



Institute for Ocean
Management
Anna University

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ENVIS Newsletter on Coastal Zone Management

Sponsored by the Ministry of Environment and Forests, Govt. of India

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EDITORIAL

ENVIS node on Coastal Zone Management at Institute for Ocean Management, Anna University started functioning from December 2002 with an objective of providing the information on the coastal zone of India and the various management initiatives of the Government. Institute for Ocean Management (IOM) acquires information using modern technologies of acquisition and processing such as remote sensing and employ recent information technology tools such as GIS, RDBMS in storage and retrieval of Coastal Zone Management related information to support the user communities and to promote the research and developmental activities.

The ENVIS node at IOM has developed a web page on Coastal Zone Management and the URL is www.annauniv.edu/iom/COZMA. The web page contains the information related to coastal zone regulation maps of coastal states and information on , sensitive coastal ecosystems of India, Water quality of the east, west and Island coasts of India, Coastal and Marine Protected Area, CZM Policies and activities etc. We invite comments and suggestions related to the web and its contents. Shortly we will display the Coastal Zone Management web Discussion List for active chat.

This quarterly News Letter on Coastal Zone Management – COZMA will be covering the information related to the ongoing national and international activities related to Coastal Zone Management. This is first issue of our newsletter, contains an article on “Need for Integrated Coastal Zone Management”, Calendar and Events in Coastal Zone Management, IOM Page (Institute of Ocean Management Page) and COZMA page. I am sure that the readers will enjoy this newsletter and benefit from its contents. We welcome your suggestions and comments.

(Signature)

Prof. S. Ramachandran
Director & ENVIS Co-ordinator
Institute for Ocean Management
Anna University, Chennai

NEED FOR INTEGRATED COASTAL ZONE MANAGEMENT

Coastal Area Management needs an integrated, interdisciplinary and multi-sectoral approach in the development of good management plans. Coastal area management clearly cannot proceed effectively through science, socio-economics, politics, or by a single institution alone. Solutions to problems and issues are seldom straight forward and require an integrated approach. A fundamental objective of resource planner and managers and indeed of most human societies is sustainable development. This implies forms of development aimed at enhancing nature's contribution to human welfare, not just anticipating and preventing undesirable effects. It involves participation not just from government agencies and NGO's but also from all sectors of society. Strategies need to be developed, whereby the needs of conservation and the needs of development begin to converge. It is a process of governance and consists of legal and institutional framework necessary to ensure that development and management are integrated with environmental goals and are made with the participation of those affected.

The overall objective of an integrated management Programme will provide the best long term and sustainable use of coastal natural resources and for perpetual maintenance of the most beneficial natural environment. The ICZM can minimize the costs and costly delays in project implementation; minimize the losses to the various users; minimize damage to the marine environment; make the most efficient use of infrastructure, information and technology available to marine development sectors and; avoids conflicting use of coastal and marine environment.



Coastal Erosion of Flood Defences



A View of Marina Beach



A view of Coastal Pollution

ICZM is a continuous and dynamic process that unites the government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the protection and development of coastal system and resources.

Goal of ICZM

To improve the quality of life of human communities who depend upon coastal resources while maintaining the biological diversity and productivity of coastal ecosystems. ...GESAMP, 1996.

Requirements of Integrated Coastal Zone Management

Integrated Coastal Zone Management requires an integrated resource planning and development agency which would take into account the need for the conservation of natural coastal ecosystems that generate the resources required to sustain different economic and social activities and development potentials that fulfill the needs and aspirations of the people and improve their livelihood security. Planning implementation and review of plans should be coordinated by a committee to ensure the integration of policies, plans and individual development initiatives. This body should monitor all private and public development projects, from their inception to implementation, so that they confirm to the established development Plan. A key principle that should also be adopted is the optimization of long-term productivity and utilization of resources. This requires greater cooperation among different sectors and levels of government,

basic management skills.

