



Integrated Assessment and Management of  
the Gulf of Mexico Large Marine Ecosystem

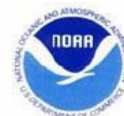


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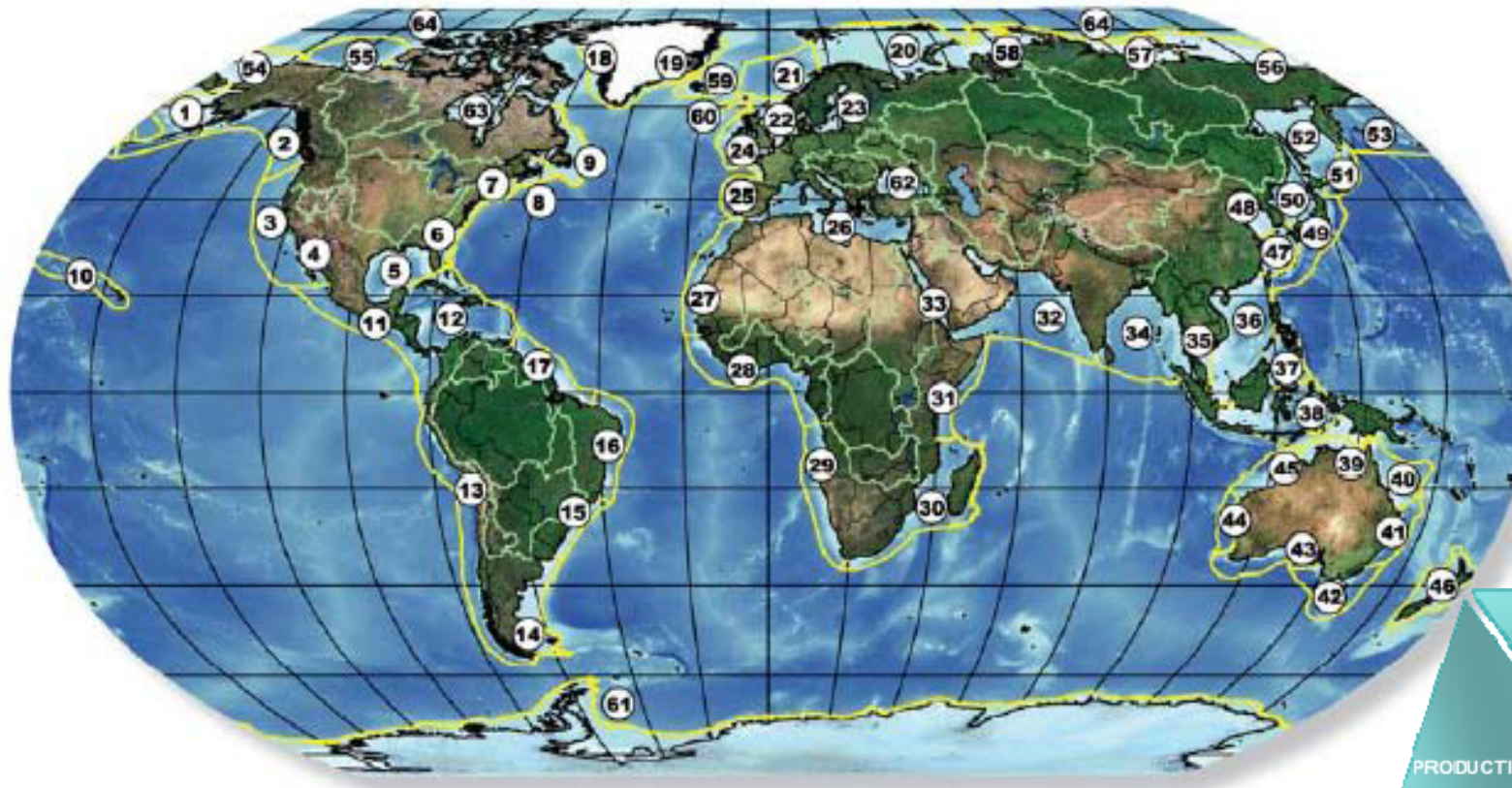
*2<sup>o</sup> International Meeting on Sustainable Watersheds*  
September 29th, 2010

