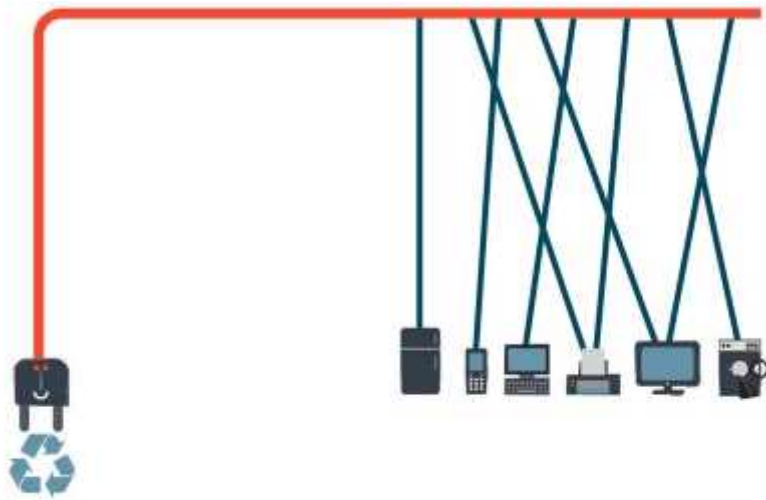


WHAT INDIA KNOWS ABOUT E-WASTE

Report on Awareness Levels of E-waste amongst common citizens in India



About Toxics Link:

" Toxics Link is an Indian environmental research and advocacy organization set up in 1996, engaged in disseminating information to help strengthen the campaign against toxics pollution, provide cleaner alternatives and bring together Groups and people affected by this problem. Toxics Link's Mission Statement - "Working together for environmental justice and freedom from toxics. We have taken upon ourselves to collect and share both information about the sources and the dangers of poisons in our environment and bodies, and information about clean and sustainable alternatives for India and the rest of the world"



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Executive Summary

Background

This survey was designed to benchmark current levels of knowledge about e-waste among common people in India.

The survey will help in assessing if the producers, who have been given the responsibility of creating awareness (under the E-waste Rules, 2011), have been effective in making consumers aware about this toxic waste issue.

Methods

The survey was carried out between November-December 2015 in five major cities in the country, namely, Delhi, Mumbai, Chennai, Kolkata and Bengaluru. A total sample of 2030, 1115 male respondents and 915 women respondents, aged between 18 to 65 years was taken. The sample was selected using random location sampling, and was weighted to ensure that it was representative of different age and income groups in these cities.

The survey carried out through a pre-designed questionnaire included knowledge testing on e-waste toxicity, disposal practices and Rules.

Key Findings

Implications for Policy and further Action

- Work must be done to raise awareness
- Information should be targeted at different age and economic groups
- Newspaper was the route by which most people heard about the issue and might be an effective tool for communicating to a wide audience.

INTRODUCTION

Background

Rapid economic growth, coupled with urbanization and a growing demand for consumer goods, has increased both the consumption and the production of EEE in recent times. Electrical and electronic equipment (EEE) production is currently one of the fastest growing global manufacturing activities. This phenomenal rise in use of EEE has a downside- E-WASTE. Fast technological development, changing lifestyle of people and low cost availability of electronic gadgets has speeded up the obsolescence rate of IT and consumer electronics, fueling generation of Waste Electronic and Electrical Equipments (WEEE).

E-waste is characterized by two main attributes: It is hazardous, due to its content of toxic substances such as lead, arsenic, selenium, cadmium, mercury, PCBs (polychlorinated biphenyls) etc.; and it is valuable because of the presence of precious and strategic metals such as gold, silver, platinum and copper. Both these attributes make it essential that this waste stream is handled in an appropriate manner. Scientific recovery and extraction of these toxics as well as valuable items becomes critical, especially to avoid environmental and health hazards during processing and for efficient recovery of the resources.

India is the fifth biggest producer of e-waste in the world; discarding 1.7 million tonnes (Mt) of electronic and electrical equipment in 2014 as per an UN report. However, the existing management practices related to E-waste in India are reasonably poor and are proving to be a challenge. Though the regulatory framework was put in place few years back to improve the system, lack of proper implementation remains a key bottleneck. Currently more than 90% of this hazardous waste stream is handled and processed in the unorganized sector, increasing the risk of environmental damage. The current practices of e-waste management in India suffer from a number of challenges and drawbacks.

Current scenario and Concern

As mentioned above, India has now a regulatory framework to manage e-waste. Prior to the Rules, e-waste was being processed in the large informal sector in the country, mainly located in and around urban centres. These sweatshops employed lakhs of labors, primarily migrant, working in unsafe condition with many hazardous materials. E-waste Rules were notified in 2011 and came into force from May 2012. Extended Producer Responsibility is the key thought in the framework and the rules stipulates that the Producers of EEE set up a system to collect and manage the end-of-life equipments. The Rules also stipulates that e-waste needs to be processed in environmentally safe manner by licensed units.

The legal framework was expected to change many things on the ground. Establishment of extensive collection network to world class recycling facility- the new e-waste regime was aimed to bring in larger factions of this new age waste to a clean channel, thereby preventing environment damage, human exploitation and efficient resource recovery. But has all this happened?

Disappointingly, majority of e-waste generated in the country still flows in the unorganized sector, being recycled in conditions which are detrimental to both human health and environment. Though the licensed recycling infrastructure saw a big upturn in terms of numbers after the rules, with the units

licensed to process e-waste currently standing at more than 150, most of the facilities are far from world class. The existing units have also failed to divert waste from the unorganized sector and run below capacities. One big reason for this has been lack of collection network set up by Producers. Though some Producers have take back system and collection points but they are grossly inadequate to serve the large population which is e-waste generator today.

But a big challenge and disappointment has been also from lack of waste flows into the clean channel. According to most producers, the consumers, especially individual consumers, seem to still prefer to sell off their waste to informal sector rather than deposit it in the take back system set up by Producers.

Relevance of the study

The burgeoning electronic and electrical market in India is largely driven by penetration in new markets, rising disposable income and urbanization of consumers. The emerging replacement markets in urban centres because of 'design for obsolescence' products and 'want rather than need' based purchase is fueling e-waste generation. E-waste, primarily a post consumer waste, is being generated by most households and individuals. Hence, their participation in a system created to manage e-waste becomes very critical. Any amount of infrastructure or best available technology will be a failure if there is no waste flow in that.

The current e-waste management system seems to indicate that there is little participation from consumers, though they have been identified as key stakeholders in the Rules. The Rules specify that the consumers need to ensure that the e-waste generated by them is channelized to authorized collection centers or registered dismantlers or recyclers or is returned to the take back systems set up by the Producers. Though the Rules have been in force for the last 4 years, the waste flowing into the clean channel is limited and a large quantity still ends up being taken apart and scavenged for recyclable materials and components in the informal sector.

Lack of public awareness regarding the toxic nature and disposal of electronic goods has been suggested as a key reason. The growing need for education of consumers, in order to reduce the adverse impact on environment and health due to the polluting technologies resulting from improper handling of e-waste, has been widely recognized. It is felt that well informed and well educated customers can create sustainable systems. But are the consumers well informed? Under the Rules, the Producers were also entrusted with the task of creating awareness among consumers. Has there been sufficient effort in trying to educate the users?

An assessment of public awareness at the level of the individual is vital to understand what is missing from management strategies, and to understand the public's behavior towards e-waste. Awareness is also necessary if India hopes to have active consumers who will demand more responsibility from electronics producers and more action from policymakers.

