



Mains Practice Question

Q. What is oil pollution? What are its impacts on the marine ecosystem? In what way is oil pollution particularly harmful for a country like India? (Answer in 150 words, UPSC Mains 2023)

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Approach:

- Begin by briefly defining oil pollution and some of its causes.
- Discuss its impacts on marine ecosystem and the ways how it is harmful for a country like India.
- Conclude with a positive note highlighting the importance of its mitigation.

Introduction:

Oil pollution, also known as oil contamination or oil spills refers to the release of crude oil or refined petroleum products into the water bodies caused due to accidents involving oil tankers, pipelines, offshore drilling rigs, or other industrial processes.

Body:

Its impacts on the marine ecosystem

- **Harm to Marine Life:** It causes difficulty in regulating marine animals body temperatures by coating feathers of seabirds, fur with oil spills which leads to hypothermia.
- **Toxicity:** Crude oil components are toxic to marine organisms and causes damage to their organs, impairing reproduction.
- **Habitat Destruction:** Oil spills can damage coral reefs, seagrass beds, and marshes which are critical for marine life.
- **Disruption of Food Chain:** Loss of biodiversity can have a cascading effect, as many species are interdependent. For example, phytoplankton, the primary producer can be killed due to oil contamination.

Oil pollution is particularly harmful for a country like India for several reasons

- **Economic Impact:** India is world's second-largest aquaculture nation and the third-largest fish producer after China. Oil pollution can disrupt fishing and tourism industries.
- **Environmental Consequences:** India is home to diverse marine ecosystems, including coral reefs, mangroves etc., oil pollution can lead to loss of biodiversity.
- **Health Implications:** India has a coastline of over 7500 km. Oil spill can pose a significant health threat to coastal communities and people who rely on sea food.

Conclusion:

Oil pollution is a matter of concern for India and efforts to prevent and mitigate the impacts of oil spills are essential to protect the country's coastal environment, economy and well-being of its coastal communities.

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