

How Can the Waste Problem in India be Solved by Prompting Changes in Behavioural Patterns of Individuals and Society?

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Abstract:- The problem of waste accumulation and management has become a rising concern for India. This research paper analyses how the waste problem in India can be solved by prompting changes in the behavioural patterns of individuals and the society, with a special emphasis on Municipal Solid Waste (MSW). By analysing the current situation of the waste management policies and strategies in India, and people's understanding of both, the paper has compiled information that can change the waste management system of India. The paper delineates methods of behavioural nudges and structural changes in accordance with behavioural insights, through which India has a high plausibility of seeing a shift towards pro-environment behaviour in its citizens.

Keywords:- Waste Management, Neuroeconomics, Municipal Solid Waste, Policymaking.

I. INTRODUCTION

Microeconomics is the social science that studies the implications of human action, specifically about how those decisions affect the utilization and distribution of scarce resources. Microeconomics mainly focuses on factors that affect individual choices, the effect of a change in the factors, how the choices of an individual decision maker are coordinated in a market, and how prices and demand are determined in individual markets. Some issues that microeconomics encompasses are how households reach decisions about consumption and savings, how firms set a price for their output, whether privatisation improves efficiency, whether a particular market has enough competition in it and how the market for labour works.

Within Microeconomics, behavioural economics is the study that attempts to understand the effect of individual psychological processes, including emotions, norms and habits on individual decision-making in a variety of economic contexts. Behavioural economics has a huge scope in changing how many things and systems work. Applying Behavioural Economics to policy making has the potential to transform how we design and implement effective policies in society. This paper will primarily focus on how to use Behavioural Economics as a tool towards efficient waste management and reduction.

The world generates 2.01 billion tonnes of municipal solid waste annually, 33 percent of which is not managed in an environmentally safe manner. Moreover, global waste is expected to grow to 3.40 billion tonnes by 2050, more than double population growth over the same period. Municipal solid waste - household and some commercial waste, is the most common type of waste found and has the most scope for rapid reduction. The reduction can be achieved with a change in our lifestyles and government policies. Now, when we talk about India specifically, biodegradable portion dominates MSW, with 50% of it being biodegradable, as shown in Fig 1.

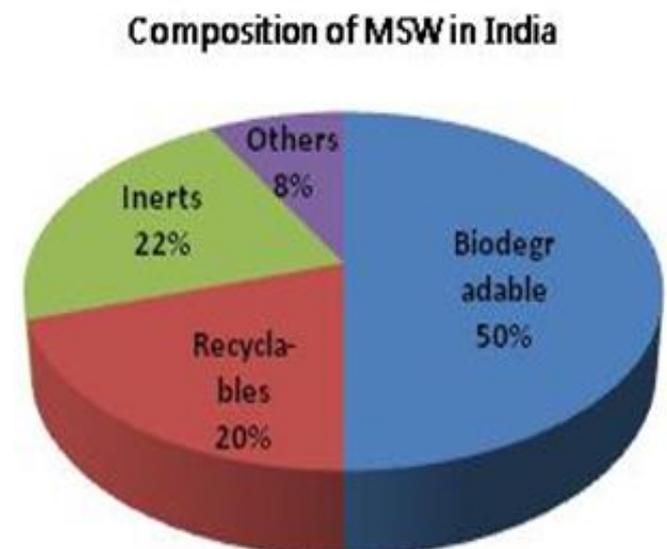


Fig 1:- (EAI, 2017)¹

When we further break down the biodegradable waste of India, the majority of it is dominated by organic content, as shown in Fig 2, nearly 50% of the total waste is organic with the volumes of recyclables and biomedical/hazardous waste growing each year as India becomes more urbanised (McKinsey Global Institute 2010). This means that the waste India generates can be easily reduced as it's recyclable and biodegradable.

