Issues with Paper Cups

Why in news?

Research has shown that a paper cup causes as much damage to nature as a plastic one, as they both contain toxic chemicals.

How are paper cups made?

- **Plastic film coating** - As paper is neither fat nor water resistant, the paper cups have a plastic film coating applied to its surface.
- The plastic film is often made of polylactic acid (PLA), a type of bioplastic commonly produced from corn, cassava or sugarcane.
- **Advantages** - PLA can decompose faster than petroleum-based plastics under the right conditions.
- It is made from renewable resources rather than fossil fuels, as are 99% of the plastics available on the market.
- **Toxicity** - Bioplastics do not break down effectively when they end up in the environment, in water.
- It remains in nature resulting in microplastics that can be ingested by animals and humans, just as other plastics.

What are the impacts of paper cups?

Impact on Environment

- **Landfill waste-** It takes 100 of years to decompose and release harmful greenhouse gases.
- **Plastic pollution**- They easily find their way to oceans and rivers, disrupting marine life and ecosystems.
- **Resource depletion**- It contributes to the depletion of resources like tree, oil and water usage which can have long term impact on environment and economy.
- **Littering-** Improper disposal leads to litter in parks, streets and natural areas.
- **Chemical exposure-** The cups are treated with chemicals to make them waterproof or durable which can leach into environment and harm wildlife.
- **Water usage**- The manufacturing of paper cups require more water than reusable cups.
- **Economic costs**- Cleaning and managing the cups can be costly affecting communities and government.

Impact on Humans

- **Direct Impact**- Use of disposable cups may directly influence your physical health due to the plastic chemicals used in their production.

- **Indirect Impact**-Pollution from manufacturing will influence global air quality.
- **Bio magnification**-Micro plastics can travel up through the food chain
- **Health hazard**- Recent IIT study revelead that drinking hot beverages from paper cups poses health risk
    - Reproductive defects
    - Cancer
    - Neurological disorder

What steps were taken to combat plastic pollution?

Efforts at global level	Efforts at national level
• **United Nations**- It prepared a zero draft of a legally binding treaty to end plastic pollution in Paris 2023, but the target was deferred. • **SCEPT** – Scientists Coalition for an Effective Plastics Treaty, which contributes scientific evidence to the negotiations. It is under progress by UN. • **Circular plastic economy**- It was created by European Union in 2015. It was launched to strengthen regulations on recycling plastic products and providing more of a science-based approach to legislation. • **Bangladesh**- It became the first country to ban thin plastic bags in 2002. • **Global treaty on Plastic Pollution-** The United Nations Environment Assembly (UNEA) is going to start writing a global treaty on plastic pollution. • The final resolution will take into account the "full life cycle of plastics" - Production, Design, Recycling and Management of plastic waste.	• **Amended Rules-** The Ministry of Environment, Forest and Climate Change, Government of India has notified the Plastic Waste Management Amendment Rules, 2021 and 2022. • **Ban**- India banned the manufacture, distribution, stocking, sale and use of selected single-use plastic items with effect from July, 2022. • **Special teams**- Control rooms and special enforcement teams were established to check the illegal use of single-use plastics. • **Grievance redressal-** The Central Pollution Control Board (CPCB) has launched a grievance redressal application to help citizens curb the plastic menace. • **Awareness campaign-** The awareness campaign has brought together entrepreneurs, start-ups, industry, Governments, regulatory bodies, experts, citizen organisations, R&D and academic institutions. • **Extended producer responsibility-** It is notified under *Plastic Waste Management Rules, 2016* in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.
Efforts taken at State Level	
• **Kerala-** Reusables in government offices switch to ink pens and steel cutlery to ensure articles like plastic water bottles, disposable teacups and plastic carry bags are no longer used. • **Tamilnadu-** *Meendum Manjappai* scheme is the awareness campaign on using yellow cloth bags and discard plastic bags.	

What lies ahead?

- Significant changes are necessary to lessen the ongoing harm to the environment and threat to our health resulting from the plastic pollution crisis.
- There is a need to address the potential hazards of food packaging.

- Adhere to the legally binding treaty to end plastic pollution of UN.

References

1. Down To Earth- Paper cups bad to the Environment
2. SciTechDaily- Why paper cups are toxic

