Sansad TV Perspective: Electronic Waste Management

In the series Sansad TV Perspective, we bring you an analysis of the discussion featured on the insightful programme 'Perspective' on Sansad TV, on various important topics affecting India and also the world. This analysis will help you immensely for the IAS exam, especially the mains exam, where a well-rounded understanding of topics is a prerequisite for writing answers that fetch good marks.

In this article, we feature the discussion on the topic: Electronic Waste Management

Video link: https://youtu.be/wsNtsH7jHz0

Anchor: Vishal Dahiya

Participants:

1. Shekhar Sharma, CEO, Hindustan E-Waste Management
2. Ashwika Kapur, Science Communicator & Filmmaker
3. Dr. Suneel Pandey, Director, Environment & Waste Management, TERI

Context:

The technological revolution has encompassed the entire world with innumerable obligations accompanied by enhanced accessibility, affordability and availability. The extensive usage of electronic devices is accompanied by the generation of surplus waste which is referred to as electronic waste or E- waste. These wastes consist of hazardous substances that contribute towards global warming and are harmful for human health. Improper management of the E-waste can have adverse effects and must be rectified. Therefore, the issue of electronic waste management seeks experts' intervention and sustainable measures

Important Observations:

- The Global E-waste Monitor 2020 estimated that the world has generated 53.6 million tons of E- waste in 2019 which is an average of 7.3 kg per capita.
- This determines a considerable increase of 21% of electronic waste in the last five years.
- Only 17.4% of the e-waste was recycled.
- India is the third largest contributor of electronic waste in the world after China and the US.
- About 3.2 million tons of e-waste is generated from India every year.
- Higher consumption of electronic equipment, short life cycles of batteries and other components and few repair options are the major reasons for the accumulation of electronic waste.