¹ <http://www.eai.in/ref/ae/wte/typ/clas/msw.html>

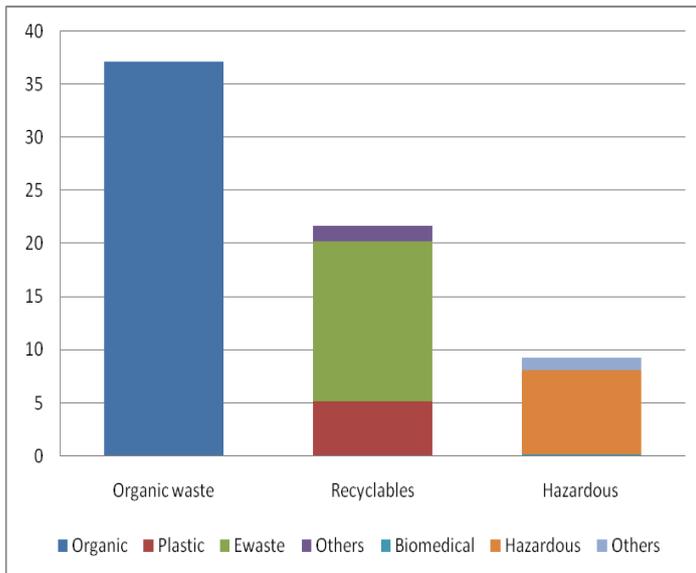


Fig 2:- Waste Composition of India, in Million Metric Tonnes per annum. Source: PIB 2016²

The waste management rules in India primarily work on the principles of “sustainable development”, “precaution” and “polluter pays”. These principles regulate the working of the municipalities and commercial establishments and ensure that their actions are environmentally accountable and responsible. However, due to the rapid urbanisation and economic development India is facing some major waste management issues.

In the following sections I will address how we can reduce the Municipal Solid Waste in India by forming effective policies using behavioural economics as a tool.

A. Current Municipal Solid Waste Management System in India

Municipal Solid Waste Management (MSW) in India is governed by Municipal Solid Waste Management Rules (MSWR). However, no urban local body (ULB) has enacted appropriately on the waste management rules. Unfortunately, no city in India can claim 100% segregation of waste at dwelling unit and on an average only 70% waste collection is observed, while the remaining 30% is again mixed up and lost in the urban environment. Out of the total waste collected, only 12.45% waste is scientifically processed, and rest is disposed in open dumps (CPCB Report, 2013). Most of the bins for garbage disposal in the Municipalities are common. Moreover, the waste composition is even affected by the difference in the socio-economic classes. For instance, the high-income groups use more packaged products, therefore generate more plastic, paper, glass, and textile waste. There is also lack of accountability in the current management system. The lack of strategic MSW plans, waste collection/segregation and a government finance regulatory framework are major barriers

²<https://www.epw.in/engage/article/institutional-framework-implementing-solid-waste-management-india-macro-analysis>

to achieving effective SWM in India. The public’s lack of awareness along with very low motivation has limited innovation and the adoption of any new practice that could improve the existing waste management system in India. Even the attitude of the community towards waste has proved to be a major barrier in achieving an efficient SWM.

Municipal authorities are responsible for managing waste in municipalities, but they face a shortage of funds. Funds for Solid Waste Management are a part of the general annual budget allotted in all the municipalities. The municipalities have to divide that budget for various services other than SWM, and as the size of the municipality increases so does the number of services they need to perform. Through various studies, it has been noticed that the smaller municipalities spend almost 70% of their general budget on SWM. While the bigger municipalities, which have many other services to perform, use only about 10% of their overall budget. The provision of funds for solid waste management in India is on an adhoc basis and not on the basis of cost estimates. This leads to misallocation and mismanagement of resources.

Open dumping, which has a lot of implications on one’s health, is also a very common practice in India. About 60 to 90% of MSW generated in cities are unswervingly disposed of on open land in unscientific manner.

➤ What’s Flawed with the Current System?

Waste management primarily consists of seven steps or processes: generation, storage and collection, transfer and transport, treatment and disposal of solid wastes. However, the waste management system in India only follows four of those steps, namely: generation, collection, and transportation disposal. Due to the lack of all the steps, the waste management process in India lacks efficiency. Moreover, due to the lack of resources and unavailability of suitable facilities, the proper management of MSW has become a necessity. Under this title we will discuss the reason for this and evaluate what’s wrong with the current system of MSW management in India.

- Most of the urban areas lacked Municipal Solid Waste storage at source, thus the MSW would often end up in heaps at the outskirts of cities and in open grounds.
- The municipal bins don’t have the facility of separating biodegradable from non-biodegradable waste, which is why people don’t take the initiative of separating their waste, something that is very important for efficient waste management.
- Most of the times, biomedical waste is not separated from general MSW and there is no proper facility for the disposal of biomedical waste. Biomedical waste is very infectious and can cause many diseases if not treated properly. Hence, it is important to treat biomedical waste separately from MSW.
- Even industrial waste which is supposed to be treated separately from MSW is not treated so. The waste is co-disposed with municipal waste in municipal waste dumping grounds. Any water body in the vicinity of the dumping ground gets heavily polluted. The heavy metals

even leach into the ground and destroy our ground water sources and aquifers.

