



CAG

Citizen consumer and civic Action Group

The Plasticene Epoch – *and the brands behind it*

The 2021 Brand Audit



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Design



About **CAG**

Citizen consumer and civic Action Group (CAG) is a non-profit, non-political and professional organisation that works towards protecting citizens' rights in consumer and environmental issues and promoting good governance processes including transparency, accountability and participatory decision-making.

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Executive Summary

Global plastic production has grown manifold times - from 2 million tonnes in 1950 to 381 million tonnes in 2015. This upward trajectory is predicted to continue. With 50 per cent being single-use plastic, the quantum of plastic waste being generated annually is alarming, to say the least. The far-reaching impact of this plastic waste on the environment, on humans and other life forms is only now being understood.

Worldwide there is growing awareness of the need to tackle this menace. On one hand, the consumer today is exhorted to make responsible decisions on her purchasing and on the other hand she is expected to continue buying products (whether essential or otherwise) that inevitably come packed in plastic. Even when it comes to recycling, the onus is on the consumer to recycle even though brands rarely provide adequate recycling information on their products, nor is the infrastructure for recycling robust enough.

The other stakeholder is the government which has enacted several legal instruments on plastics but little is enforced. Tamil Nadu, for example, banned single-use plastic (effective from 2019). Yet, to date, this remains a paper tiger.

The onus needs to shift to the brands, to the industries that produce and use plastics in their products but pay no price for the end-of-life waste generated.

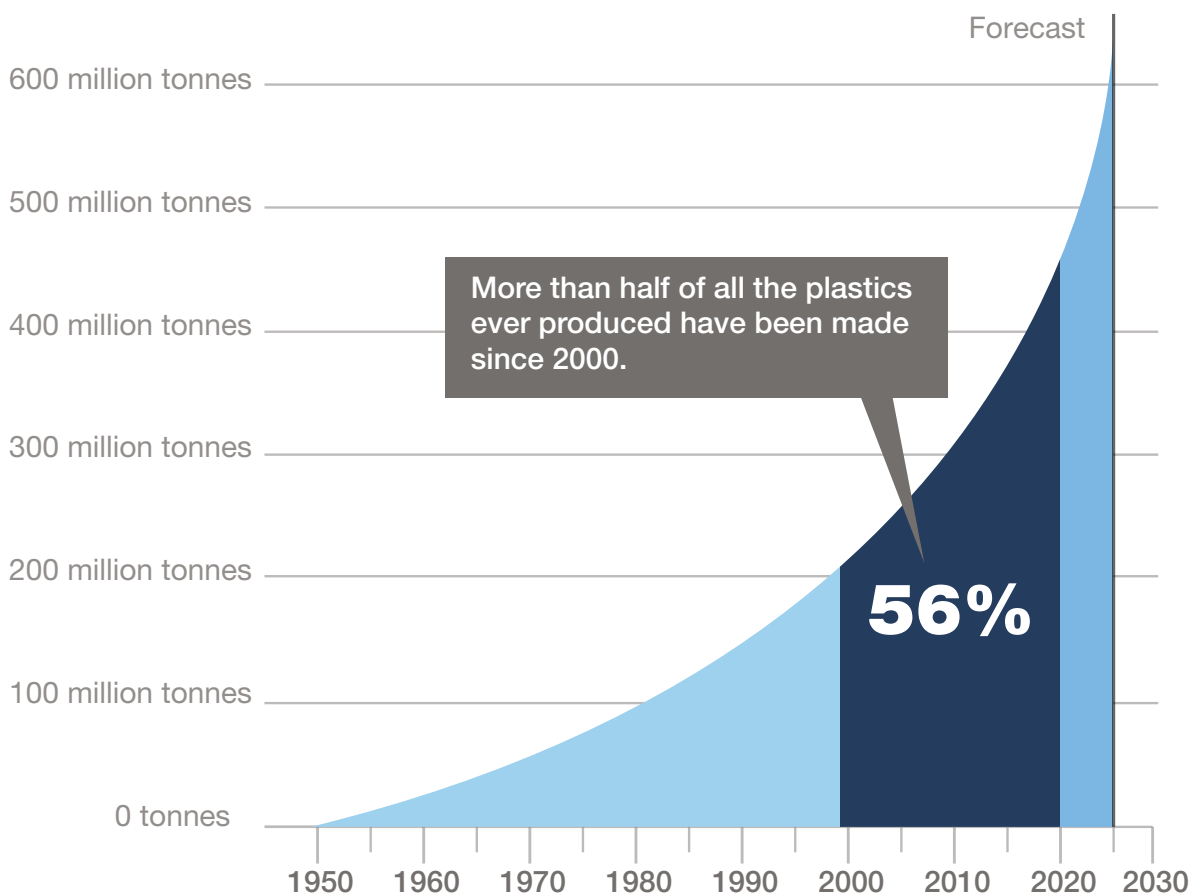
The Brand Audit is a citizen science initiative that seeks to spotlight the biggest polluter brands and call on citizens and governments to support greater transparency and accountability from these brands. The 2021 Brand Audit, with 203 participants collecting 5759 pieces of plastic over 2 weeks, found some repeat offenders in the 10 Biggest Polluters List - Unilever, Nestle, Mondelez, PepsiCo, and P&G among the multinational companies and Britannia, Aavin, ITC, and Sakthi Masala among the Indian companies. Interestingly, the biggest polluter of them all was unbranded plastic.

