

Report- Perception survey on Plastic Use and Management

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Perception Survey Report

'Rethink Plastic' Campaign

Promotion of Counter Measures against Marine Plastic Litter in Southeast Asia and India

Submitted to

United Nations Environment Programme (UNEP)



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Perception survey on Plastic use and Management

As part of the TERI - UNEP 'Rethink Plastic' Campaign, which is part of the UNEP 'Counter Measures' project; TERI is conducting a perception survey on 'plastic use and management'. The survey attempts to get an insight of people's perception about use of plastic in daily lives, management of plastic waste at household level and awareness about the impacts of plastic pollution, and alternatives to plastic. More than 865 individuals responded to the survey through online and offline modes.

1. Methodology

The surveys were conducted through online mode using Google Forms (<https://drive.google.com/open?id=1A-VksO-GT6tZGDOF2cBr90GrTp83wohCPfyAiWyNDbM>) and through face to face interaction with respondents. The face to face interactions were done with the help of volunteers from national Service Scheme (NSS) Units of various colleges in Mumbai. So far over 865 responses have been received through online and surveys conducted in person.

Highlights from the responses received are presented below

➤ Demographics of respondents

Majority respondents belong to:

- a. **Age group:** 20 -29 years (45%)
- b. **Gender:** Female (52%)
- c. **Education:** Graduate (68%)

2. Summary of Results

- 97% respondents believe that plastic is a problem for health and environment
- 80% respondents perceive that plastic can be recycled
- 85% respondents prefer cloth bags over paper and plastic bags for shopping
- 76% respondents perceive that charging a price for plastic bags would be effective in reducing the usage of plastic carry bags
- 56% respondents reported that they practice segregation of biodegradable and non-biodegradable wastes
- 60% respondents are aware about micro plastics and their impacts

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3. Perception of Respondents

4.1 Use of plastic products

- 97% respondents perceive that plastic waste is a concern for human health and environment. These impacts as perceived by the respondents are summarized in the graph below:

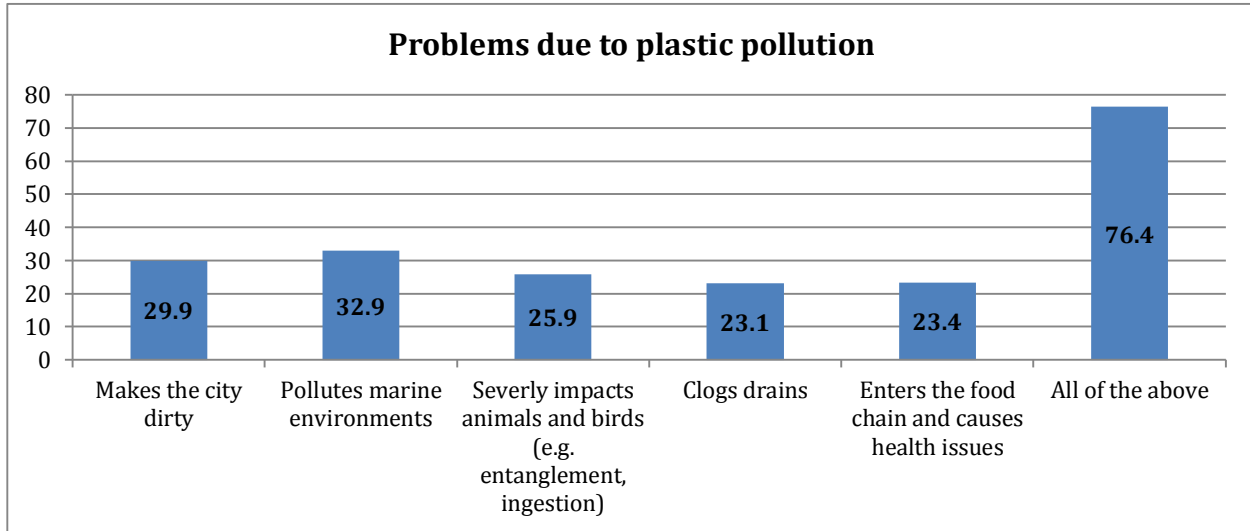


Figure 1 Problems due to plastic pollution

- Despite being aware about the severe impacts of plastics on human health and environment, reasons for preferring plastic products are their cheap cost, light weight, durability, easy availability and lack of alternative materials.
- The most commonly used plastic products are bottles, storage containers, carry bags and packaging materials (Figure 2).

