



Toxics Link
for a toxics-free world



TIME TO REBOOT

About Toxics Link:

Toxics Link emerged from a need to establish a mechanism for disseminating credible information about toxics in India, and for raising the level of the debate on these issues. The goal was to develop an information exchange and support organisation that would use research and advocacy in strengthening campaigns against toxics pollution, help push industries towards cleaner production and link groups working on toxics and waste issues.

Toxics Link has unique experience in the areas of hazardous, medical and municipal wastes, as well as in specific issues such as the international waste trade and the emerging issues of pesticides and POP's. It has implemented various best practices models based on pilot projects in some of these areas. It is responding to demands upon it to share the experiences of these projects, upscale some of them and to apply past experience to larger and more significant campaigns.

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FOREWORD

The issue of Electronic waste management was brought into public domain by Toxics Link in 2003 initiating a long drawn campaign on this highly complex waste stream. The campaign finally led to the Government of India promulgating a separate rule in 2011 appropriately titled as “E waste (Management and Handling Rules) 2011” to manage this waste. The Rule explicitly places responsibility in the hands of the manufacturers to address both upstream and downstream issues that necessitate series of action on part of the manufacturers. The role of regulators is also of critical importance as they set the rule into motion and create conditions for the rule to be effective and to ensure high levels of compliance.

The current report is an attempt in evaluating the effectiveness of the rule and the action taken on ground in past two years. This report makes a sincere effort in recording the ground realities from secondary data, website and information sought through the Right to Information Act. The result is suggestive of the fact that there are serious gaps in implementation and will require concerted effort at all fronts.

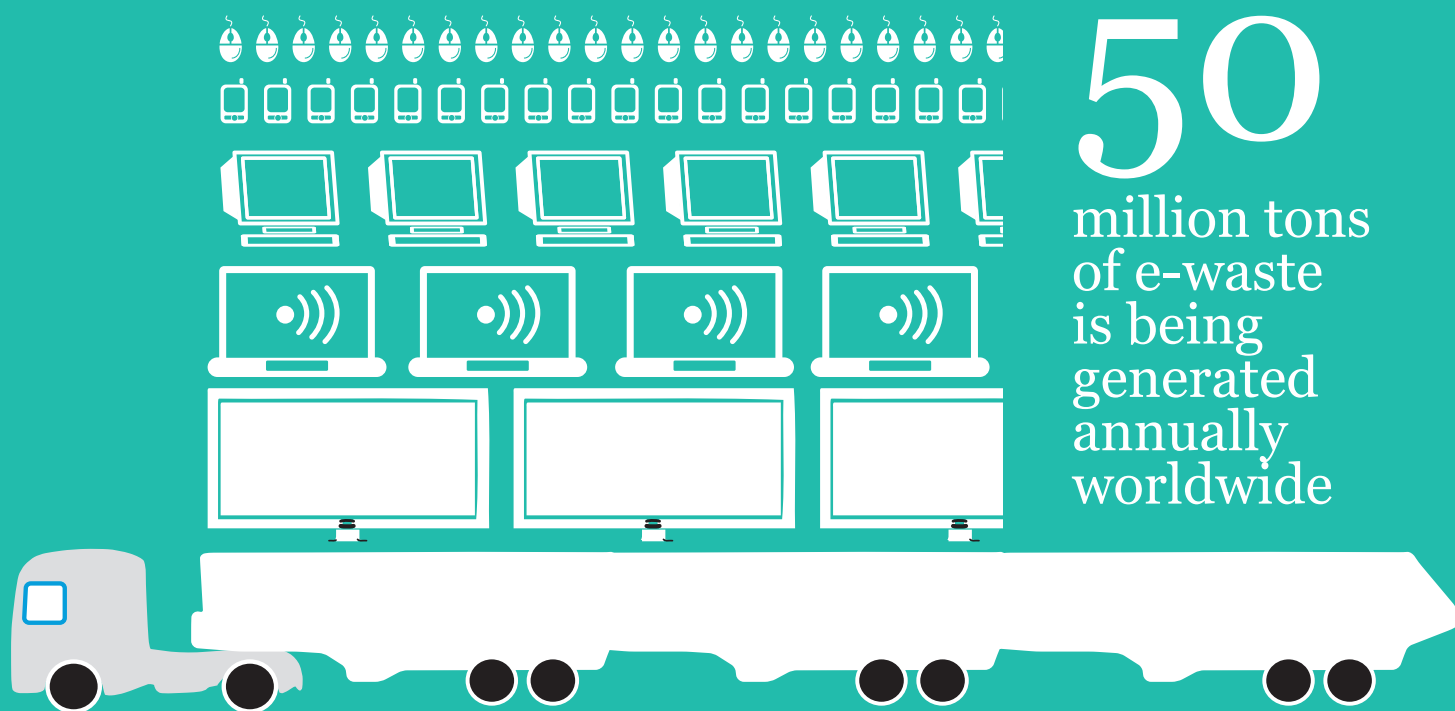
The report is an effort in the right direction and throws up some serious questions. It will be of immense help if such reports are published at periodic intervals which can serve as an effective tool towards monitoring and evaluation of the laws and improving environmental governance.

Satish Sinha

Associate Director

Toxics Link

E-WASTE MANAGEMENT



BACKGROUND

Technological innovation, intense marketing strategies and increasing consumer demand have lead to a rapid turnover of electrical and electronic equipment (EEE) globally. As a result of increased consumption pattern, rapid obsolescence of products and higher purchasing capacity of citizens large amounts of waste electrical and electronic equipment (e-waste) are generated worldwide.

E-waste management is one of the most critical waste issues affecting our environment. Globally around 50 million tons of e-waste is generated annually.¹ In India, the current estimate projects 2.7 million tons of e-waste generation annually² The concerns arising out of such waste generation is not of volumes alone but also of the nature of toxicity associated with such waste. E-waste contains a myriad of toxic chemicals, metals and materials like mercury, lead and brominated flame retardants known to cause major health and environmental damage. The high volume of e-waste streams and the hazardous substances contained therein pose serious challenges for e-waste management in India. India, which has a huge informal sector involved in waste management and recycling, collects and processes e-waste in the bylanes and neighborhoods of large cities. A huge network of informal workers has been involved in door-to-door collection as well as collection from small and large offices and businesses. The collected e-waste is usually traded

- 1 Press Release, "Basel Conference Addresses Electronic Wastes Challenge" November 27, 2006, United Nations Environment Programme (UNEP). Available at: <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=485&ArticleID=5431&l=en>
- 2 http://www.unep.org/PDF/PressReleases/E-Waste_publication_screen_FINALVERSION-sml.pdf

many times before it is finally processed for extracting valuable metals and materials. The rudimentary or unsafe practices carried out in these illegal operations have a huge fallout as they put workers at risk and are also cause for toxic emissions and discharges, thus polluting the environment. Recycling practices like open burning, acid bath for metal recovery etc. lead to massive pollution leading to environmental degradation.

To address some of these concerns E-waste (Management and Handling) Rules, 2011, were notified by the Ministry of Environment and Forest in 2011, which came into effect from May 1, 2012. This was to make sure that e-waste is handled in an environmentally safe manner, ensuring efficient material recovery. The Rules and subsequent Guidelines (issued in 2012) have brought in 'Extended Producer Responsibility' – a term not new in Indian context but never implemented well in the environmental milieu of the country.

KEY STAKEHOLDERS

Though the Rules assign roles and responsibilities to many stakeholders, including consumers and recyclers, two of the most important and critical actors are - Producers and Regulatory agencies.

Based on Extended Producer Responsibility (EPR) principle, the Rules assign responsibility to Producers (as defined in the E-waste Rules) for the end of life management of this toxic waste. The Producers are mandated to setup take-back systems in the country and ensure that their 'end-of-life' products are collected back from consumers (bulk or individual) and recycled in an environmentally safe manner. The Rules also places enormous responsibility on State Pollution Control Boards/Committees (SPCB/Cs), with the onus to implement the rules in their respective states. The SPCBs are responsible for the effective implementation of the said rules and to create systems and mechanisms to support appropriate technology for recycling such waste. One year period (May 2011- April 2012) was provided to the stakeholders, especially the producers and regulatory agencies, to set up systems and infrastructure for an effective take back program and e-waste management. The Rules finally came into effect in May 2012 and have been in operation for over two years now.

Hence it is appropriate time to evaluate the effectiveness of the Rules, but also an urgent need to understand the efforts and the levels of compliance. This will help us in understanding the bottlenecks and find answers to the current challenges. This report is an attempt to evaluate and analyse the roles and responsibilities of the regulatory agencies and the Producers and their assigned responsibilities. The report comprises of evaluation of Producers responsibility and the efficacy of Regulatory systems and compliance mechanisms and is laid out in two separate sections. The first section on EPR and its effectiveness has been presented as an assessment of the Producers by incorporating a system to rate their initiatives, hence evolving a rating for the efforts of the manufacturers which is easy to interpret and comprehend.

Section 2 is a narrative on the efforts of the various Pollution Control Boards and the evaluation is based on the information put out by the agencies on their website and responses received to a detailed questionnaire through RTI.

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PRODUCERS and EPR

RESPONSIBILITY— IS IT REALLY EXTENDED?

Assessing the Producers on EPR (under the E-waste Rules, 2011)

INTRODUCTION

Extended Producer's Responsibility (EPR) is the main feature of the E-waste (Management and Handling) Rules, 2011, wherein the producers of electrical and electronic equipment has the responsibility of managing such equipment after its 'end of life'. Under this EPR, the producers are also entrusted with the responsibility to finance and organise a system to meet the costs involved. They can fulfill their responsibility either individually or collectively or by contracting a third party to do it on their behalf.

2.7
million tons
of e-waste
is being
generated in
india alone,
annually

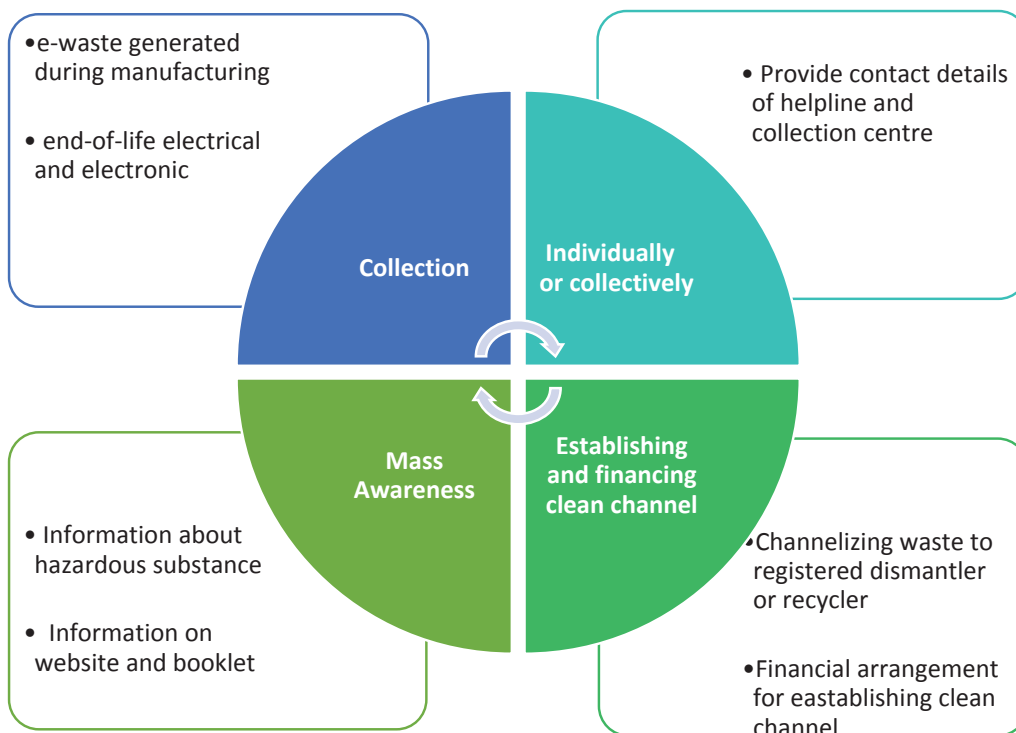


Figure 1: Role of Producers as defined in the Rules

These rules were notified in advance to give the stakeholders, especially Producers, adequate time to prepare themselves and put the required infrastructure for the effective implementation of the Rules. Unfortunately, there is not much change on the ground even after more than a year of these Rules being in force (more than 2 years after notification). Though there seems to be some action to address the B2B waste, individual consumers or general public have been mostly left ignored and are completely oblivious of the issue as well as of existence of any system to manage this waste. The e-waste management system, consumer awareness or their participation in the system – all seems to have very little forward movement since 2012.