The plastic problem

Plastics, once touted a miracle, are now recognized as a grave environmental hazard and concern. Worldwide, communities, civil society groups, and governments are realizing that plastics endure in the environment for a long time and harm living organisms, including humans.

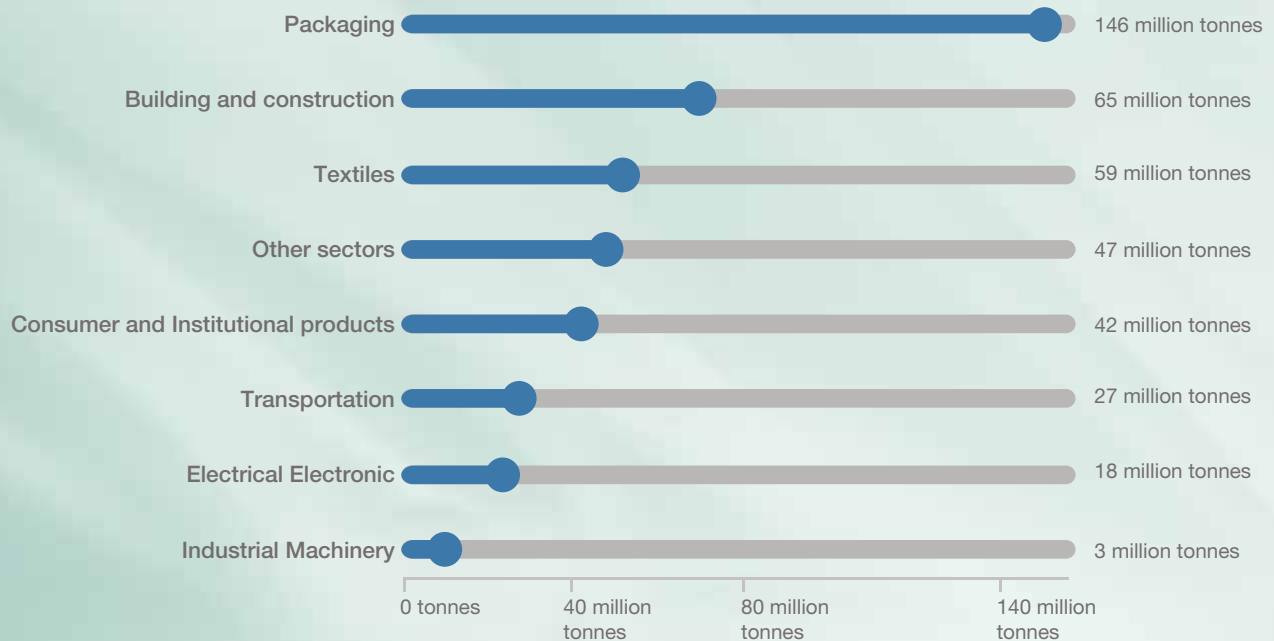


Global annual plastic production



Source: *Plastic Atlas 2019*, Plastic Soup Foundation

Global primary plastic production by industrial sector, 2017

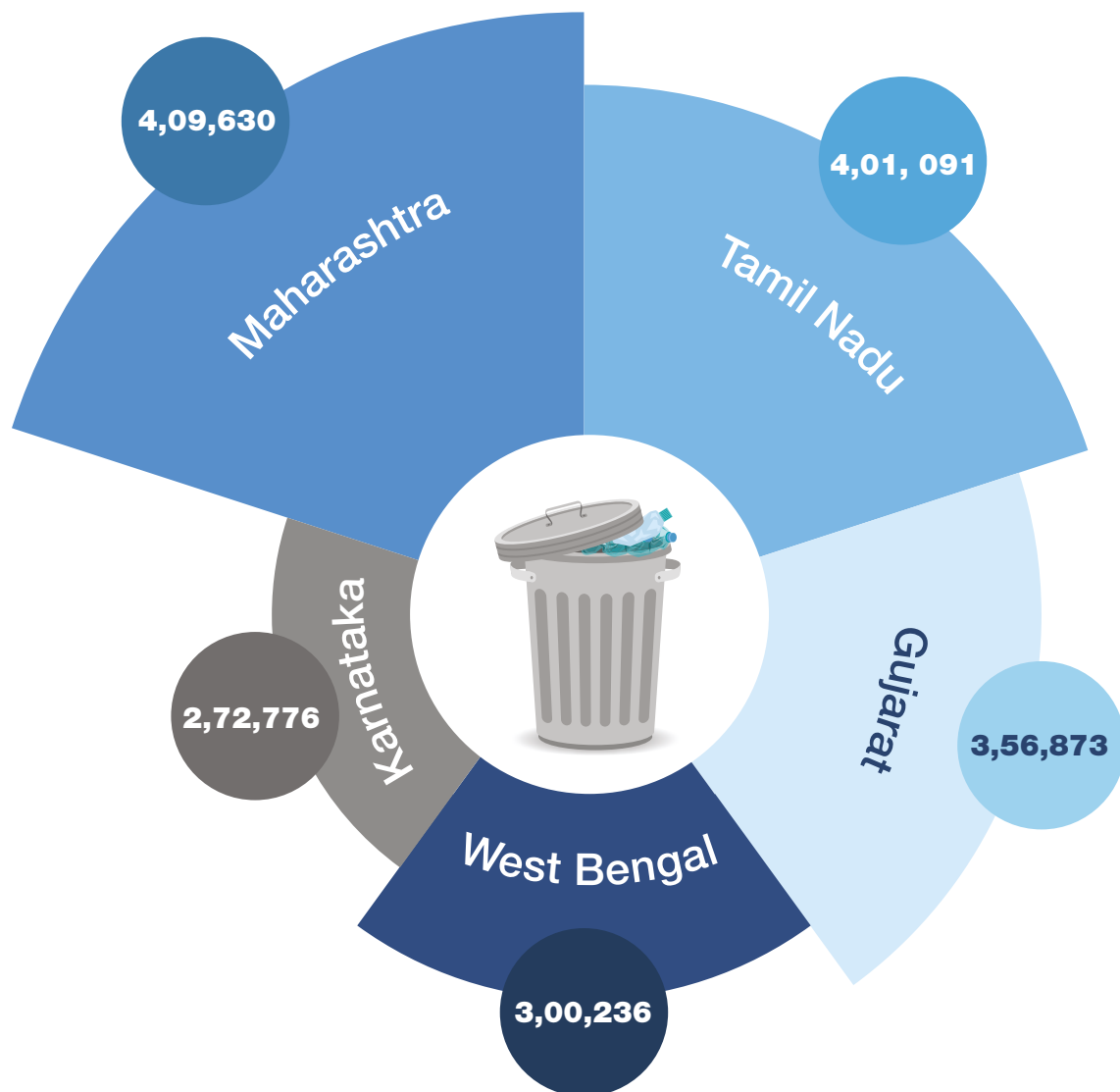


Source: Geyer et al. (2017)

The call to change our approach to this ‘miracle’ product is growing. At the same time, global plastic production has not slowed down. In fact, it has only accelerated and is predicted to continue its upward trajectory in the coming decades. India, as a middle-income country, with a young population and growing economy has been caught wrong footed on plastic pollution. While laws are in place that are predicated on the 3Rs of reduce, reuse, and recycle, the on ground reality is that the daily use-and-throw of plastic is growing. With municipal solid waste largely unsegregated, the vast majority of waste continues to accumulate in dumpyards in Indian cities and scattered across the rural landscape.



Top 5 plastic waste producing states of India



Figures in tonnes per annum
Source: www.statista.com (2022)

The single-use plastic ban in Tamil Nadu

The southern state of Tamil Nadu and its capital city, Chennai reflect this pan-Indian situation. Tamil Nadu, one of the more urbanized states, generates 150,323 tonnes of waste per annum (www.statistica.com, 2022). Chennai generates 429 tonnes of plastic waste daily. Almost all of this is carted to two dump yards in Kondungaiyur and Perungudi which are located on water bodies.

