
Effect Of The Anthropogenic Activities In Gulf Of Mexico

The study having examined the benefits will attempt to also identify the threats of over-fishing, hypoxia, pollutions and climate change that led to habitat destructions, depletion of species, eutrophication, hypoxia, and coastal inundation.

Over-fishing

Over-fishing has dire impact on the ecosystem which results in habitat loss and destructions of coral reefs. Industrial fishing has depleted fish and ocean wildlife, some nearly to extinction, trawls and nets scrapped the ocean floor to catch shrimps, fish, scallops and oysters reducing LME's productivity endangering some of species.

Illegal unregulated and unreported fishing (IUU)

The GoM experiences relatively low IUU along US coast but in Mexico the issue persists because of corruption and limited capacity to monitor and enforcement resulting in significant IUU catch. This issue was more prominent in 80's when the red drum species decline in southern Gulf of Mexico and shrimp, red groupers, and northern red snapper collapsed in US and Mexico.

Hypoxia

The GoM region is experiencing a seasonal oxygen depletion in the northern Gulf of Mexico, because of excess nutrient discharge through Mississippi rivers. The flow of the river into the LME affects the ecosystem, forming layer of fresh water above the existing salt water. The eutrophication caused algae to bloom that is toxic to marine animal and eventually kills marine animal due to hypoxic or anoxic zone.

Red tides

Red tide occurs seasonally in southwestern Florida because of ichthyotoxic dinoflagellate leading to high mortality rates of marine life from zooplankton to whales in Tampa and Charlotte Bay.

Pollution

The GoM is one of the most vulnerable LME with a gamut of pollutants from land, chemicals, and plastics. The Gulf is polluted from hazardous cargoes of crude oil, benzene, hydrochloric acid and other chemicals to plastics and constitutes danger to humans and aquatic life.

Chemical pollution

BP Deepwater Oil spill that released 4.9 million barrels of crude oil and 2.1 gallons of

chemicals to the waters and toxin substance in the Gulf of Mexico. Similarly, According to National Oceanic and Atmospheric Organization stated that the Oil spill has a significant impact on marine life, corals and destruction of habitats. The Macondo oil spill affected coral to the depth of 1, 370m and deaths of many sea animals.

Plastic

Plastic is another source of pollution threatening the LME. It is identified by relatively high levels of plastic concentration (Micro & Macro) consequent of shipping, ecotourism, and rapid urbanization within major watersheds as well as agricultural run-off.

Invasive species

The region identified large population of migrant species of Jellyfish 'Punctata' and Lionfish that pose danger to the ecosystem but the speed of the spread and its impacts to the ecosystem is still unknown.

Climate change

The LME is predicted vulnerable to climate change, growing human stressors such as carbon (CO₂) emissions change the dynamics of ocean chemistry and physics leading to increasing Sea Surface Temperature (SST) and ocean acidity. These changes present new dangers to marine organism behavior and physiology. The region is predicted with three human stressors connected to climate change; ocean acidification UV radiation and sea surface temperature.

Conclusion

The Gulf of Mexico is endowed with healthy ecology and biodiversity, which is not just a water body but a great wellspring of fishing, commerce, leisure, energy, and protection. Today, this important ocean basin is threatened by human stressors such as over-fishing, pollutions from land-use, industries and chemical causing eutrophication, hypoxia or anoxia, destroying marine habitat that triggered the ecosystem to respond with a massive flood and storms that change ocean physics and chemistry. The research highlights ecosystem goods and service provided by GoM LME in relation to the impacts of anthropogenic activities that undermine its importance with view to proffer solutions.