The brands or the producers who are responsible, physically as well as financially, for collection of this toxic waste are dragging their feet on this. Though there have been some attempts from the producers to setup systems, it is a drop in the ocean, especially considering the vastness of the country and the reach of the electronic products.

Hence it is time to evaluate the effectiveness of the Rules and assess whether the Producers are engaged in carrying out their responsibilities and making changes required to address this critical issue. In this particular section, we have tried to gauge if the EEE Producers, who are one of the key actors in the E-waste landscape, have been extending their role and fulfilling Producer responsibilities.

RATING THE BRANDS

This report attempts to assess and rate the Producers or the Brands on the take back systems introduced and their effectiveness. The ratings have been primarily designed to check the E-waste take back consumer friendliness.³ It is mainly based on Company Policy on E-waste in India (based on website information) and the response (based on interaction with helplines and customer care).

Criteria – Total of 85 points

1. Sufficiency of information on Website (A maximum of 15 points)

- 0 —————> No info
- 5 —————> Info on Rules
- 10 —————> Info on Rules and Customer care
- 15 —————> Information on rules, takeback policy, collection mechanism

2. Ease of accessibility to information (A maximum of 10 points)

- 0 —————> More than 3 links
- 5 —————> 1 to 3 links
- 10 —————> Homepage

3. Takeback system (A maximum of 30 points)

- 0 —————> No takeback
- 15 —————> Only on website
- 30 —————> Information on collection points

4. Number of collection Points (A maximum of 20 points)

- 5 —————> 1-49 points
- 10 —————> 50-100 points
- 20 —————> >100 points

5. Information with Customer Care or the helpline provided (A maximum of 10 points)

- 0 —————> No Information
- 10 —————> Information provided

Companies with points between 75 and 85: Green (Good Performance)

Companies with points between 50 and 74: Blue (Fair Performance)

Companies with points between 25 and 49: Yellow (Not so good Performance)

Companies with points between 0 and 24: Red (Bad Performance)

³ The rating has been evolved by Toxics Link and is based on their perception of consumer needs and understanding.

BRANDS INCLUDED

50 Brands were evaluated on the basis of the decided criteria. The information was collected mainly through accessing their website and contacting the helplines or customer care numbers provided by the companies.

A mix of Indian and multinational Brands selling Electrical and Electronic Equipments (covered under Schedule 1 of E-waste Rules, 2011) were covered in this study. Out of the 50 brands assessed, 19 were Indian brands and the remaining Multinationals. The Companies selected were also varied in terms of the products they sell- some of them were mainly into computing equipments, some specialised in telecom or consumer durables and some companies were selling the entire range. Due to certain limitations, local brands (regional or city) could not be included in the study.

List of companies included in the study (in alphabetic order):

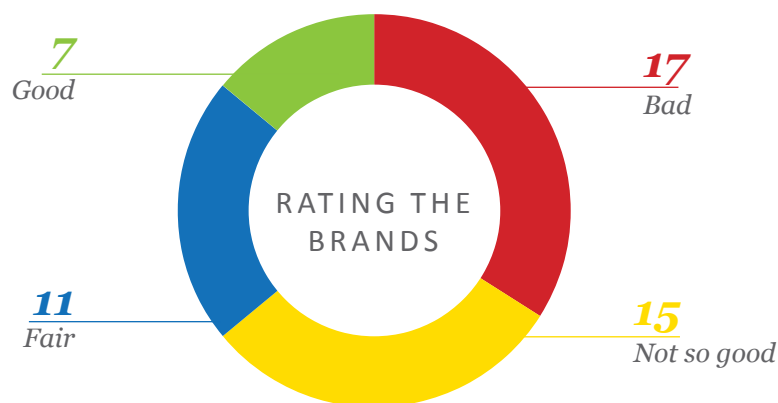
LIST OF COMPANIES INCLUDED IN THE STUDY (IN ALPHABETIC ORDER):				
Acer	Dell	Huawei India	Maxx	Sony India
Akai India	Electrolux	iBall	Micromax India	Spice
Apple (India)	Epson India	IBM India	Nokia	Toshiba
Asus	Celkon	IFB	Olive	Videocon
Ben Q India	Godrej	Intex Technologies	Onida	Voltas
Blackberry	Haier	Karbonn	Panasonic India	Whirlpool India
Bluestar	HCL	Lava	Philips	Wipro India
BPL Group	Hitachi	Lemon	Samsung	Xerox India
Canon India	Hewlett Packard India	Lenovo	Sansui India	Xolo
Carrier	HTC	LG	Sharp India	Zen

GREENWASHING – DECODING THE BRANDS

All major brands putting EEE (covered under the E-waste Rules 2011) in the Indian Market were included in this assessment. The brand websites were accessed (between June 2013 and Sept 2013) and subsequently calls were made to customer care (numbers provided on the website) seeking information on E-waste disposal.

A look at the graph below makes it quite clear that a large number of Producers (brands) have taken little or no action towards fulfilling their responsibility under the Rules. 34% of the Producers, investigated in this study, feature in the red band, signifying that they have taken no action to fulfill their responsibility under the Rules even after almost one and a half years or it being in force. Another 30% of the brands also have done little and feature on the yellow band. Most of these brands have failed to set up any takeback system on ground and have shied away from providing any information related to E-waste to their consumers.

Figure 2: Rating the Brands



Some of the leading international or multinational brands selling EEE in India have also featured in the Red category. Though the category was meant for anybody securing points between 0 and 24, all the 17 companies listed, except one, have scored zero in our marking system- clearly pointing out that these brands have not done anything on the parameters included in this study till date.

It is also interesting to note that the biggest defaulters are the cell phone companies; this red list includes 11 companies which have cell phones as their primary business product.

RED – BAD PERFORMANCE- 17 COMPANIES

Producers	Sufficiency	Ease of Accessibility	Take back policy	Collection points	Customer care	Total Score
Akai India	0	0	0	0	0	0
Ben Q India	0	0	0	0	0	0
Blackberry	0	0	0	0	0	0
BPL Group	0	0	0	0	0	0
Carrier	0	0	0	0	0	0
Celkon	0	0	0	0	0	0
HTC	0	0	0	0	0	0
iBall	0	0	0	0	0	0
IFB	0	0	0	0	0	0
Karbonn	0	0	0	0	0	0
Lemon	0	0	0	0	0	0
Maxx	0	0	0	0	0	0
Micromax India	0	0	0	0	0	0
Olive	0	0	0	0	0	0
Whirlpool India	0	5	15	0	0	20
Xolo	0	0	0	0	0	0
Zen Mobiles	0	0	0	0	0	0

The Yellow list also contains some of the leading multinational brands that are selling their products in India. These Producers have initiated some action but have failed on most counts and hence have been categorised under 'Not so Good' performance list. The list includes 15 Producers, including some big international brands and some leading Indian brands. All brands in this category, except one, have no information for consumers on physical collection points set up in the country.

YELLOW- NOT SO GOOD PERFORMANCE- 15 COMPANIES

Producers	Sufficiency	Ease of Accessibility	Take back policy	Collection points	Customer care	Total Score
Apple (India)	10	0	15	0	0	25
Asus	10	0	15	0	0	25
Bluestar	10	5	15	0	10	40
Dell	5	0	15	0	0	20
Electrolux	15	10	15	0	0	45
Epson India	10	10	15	0	10	45
Haier	10	10	15	0	0	35
Hitachi	15	5	15	0	10	45
Lava	10	10	15	0	10	45
Philips	15	5	15	0	10	45
Samsung	10	0	15	0	0	25
Sharp India	5	5	30	5	0	45
Videocon	10	10	15	0	0	35
Voltas	10	10	15	0	0	35
Xerox	5	5	15	0	0	25

Some Producers have initiated action on ground and have set up systems for take back for consumers. They have largely found place in the blue category, signifying that their performance has been fair, but some of them have still failed on a few counts like adequate number of collection points or the information provided by their helpline phones. Only 11 companies have scored between 50 and 74 points and have secured place in the blue band (fair performance) and even a smaller number of companies feature in the green band, which is to denote that the companies have taken good initiatives related to E-waste management.

BLUE – FAIR PERFORMANCE - 11 COMPANIES

Producers	Sufficiency	Ease of Accessibility	Take back policy	Collection points	Customer care	Total Score
Acer	15	0	30	5	10	60
Godrej	15	5	30	5	0	55
HCL	15	5	30	5	0	55
Hewlett Packard India	15	0	30	10	10	65
Huawei India	15	5	30	5	0	55
IBM INDIA	15	0	30	5	0	50
LG	15	5	30	5	10	65
Sony	15	0	30	5	10	60
Spice	15	10	30	5	0	60
Toshiba	15	5	30	5	10	65
Wipro India	5	5	30	5	10	55

Onida leads the pack with 80 points followed by Intex Technologies, Lenovo and Nokia, with 75 out of the total 85 possible. Though the general perception is that the Indian brands are lagging behind in EPR and the multinational brands are better, it is good to see some Indian companies in this leader pack.

GREEN – GOOD- 7 COMPANIES

Producers	Sufficiency	Ease of Accessibility	Take back policy	Collection points	Customer care	Total Score
Canon India	15	5	30	20	0	70
Intex Technologies	15	10	30	10	10	75
Lenovo	15	10	30	20	0	75
Nokia	15	0	30	20	10	75
Onida	10	10	30	20	10	80
Panasonic India	15	5	30	10	10	70
Sansui India	15	10	30	5	10	70

Most of these companies had adequate information on their website, have a takeback policy and have set up collection points on ground for consumers.