In June 2018, the Government of Tamil Nadu announced a ban on the manufacture, sale, and use of single-use plastics which was to come into force from January 1, 2019. The ban listed 14 specific items (such as plastic straws, cups, plates and carry bags) but did not restrict itself necessarily to just these. Plastic packaging of groceries was explicitly exempted from this ban.

In June 2020, a year and a half into the ban, plastic packaging of groceries was added to the banned items list.



Review of the ban

In 2020 and again in 2021, CAG conducted a study of the single-use plastic ban in Tamil Nadu to assess the implementation of the ban one year and two years after the ban came into force respectively.

The studies, focussed on Chennai, found that implementation was poor to non-existent. Soon after the ban was announced, there was a discernible reduction in single-use plastic use in shops and markets. The Greater Chennai Corporation (GCC) had also conducted several checks and raids. However, after the initial flurry of attention on the ban, the focus on implementation reduced and single-use plastics became a common sight in shops again. This underlines the need for continued enforcement of the ban.

Other takeaways from the studies were that the data available is poor i.e how much plastic waste is produced; its composition; its production; etc; and there is a lack of support for alternatives to single-use plastic. In the first study, a year after the ban, CAG found that suppliers of alternative, sustainable packaging (like leaf plates and cups) saw a sudden surge in demand which they were unprepared for and unable to meet. This speaks to the need for planning and developing a robust ecosystem for alternative packaging. Finally, it is clear that while getting a handle on the plastic waste is crucial to reduce the quantum of waste going to dumpyards; the long term solution to the plastic pollution problem is not improved waste management but reduced production of waste to begin with. The manufacture of plastics, especially single-use plastic, must be cut off at the source itself.