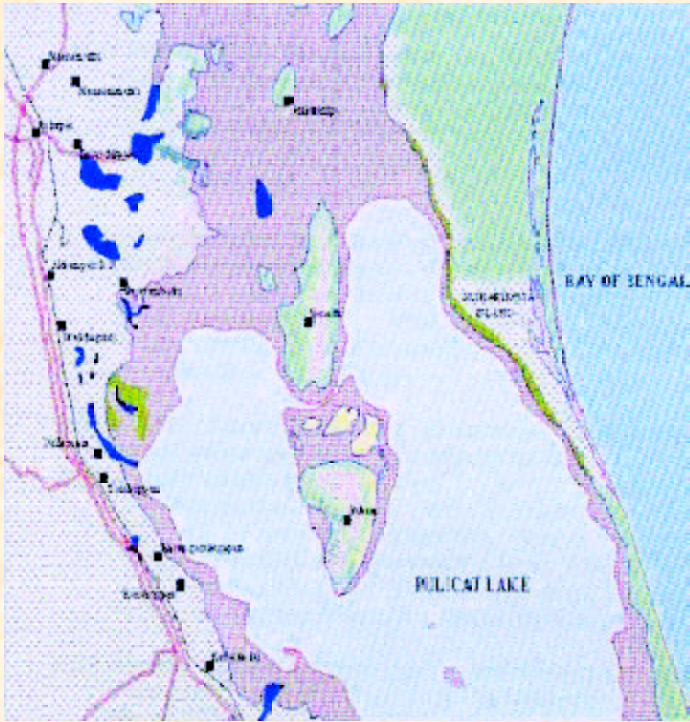
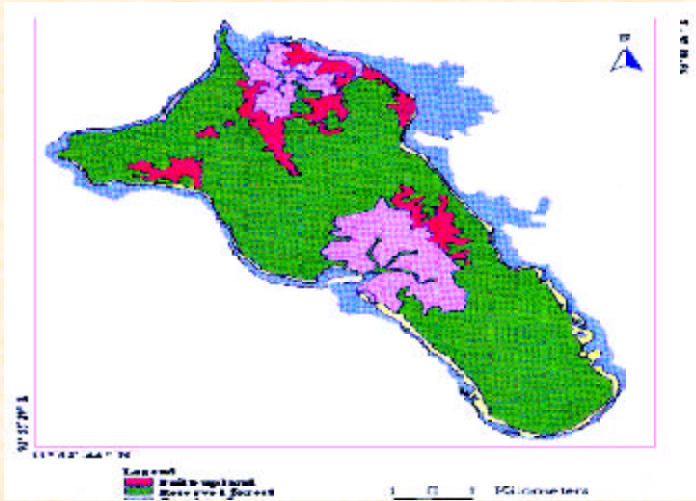
A popular management action employed as part of Integrated Planning and Management is Zonation. A zonation scheme aggregates activities that are appropriate to one another and segregates those that are contrary. Likewise, it ensures that areas that are able to sustain multipurpose development are identified and those for protection are covered by legislation. Through zonation planning areas for coastal erosion and flood control, water catchments and habitat protection, and marine resources management, including fisheries, can be identified and mapped. Suitable areas for aquaculture, recreation, tourism, industrial use and sand mining can also be identified. Zonation is thus a useful tool in development planning. Using a zonation strategy and resource specific management plans, action plans could be developed for specific sites that are currently experiencing critical resources use conflicts, or have proposed resource developments that may result in such conflicts.

Expected Output from ICZM Plan

Successful ICZM Plan could promote sustainable development of natural and physical resources and the maintenance of coastal ecological process and genetic diversity. It can provide the fair, orderly, sustainable use and development of coastal resources. It encourages public involvement in coastal resources management and planning. It also facilitates economic development and promotes the sharing responsibility for coastal and marine resource management and planning between the different spheres of government, community and industry.

At present the Ministry of Environment and Forests, Government of India, which is the governing and managing agency of natural resources; developed a body called National Coastal Zone Management Authority to coordinate the CZM activities of the national level and state Coastal Zone Management Activities at state levels. The authorities are responsible for implementing Coastal Regulation Zone (CRZ) activities and plan the coastal area development by approving maps supplied by the local monitoring agency, the State Environment Departments. The Coastal Zone Management Plan is the initial setup to identify the resources, key issues and development areas, with restrictions to different uses. ICZM will be developed in the coastal areas for use and control towards the sustainable management of the coastal resources and at the same time to utilize the developmental potentials. Two Institutions, Institute for Ocean Management, Anna University and Center for Earth Science Studies, Trivandrum are developing model ICZM Plans for Andaman and Nicobar Islands and Lakshadweep Islands respectively. Based on the success at these,two places development of ICZM may be extended to other states of India.