OBJECTIVES AND SURVEY METHODOLOGY

Objectives of the Survey

- To assess the level of awareness about e-waste and its related Environment and health hazards among consumers
- To evaluate consumer knowledge on e-waste Rules and proper disposal methods of e-waste
- To examine the current disposal practices of E-waste
- To understand the gaps related to awareness efforts

Methodology

A survey was conducted to understand the level of awareness among individual consumers regarding e-waste. Fieldwork for the study was carried out between November and December 2015.

Coverage

In India, urban centres have been seat of industrial growth and modernization. Due to the rapid developmental activities and urbanization in cities, the consumption of EEE and hence generation of e-waste is higher here. According to a study conducted by Associated Chambers of Commerce and Industry of India (ASSOCHAM) and Frost & Sullivan in 2014, Mumbai (96,000) tops the list in generating e-waste followed by Delhi (67,000), Bengaluru (57,000), Chennai (47,000) and Kolkata (35,000). These cities have also emerged as major hotspots for e-waste processing in the country in last decade or so. Most of these cities also have presence of all major electronic Producers, thereby having a greater probability of higher awareness activities and knowledge levels.

A primary survey of individuals was done in these top five e-waste generating cities in India i.e. Mumbai, Delhi, Bengaluru, Chennai and Kolkata to assess the knowledge levels of consumers.

Sample size Proposed and Target Respondents

The sample size was calculated considering margin of error as 5%. Since, the sample size does not vary much with population more than 100000, the sample size in each of the selected city was same i.e. a minimum of 385 samples. In each city a minimum of 385 respondents were interviewed as the representative sample from the population.

These respondents were selected on the basis of their income categories. The income categories selected for this study are based on NCAER-CMCR 2010 Annual Income data. According to this data source, the income range for each class has been given below:

Table 1: Income categories according to NCAER-CMCR 2010 Annual Income data

S. No.	Income category	Range (per annum)
1.	Deprived	Below 1.5 Lakh
2.	Aspirers	1.5-3.4 Lakh
3.	Middle class	3.4- 17 Lakh
4.	Rich	More than 17 Lakh

For further simplification, three major categories of income classes were considered in this study by combining the “Aspirers” with the Middle class. Thus, this study selected the respondents based on three classes which are classified as below:

Table 2: Income categories for current study

S. No.	Income category	Range (per annum)
	Deprived	Below 1.5 Lakh
	Middle Class	1.5- 17 Lakh
	Rich	More than 17 Lakh

Among these income categories, the respondents were categorized under two major age groups i.e. Group 1 (from 18 to 40 years) Group 2 (from 41 to 70 years). This was done to assess whether there is any difference between the levels of awareness, based on age. The respondents were selected primarily on the basis of their income class and later the role of age on level of awareness was examined.

There was also an attempt to bring in equal gender representation, mainly to assess if gender played a role in the level of knowledge on e-waste.

Survey instruments

Questionnaires: A questionnaire with nine questions was developed, pre-tested and used to interview the respondents (See Annex 1). A total number of 2030 questionnaires were filled in the five cities. Because of the nature of some of the questions, it was felt to be appropriate that the interviewer administers the questions and fills the questionnaire rather than the questionnaire being handed over to the respondents.

Pilot testing

The questionnaire developed for the survey was tested in actual field conditions to ensure the followings:

- Whether it covers the survey objectives
- Ease of administering the questionnaire
- Whether the respondents are able to understand the questions
- Whether the wording of the questions reflected non-bias
- Whether the flow and selection of the words and sentences were appropriate

Limitations of Study

- Due to resource constraints and limited access to information ,it was difficult to have large sample size
- The survey was limited in nature as it was geographically restricted to the five top most e-waste generating cities in India.
- People were reluctant to disclose their income status especially in Kolkata as a consequence of which the sample size for high income group which could be collected was only 60.

FINDINGS

Respondents

A total of 2030 respondents were interviewed during the survey. The sample size of Mumbai, Delhi, Bengaluru, Chennai and Kolkata were 400, 400, 411, 401 and 418 respectively. These samples were geographically spread, uniformly selected from north, south, east and west zones of the cities. Market and residential areas were visited in all these zones to collect information using the questionnaire. The samples were evenly distributed among the three income groups i.e. Low income group (<1.5 lakh), Middle Income group (1.5-17 lakh) and high income group (>17 lakh). The samples were also almost evenly distributed between the two age groups, with 1003 respondents aged between 18-40 years and 1027 aged between 41-70 years. This was done to assess if there was difference in awareness level between people of different age groups and income groups.

Cities	Low income group		Middle income group		High income group	
	18-40 yrs	41-70 yrs	18-40 yrs	41-70 yrs	18-40 yrs	41-70 yrs
Mumbai	64	72	62	81	76	63
Delhi	66	68	75	69	69	64
Bengaluru	69	64	65	68	57	77
Chennai	67	66	64	69	69	65
Kolkata	88	83	85	85	27	33

The survey also tried to assess if the e-waste knowledge was gender specific and hence attempt was made to have equal representation from males and females consumers. A total of 1000 male and 1000 female respondents were included in the survey.

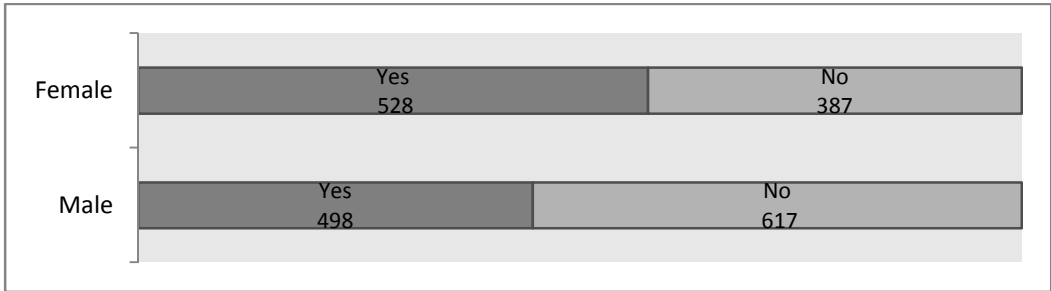
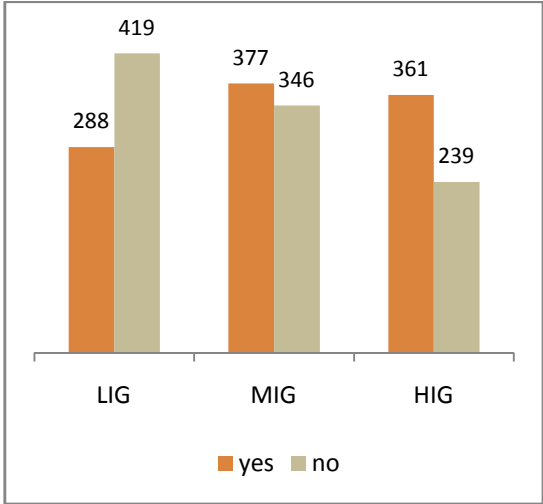
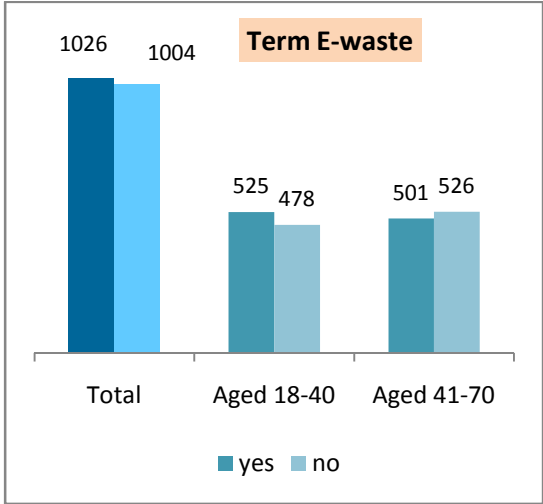
Cities	Male	Female	Total
Mumbai	215	203	418
Delhi	221	190	411
Bengaluru	238	162	400
Chennai	240	160	400
Kolkata	201	200	401
	1115	915	2030