Plastics & health

The public conversation around the impact of plastics on human health has largely focussed on end of life i.e what happens to plastic once it is discarded. Citizens have a general idea that plastics do not degrade like biological materials and that they let out toxins and greenhouse gases into the environment. However, human exposure to plastics needs to be looked at through all stages of the plastic lifecycle - from extraction to disposal. As the 2019 study by CIEL et al. underscores, humans are exposed to plastics at all stages and this exposure can be via inhalation, ingestion, and skin contact. The study collates data from a range of studies on the impact of such exposure to note that plastics affects the immune system, kidneys, liver, sensory organs leading to outcomes such as cancer, neurological, reproductive, and developmental toxicity.

In recent years, researchers have found microscopic particles of plastic (microplastic) in the air we breathe, the water we drink, and even in the food we eat. A 2020 study in Chennai found that the city's air is populated with microplastics whose likely sources are tire dust, textile fibres etc. The same is true of the water we drink. Yet, we continue to dump our plastic waste into waste bodies or in open dumps from where toxins leach into the environment. Researchers have also found microplastics in the muscle tissue of a range of species that are eaten by humans. The term Plasticene Epoch has never been more apt.

The health fallout on the planet and on the human race is still not completely clear. No doubt we will learn more in the near future. However, it is crystal clear that there will be a fallout and it is already in the making and we humans have little time to alter the course.



Why a brand audit?

The brand audit, developed by CAG, Mother Earth, Greenpeace Philippines, and GAIA, in 2018, seeks to identify the biggest plastic polluter company through a waste audit. The brand audit is a citizen-science initiative anchored by BFFP, that has spread across the globe with 440 brand audits conducted across 45 countries in 2021. The brand audit also serves the purpose of underscoring the magnitude of the plastic pollution crisis and the need for immediate and sustained action at all levels, by all stakeholders.



Methodology

The brand audit may be conducted indoors or outdoors. Outdoor audits are in public spaces like beaches and parks. Indoor audits are an audit of household plastic waste generated over a given period of time.

Participants are trained in data collection and entry. Data collection consists of collecting all plastic waste (in a given location for a given time) and sorting the plastics by manufacturer. Participants are given the brand audit toolkit which explains the data collection tools, the process, and a guide on how to enter the data.

This is then logged either with pen and paper or through any of several easy to use online applications. CAG prefers using the free-to-use application, KoboToolBox, that allows one to develop the questionnaire as per requirements. The other advantage with this application is that once the app is installed in the phone (only Android) and the form accessed, the internet is not required to enter the data. Hence participants can enter the data and turn on the internet only for sending the final data to CAG.

The questionnaire follows the standard set in 2018 with some minor modifications to suit the Indian context. Participants are provided with IEC material in English and Tamil to aid them in their understanding of the data to be entered.

With the COVID-19 pandemic shifting the brand audit indoors, since 2020, an added component to CAG's brand audit has been a webinar. The webinar provides participants an opportunity to see the results of the audit and discuss the plastic problem and the role of different stakeholders, including the participants (as citizens and consumers) in addressing the crisis.

