

Stop Single-Use Plastics – Save Earth

- Anoop Kumar Srivastava

1. The topic of this article is “Stop Single-Use Plastics – Save Earth”. The question is why are we talking about Single-Use Plastics in a bad light these days? At the outset, let me state very candidly that the benefits of plastics are undeniable. Plastic is cheap, light and easy to make. These benefits of plastic make it so convenient in our day-to-day lives. The positive contribution of plastics in our lives cannot be denied. Thanks to plastics, countless lives have been saved in the health sector. The growth of clean energy from wind turbines and solar panels has been greatly facilitated. Safe food storage has been revolutionized. These are some examples but the list is endless.

2. So, what is the problem? The problem has arisen with the emergence of Single-Use Plastics. Much of the plastic produced currently is meant for single-use and is discarded within a few minutes of its first use, giving rise to what is called a “throw away” culture. The indiscriminate use of Single-Use Plastics has resulted in plastic pollution of unimaginable magnitude in our environment. According to an estimate, as published in the report of UN Environment titled “Single-Use Plastics – A Roadmap for Sustainability”, 79% of the plastic waste ever produced now sits in landfills, dumps or in the environment, while about 12% has been incinerated and only about 9% has been recycled. The report also mentions that about 9 billion tonnes of plastic has been produced in the world so far. It means that over 7 billion tonnes of plastic waste now sits in landfills, dumps or in the environment. If the current consumption pattern and waste management practices do not improve, by 2050 there will be about 12 billion tons of plastic litter in landfills and the natural environment. This is humongous by any stretch of imagination. By then, there will be more plastic than fish in the oceans. Due to the consumption of plastic litter, we are losing around 100,000 marine animals and 10,00,000 sea birds every year. The biggest problem with plastics, as we know, is that they are not biodegradable and will take hundreds and in some cases thousands of years to decompose in the environment.

3. The emergence of Single-Use Plastics has resulted in one of our planet’s greatest environmental challenges. Our oceans have been used as a dumping ground, choking marine life and transforming some marine areas into a plastic soup. In cities around the world, plastic waste clogs drains, causing floods and breeding disease. Consumed by livestock, it also finds its way into the food chain. For example, fish which consume plastic mistaking it for food, have been found to have toxic chemicals in their tissues. So, the plastic pollution is harmful for humans too.

4. Obviously, we cannot afford to continue with this kind of catastrophe. This must stop.

5. As per fundamental duties enshrined in part-IV of the Constitution of India, it is a fundamental duty of all of us “to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures”. But what is happening due to plastic pollution caused by single-use plastics? Our forests, lakes, rivers and wildlife including marine life – all are getting affected adversely. Therefore, it is a fundamental duty of all of us – Governments, Businesses, Institutions, NGOs and Individuals – to act

together to prevent and combat plastic pollution at all costs and to stop loss of wild life and marine life due to plastic pollution, and protect our lakes, rivers and oceans, in other words save earth. We must avoid any further damage to our environment due to the single-use plastics pollution. First of all, we have to do away with “throw away” culture, that has now become a deep-rooted habit.

6. So, what do we do? Should we stop single-use plastics altogether. To answer this, let us first look at the concept of single-use plastics more deeply. The United Nations Environment Programme (UNEP) report of 2018 titled “Single-Use Plastics: A roadmap for sustainability” defines Single-Use Plastics as:

“Single-use plastics, often also referred to as disposable plastics, are commonly used for plastic packaging and include items intended to be used only once before they are thrown away or recycled. These include, among other items, grocery bags, food packaging, bottles, straws, containers, cups and cutlery.”

7. You can see that the UNEP’s definition is crystal clear. As the term itself is self-explanatory, a single-use plastic is any item made of plastic that is intended to be used only once before it is thrown away or recycled. Obviously, the list is long. But some people think that only the items mentioned in the above definition given by UNEP are single-use plastics. This is not correct. The definition itself uses the phrase “among other items”, which means the items included in the definition are given by way of examples and are not the only single-use plastics. One can think of many more. For example, a plastic glove used by a medical practitioner is a single-use plastic. The fact that plastic plate is not mentioned in the definition does not mean that it is not a single-use plastic. It is also used only once and then discarded. Therefore, a plastic plate is also a single use plastic. The plastic packaging or bags used by many e-Commerce portals for delivering sold items at the doorsteps of consumers are also single-use plastics. On the other hand, durable items like plastic buckets, chairs, etc are not single-use plastics.