I. E-waste: Lesser known waste stream

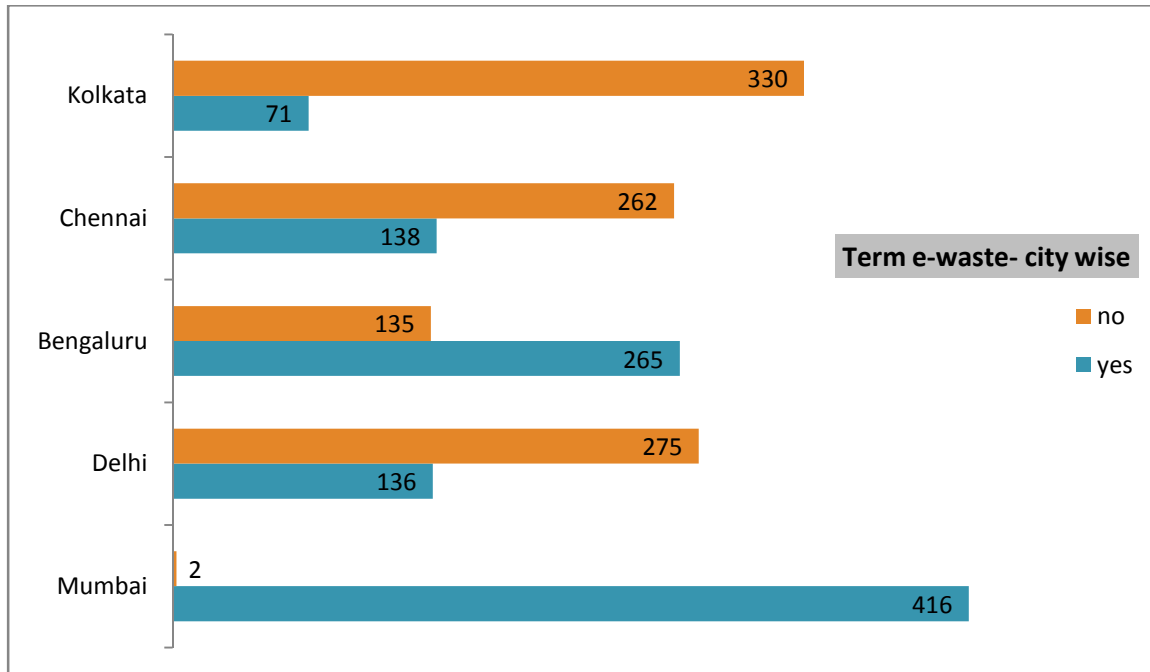
Do you know about the term e-waste?

Globally e-waste is now well known. But it is important to know if people in India are aware of this new waste stream, especially since most of them in urban centres are also e-waste generators. Our survey results shows that only 50% people interviewed are acquainted with the term E-Waste. There was not much difference in the awareness levels with respect to age group, as 52% and 48% of the younger and older population respectively have heard this term. The women in these metropolitan cities though seem more conscious as almost 58% are aware of e-waste term, whereas only 45% men are familiar with it.

With respect to the different income groups, the e-waste term seems to be more common in the high income group where almost 60% had heard the terms, compared to 40% in the low income group. The result does indicate that more efforts are required to educate a particular section of society.



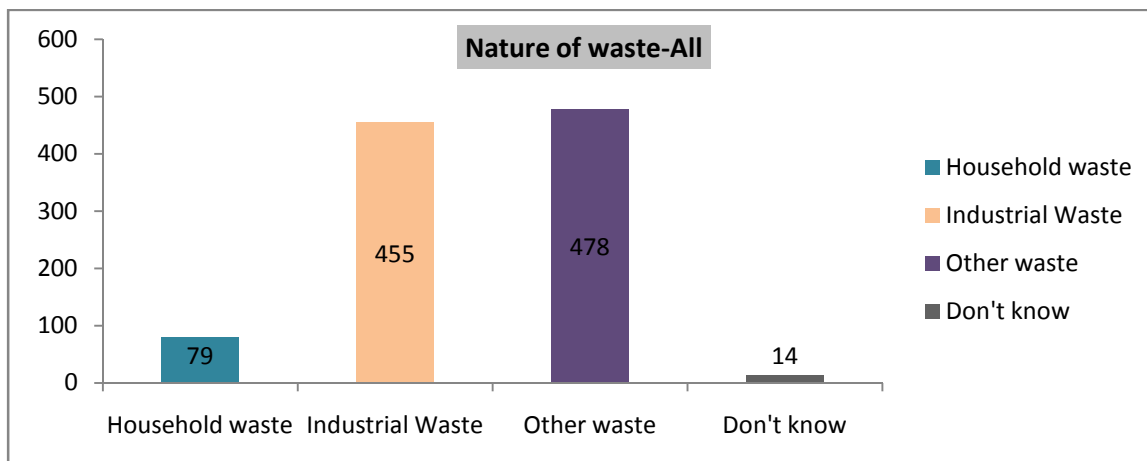
Varied results came in from cities. Though almost all citizens of financial capital of India, Mumbai have heard about e-waste, the term is almost unheard in eastern region hub Kolkata. In the IT capital of India, Bengaluru, the term was heard by the majority. But for bulk of people in Delhi and Chennai, e-waste is still an unfamiliar term.



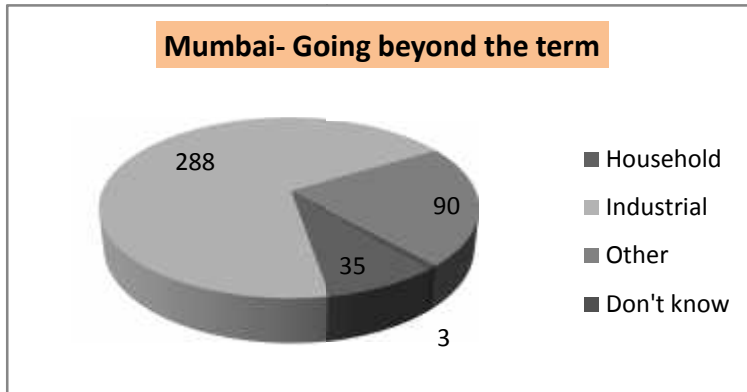
II. Waste Unknown

What is e-waste according to you?

