

A Report on Plastic Waste Problem and Management

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ABSTRACT

This essay examines waste-related issues and several approaches that can be taken to address them. Although numerous steps have been done, managing plastics is still a challenge that needs to be overcome. The essay makes obvious the harm that plastics may do to the environment, wildlife, aquatic life, and people in general. The various plastic management strategies that might be employed have been well studied. The document outlines the decisive step that each person must take to stop using plastics. Many countries have used various approaches to resolve the issue. Although these are excellent and useful, the people will ultimately determine the solution. The readers may quickly grasp the negative effects of utilising plastics thanks to the detailed financial and statistical facts. Public reaction and the reduction of plastic consumption can be sparked by appropriate awareness and education. In schools, education must be implemented. The Awareness needs to start at the very beginning and should never stop. The article serves as an eye-opener and an invitation to begin the battle against plastics and so improve the quality of life on Earth.

Keywords

Conquer Plastic, Recycled, Environmental, Management, Plastic Problem.

1. INTRODUCTION

Plastics pose a health risk and, if improperly recycled, can harm the ecosystem. The issue has persisted for a while, and numerous steps have been taken to lessen the impact of plastics. They can cause health issues for people and damage towns, waterways, and oceans if they are not properly recycled. Certain harmful plastics release dioxins when burned. Humanity needs to seriously discuss and worry about the effects of plastics on human life. Even though numerous actions have been done by various governments and councils, the issue still has to be resolved. Everyone must assume responsibility and make every effort to use fewer plastics, as well as to properly manage, recycle, and dispose of them effectively.

2. ENVIRONMENTAL IMPACT OF PLASTICS

Waste or useless plastic dumped in landfills is the biggest cause for worry in terms of plastic pollution. Plastics don't degrade easily and last a very long time in the soil. It gets worse if they are not exposed to sunlight. Plastics are frequently thrown away in landfills without adequate sunshine. They significantly strain the ecosystem chemically as well. Plastics emit hazardous gases directly into the atmosphere, which significantly adds to an area's pollution. Sulfur oxides, nitrous oxides, methanol, ethylene oxide, and volatile organic compounds are some of the other significant emissions from plastics. Creating plastics poses additional risks to

employees. There have been reports of explosions, chemical fires, chemical spills, and hazardous vapour clouds. Deaths, injuries, evacuations, and property destruction have all resulted from these incidents. Additionally, harmful to human health, the manufacture of plastic might come into contact with food. Food that is packaged in plastic is extremely harmful to your health. Plastic is frequently used in stores around the world to package food items. The government must take necessary action to prevent this since, in the long run, it could have major negative effects on humanity

3. PLASTIC PROBLEM AND ITS EFFECT

Low-cost durable polymers have advantages, but they also cause a lot of harm. It has had a negative effect on rivers, oceans, wildlife, and people due to its heavy use, low recycling rate, and spread into the natural environment. Plastics have the drawback of not decomposing because they are made of synthetic materials. It could take up to 450 years for a plastic fork that was used for almost 15 minutes to degrade. The worst kind of pollution is caused by macro plastics, which include bags, cigarette filters, bottles, caps, food containers, straws, and clothing.

The production process must be the first step in solving the issue. Plastics are exceedingly challenging to manage after manufacture. The issue must be resolved at its source. Research demonstrates

- Plastics have been produced in amounts of 8.3 billion tonnes since 1950. According to research, 6.3 billion tonnes of waste were produced, of which 9 percent was recycled, 12 percent was burned, 14 percent was dumped in landfills, and 79 percent was consumed by nature.
- 8 million tonnes of plastic enter the ocean each year from the 300 million tonnes of plastic produced annually.
- 26 percent of the plastics manufactured each year are used for packaging, and 50 percent are single-use materials.
- Virgin plastic production costs roughly 1-2 euros per kilogramme, and a 2-liter container requires 2-3 litres.
- The majority of the chemicals used to make plastics come from non-renewable resources including coal, oil, and natural gas.

4. FINANCIAL COST OF THE PLASTIC ISSUE

This manufactured product has a significant economic impact. According to estimates, the damage to marine ecosystems might reach \$13 billion annually. There are other expenses, such cleanup and removal. The economic impact from all of these is considerable, and there's more:

Fishing industry – Plastic ruins fishing gear, which results in fewer fish being caught. Fish are exported from many nations, and plastic pollution has a significant impact on fish availability. The

fish that are caught are also of poor quality. The use of plastics negatively impacts the fishing business.

Tourism Industry – Many of the Caribbean and Thai beaches are littered with plastic, making it difficult for visitors to return. For nations whose financial stability depends on tourism, this may be an issue.

Plastic pollution can be a serious worry for countries in the south, which rely mostly on fishing and tourism for their economic stability.

5. PLASTIC WASTE MANAGEMENT – IDEAS

Pollution brought on by plastic can be minimised in a variety of ways. The appropriate actions must be taken by the public and the government to safeguard the environment and human life. Plastic pollution has a negative long-term effect and poses a serious risk to humanity. Action must be taken in order to protect not just the current generation but also the next.

