

Plastic Ban-A View from the Civilians Perspective

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Abstract:

A large number of marine as well as terrestrial species are injured and killed by plastic remains which threaten their survival since a lot of species are endangered. The species ingest plastic litter and die. Other less noticeable forms such as plastic pellets are also harmful (Price, Butler, Rogler & Featherston, 1979). This paper deals with the situation when the Maharashtra Government decided to Ban Plastic Bags, water bottles and other disposable plastic items which have thickness less than 50 microns in the state because the State Civic Bodies started facing a huge and serious problems on garbage disposal and its management. It sent many of the peoples to face trouble while buying the products of their daily needy things such as Vegetables, Ration, Grocery, Shopping etc. The Ban came into action on March 23, 2018. The government gave three month time for disposing of the existing stocks, which ended on June 23. The Ban was issued under the name of 'The Maharashtra Plastic and Thermocol Products Notification'. This topic have been picked up because due to the step taken by Maharashtra govt. it affected the people both positively as well as negatively. The ecosystem has been benefitted on a large scale. The amount of pollution created by burning of plastic and the damage caused to the organisms (Aquatic, Terrestrial animals) has been reduced on a great scale.

Key words: Plastic Ban, Government, Civilians.

1. Introduction:

There are many hazards of plastic debris to the wildlife and the nature. The most convenient solution to this would be using polymers that degrade more quickly the environment than the complex polymers. The ductility of the materials decrease due to exposure at different rates. Approximately 98% plastic remained as it is for more than 40 weeks. As some plastic require UV light to get degraded. Compostable plastic degrades relatively faster when compared to Oxo-biodegradable and conventional plastic (O'Brine & Thompson, 2010). The Plastic Bags are made from Non-Renewable sources. Major component from which Plastic is made is known as 'POLYPROPYLENE' which is a compound obtained from Petroleum and Natural Gas. All these materials used in the formation of Plastic are Non-Renewable resources and because of their extraction on such a large scale, Greenhouse Gases are created which further play a major role in the dangerous process known as Global Warming. The total amount of energy required to run a normal Car for about 1000 meter or 0.5 Miles is nearly equal to the energy required to produce Nine Plastic Bags. Besides that the average life span of each and every plastic bag is not more than 13 Minutes. Due to the ban of plastic the environment is benefited on great amount which is good for all Humans, Animals, and Plants and overall to the planet Earth.

The reason behind Plastic Ban is, in 2005 devastating floods occurred in Mumbai, at that time it was found that Plastic bags were the major reason behind the rain water drains were blocked which lead to floods in several areas. Therefore the State Environment Officials took the decision to ban all kind and types of Plastic bags which not only block the drains but also damage the ecology as they are Non-Biodegradable. State Environment Minister Ramdas Kadam stated that 'Besides plastic bags we intend to ban Flex boards, Flags and non-disposable items made from plastic and thermacol such as plates, cups, and spoon'.

According to Environment Department 'Burning of plastic and plastic made materials contribute the most in the formation of Greenhouse Gases which leads to the

Phenomenon of Global Warming Whenever plastic of any kind is burned it releases many toxic chemical gases such as Nitrogen oxides, Sulfur Dioxide, Volatile organic chemicals (VOCs) and polycyclic organic matter (POMs- a solid residue leftover) and Dioxin. If Poly vinyl chloride (PVC) is burnt it releases HCl.

Large plastic items, such as thrown away fishing ropes and nets, can cause obstruction to invertebrates, birds, mammals, and turtles, but marine environment is also contaminated with much smaller microplastic particles. These have been reported at the sea surface and stranded on shorelines, and on the seabed. Micro beads are commonly white or opaque in color, and research has found micro beads to be commonly mistaken for plankton by many surface feeding fish species. (Xanthos, D., & Walker, T. R. (2017). *International policies to reduce plastic marine pollution from single-use plastics (plastic bags and micro beads): a review. Marine pollution bulletin, 118(1-2), 17-26.*) About 70% of plastic waste is a mixture of waste-polybags and plastic pouches usually used to pack food, mainly from residential localities, the CPCB (Central Pollution Control Board) report said. About 10,00,000 lakh seabirds and 100,000 marine mammals die every year all over the world from ingesting plastic or by getting caught in nylon fishing line, nets, and six-pack plastic can holders, and plastic rope, according to estimates which is a huge number.

