

General Studies-3; Topic: Environmental pollution

Plastic Pollution

1) Introduction

- Plastic pollution is the introduction of plastic products into the environment which then upset the existing ecosystems in different ways.
- These pollutants cause environmental degradation and also affect different living organisms and their habitats negatively.

2) Severity of the problem

- Humans have produced 8.3bn tonnes of plastic since the 1950s with the majority ending up in landfill or polluting the world's continents and oceans.
- Sea salt around the world has been contaminated by plastic pollution and finding their way into the food chain via the salt in our diets, according to study.
- The majority of the contamination comes from microfibres and single-use plastics such as water bottles
- Plastic pollution risks 'near permanent contamination of natural environment'
- Planning Commission in 2014, estimated that 60 cities across the country generate over 15,000 tons of plastic waste every day
- Microplastic contamination has been found in tap water in countries around the world.
- Plastic pollution in marine ecosystems is causing health hazards and economic loss
- A large number of city drains are clogged by plastic bags which are leading to water logging and urban floods as seen in recent times.
- According to a 2014 report of UNEP, "the overall natural capital cost of plastic use in the consumer goods sector each year is \$75 billion".
- A 2016 report warned that by 2050 there will be more plastic than fish in the ocean, measuring by weight.
- Study finds river Ganga is the world's second biggest carrier of plastic waste
- In developing economies like India, a rise in the middle class population has meant a higher level of consumption — and plastic waste generation.

3) International Example

- African country Rwanda has banned plastic bags since a few years. This has made the nation much cleaner.
- Kenya has just announced a ban on plastic bags, and a fine of 4 years in prison and/or \$40,000.
- Morocco has had such a ban for almost a decade.
- U.S., Canada and the Netherlands have regulations to stop the use of microbeads in personal-care products. India must adopt such regulations.
- It is time that India learns from these Africans and ban plastic bags and related stuff.

4) Concerns / Challenges

- The human health impact of ingesting plastic is not known.
- The recycling efforts are failing to keep pace with production, which is expected to quadruple by 2050.
- Current standard water treatment systems do not filter out all of the microplastics

- With production expected to accelerate over the coming decades, environmentalists warn it is creating an environmental crisis comparable to climate change.
- Cattle and other animals unknowingly consume some of this plastic material which is not digested, end up dying a slow and painful death.
- Pollutants also upset primary food production in waterbodies by preventing the entry of sunlight into water
- Plastic pollution in beaches also impact tourism.
- The ban on plastic carry bags below 40 microns in many states has not yielded the desired results.

5) Way Forward

- Need for urgent research on the implications of plastic on human health.
- Prevention is the best answer. We need to start with our daily habits and reduce plastic consumption
- Choosing sustainable, natural fibre clothing and using reusable water bottles.
- People should complain to retailers about over-packaging and much more plastic needs to be recycled
- In Germany, consumers get a small refund when returning a plastic bottle. More than 98% of plastic bottles are returned. Similar initiative must be introduced in India at the local level.
- Further research work will reveal more microbes that are capable of degrading polymeric and plastic wastes.
- Bioplastics (plastics made from materials such as corn starch and vegetable fats and oil) are "innovative solutions" that could be part of a long-term solution
- A concerted effort involving both national and local government as well as private sector, NGOs and citizens is needed.
- It is time for the World Health Organization to introduce universal benchmarks for microplastic content in water, similar to those for lead.

6) Conclusion

- We as a society need to create an ecosystem that reduces the use of plastic and prevents its escape into the external environment.
- Involve everyone, from the manufacturer to the user to the waste collector and the recycling authority.