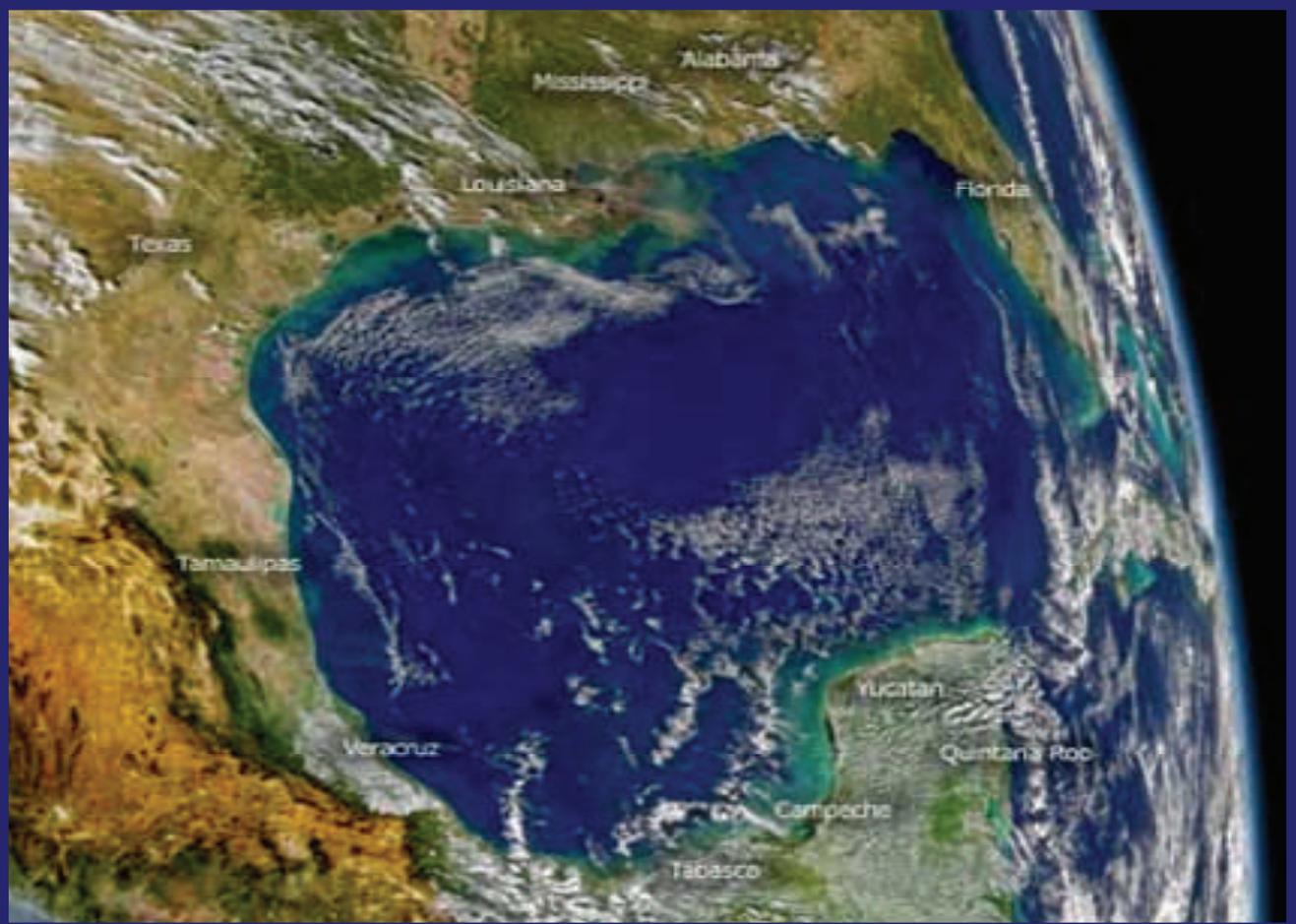




Gulf of Mexico Large Marine Ecosystem (GoM LME)



BULLETIN

YEAR 1 NUMBER 01

January — March 2010

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INTRODUCTION

Welcome to the first GoM-LME Project E-News bulletin. This publication aims at sharing information about the main activities and achievements of the GoM-LME, as well as publishing coming scheduled events. If you have any comments or suggestions please do not hesitate to contact us. We hope you can find this information useful and fruitful for you and your organization.