- The landfills in India have not been designed according to the designated specifications, which is why the groundwater gets contaminated through leaching of toxins.
- The waste is often burned as there is no place to store it. Since the waste is not separated at source it contains many varieties, like industrial and biomedical waste, this leads to release of very toxic gases and causes harm to human health.
- The laws regarding Waste Management need to be more stringent and binding, people should be able to feel the repercussions if they happen to disobey any laws regarding the same.

B. How Existing Practices in India Can be Altered to Reduce Waste in Accordance With Economics

➤ Make the Trading of Trash an Official Practice

A report by IIT Kanpur (2006) found the potential of recovering at least 15 per cent or 15,000 MT of waste generated every day in the country.³ This, the report said, could also provide employment opportunities to about 500,000 rag-pickers. In large cities, there are two-three tiers of waste buyers, which are well organised and specialised in specific wastes. But the fact that it's this practice saving our cities from drowning in garbage is often ignored. If trading of trash is made an official practice people would indulge in it more, as they would know its a certified transaction taking place. The trash collectors could be given ID badges, provided with sorting and storage space, and doorstep pickup service for post-sorting rejects to be taken away. Through this, the trash collectors would feel incentivised as they would be officially recognised for the job, and after the paperwork, even well paid.

➤ Imposing Taxes on Landfill

In India, 43 million tonnes (MT) of the waste is collected, 11.9 MT is treated, and 31 MT is dumped in landfill sites.⁴ By imposing taxes on landfills, it will restrict the disposal of waste into landfills which can be recovered through other treatments, like recycling, upcycling etc. The taxes on landfills help in implementing the "Polluter Pays Principle" more effectively. The taxes henceforth collected could be used for coming up with innovative ways to manage waste. The financial aid could be used to install various waste management technologies, come up with newer technologies, upgrade various landfill sites and improve the local authority responsible for waste management in their areas. India can use the framework of the EU for the landfill taxes and further formulate a more inclusive plan for the same. Landfill taxes are now applied in a number of EU countries. The taxes are aimed at encouraging businesses and consumers to reduce the amount

³<https://www.downtoearth.org.in/blog/waste/india-s-challenges-in-waste-management-56753>

⁴<https://www.downtoearth.org.in/blog/waste/india-s-challenges-in-waste-management-56753>

of waste produced, to recover the possible value from the waste and to dispose less in the landfills.

➤ Introduction of Financial Penalties

By imposing stiff penalties on practices which deter the waste management process in India, we can achieve a more efficient system. Moreover, residents need to be penalised for not segregating their waste and generating mixed waste. Furthermore, by charging a penalty on agents who only collect segregated waste will further enforce the policy of segregation. Therefore, strict penalties will further the cause for an efficient waste management system in India.

C. Behavioural Economics as a Tool to Solve the Waste Problem in India

Most of the environmental problems that we face today stem from human behaviour, and their attitude towards waste management.

➤ Distortion Bias and Identity Bias

According to a CPCB report, in 2014-15, 91 per cent of solid waste was collected, of which, only 27 per cent was treated and the remaining 73 per cent was disposed at dump sites. A recent study indicates that India would need a landfill of 88 sq. km, nearly the size of Bengaluru, to dump all its waste by 2030.⁵ As shown in Figure 3, less than 60% of waste is collected from households and only 15% of urban India's waste is processed.

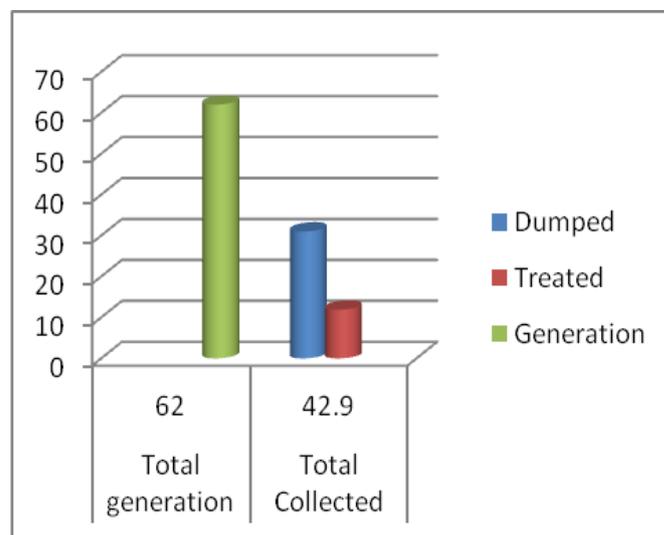


Fig 3:- Collection vs Dumped Statistics (numbers in million MT per annum) (Source: PIB, Government of India)⁶