8. The overwhelming share of plastic waste generated is the waste generated by single-use plastics. Therefore, the plastic pollution we see around us is mostly caused by single-use plastics. The ideal solution to preventing plastic pollution in the long run is to stop production and use of single-use plastics. But in practice, it is not possible at this juncture to stop all single-use plastics. In order to stop any single-use plastic, we need its alternative. There are some single-use plastics, for which eco-friendly alternatives are available. These can be stopped immediately. But there are some single-use plastics, for which alternatives are not available at present. These will have to be stopped when alternatives become available through research and innovation.

9. By far, the plastic carry bag is the most problematic single-use plastic item, responsible for much of the environmental damage. Plastic bags can block waterways and exacerbate natural disasters. By clogging sewers and providing breeding grounds for mosquitoes and pests, plastic bags can increase the transmission of vector-borne diseases like malaria. High concentrations of plastic materials, particularly plastic bags, have been found blocking the airways and stomachs of hundreds of species. Plastic bags are often ingested by turtles and

dolphins who mistake them for food. It is estimated that one to five trillion plastic bags are consumed worldwide each year. Five trillion is almost 10 million plastic bags per minute. If tied together, all these plastic bags could be wrapped around the world seven times every hour. This is too much by any set of standards. The situation obtains in India is no different. The plastic bags of all descriptions are the biggest source of plastic pollution in India.

10. We must, therefore, tackle the problem caused by plastic carry bags on first priority. What should be done? All State Governments should ban all types of plastic bags regardless of thickness, with strong enforcement. Industry and businesses should innovate and introduce low cost bags made of biodegradable material in the market, as alternative to plastic bags. To encourage consumers to bring their own non-plastic eco-friendly bags to shops, businesses should provide financial incentives in the form of say 0.5 % to 1% discount on total purchases if the consumer doesn't ask for a carry bag. As individuals, we should all recognise our duty to the environment, and voluntarily stop using plastic carry bags. We should carry our own bags when we go for shopping as we used to do about two to three decades ago. No doubt, it has become a habit and old habits die hard, yet we must make a beginning by giving up plastic bags in the first place.

11. Apart from plastic carry bags, other single-use plastics of high consumption are cups, plates, cutlery, glasses, containers, straws, stirrers and PET bottles. As for the cups, plates, cutlery, glasses, containers, and stirrers, we should switch over to ceramic or metal items which are reusable. We can easily live without straws, as we can sip our drink directly from the glass. We should also be wary of these plastic items as they have hazards for human health too. The UNEP report brings out health hazards of single-use plastics very succinctly. Styrofoam items contain toxic chemicals such as styrene and benzene. Both are considered carcinogenic and can lead to additional health complications, including adverse effects on the nervous, respiratory and reproductive systems, and possibly on the kidneys and liver too. Several studies have shown that the toxins in Styrofoam containers can transfer to food and drinks, and this risk seems to be accentuated when people reheat the food while still in the container. Styrofoam containers should therefore be banned simply on the ground of health as in the case of e-cigarettes.

12. Apart from the abovementioned single-use plastics, there are some other single-use plastics, for which alternatives are not imminent. For example, plastic pouches, in which liquid milk is sold, seem inevitable at present juncture. Fortunately, these pouches are made of high-grade LDPE, which is recyclable. While research and innovation may bring eco-friendly alternatives in future, till such time it happens, a system should be put in place to collect and recycle these pouches. Same system should be evolved for similar other single-use plastics, for which no alternatives are imminent, but are recyclable.

13. Plastic bottle is one of the most common single-use items. Drinking water is sold in bottles made of Polyethylene Terephthalate (PET) throughout the world. Most soft drinks are also sold in PET bottles. These are very high consumption items. The world community should definitely reduce its consumption as the present level of its consumption makes it very difficult to recycle the entire waste created by the use of PET bottles. The governments, businesses, institutions and all other organisations should stop using PET bottles for its

employees and clients. People should develop a habit of carrying own drinking water from home in reusable bottles. Single-Use PET bottles at present are a necessity only for the tourists and pilgrims. In the long run, more water ATMs will need to be developed to cater to the drinking water requirement of tourists & pilgrims. PET bottle may not be identified as an item for banning, but our overall reduced requirement with our changed habits can be easily handled through Extended Producer Responsibility (EPR). In several developed and developing countries, the introduction of EPR and deposit-return schemes have proven effective in reducing littering from PET bottles while boosting the recycling sector. Fortunately, PET is recyclable. If PET bottle manufacturers may be persuaded to discharge their EPR, by introducing deposit-return schemes, all of the PET bottles produced can be recycled. For example, while selling water or soft drink in PET bottles, the seller may keep a deposit of reasonable amount which shall be refunded to the consumer when she/he brings back the empty bottles to the shop.