Second Steering Committee Meeting 11-12 February

The Second Steering Committee (SC) took place in Miami, Florida, and called for an active participation of those members that participated in the first SC meeting, which included representatives from the National Oceanic and Atmospheric Administration (NOAA), the National Marine Fisheries Service (NMFS), the Gulf of Mexico Coastal Ocean Observing System (GCOOS), the Mexican Ministry of Environment (SEMARNAT), the Mexican National Commission for Natural Protected Areas (CONANP), the Mexican National Institute of Ecology (INE), the Mexican Institute of Water Technology (IMTA), the Advanced Research and Studies Center (CINVESTAV), the Nature Conservancy (TNC) the Mexican Center for Environmental Law (CEMDA), and the United Nations Industrial Development Organization (UNIDO). The elected Steering Committee Chair and Co-chair were the representatives of the country focal point institutions: Bonnie Ponwith from NOAA-US and Antonio Diaz de Leon from SEMARNAT- Mexico, respectively.

A detailed description of the project components was presented along with underlying activities, goals, risks, and assumptions. Additionally, the activities required to update the Transboundary Diagnostic Analysis (TDA) were presented. The Project's Chief Technical Advisor, Porfirio Alvarez-Torres presented this year's activities in order to find possible participation of the American counterparts. NOAA's activities in the GoM were mentioned as was the possibility to attend a training course on Atlantis modeling by two Mexican experts. The importance to establish learning centers that replicate the experience of the Kiosk in the Veracruz Aquarium, currently being used to share knowledge about marine and coastal ecosystems of the region, was brought up.

Main activities during 2009

Inception Workshop, Merida, Yucatan Mexico (24-26 June)

First Steering Committee Meeting, Merida, Yucatan Mexico (26 June 2009)

National Workshop of the Pilot Project: "Joint Assessment and Monitoring of Coastal Conditions in the Gulf of Mexico", Campeche, Campeche, Mexico (1-2 October)

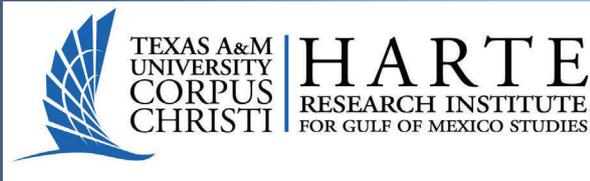
First National Workshop of Experts, Pilot Project: "Natural Habitat and Ecosystem Conservation of Coastal and Marine Zones of the Gulf of Mexico". Mexico City (7-8 October)

Bi-national Meeting Mexico- United States: "Enhancing partnership and review of advances of the Integrated Assessment and Management of the Gulf of Mexico Large Marine Ecosystem Project", November 17 - 18, 2009, Mexico City

In summary, during this meeting new commitments emerged in order to establish a work plan for this year.

International Conference on Sea Level Rise of the Gulf of Mexico

4 – 5 March



The International Conference on Sea Level Rise of the Gulf of Mexico held in Corpus Christi had an overall goal of sharing knowledge among researchers studying the natural processes and human dimensions of sea level rise in the GoM and to engage decision makers and public in land and sea use planning..



The GoM LME Chief Technical Advisor presented a speech on “Incorporating Risk and Vulnerability factors in the Development of models used in the Sea and Land Use Planning of the GoM and the Caribbean Sea” as part of the collaborative actions conducted between the

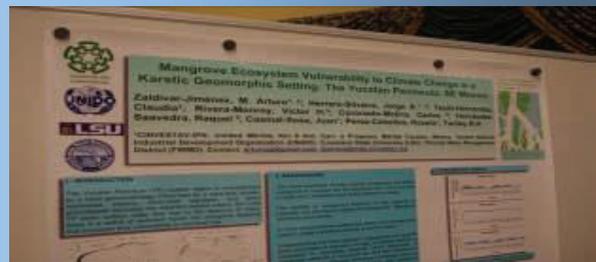


GoM project and Mexico’s Focal Point, SEMARNAT; INE, the University of Quintana Roo, among others.



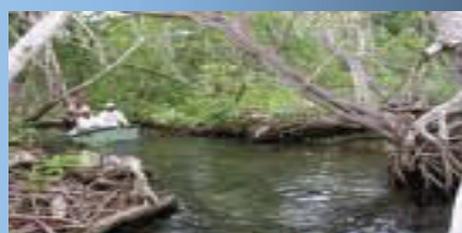
The conference addressed a number of issues concerning mitigation measures and fostered an in-depth discussion on how people and the environment would respond.

