

## 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 revealed 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
<ul style="list-style-type: none"> <li>• <b>United Nations</b>- It prepared a zero draft of a legally binding treaty to end plastic pollution in Paris 2023, but the target was deferred.</li> <li>• <b>SCEPT</b> - Scientists Coalition for an Effective Plastics Treaty, which contributes scientific evidence to the negotiations. It is under progress by UN.</li> <li>• <b>Circular plastic economy</b>- 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.</li> <li>• <b>Bangladesh</b>- It became the first country to ban thin plastic bags in 2002.</li> <li>• <b>Global treaty on Plastic Pollution</b>- The United Nations Environment Assembly (UNEA) is going to start writing a global treaty on plastic pollution.</li> <li>• The final resolution will take into account the “full life cycle of plastics” - Production, Design, Recycling and Management of plastic waste.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Amended Rules</b>- The Ministry of Environment, Forest and Climate Change, Government of India has notified the Plastic Waste Management Amendment Rules, 2021 and 2022.</li> <li>• <b>Ban</b>- India banned the manufacture, distribution, stocking, sale and use of selected single-use plastic items with effect from July, 2022.</li> <li>• <b>Special teams</b>- Control rooms and special enforcement teams were established to check the illegal use of single-use plastics.</li> <li>• <b>Grievance redressal</b>- The Central Pollution Control Board (CPCB) has launched a grievance redressal application to help citizens curb the plastic menace.</li> <li>• <b>Awareness campaign</b>- The awareness campaign has brought together entrepreneurs, start-ups, industry, Governments, regulatory bodies, experts, citizen organisations, R&amp;D and academic institutions.</li> <li>• <b>Extended producer responsibility</b>- It is notified under <i>Plastic Waste Management Rules, 2016</i> in which a producer’s responsibility for a product is extended to the post-consumer stage of a product’s life cycle.</li> </ul>
Efforts taken at State Level	
<ul style="list-style-type: none"> <li>• <b>Kerala</b>- 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.</li> <li>• <b>Tamilnadu</b>- <i>Meendum Manjappai</i> scheme is the awareness campaign on using yellow cloth bags and discard plastic bags.</li> </ul>	

## 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](#)