14. The most difficult single-use plastic item to handle is the Multi-layered Packaging (MLP). According to the Ministry of Environment, Forest & Climate Change, replacement technologies are still not available to the manufacturers of products, which use MLP. MLP which is non-recyclable or non-energy recoverable or with no alternate use were required to be phased out in two years' time as per the amended Rule 9(3) of the Plastic Waste Management Rules. The said rule was amended in March, 2018. Hence, this two year's window was over in March, 2020. Therefore, legally no such MLP can now be produced, which is non-recyclable, non-energy recoverable and has no alternate use. It is hoped it is being followed. The MLP is generally incinerated in high temperature cement kilns, or used in road construction or used for energy recovery. More research and innovation are needed to find eco-friendly alternatives to MLP.

15. Now a few words on very specific Indian context.

16. India was the global host of 2018 World Environment Day on June 5, 2018. With "Beat Plastic Pollution" as the theme, the world came together to minimise plastic consumption and mitigate its impact on environment. On this day, Prime Minister Shri Narendra Modi announced India's pledge to phase out all Single-Use Plastics by 2022. Subsequently, at least on two occasions, first on 15th August, 2019 and later on 2nd October, 2019, PM has reiterated India's pledge to phase out all Single-Use Plastics by 2022. This should imply that, by 2022, India should completely stop producing and using all single-use plastic items. Given the present magnitude of the problem and considerations of economic growth & employment etc, this is a challenging task, but doable.

17. Of course, this target is to be achieved in a phased manner. Phasing out of all Single-Use Plastics will require it to be tackled from both demand and supply angle. Demand reduction will involve promotion of alternatives to single-use plastics and Information Education Communication (IEC) / Behaviour Change Communication (BCC) activities. Supply reduction will require legislative and regulatory measures including banning single-use plastics in a phased manner. Demand reduction and supply control complement each other. None will work in isolation from the other.

In order to fulfil India's pledge to phase out all Single-Use Plastics by 2022, the Government of India in the Ministry of Environment, Forest and Climate Change has on 21st January, 2019 issued Standard Guidelines for Single-Use Plastics to all States and UTs suggesting different sets of actions that State/UT Governments may take to minimise the production and use of single-use plastics. It is satisfying that these guidelines cover both supply and demand reduction strategies. The guidelines are comprehensive and, if implemented in both letter and spirit, are capable of freeing India of all single-use plastics by 2022. However, the onus is on the State and UT Governments as they are the primary implementers of the guidelines.

18. The guidelines recognise that key aspects of effective management of plastic waste throughout the country include long term investments in waste management systems, promotion of alternative options, and effective awareness campaigns. It also underlines the need to maintain parity among actions at state level in various States and UTs to avoid ambiguity.

19. One common thread that runs across the country to maintain uniformity is the Plastic Waste Management Rules, 2016 (PWMR) notified by the Ministry of Environment, Forest and Climate Change in March, 2016. These Rules were slightly amended in March, 2018. These Rules, if implemented rigorously, can substantially prevent and eliminate plastic pollution. The Rules make segregation of various types of waste mandatory. The intention under the Rules is to follow a waste-to-wealth pathway via recovery, reuse and recycling. The Rules also introduce Extended Producer Responsibility (EPR), as an environment policy instrument, and assign the physical, financial and environmental responsibility to producers, brand owners and importers of plastic. Rules contemplate that under the rubric of EPR, producers / brand owners need to work with all stakeholders including local bodies and informal sector, etc. So far so good. The Rules are excellent, but their implementation on ground is not up to the mark. The Rules need to be implemented with sincerity and with all seriousness they deserve, to have any beneficial effect. The Central and State Governments need to sensitise all concerned authorities and agencies about their obligations under the Rules and to ensure that they implement the Rules in both letter and spirit.