In May 2012, two Supreme Court judges, Justice Singhvi and Justice Mukhopadhaya, said that “the next generation will be threatened with something more serious than the atom bomb” unless a “total ban on plastic is put in place”.

1.1 Objective of the study

- 1). To put light on the Benefits and Problems caused by the plastic products and the decision taken by the Maharashtra Govt. against it which is called the “Plastic Ban”.
- 2). to understand how the decision affected the shopkeepers and plastic bag manufacturing companies.

2. Literature Review:

The effect of plastic pollution through consumption and entanglement of marine fauna, ranging from zooplankton to cetaceans, seabirds and marine reptiles, are well documented. Adsorption of existing organic pollutants onto plastic and their passage into the tissues and organs through ingestion impacts marine mega fauna and lower trophic-level organisms and their predators. (Eriksen, M., Lebreton, L. C., Carson, H. S., Thiel, M., Moore, C. J., Borerro, J. C., ... & Reisser, J. (2014). *Plastic pollution in the world's oceans: more than 5 trillion plastic pieces weighing over 250,000 tons afloat at sea. PloS one, 9(12), e111913.*)

The Plastic ban covers plastic bags, disposable cups and plates, plastic cutlery, non-oven polypropylene bags, plastic pouches and packaging, and thermocol. The ban has defined ‘PLASTIC’ as a material which contains as an essential ingredient a high polymer such as Polyethylene Terephthalate, High density Polyethylene, Polystyrene resins, Polystyrene (Thermocol), Multilayered co-extruder, Poly propylene, Poly terephthalate, Poly amide, Poly methyl methacrylate, Plastic micro beads etc. All these are the basic ingredients with which Plastic is made. The composition of these ingredients may change or differ according to type and quality of the plastic material to be made. All these compounds when burned convert into more complex and harmful compounds.

Chemical compounds by which plastic is made were characterized on different types of plastic items and beached pellets, using a screening test known as GC-MS method. A huge diversity of plastic related products, such as building blocks, antioxidants, additives and degradation products, were identified with the diverse environmental pollutants and biofilm compounds. A declared method for the analysis of PAHs (Polycyclic aromatic hydrocarbons) and PCBs (Polychlorinated Biphenyls) on beached

pellets at the Belgian Coast. The wide variety of plastic compounds were regained in the general screening showed the role of plastic as a potential source of contaminants and their degradative products (Gauquie, J., Devriese, L., Robbens, J., & De Witte, B. (2015). *A qualitative screening and quantitative measurement of organic contaminants on different types of marine plastic debris. Chemosphere, 138, 348-356.*)

The ban has restricted the state of Maharashtra from Manufacturing, Distributing, Transport, Usage, Wholesale and Retail sale and Storage of Plastic made products which are as follows Plastic Bags, Disposable plastic items like Spoons, Forks, Cups, Glasses, Containers, Disposable Thermacol items like Plates, Glasses, Containers, Plastic pouches for storing Liquid, Plastic wrap used for packaging or storing products, Non-Woven polypropylene bags.

The Maharashtra Government have exempted the following materials from plastic ban which are Plastic used for packaging of Medicines, different Materials used for Plant Nurseries, Horticulture, Agriculture, Handling of solid waste, Wrap material used at the manufacturing stage, Milk bags and Water bottles, All PET bottle Manufacturers.

The ban is applicable for each and every person living in Maharashtra which includes Government and non-government organizations, Educational Institution, Sports Complex, Clubs, Cinema Halls and Theaters, Marriage/Celebration Halls, Industrial Units, Pilgrimages and Religious Places, Hotels, Dhabas, Tourist Places, Forest and Reserved Forest, Eco-sensitive areas, All Sea Beaches, Railway Stations, Bus Stops etc.

Alternatives for Plastic Bags and their Problems are Aluminium Foil and Aluminium Press is harmful for environment it is sometimes non-recyclable, Cloth Bags cannot be decomposed and they remain buried undecomposed for many years Animals will die if they Eat it, Plants would not be able to grow, paper bags which are made from Trees, Forest will be cut down which would lead to cutting of trees on a large number just to meet the need of plastic bag.

The In charge committee of the ban are Municipal Commissioners and Deputy Municipal Commissioner, Shops and Establishment Officers and Inspectors, Health Inspector and Health Officer, Maharashtra Pollution Control Board (MPCB), Maharashtra Tourism Development Corporation, State Tax Officials, Range Forest Officers.