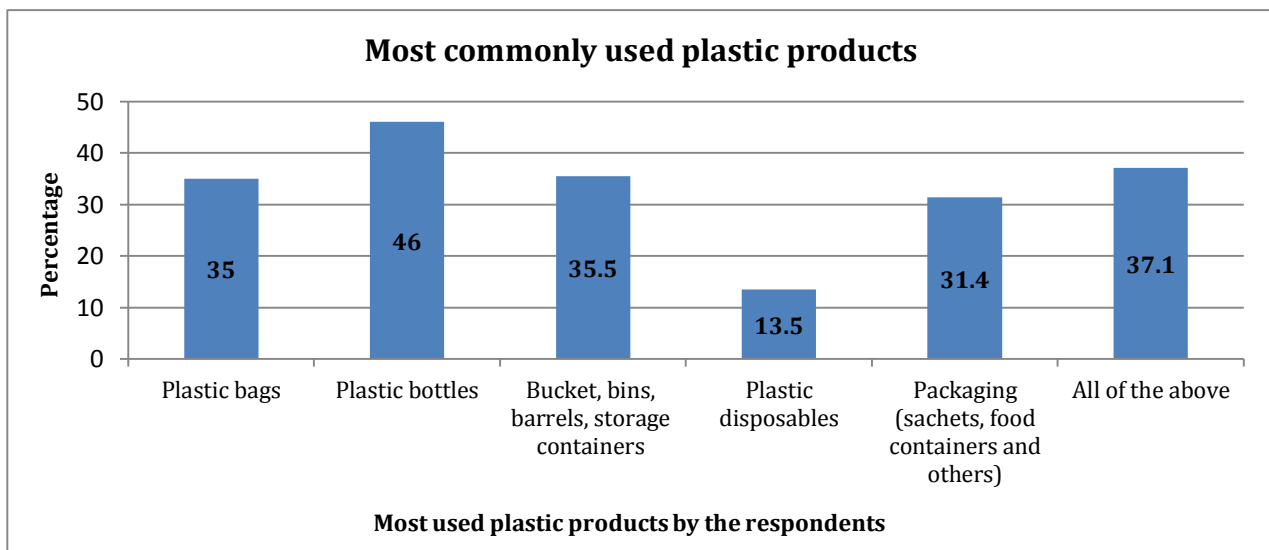


Figure 2 Most commonly used plastic products

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4.2 Plastic Waste Management in locality and city

The respondents were asked to rate plastic pollution in their locality and city respectively, on a scale of 0 – 5 (0- highly polluted with plastic, 5- plastic waste is well managed).