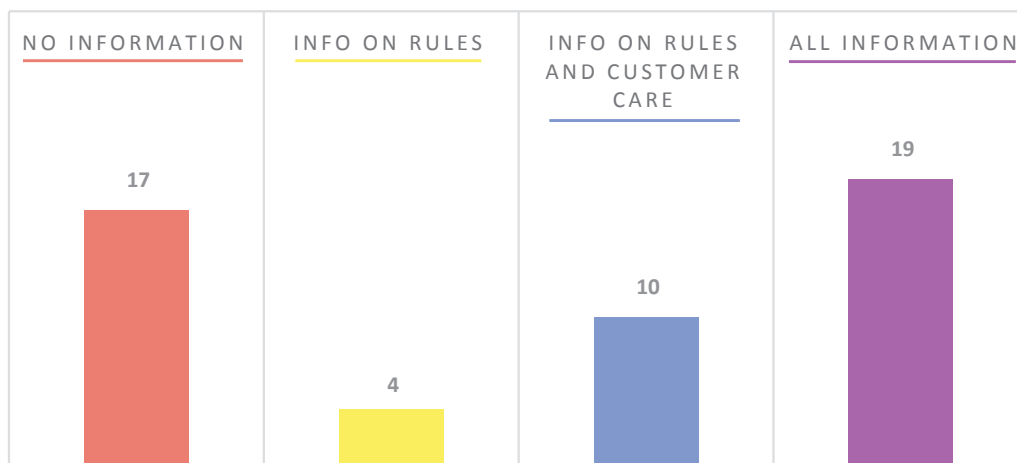
CURRENT SCENARIO

We look at how the brands have been performing overall on the criteria that we have been included in the rating system. As mentioned earlier, this is mainly to check if the producers have set up consumer friendly systems, hence include parameters like adequacy of information provided through website, ease of accessing such information, information with the customer care and the convenience of collection points.

WEBSITE ACCESSIBILITY AND INFORMATION SUFFICIENCY

One of the key responsibilities that have been entrusted on the Producers in the E-waste Rules is to provide information to the consumers- Information about hazardous substances and also regarding the collection points and helplines. Though many Producers, included in this study, have put some information related to e-waste on their websites, in most cases the information provided is not sufficient enough and in many cases not easily accessible from a consumers' point of view. There is a degree of difficulty in accessing such information.

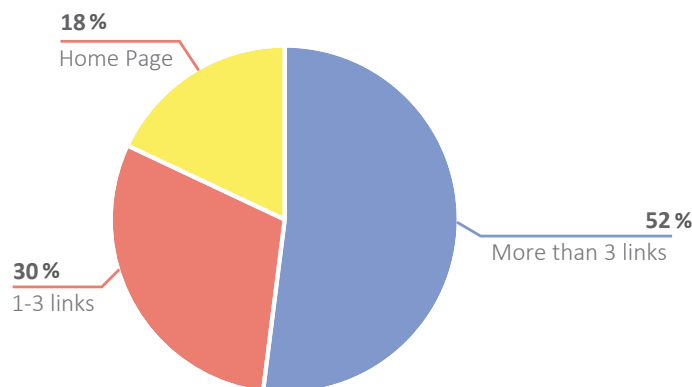
INFORMATION



34% companies, out of the total 50 included in this study, did not have any information on E-waste on their website. These included some large multinational brands as well. Another 28% had limited information, wherein they had either written about just the E-waste Rules or helpline numbers that were provided for consumers to seek further information. A large number of Producers (38%) included in the study did have all information related to the Rules, helplines, collection or takeback points. But at times access to the pages, which provided these important information, was tedious and difficult. This has been given weightage as most consumers are unaware about the issue and may not be looking for such information actively and emphasis to such information through greater visibility (for example home page of the brand) can result in higher awareness and participation. Even consumers, who are seeking such information, may not have enough keenness to search for it through many links or pages on the website.

Unfortunately only 9, out of the 50 brands included, have put information or link for E-waste on their homepage, and thus making it convenient and visible for all visitors on their website to access this information. E-waste has been relegated to probably ‘not so important’ category by a large number of Producers, with the information placed in pages which are more than 3 links away from their homepage on the website. These 26 brands include large multinational brands as well.

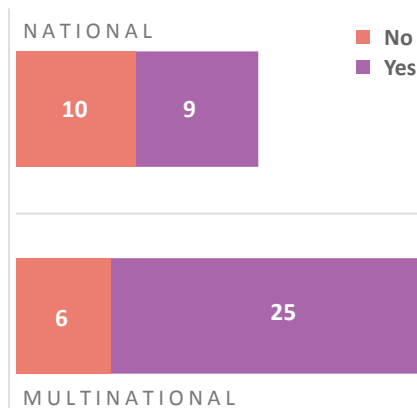
EASE OF ACCESSIBILITY



TAKE BACK

The study brings home a shocking fact. 16 brands have no take back service, atleast it is not mentioned on their website. This list comprised of mainly Indian Brands and included many of the popular Indian mobile phone companies. Surprisingly though these companies must be spending substantial amounts on advertisement and publicity, many of them hiring celebrities as brand ambassadors, they have not really invested much in carrying out their legal responsibilities as assigned by the law of the country. It was observed, though, that most of the international brands had information on take back on their website.

TAKE BACK IN INDIA

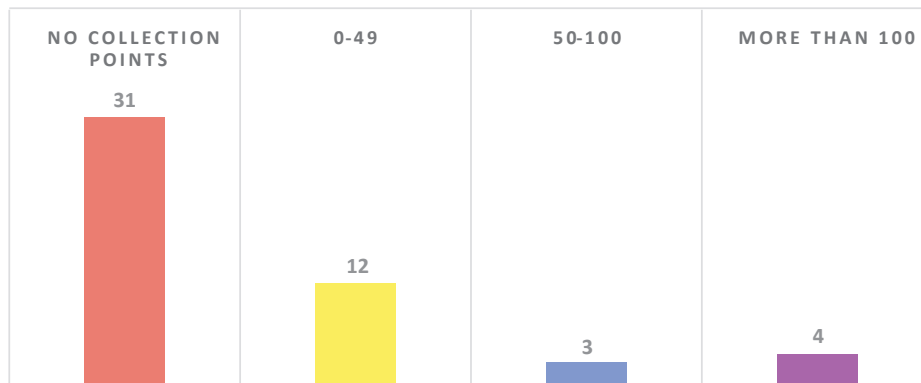


16 brands, out of the remaining 34, have their own collection mechanism, 10 have contracted third party and 6 brands have both mechanisms in place. 2 of the brands did not provide any details.

Out of 34 Producers, which had take back systems, 15 did not mention any physical collection points and only provided helplines for further information. In absence of the details on collection points, it might be very difficult for consumers to participate in this system. A large segment though, 19 Producers, provided a detailed list of the collection points set up in the country. But the important question under consideration is also the adequacy of the collection points. Though it is difficult to assess adequacy, we categorised them into three.

In a geographically large country like India, it was unimaginable to see that only 4 producers had more than 100 collection points.

COLLECTION POINTS

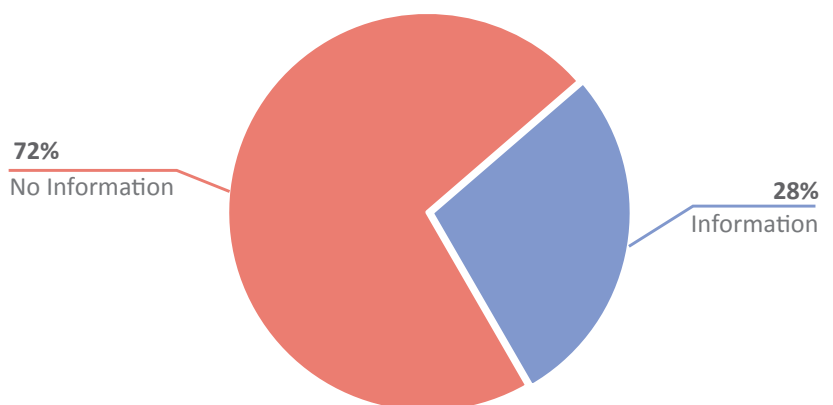


FUNCTIONALITY OF TAKE BACK SERVICES

Though many of the brands have information about take back on their website, the study also set out to investigate if the helplines provided were functional and if this desk had information related to E-waste or takeback systems. Some brands have designated separate helplines for this while others use the same helpline as for the product enquiry.

During the study, helplines or toll free numbers of all the 50 brands were contacted to check if the customer care representatives had information on the recycling programme or not. The results were quite shocking. Customer care representatives of 36 brands had no information or idea about any take back or recycling programme.

HELPLINE RESPONSE



INCENTIVES FOR CONSUMERS

Consumers in developing countries like India are different from their counterparts in developed countries that are relatively more aware about environment. The average population in India also perceives waste as a resource and assigns certain value to it, thereby expecting some incentive while discarding it. Most producers did not provide details of any incentives being offered to the consumers for returning e-waste. This might be a deterrent for the Indian consumers since they are used to financial incentives and the informal sector still continues to offer money for discarded EEE. The Producers probably are not really making any extra efforts to bring in the consumers to the clean channel which is being set up after the Rules.

In many cases brands of any particular product also do not accept e-waste of any other brand. Though this is not mandated under the Rules, this could have increased the reach of the brands and made it convenient, especially for the individual consumers to return their e-waste.

PHYSICAL COLLECTION POINTS

The collection points set up by the brands were also visited to verify if these were functional and the response at these points. These points were either mentioned on the Producer's website or were provided by the customer care helplines of the Producers. Due to limitations of the study, collection points of only 9 (Acer, Canon India, Haier, HCL, HP, Intex Technologies, Lava, Nokia, SPICE) could be visited. Also, the visits were restricted to collection points in Delhi. Unstructured interviews were conducted of the personnel responsible at the collection points and interestingly, it was found that collection points of only Haier and Nokia had detailed information or service. In most cases, the centres have no idea of the take back programme of the brand and these were not linked to any authorised recycler.

A. Acer

Name: VCL Infotech Pvt. Ltd., Nehru Place, New Delhi

This collection point is an Acer Sales & Service centre and takes back old Acer laptops from the customers. According to the staff there, the centre was not linked with any authorised e-waste recycler. The collected E-waste was not picked up by the company and it was left to the staff there to dispose off or sell the collected E-waste.

B. Canon India

Name: Canon Image Square, Nehru Place, New Delhi

When the above mentioned address was contacted, the person at the shop had no idea about the take back or recycling programme.

C. Intex Technologies

Name: Intex Technologies, Nehru Place, New Delhi

The mentioned address is a collection point for Intex Technologies which takes back all products of Intex like mouse, headphones, keyboard, phones etc. But they had no idea about the recycling or take back programme of Intex. These old or discarded Intex products are further sold to the electronic shops in Nehru Place.

D. Haier India

Haier, Mathura Road, New Delhi

This is an authorised collection and service centre of Haier and takes back old or discarded Haier product from customers. The centre has clear idea about the recycling programme of Haier and also provides pick up facility for the consumers. All the procedures and formalities like paper work etc. are followed before taking back e-waste. The collected end of life equipments are channeled to an authorised recycler.

E. Hewlett Packard India

Name: inTarvo Technologies Ltd., Okhla Industrial Area Phase-I, New Delhi

The customer care representative at HP Care informed that inTarvo Technologies is their partner for take-back/recycling program. When inTarvo Technologies was contacted for the same, they clearly denied saying that they do not take HP products anymore.

F. Lava Mobiles

Daryaganj, Delhi

The centre was functional and the person incharge was ready to offer money for the working Lava phone, even though the company policy and customer care representative clearly stated that there is no financial benefit against the phone. The personnel also did not clarify if the discarded mobile will be sent back to the Producer or to an authorised recycler. It appeared that the outlet might be selling it further to a kabadiwala or to electronic markets like Nehru Place and Lajpat Rai.

G. Nokia

Nokia Service and Communication, Kotla Mubarakpur, Delhi

N.R.I. Communication, Lajpat Nagar-II

Communication solution, New Delhi-110018

All the above mentioned addresses are Nokia Drop-In centers which had drop box for mobile phones and were functional. The consumers could drop in mobile of any brand or any related accessories, but there was no financial incentive on offer. The designated person at the centre was well aware about the Nokia recycling programme.