**Porfirio Álvarez-Torres, Ph. D.**  
Chief Technical Advisor



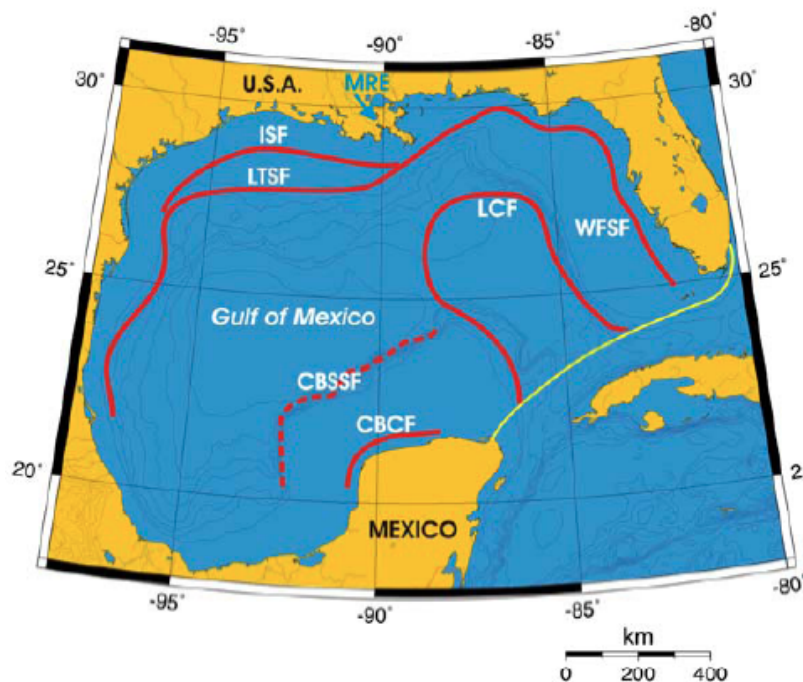
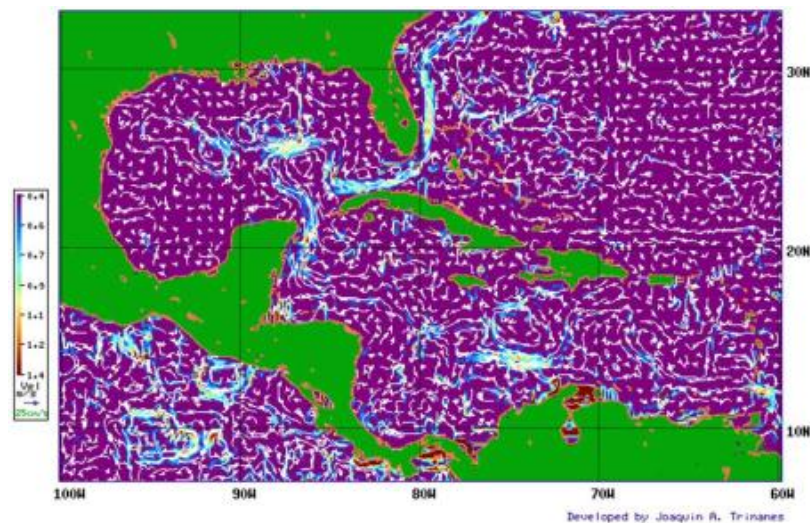