Some examples about new technologies used to drive models that assess the impact of future changes were presented. These include output from numerical models driven by data rich observation programs, cutting edge data visualization methods, and global ocean estimates for satellite altimetry.



In this regard, the GoM LME Project involves several actions that will contribute to the development of adaptation mechanisms for protection of coastal areas in the future.

As an example of this, the GoM-LME Pilot Project on Restoration presented a poster with the latest information on the Yucatan Peninsula. The content focused on the potential effects of climate change on the Yucatan mangroves and the environmental and hydrological characteristics of these important ecosystems.

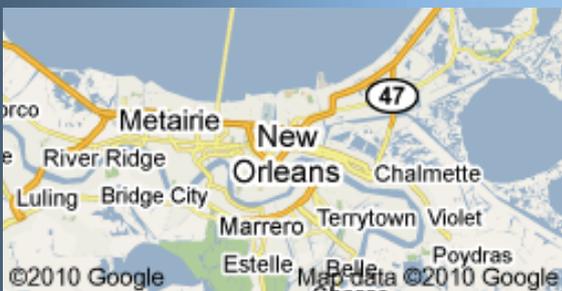


GCOOS Board of Directors Meeting 6 March



As part of the main achievements of this event, the development of a summer training course on Governance of the Gulf of Mexico was proposed for this year. This program will be conducted by the Harte Research Institute, the University of Veracruz and the GoM LME project.

The meeting took place in New Orleans, Louisiana with the aim of signing a memorandum of agreement between SEMARNAT and GCOOS. In addition, the Project's Chief Technical Advisor presented an overview of main activities carried out during 2009 in collaboration with GCOOS and its members, and highlighted the issue of education and public participation.



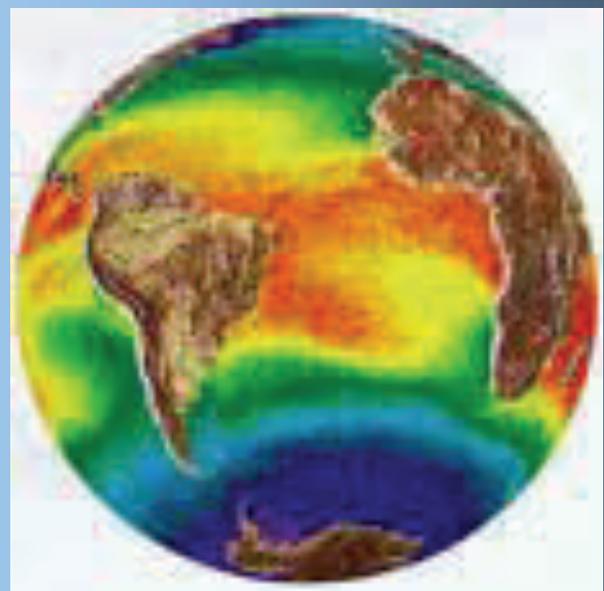
Another aspect regarding the collaboration between GCOOS, SEMARNAT and the GoM LME project, is the assignment of an ex-



pert in fisheries to take part in a training course on fisheries stock population analysis by invitation of the Dauphin Island Sea Lab.

The project will be working directly with Dr. Nancy Rabalais, Executive Director of the Louisiana State University Marine Consortium (LUMCON), and marine pollution expert.

Finally, these events offered the opportunity to strengthen collaboration between a number of institutions involved and the GoM LME project. Expected outcomes were achieved and future events resulting from this meeting are: the participation of a member of the GoM LME project to attend the Climate Change and Sea Level Rise to be held in St. Petersburg Florida on the second week of April, to define names of experts who will be participating in the Regional Binational Workshop on watersheds, pollution, over enrichment and hypoxia to be held in Mexico, and to define and plan the regional summer training.



Course: Ecosystem Modelling for Fishery Management.

Copenhagen, Denmark.

8-10 March



An important component of the activities of the Pilot Project Enhancing Shrimp Production through ecosystem

- based management is to use the ecosystem model “ECOPATH”, one of the most used tools worldwide for fisheries management. This system is designed to enable construction of data-rich ecosystem models and will be very useful in the implementation of ecosystem-based fisheries management.