H. Spice Mobile & HCL Technology

Sequel Logistics Pvt. Ltd., Okhla Phase 2, New Delhi

Spice mobile and HCL technology has provided Sequel Logistics address and contact details on their websites for take back. But when Sequel Logistics was contacted on the above address to know about the collection mechanism, they clearly denied saying that they are logistic company and have no idea about take back or recycling programme.

DOUBLE STANDARDS?

EPR is the backbone of most e-waste regulatory framework across the world. The Producers are setting up systems, individually or collectively, in most countries (mainly developed) to collect and manage this toxic waste. In this section, we have tried to compare policies and practices of some of the brands- globally and in India.

A. Apple

▪ Globally

Apple's take back programme varies country to country. Apple has its own take back programme and collects electronic items irrespective of the brand in most places. There global website has detailed information on the recycling programme but the accessibility to website is very weak.

- **US:** In the US, Apple provides gift cards to consumers in exchange for apple products, which could be used for new purchase.

<https://www.apple.com/recycling/gift-card/>

- **UK:** In the UK, Apple has a payback recycling policy which allows the user to get a certain amount of money from the equipment, if it qualifies for reuse and has monetary value. If it doesn't, the customer can recycle it responsibly through one of their free recycling programmes.

<http://www.apple.com/uk/recycling/computer/>

- **Singapore:** In Singapore, the recycling services are provided by third party named, the Li Tong Group. The recycling is free of charge.

<http://www.apple.com/asia/recycling/nationalservices/asiapac.html#singapore>

▪ In India

In India, Apple's recycling services are provided by third party named Sims Recycling Solutions. There is no financial mechanism in place for Indian customers unlike US and UK. Also, the collection mechanism is not well defined as in case of Singapore or other countries.

<http://www.apple.com/in/recycling/>

B. Blackberry

▪ Globally

Blackberry's take back policy is weak and unclear. They provide recycling services only to individuals in US. Their website has little information on recycling programme.

<http://us.blackberry.com/recycle.html>

▪ India

Blackberry end-of-life responsibility is practically non-existent in India and it does not offer any take-back service to its customers in India.

C. Canon

▪ Globally

Canon has extensive information on recycling programme on its website. Globally it supports IPR. Canon has worked on various green initiatives programmes. E-waste take back initiatives in few countries are as follows:

- **US:** For toner or ink cartridge, consumers simply have to pack them in boxes to be either picked by courier service or dropped off at the courier service office. For consumer products like camera, lenses etc. they have to pay a minimum recycling fee of \$6.00.

http://www.usa.canon.com/cusa/about_canon/community_environment/environmental_commitment/environmentally_conscious_programs/toner_cartridge_return_program

<http://shop.usa.canon.com/shop/en/catalog/product-accessories/recycling-program>

- **Europe:** Canon provides free recycling service for toner and ink cartridge to most of the European countries. No information was provided for the consumer products.

<http://www.canon-europe.com/recycling/>

▪ **India**

Canon has set up a collection mechanism to channelise and dispose all their electronic equipment starting from printer, scanner to cartridges in India. Detailed information on the collection centre has been provided on the website but the on ground implementation appears weak.

<http://www.canon.co.in/personal/web/company/qehs/recycling>

D. Dell

▪ **Globally**

Dell provides various recycling options for computer and its accessories.

- **US:** Customers can either go to any nearby Goodwill store for free recycling services or call Dell representatives for IT asset recycling or resale where they provide free pick up facility to the customers. Also, for toner or ink cartridge, consumers simply have to pack them in boxes to be either picked by courier service or dropped off at the nearest FedEx office. In addition, if consumer buys a new Dell product, Dell recycles their old computer even if it isn't a Dell-branded product.

<http://www.dell.com/learn/us/en/uscorp1/dell-environment-recycling?c=us&l=en&s=corp>

- **Europe:** Dell provides free recycling and asset recovery programme for various European countries where the consumer has to pack the computer hardware and cartridges in a box and call the designated courier service for a pick up.

http://www1.euro.dell.com/content/topics/topic.aspx/emea/topics/services/recycle_program?c=eu&l=en&s=gen

▪ **India**

Dell offers free recycling services to Indian customers. They have developed online form for the entire process. But the implementation is unclear. Customer care representative did not have any information regarding the take back or recycling programme.

http://supportapj.dell.com/support/topics/topic.aspx/ap/shared/support/recycling/en/global_recycling?c=in&l=en&s=gen&DoNotRedirect=y

E. Electrolux

▪ Globally

In Europe Electrolux, along with Braun, Sony and HP founded the European Recycling Platform to comply with the WEEE Directive. This network provides recycling services to the consumers on behalf of various EEE producers.

<http://group.electrolux.com/en/producer-responsibility-3235/>

▪ India

Electrolux claims to have take back system in place in India but the website has very limited information on the same. They have provided list of authorised recyclers in the country but have not set up any collection mechanism themselves.

<http://www.electrolux.in/node179.aspx>

F. Lenovo

▪ Globally

Lenovo offers environmentally sound managed asset recovery services (ARS) and product take back and recycling programs to business and individual customers, respectively, in many countries around the world.

- **US:** Lenovo has partnered with Reverse Logistics Group Americas (RLG Americas or RLGA), a leader in environmentally sound Product Takeback and Regulatory Compliance, to offer free recycling of Lenovo products to Lenovo's home and home office customers.

http://www.lenovo.com/social_responsibility/us/en/sustainability/ptb_us.html

- **Europe:** In most of the European countries, Lenovo has partnered with either the municipalities or third party organisation (recyclers) for the collection of the WEEE from households and business houses.

http://www.lenovo.com/social_responsibility/us/en/sustainability/ptb_norway.html

http://www.lenovo.com/social_responsibility/us/en/sustainability/ptb_netherlands.html

- **Singapore:** Unlike other European and American countries, Lenovo doesn't have a very well defined takeback programme in Singapore. They have just provided an email id which has to be contacted to know about the recycling and takeback programme.

http://www.lenovo.com/social_responsibility/us/en/sustainability/ptb_singapore.html

▪ India

Lenovo has partnered with Sims Recycling Solutions India Pvt. Ltd to comply with the India's E-Waste (Management and Handling) Rules in providing drop-off centers and environmentally sound management of end of life electronics.

G. Nokia

▪ Globally

Nokia has a universal policy about recycling old phones irrespective of the country of operations and takes care of the collection process itself.

- **US:** Consumers are supposed to pack the mobile phone and its accessories in a box and drop the package at US post office or mailbox.

<http://www.nokia.com/us-en/support/recycling/>

- **UK:** Nokia has 40 care points where users can deposit their old phone for recycling irrespective of the brand.

<http://www.nokia.com/gb-en/support/recycling/>

- **Singapore:** While in Singapore there are 9 care points where your phone can be recycled.

<http://www.nokia.com/sg-en/support/recycling/>

▪ India

In India, Nokia has over 1400 drop off points in order to recycle mobile phone. Nokia offers free collection and recycling for customers.

<http://www.nokia.com/in-en/support/recycling/>

H. Sony

▪ Globally

Its take back services are worldwide and different in each place. In the USA, France, Germany, Sweden and the UK, SOMC offers freepost collection for the used mobile phones.

- **US:** Sony provides both incentive based and free recycling services to the consumers in US. Consumers have to go to their nearest store to drop off the product. They take all brands.

<http://store.sony.com/-cms-page.sony.tradein>

- **Europe:** Sony takes full responsibility for its take-back obligations in all those European countries where it has sales base except few countries. It either collects through collection points or contracted recycling organisations that undertake recycling in lieu of manufacturers to ensure its products are recycled in a manner.

- **Russia:** In January 2013, Sony Mobile Communications AB (SOMC) launched a voluntary phone recycling program in Russia and installed collection boxes in 39 service centers across 32 Russian cities.

http://www.sony.net/SonyInfo/csr_report/environment/recycle/europe/index.html

- **Japan:** Sony has different schemes for various products. These schemes vary from collection through collection points to contracting recycler to establishing recycling network. For example, for television sets Sony has established a

nationwide cooperative recycling network with five other manufacturers. As a consequence, Sony-manufactured televisions are now recycled at 15 recycling plants across Japan.

http://www.sony.net/SonyInfo/csr_report/environment/recycle/japan/index4.html

■ India

As of the end of March 2013, approximately 20 collection points across the country had been established. Sony India had a plan to review the results of this initiative at the end of its financial year and formulate future plans accordingly.

<http://www.sony.co.in/article/503906/section/environment>

CONCLUSION

Almost one year of preparatory time and over a year of regulation, the E-waste Rules, which was set to change to ground situation and create a clean channel for this toxic waste management, is still struggling to find its footing. Though the e-waste generation is still on the increase, most consumers or the end users are ignorant about what the problems are or what should be done. It is clear that there are serious gaps.

With Extended Producer Responsibility or EPR as the cornerstone of the E-waste Rules, e-waste management is largely to be taken care by the Producers or the large Brands or companies who put these electronic and electrical gadgets in the market. The study unmistakably points out towards lack of effort from these important stakeholders. Though some brands have been proactive, most have failed to create a consumer friendly takeback system, a key component of EPR. In absence of it, this toxics waste continues to flow in lanes and bylanes of cities and surrounding towns, putting at risk lives of thousands of people involved in informal e-waste recycling and poisoning our environment and our lives.

The lack of effort from the Producers indicates that there is a need to strengthen the regulatory framework and implementation. Though the Rules do have EPR as a key principle, the following elements could add more teeth to the framework

- National Registry
- Mandatory targets for collection
- Geographical spread of collection points
- Measures against Producers not fulfilling EPR



State Agencies and E-waste Rules

Is Anybody Keeping a watch?

Assessing the role of the State Pollution Control Boards/ Committees (under the E-waste Rules, 2011)

INTRODUCTION

SPCBs/PCCs have a key role in e-waste management as they are the agency accountable for ensuring implementation. The following roles have been assigned to the agency in the Rules under Schedule III:

- a. Inventorisation of e-waste;
- b. Grant and renewal of authorisation;
- c. Registration of recyclers of e-waste;
- d. Monitoring compliance of authorisation and registration conditions;
- e. Maintaining information on the conditions imposed for authorisation, etc.;
- f. Implementation of programmes to encourage environmentally sound recycling;
- g. Action against violations of these rules;
- h. Any other function delegated by the Ministry under these rules.

The Guidelines issued under the E-waste Rules 2011 further elaborate on the role of SPCBs/PCCs. Some of the key responsibilities include:

- Ensuring that the manufacturer has setup adequate collection mechanism to cater to the collection needs from the entire State;
- Ensuring that the collection centres that have applied for authorisation have adequate space for storing the quantity of e-waste for which the application has been made;
- Ensuring that the dismantlers and recyclers, who have applied for authorisation and registration, possess appropriate facilities, technical capabilities and equipment to handle e-waste safely;
- SPCBs/PCCs to make certain that dismantlers/recyclers are members of TSDF;
- SPCBs/PCCs to regularly monitor the compliance of authorisation and registration.

Months following the rules, we have no idea about the quantum of E-waste being generated at state levels or of the number of Producers operating in the country. There is no check on whether adequate collection mechanisms have been set up by Producers and are there any norms set up by the monitoring agencies to see if this system is working.