Prof. S.Ramachandran
Anna University, Chennai
A View of the Havelock Island: Andaman



Identification of Ecologically Important Area in Tamil Nadu: Pulicat Lake



Area of Coastal Regulation Zone in the East Coast of India: Ramanathapuram District

MANAGEMENT CALENDAR

- 1) **Oceanology International, the Americas, 2003**, Ernest N. Morial Convention Center. held at New Orleans, Louisiana , between June 4th – June 6th. Contact : Information from Spearhead Exhibitions Ltd. at +44 (0)20 8949 9222
- 2) **1st International Conference on Integrated Coastal Zone Management** , held at Santiago de Cuba, Cuba between May 5th – 7th . Contact : Info: E-mail: pbeaton@rect.uo.edu.cu and liliana@rect.uo.edu.cu, Website: http://www.uo.edu.cu/eventos/CARICOSTAS_2003/Caricosta.htm
- 3) **The Fifth International Science and Management of Protected Areas Association (SAMPAA)** – held at University of Victoria, Victoria, British Columbia, Canada between May 11th – 16th Contact : website <http://www.sampaa.org>
- 4) **Coastal Sediments '03**, - Sheraton Sand Key Resort held at Clearwater Beach, Florida, USA on May 18 Contact : website: <http://www.coastalsediments.net/>
- 5) **Mangrove 2003** International Conference, Connecting research and participative management of estuaries and mangroves held at Salvador, Bahia Brazil between May 20th – 24th Contact: Website: <http://www.mangrove2003.ufba.br>
- 6) **1st EARSeL Workshop on Remote Sensing of the Coastal Zone** - held at Ghent, Belgium between June 6th – June 7th . Contact: Info: earsel@meteo.fr, Website: http://las.physik.uni-oldenburg.de/projekte/earsel/1st_workshop.html
- 7) **Coastal Zone '03** Coastal Zone Management Through Time The largest conference for the world's coastal resource management community., between June 13th – 17th . Contact: website www.csc.noaa.gov/cz2003/
- 8) **Sixth International Conference on Computer Modelling and Experimental Measurements of Seas and Coastal Regions** - held at Cadiz, Spain between June 23rd-June 25th Contact: Info website <http://www.wessex.ac.uk/conferences/2003/coastal03>
- 9) **Aquaculture Europe 2003 conference and workshop, “Beyond Monoculture** – held at Trondheim, Norway between August 8th - 12th . Contact: contact details: Tel.: +32-59-32-38-59; Fax: +32-59-32-10-05 ; e-mail: ae2003@aquaculture.cc EAS, Slijkensesteenweg 4, B-8400 Oostende, Belgium, Internet: <http://www.easonline.org/agenda/en/AquaEuro2003/default.asp>

- 10) **3rd IAHR Symposium on River, Coastal and Estuarine Morphodynamics**.- held at Barcelona, Spain between September 1 – 5 Contact: Website: <http://www-ehma.upc.es/rcem2003/index.htm> Email: rcem.2003@upc.es
- 11) **People and the Sea II, Conflicts, threats and opportunities**. –held at Amsterdam, Netherlands between Sept 4th and Sept 6th. Contact: Website: <http://www.siswo.uva.nl/mare> Info: mkraan@siswo.uva.nl.
- 12) **16th Australasian Coastal & Ocean Engineering Conference; 9th Australasian Port & Harbour Conference**. – held at Auckland, New Zealand between September 9 and 12 for more information: Contact : Fax: +64 9 360 1242, Email: coastsandports@tcc.co.nz, Website: <http://www.coastsandports.co.nz/>
- 13) **Sixth International Conference on Coastal and Port Engineering in Developing Countries. “Engineering the coastal Environment”**. Contact : More information can be obtained at the Local organizing Secretariat of COPEDEC VI Colombo 2003. Internet: <http://www.copedec.lk/> Tel. + 94 1 300589 or 300590, Fax. +94 1 331816 or email <mailto:acetrvl@eureka.lk> or acetravels@aitkenspence.lk
- 14) **30th Pacem in Maribus**. Held at : Kiev, Ukraine. Contact: More details on web-site: <http://www.30pim.sevinfo.net/>
- 15) **Bay of Fundy Tourism Partnership Conference**, held at Wolfville, Nova Scotia, between 8th and 9th May. Contact: the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 16) **Climate Solutions for the Northeast**, a Conference on Implementing State and Regional Climate Change Action Plans, held at Hartford, Connecticut between 11th and 13th May. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 17) **SAMPAA V**, the 5th International Conference on Science and the Management of Protected Areas, held at Victoria, British Columbia between 11th and 16th May, 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 18) **15th Annual Conference of the European Association of Fisheries Economists (EAFE)**, held at Brest, France between 14th to 16th May, 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 19) **GEOIDE Summer School**, held at Victoria, British Columbia between 15th to 20th May 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.