Figure 3 Perception of plastic waste management in Localities

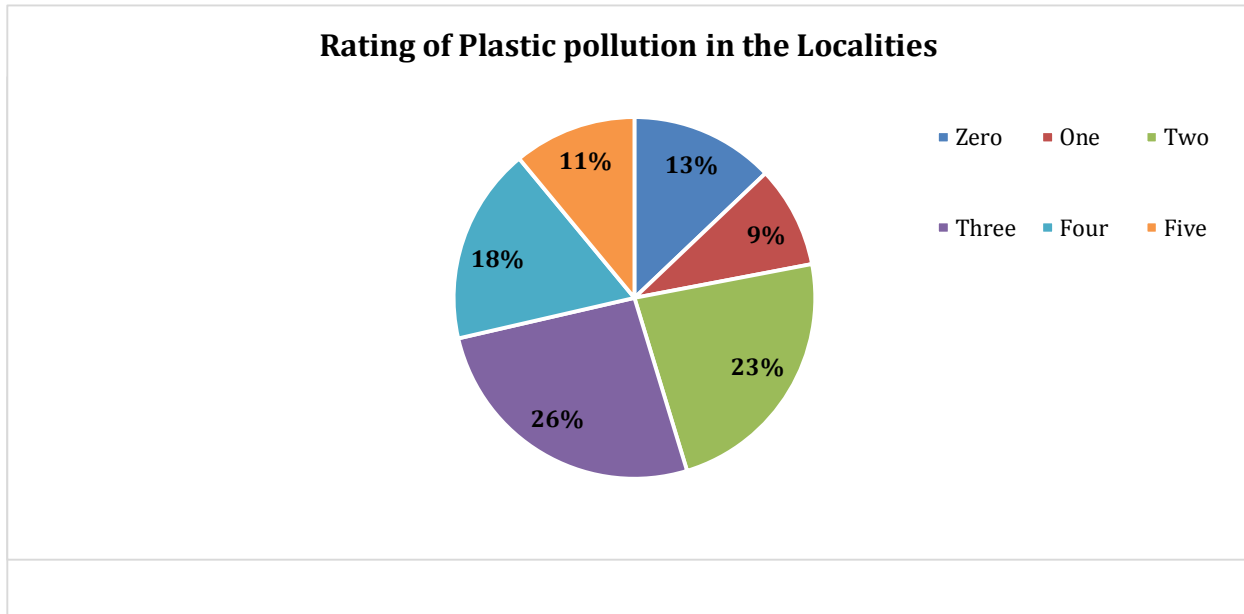


Figure 4 Perception of plastic waste management in Cities

4.3 Plastic Waste Management at Household level

- 56% respondents segregate biodegradable and non-biodegradable waste at household level, 31% are aware about segregation but do not practice it, while 13% are not aware about the concept of waste segregation.

More than half the respondents practice waste segregation at home. This can be considered a positive outcome of initiatives like Swachha Bharat Mission and also because of media highlighting environmental issues like plastic pollution and proper waste management. More such initiatives and awareness campaigns should be promoted. In order to encourage other citizens to also follow waste segregation at home, incentives may be provided to citizens/ housing complexes practicing segregation

- 47% respondents dispose plastic waste in municipal corporation waste bins while 46% hand it over to waste collectors. It is noteworthy that disposal of plastic waste by burning and open dumping is practiced only by 2% and 6% respondents respectively.
- 80% respondents believe that plastic waste can be recycled.

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- However, recycling at society level needs to be promoted. Only 31% respondents reported that their societies or housing complexes tie up with waste recyclers to recycle plastic waste (Figure 5).

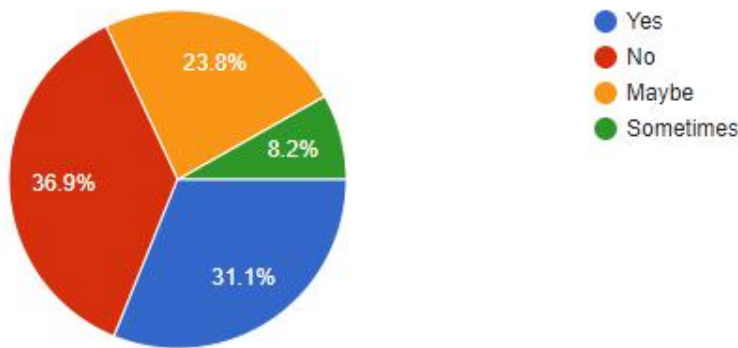


Figure 5 Tie up of Societies with recyclers for recycling plastic waste

This suggests that housing societies should be encouraged to tie-up with local waste recyclers who could collect recyclable waste from the societies at monthly/ fortnightly basis depending on the amount of waste being generated. For this, the municipal authorities should encourage the housing societies and also provide them with list of registered recyclers in their vicinity. This would also promote waste segregation.

- 66% respondents reuse plastic carry bags (Figure 6). The common purposes for reusing plastic carry bags are as bin liners, to store materials that may leak or as a carry bag.
- 60% respondents reuse plastic bags 1 to 5 times while 40% respondents reported that they reuse plastic bags till the end of its life.

