IMPACT OF PLASTIC BAN IN INDIA

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INTRODUCTION

Economic development significantly contributes to improvements in life standards. Therefore, both economic development and environmental conservation are the immense important aspects and priorities of 21st century. Both require simultaneous indispensable support and adequate consideration, so that they are in fact not only being compatible but also remain mutually supportive. However, coupled with life standard improvement, economic prosperity also induces environmental degradation with long-term irreversible consequences for nature. Rapid population growth, urbanization, and industrial growth have led to severe waste management problems in several cities around the world. Simultaneous development in economic prosperity and industrialization often conflict with sound environmental considerations.[3] The real problem, however, is the lack or inadequate environment management at a grass root level. The basic requirement is; therefore, need an approach toward13technological development for the minimization of environmental degradation.[4]

Plastic bags have been a big part of our lives for a long time that many of us don't give them a second thought. Nature has witnessed a considerable intensification in the production of plastics in last few decades and simultaneous increased consumption of plastic materials. With time, stability and durability of plastics have been improved continuously, and hence these groups of materials are now considered as a synonym for materials being resistant to many environmental constraints.[5]

Plastic which is derived from fossil fuels such as oil and petroleum is being widely used for manufacturing numerous things including plastic bags, kitchenware, furniture, doors, sheeting, packing material, counter tops and what not. People prefer items made of plastic as

[1] Student, School of Law, UPES
[2] Student, School of Law, UPES
[3] Narayan, R. (1993). Biodegradation of polymeric materials (anthropogenic macro-33 molecules) during composting, In: Science and Engineering of Composting: Design, Environmental, Microbiological and Utilization Aspects, H.A.J. Hoitink and H.M.
[4] Orhan, Y. and Buyukgungor, H. (2000). Enhancement of biodegradability of dis-27 posable polyethylene in controlled biological soil. International Biodeterioration and28 Biodegradation 45: 49–55.
[5] Shah, A.A., Hasan, F., Hameed, A., andAhmed, S. (2007). Isolation and characterization23 of poly (3-hydroxybutyrate-co-3-hydroxyvalerate) degrading bacteria and purification24 of PHBV depolymerase from newly isolated Bacillus sp. AF3. International Biodete-25 rioration and Biodegradation 60: 109–115.

these are light weight compared to wood or metal items and are also quite economical. Plastic bags are readily available in the market and are used widely. Available in various sizes these are quite economical and also easy to carry. However, the cost we are paying for using these bags is overlooked. These bags are costing us our beautiful environment. Plastic is a non-biodegradable substance. It breaks into pieces, deteriorates over the time but does not become one with the soil. It remains in the environment for hundreds of years and reason to environmental pollution. It goes into the landfills and leaks pollutants that damage soil and water. Plastic cannot even be disposed of by burning as on burning it produces poisonous gases that can cause serious diseases. Plastics are formed into any number of products, and different plastic resins are difficult to differentiate. This leads to problems in collection, separations, and recycling. Because of its durability, plastics accumulate and remain persistent in the environment at the rate of 25 MT per year. Management of plastics found in municipal solid waste (MSW) is most critical sector because of continuous increase in plastic proportion in MSW, its non-biodegradability, and direct harmful effect to society.[6]

Researchers claim that some toxic elements from the plastic enter the food items packed in them. Plastic bags thus contaminate the food rather than keeping it safely packed. Many cases of plastic causing harm to the food have been reported. Eating such food can cause food poisoning, intestinal problems and other health hazards. Plastic bags can even lead to suspected human carcinogen. Apart from this, plastic bags produce immense amount of non-biodegradable waste. This waste remains on earth for almost 500 years. This waste material enters water bodies and degrades the quality of drinking water. The quality of drinking water has gone down drastically in the last few decades. It is majorly because of the increasing amount of plastic bags being dumped in the rivers that are a source of drinking water. This has given way to various water-borne diseases.[7]

Animals and marine creatures are worst effected by waste plastic bags. We throw the plastic bags thoughtlessly after use. These plastic bags form a major part of the garbage areas where the innocent animals go looking for food. Animals often eat small plastic content and even the entire plastic bags along with their food. Small plastic content accumulates in their body

[6] Banerjee, T. and Srivastava, R.K. (2009). Plastics waste management and resource30 recovery in India. International Journal of Environment and Waste Management31 (Accepted, in press).