## Large Marine Ecosystems of the World and Linked Watersheds



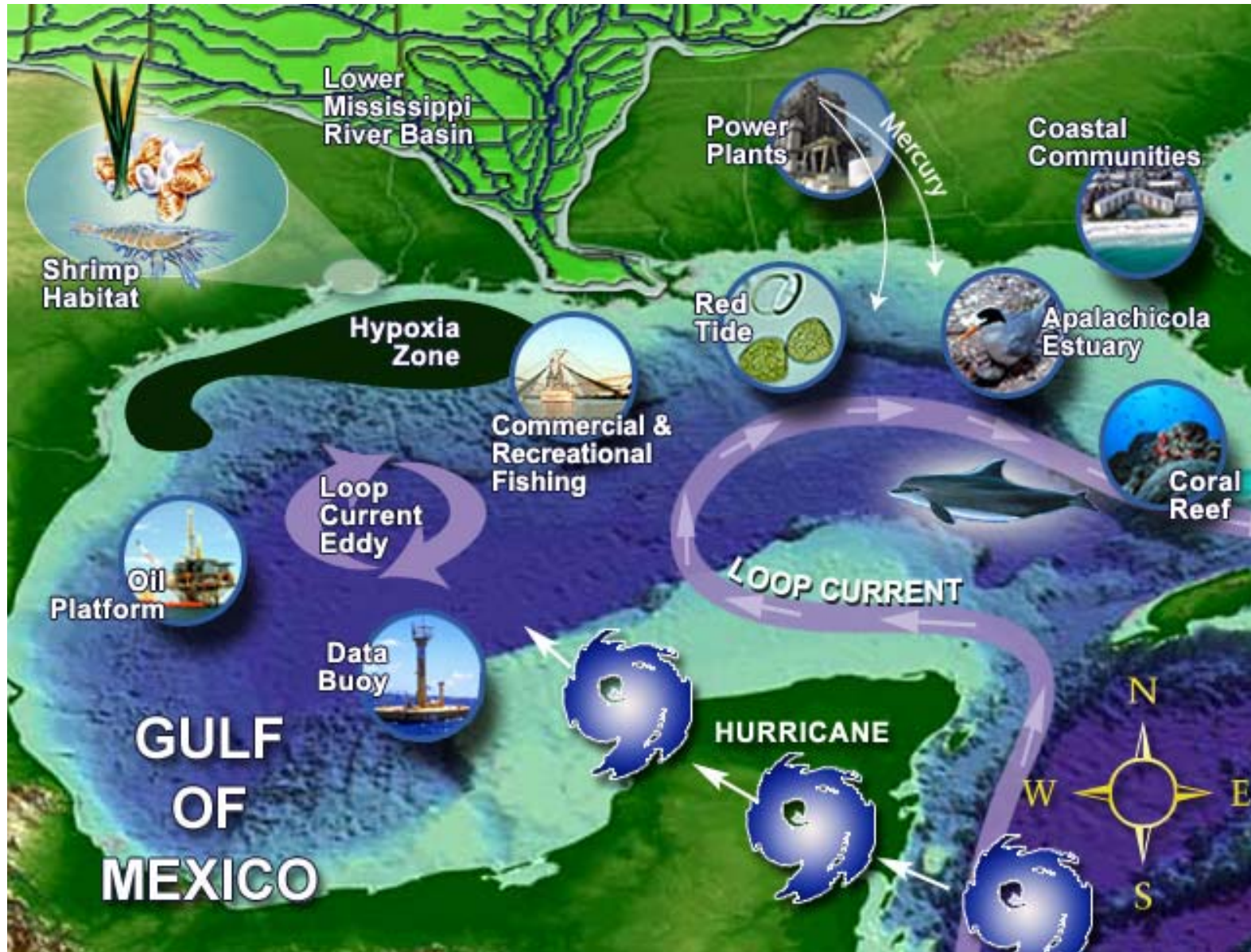


## Transboundary Connectivity