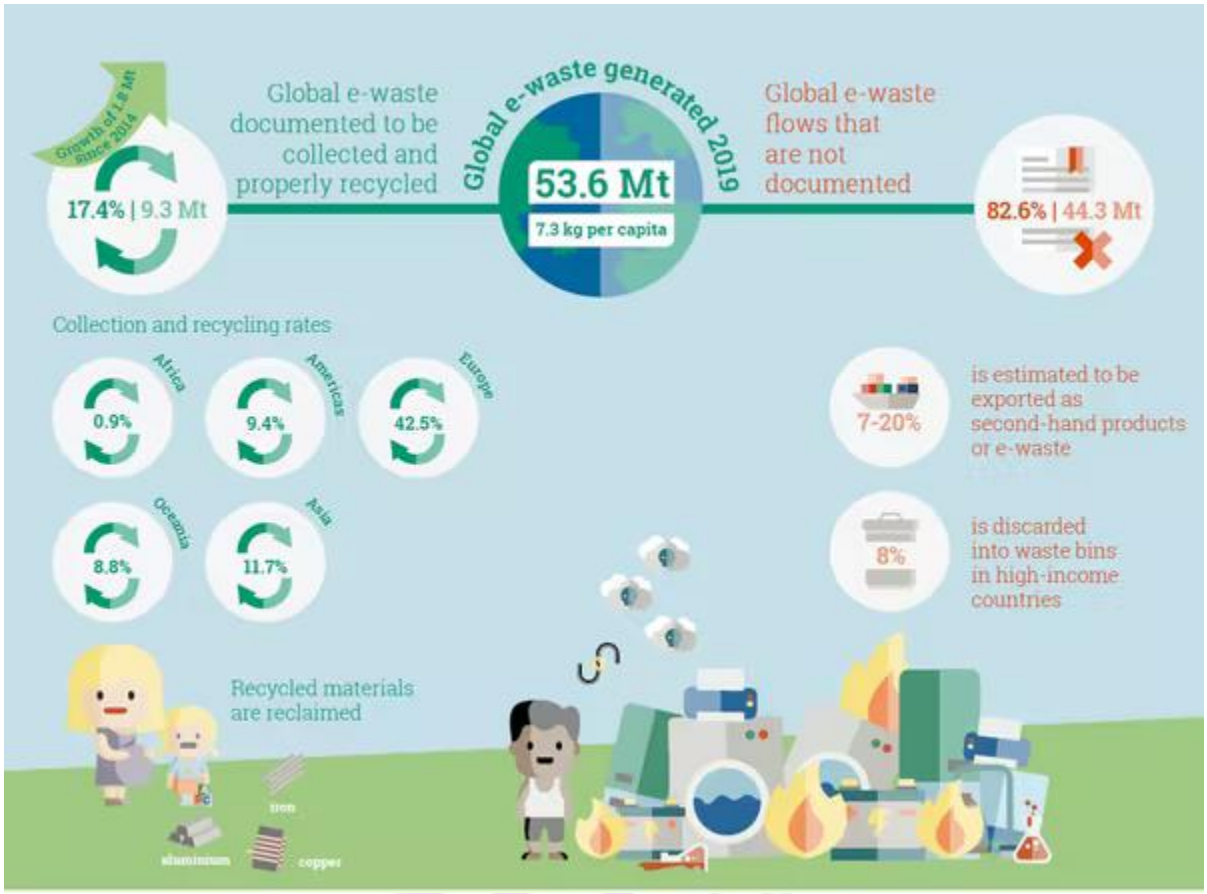

Image Source: The Conversation

What are electronic wastes?

- Electronic wastes can be defined as the wastes that are generated by damaged electronic devices like old computers, laptops, televisions and require special methods of recycling.
- They release several toxic substances into the environment along with their introduction into the food chain which are major concerns.
- Electronic wastes are regarded as the fastest growing waste streams in the world.
- E-wastes contain toxic additives like mercury, Brominated Flame Retardants (BFR), Chlorofluorocarbons, and Hydrochlorofluorocarbons (HCFC)

The essence of electronic equipment:

- Innovations and upgradation that speak of excellence in the advancement of scientific temper across the human race have shaped the dynamic cycle of supply and demand.
- It is of enormous significance to infer that technology expresses itself and connects with our daily lives through the variety of electronic devices, gadgets and equipment that are used with tremendous dependency.
- With the futuristic aspirations of digitization in every segment of governance, India has evolved with its Digital India campaign along with an alertness towards cyber security.

- Electronic equipment is indispensable for smooth functioning of financial, healthcare, educational, and environmental and various other services, industries, governance, management of supply chain and so on and so forth.
- The dependency on electronic devices will increase undeniably in a world that we are living in and the next world that we anticipate.

Electronic Waste Management in India:

- The Ministry of Electronics and Information Technology (MeitY) took an initiative to spread awareness about electronic waste under the Digital India programme. The awareness programme aimed at recycling of electronic waste by the unorganized sector and educating them about alternative methods of disposal.

This would result in employment generation.

- E- Waste (Management) Rules were introduced in 2016 and replaced the existing rules for E-waste management and handling.
- E-waste clinic was set up for the first time in India in Bhopal, Madhya Pradesh. The e-waste clinic intended to provide assistance towards the scientific handling of the hazardous electronic wastes and recycling them. The E-waste clinic resulted from the signing of MoU between the Central Pollution Control Board (CPCB) and Bhopal Municipal Corporation.
- The National Green Tribunal has taken active participation in facilitating the scientific implementation of the E-waste Management Rules, 2016 and proper disposal of electronic waste.
- In order to develop an ecosystem to recycle and manage e- waste, IIT Hyderabad in collaboration with CMET (Centre for Materials for Electronics Technology) and the Ministry of Electronics and IT introduced a course on management of electronic waste. This will benefit in the following ways:
    - Learning new technologies for recycling of e-waste
    - Recovery of metals and plastics from the damaged electronic devices
    - Life cycle analysis and carbon footprint calculations
    - Artificial intelligence based techniques to manage for effective recycling
    - Case studies to develop new technologies with long lasting solutions
- Involvement of corporate companies can also assist in the better management of electronic waste and offer real meaning to the concept of Waste to Wealth.