[7] Ismail, Z.Z. and Hashmi, E.A.AL. (2008). Use of waste plastic in concrete mixture as39 aggregate replacement. Waste Management 28: 2041–2047 *(PDF) PLASTICS WASTE MANAGEMENT IN INDIA: AN INTEGRATED SOLID WASTE MANAGEMENT APPROACH*. https://www.researchgate.net/publication/268079134_PLASTICS_WASTE_MANAGEMENT_IN_INDIA_AN_INTEGRATED_SOLID_WASTE_MANAGEMENT_APPROACH [15 November, 2018,5:30 pm].

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and causes health problems over the time. On the other hand, gulping the entire plastic bag in one go can suffocate them to death instantly. The water bodies are polluted immensely because of plastic waste. It is deteriorating the quality of water that marine creatures drink.[8]

The problem is much serious than it appears. Researchers claim that plastic bags are a major cause of water pollution. These are also responsible for making our agricultural lands infertile and a cause of a number of other serious problems. Many countries have banned the use of plastic bags in order to ensure a cleaner and greener environment. India is also among one of these countries. Our country has banned the use of plastic bags in many states. However, the implementation of this rule hasn't been proper. These are still available in the market. The retailers provide goods in these bags and the shoppers gladly take their stuff in these easy to carry bags. It is time each one of us must understand the severity of the issue and stop the use of plastic bags. Plastic bags that form a major part of the plastic pollution are thus being banned in many countries. However, merely banning plastic bags shall not help. Ban must be imposed on other plastic items as well to bring down the environmental pollution.[9]

DAMAGE TO ECOLOGY

Now-a-days the most popular plastic pollution is caused is polyvinyl chloride (P.V.C.). When any food material or blood is stored in the said plastic containers then gradually the soluble chemical gets dissolved in them causing death due to cancer and other skin diseases. Polyvinyl chloride has also been found to destroy the fertility of the animals and their respiratory systems. When mixed with water, it causes paralysis and also damages bones and causes irritation to the skin.[10]

India should immediately ban the use of P.V.C. in water pipes, food and medicine containers to save the lives of millions who are already suffering from different types of ailments. In one dead turtle found off Hawaii in the Pacific more than 1000 pieces of plastic were found in its stomach. A recent US report concluded that more than 100000 marine mammals die every year in the world's oceans by eating or getting entangled in plastic rubbish, and the position is worsening world-wide, 75 marine bird species are known to eat plastic articles. This

[8] Hari Pulakkat, How India is trying to solve its plastics waste problem https://economictimes.indiatimes.com/news/politics-and-nation/how-india-is-trying-to-solve-its-plastics-waste-problem/articleshow/64431263.cms.
[9] Aarefa Johari, Why have laws to completely ban plastic bags failed in India? https://scroll.in/article/872612/why-have-laws-to-completely-ban-plasti c-bags-failed-in-india.
[10] Ameen Khan, Pratik Roy and R.R.N. Sailaja, Challenges and opportunities: Plastic waste management in India http://www.teriin.org/sites/default/files/2018-06/plastic-waste-management_0.pdf.

includes 36 species found off South Africa. Endocrine disruptors are ubiquitous in our environment and have deep impact on our health. Endocrine distruptor chemicals (EDC's) are added to plastic products to make them softer and easier to handle.[11]

These EDCs are common in our environment and, when absorbed by human beings and wildlife, mimic the action of hormones and have been linked to reproductive problems in animals and human beings are known to affect fat cells. Bisphenol A (an endocrine disruptor) is a key monomer in production of polycarbonate plastic and epoxy resins. Polycarbonate plastic, which is clear and nearly shatter-proof, is used to make a variety of common products including baby and water bottles, sports equipment, medical and dental devices, dental composite fillings and sealants and lenses.[12]

The figure shows that as the plastic moves up in food chain, its concentration increases and when these fishes with huge amount of plastic are eaten by human cause diseases like cancer. Plastic plays the villain right from the stage of its production.[13]

The major chemicals that go into the making of plastic are highly toxic and pose serious threat to living beings of all species on earth. Some of the constituents of plastic such as benzene are known to cause cancer. Recycling of plastic is associated with skin and respiratory problems, resulting from exposure to and inhalation of toxic fumes, especially hydrocarbons.