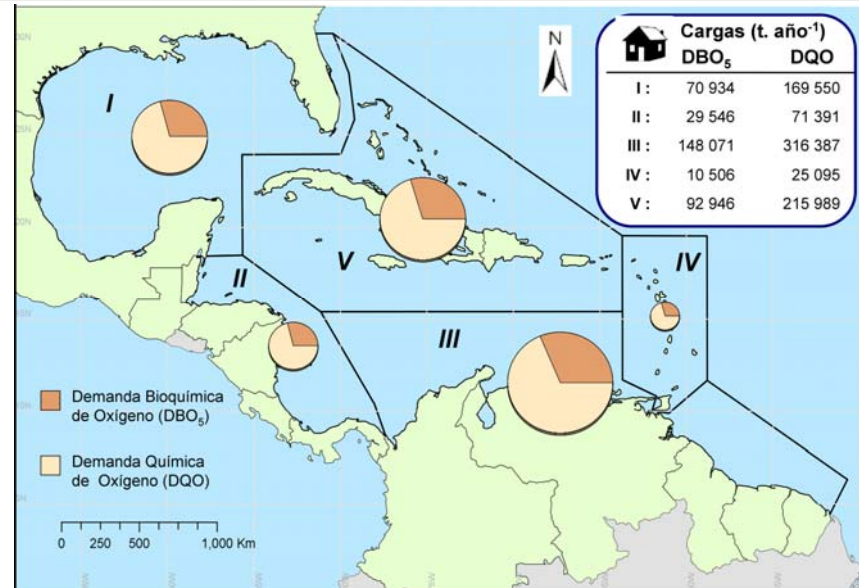
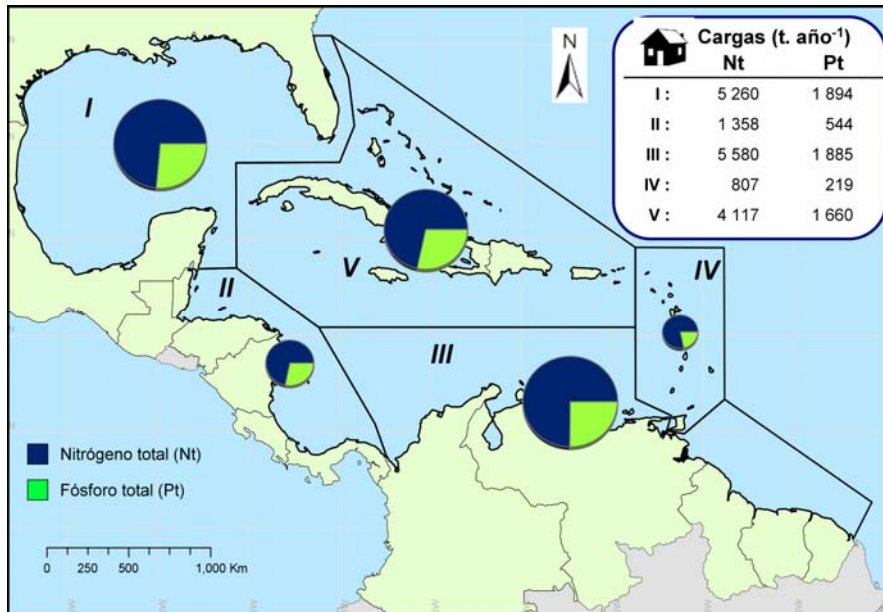
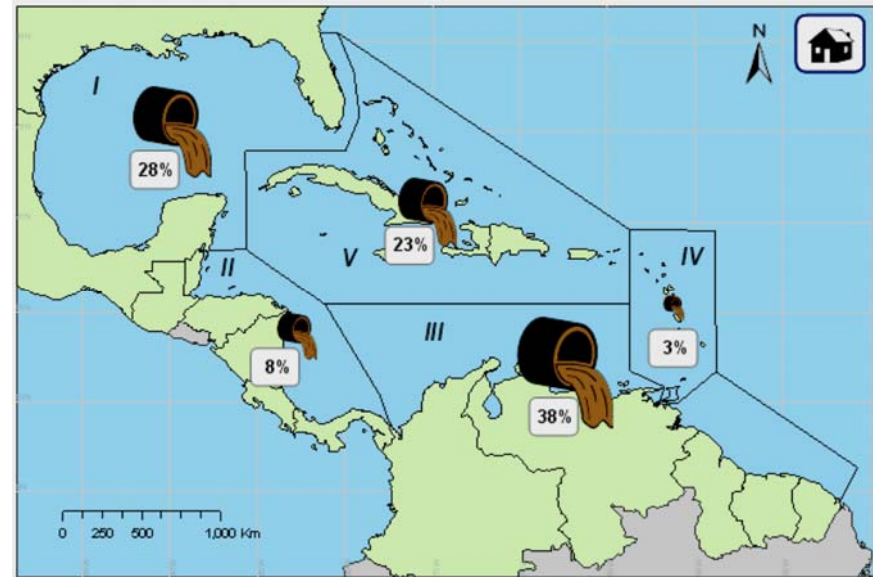
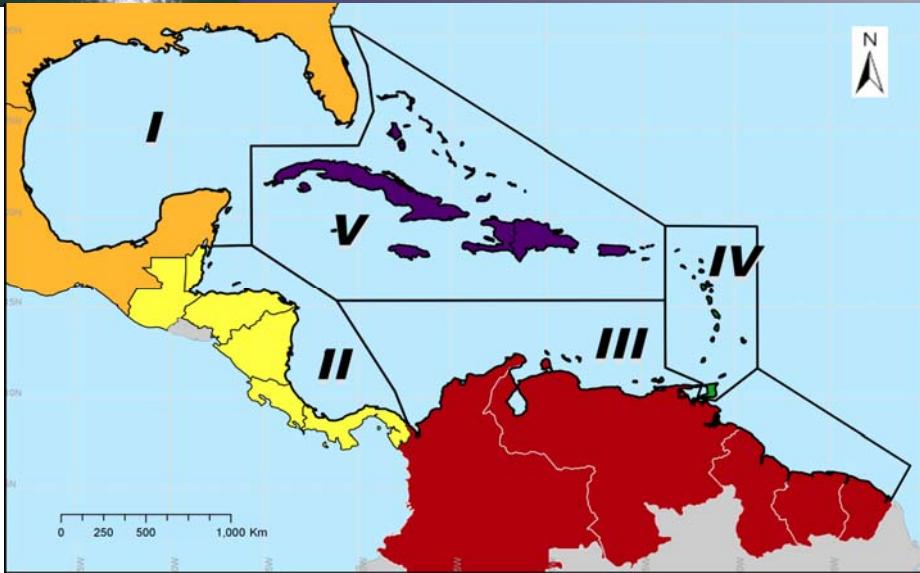