Though 50% of the people have heard the term, it is important to see if E-waste is just a term that they have heard or do they know what it is. The idea was to know if the general public thinks this is part of the normal household waste or some sort of waste coming from industries, or is it different waste stream. The mixed response shows that the respondents are not very clear and though only a small section thinks that this might be a part of household waste, a large number of people think it might be industrial waste. A substantial number of public did think this was another waste stream. (The answer for this question was sought only from people who had, in the earlier question, said that they had heard the term e-waste)



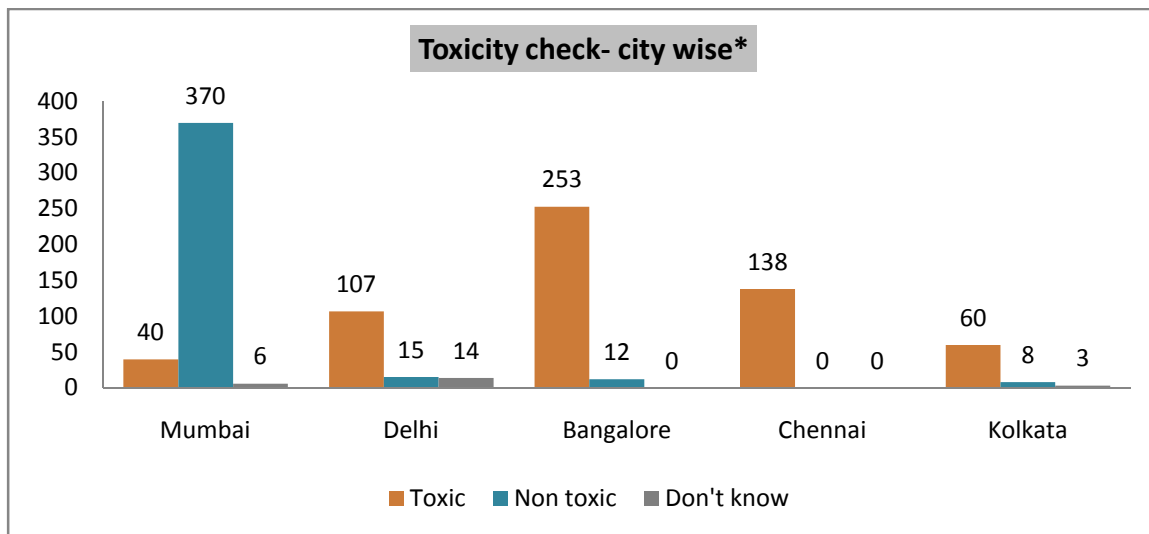
In Mumbai, where most people have heard about the term, majority think it is a form of industrial waste, indicating that there is little understanding of the issue even among the people who are familiar with the term.



III. Nature of Waste: Toxic or Not

What according to you is the nature of e-waste?

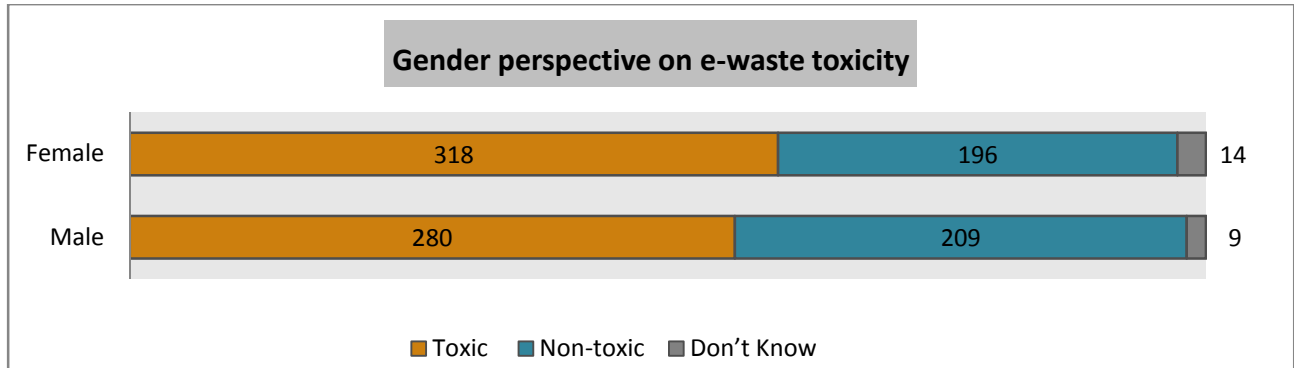
E-waste is growing exponentially and though there is concern related to the huge volumes, the primary concern is of the toxic nature of the waste. Hence, we were keen to understand if the general public, who had heard this term, was also aware of its hazardous nature.



*Answer sought only from the respondents who had heard the term e-waste

Among the cities, Mumbai fares the worst, as a large majority of respondents here feel the waste is non-toxic. In other cities, people who knew term, seem to be aware of its toxicity. In Chennai, the awareness seems to be good as 100% knew (from the people who had heard the term) that it was a toxic waste

stream. Awareness regarding the toxicity was little less in the LIG, compared to MIG and HIG, again pointing out the need to educate this particular group.



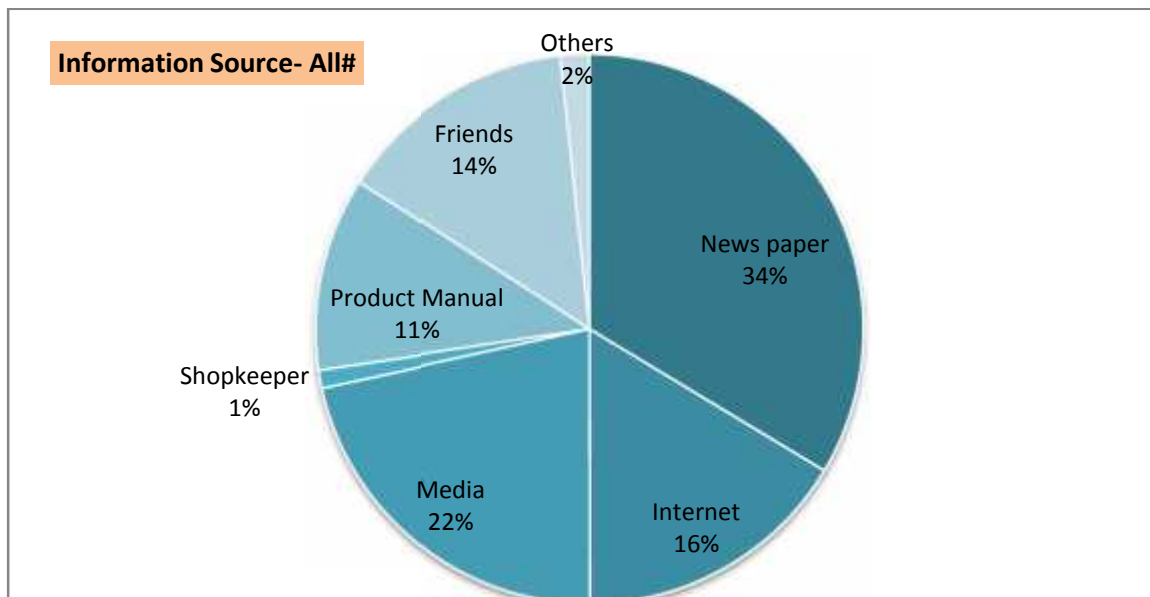
Though knowledge on gadgets are popularly considered to be a more male dominated area, the greater awareness among women about e-waste and its toxicity shows otherwise.

IV. Telltale!

From where did you get the information about e-waste?

50% of the people included in the survey know about e-waste. Are you wondering where did they hear about it? Can this provide some clue on how to rope in the remaining?

Newspapers and Media (television and radio) seem to be the major source of information, with 34% of the 1026 respondents (those who had heard the term) getting to know about it through printed dailies and 22% through visual and audio media.



