Marine Plastic: Problem, And Solution

Why in News

According to the **Central Pollution Control Board's (CPCB)** Annual Report on Implementing the **Plastic Waste Management Rules, 2016**, the plastic waste generated in 2018-19 was 3.3 million tonnes per year (roughly **9,200 tonnes per day**).

Key Points

- **About:**
    - Plastic is a **synthetic organic polymer** made from petroleum with properties ideally suited for a wide variety of applications, including packaging, building and construction, household and sports equipment, vehicles, electronics and agriculture. Plastic is cheap, lightweight, strong and malleable.
    - 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.**
- **Sources of Marine Plastic:**
    - The main sources of marine plastic are **land-based**, from urban and storm runoff, sewer overflows, beach visitors, inadequate waste disposal and management, industrial activities, construction and illegal dumping.
    - **Ocean-based plastic** originates mainly from the **fishing industry, nautical activities and aquaculture.**
    - Under the influence of **solar UV radiation**, wind, currents and other natural factors, plastic fragments into small particles, termed **microplastics** (particles smaller than 5 mm) or nanoplastics (particles smaller than 100 nm).
        - In addition, **microbeads**, a type of microplastic, are very tiny pieces of manufactured polyethylene plastic that are added as exfoliants in health and beauty products, such as cleansers and toothpastes. These tiny particles easily pass through water filtration systems and end up in the ocean and lakes.
- **Concerns of Marine Plastic Waste:**
    - 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.
- **Steps Taken So Far:**

    - **GloLitter Partnerships Project:**

        - It is launched by the **International Maritime Organization (IMO)** and the **Food and Agriculture Organization of the** United Nations **(FAO)** and . initial funding from the **Government of Norway.**
        - **Aim:** To prevent and **reduce marine plastic litter** from shipping and fisheries.

            - It will also **assist developing countries in reducing marine** litter, including plastic litter, from within the maritime transport and fisheries sectors, and to decrease the use of plastics in these industries.
            - Also assist in identifying opportunities to **reuse and recycle plastics.**
        - **30 countries including India** have joined this global initiative to tackle marine litter.
    - **World Environment Day, 2018** hosted in India, the world leaders vowed to **"Beat Plastic Pollution" & eliminate its use completely.**
    - **Specific to India:**

        - **Plastic Waste Management Rules, 2016** state that every local body has to be responsible for setting up infrastructure for segregation, collection, processing, and disposal of plastic waste.
        - **Plastic Waste Management (Amendment) Rules 2018** introduced the concept of Extended Producer Responsibility (EPR).
        - **Ban on Single-Use Plastics** in a bid to free India of single-use plastics by 2022.
- **Solutions:**

    - **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.
    - **Technologies and Innovation:** Developing tools and technology to assist governments in measuring and monitoring plastic garbage in cities.

        - India should start projects like the **'Closing the loop'** project of the United Nations Economic and Social Commission for Asia and the Pacific **which** assists cities in developing more inventive policy solutions to tackle the problem.
    - **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.
    - **Multi-stakeholder collaboration:** Government ministries at the national and local levels must collaborate in the development, implementation and oversight of policies related to plastic waste management.

Central Pollution Control Board

- CPCB is a statutory organisation which was constituted in September, 1974 under **the Water (Prevention and Control of Pollution) Act, 1974.**
- It was entrusted with the powers and functions under the **Air (Prevention and Control of Pollution) Act, 1981.**
- It also provides technical services to the Ministry of Environment and Forest and Climate Change of the provisions of the **Environment (Protection) Act, 1986**.
- Principal Functions of the CPCB, as spelt out in the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981:
    - to promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution.
    - to improve the quality of air and to prevent, control or abate air pollution in the country.

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