this initiative.

All communities in Thailand were eligible to enter the competition for the best community-led climate change adaptation project. UNDP informed MFF Thailand about the competition and helped in distributing the call for entries. Chumporn province, the site of the MFF Small Grants Facility project "Strengthening the conservation for Mangrove, Marine and Coastal Resources of Ao (gulf) Thong Tom Yai", qualified for the final round. Other finalists were communities from Chiang Mai and Burirum.

The climate change competition was part of the December 2010 launch of "Increasing Coastal Community Capacity for Climate Change Adaptation" or INCA, a UNDP-supported project that encourages Thai communities to integrate climate change adaptation strategies in their community conservation efforts.

INCA is a three year UNDP GEF project (2010-2013) with pilot sites in ten communities across South Thailand, and includes Nakorn Srithammarat - Thasala district (Tambon Thasala and Laem Talumpuk); Pak Phanang District Pattalung (Tambon Jongthanond), Khao Chai Son District Trang (Tambon Koh Libong), and Tambon Bang Sak, KanTrang District. Half of the INCA sites are also MFF Large Project Sites.

The INCA project is collaboration between the Red Cross of Thailand, the Ministry of Interior, the Disaster and Mitigation Department, and MFF partner organization Sustainable Development Foundation (SDF). Partner agencies of INCA also include the Ministry of Natural Resources and Environment (MONRE) and Southeast Asia Global Change System for Analysis, Research and Training(SEA START).



Da Loc commune in Thanh Hoa province, village Green Teams clean the beach near a mangrove plantation © Søren Rud

MFF Viet Nam

Update from the National Coordinating Body

Viet Nam has a long, densely populated coastline that is prone to extreme weather events and it is projected to be one of the countries most affected by the impacts of climate change and sea level rise.

As a recently joined member MFF Viet Nam has formalized its National Coordinating Body and begun building links with national, provincial and local stakeholders. In mid December MFF Viet Nam held a National Coordinating Body meeting to discuss the revised National Strategy and Action Plan. MFF Viet Nam sees great potential to benefit from and contribute to MFF as many of its coastal conservation and management projects are valuable as models to other countries.

MFF Viet Nam plans to work on replanting or rehabilitating mangroves over the next five years. Steps will be taken to increase National Coordinating Body representation from southern Viet Nam and to expand the focus from mangroves to include corals, sea grasses, and other vulnerable coastal ecosystems.

In addition to these activities, national projects on adaptation measures to respond to climate change and sea level rise impacts on coastal areas will be developed. A national program on Integrated Coastal-zone Management scaling up for 20 coastal provinces in Viet Nam toward year 2015 will also be established.

Events 2011

2 February

World Wetlands Day

Launch of International Year of Forests

3-5 March

Mangrove Forest Ecology, Management and Restoration training workshop, Hollywood, Florida, USA

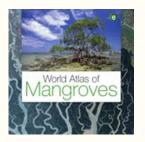
22 March

World Water Day

21-25 August

Society for Ecological Restoration - 4th World Conference on Ecological Restoration, Merida, Mexico. Re-establishing the Link between Nature and Culture

Resources



World Atlas of Mangroves

By Mark Spalding, Mami Kainuma and Lorna Collins.

This atlas provides the first truly global assessment of the state of the world's mangroves.

Published with ISME, ITTO and project partners FAO, UNESCO-MAB, UNEP-WCMC and UNU-INWEH



Children's Perspective on the Environment: A teacher's toolkit for investigating coastal and marine ecosystems in Asia.

Citation: V.Hoon, H.Kavvinde and G. Sriskanthan (2009). Children's perception of the environment: A teacher's toolkit for investigating coastal and marine ecosystems in Asia. IUCN/CORDIO/CARESS.



The Use and Management of Mangrove Ecosystems in Pakistan

Bhim Adhikari, Saima Pervaiz Baig and Usman Ali Iftikhar *The Journal of Environment and Development* 2010 19: 446, originally published online 1 October 2010

DOI: 10.1177/1070496510384392.



Ecosystem-based Adaptation in Seaflower Marine Protected Area, San Andes Archipelago, Colombia (chapter 8)

Citation: Andrade Pérez, A., Herrera Fernandez, B. and Cazzolla Gatti, R. (eds) (2010). *Building Resilience to Climate Change: Ecosystem-based adaptation and lessons from the field.* Gland Switzerland: IUCN. 164pp



Pristine mangrove forest in the Sian Ka'an Biosphere Reserve, Mexico © IUCN

"Go Mangroves" in Sian Ka'an

The Sian Ka'an Biosphere Reserve is a couple of hours from Cancun, Mexico, where delegates at the UN's climate summit met for COP 10 in December. The reserve offers up to 120 km of pristine Caribbean coastline.

Read more about the IUCN field trip to Mangroves in Sian Ka'an during COP 10 in Cancun, Mexico.

Put your news in the next issue of the MFF newsletter!

Do you have any news or stories that you would like to feature in the next issue of the bi-monthly MFF Newsletter?

Send us your latest news and other activities to: e-news@mangrovesforthefuture.org.

Sincerely,

Mangroves for the Future Regional Secretariat

Mangroves for the Future (MFF), is a unique partner-led initiative to promote investment in coastal ecosystems which builds on a history of coastal management interventions before and after the 2004 tsunami, as well as extensive consultations with over 200 individuals and 160 institutions involved in coastal zone management. It focuses on the following countries; India, Indonesia, Maldives, Pakistan, Seychelles, Sri Lanka, Thailand and Viet Nam, as well as several outreach countries in the region that face similar issues.

MFF uses mangroves as a flagship ecosystem but is inclusive of all coastal ecosystems. MFF provides a collaborative platform among the many different agencies, sectors and countries who are addressing challenges to coastal ecosystem and livelihood issues. Through generating knowledge, empowering institutions and individuals to promote good governance in coastal ecosystem management, MFF seeks to achieve demonstrable results in influencing regional cooperation, national programme support, private sector engagement and community action.

This newsletter is produced by the MFF Regional Secretariat with the financial support of Norad and Sida.