In spite of the limited take-back mechanism in place, e-waste is being collected and processed in many parts of the country. The economics of e-waste recycling has been in the limelight for some time, with the world taking note of the benefits of extracting material from e-waste and putting it back into the production chain. Many new entrepreneurs and some established global recycling companies have sensed this opportunity in India and have setup facilities. At the last count, there were more than 99⁴ units with authorisation. But the big question is on how well the environmental safety and the monitoring mechanisms are in place in order to ascertain if the practices being implemented are sound and appropriate.

One year after the rules, it is important to check the initiatives taken by different stakeholders and to evaluate the Rules and its effectiveness. This brings us to the role of the monitoring agencies – State Pollution Control Committees/Boards. Toxics Link conducted a review to determine the initiatives and actions taken by the State Pollution Control Board (SPCB) for management of e-waste since May-June 2012. The purpose of the study was to assess its compliance with the E-waste Management and Handling Rules, 2011 – which came into effect in May 2012 – and to gauge the extent to which this regulation is being effectively implemented by the monitoring agencies.

GETTING INFORMATION

The study planned to collate and review information related to the implementation of Rules by the State Pollution Control Boards/Committees. The Boards and Committees of States and Union Territories were contacted to understand their initiatives and actions related to E-waste Rules, 2011.

We also visited websites of each of the SPCBs/PCCs to gather any information/data that has been put on the website, both related to implementation as well as public awareness. A similar survey was done in November 2012 and the findings of that are also shared in this report. CPCB website was also reviewed for any information or collated data regarding monitoring/implementation. Media reports were also accessed to collect information on the monitoring agencies' initiatives.

Website of the Pollution Control Boards and Committees of the following states and Union Territories were accessed in the month of May and June, 2013, to gather information.

- | | | |
|---------------------|------------------|-----------------------------|
| – Andhra Pradesh | – Kerala | – Tripura |
| – Arunachal Pradesh | – Madhya Pradesh | – Uttar Pradesh |
| – Assam | – Maharashtra | – Uttarakhand |
| – Bihar | – Manipur | – West Bengal |
| – Chhattisgarh | – Meghalaya | – Andaman & Nicobar Islands |
| – Goa | – Mizoram | – Chandigarh |
| – Gujarat | – Nagaland | – Dadra and Nagar Haveli |
| – Haryana | – Odisha | – Daman and Diu |
| – Himachal Pradesh | – Punjab | – Delhi |
| – Jammu & Kashmir | – Rajasthan | – Lakshadweep |
| – Jharkhand | – Sikkim | – Puducherry |
| – Karnataka | – Tamil Nadu | |

4 CPCB Website available at <http://www.cpcb.nic.in/Ewaste%20Registration%20List.PDF>

Letters and e-mail communication were sent to all the states in May 2013 requesting them for information; however, we did not get a response from any of them till June 18th 2013.

Subsequently, under Right to Information Act (RTI Act), queries were sent to all the State Pollution Control Boards and Committees. The questions were primarily on the status and role of SPCBs in managing e-waste in their respective states. (Questions in Annexure 1)

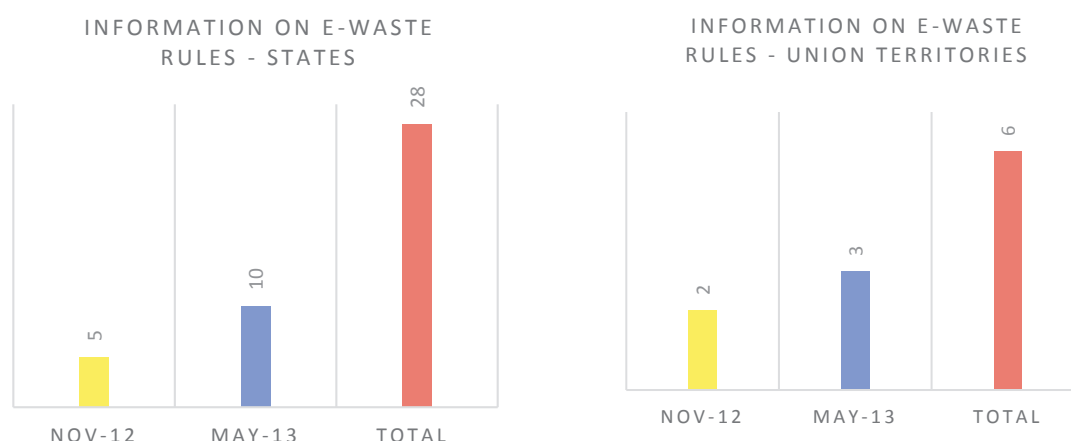
FINDINGS

The best source for information on the initiatives taken by various State Pollution Control Board/Committees was their individual websites. The websites of the monitoring and implementing body was examined in detail to understand the various initiatives and efforts made by the Pollution Control Boards' implementation of the E-waste Rules.

The following information was sought:

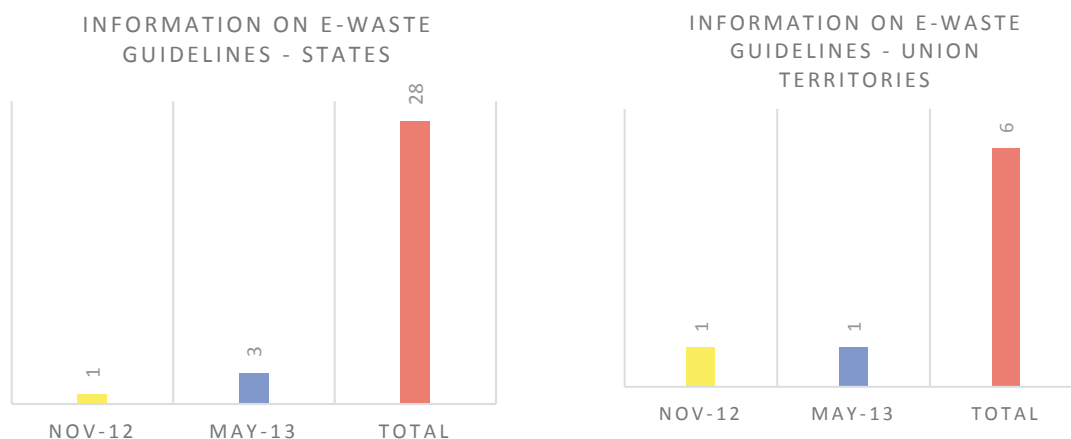
1. Information on E-waste Rules;
2. Information on Guidelines;
3. List of e-waste collection agencies, dismantlers and recyclers;
4. Any other information related to e-waste;
5. Any public notices issued by the Boards/Committees.

E-waste Rules 2011 finds very little space in the websites of the state agencies. Out of the 28 states, only 5 had published the Rules on their sites or had provided link to the Ministry of Environment & Forests site for the Rules in November 2011. The Rules are currently available on the sites of only 10 Pollution Control Boards (Table a and b) and visitors accessing the websites may not find any information on the existence of such a rule. The Union Territories do fare a little better as 50% of them have uploaded the Rules on their website. Out of the seven Union Territories, two of them – Dadra and Nagar Haveli and Daman and Diu – share a website.



However, it is a matter of concern that even after 2 years of its notification and 1 year after the Rules were being brought into force, the main implementation bodies across the country have not been able to upload these Rules on their website. Though most other waste rules find a place on the SPCB websites, the reason for the absence of E-waste Rules on this platform is not understood. This gap requires to be addressed immediately.

The Guidelines issued after the E-waste Rules fare even worse, as only 3 states placed it on their websites. The Guidelines were issued by the Central Pollution Control Board in 2012 to elaborate on the Rules and help different stakeholders develop a better understanding of the Rules and its implementation. The SPCBs do not even mention the issuance of such Guidelines with many displaying the old Guidelines issued under the Hazardous waste Rules. Among the Union Territories, only one of them has put this important guideline on their website with no change from the November 2012 status.



Access to information related to the collection centre, dismantling and recycling facility is very important, as these help the consumers – both individual and bulk – in complying with the Rules and disposing of their e-waste in an environmentally safe manner. With the collection points from producers limited currently, this list can be a valuable resource for all those who require this information on e-waste. Unfortunately, the SPCBs do not fare well on this account as well. Many states do not have such facility in their state, but even among those who have there is little information available for public. Only 4 states have recyclers list – including collection agency and dismantler – on their website. Surprisingly this number has come down from November. The Union Territories are no better with only one of them displaying this information and one of them putting an old list on the website. Lack of this information in public space is really a big gap. Consumers do look for this list as evidenced by the many calls and e-mail queries that we receive.

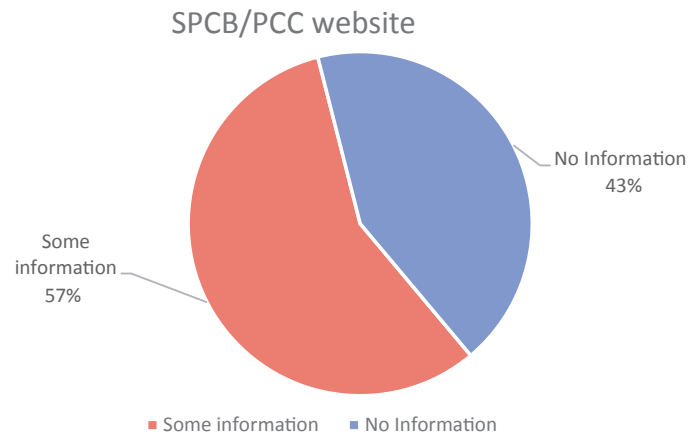
Major defaulters (based on website review)

- All states in the North-east
- Andhra Pradesh
- Bihar
- Chhattisgarh
- Kerala
- Uttar Pradesh
- Uttarakhand
- West Bengal

Regarding other information related to e-waste, we did find inventory reports on a couple of SPCB websites and also some information associated with workshops organised by them. Some SPCBs had uploaded public notices issued by them regarding e-waste management. A few of the websites, including a couple of Union Territories, had put details of collection bins.

Out of 35 Pollution Control Boards and Committee websites, 13 had no information on e-waste on their website. Out of the 22 which had some material, only 4 had detailed information. The rest websites only provided limited information that too only on the rules.

The SPCBs/PCCs are required to ensure that manufacturers setup adequate collection mechanisms to cater the collection needs from the entire State, but there are no guidelines or specifications mentioned on the websites by the state agencies regarding the adequate number of collection centres. It appears that there has been little



attempt by any agency to enforce ‘Extended Producer Responsibility’, which states that electronic equipment brands must take responsibility for their own products at the end of their useful life. If the producers fail to do so, the State Boards have the power to penalize them. However, there is no information of any action being initiated on this front on their website.

In addition to the websites being the main source of information, the Pollution Control Boards and Committees were also contacted through letters and e-mails. Only 3 PCBs responded to that and just one providing information on the initiatives taken.

The media reports were also scanned to understand if the State agencies had taken any action on the Rules and also if they were using the media to reach out to different stakeholders to educate them and provide information. Though the e-waste issue did get coverage in many states, there was mention of any initiatives taken by SPCBs in only a few.

Inadequacy of information on public space hints towards the fact that the regulatory agencies have not paid adequate attention to these rules and the effort to put information in public domain has not received the consideration that it requires.

