



National Workshop

Vision Development for the Coastal Zone of Bangladesh

Sustainable Livelihood of Coastal Communities Needed

The Program Development Office (PDO) of the Integrated Coastal Zone Management (ICZM), Water Resources Planning Organization and Ministry of Water Resources jointly organized the day-long National Workshop on Vision Development for the Coastal Zone of Bangladesh on September 12, 2001 at the auditorium of Bangladesh Institute of Administration and Management. The Chairman of the day was Dr. M.A. Quassem, Director General of WARPO.

The Adviser to the Ministry of Water Resources and the Ministry of Energy and Mineral Resources AKM Amanul Islam Chowdhury inaugurated the workshop as the chief guest. He stated "the government is committed for the development of the coastal belts of the country."

Furthermore he emphasized the need for involving local people in the coastal development process. He also invited all development partners to join their hands in this issue. He hoped that the concept of the Integrated Coastal Zone Management would contribute for the sustainable livelihood of the coastal communities.



The Ambassador of the Netherlands in Dhaka, Mr. J IJzermans, recalled the achievements of the projects implemented with the financial assistance of the Netherlands government. "I think that the Meghna Estuary Study Projects and the Char Development and Settlement Project have contributed for the development process of the coastal areas by direct interven-

tions and enhancement of the coastal knowledge base", the ambassador said. He also assured continuous support of the Netherlands government to the development efforts of Bangladesh.

The Secretary, Ministry of Water Resources Mr. AYBI Siddiqui also addressed the inaugural session. He said that the overall approach of the Govt. focusses on the integration of development and disaster management policies and activities in response to the priorities of the communities.

Four reports were presented in the four working sessions. Chief Technical Advisor of the Integrated Coastal Zone Management Program (ICZMP) Anne van Urk, Interim Team Leader, Dr. M Rafiqul Islam, former MoWR Secretary Dr. ATM Shamsul Huda, experts of Coastal Zone Management Center in Netherlands Tom Bucx and Theo Sturm were the presenters.

IN THIS ISSUE

Training on ICZM in India

Resource Use by Indigenous Communities

Safety Issues of the Fishers

Hydroponics (Soil-less Farming) - An Adaptation Response to Climate Change

Regional Round Table Discussion at Khulna



Tim Robertson of the DFIDB, SC Khan of the Ministry of Water Resources, Peter de Vries of the Netherlands Embassy, Dr. MA Quassem of the Water Resources Planning Organization chaired the working sessions.



Anne van Urk said that the protection of the vulnerable coastal zone would be more difficult if it was not addressed immediately. He emphasized the need for formulating integrated policies for proper maintenance of the coastal belts so that the resource harvesting could be optimized in a sustainable way.



Dr. Rafiqul Islam stated that ICZMP is a process and that the PDO is to contribute to the integration of multisectoral activities, on-going and planned, in the coastal zone. He highlighted the contribution of NGOs and emphasized their participation.



Dr. ATM Shamsul Huda expressed concern over non-coordination among the agencies meant for taking care of the issues. He in this regard said, "the written policies will not make sense if there is no specific action plan to implement the policy directives for the welfare of the people.



Theo Sturm & Tom Bucx from the Netherlands presented the experiences in ICZM of Egypt, Netherlands, Vietnam and Ghana. Summarizing lessons learned from these countries, they elaborated 'consideration points' for Bangladesh.



The Country Director of the IUCN Dr. Ainun Nishat and Director of Bangladesh Unnayan Parishad Dr. QK Ahmed also participated in the discussion. Dr. Nishat strongly suggested re-delineation of the coastal zone and to push ahead as a sound logical framework for action is available now, Dr. Ahmed emphasized the need for identification of drivers to guide the process of development. He urged inclusion of 'adaptation measures to climate change' in the ICZM program.



Many other discussants said that the stakeholders of the coastal belts should be brought under the program formulation and arrangements are to be made to protect from erosion, accretion, salinity, flooding and cyclones.