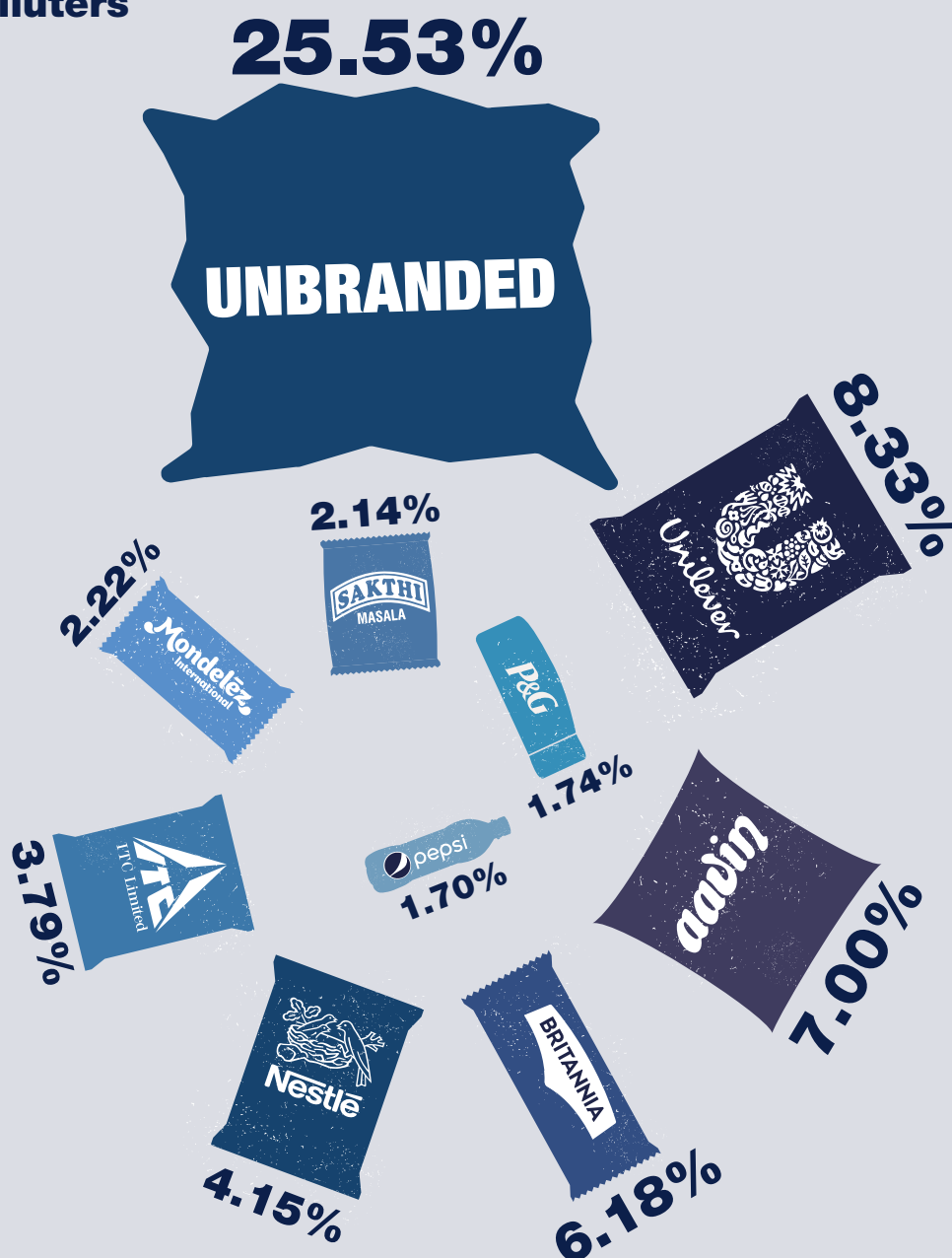
Limitations

The brand names and their parent companies are cross checked on the websites of brands as well as against Break Free From Plastic's (BFFP) master list of companies. However, a large proportion of brands are local ones, limited to India or even specific states and therefore information on parent companies is not readily available.

This year, due to the COVID-19 pandemic restrictions, the brand audit could not be conducted outdoors and had to be home-based.