INFORMATION FROM POLLUTION CONTROL BOARDS/COMMITTEE WEBSITE

Table a: States-Pollution Control Boards

	State	Rules	Guideline	Recycler list	Other	Rules	Guide-line	Recycler list	Other
		November 2012				May 2013			
1.	Andhra Pradesh	No	No	No		No	No	No	
2.	Arunachal Pradesh	No	No	No		No	No	No	
3.	Assam	No	No	No					
4.	Bihar	No	No	No	Site not opened in proper way	No	No	No	
5.	Chhattisgarh	No	No	No		No	No	No	
6.	Goa	No	No	Yes, but old (CPCB's 2010)	Forms for authorisation, maintaining records and return are available	No	No	No	Status (inventory) report on Goa
7.	Gujarat	No	No	No		Linked to MoEF	No	No	
8.	Haryana	No	No	Yes		Yes	Yes		Public notice to bulk consumers, recyclers, dismantlers and producers
9.	Himachal Pradesh	No	No	No	A public notice on 5 th May 2012				Public notice dated 5 th May 2012
10.	Jammu & Kashmir	No	No	No	Only tag; no information	Yes	No	Yes	Details of awareness workshop; details of requirement for authorisation and registration
11.	Jharkhand	No	No	No	Only link with CPCB & MoEF	Link of MoEF for rules	No	No	Public notice issued
12.	Karnataka	Yes							
	No	Yes	Applica-tion forms are avail-able	Yes	No	Yes			
13.	Kerala	No	No	No		No	No	No	
14.	Madhya Pradesh	Yes	No.	Yes	Expression of interest and News clippings are present	Yes	No	Yes	Workshops, EOI for inventory

State	Rules	Guideline	Recycler list	Other	Rules	Guide-line	Recycler list	Other
		November 2012				May 2013		
15. Maharashtra	Yes	Yes	Yes	Circulars and list of collection centres are also put on the site	Yes	Yes	Yes	Circulars and list of collection centres are also put on the site
16. Manipur	No	No	No		No	No	No	Note on inventory
17. Meghalaya	No	No	No		No	No	No	
18. Mizoram	No	No	No					
19. Nagaland	No	No	No		No	No	No	
20. Odisha	No	No	No		No	No	No	
21. Punjab	No	No	No		No	Yes	No	E-waste definition
22. Rajasthan	Yes	No	No		Yes	No	No	
23. Sikkim	Yes	No	No		Yes	No	No	
24. Tamil Nadu	No	No	No		No	No	No	
25. Tripura	No	No	No		No	No	No	
26. Uttar Pradesh	No	No	No		No	No	No	
27. Uttarakhand	No	No	No		No	No	No	
28. West Bengal	No	No	No		Link to MoEF website	No	No	

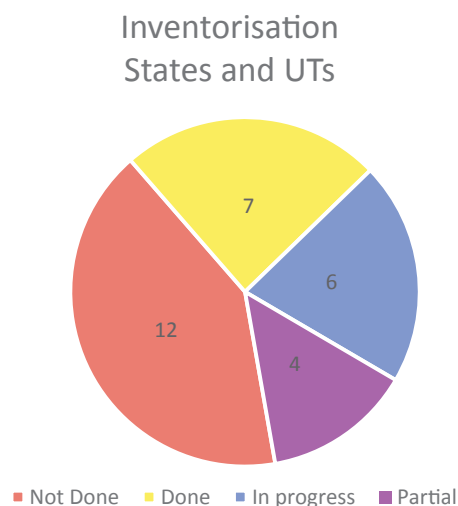
Table b: Union Territory: Pollution Control Committee

	State	Rules	Guideline	Recycler list	Other	Rules	Guideline	Recycler list	Other
		November 2012				May 2013			
29.	Andaman & Nicobar Islands	NA	NA	NA	-	NA	NA	NA	-
30.	Chandigarh	No	No	No	Guideline, Public notice and list of E-bins & items listed on ENVIS website	No	No	No	Information on ENVIS website
31.	Dadra and Nagar Haveli	Yes	No	CPCB's list, 2010	Jointly	Yes	No	CPCB's list 2010	
32.	Daman and Diu								
33.	Delhi	Yes	Yes	Yes	Number of collection units listed	Yes	No	Yes	Public notice and other activities undertaken listed
34.	Lakshadweep	NA	NA	NA		NA	NA	NA	
35.	Puducherry	No	No	No		No	No	No	
31.	Dadra and Nagar Haveli	Yes	No	CPCB's list, 2010	Jointly	Yes	No	CPCB's list 2010	
32.	Daman and Diu								
33.	Delhi	Yes	Yes	Yes	Number of collection units listed	Yes	No	Yes	Public notice and other activities undertaken listed
34.	Lakshadweep	NA	NA	NA		NA	NA	NA	
35.	Puducherry	No	No	No		No	No	No	

INFORMATION COLLECTED FROM RTI

Under Right to Information Act, queries were sent to 28 states and 6⁵ union territories (except Lakshadweep) in the month of August 2013.

All Union Territories, namely Andaman and Nicobar Islands, Chandigarh, Delhi, Daman and Dui (along with Dadar and Nagar Haveli) and Puducherry responded to the RTI, though the status of implementation varied. Among the states, only 24 responded. Even after reminders, the replies from Gujarat, Maharashtra, Manipur and Sikkim are still pending. Rajasthan sent in the reply to the RTI refusing to answer any question.



According to the information provided by the SPCB/Cs, inventorisation – one of the key tasks assigned to the SPCB/Cs in the E-waste Rules – has been carried out only in 7 states, another 4 states have done partial inventory (only one or two districts) and in 6 states the status is under progress. The remaining states and UTs have not done inventorisation of e-waste till date. Though there was no time frame assigned for this under the rules, it is startling to note that the majority of states/UTs have not even initiated this after one year of the Rules being in force⁶.

As per the data provided by the states of inventory, Andhra Pradesh and West Bengal were the highest e-waste generating states in 2011-12, with Nagaland being the least.

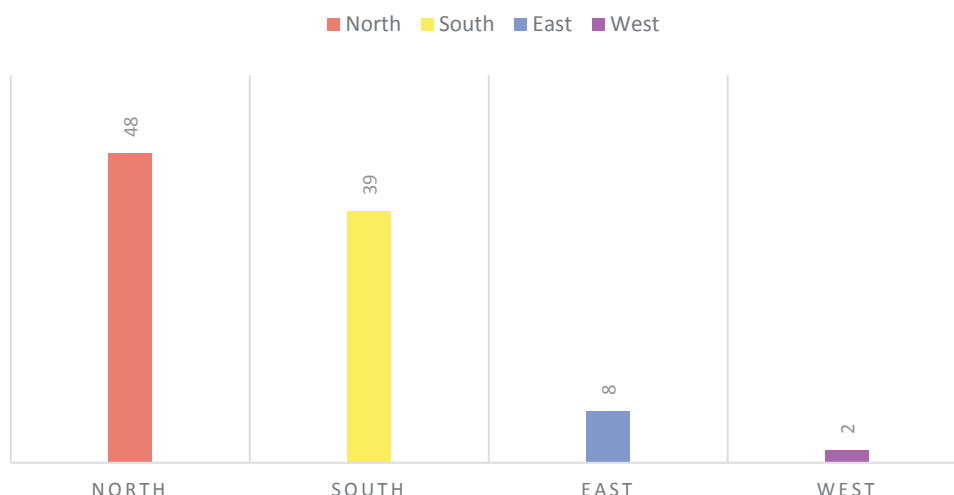
Extended Producer Responsibility (EPR) is the key principle in E-waste Rules and producers have a key role to play in e-waste management. Our query is related to the number of producers who have sought and received authorisation till July 2013 and was answered by most PCB/Cs. Delhi has given authorisation to the 17 producers; 34 producers have sought authorisation in other states, namely Goa (11), West Bengal (6), Puducherry (5), Uttarakhand (4), Andhra Pradesh and Haryana (3 each) and one each in Uttar Pradesh and Kerala. Some of these, like in West Bengal, are yet to be granted authorisation.

According to the responses, there are only 3 EEE manufacturing units in India – 2 in Haryana and 1 in Kerala. Most of the other SPCBs which responded indicated that they do not have any EEE manufacturing units in their states.

⁵ 33 RTIs were filed as Pollution Control Committees for Dadar and Nagar Haveli and Daman and Diu are common. So 5 RTIs for Union Territories.

⁶ Rajasthan has not been included as they did not reply to the query.

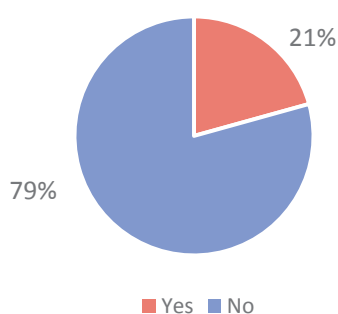
COLLECTION INFRASTRUCTURE



E-waste management infrastructure is slowly on the rise in India, especially after the Rules were notified. 42 units have been authorised for collecting e-waste till date. In addition to these, there are 55 dismantling/recycling units across the states which replied. Most of these act as collection centres as well. So, effectively, there are 97 collection agencies though the spread is very uneven. Almost 90% of these units are located in North and South of India. Some states have no authorised unit. In the north-eastern region, for example, there are only two collection agencies, both located in Assam. Eleven States/UTs have no collection centres till date.

The dismantling and recycling units seem to be even more unevenly spread, with 33 in the southern region and 21 in the north. The eastern region has only 1 dismantling facility whereas there is no such facility registered in the West (based on the replies received). The alarming part is also that most SPCBs have not indicated any mechanism for monitoring these facilities. The few states which maintain that they have set parameters to check

Monitoring of the registered units



compliance of the dismantling and recycling units are Haryana, Madhya Pradesh, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal. Only a couple of states have information related to the quantities processed in these registered units.

19 out of the 29 states/UTs have no infrastructure for processing E-waste.

Lack of awareness or public knowledge on the issue remains a critical bottleneck in the implementation of E-waste Rules. Though the E-waste Rules, 2011 came into force from May 2012, most consumers, including bulk consumers, are still oblivious of it and have little awareness about the need to do something. Only 18 states/UTs (from the responses received) have taken some action – mainly notices in local newspapers – to inform the general public about the Rules and their responsibilities. The State Pollution Control Boards, which

have been assigned the duty to take action against violations of these Rules, have done little on this account as well. Only two Pollution Control Boards – Haryana and Delhi – have sent notices to few producers for violation.

Moreover, there is little funding available to carry out any such activity. According to the responses received, only five states, namely Chandigarh, Kerala, Odisha, Puducherry and West Bengal, have some fund earmarked for this purpose.

Here's the information received from individual States/UTs:

ANDHRA PRADESH

Andhra Pradesh is one of the few states where inventorisation study has been carried out and the report is available for public. According to the reply received under RTI, the quantity of e-waste generated in the state in 2011-12 was 4268.42 MT and three producers have been authorised by the SPCB under the E-waste Rules, 2011. According to the information provided, there are no electronic manufacturing facilities in state.

The state has started to develop infrastructure for E-waste management and currently has two collection centres and two dismantling centres in the state. However, the state does not appear to have evolved any mechanism for monitoring such facilities as it did not even have information on the quantity of waste processed in the previous year.

The SPCB also did not answer to our query regarding public awareness or if there were any specific funds available for such programs.

ARUNACHAL PRADESH

According to the information provided, the state PCB has done little to implement the E-waste Rules in the state. The state which is very close to Chinese borders and is alleged to receive lot of Chinese electronics (at times not of great quality) has no idea of the quantities of this toxic waste generated. There have been no efforts to setup any infrastructure and the Pollution Control Board has not initiated any action to make the general public aware of this waste problem. The PCB also has no funds allocated for this waste management issue.

ASSAM

According to the PCB inventory, 14 MT of e-waste was generated in 2011-12 in Assam. No producers have sought authorisation from the PCB and there are no manufacturing facilities in the state. Two collection centres have been authorised in the state, both in the capital city of Guwahati.