INDIA's STRUGGLE TO DEAL WITH PLASTICS WASTE

As per a 2013 estimate of the Central Pollution Control Board (CPCB), Indians throw out 15,342 tonnes of plastic waste every day, of which about 60 percent is recycled, most of it in the informal sector. Yet, there are over 6,100 tonnes of plastics being dumped in landfills or ending up polluting streams or groundwater resources every year. This is a problem: while some kinds of plastics do not decompose at all, others can take up to 450 years to completely break down. CPCB surveyed 60 Indian cities and found that plastics account for eight percent of all solid waste, the figure going up to over 10 percent in nine cities. Delhi produces the

[11] Single- use plastics: A Roadmap for sustainability http://www.indiaenvironmentportal.org.in/files/file/singleUsePlastic_sustainability.pdf.
[12] Vikram Doctor, Why it requires more than simple bans to stop plastic menace https://economictimes.indiatimes.com/industry/miscellaneous/why-it-require-more-than-simple-bans-to-stop-plastic-menace/articleshow/63550140.cms.
[13] Sadhguru, We don't need to ban plastic; we just need to start using it properly https://www.weforum.org/agenda/2018/05/plastic-asset-legal-policy-responsible-use-sadhguru/.

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maximum plastics waste in the country, followed by Kolkata and Ahmedabad. The biggest hurdle to plastic recycling and waste management is non-segregation of waste at source. It was also clarified that heavy metals, chloride and phthalates 'migrate from plastic waste into the surrounding medium'. The leachates can cause considerable pollution problems by contaminating the surrounding soil, ground or surface water.[14]

In the current scenario, waste is the default responsibility of the informal sector. Wastepickers. They collect unsegregated waste from households, schools, offices and shopping malls. They then segregate the waste and sell the recyclables to small waste-handlers. The non-recyclable or wet waste is taken to 'dhalaos'. Municipal trucks pick the waste up from the 'dhalaos' and dump it in landfills. At the landfill, the waste is further segregated by wastepickers who eke out a living by selling recyclables. In most cases, low grade polythene packets, packets of chips and the like do not get recycled.[15]

DOMESTIC LEGISLATIONS REGARDING PLASTIC

The Plastic Waste Management Rules, 2016 (henceforth, Rules) were notified by the Union Ministry of Environment Forest & Climate Change in March 2016. It is a Central legislation that aims to tackle the plastics waste menace. The Rules make source segregation of waste mandatory. The ambition is to follow a waste-to-wealth pathway via recovery, reuse and recycling. The Plastic Waste (Management and Handling) Rules 2011, and notified the 2016 Rules. 'These rules prescribe two years' time to phase out manufacturing non-recyclable multi-layered plastic.

The Rules are well-conceived. Section 4(b) explicitly states that only virgin plastic is to be used for products related to storing, carrying, dispensing or packaging food stuff which is ready to eat or drink. Section 9(3) requires the phasing out of non- recyclable multi-layered plastic by March 2018, while Section 17 requires manufacturers, producers and users of non-recyclable packaging to either pay municipalities for the cost of managing such waste, or arrange to take it back and manage its disposal themselves. According to earlier rules related to municipality solid waste, waste generators are required to segregate waste into three

[14] Anisha Bhatia, Plastic Ban: What India can learn from other countries (28 October, 2018, 5:00pm) https://swachhindia.ndtv.com/plastic-ban-india-can-learn-countries-6161/.
[15] Manoj R Nair, Will banning bags in Maharashtra solve our plastic waste problem? (29 October, 2018,7:45pm) https://www.hindustantimes.com/mumbai-news/will-banning-bags-in-maharashtra-solve-our-plastic-waste-problem/story-XrMxY2qwT2MLydDjxVyY0O.html.

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streams: biodegradables, dry (plastics, paper, metal, wood and similar materials) and domestic hazardous waste (diapers, napkins, mosquito repellents, cleaning agents, to name a few).

The Rules stipulate the minimum thickness for carry bags be raised from 40 microns to 50 microns and, in what would become a contentious clause, street vendors and retailers who provide plastic carry bags will have to pay a minimum monthly waste management fee of INR 4,000.

