



Mains Practice Question

Q. The Intergovernmental Panel on Climate Change (IPCC) has predicted a global sea level rise of about one metre by AD 2100. What would be its impact in India and the other countries in the Indian Ocean region? (Answer in 250 words, UPSC Mains 2023)

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Approach

- Begin with a brief introduction that sets a context to the question.
- Discuss the impact of Global sea rise on India and suggest measures for preparedness.
- Conclude with a solution based approach.

Introduction

Global warming and its associated problems, which were once educated assumptions have now become actual problems. The rise of global sea level and its impact has been widely talked about since the report by IPCC released.

Body

Impact on India and the region

- **Environmental impact:**
 - **Shrinkage of Coastline:** India derives immense economic benefits from its vast coastline. It will be threatened if the coasts start submerging in ocean.
 - **Costal Wetland Degradation:** Wetlands near coastal zones have a threat of degradation and even extinction.
 - **Coral Bleaching:** Fresh water dilution resulting from an increased sea surface level is bound to cause coral bleaching.
 - **Fauna Displacement:** Animals and biodiversity gets displaced from their environment which causes distress.
 - **Groundwater Salination:** The water table gets contaminated by the incoming saltwater from the ocean, therefore reducing availability of usable groundwater.
- **Economic impact:**
 - **Property and Resource:** Damage to the property and resource due to increased occurrence of costal disasters will incur a high cost for the nation.
 - **Loss of Livelihood:** Employment in costal based professions will take a hit as the people would have to relocate due to lack of livelihood options. Employment patterns will also change.
- **Social impact:**
 - **Displacement of People:** Climate refugees are a group of people that have been displaced by the horrors of climate change. The number of people losing their houses to the impact of climate change is rising every year.
 - **Stress on Inland Location:** People displaced by the changes on the coastal areas are bound to move towards inland locations thereby putting pressure on already stressed resources.

Measures

- Activities such as mangrove plantation can help in mitigating the problems of rising sea surface.
- Coastal Regulation Zone (CRZ) Rules and Integrated Coastal Zone Management Plan seek to regulate the management and resource utilization in coastal areas.

Conclusion

To address these challenges, regional cooperation and international collaboration are crucial. Developing and implementing sustainable adaptation and mitigation strategies are essential to minimize the adverse effects of sea level rise on the people, ecosystems, and economies of the Indian Ocean region.

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