Fine for violating the ban is Rs.5, 000 for the first time and Rs.10, 000 for second time and Rs.25, 000 for the third time offence and/or a Three-Month Imprisonment. Many shopkeepers and people were caught while carrying Plastic bags with them. A detailed receipt consisting of their name, address and other necessary details were taken and then fine was charged. The In charge committee made many raids on shops they got information of keeping plastic bags.

Effects of plastic ban on Indian economy is as follows the decision of plastic ban in the state of Maharashtra is expected to incur to a GST loss of Rs.800 crore, as stated by the All India Plastics Manufacturers Association (AIPMA). With Maharashtra producing plastic products worth Rs.50, 000 crore, the ban mostly affects SME (Small to Medium Enterprise). About 2150 industrial units may be closed down due to the ban. The banned products alone would be about Rs.15, 000 crore. The All India Plastic Manufacturers Association claimed the industry employed about 3 lakh people in the state, which means about 3 lakh people would become Jobless. Many units of Grains, Bakery and Clothing industries are on the border of closure in absence of basic packaging material. More than 6, 80,000 readymade garment materials for export are kept at the docks on account of non-availability of transparent plastic bags for packing at Mumbai Docks. Maharashtra is the only state where there is ban on PET bottles (Polyethylene terephthalate). Industry insiders have said that the job losses from the ban is going to impact the Maharashtra state's GDP, and also increase banks' bad loans from the plastic sector industries.

2.1 An analysis of the current situation

The current situation shows that not a single person is carrying a Plastic bag with Him/Her. People are afraid that if they get caught by the government officers they would have to pay fine. The Shopkeepers are also afraid to give Plastic Bags because if a person is caught with a plastic bag of the Shop the Person carrying it would have to pay a fine of Rs.5, 000 and the Shopkeeper would have to pay a fine of Rs.10, 000. Therefore everyone is using a Paper Bag, Cloth Bag and any other source for carrying their daily materials. There are many peoples who burned the plastic bags which were stored at their respective houses.

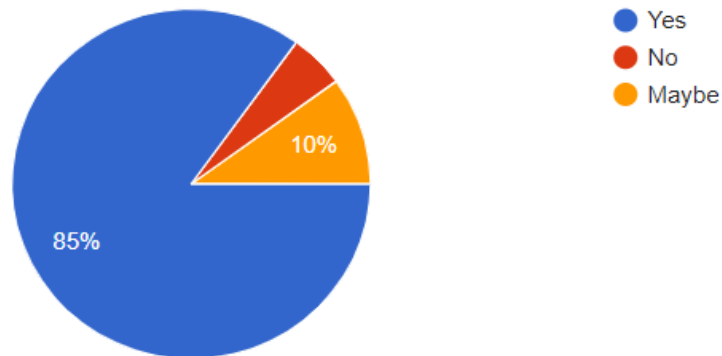
3. Research Methodology:

The main source of data was the research papers published by different Experienced Researchers upon Plastic and its harmful effects caused to the environment due to their pollution. Another source of data was Environment related books. The data sources for the information related to Plastic ban was taken from Various Articles and News Papers. The Research Instrument for collecting how aware the Public is Aware was taken through questionnaire of about 10 questions related to Plastic Ban such as was it useful and what problems they faced during the Ban period.

4. Analysis and Findings:

1. Was the decision to ban plastic bags useful?

20 responses



ANALYSIS: According to the data collected 85% people say that the decision to Ban plastic was useful and very much beneficial to the environment. A few people said that the Ban was not useful as it caused them problems for carrying daily needy things. And a few were not sure the Ban was useful or not.