Planning workshop, held at Bar Harbor, Maine between 20-21 May 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.

- 21) **International Symposium on Contaminated Sediments**, held at Québec City, Québec between 26th and 28th May , 2003 . Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 22) **Offshore Oil and Gas Environmental Effects Monitoring Workshop: Approaches and Technologies**, held at Dartmouth, Nova Scotia between 27th and 30th May 2003. For Further information contact the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 23) **14th International Global Warming Conference and Expo**, held at Boston, Massachusetts between 27th and 30th May 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 24) **Joint meeting of the ACMCLA, the CAG and the CCA**, held at Victoria, British Columbia between 27th – 31st May 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 25) **8th Canadian Workshop on Harmful Marine Algae (CWHMA)**, held at Gulf Fisheries Centre, Moncton, New Brunswick between 28th – 30th May 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 26) **Improving the Quality of Life through Environmental Impact Assessment (EIA)**, a 10-day course being offered at McGill University, Montréal, Québec between 26th May and 6th June, 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 27) **10th Annual Environmental Studies Association of Canada Conference**, held at Halifax, Nova Scotia between 1st and 3rd June 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 28) **Conference on Hyperspectral Issues for Coastal Zone Environments**, organized by the Alliance for Remote Sensing (AMRS), held at New Orleans, Louisiana between 4th June to 6th June 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.
- 29) **Conference on the Challenges of Offshore, Coastal and Estuary Engineering and Management**, held at Moncton, New Brunswick between 4th June to 7th June 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net with the details.

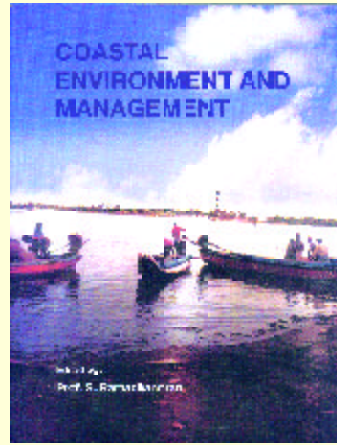
held at Ghent, Belgium, between 6th to 7th June 2003. Contact : the ACZISC Secretariat, at leblancc@ca.inter.net

IOM PAGE

Institute for Ocean Management (IOM) is an autonomous and advanced center that functions under the Faculty of Civil Engineering, Anna University from the year 1998. The mission of IOM is management of ocean and coastal environment and their resources for sustainable utilization of resources and livelihood security of coastal and ocean dependent communities and users through research and training. The important activities are basic research, collection of conventional and non-conventional data, organization and maintenance of databases exchange of database and knowledge base, preparation of status reports and management plans and providing training in the area of coastal and marine area management.

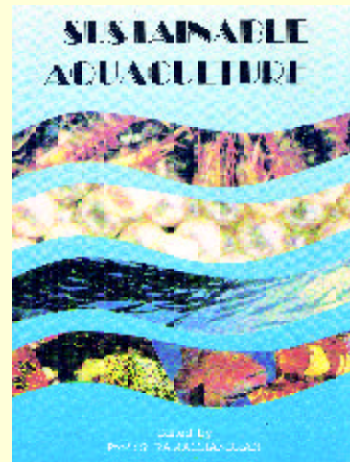
IOM provides consultancy services on Environmental Monitoring, Environmental Impact Assessment, Aquaculture and Mariculture site selection, application of Remote sensing in Coastal Zone Management, Coastal Regulation Zones Mapping and Integrated Coastal Zone Management Planning etc. More than Rs. 88 million has been received in the past 5 years as research grants, 21 projects have been completed and 12 projects worth 20 million rupees are still ongoing. More than 30 training programmes, short courses, seminars and symposia have been conducted in the past 5 years, on the academic side 20 are well awarded.