Understanding two biases related to recycling will give us more clarity on the waste management process and help

⁵<https://www.thehindubusinessline.com/opinion/columns/the-res-much-to-gain-from-recycling-of-waste/article24802735.ece>

⁶<https://www.epw.in/engage/article/institutional-framework-implementing-solid-waste-management-india-macro-analysis>

us increase our understanding of the broken waste management system of India. Based on a research conducted by Remi Trudel, an Associate Professor of Marketing at the Questrom School of Business, Boston University, and her colleague, it was concluded that people are more likely to recycle waste which is not distorted, like intact glass bottles and undented cans.⁷ This is primarily because when people view distorted items, they perceive it as something which has no utility in any form, hence, they proceed to throw it away. This further backs up the reason why India's landfills are overflowing with trash. If the people are made aware of the distortion bias, waste management could see a huge change in terms of recycling.

Employees in shops should be educated on what can be recycled and what can't be recycled. They should be informed that recycling a crushed plastic bottle is the same as recycling an uncrushed one. If employees learn that items can be recycled in various forms, it can have an increased impact on waste management in India. Moreover, companies can take up projects to design and develop packages which stay comparatively more intact after opening than they did earlier. This would lead to a mass scale decrease in packages being thrown over recycled. Students in schools and colleges should be informed about the distortion bias and should be taught how recycling distorted items is the same as recycling undistorted items. Learning about the distortion bias can be very helpful in designing products for a sustainable future of India. Encouraging people to recycle distorted items and displaying pictures of distorted waste items on bins meant to segregate waste for recycling will further nudge them to recycle their waste rather than trash it.

In the same research conducted by Remi Trudel, the identity bias was discovered. It was concluded after research and experimenting that consumers are more likely to recycle products which aren't linked to their identity than recycling items which aren't. For example, a consumer is more likely to recycle a cup which has the logo of his/her university rather than recycling a cup which is not associated to him/her in any capacity. The reason for the identity bias is that the consumers connect the product to themselves, and hence trashing the product rather than recycling it hurts their sentiments and lowers their self-esteem. By finding ways to help consumers see the links between the products they buy and their identities, recycling rates could be substantially increased.

One way to overcome the identity bias is customising products in offices, like paper sheets, disposable cups, etc, to form a bond between the employees and the product, hence, resulting in the consumers recycling the product rather than simply throwing it away. Moreover, companies can take ideas from Coca-Cola's "Share a Coke" campaign, where names and certain relationship designations are printed on

the coke bottles. This gives a sense of personal touch to the bottles, and makes the consumer feel more connected with the product, hence, increasing the recycling rates of the bottles. Companies can print letters on their products, this would also encourage them to recycle as the consumers would perceive the letter as their initial and hence feel connected to the product. Enterprises should be made aware of the identity bias in order to encourage them to produce more customised products which they initially might be producing just to give a personal touch to the products, unaware of the disposal consequences the customisation has.

Hence, by understanding the two biases well, we can improve the recycling system in India by coming up with new schemes and programmes to overcome the same.

➤ *Reducing Food Waste Through Nudging and Behavioural Insights*

194 million Indians go hungry every day, India is 100th out of 119 countries on the Global Hunger Index. Yet, according to the United Nations Development Programme, up to 40% of the food produced in India is wasted.⁸ Indians waste as much food as the whole of the United Kingdom consumes. When talking about it in monetary terms, India wastes food worth Rs. 88,800 crore every year. Weddings, restaurants, hotels and households are the major contributors of wasting cooked food.

