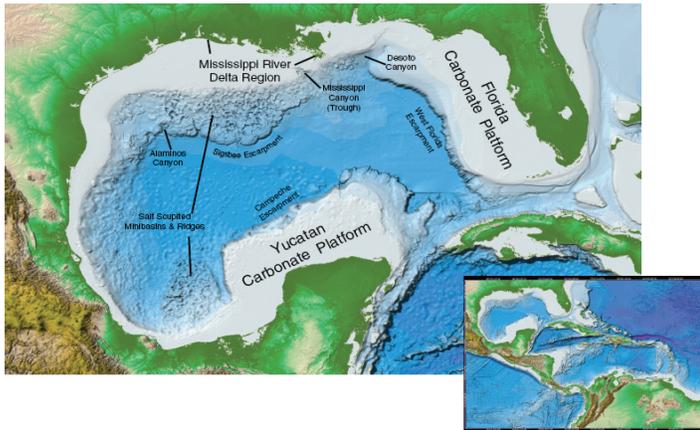


## Gulf of Mexico Large Marine Ecosystem (GoM-LME)

The GoM-LME is the ninth largest body of water in the world and the largest semi-enclosed coastal sea in the Western Atlantic; it is an oval shaped oceanic basin covering 1.6 million km<sup>2</sup>, measuring approximately 1,500 km at its widest point and 4,384 m at its deepest. Its eastern, northern and northwestern shores touch on five U.S. states (Florida, Alabama, Mississippi, Louisiana, and Texas); southwestern and southern shores span lie along five Mexican states (Tamaulipas, Veracruz, Tabasco, Campeche, Yucatan, and the northernmost tip of Quintana Roo). On its southeast quadrant, the Gulf is bordered by Cuba.



Global Relief Model of the Gulf of Mexico Large Marine Ecosystem with inset of the Gulf-Caribbean complex (based on data from Amante and Eakins, 2009).

The GoM LME geographic and biophysical characteristics, make it an important global reservoir of biodiversity and one of the most productive of the 66 LMEs in the world. The GoM-LME provides economic wealth, products, food, services, cultural heritage and energy directly to the countries that share it, and contributes to the oceanic biodiversity as a whole.

### Highlighting the Economic and Environmental Value of the GoM LME

The GoM-LME is a major asset to its coastal countries in terms of fisheries and seafood processing, tourism, agriculture, oil infrastructure, trade, and shipping. The five states that make up the Gulf Region in Mexico contribute approximately 10% of the gross domestic product in the agriculture, livestock, forestry and fisheries sectors. Economic activities in the GoM-LME

are significant for both countries, with 85 % of Mexico's oil extraction originating in the region as well as 72 % of the U.S. offshore petroleum production.

Regarding gulf ecosystems, more than 15,000 plant and animal species are found in GoM waters, also 31% percent of its coastal watershed area is comprised of wetlands, which signifies a total of 28,372 square miles of this valuable natural resource.

### The GoM LME at risk

Although its favorable characteristics, the high productivity of the GoM-LME is at risk due to different human-related activities such as excessive fishing effort, destruction of critical coastal and marine habitats, and nutrient-enrichment. These threats have resulted in a "Dead Zone" of over 18,000 km<sup>2</sup> that forms one of the largest hypoxic zones of water in the world. Additionally, the LME is the focus of extensive oil and gas production as well as a rapidly increasing tourism industry.



Gulf of Mexico: Ciudad del Carmen Campeche/ Paloma Ladrón de Guevara

The three main significant factors resulting in biomass changes in the GoM-LME are intensive fishing, habitat modification, and connectivity. According to data from the Food and Agriculture Organization of the United Nations (FAO), in the last 30 years Mexico has lost more than half of its mangrove coverage on both coasts. Depletion and impacts on fish stocks affect both countries given that many stocks are shared, migratory, or connected via egg or larval transport. Loss of habitats impacts on the life cycles of over 90% of GoM coastal and marine species, as does the increasing pollutant and nutrient loads.

## UNIDO's relevance and engagement in the Large Marine Ecosystems

In accordance with its mandate to promote **Inclusive and Industrial Sustainable Development** (ISID), UNIDO has coined the concept of **Green Industry** to place ISID in the context of **circular economy**, and also it has developed certain methodologies such as the **Transfer of Environmentally Sound Technologies** (TEST), which consists in identifying improvements in industrial processes by reducing environmental impacts and increasing company competitiveness simultaneously.

Through promoting ISID, Green Industries, circular economy and TEST, UNIDO contributes substantially towards the recovery and sustainability of the degraded goods and services in LMEs, consequently supporting the achievement of the 2030 Development Agenda, particularly with regards to **goal number 9: build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**, and **goal number 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development**.



Know more about UNIDO's role in the Development Agenda 2030  
<http://www.unido.org/who-we-are/unido-and-the-sdgs.html>

UNIDO has been actively engaged in LMEs in Latin America since 2008 through pro-active cooperation with the Mexican Secretariat of Environment and Natural Resources (SEMARNAT) and the US National Oceanic and Atmospheric Administration (NOAA) to promote the ecosystem based and sustainable management of the GoM LME.

During 2008-2013 the binational GEF project Integrated Assessment and Management of the GoM was entrusted by Mexico and the United States to UNIDO, with the aim of setting the foundations for LME management approaches to rehabilitate marine and coastal ecosystems, recover depleted fish stocks, and reduce pollution and nutrient overloading.

After 6 years and with a Transboundary Diagnostic Analysis (TDA) published and broadly disseminated,

the SAP for the GoM-LME was agreed and endorsed by Mexico and the USA and the countries again entrusted to UNIDO for its implementation.

During 2016-2021 the binational initiative will continue with the implementation of the SAP. This will be achieved with the an investment by GEF and a co-financing by Mexico and the US, through the implementation of three action components: improving water quality, recovering depleted stocks of living marine resources and addressing the dual challenge of conservation and restoration of the ecosystem. Additionally, one management component was included with the aim of supporting effective monitoring and evaluation by UNIDO, and the widest possible dissemination of results and lessons learned.

Each action component will be delivered by technical and expert institutions that also were involved in the preparation of the SAP:



## Expected Outcomes from Action Components

Each component with its correspondent output is expected to deliver the following outcomes:

1. Water quality will be improved using pollution reduction measures. Industrial water consumption will be reduced by at least 10%
2. The recovery of Living Marine Resources, a Reduction of number of fishing boats and a strengthened role of women in fisheries and post harvest activities.
3. Improved ecosystem health from reduced pollution and nutrient loads into the mangroves and wetlands. Habitats will be recovered for ecologically important and/or commercially important fish species.

For more information about GEF GoM LME Project, visit:  
<https://www.thegef.org/project/6952>

To see more about UNIDO's projects, visit:  
<https://open.unido.org/>