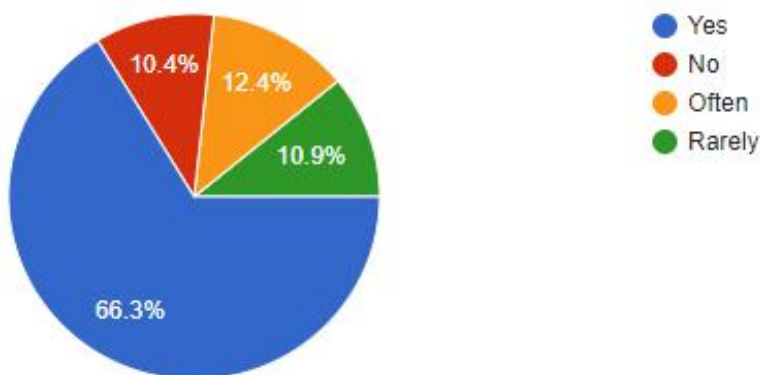


Figure 6 Reuse of plastic carry bags by respondents

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- 48% respondents generate less than 10 disposable items per month, and 43% respondents generate less than 50 disposable items per month.
This suggests limited use of single use plastic items at household level. The most **common use of single use plastics at household levels is as bin liners**. Thus, convenient and affordable alternatives for the same need to be promoted.
- The main reasons for not reusing plastic carry bags were that respondents found disposing easier and better than reuse (42%), lack of awareness about reuse (40%) and lack of concern about such issues (16%).

4.4 Use of plastic carry bags

- 85% respondents prefer cloth bags over paper and plastic bags for shopping.
- Paper bags are not as much preferred as cloth bags as they are less durable and unsuitable for carrying heavy and liquid products.

Greater preference for cloth carry bags would gradually help reduce the dependence on plastic bags. Also, to ensure sustainability of cloth bags, reuse of old cloths for making these bags should be promoted. Encouraging cloth bag making by rural/ tribal women would also help in employment/ livelihood generation.

- 76% respondents perceive that charging a price on plastic carry bags is a good way to reduce their usage and encourage people to carry their own bags and switch to alternatives.
- 66% respondents carry their own shopping bags. This suggests a positive behavior of respondents and also effectiveness of ban on plastic bags and making carry bags available for a price by the shop keepers.
- 50% respondents refuse taking plastic carry bags from shopkeepers when they have alternate bags with them while 33% respondents always ask the shop keeper for a cloth/ paper bag.
- The most common reason for not carrying own carry bag was that people usually forgot to take one while leaving to shop (69%) (Figure 7).

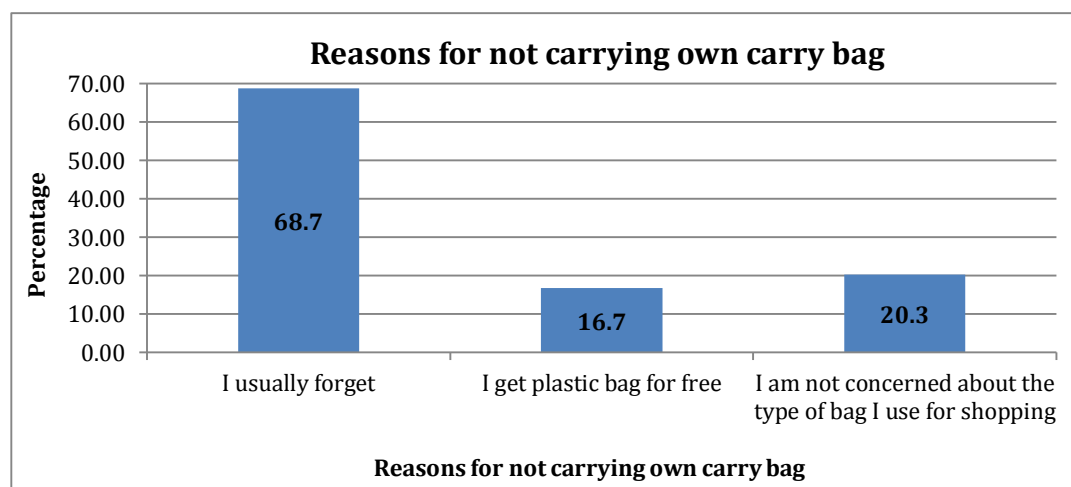


Figure 7 Reasons for not carrying own carry bag

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4.5 Awareness about Plastic Pollution