The food reduction in all the above-mentioned sectors will be approached separately beginning with weddings. Approximately 10-15 percent of the food in Indian weddings is wasted, with a minimum of around 30-50 kg and maximum going up to as high as 800 kg. This can be used to serve around 100-200 people on an average, and a maximum of 2,000-4,000 people. Thus, controlling the food wasted in Indian weddings can make a huge difference. Small placards can be placed near plates and serving areas, nudging the guests to only serve as much as they can consume. Moreover, the trash cans placed can have small quotes, stating how the guests should think before wasting food. Applying such elements of the nudge theory can help make a difference. Moreover, the catering companies in India can be incentivised by giving subsidies pushing them to print "Do not waste food" on their napkins and plates, hence, nudging the consumers to not waste food on various occasions. The hosts of the weddings can contact the various NGOs in their locality which work towards feeding the poor of the country, by collecting food from parties, weddings and households. Few of such organisations are "Meals with Love" which is an NGO exclusively for collecting food from weddings which would otherwise go waste, Feeding India, Robin Hood Army and No Food Waste.

⁷ <https://hbr.org/2016/10/the-behavioral-economics-of-recycling>

⁸ <https://theicsrjournal.in/food-wastage-in-india-a-serious-concern/>

Nordic Hotels in Norway, with the help of the Green Nudge non-profit organisation, conducted experiments to discover ways through which food waste could be reduced with some insight on human behaviour. It was discovered after two experiments that smaller plates and bowls led to less food wastage, and constant nudges, such as boards to invite the consumer to serve repeatedly in the buffet rather than taking one large serving also helped in the same.⁹ Thus, based on the results from the experiments, the solutions can be applied in restaurants and hotels in India as well. Large plates and bowls could be replaced with smaller ones, and boards could be placed. Moreover, hotels and restaurants can put up small boards which could be updated weekly with the amount of food wasted every week in the hotel. This would directly affect the conscience of the guests and nudge them to waste less food. Thus, by nudging the guests in the mentioned manners, the amount of food wasted in hotel and restaurants can be reduced.

Households should be nudged into separating their food waste which could further be converted into biofuels by distributing leaflets with taglines like “Join your neighbours in producing biofuels by separating your waste”. Such lines would encourage the people to be a part of an already existing movement. Moreover, awareness campaigns can be launched telling people about the vitality of recycling food waste and segregating it. Households in India can reduce the amount of food by contributing to a new concept called the “Community Fridge”.¹⁰ The concept of Community Fridges was found in 2017, by the United Kingdom in order to reduce food waste. These fridges are locally set up refrigerators to which residents from around the area can contribute food, which is available for anybody who needs it. Community fridges have helped reduce the amount of food being wasted in UAE, Germany and France, and can help do the same for India. Households can contribute their wasted food to these community fridges which would feed the people starving.

The packaged food that gets wasted from supermarkets and through consumers, too, can be reduced. The soon to be expired items can be on discount to incentivise consumers to buy it and consume it soon, hence, saving the product from going for a waste. Moreover, the best before date and expiry date should be differentiated between, to make sure the consumers only throw the specific item when they have to be thrown.

➤ *Altering Waste Segregation Processes*

In order to change people’s waste segregating habits, they need to be aware of the impact of not segregating waste. In order to do this, media attention and campaigning should focus on increasing the public visibility of the issue. This would, henceforth, indirectly influence our behaviour of segregating our waste and push us to segregate our waste in a proper manner. Moreover, the municipality bins should

be placed in proper locations which are easily accessible to the people and at short distances between each other. Small posters could be put up near the bins nudging the citizens to segregate their waste, “as everyone else in the community does too”. This would motivate the citizens to segregate their waste either due to pure altruism or due to impure altruism, i.e. to convey to other people that they are socially responsible citizens of the community. Bins in the shapes of cows and frogs with open mouths as the bin opening can be placed in parks and other such areas that children visit often as they would tend to throw their waste in such bins getting attracted by their outer appearance.

India can even take some inspiration from Spain’s Door to Door collection of waste, implemented in 2013 which helped in decreasing the amount of waste being thrown away without segregation. It was discovered that the waste segregated per household increased upon door to door collection, one reason could be that the citizens were conscious about how they would portray themselves in front of the responsible authorities and they wanted to display themselves as socially responsible citizens. Moreover, door to door collection of waste even reduced the hassle for the citizens and made their made segregation and collection more convenient for them. In addition to implementing door to door collection in India, bags could be given along with the collection process to the citizens, so that they don’t find excuses of not having anything to separate the waste in and hence, nudging them to segregate their waste.