Respondents gave more than one answer

Internet also seems like a good source of information.

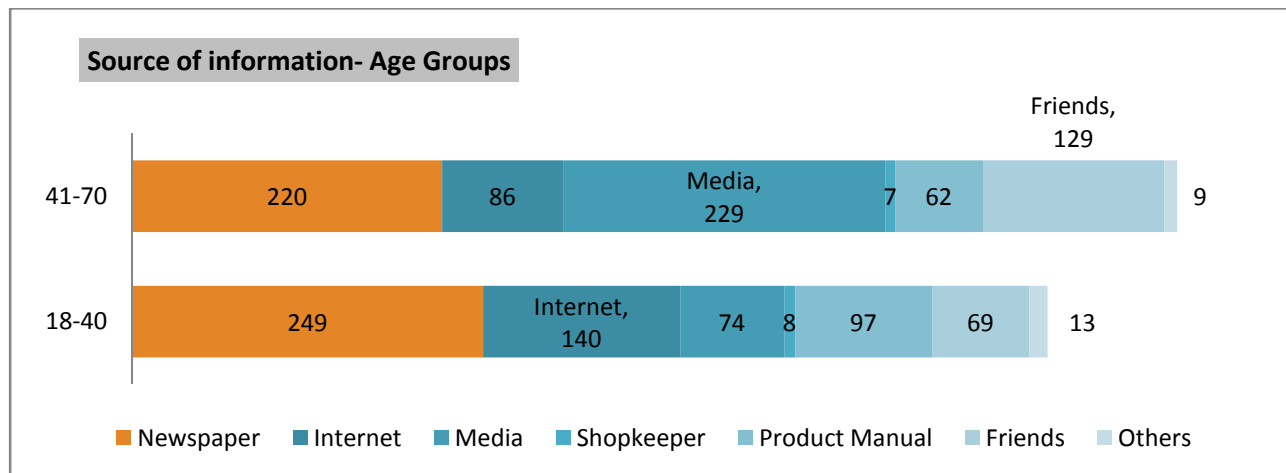
Product manual, which are given by the Producers with the products, did not come as a major source of information, probably an indication that they are not read by too many people for such information or the information on e-waste is not prominently placed in it.

Among metros, the IT city of Bengaluru's results are very different as they seem to be reading the product manuals and also learning from friends- a welcome sign indeed. Chennai gets its e-waste information largely from Internet.

Medium	Mumbai	Delhi	Bengaluru	Chennai	Kolkata
News paper	305	61	47	23	33
Internet	78	62	6	55	25
Media	251	40	4	0	8
Shopkeeper	5	0	5	0	2
Product	4	3	116	25	6
Friends	37	29	87	35	10
Others	0	14	0	0	8

Source of information for the two age groups also differed, though newspaper remained the key resource for both. For the respondents aged between 18-40, internet emerges as an important information source; with the senior generation (aged between 41-70), visual and audio media and friends are the information providers.

Internet was not a very popular information source for LIG, though it was so for MIG and HIG.

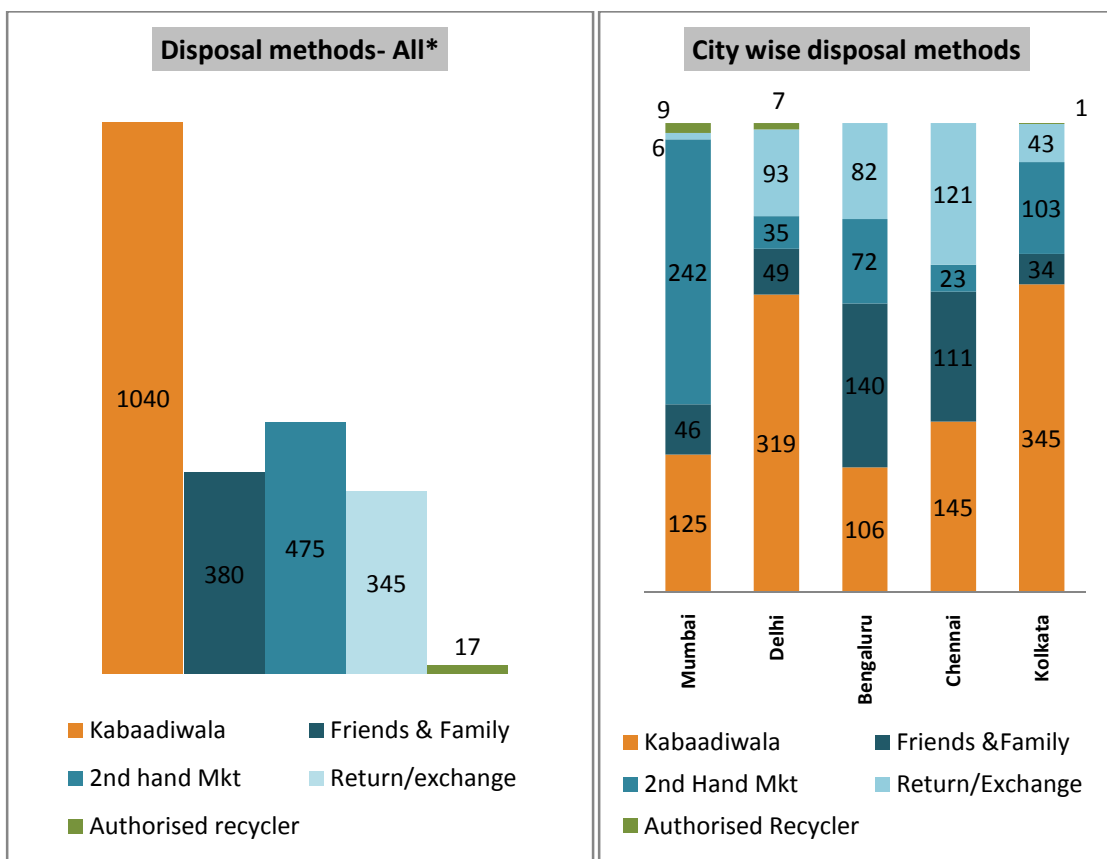


V. Flawed Fate!

How do you dispose-off or discard your unused electrical and electronic equipments?

Few years back, may be, there were only a couple of ways to dispose off your used electronics- either exchange it with the shopkeepers when buying next or sell it to a local kabaadiwala. Both these methods would mean the waste ending up mostly in the informal sector where crude methods are employed to recycle e-waste, harming environment and human health. But, things have changed quite a lot in the last decade or so, with the toxicity concerns of e-waste coming forth. E-waste Rules and good business opportunity opened up other options for disposal - today, as the rule mandates, you can return your end-of-life product to a Producer or to an authorized recycler or collector. The age old exchange or local kabaadiwala also continue to exist.

Which of these options are people using? More than half of the respondents, i.e. 51% hand over their toxic e-waste to kabaadiwalas, meaning it would end up most likely in the informal sector with crude methods of recycling. And 36% people gave the discarded equipments to 2nd hand market or exchanged them for new equipments, 16% gave them to their friends, relatives or maids. Only 0.7% people handed them to the licensed recycler. There is not much difference in the disposal methods among the three income groups, kabaadiwala is a preferred choice across the groups.



Among cities, residents of Mumbai prefer to put their discarded equipments in the 2nd hand market, whereas Bengalurians pass it on to the friends and family, a good way of extending the product lifespan. Majority of respondents in Delhi, Chennai and Kolkata still prefer the convenient Kabaadiwala route.