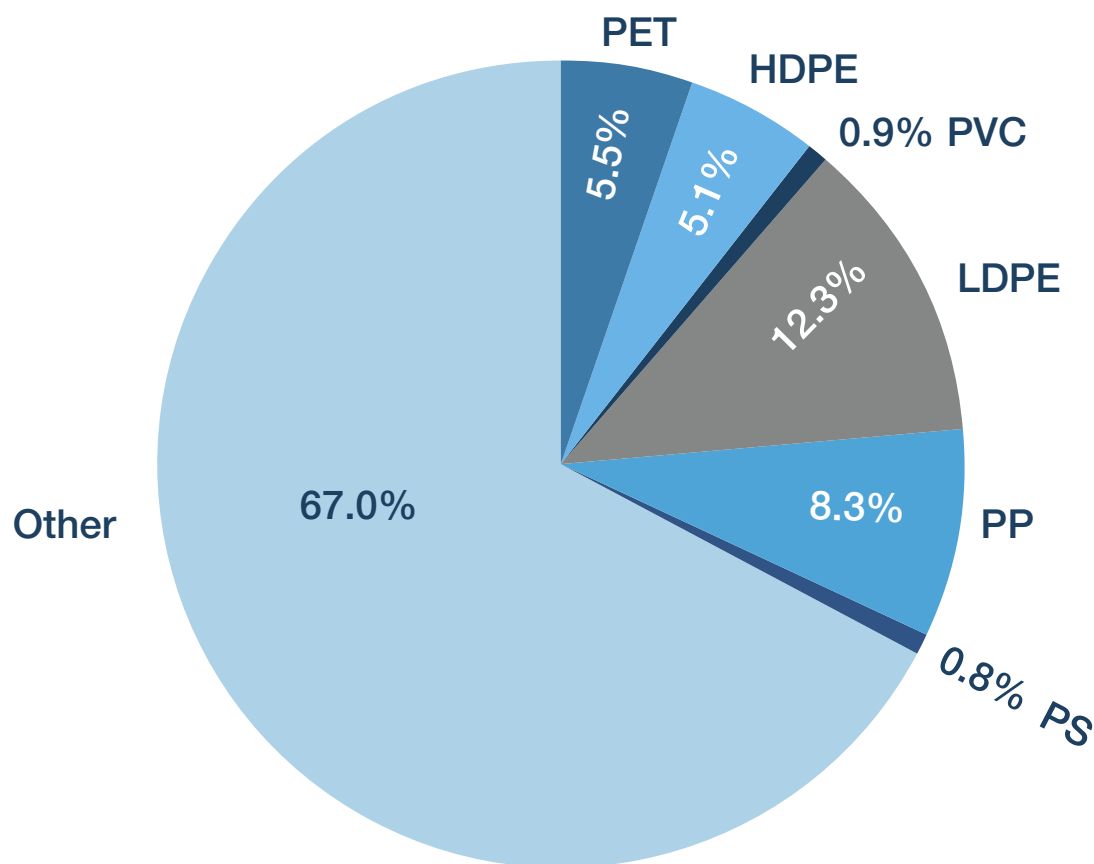
Results

Top Polluters



The 203 brand audit participants collected 5759 pieces of plastic over a two-week period. In terms of top polluting brands, the leader of the pack were unbranded and local companies, accounting for approximately a quarter of the plastic collected; second was Unilever (Hindustan Unilever in India) with just over eight per cent, and third was the State milk supply cooperative known as Aavin at about seven per cent. At last year's brand audit, which was also a home-based one, Aavin topped the charts with 30 per cent followed by Unilever at 13 per cent while local/unbranded plastic was just eight per cent.

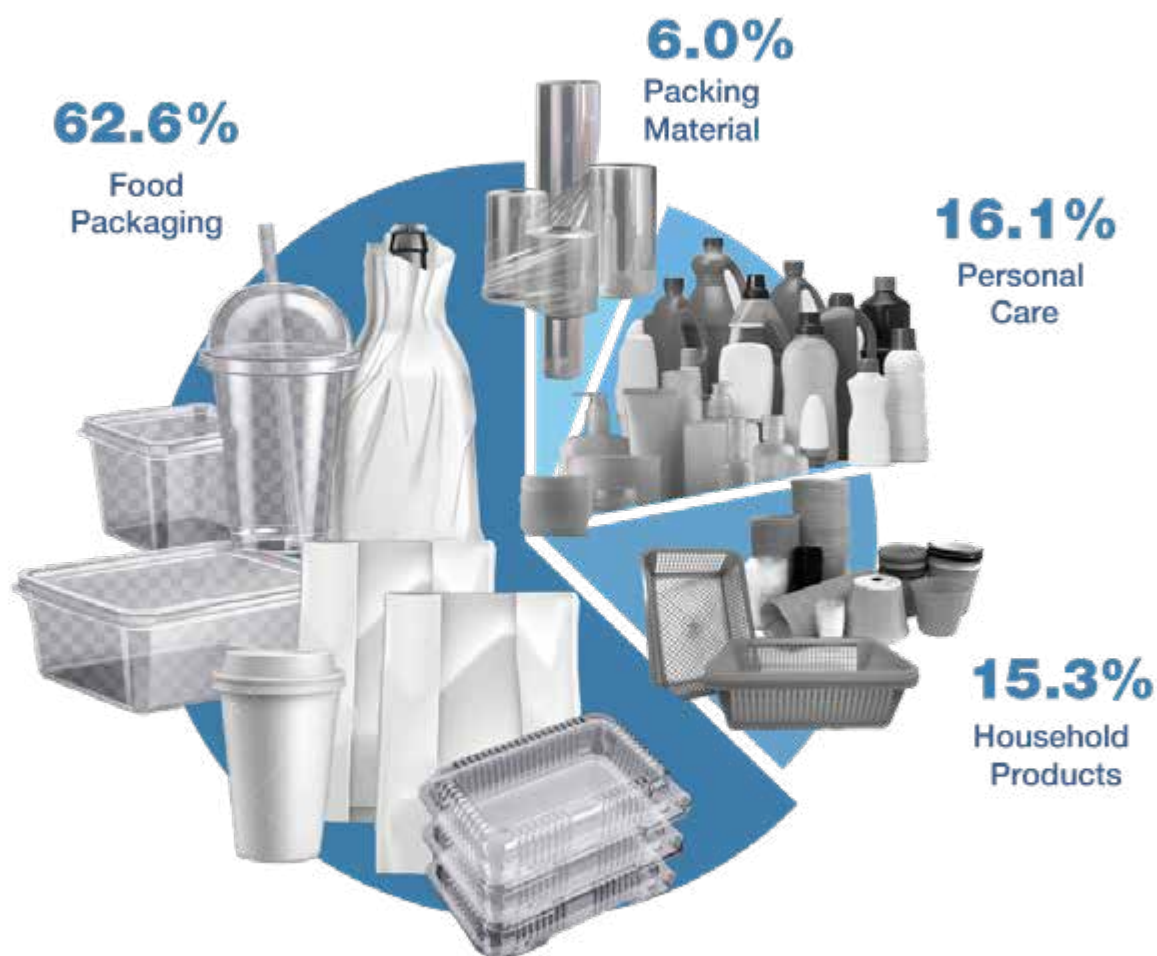
Plastics Composition



In terms of types of plastic collected in brand audit, 67 per cent of the plastic was either marked 7-Other (i.e consisting of more than one type of plastic) or did not have any information on type of plastic. The second highest was of LDPE (12.3 per cent) which likely is largely attributable to Aavin whose major product is milk. Plastic packaging made of PP, PET, and HDPE were the next lot of plastic that were most common.