2. What problems did you faced in your daily routine?

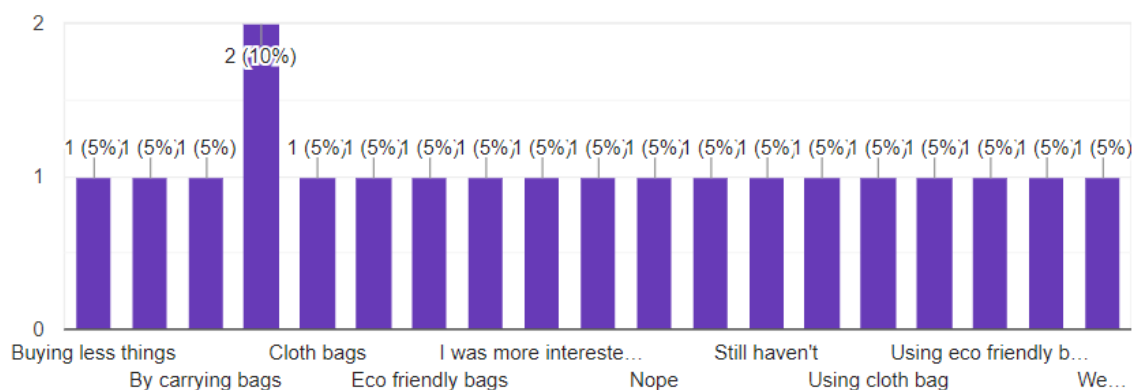
20 responses



ANALYSIS: According to the data presented above it shows that the people faced a number of problems such as it caused them problem in carrying their daily needy things such as vegetables, fruits, Ration etc. Some said that the cloth bags were costly and even if they don't want it they had to buy it.

3. How did you overcame this situation?

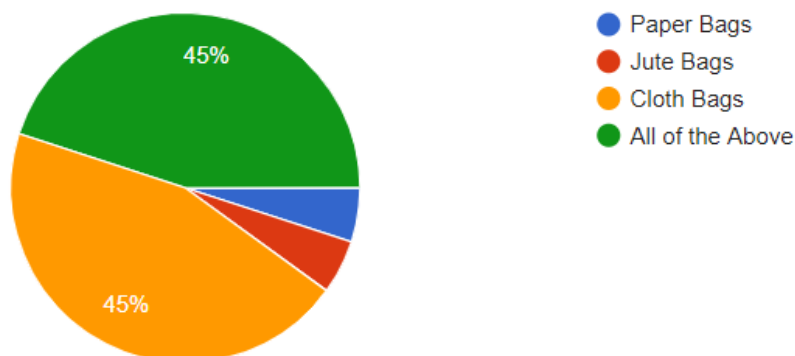
20 responses



ANALYSIS: To overcome this situation many people started using cloth bags and other eco-friendly bags such as Paper bags and Jute bags. But most of them used Cloth bags as it was easily available and was able to be used several times.

4. What was your substitute to plastic bag?

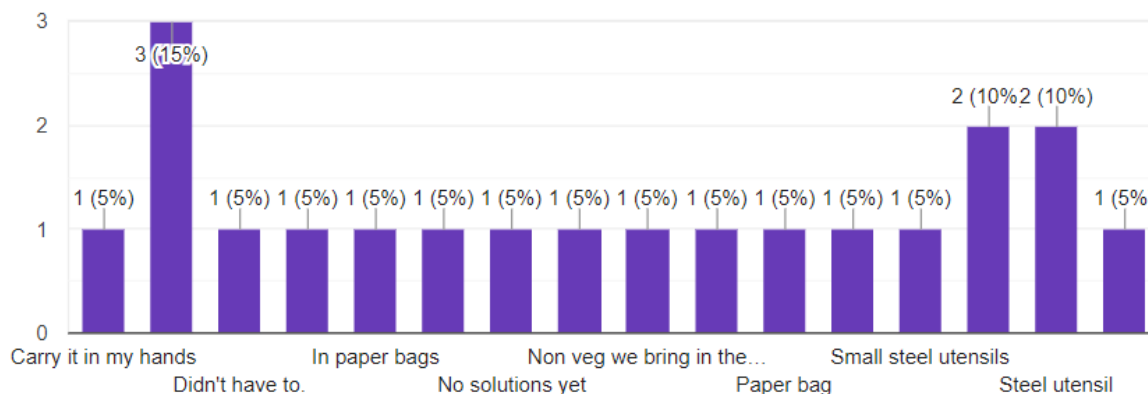
20 responses



ANALYSIS: According to the recorded data the people preferred cloth bags more than the paper and jute bags. All the Super stores and Shopping complexes kept cloth bags. A very few people used paper bags as it was not that durable as compared to cloth bags.