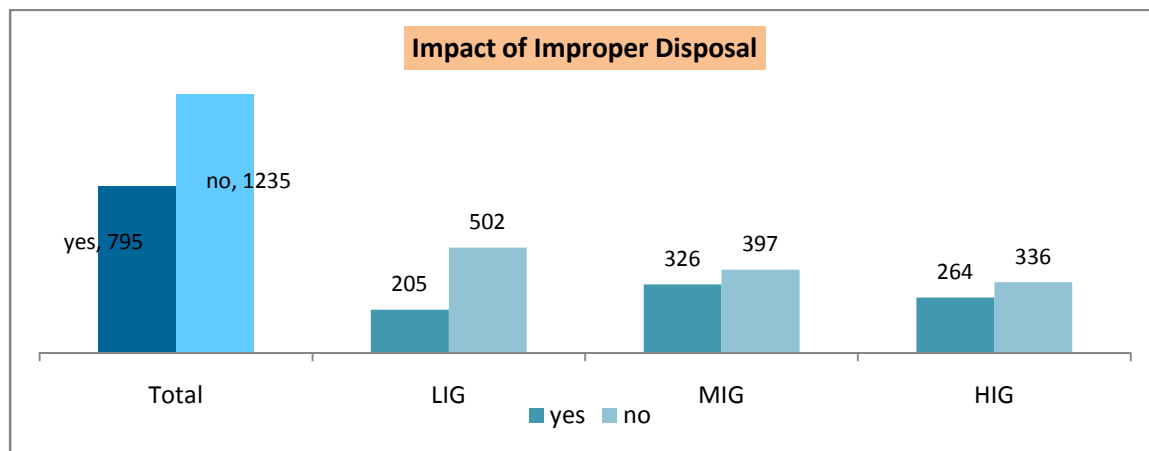
It is sad to see only a handful of respondents sending their e-waste to recyclers.

	Kabaadiwala	Friends and Family	2 ND Hand market	Return/Exchange	Authorised Recycler
Male	615	219	286	114	9
Female	425	161	189	231	8

VI. Ignorance is bliss? No way!

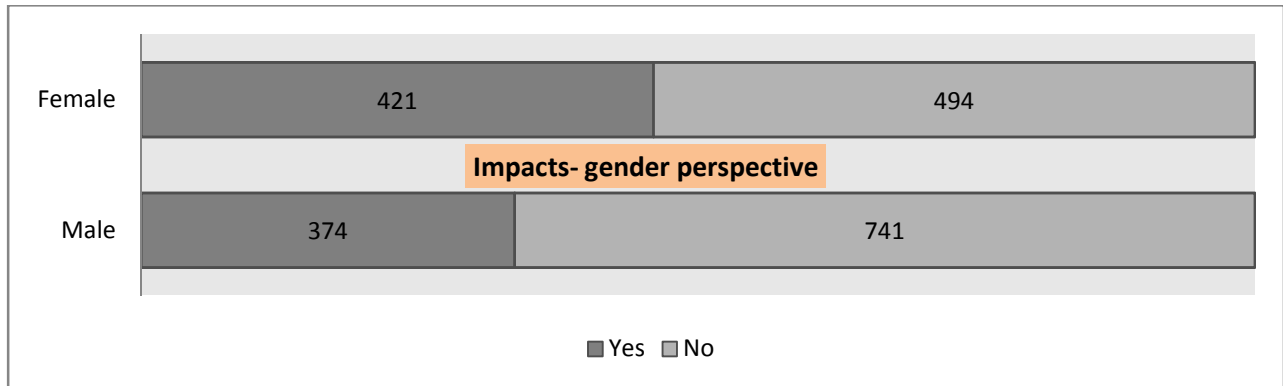
Are you aware about the impact of improper disposal the electrical and electronic equipments?

EEEs are made of a multitude of components, some containing toxic substances that have adverse impact on human health and the environment if not handled properly. Often, these hazards arise due to the improper recycling and disposal processes used. It can have serious repercussions for those in proximity to places where e-waste is recycled or burnt. But, the environment pollution resulting from this impacts every one of us. But is the general public aware of this?

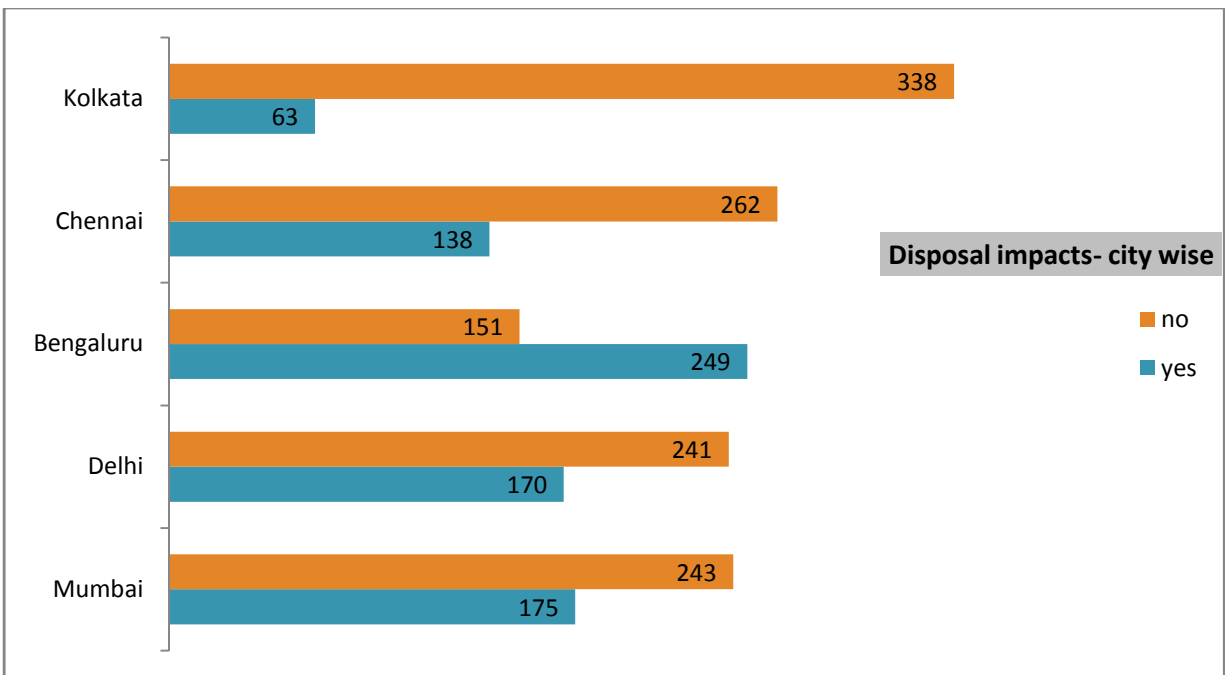


61% respondents are totally ignorant about the impacts of improper disposal of electrical and electronic equipments with the awareness being low in both the age groups. Among the different economic groups, there is least knowledge on impact in the lower income groups where more than 71% of the respondents were unaware. MIG and HIG fared just a little better, with 55% and 54% respectively aware of the incorrect disposal methods.

It is interesting to see the gender perspective in this, as the awareness among women is much more than men.



Among the cities, Kolkata fares the worst, with more than 84% of the respondent unaware of the repercussions of improper disposal. Chennai, Delhi and Mumbai also do not fare too well. Bengaluru seems to be living up to the tag of IT city as most respondents here knew about the impacts.