As per the Rules, brand owners who sell or market their products in packaging materials, which are non-biodegradable, should put in place a system to collect back the packaging waste generated. The Rules also direct that non-recyclable waste of a calorific value of 1,500 K cal/ kg or more should be utilised to generate energy either through refuse-derived fuel or as feedstock to prepare refuse-derived fuel. High calorific wastes are to be used for co-processing in cement or thermal power plants.

The Plastic Waste Management Rules, 2016 also aims to expand its jurisdiction to rural areas, because plastics has reached rural areas as well. Here, it confers the responsibility of managing plastics waste to Gram Panchayats. Another goal is to induce producer responsibility in the plastics waste management system and to encourage a collect back system of plastics waste by the producers/brand owners under the rubric of extended producer responsibility. Moreover, it recommends ways of gainfully using waste.

The Plastic Waste Management (Amendment) Rules 2018 contain the following:

• Rule 15 (Explicit pricing of carrying bags) has been omitted in the amendment. Earlier every vendor who sold commodities in a carry bag was required to register with their respective urban local body and pay a minimum fee of INR 48,000 per annum (INR 4,000 per month). Other minor amendments include the addition of two more definitions: one on ‘alternate use’ and one on ‘energy recovery’.

• Under Section 9(3), the term ‘non-recyclable multilayered plastic if any’ has been substituted by ‘multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use’. This stipulates plastics producers to prove that their products can be

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put to some other use, if not recycled. This kind of single-use plastics was supposed to be banned by March 2018.

Section 13(2) now requires all brand owners and producers to register or renew registration with the concerned State Pollution Control Board (SPCB) or Pollution Control Committee if operational only in one or two states or union territories. They have to do the same with the Central Pollution Control Board (CPCB), if the producers/brand owners are operating in more than two states or union territories. Earlier, only the producers had to register with CPCB or SPCB regardless of their extent of the area of operation. CPCB says that a centralised registration system will evolve from this.[16]

GLOBAL STAND ON PLASTIC BAN

More than 60 countries now have some kind of ban or tax on plastic bags, according to UNEP's recent report. Data on the effectiveness of these rules is available for only half these countries, of which 30 percent have seen a dramatic decline in use, the report said. These include Denmark, Ireland, China, and the Netherlands. The other 20 percent of countries have seen no change. In May, the European Union proposed a ban on 10 single-use items, including bags, straws, and cotton swabs. Britain also has called for a ban on plastic straws, and other countries may follow suit; in the United States alone, 500 million plastic straws are used daily.[17]

Among the earliest and most successful countries at slashing plastic bag use was Denmark, which in 1993 became the first country to tax plastic bags, levying charges first on bag makers, and then in 2003, on retailers. Today, the average Dane uses four single-use bags in a year, compared to an American or Pole who uses a bag a day. In 2002, Ireland introduced a fee on plastic bags at supermarkets, leading to a 90 percent reduction in use. And in 2008, China reported a 70 percent fall in plastic bag use after it banned bags of less than 25-micron thickness and levied fees on thicker ones.

[16] Suradha Iyer, Will the ban on single-use plastics save India from environmental destruction? (29 October, 2018, 8:00pm) https://qrius.com/will-the-ban-on-single-use-plastics-save-india-from-environmental-destruction/.

[17] Nicole D' Alessandro, The global downfall of the plastic bag (30 October, 2018, 5:30pm) https://www.ecowatch.com/the-global-downfall-of-the-plastic-bag-1881906470.html.

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For Europe, the results are already showing: one study found a 30 percent drop in plastic bags on the seafloor around the U.K. and parts of northern Europe after 2010, which researchers attributed to the spread of bag charge policies.[18]

Less successful has been a 2002 ban in Bangladesh, which forbade thin plastic bags after recurring floods were found to have been aggravated by plastic waste choking storm drains. Poor enforcement of the ban, as well as a lack of cheap alternatives, led to failure.