5. How do you bring non veg items, milk curd from shops?

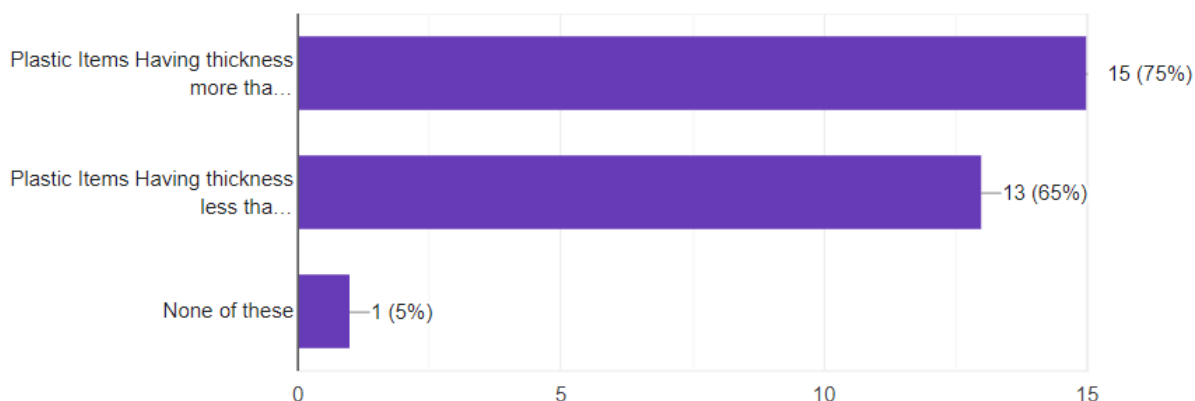
20 responses



ANALYSIS: For Bringing and carrying Non-Veg items, milk, curd etc. people mostly used smallsteel utensils and sometimes paper bags were used. Steel utensils were the best option to carry Non-Veg and Curd as they used to stick the paper bags and it was not a good option.

6. Which plastic items are banned? And which are allowed?

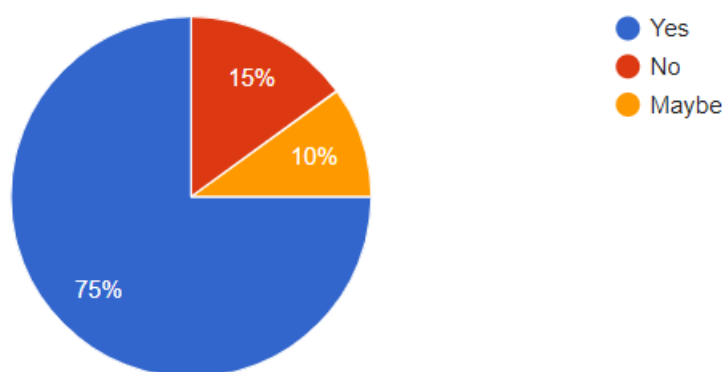
20 responses



ANALYSIS: When asked about what kind of plastic items were not banned most of the people knew that the plastic having thickness more than 50 microns was not banned and Plastic items having thickness less than 50 microns was banned.

7. Do you think the step taken by Maharashtra govt. is helpful?

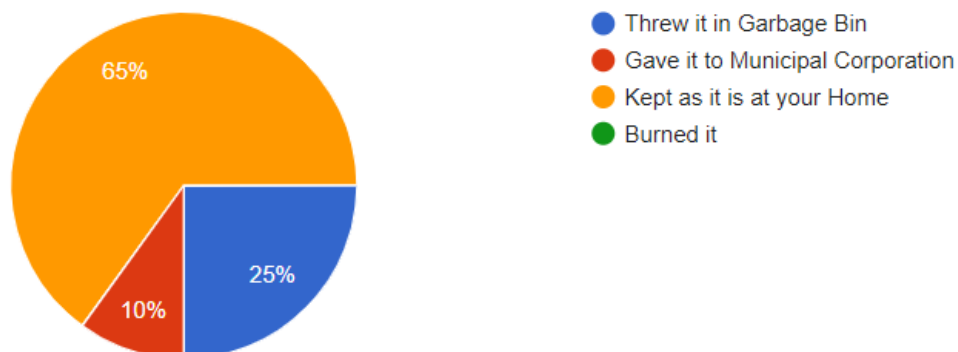
20 responses



ANALYSIS: Almost 75% of the people think that the decision to ban plastic bags by Maharashtra Govt. is helpful as it reduces the pollution and the harm caused by them to the environment will also reduce and in future the this Decision will be appreciated.

