



# The Big Picture: World Environment Day: Identify the Dangers of the Plastic Era

## Context And Background

The United Nations observes 5th of June every year as the World Environment Day, to make people aware about the environment and its protection. Although, the United Nations declared it in 1972, but World Environment Day was first celebrated on the 5th of June 1974. This year, 45th World Environment day is being observed.

## India to be the Global Host

This year, India has been chosen to be the Global Host of the World Environment Day. On this occasion, various governments, industries, communities and the citizens have been requested to unanimously find permanent alternatives and stop the use of non-biodegradable plastic; as they are polluting the oceans, destroying the marine habitat and posing as a danger for the human health. The situation is so bleak that within the time span that a fast bowler delivers an over, four trucks full of garbage are dumped into the ocean. It has a theme every year and this year, the theme is **Beat Plastic Pollution**.

## What is United Nations Environment Programme (UNEP)?

United nations Environment Programme is the global voice on the issue of environment. It inspires, informs and induces people and states to improve their quality of life, without compromising with the lives of the upcoming generations. Thus, it provides leadership and encouragement for the protection of the environment. United Nations works with the various governments of the world, private sectors, civil societies, and other units of the United Nations, as well as other International Organisations.

***(Team Drishti Input)***

## About Plastic

- The American scientist of Belgian descent, Leo Baekeland is considered to be the inventor of Plastic.
- He invented Plastic while experimenting with chemicals like Formaldehyde and Phenol.
- The Plastic so formed was called "**Bakelite**". After this, Plastic gained acceptance far and wide, very quickly.
- Various forms of Plastics were being made in the laboratories across the world, including plastics involved in the packaging industry, like Polystyrene, Nylon and Polyethylene.
- Before this, plastic like materials were made from **Celluloid**, which was obtained from plants.

## Burgeoning production and consumption of Plastic

- Decades ago, plastic was invented for the ease of people, but lately, it has become it has become

an ulcer for the Environment.

- In all the steps from its production to consumption, plastic has become dangerous for the environment and ecology.
- In addition to soil and water, air is also being polluted because of plastic and polythene.
- Lately, aquatic organisms of both, freshwater and saline water habitat, have been found to have adversities caused by plastic chemicals in their bodies.

### **Plastic everywhere**

Despite everything, there has been no decline in the sale of plastic and polythene. In fact, the main reason behind this, is the people's perception that objects made of plastic are attractive and easy to clean. Plastic objects made of tupperware are an excellent example of the same. Apart from this, the cheap rates of objects made of plastic makes them affordable by everyone. Today, homes, markets, and garbage pits are all full of plastic and this is happening on a global level.

### **Oceans are also full of plastic**

- Increasing pollution in the oceans is becoming a matter of concern. Tasmanian sea, between Australia and New Zealand, is one of the areas worst affected by plastic pollution.
- Thousands of tonnes of plastic dumped on land find its way to the oceans. Not able to be decomposed easily, it lies on the sea bed for time indefinite.
- The amount of heavy metals and saline wastes reaching the Indian ocean from the Indian subcontinent alone, is crores of tons every year.

### **Fatal for the marine Ecosystem**

- Millions of tons of plastic wastes reach oceans everyday, which affects the faunal biodiversity and causes adverse effects on the life of the aquatic flora and fauna as well.
- This huge quantity of plastic, in addition to being a problem for the environment, is also life threatening for aquatic flora and fauna.
- In addition to being a huge reservoir of water, spread across earth, oceans also support, within themselves, and around, many small and delicate ecosystems; which are home to a variety of flora and fauna. Plastic adversely affects these as well.
- Worldwide, about 90% of marine organisms and birds are consuming plastic in some form or the other.
- According to studies conducted on the Arctic Sea, if this situation continues, the amount of plastic will exceed the number of fishes in the ocean by 2050.
- In the 1960s, only 5% of plastic was found in the birds' food; whereas, it is estimated that by 2050, 99% of marine animals and birds will have plastic in their stomachs.

### **Microbeads**

There are certain tiny bits of plastic, called Microbeads. They have a size not exceeding 5 mm in diameter. The Indian Bureau of standards also declared these non-biodegradable microbeads as harmful for use in consumer goods. Countries like America, Canada and Netherlands are passing laws to limit the used of microbeads in private and public industries; but India has not passed any such law yet.

***(Team Drishti Input)***

### **We are living in an era of plastic**

- We are all habituated of using plastic in all the spheres of our lives, and this habit has developed as a result of continual use of plastic since many decades.
- Once thought to be a miracle, plastic has turned out to be omnipresent in what we wear, carry or play with... there is hardly any arena where plastic has not been introduced yet.
- First, we fulfilled our necessities with plastic, and then went on to develop new necessities of

plastic. Even though it is not visible, plastic has become an integral part of our lives-like the blood running in our veins.

- Garbage from plastics have come across as a major problem in the South-East Asia, and India too, is not aloof from this situation.
- Soft Plastic bags and the plastic used in the packaging of materials, is hampering the environment. Moreover, the situation is worsened by the usage of plastic water and soft drink bottles, whose numbers run in crores per day. Despite of all the restrictions, its usage is increasing day by day.
- For countries like India, and many more, plastic is continuously becoming a major challenge, but there seems to be no way to get rid of this albatross around our necks.
- Worldwide, China is the largest producer of plastic, but no country is able to pressurize China into stopping this menace.