- Reduce the use – Reducing the amount of plastic used in packaging is the easiest and most immediate solution. Consumers and retailers can use products with minimal or no packaging. Glass, aluminium, and paper are all alternatives to plastic. People who object to using plastic packaging will cause producing industries to produce less, which will lead to a fall in plastic consumption, which will minimise health issues, energy use, and pollution.
- Reuse containers – Reusing containers is another way to reduce the consumption of plastics. Plastic container utilisation can significantly minimise the consumption of disposable plastics because refillable containers can be used 25 times. Reduced environmental impact and lower energy use are the outcomes. Reusable container use will encourage container makers to take extra precautions to guarantee that their products are reusable, which will ultimately reduce plastic pollution and raise public awareness of the dangers associated with plastic usage.
- Encouraging producers to take back resins – Another strategy is to directly involve plastic makers in waste management and plastic disposal. They will then be motivated to produce recyclable materials and build the necessary infrastructure to reprocess the resources as a result. It enables the product's life cycle to be planned by the designers and producers, reducing the need for single-use plastics. Limiting the variety of container types, using a single resin type for each container, creating collapsible containers, and gradually phasing out associated metals like aluminium sealing are all ways that container manufacturers might facilitate easy reprocessing. In conclusion, by obtaining plastics from individuals, both resin and container manufacturers may control the reprocessing infrastructure.
- Demanding recycled content lawfully – Making it mandatory for all containers to include post-consumer material reduces the amount of new material that is consumed. Mandating recycled content can encourage primary recycling, albeit it is less successful than other ways to decrease the usage of plastics. Reusing containers while incorporating primary recycling would be a fantastic fix for the issue. Designers would be encouraged to create more recyclable containers if container makers were asked to employ recycled materials. Plastic pollution can be significantly decreased in these methods. One method for preventing pollution and the consequences of plastic use after use is to legally require recycled content.
- Standardize labeling and informing the public - Standardized words and labelling are required to bring justice and clarity regardless of the strategies used to limit the usage of plastics. It is necessary to create several labels with standards for "recyclable," "recycled," and "made of plastic-type X." The Eco mark system is used in nations like Taiwan and Germany. Labels that read "eco-friendly" can be utilised with such a

system. This can be used to distinguish between environmentally friendly products and those that are not. Additionally, the environmental effects of plastic can be assessed and audited by a neutral organisation. Public education should be implemented alongside labelling initiatives and standardisation.

6. HOW CAN WE CONQUER PLASTIC?

More than 20 times as much plastic is produced today than there was in 1964. According to studies, the amount of plastic in the oceans will increase by a factor of four, outweighing fish. Plastics have been called "the problem of our civilization," by someone.

We need to stop relying so much on plastics. We rely on plastics and utilise them for unimportant things. With some caution, its usage can be decreased. Anyhow, we need to cut back on our use and consumption of plastic. Many nations have put in place legal restrictions and reusable plastics to limit usage, but we as individuals need to take responsibility for all of these impacts. People who recycle plastic may be eligible for subsidies from some governments. For instance, the city of Beijing offers free train passes to those who recycle plastic. Consumers should endeavour to avoid using plastics and educate themselves about the consequences. There won't be much of a shift unless people take the problem seriously.

Australia and India have passed laws requiring plastics manufacturers to recycle or clean up the plastic they create.

By 2022, the Indian Prime Minister promised, no single-use plastic will be used in India. All of these are commendable government actions, and it goes without saying that the governments of various nations are well aware of the potential effects that plastics could have and have responded appropriately. However, whether or not to ban plastic is ultimately up to the general public.

Even though clearing out and moving trash is crucial, it is not the only solution. Plastics must be eradicated from the source.

Cleaning only moves it from one location to another; it is not a long-term fix. Many different materials can be used in place of plastic. To limit the usage of plastics, people must take proactive measures. The majority of individuals are either uninformed or do not place a high priority on the need to avoid plastics. People find it challenging to give up plastics because they have integrated them into daily life. This occurs primarily as a result of a lack of knowledge or instruction about the numerous hazardous and destructive impacts of plastics. Plastics will undoubtedly make life on Earth challenging.

7. CONCLUSION

Without a doubt, plastics pose a serious threat to humanity. Despite the fact that they offer distinct uses, the consequences are profound. They harm the environment, wildlife, aquatic life, and ultimately, people. The issue has existed for a while, and despite the implementation of numerous strategies and plans of action, it still needs to be resolved. It will obliterate future generations if it is not resolved. The general people has to be well informed and made aware of the hazards of plastics. In the end, it is up to each and every person to take action and refrain from using plastic. Even though they can be helpful, cleaning and reuse are not long-term fixes for the issue.

To take forceful action, everyone must band together. Our decisions to stop using plastic will result in a world without plastic for us.

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