The quickening pace of action to reduce plastic use reflects growing concern about the impact of plastic waste on the environment, especially marine life. An estimated 8 million tons of plastic enter the oceans every year, much of it from Asia, especially China, with its growing economies and poor waste disposal systems. Plastic debris is now found on the farthest shores of the earth's oceans, including in the high Arctic and Antarctica, and at great ocean depths. The discovery of small plastic particles, or micro plastics, in the food chain, including in drinking water, have added to the rising concern.[19]

While there is no one-size-fits-all solution, experts say some factors are key to reducing single-use plastic. These include advance consultation with industries, sufficient time to build public support, strong enforcement, and the use of incentives such as the buy-back of banned plastic items. The success stories, in places ranging from Ireland to China, also suggest that charging people for using plastic bags works better than outright bans. Education is also important, as is improving waste management, especially in developing economies like India.

PLASTIC BAN ANALYSIS

Twenty-five Indian states/UTs now have some form of ban on polythene carry bags, but the implementation is often a challenge and the bags continue to be used. In Karnataka and Punjab, a ban has been in place since 2016. The widespread availability of and demand for polythene bags persist. In Arunachal Pradesh and Uttar Pradesh, there is limited awareness about permissible grades of polythene. In Uttarakhand, the use is gradually fading out, experts say, while in Rajasthan awareness campaigns seem to be paying off. Jammu and Kashmir and Maharashtra became the latest states to ban the use of polythene carry bags respectively in January and March 2018. These instances reflect that levels of awareness are on an ascending curve in different states, but at varying levels. According to a 2017 article in

[18]Anisha Bhatia, Plastic ban: What India can learn from other countries (30 October, 2018, 5:45pm) https://swachhindia.ndtv.com/plastic-ban-india-can-learn-countries-6161/.

[19] A new study on plastic bag bans (30 October, 2018, 6:00pm)https://www.reusethisbag.com/articles/where-are-plastic-bags-banned-around-the-world/.

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the journal Environmental Science & Technology, of the world's ten rivers that carry 90 percent of the plastics the oceans receive, three are in India: the Indus, the Ganga and the Brahmaputra. However, this situation is a result of the material flow (legal and illegal) of plastics across national boundaries.

In June, one of the world's strictest plastic bans came into effect in the western Indian state of Maharashtra, of which Mumbai population 18.4 million is the capital. Plastic bags had been banned here before, to little effect. This time, however, thanks to a strong push from a prominent young local politician, the restrictions are far more sweeping. They included bans on the manufacture, sale, and use of throwaway plastic items such as bags, plates, cutlery, straws, and small bottles, as well as new regulations governing retail packaging and Styrofoam. And penalties for manufacturing and selling these items were now higher than ever, including fines of up to $350 and jail terms of up to three months.

Within a week after pleas from plastic manufacturers, milk suppliers, small traders, consumer giants like Pepsi and Coca-Cola, and e-commerce companies like Amazon the government relaxed the rules, exempting small traders and granting more time for bigger players to come up with solutions for retail packaging, including alternative materials and recycling schemes. For now, only plastic bags, takeout containers, plates, and Styrofoam remains forbidden[20].

It's not easy to restrict a material that has become so deeply embedded in the modern economy.

Mumbai's ban is part of a growing global trend restricting the use of plastics, especially plastic bags and other single-use items. But the city's dramatic intervention seems more like a lesson in how not to implement a plastic ban. Restrictions were announced just three months before they were to take effect, there was little publicity before the June 23 deadline, and alternatives were not promoted. The failure to enforce previous bans also made people cynical. Big business didn't even turn up for early meetings of the government committee handling the issue.

As the lobbying, backtracking, and confusion that have beset Mumbai in the past two months shows, it's not easy to restrict a material that has become so deeply embedded in the modern economy. Transitioning to more environmentally suitable alternatives will be a lengthy

[20] AtharParvaiz, Why India passed one of the world toughest anti-plastic laws (31 October, 2018, 8:00pm) https://www.huffingtonpost.com/entry/single-use-plastic-ban-india_us_5b3a09b6e4b0f3c221a28a07.

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process, as per the reports of United Nations Environment Programme, which launched a campaign on plastic pollution last year[21]

Experts say that targeting consumers and retailers for single-use items like bags, cups, and straws is a good place to start, since they are the most visible and ubiquitous plastic waste. But availability of affordable alternatives remains a challenge. Governments thus need to expand their focus to industry, especially consumer goods giants, since packaging accounts for half of the plastic waste in the world, according to UNEP. The European Commission now aims to make all plastic packaging reusable or recyclable by 2030.