People should be well aware of the importance of segregating waste in order to instigate pro-environmental behaviour in the citizens. Moreover, ambiguity on how waste should be segregated could lead to a faulty waste segregation process on part of the citizens. Along with disseminating waste segregation instructions, feedback on the waste segregation behaviour should be given as well, in order to foster a pro-environmental behaviour in the citizens. Feedbacks as an encouragement for the citizens to segregate their waste as they feel that they too have contributed towards a cleaner environment. A research done, based on disseminating feedback based on the usage of energy showed that the feedback resulted in reduced usage of energy.¹¹ If feedback in this aspect could foster pro-environmental behaviour, then it is highly plausible for the same to happen in terms of waste management.

➤ *Basic Nudges that Stores can follow*

15.27% of the total Municipal Solid Waste generated in India consists of plastic bags. These plastic bags are mostly obtained from grocery stores.

⁹https://edisciplinas.usp.br/pluginfile.php/4291492/mod_resource/content/1/el_food_waste_2013.pdf

¹⁰<https://www.downtoearth.org.in/news/food/can-india-reduce-food-wastage-with-community-refrigerators--61783>

¹¹https://www.researchgate.net/publication/288857298_Attributes_in_Fostering_Waste_Segregation_Behaviour

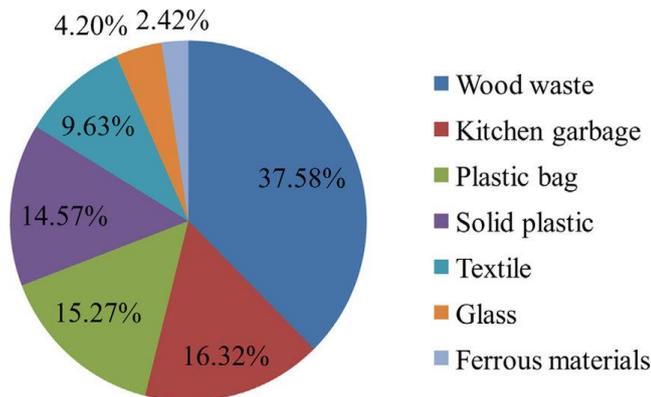


Fig. 4:- Municipal Waste Composition¹²

However, with basic nudges this figure can be reduced substantially. Instead of simply giving the consumers plastic bags to put their groceries in, they should be asked whether they want one.¹³ Japan was able to increase the refusal of plastic bags to 40% simply after the shopkeepers started asking customers if they wanted one. Moreover, plastic bags should have some charge on them, which the customers should be informed about in order to make him/her rethink his/her decision of taking the plastic bag. Reusable shopping bags can be placed close to the check-out counters in order to encourage the customers to either buy it or remember to carry their own shopping bags the next time they go shopping. Printing lines telling customers to not use plastic bags on the plastic bags itself would give rise to feelings of guilt in the consumers hence resulting constraining them from using plastic bags as often as they otherwise would have. The vegetable sellers in India usually give plastic bags when selling their vegetables. To reduce the number of plastic bags in this situation, the vegetable sellers should be incentivised by the government through monetary means to use recycled newspaper bags instead of plastic bags for selling the vegetables.

The stores in India should take ideas from MAC's "Back to MAC" scheme which aims at encouraging it's customer's to reduce waste by recycling it instead. In the "Back to MAC" scheme, the customers of MAC can bring any six pieces of primary packaging of MAC cosmetics back to the store and get a free product in exchange. This incentivises the customers to get their packaging for recycling, leading to a reduced amount of waste that ends up in landfills. Even the Canadian brand Lush follows the same scheme, wherein customers who return five empty containers get a free product. Besides this, some companies even follow the policy of giving points to customers who return their products. These points can later on be redeemed for a product. Some companies which follow this scheme are - Innisfree, Garnier, and Kiehl's. By these methods of incentivising customers, Indian stores can see a huge change in the number of containers being recycled for a small cost.

¹²https://www.researchgate.net/figure/Municipal-solid-waste-MSW-composition_fig4_262770436

¹³ <http://theconversation.com/how-to-break-up-with-plastics-using-behavioural-science-99741>

The recycling of the containers would further act as an incentive for the owners, as it would reduce their cost for the initial packaging.