Notifications on E-waste Rules have been published in local newspapers by the PCB and documentaries or small snippets have also been shown on local television channels.

ANDAMAN AND NICOBAR ISLANDS

There have been no steps taken till now in this environmentally fragile state of India. According to the state PCB, no collection centre has been setup and the state has not initiated any campaign to create awareness among general public.

BIHAR

Bihar SPCB has not done or initiated inventorisation of e-waste in the state and hence no data or report is available. The state, even after more than a year of regulatory framework, has no infrastructure in place for e-waste management. No producers have sought any authorisation from the state PCB.

The only effort towards sensitisation or awareness has been newspaper advertisement.

CHHATTISGARH

According to the Chhattisgarh SECB, the inventorisation study is currently being done. Only one e-waste dismantling/recycling company (also doing collection) has been authorised in the state. But the state has not mentioned any mechanism for monitoring these units. Moreover, the amount of e-waste recycled by the authorised unit has not been disclosed.

The SECB has done e-waste awareness programs on Environment day and International day for preservation of Ozone layer.

CHANDIGARH

Chandigarh PCC does not have an idea of the amount of e-waste generated in the city, as they have not undertaken inventorisation study as mandated under the E-waste Rules. One collection centre has been authorised in the state, even though no dismantling or recycling companies are registered in the state. The state has no monitoring mechanism for such units in the city.

The PCC has done some effort towards awareness campaign and has allocated 85.572 lakh, out of which 5 lakh had been utilised till the time of RTI.

DAMAN AND DIU & NAGAR HAVELI

Reply received from Daman and Diu & Nagar Haveli showed that the state PCC has taken no steps in regards to E-waste Rules 2011.

DELHI

Delhi – the biggest hub of e-waste recycling and probably one the highest e-waste generating city in India – has unfortunately not undertaken a study to assess the quantity generated in the city. Among the states which sent in replies, the city has the highest number of authorised Producers (EEE). Twenty-two producers have sought authorisation till July 2013 and 17 producers have been granted so by Delhi PCC. In a rare occurrence, the Delhi PCC has given notice to 13 producers for violating E-waste Rules 2011.

Delhi Master Plan does not allow hazardous activities in the city and hence there are no dismantling or recycling facilities within the city boundary, but 11 collection centers have been authorised by the Board. Unfortunately, it has no mechanism for monitoring these facilities.

Delhi Pollution Control Committee organised various workshops and also published advertisements in national newspapers to create awareness on e-waste, but they did not disclose about the funds allotted for the same.

GOA

Goa has carried out an inventorisation study and, according to the report available for public, 915.27 MT of e-waste was generated in state during 2011-2012. Surprisingly even in a small state like Goa, 11 producers have been authorised. According to the response, there are no EEE manufacturing facilities in the state. Two collection centres for e-waste are operational in the state.

There are no specific provisions for funds for e-waste, but awareness has been done through notices issued in local newspapers.

HARYANA

Gurgaon – one of the major cities in Haryana – has emerged as a major commercial hub in recent times with many large companies including electronic companies and MNCs setting up their base here. This means huge consumption and waste generation of EEE. In spite of this, the State PCB has not made any efforts to assess the quantity of e-waste generated in the city.

Three producers have sought authorisation from the SPCB and there are two manufacturing units in the state (total quantity of e-waste generated by them 53 MT). Authorisation has been granted to one collection centre and seven dismantling and recycling units (also doing collection) have been given registration for processing e-waste. These companies have a capacity of processing 18500 MT per annum, though the PCB did not share any information regarding how much quantity has been processed by them.

Though the Haryana SPCB has not specified any funds allocated for awareness, they have taken some action towards this. In a rare, the PCB has served showcase notices to some producers; their number or names have not been provided.

HIMACHAL PRADESH

There has been no state-wise inventorisation, but a couple of districts have assessed the quantities generated there. The two districts – Solan and Sirmour – generated 7.89MT of e-waste in 2011-2012.

No clear list of producers was provided in this district-wise reply to the RTI; only 8 of the districts responded. Though one district stated 9 producers, another district listed 40 producers, which seemed incorrect as many FMCG companies were included. There are no manufacturing facilities available in the state; only one e-waste collection centre has been authorised in the state, which is located in Solan district. There are also no e-waste processing plants in this hilly state of India.

The SPCB initiated some awareness campaigns and workshops on e-waste. However, no funds are available to the Pollution Control Board for such activities.

JAMMU AND KASHMIR

SPCB did inventorisation of e-waste for the year 2009-10 and another one – for 2012-13 – is under progress. The Board has not provided any data of the inventorisation. No data is given on the amount of e-waste generated in the state 2011-2012.

For creating awareness, the SPCB has sent notices to scrap dealers, bulk consumers and manufacturers in the state.

JHARKHAND

Only one district in Jharkhand has done inventerisation (Jamshedpur); 1.15 MT of e-waste was generated in this district in 2011-2012. However, no producers have sought authorisation till date. With no collection centre or dismantling/recycling units present, the state has no infrastructure to manage e-waste.

The PCB published some newspaper notices for creating awareness, but, like most other states, it did not answer questions related to the specified fund available for e-waste.

KARNATAKA

Karnataka SPCB did not provide any answers stating that the information is 'not available'. This is astounding as most other states were able to provide answers to our queries. The State is probably one of the highest e-waste generating states – Bangalore being the IT hub – in the country.

The PCB directed us to their website for information on dismantling and recycling facilities, which has listed 26 units registered under the E-waste Rules, 2011.

KERALA

The Kerala State Pollution Control Board has not undertaken any inventerisation study even after more than a year of E-waste Rules. Only one producer has sought authorisation till date, but it is still to be granted. Only one manufacturing facility is available in the state, but the waste generated by the unit was not disclosed. However, the SPCB has spent around 1.06 lakhs rupees on public awareness.

The state, which has been putting a lot of stress on IT development, has one authorised collection centre operational.

MADHYA PRADESH

Madhya Pradesh PCB has initiated the inventerisation process and currently it is being done in 5 districts of the state. Though the state has no authorised manufacturing facilities or producers, one recycling unit (which also acts as a collection centre) has been given registration and it is currently operational in Indore city. This facility has processed 1.5 MT of e-waste between Feb-Mar 2013 as per records available with PCB. The authorities are monitoring the facilities as per the E-waste Rules and Guidelines.

The State PCB has been very active towards creating awareness and has organised more than 10 workshops in various cities like Bhopal, Jabalpur, Indore, Gwalior, Ujjain, etc. Apart from these, newspaper ads, pamphlet distribution in school/colleges and other campaigns with NGOs have been taken up to make public aware of this problem. All government departments have been also sent circulars regarding proper e-waste management.

MEGHALAYA

Meghalaya SPCB has done inventerisation of e-waste and these reports are available for public. Apart from this, the state has taken little action for proper management of e-waste generated in the state and currently there is collection or processing units authorised by PCB.

The Board has not conducted any awareness programme till date and no funds have been allocated for this purpose.

MIZORAM

The SPCB has done inventorisation of e-waste in two districts in this state in North-east, but the report has not been made available for public. According to the RTI reply, the amount of e-waste generated in the two districts - Aizwal and Lunglei – was 18MT in 2011-12.

The Board has not initiated any action besides this and there is no collection or processing units authorised in the state. No awareness has been created as no funds have been allocated for the same.

NAGALAND

Nagaland has carried out an inventory study which was done in 2009 and a negligible amount of e-waste was found to be generated in the state. The SPCB has not taken any action post that and currently there is no updated inventory of the waste generated. No infrastructure has been setup in the state.

The Board, though, has tried to create some awareness through articles in local newspapers.

ODISHA

Odisha has not done inventorisation of e-waste, but has initiated the same. Two producers have sought authorisation from SPCB for setting up collection centres, which are pending. Additionally there are 7 authorised collection centers in the state (in Bhubaneswar and Khurda). No dismantling and recycling companies are registered with the PCB.

The SPCB has taken some steps for public awareness by issuing public notices, publishing newspaper advertisements and organising workshops. A total of 1.6 lakh rupees have been budgeted, out of which 18,166 has been spent.

PUDUCHERRY

The PCC has not done inventorisation, but gives a figure of 11.06 MT of e-waste generated in the state 2011-12. Five producers have sought authorisation, though it is not clear if it has been granted by PCC. The Union Territory has no authorised collection centre or registered dismantling and recycling company.

Puducherry has allotted 1.30 lakh rupees for E-waste, and has taken initiated public awareness campaign.

PUNJAB

The Pollution Control Board has not done any inventorisation of e-waste in the state. No manufacturing facility or producers are authorised in the state. There is some infrastructure for collection as the Board has authorised 5 e-waste collection centers in the state. Assistant Environment Engineers have been deputed to carry out inspections for checking compliance and they have visited bulk consumers, common collection centres, etc. in Ludhiana for the same.

All the regional offices (of PCB) have been asked to launch a special drive and they have issued notices to consumers and producers for compliance.

RAJASTHAN

The PCB responded to the RTI saying that the question asked was not clear and precise and, was also not valid. This is surprising since most of the other states replied to our queries.

TAMIL NADU

The response was received district-wise. Though most districts replied, some of them did not and hence the information received was not completed. None of the districts, except Salem, have done inventorisation and hence no information is available on the quantity of e-waste generated in the state. Two manufacturing facilities have been mentioned in the replies (appear to be bulk generators though). Three e-waste collection centers have been authorised in these districts and 3 dismantling and recycling companies (also doing collection) have received registration. These three dismantling/recycling units – in district Tiruvallur – processed 1346 MT of e-waste between May 2012 and July 2013.

Even after so many months of Rules being in force, their replies indicate that the awareness programmes are still at the planning stage.

TRIPURA

State level inventorisation has been initiated to assess the quantity of e-waste generated and a survey to identify the manufacturing units in the state is under progress. No other action has been initiated by the Board yet and there is no infrastructure for e-waste management.

UTTRAKHAND

No inventory study on e-waste has been done in the state yet and there is no data available on waste generation. Four producers have sought authorisation and 56 manufacturing facilities have been listed by the PCB in their replies.

The state has four authorised collection centres and three of these are dismantling and recycling companies. The units are regularly monitored for waste water and air quality.

However, no step has been taken for creating public awareness in the state.

UTTAR PRADESH

The inventorisation of e-waste is under process as per the reply sent by the SPCB. Only one producer has been given authorisation by the Board till date.

Seven units have been authorised to do collection by the state and 9 units have been registered to do collection/dismantling/recycling. The recycling/collecting/dismantling units are inspected by the Regional Officer of UPPCB for ensuring compliance of the conditions of authorisation and registration.

Public awareness has been done through publication of notices in newspapers; however no fund has been allotted for e-waste.

WEST BENGAL

The PCB has done inventorisation of e-waste and the reports on e-waste are also available. 34,124 MT of e-waste was generated in the state in 2011-2012. Six producers have sought authorisation.

Though the city is in the eastern hub, there are no collection centres for e-waste. However, one dismantling/recycling company has been registered under the e-waste Rules. Monitoring parameters applicable for red category industries will be applied here as well.

The PCB has conducted awareness workshops for bulk users with civil society organisations. Though no specific fund has been allotted for creating awareness, PCB has been sanctioned 2.5 lakh rupees from the Central Government for conducting such programmes.

CONCLUSION

It's been two-and-a-half years since the E-waste (Management and Handling) Rules, 2011 were notified. The big question now is: how effective these rules have been? Have we moved forward and been able to implement it on ground? Or has these rules just remained on paper with no change in the ground situation?