Some companies in Maharashtra state have switched to making packaging material that has been exempted from the ban. Still, consumers need to play their part. The world's largest citizen-led beach cleanup at Versova Beach in Mumbai, which helped inspire the Maharashtra plastics ban volunteers have collected some 35 million pounds of waste in weekend cleanups since 2016, and 95 percent of this has been plastic. Pressure mounts to reform our throwaway clothing culture. Maharashtra ban was eased within a week following what sources said was intense lobbying by multinational companies and plastic industry bodies for softer rules and extensions.

The government banned the sale of plastic bottles containing drinking water less under 200 milliliters. It also did not specify a buyback price for empty bottles used for selling beverages other than water, a move that could potentially help soft drink makers.

The latest rules also exempt the use of plastic packaging of medical equipment and drugs.

Plastic could be used for wrapping products by manufacturers, if the material used was thicker than 50 microns, comprised at least 20 percent recyclable material and had the manufacturer's details and buyback price printed on it, the order said[22].

ROLE OF CENTRAL GOVERNMENT

Experts say measures should be tailored to each country's socioeconomic situation sudden bans can be devastating in low-income communities where small businesses operate on tiny margins. The bag ban in India's Maharashtra state has led to the closure of hundreds of small manufacturing firms, the loss of tens of thousands of jobs, and has cost the plastics industry

[21]RajendraJadhav, Indian state softens plastic ban after industry lobbying (31 October, 2018, 8:15pm) https://in.reuters.com/article/us-india-plastic-ban/indian-state-softens-plastic-ban-after-industry-lobbying-idINKBN1JT1H4.

[22] Plastic ban in Maharashtra: What is allowed, what is banned (31 October, 2018, 8:30pm) https://indianexpress.com/article/india/plastic-ban-in-maharashtra-mumbai-from-june-23-what-is-allowed-what-is-banned-all-you-need-to-know-5228307/.

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millions of dollars, according to the All India Plastic Manufacturing Association (Some firms, however, are switching to making packaging material, which has been exempted from the ban.

India's plastic manufacturing sector is small-scale, and being small, they can't afford to change their technology overnight.

For developing countries, waste collection is a big part of the problem. For example, rapid economic growth has increased plastic production and consumption in Asia; annual per capita plastic consumption in India is expected to double to 44 pounds by 2022. This is still far below the 220 pounds-per-year generated by the average American, but waste collection systems in India have failed to keep up with increased consumption. So if India wants to import the Western economic model, then ithas to import the waste systems too. Recycling, on the other hand, is lacking everywhere. Globally, just 9 percent of plastic waste gets recycled, with some European countries coming close to 30 percent. Recycling capacities are low in advanced economies, such as Britain and the U.S., partly because they export their plastic waste, previously to China and now to Southeast Asia.[23]

India has relatively high rates of recycling, thanks to an informal network of impoverished ragpickers. But they do not collect plastic straws, thin plastic bags, other small items because it's not worth their time to accumulate the enormous volumes needed to make up one kilogram of low-quality plastic, which fetches just over a dollar. It's this lightweight, disposable plastic that pollutes India's waterways, wetlands, and roads.

Plastic packaging accounts for nearly half of all plastic waste globally, and much of it is thrown away within just a few minutes of its first use, according to the United Nations.

The union environment ministry is considering a uniform, countrywide legislation to phase out four single-use plastic products styrofoam cups, plastic water bottles, disposable plastic cutlery and all plastic carry bags.[24]

Single-use plastic meant for packaging will not be covered by the legislation, a draft of which is ready with the ministry but is being negotiated internally on various clauses. The ministry

[23]VaishnaviChandrashekhar, In India's largest city, a ban on plastics faces big obstacles (1 November, 2018, 6:00pm) https://e360.yale.edu/features/as-indias-largest-city-shows-banning-plastics-is-easier-said-than-done.
[24]Jayashree Nandi, Environment ministry considers nation-wide ban on 4 single-use plastic products, (1 November, 2018 6:15pm) https://www.hindustantimes.com/india-news/four-plastic-products-may-be-banned/story-rmsu5imwlSdjplP1WjQDeM.html.