A total of 92 participants representing ministries, government agencies, donors, projects, NGOs, universities, media and others participated the workshop.



Dr. Quassem, the Chairman of the Workshop, concluded the day by proposing the following Vision statement: *"To make the coastal zone a place where people will pursue their life and livelihood within secure environmental and social conditions and will use its natural resources in a sustainable way"*.



Furthermore he highlighted the next steps from vision to an integrated coastal zone action plan leading to investment projects.



The Workshop did not limit itself to the Vision statement only but it also communicated the specific issues and objectives and program development. Finally a framework for action with milestones to be achieved by the PDO-ICZM in the coming 3 years was adopted.

Final results of the Workshop will be reported in proceedings.



Brain Storming Session : Preparatory Meeting for the National Workshop

Vision Issues Adopted

As part of the preparation for the national workshop, a brain-storming session was organised on September 06, 2001 at the conference room of the WARPO. The purpose was to discuss, in general, aspects of vision and to reach a consensus on layout and contents of the vision document. A total of 10 panelists, from WARPO, BWDB, BUET, LGED, Dept. of Forests, EGIS participated the brain-storming session. Experts from the Coastal Zone Management Centre, Netherlands and the University of Leeds, UK also participated in the discussion. Detailed discussions were held on various aspects of vision, coastal issues and relevant role of the PDO in the ICZM process. Dr. M A Quassem, DG, WARPO chaired and facilitated the discussion.



CDSP organised training on ICZM for key project personnel

A short course on ICZM, sponsored by the Char Development & Settlement Project II, was held at the Institute of Ocean Management (IOM) Anna University, Chennai, India. Dr. Martin le Tissier and others of the Centre for Coastal Management, Dept. of Marine Sciences, University of New Castle, UK conducted the training jointly with the IOM. A total of 12 participants representing Ministries of Water Resources, Land and Local Govt.; BWDB, LGED, DPHE, DAE and BRAC participated in the training. Dr. M. Rafiqul Islam of the PDO participated in inaugural function and delivered a lecture on ICZM initiatives in Bangladesh,



Pro-Active Interactions with Projects/ Programmes at Chittagong, Patuakhali

During this quarter, Dr. M Rafiqul Islam visited districts of Chittagong, Cox's Bazar and Patuakhali as part of pro-active interactions with projects, organizations and NGOs of the areas.

During July 16-19, discussions were held with Marine Fisheries Management Project, Fisheries Research Institute, Salt Project, Fishing Boat Owners' Association, Hatcheries Owners' Association, and NGOs CODEC & COSED. Visits were made to CERP-II and CARE field sites. Stops were made at 'ship breaking yards' at Kumira, Chittagong.

During Sept 22-25, discussions were held with Patuakhali Barguna Aquaculture Extension Project, Small Holder Livestock Development Project, Rural Development Project 16, Strengthening Marine Fisheries Management Project, CODEC Training Centre, CODEC Regional Office, ADAB and Mass-line Media Centre. Visited Kualkata Tourist Spot.

Resource Use by the Indigenous Communities in the Coastal Zone

The coastal zone of Bangladesh is inhabited by a number of indigenous communities. The socio-economic life of these communities are characterized by diverse professions and specific resource use patterns. Ethno-cultural profiles of these communities and particularly their resource use patterns, would be valuable for undertaking initiatives in the coastal zone.



In this backdrop, a survey was launched on ten indigenous communities; namely Munda, Mahato, Marma, Murang, Khiyang, Pundra-Khatrio, Chakma, Tripura, Tanchangya and Rakhaing. Among the 0.2 million indigenous peoples living in the coastal zone. It was found that these communities have a unique and glorious ethno-cultural tradition, but economically they lag substantially behind, and they also have a very limited access to the environmental & natural resources of the area where they live in.