- 44% respondents are not aware about **initiatives against plastic pollution** being organized in the city by municipalities, central government and NGOs. Some of the initiatives that people are aware of are: Swachha Bharat Mission, recycling of bottles by Bisleri and Adidas, ban on single use plastic in the city and others.
- Only 30% respondents are aware about the approximate amount of plastic waste generated in the city. Greater awareness about the same is important to sensitize the citizens about the magnitude of the waste being generated in order to encourage citizens to bring about behavioral changes not only to reduce waste generation at household levels but also to effectively manage the waste.
- 60% respondents are aware about micro plastics and their impacts on health and environment
- Only 34% respondents are aware about **Bisphenol A (BPA)** and its impacts and only 18% respondents practice checking for BPA free label on products before purchasing.

- Bisphenol A (BPA) is a chemical use in polycarbonate plastics and epoxy resins. It is used to make plastics more durable¹.
- Polycarbonate plastics are used for making food and beverage containers and water bottles and epoxy resins are used to coat metal cans for storing packed food, to make the cans anti corrosive and sturdy.
- BPA is also present in compact discs, medical equipment and dental sealants¹.
- Plastic items having recycling numbers 3, 7 or the letters "PC" also usually contain BPA.
- BPA is known to cause endocrine disorders, infertility, breast and prostate cancer and polycystic ovary syndrome (PCOS).
- Information about BPA and its health impacts needs to be disseminated among the citizens to raise awareness and promote the use of BPA free products.

- The main sources of information about plastic pollution are **social media** followed by **electronic and print media** (Figure 8). Thus, there is a need to monitor the kind of information that is circulated on social media. No misleading facts should be circulated while more posts for sensitization and bringing about behavioral change should be circulated. The municipal authorities should also emphasize on reaching out to citizens through various social media platforms.

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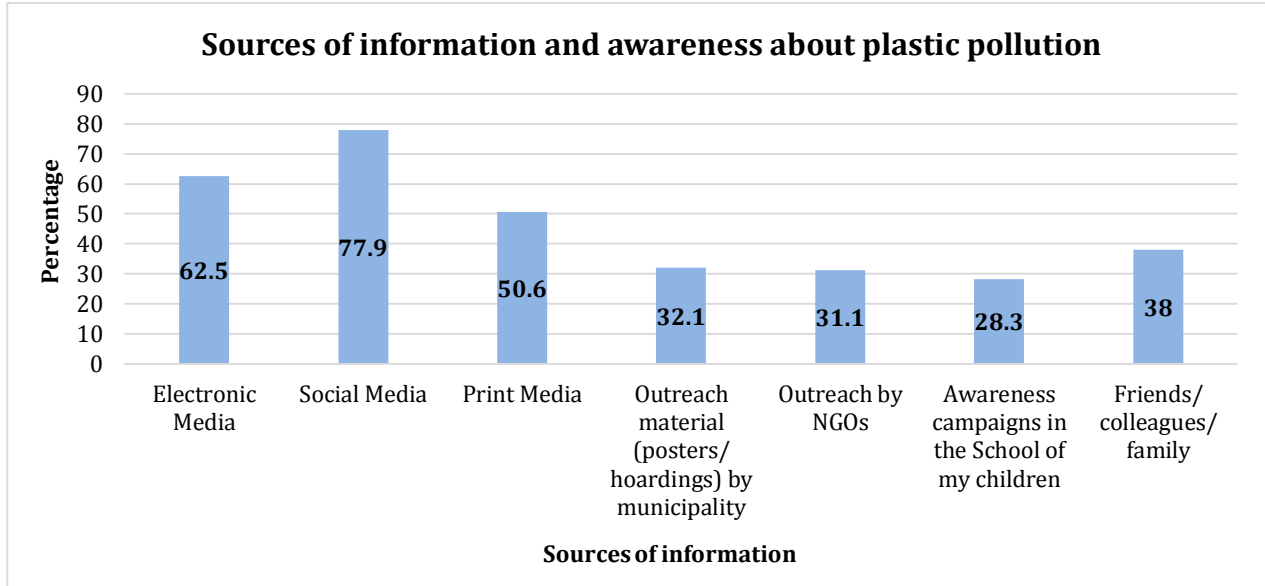