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## Main Problems Prioritized in the Gulf of Mexico LME

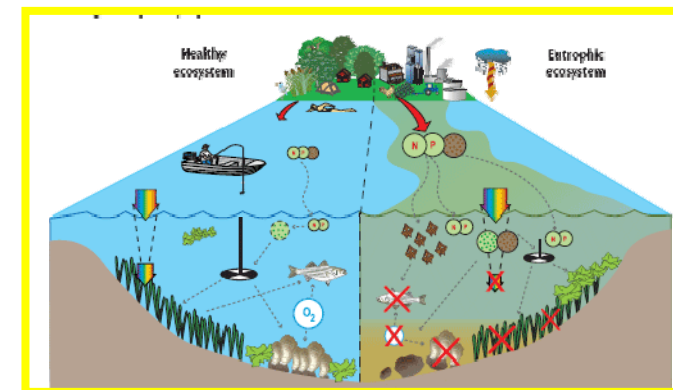
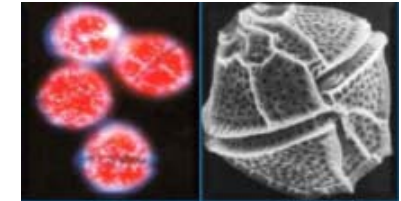
Eutrophication, dead zones, HAB's & Red Tides

Habitat modification (loss of mangrove areas, connectivity and resilience)

Overexploitation of Marine Living Resources (Decreasing of fisheries resources)