The survey confirms the fact that although several indigenous communities live in the coastal districts, only a few can be considered coastal communities from the perspective of the environment in which they live in. They include Rakhaing in Cox's Bazaar and Patuakhali, and Pundra-Khatrio, Munda & Mahato in Khulna.

Among them, the study reveals Rakhaing and Munda lack adequate land for cultivation and many of them are (particularly from among the Rakhaing) having to recourse to non-resource based professions like goldsmith, day labor, technical work, weaving, small trading etc. However, Rakhaings in Cox's Bazaar and in parts of Patuakhali are still involved in resource based professions like plough-cultivation, nappy -production (dried-shrimp), shrimp and crab culture, carpentry and so on. On the other hand, Mundas are involved in various kinds of earthwork and logging in the Sundarbans. The area inhabited by Mahatos and Pundra-Khatrios are in the grip of saline environment. As a result, although they have sufficient land to cultivate, their paddy production is suffering badly and they are switching over to tiger shrimp culture. The landless are engaged in earthwork, logging, boat-making etc. However, they collect materials from natural resources to meet regular household needs. For house-building and cooking they collect nara (straw), chhan (hay), and wood, golpata, firewood, ghutay (made of cowdung) etc. from the nearby forests or the market.

Apart from the above four ethnic minorities, the other six (Chakma, Marma, Murang, Khiyang, Tripura, Tanchangya) reside technically in the coastal zone but their localities lack the environment and natural resources that can be called coastal. Owing to insufficient cultivable land most of the households of these communities are engaged in day labor followed by jhum cultivation, plough cultivation, gathering and selling of bamboo and firewood, carpentry, small business and services. Unlike the Rakhaing, Munda and Pundra-khatrios the other communities depend on nearby hill- forests both for their professional and socio-economic life.

Besides these resource use activities, the indigenous women and men are also engaged in making wine, keeping pigs, fishing in the hill streams and weaving to supplement their incomes. But the overall review regarding access of the indigenous communities to natural resources show that they are not in a favorable situation. It becomes impossible for them to pursue their traditional professions, like weaving. The decreasing hill-forests, increasing salinity and the unauthorized nexus of the locally powerful are proving ruinous for the indigenous peoples of the coastal zone.

In this circumstances, it is a need of the hour to help these communities, who are in desperate need of support. Land being the principal resource and now being grabbed at an alarming rate, a Land Commission may be formed for rapid action. The tradition of weaving should also be patronized through training for the skill development, while steps should be taken to foster education among them, particularly higher education. Most important of all, access to natural resources must be ensured for the indigenous communities.

Study conducted by Mr. Mesbah Kamal, Dr. Avizit Reaz Quazi & Ms. Sanzida Akhter. Full report is available on request to

Safety Issues of the Fishers: A Short Note

Fisheries sector play an important role in the national economy (provide full time employment for 1.2 million people and part time for 11 million) of Bangladesh. About 7.3 million people are marine fishers and supply about 22% of the total fish protein.

The fishing activities in the country are of four main types: estuary & sea based, river-based, canal based and pond based. Among the four types, the fishers fishing in the estuary and sea have greatest safety risks followed by fishers fishing in the rivers and canals.

Dangers faced by the fishers

Natural calamities and fishing pattern of the fishers: The fishers (around 80%) mainly depend upon hilsha fish. Mid July to mid September is the time for catching hilsha, which is often risky due to frequent occurrence of cyclone and tidal surges. The engines of the boats are usually not powerful enough to move speedily in strong currents, often resulting in engine failures. Presence of numerous submerged chars make the sea more wavy. There is no warning sign (buoy) and the fishers cannot locate the positions of the chars many times and fall in trap. If the boats strongly hit the submerged chars, they could be broken.

Pirates and intruders: Piracy is a major problem for fishers. There are powerful organized gangs with modern weapons and fast moving vessels. They snatch away fish and often kidnap the fishers to collect ransom. The pirates are the greatest threat for fishers especially in the Sundarbans. It is reported that several gangs are active there in abducting fishermen.

