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Mains Practice Questions

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Q. Plastic pollution is the most widespread problem affecting the marine environment. Discuss. (250 Words)

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Approach

- Give in brief about the increasing concentration of marine plastic pollution.
- Discuss the concerns of plastic pollution in the marine environment.
- End with a way forward.

Introduction

- Over 300 million tons of plastic are produced every year, half of which is used to design single-use items such as shopping bags, cups and straws.
- Only 9% of plastic waste is recycled. Approximately 12% is burnt, while 79% has accumulated in landfills.
- According to the International Union for Conservation of Nature (IUCN), at least 8 million tons of plastic end up in the oceans every year.

Body

Concerns of Marine Plastic Waste

- **Impacts on marine environment**
 - The most visible and disturbing impacts of marine plastics are the ingestion, suffocation and entanglement of hundreds of marine species.
 - Marine wildlife such as seabirds, whales, fishes and turtles mistake plastic waste for prey, and most die of starvation as their stomachs are filled with plastic debris.
 - They also suffer from lacerations, infections, reduced ability to swim, and internal injuries. Floating plastics also contribute to the spread of invasive marine organisms and bacteria, which disrupt ecosystems.
- **Impacts on food and health**

Several chemicals used in the production of plastic materials are known to be carcinogenic and to interfere with the body's endocrine system, causing developmental, reproductive, neurological, and immune disorders in both humans and wildlife.
- **Impacts on climate change**

Plastic also contributes to global warming. If plastic waste is incinerated, it releases carbon dioxide into the atmosphere, thereby increasing carbon emissions.
- Plastic waste **blocks our sewers, threatening marine life and generating health risks** for residents in landfills or the natural environment.
- The financial costs of marine plastic pollution are significant as well.

According to a forecast made in March 2020, the direct harm to the **blue economy** of the **Association of Southeast Asian Nations** will be USD 2.1 billion per year.

- Enormous social costs accompany these economic costs. Residents of coastal regions suffer from the harmful health impacts of plastic pollution and waste brought in by the tides.
- Boats may become entangled in abandoned or discarded fishing nets or their engines may become blocked with plastic debris.

It can create problems for industries such as Shipping, fisheries and aquaculture and maritime tourism which affect livelihood of the coastal community

Way Forward

- **Designing a product:** Identifying plastic items that can be replaced with non-plastic, recyclable, or biodegradable materials is the first step.
Countries must embrace **circular and sustainable economic** practices throughout the plastics value chain to accomplish this.
- **Pricing:** Plastics are inexpensive which provide fewer economic incentives to employ recycled plastics. Balancing price structure with environmental health should be a priority.
- **Promoting a plastic-free workplace:** All single-use goods can be replaced with reusable items or more sustainable single-use alternatives.
- **Producer responsibility:** **Extended responsibility** can be applied in the retail (packaging) sector, where producers are responsible for collecting and recycling products that they launch into the market.
- **Municipal and community actions:** Beach and river clean-ups, public awareness campaigns and disposable plastic bag bans and levies.

Conclusion

To effectively address the issue of marine plastics, **research and innovation** should be supported. Knowledge of the full extent of plastic pollution and its impacts would provide policy-makers, manufacturers and consumers with scientific evidence needed to spearhead appropriate technological, behavioural and policy solutions.