### **A major risk to life and environment**

Plastic has also entered the food we consume, courtesy its perpetual use around us. Scientists have been saying for a prolonged time, that if this situation continues, plastic will soon become a risk for our lives. But, along with making our lives easier, it is also the root cause of the difficulties we are facing... especially non-reusable plastic, which is thrown after a single use, like bags, packaging and water bottles, etc. If we do not control the situation, then it may soon annihilate the whole human society.

### **Some facts related to plastic pollution**

- Given the speed with which we are using it, by 2020, there will be 12 Billion tonnes of plastic wastes accumulated worldwide, which will require hundreds of years to decompose.
- Every year, 500 Billion plastic bags are used globally.
- Yearly, at least 8 million tonnes of plastic reaches the oceans, which is equivalent to a truck full of garbage every minute.
- The amount of plastic produced in the last decade is more than the total amount of plastic produced in the last century.
- Of all the plastic we use, 50% of it is used only once.
- Every minutes, 10 million plastic bottles are bought.
- Plastic contributes to 10% of all the wastes we produce.
- Every year, more than 8 Million tonnes of plastic pollutes the oceans.

### **What can be done?**

- Despite of all the efforts being made to minimise its use, we are unable to see any positive outcomes yet due to lack of active participation from the people.
- Plastic bags have been banned in 25 states and union territories, but its implementation still lags far behind what the numbers depict.
- 25,940 tonnes of plastic wastes are produced in India everyday; of which, 40% is not collected.

### **Theories of circular economy needs to be adopted**

- This issue can be addressed by applying the theories of the circular economy. These theories include elimination of pollution, sustainable use of materials, creation of a natural capital in the nutritional and reproductive systems by changing the designs.
- Circular economy is not just applicable to the global currents of plastic and clothes, but can also contribute significantly to the achievement of sustainable development goals.
- In addition to this, there should be a system which promotes innovation; which can be connected to the design of plastic packaging, in its collection, sorting and afterwards, its reuse or recycle.
- The best way to deal with plastic is none other than recycling. Recycling means, obtaining plastic from plastic wastes and using it to make new products.

### **Mass participation of the people is imperative**

- Despite the Cleanliness Mission (Swachh Bharat) being carried on in the country, plastic wastes predominate villages, towns, cities-metropolitans; and it is littered all around.
- Ignorance on the part of the government and local municipalities coupled with the contribution of the common people is responsible for the grave nature of the problem. This is the reason why, today, plastic is present, in the food we eat and the water we drink. No huge step is required in our battle against plastic; rather, we need to inculcate environment friendly actions in our daily habits. Every person has a responsibility towards the environment, and it is the collective responsibility of the population that we protect the environment for the sake of our future generations.
  - Use jute or cloth bags while shopping.
  - Reuse the plastic bags.
  - Use reusable crockery.
  - Reduce the purchase of packaged food items.

### **Plastic Waste Management Rules, 2016**

According to the Plastic Waste Management Rules, 2016, separation of plastic wastes is expected, which will ensure that plastic and other materials can be obtained again. This will decrease the harm which is being caused to the environment.

- According to these rules, the minimum thickness of plastic carry bags has been increased to 50 microns from 40 microns.
- The existing law, limited to municipal districts earlier has been extended to villages, because plastic has found its way to the villages as well.
- By prior-registration of plastic manufacturers, suppliers and vendors; collection of plastic waste management has also begun.

It needs to be pointed that presently, only one law exists to curb the use of plastic in the country, stating that no producer or vendor can sell plastic less than 50 microns in diameter. Since this law is not applicable to sell other kinds of plastic, their production has not been lowered.

### **Use of plastic in the construction of roads**

Once used, the items made of plastic are thrown into the bin. However, a technique to construct roads with this plastic has been developed lately. Plastic wastes are being used to construct roads in Tatanagar, Jamshedpur, Mumbai and Tamil Nadu.

- Plastic waste is mixed with Bitumen (Asphalt and Tar), which increases the durability and water resistance of the roads.
- Bitumen is a waste product obtained from the refinement of crude oil and India imports majority of its petroleum products.
- Thus, the consumption of bitumen will go down, if plastic wastes are used in road construction; this will save us foreign currency and pollution caused by such wastes will also be minimised.

### **Conclusion**

It is high time we rethink on the methods of producing and using this omnipresent plastic, which has become an indispensable part of the modern economy. On a global level, the problem of pollution caused by plastic has reached an alarming level; and it is only increasing by the day. Currently, the use of plastic is cosmopolitan, and as its demand increases, so does the usage. Since plastic requires a long time to be decomposed, and causes water, air and soil pollution; therefore, we need to take mass and immediate action regarding the production of plastic. In order to free ourselves of this problem, it is a prerequisite for us to fulfil our duties on a personal level; only then will the earth be saved. Serious actions in this direction is required. As a society, we need to create a sustainable system, which reduces the use of plastic and prevents it from deteriorating our environment.

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