20. In any case, the Plastic Waste Management Rules (PWMR) fix a minimum benchmark or minimum standards for the State and Central authorities. They are free to go beyond the benchmark and adopt any other innovative way to reduce production and use of single-use plastics. It is satisfying to note that 15 States and 4 UTs have issued notifications/orders introducing regulations pertaining to ban on plastic carry bags and/or other single-use plastic items, albeit with poor implementation and little success. In addition, some States have introduced partial bans on carry bags or other single-use plastic items supplementing PWMR in some ways. It is important to note that so far PWMR have banned only three items, that is, plastic carry bags (virgin or recycled) of less than fifty microns in thickness, and plastic sheet or like, which is not an integral part of multi-layered packaging, and cover made of plastic sheet used for packaging, wrapping commodities with thickness less than fifty microns. No other single-use plastic item has been banned under PWMR.

21. In the guidelines on single-use plastics, issued by the Central Government, there are essentially six sets of actions that are to be taken by the State/UT Governments. These are:

(1) Waste management system improvements, (2) Legal options for phasing out single-use plastics, (3) Promotion of eco-friendly alternatives, (4) Social awareness and public education, (5) Action by Government offices, and (6) Extended Producer Responsibility.

22. The suggested actions are unexceptionable. No one can overemphasise the importance of waste management system improvements. This is important not only to manage the plastic waste efficiently, but also for maintaining overall cleanliness in metropolitan cities, other cities and towns and villages under the Swachh Bharat Abhiyan. The role of local bodies assumes tremendous importance, which is a state subject under entry 5 of state list of seventh schedule of the Constitution of India. Incidentally, sanitation which is a related issue, is also a state subject under entry 6. States and UTs have, therefore, primary responsibility in this regard. Huge investments are needed to improve waste management systems. Public private partnership could be explored to reduce the burden on public exchequer alone. The source segregation of waste, its collection, transportation and processing are key to the success of waste management. Indore model, which has been a huge success, could perhaps be suitably adopted by other cities.

23. Under the ambit of legal options for phasing out single-use plastics, States/UTs have been advised to consider prohibitive action with regard to (a) all plastic carry bags, with or without handles, irrespective of thickness and size, (b) plastic cutlery including plates, plastic cups/glass, straws, stirrers, etc, and (c) cutlery and other decorative made of Styrofoam (Thermocol). This is a welcome suggestion and all States and UTs should ban production and use of at least these single-use plastic items in a phased manner. Since, there are enough options for carry bags, such as cloth, khadi and jute bags, the plastic carry bags should be banned immediately by all States and UTs without any delay. At the same time, as I stated earlier, we as consumers, should develop the habit of carrying our own eco-friendly and reusable bag whenever we go for shopping. Other single-use plastic items may be banned by 2021 to allow for introduction of eco-friendly alternatives and consumption of existing stocks that single-use plastic producers may have. These future dates for ban need to be announced well in advance to enable the producers to switch over to different products and technologies.

24. Promotion of eco-friendly alternatives is key to reducing single-use plastics. The alternatives need to be cost-effective and convenient. Projects which support small scale and micro enterprises should be encouraged. The Ministry of Environment, Forest and Climate Change has suggested that States may take benefit of a central sector scheme called "Creation of Management Structure for Hazardous Substances" which provides financial assistance for innovative technologies and novel treatment options to different waste streams.

25. Social awareness and public education are very important for inculcating behavioural change in plastic usage.

26. Action by Government offices include declaring all offices as single-use plastic free. The offices can go beyond single-use plastics and cut down on other plastic items too, where alternatives exist. This will have a demonstrative effect and even private sector will be inspired to make their offices single-use plastic free.

27. Last, but not least, is the concept of Extended Producer Responsibility (EPR), about which I have already spoken at length. My suggestion to the Ministry of Environment is that they should not leave everything on State Governments. As for the large brands which have Pan India presence, the Ministry itself should enter into EPR agreements with them. This will ensure uniformity and an integrated approach across the country. Different States entering into agreements with same producer may create avoidable problems of coordination and smooth implementation.

28. The Ministry has advised State Governments that certain single-use plastic products including PET bottles used for packaging beverages including water may not require prohibitive action and will come under the ambit of recycling/processing channels under EPR. This too is fine provided the producers of such products take responsibility for 100% collection of their products through deposit-return scheme and their eventual recycling.

29. While as per the guidelines issued by the Ministry of Environment, Forest and Climate Change, the onus is on the State and UT Governments to take action, but the Ministry should set up a monitoring mechanism to ensure that States and UTs do take the desired action. Already considerable damage has been done to the environment, and we cannot afford any delay and slippages

30. Finally, I want to say that in our war against humongous plastic pollution in our environment, all of us – including Governments, Businesses, Institutions, Organisations including NGOs, Media and above all – the People – need to act in concert with complete clarity of mind, precise plan of action, and with a great sense of urgency.
