



## Be Mains Ready

**What do you understand by Operational Oceanography? Discuss its benefits for a country like India. (250 words)**

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### Approach / Explanation / Answer

#### Approach:

- Define the term Operational Oceanography and its applications.
- Substantiate with examples, the benefits that India can have from Operational Oceanography
- Conclude by stating recent steps taken by India in this direction.

#### Introduction

The operational oceanography is an activity of conducting systematic oceanographic studies towards providing information services to various sectors viz. fisherman, disaster management, shipping, ports, coastal states, navy, coast guard, environment, offshore industries for conducting their day-to-day operations.

In simple terms, it is like weather monitoring and forecasting for the ocean which can provide estimates of essential ocean variables like sea level, temperature, currents, salinity etc. of the present and the future, as well as for the past.

#### Body

- **Operational Oceanography can help countries multidimensionally like:**
  - Providing potential fishing zones advisories to fishermen, ocean state forecasts for mariners, Tsunami & storm surge early warnings
  - Providing warnings about hazards like coastal floods due to cyclones, storm impacts, harmful algal blooms and contaminants.
  - Providing with information about sea state conditions, optimum routes for ships, prediction of primary productivity, ocean currents, ocean climate variability, and modelling of and response to oil spills and dredging.
- **Apart from these benefits, Operational oceanography can aid India in various sectors like:**
  - It can help India to forge cooperation and improve engagement among the countries of the

- Indian Ocean, including South Asian and African states bordering the Indian Ocean.
- It can also help India in achieving **Sustainable Development Goal-14 (SDG 14)** related to building marine scientific research capacity which will further fulfil India's commitment to support Small Island Developing States, Least Developed Countries.
  - Also, operational oceanography is expected to increase ancillary development leading to employment generation in India.

## Conclusion

- Thus citing the importance of operational oceanography Indian government has inaugurated a **UNESCO Category 2, International Training Centre for Operational Oceanography**.
- The establishment of the centre would respond to the worldwide increasing need to build technical and management capacity to address marine and coastal sustainability issues and prepare the region for and react efficiently to marine natural hazards.

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