One of the experts of the GoM-LME project participated in this course with the aim of gathering information and gaining skills for the implementation of ECOPATH in the Pilot Project.

Important supporting tools for decision-making were analyzed as follows:

- 1.- Conservation and Restoration Site Selection Tools
- 2.- Ocean Zoning and Coastal Zone Management Tools
- 3.- Fishery Management Tools
- 4.- Hazard Assessment and Resiliency Planning Tools
- 5.- Land Use Planning Tools

Although fisheries ecosystem models are to be considered only one of several tools available for Ecosystem-Based Management (see <http://www.ebmtools.org>), they deal with core issues of fisheries management, catches dynamics and by-catch. Other ecosystem simulation systems like Atlantis don't include the upper trophic levels, which Ecopath/Ecosim simulation focuses on, but deal more thor-

oughly with aspects like nutrient dynamics that are only treated marginally in Ecopath/Ecosim. A balanced Ecosystem-Based Management approach should consider a wide array of tools, according to the challenges at hand.



However, it is necessary to maintain a continuous training regarding ECOPATH in order to develop an efficient model tool for the Pilot Project.

Workshop: Wetlands and Climate Change in Latin America and the Caribbean Region

15 - 16 March

This workshop was coordinated by the National Institute of Ecology and the World Bank. It was organized to disseminate information on climate change adaptation and the activities currently implemented in Latin America and the Caribbean Region, as well as to share information on how to measure impacts of climate change on wetland ecosystems and identify new cooperation opportunities for wetland projects in Latin America and the Caribbean Region.



With the participation of the GoM LME staff in this event it was possible to learn about the different projects currently being implemented by the World Bank. The possibility of future collaboration with other stakeholders that participated during this event was also identified .

The CTA gave a brief presentation of the GoM LME Project and as a result of this, Mr. Walter Vergara, Lead Engineer of the World Bank Environmental Network, suggested that a collaboration between this Project and different wetland projects lead by the World Bank be developed.



The workshop concluded pointing out that it is necessary to establish a virtual community of regional wetland project practitioners. The World Bank will support knowledge exchange and the dissemination of lessons learned through the organization of a working table among stakeholders involved in wetland projects in the Gulf of Mexico region and other LAC regions in order to coordinate efforts and avoid duplicities, give special emphasis on local community activities, promote wider public participation, consensus and awareness raising in local communities, and consider carbon sequestration as an opportunity for wetland programs.

CONAFOR and GoM LME Chief Technical Advisor Meeting 15 - 16 March

The purpose of attending this meeting was to talk with National Forestry Commis-

sion (CONAFOR) officers in order to define collaborative actions and budget allocation for FY 2010, towards the Pilot Project on Coastal Ecosystems Restoration (mangroves) of the GoM LME Project.



The National Forestry Commission is a federal organization under the Ministry of Environment and Natural Resources (SEMARNAT) devoted to the recovery and sustainable use of forest resources. CONAFOR has available resources to promote best management practices and technical programs to conduct reforestation and rehabilitation of coastal wetlands and mangrove ecosystems among other resources.



The PCU gave detailed information on the Gulf of Mexico LME project and its components, giving particular attention to the Pilot Project on Mangrove Restoration. The CTA also provided with a specific technical proposal document for the rehabilitation of mangrove areas in Isla del Carmen, Terminos Lagoon, Campeche.

One of the goals of the visit to CONAFOR was to define a close cooperation between the GoM LME project and the Commission and to leverage existing GoM LME project resources in accordance with UNIDO's rules and regulations, as well as to

mentioned Pilot Project on Mangrove Restoration



CONAFOR authorities showed great interest in the given proposal prepared by GoM LME experts on mangrove restoration, Mr. Arturo Zaldivar and Mr. Jorge Herrera. Both experts already have a great technical reputation with CONAFOR authorities due to the excellent results obtained in recent restoration projects conducted in the Yucatan Peninsula, Mexico.



The Commission requested the GoM LME PCU to aid in creating and implementing similar pilot projects on mangrove rehabilitation in other Gulf of Mexico coastal states, and encouraged the GoM LME PCU to work closely with CONAFOR technicians, local communities and NGOs to increase the expected results of mangrove rehabilitation in the region.



The PCU highlighted that the Pilot Project of Terminos Lagoon will provide with the needed expertise, robust indicators and lessons learned to be used in future mangrove rehabilitation projects in the GoM LME.