VII. Who bears the brunt?

If yes, what according to you may be the effects?

E-waste with its toxic contents like lead mercury, cadmium, brominated flame retardants etc poses a risk to both environment and human health. But, do common people perceive it as that? Among the respondents who know that there are impacts of improper disposal, most people seem to be aware that it is both environmental and health concern. In Mumbai, though, most people think it is only a health hazard, whereas in Chennai, majority said they are not aware of specific impacts.

	Mumbai	Delhi	Bengaluru	Chennai	Kolkata	Total
Don't know the specific Impact	11	33	17	60	1	122
Health Hazard	63	8	66	0	9	146
Environmental Hazard	28	26	46	55	12	167
Both Health & Environmental Hazard	72	102	116	23	41	354

VIII. Legally bound or blind?

Do you know about the E-waste Rules?

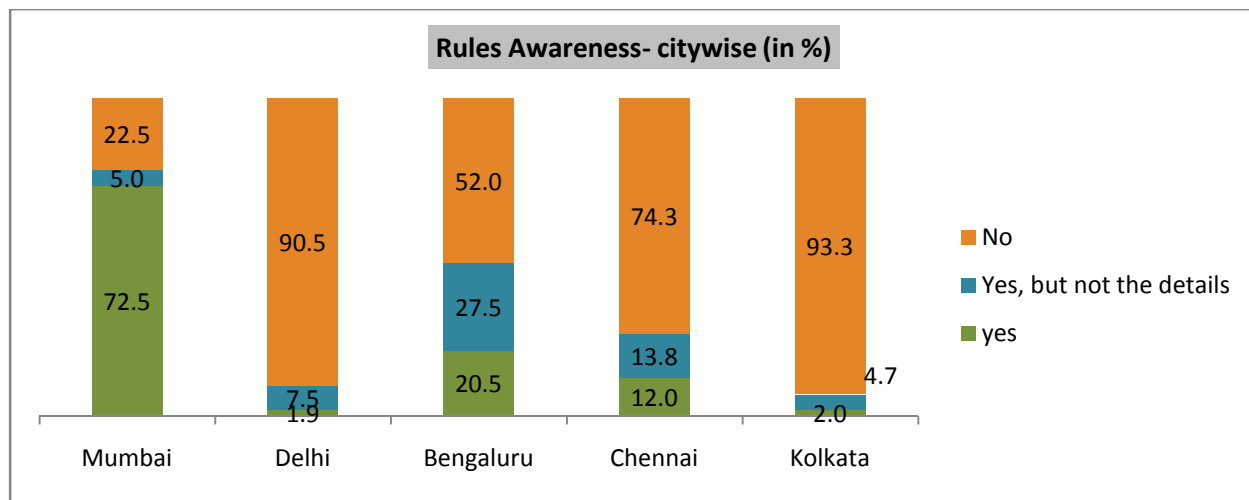
E-waste Management and handling rules were notified in 2011 and came into force in 2012. The revised rules have also now been notified and will come into effect from October 2016. Under this, the consumers have a role to play and are mandated to dispose off their end of life electronics to Producers or authorized collection agency, dismantlers or recyclers. It has been now close to 5 years that the rules were notified, but is the existence of this regulatory framework remained only with the think tanks and not percolated to the common public, one of the key stakeholders? We set out to find that.



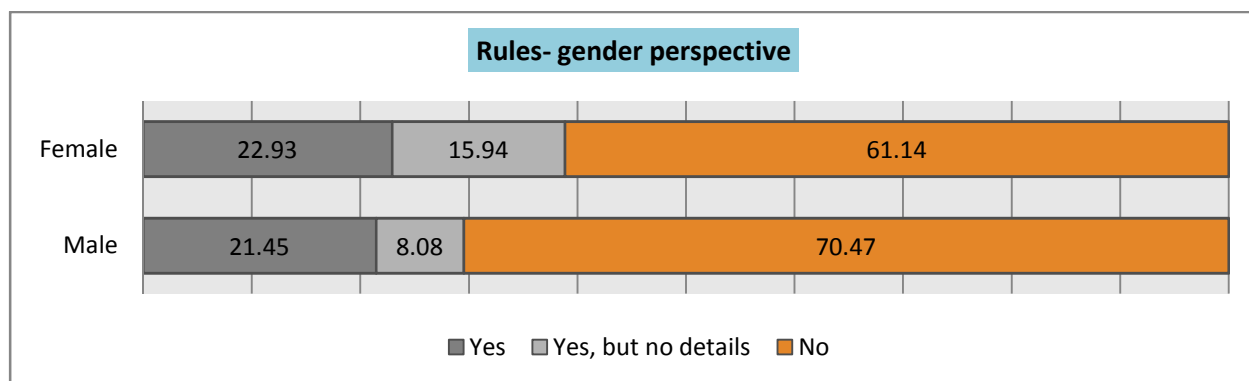
66 % of the respondents across the five cities have no knowledge on the Rules. They are oblivious of the fact that there is a rule governing e-waste disposal in the country. Among the aware respondents (34%), 12% had heard about the rules but did not know the details.

Among the surveyed cities, Kolkata respondents again seem the most ignorant as more than 93% of the people questioned have not heard about the Rules. Delhi, the capital city where the Rules are framed, is only a marginally better, with almost 90% ignorant about the Rules. 74% and 52% respondents were unaware of the Rules in Chennai and Bengaluru. Mumbai seem to know its Rules as almost 77%

respondent responded positively. Over all, looks like a lot of effort is required to make these Rules known to general public.



Women again scored higher on their knowledge about the Rules, with only 61% unaware in comparison to 70% male population.



IX. Passing the Buck!

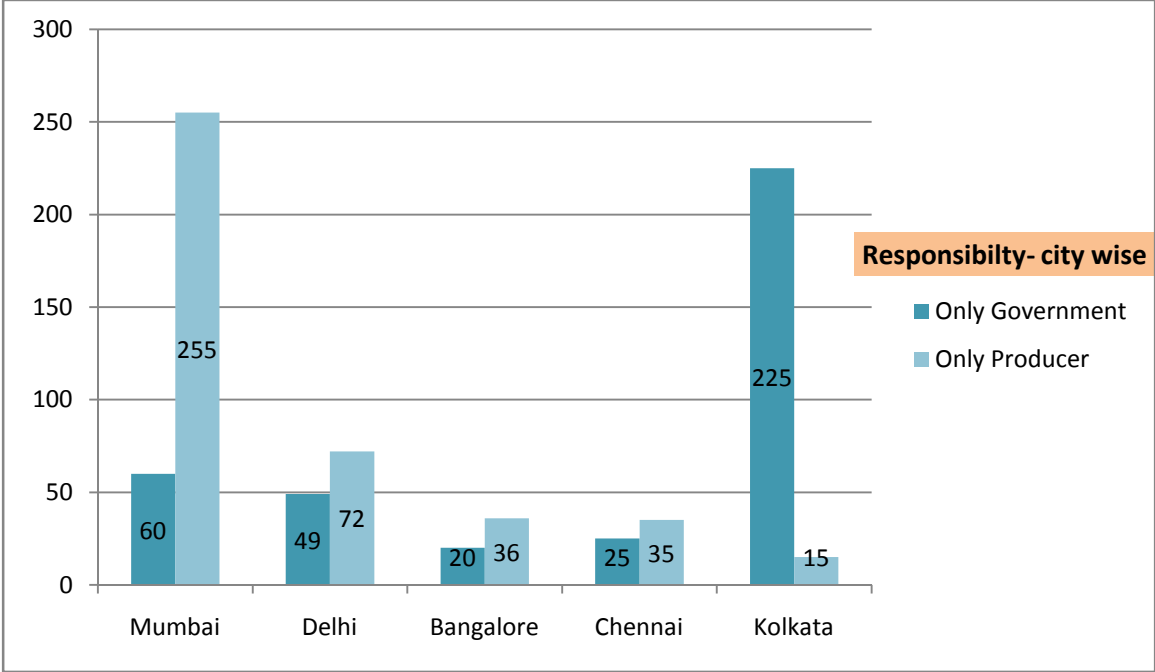
Who do you think is responsible for proper management of e-waste?