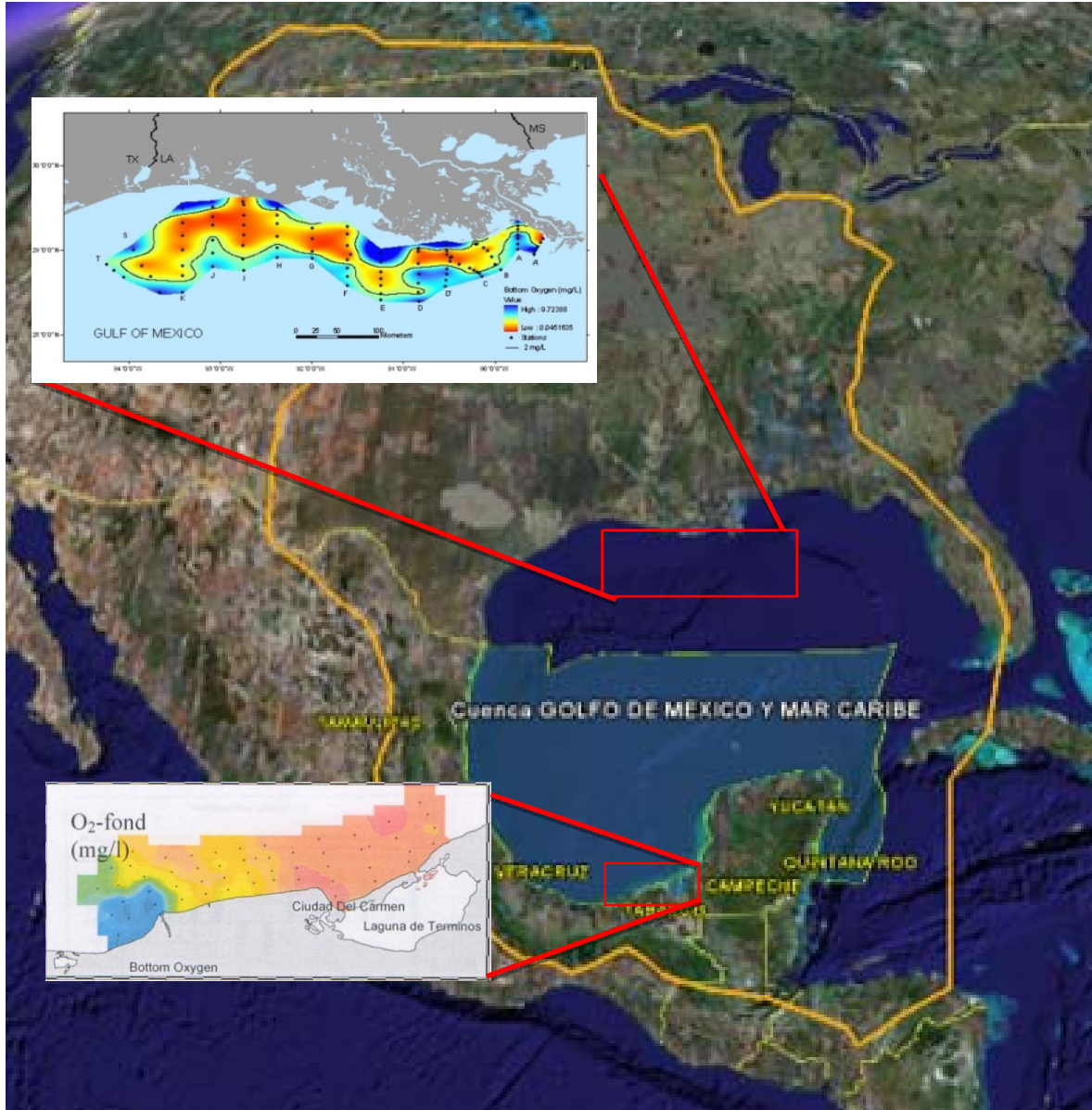
Mono-specific management, and lack of ecosystem approach

Deficient assessment of environmental goods and services





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## GoM-LME Project Main OBJECTIVES and SAP/NAP construction