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has also written to all states to come up with their own policy or guidelines for immediate phase out of these products.[25]

Prime Minister NarendraModi was recently conferred the "champions of the earth" award by the United Nations Environment Programme for pledging to eliminate all single-use plastic by 2022 and for leading the International Solar Alliance. According to senior environment ministry officials, the plastic industry has been demanding countrywide, uniform rules and not state-specific bans. The definition of single-use plastic is still being worked on, they said, and it appears that about 50% of plastic usage is of the single-use variety.The central legislation may be on the lines of the Maharashtra notification.A punitive clause will be included to ensure strict compliance. The ministry is negotiating with states and institutions to begin phasing out these products in offices. "We have written to all ministries and government departments to voluntarily phase out these four items," the official said.Milk sachets are single-use and form a large part of the plastic waste in India but they will not be included in the phaseout due to lack of sufficient alternatives. On packaged drinking water bottles, the ministry plans to restrict usage in offices and institutions, not by individuals."For now, we are asking people not to use packaged water as a culture. It may not be banned altogether," the official added. Ravi Agarwal, director of Toxics Link, said a phaseout may not have much impact unless it also covers plastic packaging. "We need a packaging legislation.[26]

CONCLUSION

Currently in India, there is only one law that is in place no manufacturer or vendor can use a plastic bag which is below 50 microns as thinner bags pose a major threat to the environment due to its non-disposability. The usage of plastic bags is still high as the ban is not implemented on all plastic bags.

Many big brands and vendors have started charging the customers for the polybags in order to commercially discourage them, but it is so far not been effective as there is no law or guidelines that says shopkeepers should charge money from the customers for the polybag.

[25]Single-use plastics ban in India facing enforcement road bumps and packaging industry backlash, (2 November, 2018, 5:00pm) https://www.foodnavigator-asia.com/Article/2018/07/30/Single-use-plastics-ban-in-India-facing-enforcement-road-bumps-and-packaging-industry-backlash.

[26]Casey Quackenbush, India's NarendraModi vows to ban all single-use plastic by 2022, (3 November, 2018, 8:30pm) http://time.com/5302732/india-ban-single-use-plastic/.

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Though the ban imposed has economically hit the industry very hard and the plastic industry is staring at a loss of Rs 15,000 crore, leaving nearly 3 lakh people jobless overnight,

Several legislations are being worked on but the country has to be prepared for it. States have to be on board. Plastic bags or thin plastic bags have been either partially or fully banned in 22 states. Maharashtra has the strongest legislation. Sikkim is also implementing the ban on plastic bags well. We have seen promising results in Jharkhand and Madhya Pradesh as well. Alternates of plastics are considered but they are not versatile enough to replace necessity like plastic from the market, The health risks of plastic must be weighed against the risks of infections from spoiled food that were common before its sterile hygiene was widely used. And recycling, while ideal, comes with costs of substantial cleaning, water use and manual labour.

If packaging becomes impractical and expensive, it could turn out to be a blessing in disguise. Right now, an item as simple as bread is mass manufactured far away from where it is consumed. It travels huge distances and by the time it actually reaches the consumer, it has lost most of its nutrients. This is one of the reasons preservatives are added to bread.

Now imagine a scenario where packaging isn't easy and cheap.

The need would be to create a self-sufficient neighbourhood where one can get daily use items such as bread close to your home. The local bakery would start getting more clients and more will open up nearby as demand increases. Gradually, people won't mind carrying their cloth bags and metal containers for short distances.

Now let's imagine this scenario for not just bread but many more items such as, pulses, grains, vegetables and even soaps. A city or town will have to change its laws so more goods can be manufactured locally. There is a need for innovation and entrepreneurship, the alternative materials including biodegradable items and biopolymers such as cellulose need to be seen "as part of a broader strategy toward more sustainable production.

Any replacement of plastic is not easy, it would defeat the purpose if we replace plastic with another non-biodegradable substance such as Styrofoam and an organic replacement will have its own set of challenges to overcome. Will it be renewable? What if it encourages deforestation? Will its production be energy intensive? Will it be cheap enough to actually replace plastic? The better idea is to reduce consumption of packaging in itself.

The solution needs to be just like the material we are fighting - resilient and forever relevant.

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