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Understanding the Scenario of Single Use Plastic in the State of Goa

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Abstract

The global consumption of plastic is likely to be about 300 million tonnes per year in 2022. Eight million tonnes of which is micro plastics in oceans. Majority of this plastic waste is from Single-Use-Plastics (SUPs). This happens mainly due to the sharp rise in the 'throw-away' culture of SUPs. Unfortunately, about 30% of plastics gets recycled. This work aimed at understanding the current scenario of awareness as well as steps taken towards fighting SUP in the state of Goa. Through this survey-based study we realised that, although there is awareness about plastic at large, not many understand the concept of SUP. 97% realise the harmful effects of plastic use, 88% believe the use of plastic needs to be minimised. However only about half of the surveyed individuals make efforts to reduce the use of plastic.

Keywords: SUP, single use plastic, plastic, non-degradable, environment.

Introduction

Since the 1950s, the production of plastic has outpaced that of almost every other material (Giacoveli, 2018). The world is creating more single-use plastic waste than ever, said a recent article published in February 2023. While making efforts to fight plastic pollution, we realise that single use plastic could be the bigger monster. Every day, the equivalent of 2,000 garbage trucks full of plastic are dumped into the world's oceans, rivers, and lakes. Plastics in the marine environment are of increasing concern because of their persistence and effects on

the oceans, wildlife, and potentially, humans (Jenna R. Jambeck et al., 2014). Plastic pollution can alter habitats and natural processes, reducing ecosystems' ability to adapt to climate change, directly affecting millions of people's livelihoods, food production capabilities and social well-being. (www.unep.org/plastic-pollution). SUPs: Single use plastics, designed for the current "throw-away society," are intended to be used just once. (Chen et al, 2021). The production and use of these SUPs is global, particularly as packing of consumables, sachets of sauces/ shampoos, mineral water bottles, carry bags, spoons, straws etc.

The current study aims at understanding the scenario of Single use plastic waste in Goa. While Goa is doing a good enough job in managing the general and plastic waste, we attempted reviewing the knowledge and awareness of the common man with regards to single use plastics.

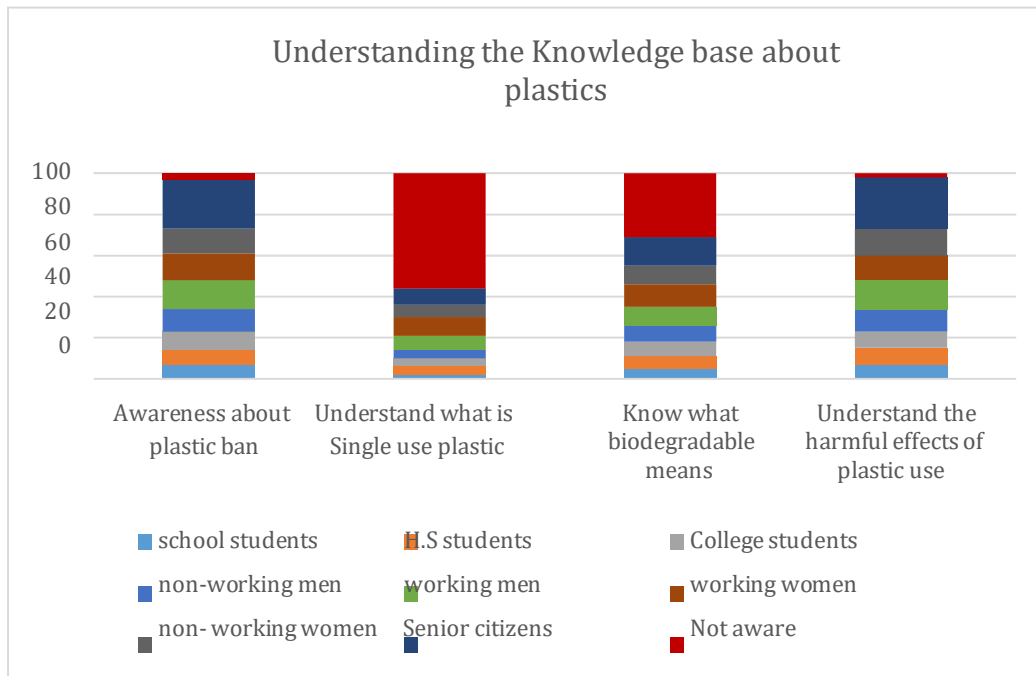
Methodology

In this study, an attempt was made to understand the use of plastic, mainly single use plastic in Goa. The use, in various ways and forms. The focus was mainly on single use plastic, like plastic bags, water bottles, single use plastic spoons etc. Data collection was carried out by an online survey method. Survey is a prevalent mode of gauging the opinion of people on any given topic. (Lau, 2017). The survey was carried out using Google forms, as the surveying tool. Google forms was selected due to its user-friendly nature. It was ensured that the participants selected were from different age groups as well as had different exposure. 25% of the participants were students, 25% were women (working and homemakers), 25% were men (working and non-working) and 25% were senior citizens. The participants answered a series of questions that helped us apprehend their understanding and usage of single use plastic.