A large section of the respondents felt that the Government agency, Producers and consumers had an equal role to play in proper management of this toxic waste. It was surprising to see that not too many people in the High income group felt that consumers had any role.

	Total*	LIG	MIG	HIG
Government Agency	422	156	163	103
Producer	478	166	145	167
Consumer	331	125	133	73
All of above	465	123	188	154
Don't know	418	154	129	135

* Multiple answers given by respondents

City wise data threw up interesting results. Though most of the respondents have given multiple answers and think more than one agency or organization is responsible for proper e-waste management, some of them felt that it was only to be done by one stakeholder or the other. A large number of Mumbaiers feel that the Producers or the brands are the ones who should take care of this waste stream. Kolkatans feel differently and a large number there feel that the Government should be solely accountable. Interesting indeed!



	Mumbai	Delhi	Bangalore	Chennai	Kolkata
Government Agency	67	73	20	25	237
Producer	262	98	36	35	47
Consumer	19	119	94	55	44
All of above	86	118	149	23	89
Don't know	2	40	101	262	13

CONCLUSIONS AND RECOMMENDATIONS

Waste is one of most critical environment issues globally. Urbanization, changing consumption patterns, increasing disposable incomes and products designed for dump are some of the key factors contributing to this mammoth challenge, especially in a developing country like India. Travel anywhere in India and the problem of increasing waste is evident. The country has tried to address some of the growing waste concerns through regulatory systems, but to little effect. In addition to appropriate legislation, a critical component in any waste management program is public awareness and participation. We can set up very good systems but if there is no public participation in it, the system is doomed to fail. In recent times, Swachh Bharat Abhiyaan, the Government's ambitious project to make India a clean country, has also recognized that and aims to teach citizens to reduce and even clean their own waste.

The present study looks at the relatively new waste stream of e-waste and tries to understand the public perception, knowledge and behavior regarding it. The study conducted in top five E-waste generating cities of India i.e. Mumbai, Delhi, Bengaluru, Chennai and Kolkata set out to assess public awareness of both toxic nature of WEEE and policies governing proper disposal and management and had very interesting findings. Analysing some of these results will help us evolving better strategies, identifying right mediums for target audience and designing specific campaigns.

E-waste is generated in almost all nooks and corners of the country, with mobile phones and other consumer electronics penetrating both urban and rural markets. Most residents in the large metro cities use more than one device and still even the term is unknown to almost 50% of them. The finding certainly calls for the need to reach out to general public. Lack of clarity regarding the kind and nature (toxic or non- toxic) of the waste is also clearly pointing out towards the need to educate the consumers.

Most of the information coming in to consumers is from newspapers and media, a good sign that these mediums are covering the issue well and have been successful, to some extent, in making people aware about this toxic stream. But it is very disappointing that the product booklets, which are supposed to mention about e-waste, is not contributing enough. Probably a reminder for Producers that they need to highlight this information in the booklets. Also, since the respondents in the age group of 18-40 source lot of this information from internet, it might be a good strategy to use this platform in a better way to communicate with this audience group.

Lack of knowledge regarding the repercussions of improper disposal is also probably leading to most consumers preferring the most convenient disposal route of selling their e-waste - to local kabaadiwalas. In cities like Mumbai and Bengaluru where there is greater awareness regarding e-waste, its toxicity and impacts, we do see that less number of people are going the kabaadi route. So, may be with greater awareness, we can have more people joining in the clean channel.

Though the Rules were notified in 2011 and were meant to create cleaner channels for e-waste, a large majority has not even heard about it. The government or other agencies responsible have not really made an effort to educate the general public about this and also their role in it. No wonder, most people think that it is only government or Producers responsibility to manage e-waste.

Though the awareness was low in most cities, results from Kolkata seem to suggest that there is a need to put in more efforts in the city of Joy. The low awareness and understanding levels in the large metro cities also give us an indication of things in smaller cities or towns, where it might be worse.

The study, as a whole, points out towards the fact that the general public is probably unaware of the changing waste streams and its impact on health and environment. Presently, we think of waste in a linear model. Something is created or offered, we buy or use it, and when we are done we get rid of whatever is left. Life cycle thinking can alter this. We need to certainly stress on the need for bringing in circular economy and its benefits and the role general public can play in it.

Recommendations

- Awareness campaigns and drives should be done regularly to educate general public about e-waste.
- Producers need to put in more efforts in educating their consumers, with proper highlighted information in product booklets, their website and other advertising material.
- Government needs to educate people about the Rules and their role in e-waste management.
- Target group specific information material- age, gender and income group wise, needs to be produced.
- Platform like internet for younger consumers, newspaper and television medium and newspaper for the older consumers might be more effective.

ANNEXTURES

Questionnaire

Dear Respondent

This survey is being conducted by Toxics Link-an environmental NGO to understand the level of awareness about electronic waste or e-waste among the households. The survey is done to record your opinion and will not disclose any personal information about the respondent to any person or agency. Therefore, kindly give your valuable time (not more than five minutes) to fill this questionnaire.

Thanks

1. Do you know about the term e-waste?
 - a) Yes
 - b) No

2. If yes, what is e-waste according to you?
 - a) Everyday household waste
 - b) Industrial waste
 - c) Other waste
 - d) Don't know

3. What according to you is the nature of e-waste?
 - a) Toxic
 - b) Non Toxic
 - c) Don't know

4. From where did you get the information about e-waste?
 - a) Newspapers
 - b) Internet
 - c) Media
 - d) Shopkeepers of electronic products
 - e) Product Manuals

- f) Friends
- g) Others (please mention the source) :

5. How do you dispose-off or discard your unused electrical and electronic equipments?

- a) Kabaadiwalas
- b) Fiends/Relatives/Maids
- c) Second hand market
- d) Return/exchange at the brand store
- e) Licensed recycler

6. Are you aware about the impact of improper disposal the electrical and electronic equipments?

- a) Yes
- b) No

7. If yes, what according to you may be the effects?

- a) Don't know the specific impact
- b) Health hazard
- c) Environmental hazard
- d) Both Environmental and Health hazard
- e) Don't know

8. Do you know about the E-waste Rules?

- a) Yes
- b) No Information
- c) Know about the rules but not the details

9. Who do you think is responsible for proper management of e-waste?

- a) Government Agencies
- b) Producers
- c) Consumers

- d) All of the above
- e) Don't know

Basic Information:

1. Name:
2. Age:
3. Gender:
4. Location:
5. Income of the family (per annum):
 - a) Less than 1.5 lakhs
 - b) 1.5 – 17 lakhs
 - c) More than 17 lakhs
6. Please provide your contact details:
 - a) Mobile no. :
 - b) Email id.:

Thanks for your valuable time!