Figure 8 Sources of information and awareness about plastic pollution

4.6 Alternatives to plastics

- Cloth bags and paper bags are the most common alternatives to plastics used by the citizens, followed by metal crockery (Figure 9). Some other alternatives used by respondents include shampoo bars with minimal packaging, ink pens and glass containers.
- Key reasons why people are not switching over to alternatives for plastics are lack of easy availability (54%), high cost (43%), lack of awareness about alternatives (27%) and other properties of plastics like durability, light weight and leak proofing.

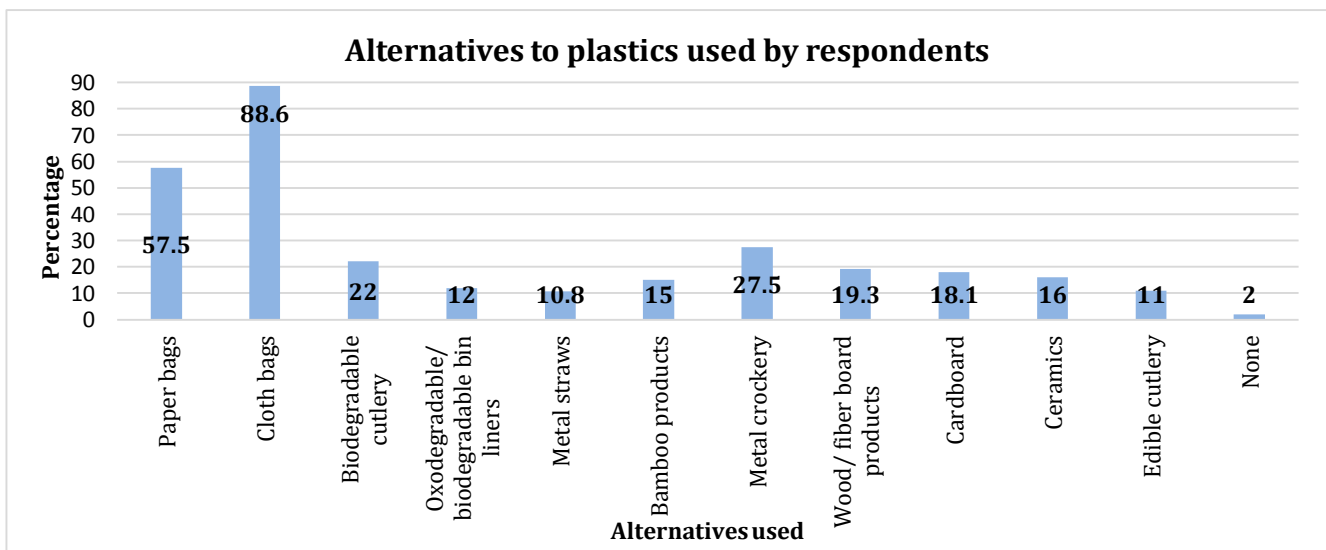


Figure 9 Alternatives to plastics used by respondents

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4.7 Suggestions for better plastic waste management by respondents

49% respondents believe that individual actions and efforts are the most effective way to manage plastic pollution in the city while 36% believe that only government regulations can help tackle plastic pollution. Other suggestions include:

1. Action oriented campaigns by NGOs.
2. Educating people in various localities and societies and thus motivating everyone to contribute in managing plastic pollution and encouraging public participation in initiatives against plastic.
3. Collective efforts by the government, NGOs and citizens. Policies and campaigns based on bringing about behavioral change is the key step to manage plastic pollution.
4. Ample Research & Development for alternatives in order to ensure long term sustainability and minimal environmental impact.
5. Imposing heavy fines on single use plastic
6. Need for housing societies to tie-up with plastic recyclers in the vicinity to promote proper segregation and management of plastic waste. The municipal authorities should facilitate this process by making residents aware about the recyclers in their vicinity and incentivizing such initiatives.