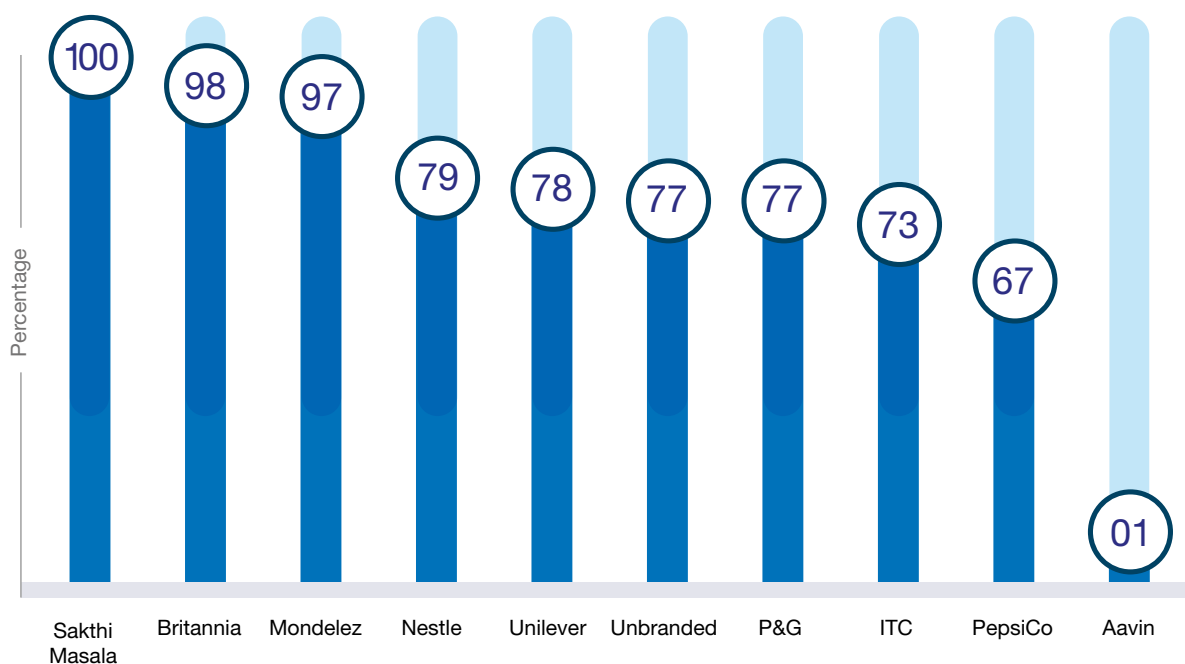
Last year's audit had nearly 40 per cent of LDPE (again the link to milk and curd packets is clear), but the maximum plastic was of 7-Other and those without any information - 48 per cent. And like 2021, PP, PET, and HDPE were substantially less in quantity at seven, 2.2, and 2.4 per cent respectively.

What were the plastics used for?



The brand audit also found that 62 per cent of the plastic was from food packaging, with personal care (16.1 per cent) and household products (15.3 per cent) bringing in the second and third highest amount of plastic. The remaining plastic was of packing material (such as external packing from online shopping) and smoking material which is a very miniscule amount. The trend is the same as last year where food packaging was 56.7 per cent, followed by personal care (6.5 per cent), household packaging (3.2 per cent) and less than one per cent packing material and no smoking material. Interestingly, packing material has increased from less than one per cent to about six per cent.

Percentage of non-recyclables



The data was analysed to understand how much of each company's plastic is easily recyclable in the Indian context. Typically, 1-PET, 2- HDPE, 4- LDPE, and 5 - PP are easily recycled in India.

On this basis, the data showed that a large percentage of the plastic used was not easily recyclable. Looking at how the Top 10 Polluters fared in terms of recyclability of their plastic, Sakthi Masala's plastic was 100 per cent non recyclable, followed closely by Britannia and Mondelez. Aavin, which came third in terms of total plastic waste produced (in the brand audit) had less than 2 per cent of its plastic as non-recyclable.



Discussion

When looking at the top polluting brands, this year, at the top of the table was unbranded plastic, followed by Unilever. Last year the leader was Aavin and Unilever again in second place. The jump in unbranded plastic could be ascribed to the fact that this year the brand audit was conducted in smaller towns where the range of brands available in the market is likely less compared to Chennai which hosted the brand audit in 2020. Unilever's continued position is interesting, perhaps speaking to the wide range of products and level of market penetration the multinational has achieved.

Plastic marked 7-Others, indicating the presence of more than one type of plastic in the packaging and plastic with no information formed a considerable amount of the plastic waste last year (48 per cent) and in 2021 (67 per cent) as well. This type of plastic is not commonly recycled in India yet many brands, including well established Indian and multinational companies, use this plastic extensively. Companies must make concerted efforts to move away from such plastics to more sustainable packaging or at the very least more easily recyclable plastics although this option must be the last choice.