As a result, the GoM LME project and CONAFOR will have a close collaboration in the Pilot Project and later on with future projects implemented in the Gulf of Mexico with budget allocation and technical support. This represents an important achievement for the GoM LME project and for CONAFOR because both organizations will be supporting sustainable development throughout the region.

Training Course on Quality Assurance and Quality Control Programs to Coastal Condition Assessment

18 - 19 March

The purpose of the training course was to bring together the national experts on monitoring of coastal conditions from the Mexican Gulf in order to:

- Define the Quality Assurance and Control program to develop the baseline sampling of the monitoring pilot project.
- ♦ Provide the knowledge and guidelines to design the detailed protocols for each analysis and determination during baseline sampling, sample and data analyses, database preparation and results preparation.
- ♦ Strengthen capacity and enhance integrated ecosystem based management in the region.

Baseline sampling is one of the most important activities of this pilot project and Mexican regional experts will be designing indicators for assessing the following coastal conditions:

- ♦ Water Quality Index
- ♦ Sediment Quality Index
- ♦ Benthic Community Index
- ♦ Coastal habitat Index
- ♦ Fish Contaminants Index

The training course was designed for experts to share experiences and knowledge to address troubles faced when preparing their Quality Assurance and Quality Control Programs for assessing the above mentioned conditions.

Main training course products were Quality Control and Assurance not only for chemical and physical measurements, but also for biological measurements, number and type of sampling stations, timing on the sampling, among others. For these reasons, national experts participated during this training course in order to get the tools to develop detailed protocols for QA/QC.



XI Regional Gulf of Mexico Shrimp Forum 18 - 19 March

The Forum was organized by the National Fisheries Institute (Instituto Nacional de la Pesca, INP) with the objective to present results of the Institute's monitoring and research activities, including results from the Gulf of Mexico (Tamaulipas and Veracruz) brown shrimp fishery, Southern Gulf of Mexico (Campeche) fishery and Caribbean (Quintana Roo's rock and red shrimps). In this forum the INP showed some important progress in quantifying artisanal fishery efforts in Laguna Madre and making preliminary socioeconomic assessments in Tamiahua Lagoon.

Also, quantitative analyses have been made on the industrial fishing effort of Tamaulipas and a preliminary assessment of economic conditions of the industrial Campeche fleet. Presentations by non-INP researchers included a speech by Dr. Atahualpa Sosa from EPOMEX, on dealing with a recently approved project that aims at creating a Mexican shrimp researchers network.



These fora, organized by the INP since 2000, seek to exchange experiences in monitoring and research results with academia and fishermen. The INP has been the mainstay of Mexico's fisheries research for five decades.



It was shown that the complementariness of INP's activities with those of the Enhancing Shrimp Production through Ecosystem-based Management Pilot Project in Terminos Lagoon could lead to fruitful synergies. INP's participation is seen as an asset in the development of the GoM LME project's activities.

Final Remarks:

The information presented is part of the most important events celebrated during January, February, and March 2010. The participation in each of these events represented an opportunity to strengthen collaboration and give a wide dissemination of the Gulf of Mexico Large Marine Ecosystem Project.

Most of the activities have resulted in successful achievements where the GoM LME is working now. Future activities and events for the next months (May - June - July) are listed below:

Calendar of upcoming events

Activity	Place	Date
Workshop: Climate Change Education and Outreach. Organized by NOAA	St. Petersburg, Florida. USA.	19 - 21 April
Training course on probabilistic sampling design to coastal condition assessment. Organized by GoM LME project	Merida, Yucatan Mexico.	10 - 13 May
Experts workshop for sampling preparation. Organized by GoM LME	Cd. Carmen, Campeche, Mexico.	1 – 2 July
Experts meeting for oil spill analysis in the Gulf of Mexico Organized by SEMARNAT and the GoM LME	Mexico City	14 may
Course: Mangrove Restoration. Organized by GoM LME	Merida, Yucatan, Mexico	12 – 13 July
Regional International Forum: From the Rivers to the Gulf of Mexico, Towards an Ecosystem Management Approach. Organized by GoM LME	Mexico City	October
Regional Workshop on Environmental Education for Natural Protected Areas organized by CONANP	Pantanos de Centla, Mex- ico	September

GULF OF MEXICO LME



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