Attack of dacoits and other miscreants are prominent in other watercourses.

There is also growing concern of intruder in the waters of Bangladesh from neighboring countries. The shores of Bangladesh are rich in fisheries. So fishers and pirates from other countries come to catch fish. Sometimes there are direct confrontations between fishers of different countries.

Accidents: Different accidents in the Bay claim at least 350 lives of fishers every year. Surveys revealed that the accidents occur mainly due to faulty engines and lack of life saving equipment. According to these surveys 20% of the total sea going vessel run without any fitness certificates.

Some of the main causes of such accidents are absence of life saving equipment and warning system in the boats and lighthouse, lack of seaworthiness of the boats and knowledge and training of the fisher on safety issues.

Conclusion

The profession is considered as one of the most dangerous professions in the world. Poorest section of the community is mainly engaged in this profession. So they cannot take necessary measures to prevent or even reduce the dangers. Massive support from government and non-government organizations and awareness of the fishers can reduce these risks.

Box - 1: News Headlines

- 72 Thai fishermen arrested from Mongla Port (The Daily Star , 02.01.01)
- 368 abducted woodcutters, fishermen rescued (The Daily Star, 11.02.01)
- Catching of fish hampered; piracy in the Sundarbans area, Bay increases alarmingly (The Observer, 01.03.01)
- Dacoits in fishing trawlers rampant in coastal areas (The Independent, 16.04.01)
- 5 fishers injured, 4 missing: attack of Nasaka in Teknaf for more than hundred times in one month (The Daily Inqilab, 25.04.01)
- Dacoities, extortion on the rise in the Sundarbans (The Independent, 06.05.01)
- 14 fishermen abducted (The Independent, 17.07.01)
- Pirates kidnap 3 fishermen in Satkhira (The Observer, 21.07.01)
- Two fishermen are again kidnapped for ransom (The Ittefaq, 22.08.01)

Box -2: News Headlines

- 350 fishermen killed every year in Bay accidents (The Observer, 12.04.01)
- Eight drown as trawler capsizes near Sandwip (The Daily Star, 02.06.01)
- Trawler capsizes in high seas: Six fishermen could not be traced (The Daily Ittefaq, 14.06.01)
- Four fishermen are lost in the Meghna after trawler capsizes (The Ittefaq, 21.08.01)
- Apprehension of death of 9 fishermen, 3 children washed away (Prothom Alo, 23.08.01)

Soil-less Farming (Hydroponics) in South-west Region of Bangladesh: A possible Adaptation Response to Climate Change

Hydroponics, the science of growing plants without the use of soil is becoming popular all around the world. There are two types of hydroponics system; (a) Industrial type in which inert medium is used like gravel, sand, peat, vermiculite, sawdust and added nutrients solution to it that absorbed plants root for growth. (b) Indigenous/traditional type, where indigenous wetland plants are used to construct floating beds on which farmers grow different vegetables, saplings, flowers etc. From times immemorial, these types of hydroponics exist in different parts of the world. Traditional soil-less agriculture of Inle Lake, in Burma and Dal Lake in Kashmir is widely recognized.



The soil-less cultivation system has been practicing in Gopalganj, Pirojpur and Barisal district in Bangladesh and it has a history of more than two centuries. The cultivation technique is different from other part of the world. Water hyacinth, (*Eichhornia crassipes*), Long paddy stub and other aquatic plants such as Topa pans (*Pistia stratiotes*), Duckweed, *Salvinia spp.*, *Najas spp.*, Dulalilata (*Potamogeton alpinus*) etc. are the prime construction materials for floating beds. Water hyacinths are collected during May to June from the nearby river, channels, ditches and store them in tall form. Fully matured water hyacinths are dumped until the desired height is not attained. After 7-10 days, rapidly decomposable aquatic weeds are used on the top of the floating bed to decompose the top of the bed quickly. The longevity, buoyancy and thickness of the beds depend on this layer. The size and shape of the bed is not fixed. Farmers make the bed as their desired size and shape. Generally, the dimension of the bed is 50-155 ft. long, 5-7 ft. width and 2-3 ft. height. More than 20 different vegetables and 5 different spices are cultivated in hydroponic farming. Sometimes farmers shift the floating bed on the raised land of wetlands whether natural or man made. This system is found in some parts of the existing hydroponic farming areas and called non-floating island or Sarojan (locally called *Kandi-Bairh* system).