Image Source: mygov

Walking ahead with sustainable electronic waste management

- According to the findings of the Ministry of Environment, Forest and Climate Change about 95% of the e-wastes are recycled by the informal sector and scrap dealers. Experts recommend that these scrap dealers be trained in proper disposal techniques and expand the role of the informal sector to recycle the electronic waste.

- A transition to a circular economy will reduce dependency and demand for new electronic devices and enhance resource productivity. It aims at mitigating wastage at each life cycle stage and ensuring the reuse, repair, recovery, remanufacturing and regeneration of electronic products.
- Incentivizing the circular economy business models will not only prevent the increase of e-waste but also offer a massive boost to the informal sector and indigenous manufacturing that will ignite the spirit of Atmanirbhar Bharat along with a sustainable E-waste management.

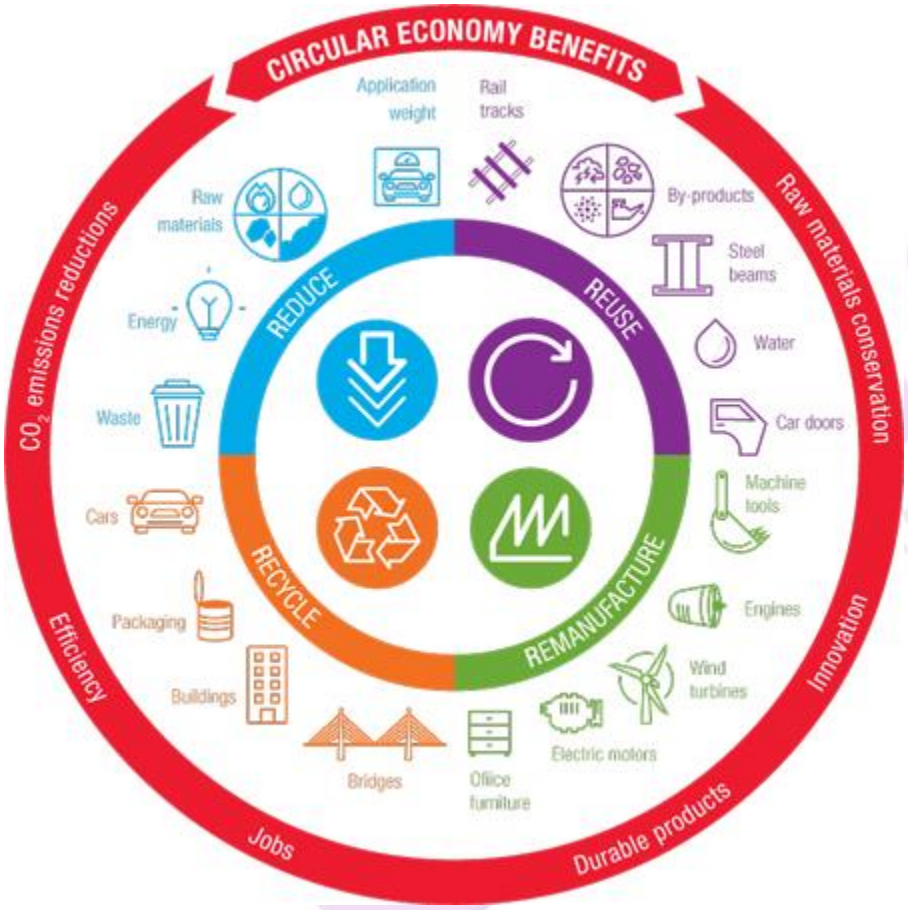

Image Source: Business world

Read more summaries of Perspective in the link.