Reduction of pollutants and excessive nutrient loads

Recovery of over-exploited marine resources

Rehabilitation of marine and coastal ecosystems

### SAP/NAP IMPLEMENTATION

SEMARNAT SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES

NOAA NATIONAL OCEANOGRAPHIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE

GULF OF MEXICO ALLIANCE

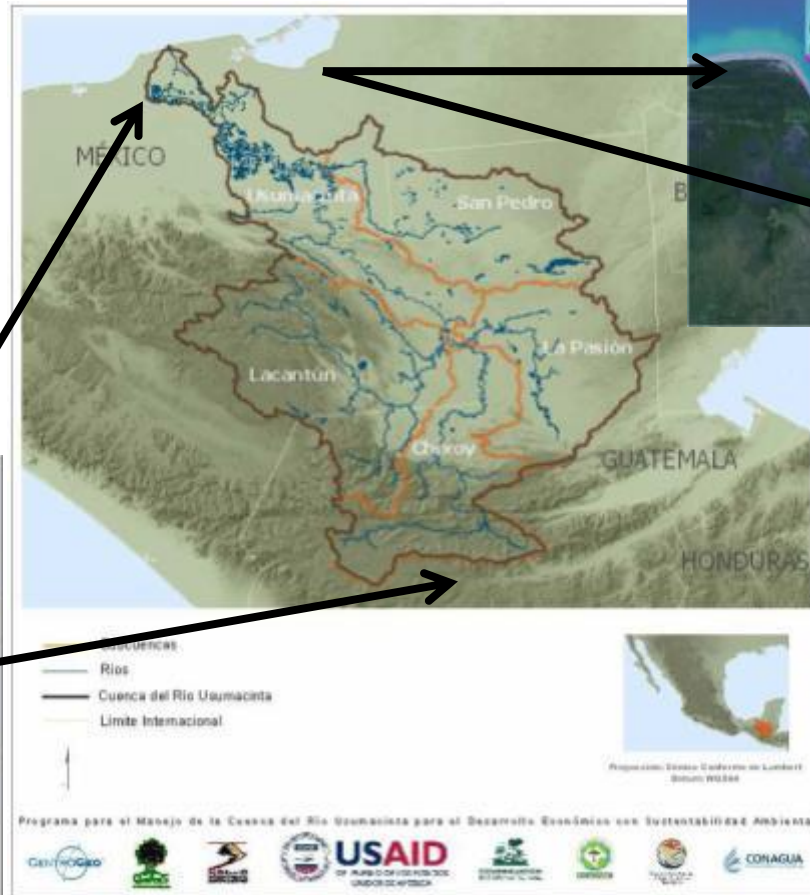
COMISIÓN INTERSECRETARIAL PARA EL MANEJO SUSTENTABLE DE MARES Y COSTAS CIMARES



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## Grijalva-Usumacinta River Basin







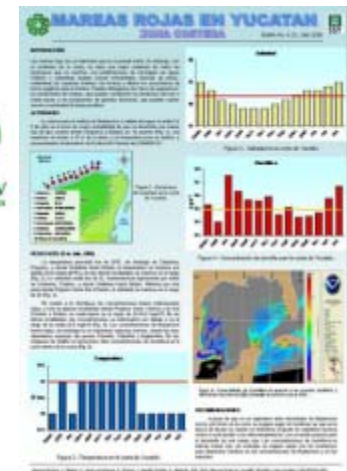
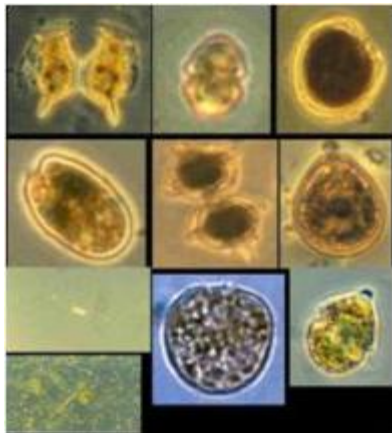
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# “HABs, Join Monitoring Program Mex-US



**HABIOS**  
(Harmful Algal Bloom Integrated Observing System)  
IOC-UNESCO  
(Intergovernmental Oceanographic Commission on Harmful Algal Bloom Program)





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## Goal:

Strategic Action Program (SAP) & National Action Programs (NAPs) Endorsed by both  

**FASE 2: SAP/NAP IMPLEMENTATION (2013 →→)**





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DESDE LAS CUENCAS HASTA EL GOLFO DE MEXICO

FROM THE RIVERS TO THE GULF OF MEXICO

27 de Septiembre 2010  
28

HOTEL COMERCIAL FEDERAL, MONTERREY, MEXICO





Integrated Assessment and Management of  
the Gulf of Mexico Large Marine Ecosystem



GULF OF  
mexico LME



*Gracias*