In the existing farming system about 60 tons per year of vegetables are produced from one acre of wetland. The production of sapling per sq. ft. is 2.7 numbers, and saplings are grown for 3 times in a season of three months.

Government has taken different initiatives to transform wetlands into terrestrial system from the 60's. After a decade of the implementation of different drainage and irrigation projects new kind of water logged areas are emerging in different areas with alarming rate. Beside this the rise in sea level would be about 30 cm by 2030 (As per IPCC estimates). Even a very cautious projection of 10 cm sea level rise, which would most likely happen well before 2030, would inundate 2,500 sq. km, about 2% of the total land area of the country. Thus, vast coastal and inland areas would be submerged due to sea level rise and the total of wetland and waterlogged areas would be increase in near future. A country like Bangladesh shall have not much to do in that case to reverse it. Soil-less cultivation is the best alternative to cope or face this situation to enable agricultural production in those vast wetlands without altering the ecosystem, as this fanning system can enhanced meet the demands of the wetland people if all-out effort is given to promote and development of soil-less agricultures by the GO and NGO. The soil-less cultivation shall be able to turn "the curse" into well-to-do site by making these vast wetlands productive and ensure food security that direct livelihood sustainability of the wetland people. This means, if 45,512 acres out of 424,554 acres of wetlands in the south-western region of Bangladesh can be brought under hydroponics, the region alone will produce 2.73 million tons of vegetables per year worth US\$ 240 million. In addition 16,247,784 tons of organic manure produced as a by-product (approximately 357 tons per acre). Beside these, huge number of employment generate through this system. At present 630 man-days are required for 1 acre of land. But there are enormous scopes of R&D fur adaptation of the system. By assessing the above, WRDS is attempting to develop and standardization of this fanning system for dissemination of other part of south-west region.

Regional Round Table Discussion at Khulna

Multi-sectoral Organisations Participated

The Program Development Office (PDO) of the Integrated Coastal Zone Management (ICZM) organized a regional roundtable discussion on August 20, 2001. The purpose of this roundtable discussion was to initiate a dialogue with different multi-sectoral stakeholders active in Khulna region. The discussion meeting was attended by representatives of the following organisations:

- GO : DAE, DoFisheries, Do Forests
- NGOs : JJS, CDP, Sushilon, CARE, Uttaran, Prodipon, Proshika, CCCCE, PPS
- Media representing most local and national dailies
- Khulna University
- Bangladesh Frozen Food Exporters Association,
- Khulna Chamber of Commerce & Industry,
- Khulna Development Authority

Coastal Development Partnership (CDP), a network of coastal NGOs, facilitated the organization of the roundtable discussion. Dr. M Rafiqul Islam, Interim Team Leader, PDO-ICZM made the introductory presentation on conceptual issues of ICZM in Bangladesh. During the day, three theme discussions were held : coastal resources, coastal people and development challenges. During the presentations, issues of Sunderbans, livelihood of coastal communities, fish biodiversity, mangrove forests, shrimp culture, river resources, navigation, salinity, bee-keeping, indigenous knowledge, law and order situation, climate-change, groundwater, Mongla port were dealt. The speakers appreciated holding of such a workshop and



took decision to organize follow-up workshops at 3-4 months interval. The next workshop will be facilitated by the Khulna University. Mr. Anne van Urk, Team Leader PDO-ICZM presented concluding remarks. He explained the importance of regional workshops in advancing the causes of integrated management of the coastal zone.