Results and Discussion: Numerous efforts with regards to anti plastic campaigns, policies, plastic ban have been taken up by the concerned authorities. Also with the immense pool of information available over the net, people seemed to be aware about the plastic menace. The results of our survey, as seen in Fig. 1, showed that 96% of the participants were aware about plastic and the plastic ban. A small amount of 4% comprising of school students and senior citizens were unaware about the same. Also, 98% understood the harmful effects of plastic. However only about 44% knew what Single-Use-Plastic was. 56% did not realise what it meant or what its harmful effects were. 68% of the participants were aware, that plastic is a non- biodegradable entity. They were mindful that paper, cloth etc. are biodegradable.

Figure 1

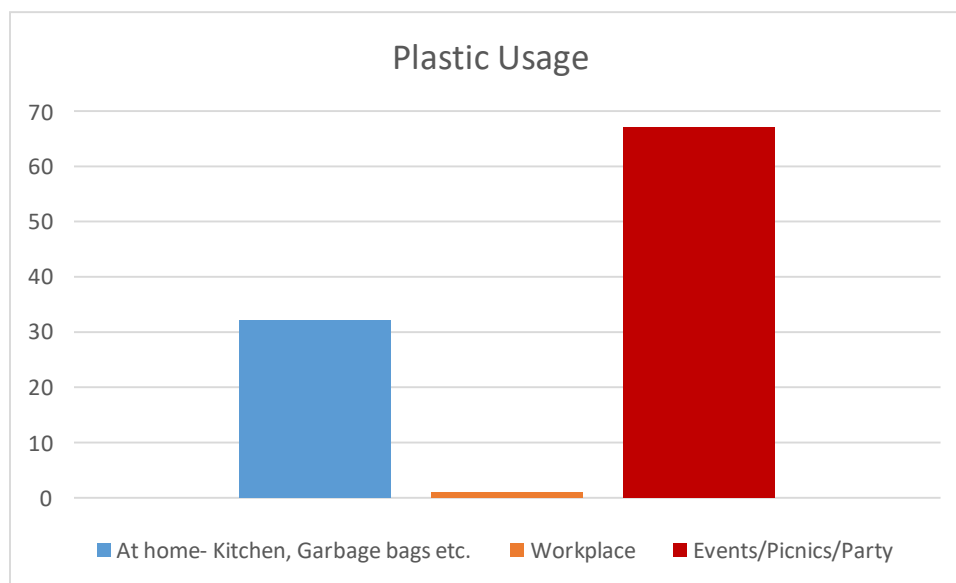
Graph Denoting the Understanding the Knowledge Base about Plastics Across Different Categories of Survey Participants



Although a huge majority was cognizant about the harmful effects of plastic to the environment, participants shared that in certain cases they still used plastic. As seen in Fig. 2, maximum use of plastic was done at functions/events/picnics in the form of disposable items like plastic spoons, straws, cups, plates, bags etc. Following that was use of plastic in the kitchen, mainly for storage (like use of cling film etc.) 40% homes use cling films for storage and 71% of household showed usage of garbage bags. However, some houses used Oxo degradable plastic bags. Least use of plastic was seen at the workplace.

Figure 2

Plastic Usage by Participants



Upon realising that participants are educated about harmful effects and biodegradable entities, we made an attempt to understand what interventions and actions are taken by the common man to reduce this. As seen in Fig. 3, it was observed that about 69% carry their own re-

usable (mostly cloth) bag while going for shopping. 61% of those who do not carry a re-usable bag, however specified, that they do re-use the plastic bag and do not treat it as SUP. 87% carried their own water bottles to school, workplace etc. However, 52% of these people carried re-usable plastic water bottles. Despite of all the awareness created, 34% of people, still used plastic straws. With regards to online food orders, 49% of participants informed that they do not order food online. This included mainly school students and senior citizens. Of the 51% that ordered online food, 20% made sure, they selected the option of ‘no cutlery’.

Figure 3

Steps Taken to Reduce Plastic Usage



Conclusion

The survey made us realise that there is a good amount of awareness amongst participants of all age groups about the ill effects of plastic. However, not many made efforts to reduce the plastic usage. Steps need to be taken for dipping the use of SUPs, shifting buyer behaviour,

refining SUP waste assemblage and reprocessing. (Chen et al, 2021). The need of the hour is to completely eradicate plastic and to go green. Nevertheless, certain percentage of people do realise the significance and are moving towards having a sustainable approach towards the environment.

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