LDPE plastic has consistently been quite high with milk, curds, etc being usually packed in LDPE which is easily recycled in India. Till date, buy back schemes for LDPE have not been set in place. Aavin had announced a buy back scheme in 2019 though extent of roll out and details on quantum recycled etc is unknown.



As mentioned, plastic that is not easily recycled in India pre-dominated with some brands having all or nearly all of their products packed in such plastics. Multinational companies like Unilever, Nestle, and Mondelez for example set a poor example with 79 to 98 per cent of their products coming in non-recyclable plastics. A recent study by Consumers International, in which CAG was a collaborator, compared 8 products that were available in multiple countries in terms of various parameters relevant to the consumer. One was looking at the level of recyclability of packaging in each country and found none of the products were easily recyclable in all the countries. This speaks to the lack of interest among brands to make their product more sustainable. Brands must adapt packaging to the local recycling scenario.

In terms of what the plastic is used for, i.e plastic from food packaging or household products etc, the highest was from food packaging, followed by personal care, and then household products. With the Tamil Nadu government extending the single-use plastic ban to items that come pre-packed in single use plastics (notification modified in 2020), grocery items would come under the purview of the ban. Companies must look to invest in R&D to develop better packaging options. A general observation from CAG's Behind the Labels (2021) study was that labelling on recyclability of the packaging was poor. The recycling information as required by Bureau of Indian Standards (BIS), is missing in most products or is not readily accessible to the consumer due to poor placement, colour, size, readability etc.



Conclusion

The onus of plastic waste management continues to be placed on the shoulders of consumers, followed by local government bodies, neither of whom are equipped to deal with this appropriately. There is also the issue of justice in that the environmental and health burden is borne by citizens/consumers as well as the government (in terms of handling public health fallout) while brands are not held accountable for creating this plastic waste in the first place.

Instead, recycling and waste to energy have been and continue to be touted by brands. These too place the onus on consumers and governments to ensure the necessary processes and infrastructure are in place. The negative aspects of these solutions are also ignored. These include:

- Waste to energy (WTE) requires a high level of infrastructure investment;
.....
- Problems in terms of toxins released into the air and in the ash residue;
.....
- WTE plants have a life of 35-40 years and require a continuous supply of plastic to function and hence promote continued use and throw of plastics;
.....
- Waste is largely unsegregated in India (and does not look to change in the near future) making WTE inefficient;
.....
- Calorific value of waste in India has been quantified to be low and therefore not suitable for WTE;
.....
- Both WTE and recycling are options that make it seem that plastic waste is just a problem of poor management instead of an issue of overconsumption of resources and inappropriate use of resources. The focus then shifts from reducing consumption (and therefore reducing production of waste) to *better management* of waste.

false solutions

In the short term, at all levels of governance, the need of the hour is to follow the 7Rs of sustainability - reduce, refuse, rethink, reuse, repair, replace, and recycle. This should be dovetailed with a decentralised approach to source segregation, and community/individual composting as well as robust mechanisms for recycling that integrate the informal waste pickers and recyclers keeping in mind their livelihood, health, and safety.

Long-term solutions

What is needed therefore is to work on multiple fronts, bringing in all stakeholders for a medium to long term shift away from plastics to sustainable packaging. Brands must be prevailed upon by governments and consumers to invest in sustainable packaging and held accountable for the same. Currently several multinationals have committed to targets on sustainable packaging. However, reviews indicate that little progress has been made. Reductions in use of virgin plastic has largely been driven by increasing the level of recycled plastics in products while there is little effort or investment in reducing the need for single use plastics.

In the end the only truly sustainable answer is to turn off the tap of plastic production.

Bibliography

CAG. 2021. "Behind the Labels: A study of recycling labels on food packaging in Tamil Nadu."

<https://www.cag.org.in/database/behind-labels>

CAG. 2021. "Efficacy of Single-use Plastic Ban in Chennai."

<https://www.cag.org.in/database/efficacy-single-use-plastic-ban-chennai>

CENFA. 2022. "Making Plastics in India: Trends in the Industry."

<https://www.cenfa.org/uncategorized/making-plastics-in-india-trends-in-the-industry/>

CIEL. 2019. "Plastics & Health: The Hidden Costs of a Plastic Planet."

<https://www.ciel.org/reports/plastic-health-the-hidden-costs-of-a-plastic-planet-february-2019/>

Consumers International. 2021. "The Consumer Lens on Packaging 2021."

<https://www.consumersinternational.org/media/368767/packaging-research-project-040521.pdf>

Ellen MacArthur Foundation. 2021. "The Global Commitment 2021 Progress Report."

<https://ellenmacarthurfoundation.org/global-commitment/overview>

Plastic Soup Foundation. n.d. "Production of Plastic." Accessed February 08, 2022.

<https://www.plasticsoupfoundation.org/en/plastic-facts-and-figures/>

Statistica. n.d. "Volume of plastic waste generated in India in financial year 2019, by state." Accessed February 08, 2022.

<https://www.statista.com/statistics/1168513/india-amount-of-plastic-waste-by-state/>



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