In order to reduce food packaging waste, the producers can adopt some methods with respect to behavioural insights. To push the consumer to buy one large package of a product instead of several small ones, they could print "20% Extra" taglines and highlights on the packages, incentivising consumers to go for the bigger package. In cafes and coffee shops, the customers could be given tokens for free coffee on their next visit or even discount for getting their own coffee cups, hence reducing the Styrofoam cups used otherwise. Cafes and coffee shops in the country should get encouraged by Starbucks. "Get your cup" policy implemented in the US and Canada, which gives customers a ten percent discount when they get their own tumblers and coffee mugs to Starbucks. Using such promotional skills will not only help sustain the environment but also economically benefit the customers.

➤ *Policymaking-*

With the support of the government and proper policies which are designed keeping in mind behavioural insights will help in the implementation of an efficient waste management strategy. India can work upon the seven behavioural levers, by Mont, Lehner and Heiskanen (2014)¹⁴ for forming effective waste management policies. These levers, along with the scope they have for improving waste management in India, are:

- *Simplifying and Framing of Information:*

The policies regarding waste management should be framed in a simplified manner so as to prevent information overload, because only when people understand the policies will they be able to implement them. Information can be put in a manner to inculcate certain habits and values in people and stimulate consciousness in the citizens regarding waste practices in the country. Moreover, the way the policies are presented also determine how the citizens process them hence, the policies should be in an understandable form.

- *Changes to the Physical Environment:*

Changes in the structural environment around us can have an impact on the decision-making skills of people to a large extent. It can determine if they recycle, reduce or simply throw their waste away. An example of the same could be the installation of bins for segregating waste at every corner of the street, along with posters pushing people to do the same. This would lead to more people segregating their waste than just adding to the heaps of garbage usually seen along the streets.

- *Changes to the Default Policy:*

People adapt and soon become resistant to policies after a period of time. The impact of the policies seems to become less, hence, not helping in regulating what they

¹⁴<https://www.oecd.org/environment/tools-evaluation/Policy-Highlights-Behavioural-Insights.pdf>

were initially supposed to. Thus, bringing a change in the default policy regarding waste management can help in bringing about a change in people's behaviour too. For example, fines on throwing waste on streets and public areas can be revised. Moreover, heavier fines can be imposed for the same, and the news as such could be broadcasted in order to make people aware of the change. New policies which incentivise people to recycle can also be introduced.

- *Use of Social Norms and Comparisons:*

Social norms and comparisons can be used to make people conscious of their roles as socially responsible citizens, and how they should act as a part of the community. Phrases such as, "Community A recycles their waste, will you?" will push the specific community to recycle their waste, as they are being compared to their counterparts. Moreover, comparison invites competition, and in order to "win" the competition the citizens would behave like socially responsible citizens when compared to the people around them. This would stimulate an increase in the amount of waste being recycled and less of it being generated.

- *Use of Feedback Mechanisms:*

As mentioned before, giving feedback to the community is a very helpful way of deriving pro-environment behaviour. It's because the feedback makes them aware of the impact their actions have on the community and hence, help in prompting the desired behaviour from them. Implementing the feedback mechanism in the environmental policies can help us achieve a sustainable future. For example, municipalities of certain areas can give monthly feedback to households on their waste generation and how they can work to reduce the same.

- *Reward and Punishment Scheme-*

Implementing the reward and punishment scheme in India's policies for waste management will help in incentivising the people to have a pro-environmental behaviour. For example, rewarding companies and industries which introduce new ways and technologies to manage waste more efficiently, and reduce waste.

- *Goal Setting and Commitment Devices:*

In order to regulate changes in behaviour which would be achieved by the levers described, commitment devices should be set up to measure the change and the achievement. Moreover, the government should set up goals to be achieved over a period of time in order to increase the efficiency.

By implementing the levers by Mont, Lehner and Heiskanen, India can see a positive change in its policies for waste management.

II. CONCLUSION

This paper seeks to analyse how behavioural insights can help in promoting changes in the behaviour of people, hence solving the waste problem in India, with special focus on Municipal Solid Waste (MSW). India can see a huge change in its current waste management system using behavioural economics as a tool for (a) altering existing practices (b) identifying and spreading awareness about the distortion bias and identity bias (c) reducing food waste through nudges (d) altering waste segregation processes and (e) policymaking. Through the correct implementation and designing of the given solutions, India has a bright future with respect to the efficient management of waste. The main stakeholders in the implementation of the plan are the corporate organisations, the government, NGOs, and the community. With the combined effort of all, the goal of making India a sustainable country in terms of waste can be achieved.

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