8. What did you do with plastic bags kept at your home?

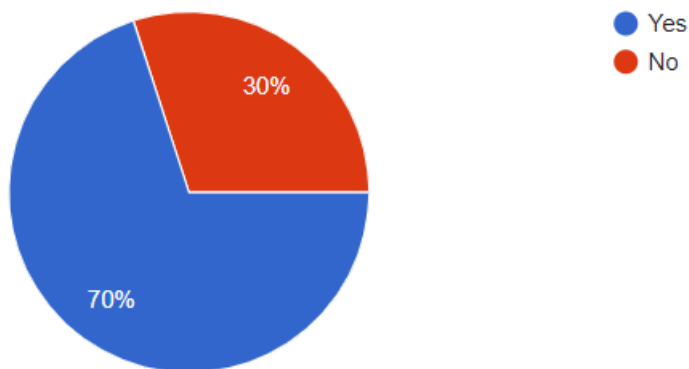
20 responses



ANALYSIS: When the question was asked that what they did with the plastic bags kept at their home many of them said that they kept it as it is at their homes, some threw the bags in the garbage bin and a very few people gave it to the Municipal Corporation.

9. Are you aware of the circumstances you face if you are caught carrying plastic bag?

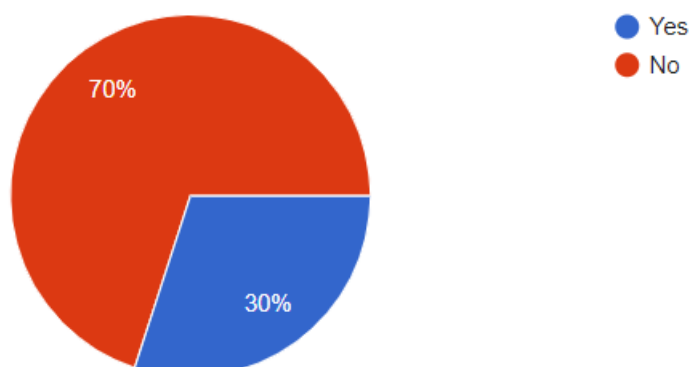
20 responses



ANALYSIS: According to the above collected data nearly 70% people know what circumstance they would face if they are caught while carrying Plastic bags with them for the 1st, 2nd and 3rd time. Around 30% people are not aware about the circumstances they would face if they are caught while carrying or selling plastic bags. So it is clear that few people still need to get aware of the rules and regulations.

10. Do you know who are In-charge committee of Ban?

20 responses



ANALYSIS: According to survey most of the people about 70% know the In-charge committee of the ban it means that many people are aware and took the ban positively and supported it. A very few people don't know the In-charge committee of the ban.

Therefore it can be concluded that the decision taken by the Maharashtra Govt. was a success and was supported by the people, which will reduce the pollution and will be very helpful for the Environment.

5. Conclusion

As a result of Plastic Ban the Pollution on Land, Water and Natural Habitats has started to reduce. This is a long procedure the benefits would not be seen quickly but as the time passes all the people would be satisfied and would properly understand that why the Government banned Plastic. As people are also getting the knowledge about the harmful effects of plastic they started supporting the Maharashtra government. Looking at the powerful decision of Maharashtra Government other states are also thinking to apply the plastic ban law in their states. In India, the use of plastic bags had been banned in the following states Bengaluru, Maharashtra, Delhi, Punjab, Rajasthan, Goa, and West Bengal. Currently in India states like Jammu and Kashmir, many vendors have not heard of the three-month-old ban. In Karnataka and Punjab, where the ban is active since 2016, it still remains ineffective in many parts, as there is enormous availability of and demand for polythene bags.

While In Arunachal Pradesh and Uttar Pradesh, there is a confusion regarding permissible grades of polythene. In Uttarakhand, the use of polythene is "gradually fading out", experts said, while in Rajasthan, awareness campaigns seem to be paying off.

States like Jammu & Kashmir and Maharashtra became the latest states to ban the use and production of polythene carry bags—in January and March 2018, respectively.

5.1 Limitations of the study

Lack of research study on Plastic Ban in Maharashtra and other countries where plastic ban took place, the information available was less and not much.

While taking the survey less number of people gave their responses and many of them ignored the survey so the number of responses was not much.

6. Bibliography

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