Each of the participating organisations also contributed written statement of their relevant activities.

The Proceedings of the regional workshop is being prepared and circulated.

Char Information Sharing Meeting

The PDO-ICZM will host the next Char Information Sharing Meeting on Oct. 29, 2001. This is a network of organisations with interest in riverine and/or coastal chars. The PDO-ICZM has recently circulated a draft 'Inventory of Coastal and Estuarine Islands & Charlands'

PDO-ICZM : Recent Publications

- Coastal Zone Management: An Analysis of Different Policy Documents; February 2001.
- Proceedings of the Round-Table Discussion : Status of Activities in the Coastal Zone (of selected GoB -Departments); April 2001
- Proceedings of the Regional Workshop, Noakhali : Status of Activities in the Coastal Zone : May 2001
- Resource Use by Indigenous Communities in the Coastal Zone : July 2001
- Proceedings of the Regional RoundTable Discussion, Khulna : Status of Activities in the Coastal Zone : October 2001
- Press Clippings (Bi-monthly; compilation of coastal related news & info from national dailies)

Copies of these reports are distributed widely. Additional copies are available by mailing a request to

Website

The PDO-ICZM will launch its website during the last week of October, 2001. The website will contain an introduction of the PDO-ICZM, inventory of relevant projects, who is who, summary of all PDO-ICZM reports/publications, all copies of the Coast News, proceedings of all TC meetings and many other items.

You are invited to visit the website. Your comments will be appreciated on the website.

The address of the site is www.iczmpbangladesh.com

About PDO-ICZM

The PDO-ICZM is constituted as a separate and independent unit under the mandate of Inter-Ministerial Steering Committee and Technical Committee. The Ministry of Water Resources is the lead Ministry. The DG, WARPO is the Program Manager.

The PDO-ICZM is responsible for:

- Developing a common vision for the coastal zone and a strategy to achieve this.
- Preparing a framework for a comprehensive & multi-sectoral ICZM Program.
- Identification, formulation and appraisal of activities as building blocks for the ICZMP.
- Pro-actively interact with activities along with harmonization where needed.
- Initiating stakeholder's consultation and the set up of a coastal resources knowledge.
- Co-ordination and facilitation of the exchange of data and information.
- Developing the Plan & identify investment new gerater integrated project.

In the preparatory phase of ICZM, the PDO will operate till December 2004.

Rational Workshop in Chittagong, Cox's Bazar and Patuakhali

These workshop are planned in Nov/Dec, 2001. If your organization/project is interested to participate, please express your interest at the pdo@bangla.net

COASTAL ZONE ASIA-PACIFIC CONFERENCE (CZAP2002)
12-16 May, 2002, Bangkok, Thailand

Announcement

An international conference focusing on the coastal zones of the Asia-Pacific region is being organized to bring together regional and international researchers, policy-makers, interest groups and communities to address and discuss issues of common concern in those tropical coastal areas. Key themes of the workshop are i) Integrated Coastal Resource Policies, ii) Community/Resource Interactions, iii) Coastal Ecosystem Management, iv) Coastal Resource Economics, v) Coastal Activities: Aquaculture/Fishing/Tourism and vi) Coastal Area Planning.

The PDO-ICZM is one of the Conference Partners and is the local contact of this conference in Bangladesh. For detailed circulars, mail to rafiqpdo@bangla.net. The website of the conference is <http://www.vims.edu/czap>.

Projects/Initiatives are encouraged to send news & information relevant for the coastal zone for the next issue of the Coast News, to be published in Jan 2002.

For further information please contact:
 Program Development Office for ICZM
 Saimon Centre (6th Floor)
 House 4A, Road 22, Gulshan 1, Dhaka 1212, Bangladesh
 Phone: 8811370/8826614, Fax: 880-2-8821891
 E-mail: pdo@bangla.net

The PDO-ICZM is financed by the Governments of the Netherlands and Bangladesh.