Coastal Environment and Management



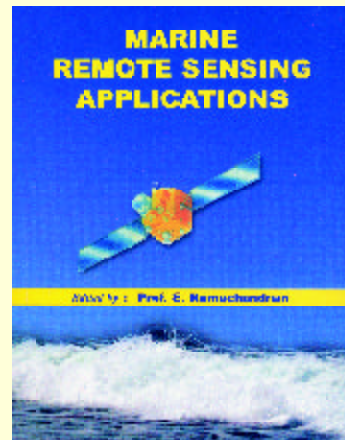
This book describes in detail about the Coastal Environment and Management aspects of India, is edited by Prof. S. Ramachandran. The cost of the book is Rs 1000.

Sustainable Aquaculture



This gives a description of the Aquaculture. This is another valuable asset of prof S.Ramachandran, has 223 pages and its cost is Rs 300

Marine Remote Sensing Applications



This book describes in detail about the Remote Sensing applications applicable to marine Rerouvos. Edited by Prof. S. Ramachandran, and its cost is Rs 750.

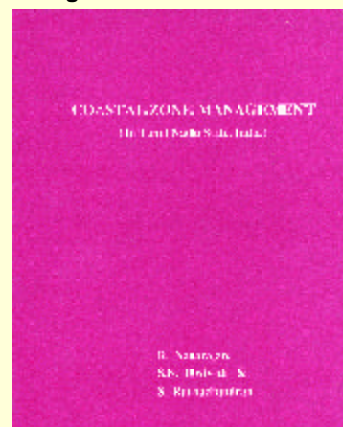
Publications in CD form:

Pulicat lake Southeast Coast of India:

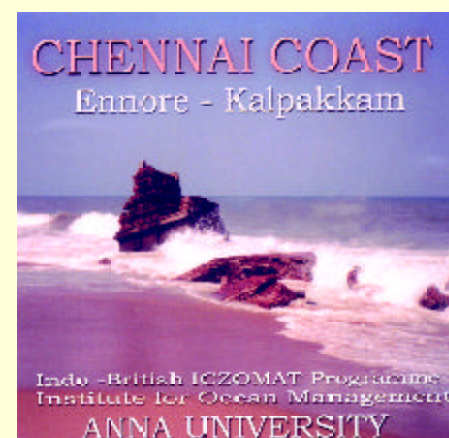


This CD gives a description of the Pulicat lake. Edited by Prof. S. Ramachandran, the cost is Rs. 300.

Coastal Zone Mangement



This book describes about Coastal Zone Management in the state of Tamil Nadu. This is edited by Prof.S. Ramachandran with the assistance of R.Natarajan and S.N. Dwivedi. This has 223 pages and its cost is Rs 400.



This CD gives a description of the Chennai Coast , in Ennore-Kalpakkam areas. Edited by Prof. S. Ramachandran , and the cost is Rs 300.

ENVIS node on Coastal Zone Management (COZMA) has started functioning from December 2002, at Institute for Ocean Management, Anna University. Prof.S.Ramachandran, Director, Institute for Ocean Management is the ENVIS Coordinator. Dr.D.Asir Ramesh, Program Officer and Ms.Padmaja Raman, IT Assistant, are appointed in this node, and they are involved in web page creation, database and bibliography preparation on Coastal Zone Management. Short-term contracts are also provided to suitable persons for developing and assisting in the bibliography preparation and database designing tasks of COZMA node.

The main objectives of the COZMA node are, dissemination of information relevant to Coastal Regulation Zone (CRZ) maps, Ecologically Sensitive Areas of the Coastal Environment, Critical Habitat and Coastal Zone Management Planning. The project outputs of the Coastal Zone Management studies and CRZ maps prepared by the IOM, Anna University were transferred to the COZMA web (annauniv.edu/iom/envis) for public utilization.

The node has one computer, laser printer and a scanner connected with the internet. Ten international users and 20 national users have collected information from the ENVIS office directly during the past four months. A library on coastal zone management is being developed to strengthen the node. The journals and books, which are relevant to the Coastal Zone Management subject area, are being purchased for the COZMA node library . Brochures of COZMA node and requestation letter for subscription of publications are being sent to other nodes to develop network and strengthen the library.



COZMA ENVIS Home page

URL: www.annauniv.edu/iom/COZMA

We welcome your suggestions on this Newsletter. Reports and Articles related to Coastal Zone Management will be encouraged.

for Further Details, Please contact

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