This section of the report, which is part of the process to review the effectiveness of the e-waste Rules, looks at this second stakeholder – Regulatory authority, in this case the State Pollution Control Boards and Committees – who have been assigned certain tasks and duties to ensure that e-waste is effectively managed and there are no violations on the ground.

The findings from the RTI filed and from other sources suggest that the regulatory authorities are falling short. There seems to be little initiative from the PCB/Cs to get the ground situation changed. From lack of information on their website to inventorisation, from setting monitoring mechanisms to taking actions against violations, most Boards have failed on many counts.

Overall, it is a very dismal picture as most State Pollution Control Boards and Committees have not put in place any compliance mechanism to enforce the E-waste Rules. The State Pollution Control Boards also failed to provide any information on whether they had taken any action to check if the producers, bulk consumers or the processing industry – collection, dismantling and recycling – were adhering to the Rules and carrying out their responsibilities.

The following measures can probably help the State Boards in effectively implementing the Rules-

- Capacity building and training of the officials
- Clarity on Rules and Guidelines
- National Registry to identify the Producers
- Sharing of information between State Boards
- Framing of guidelines to help SPCBs monitor the collection, dismantling and recycling units
- Resource allocation for E-waste management

Annexure 1:

Brands	Availability of information on website	Ease of accessibility to information	Sufficiency of information	Information on take back with customer care / helpline
Acer	Yes	Five links	Details on rules, takeback and collection points	Yes
Akai	No	-	-	No
Apple	Yes	Five links	Details on rules and email id of recycler	No
Asus	Yes	Separate Website	Details on rules and takeback	No
Ben Q	No	-	-	No
Blackberry	No	-	-	No
Bluestar	Yes	Two links	Details on rules and takeback	Yes
BPL Group	No	-	-	No
Canon	Yes	Two Links	Details on rules, takeback and collection points	No
Carrier	No	-	-	No
Celkon	No	-	-	No
Dell	Yes	Four links	Details on rules and takeback	No
Electrolux	Yes	Home page	Details on rules and takeback	No
Epson	Yes	Home page	Details on rules and takeback	Yes
Godrej	Yes	Two links	Details on rules takeback and collection points	No
Haier	Yes	Home Page	Details on rules	No
HCL	Yes	Three links	Details on rules, takeback and collection points	No
Hitachi	Yes	Three Links	Details on rules and takeback	Yes
HP	Yes	Four links	Details on rules, takeback and collection points	Yes
HTC	No	-	-	No
Huawei	Yes	Two links	Details on rules, takeback and collection points	No
iBall	No	-	-	No
IBM	Yes	Six links	Details on rules, takeback and collection points	No
IFB	No	-	-	No
Intex	Yes	Home page	Details on rules, takeback and collection points	Yes
Karbonn	No	-	-	No
Lava	Yes	Home page	Details on rules and takeback	Yes
Lemon	No	-	-	No
Lenovo	Yes	Home page	Details on rules, takeback and collection points	No
LG	Yes	Three links	Details on rules, takeback and collection points	Yes
Maxx	No	-	-	No
Micromax	No	-	-	No

Brands	Availability of information on website	Ease of accessibility to information	Sufficiency of information	Information on take back with customer care / helpline
Nokia	Yes	Five links	Details on rules, takeback and collection points	Yes
Olive	No	-	-	No
Onida	Yes	One link	Details on rules and takeback	Yes
Panasonic	Yes	Two links	Details on rules, takeback and collection points	Yes
Philips	Yes	Two links	Details on rules, takeback and collection points	Yes
Samsung	Yes	Separate website	Details on rules and takeback	No
Sansui	Yes	Home page	Details on rules, takeback and collection points	Yes
Sharp	Yes	Three links	Details on rules	No
Sony	Yes	Five links	Details on rules, takeback and collection points	Yes
Spice	Yes	Home page	Details on rules, takeback and collection points	No
Toshiba	Yes	Two links	Details on rules, takeback and collection points	Yes
Videocon	Yes	Home page	Details on rules and takeback	No
Voltas	Yes	Home page	Details on rules and takeback	No
Whirlpool	Yes	Two links	No information	No
Wipro	Yes	Three links	Details on rules	Yes
Xerox	Yes	Two links	Details on rules	No
Xolo	No	-	-	No
Zen Mobile	No	-	-	No

Annexure 2:

Brands	Physical collection points		Take back for own brand/ Multi-brand	Financial Mechanism
	Own/Third Party	Number of collection points/centre		
Acer	Third Party – Attero Recycling	21	Own	No information
Akai	-	-	-	-
Apple	Third Party – SIMS Recycling Solutions	No information	Own	No information
Asus	Third Party – SIMS Recycling Solutions	No information	Own	No information
Ben Q	-	-	-	-
Blackberry	-	-	-	-
Bluestar	Third Party	No information	No information	No information
BPL Group	-	-	-	-
Canon	Own	107	Multi-brand	Free
Carrier	-	-	-	-
Celkon	-	-	-	-
Dell	Own and through third party	No information	Own	No information
Electrolux	Own	No information	Own	Free
Epson	Third Party	No information	Own	Free
Godrej	Own and through third party	21 (own) 9 (third party)	Own	No information
Haier	No information	No information	No information	No information
HCL	Own	21	No information	No information
Hitachi	Own	No information	Own	Free
HP	Own	70	Own	Free
HTC	-	-	-	-
Huawei	Own	1	Own	Free
iBall	-	-	-	-
IBM	Third Party – E Parisaraa	5	Own	No information
IFB	-	-	-	-
Intex	Own and through third Party – Attero Recycling	66 (own) 24 (third party)	Own	No information
Karbonn	-	-	-	-
Lava	Own	No information	Own	Free
Lemon	-	-	-	-
Lenovo	Third Party – SIMS Recycling Solutions	1491	Own	No information
LG	Own and through third Party	9 (own)	Own	No information

Brands	Physical collection points		Take back for own brand/ Multi-brand	Financial Mechanism
	Own/Third Party	Number of collection points/centre		
Maxx	-	-	-	-
Micromax	-	-	-	-
Nokia	Own	1400	Multi-brand	Free
Olive	-	-	-	-
Onida	Own and through third Party	3564	Own	No information
Panasonic	Own	70	Own	Free
Philips	Own	No information	Own	Free
Samsung	Own	No information	No information	Free
Sansui	Third Party – Attero Recycling	20	Own	Free
Sharp	Third Party – SIMS Recycling Solutions	27	Own	No information
Sony	Own	20	Own	Free
Spice	Own	21	Own	Free
Toshiba	Own	1	Own	Free
Videocon	Own and through third Party – Attero Recycling	No information	Own	No information
Voltas	Third Party	No information	Own	No information
Whirlpool	No information	No information	No information	No information
Wipro	Own	Few collection points	Own	No information
Xerox	Own	No information	Own	Free
Xolo	-	-	-	-
Zen Mobile	-	-	-	-

Annexure 3:

Brands	Website
Acer	http://www2.acer.co.in/ewaste/Index.htm
Akai India	-
Apple (India)	http://www.apple.com/in/recycling/
Asus	http://csr.asus.com/english/index.aspx#141
Ben Q India	-
Blackberry	http://us.blackberry.com/recycle.html
Bluestar	http://www.bluestarindia.com/knowledge-centre/e-waste-management.asp
BPL Group	
Canon India	http://www.canon.co.in/personal/web/company/qehs/recycling
Carrier	-
Dell	http://supportapj.dell.com/support/topics/topic.aspx/ap/shared/support/recycle/en/recycle?c=in&l=en&s=gen&DoNotRedirect=y
Electrolux	http://www.electrolux.in/node179.aspx
Epson India	http://www.epson.co.in/epson_india/explore_epson/environment/epson_weee_directive/epson_weee_directive.page
Celkon India	https://www.celkonmobiles.com/
Godrej	http://godrejappliances.com/green-think/benefits.htm
Haier	http://www.haier.com/in/footer/201204/t20120427_128613.shtml
HCL	http://delweb.hclinfinet.com/e-waste-management-initiative.htm
Hitachi	http://www.hitachi-hli.com/about-us/HHLI-E-Waste-Management-Initiative/
Hewlett Packard India	http://www8.hp.com/in/en/hp-information/supplies-recycling/hardware.html
HTC	http://www.freeurecycle.com/
Huawei India	http://www.huaweidevice.co.in/Support/EwasteCollection/
iBall	-
IBM India	http://www.ibm.com/ibm/recycle/in/
IFB	-
Intex Technologies	http://www.intextechnologies.com/ http://www.intextechnologies.com/window_self/Waste%20Disposal.html
Karbonn	-
Lava	http://www.lavamobiles.com/EntityDetail/Product_Support.aspx?3G_356
Lemon	-
Lenovo	http://www.lenovo.com/social_responsibility/in/en/sustainability/ptb_india.html
LG	http://www.lg.com/in/recycling http://www.lg.com/global/sustainability/environment/take-back-recycling/mobile-phones
Maxx	-
Micromax India	-
Nokia	http://www.nokia.com/in-en/support/recycling/
Olive	-
Onida	http://onida.com/e-waste.php
Panasonic India	http://www.panasonic.com/in/corporate/sustainability/panasonic-india-i-recycle-program.html#UvH8wGKSw38
Philips	http://www.india.philips.com/about/sustainability/recycling/index.page
Samsung	http://www.samsung.com/in/samsungrecycle/
Sansui India	http://www.sansui-india.com/?page_id=270
Sharp India	http://www.sharp-world.com/corporate/eco/env-info/promoting/index.html#ancRegions

Brands	Website
Sony	http://www.sony.co.in/article/503906/section/environment
Spice	http://www.si2imobility.com/spicemobiles/gogreen/gogreen.htm
Toshiba	http://www.toshiba-india.com/enviroment.html
Videocon	http://www.videoconworld.com/experience/ewaste
Voltas	http://www.voltasac.com/E-Waste%20Guidelines.pdf
Whirlpool India	http://www.whirlpoolindia.com/recycle
Wipro India	
Xerox India	http://www.xerox.com/downloads/usa/en/e/Environment.pdf
Xolo	-
Zen Mobile	-

Annexure 4:

1. Has the State Pollution Control Board done inventorisation of e-waste in the state, as mandated under the E-waste Rules, 2011? Is the report available for public? If yes, list the quantity of e-waste generated in the state in 2011/2012.
2. List the producers who have sought authorisation till July 2013 under the E-waste Rules, 2011. Also list the producers authorised by the State Pollution Control Board/Committee.
3. Has the Pollution Control Board penalised any producer for violating the provisions of E-waste Rules? If yes, kindly provide the list.
4. Are there any manufacturing facilities in the state as defined under the E-waste Rules, 2011? If yes, kindly provide the unit-wise amount of e-waste generated in year 2012 by these manufacturing facilities.
5. Provide a list of collection centers for e-waste that have been authorised in your state.
6. How many dismantling and recycling companies have been given registration under the E-waste Rules, 2011, for E-waste Management? Provide the names and contact details of the same.
7. Is there any mechanism for monitoring these recycling facilities? If yes, list the parameters for such monitoring and provide a report of the previous monitoring done by your organisation.
8. Please provide data for:
 - The amount of e-waste recycled by authorised companies from May 2012–April 2013;
 - The amount of e-waste recycled by authorised companies from May 2013–July 2013.
9. What are the steps taken for creating public awareness on E-waste Management by State Pollution Control Board? Provide details of funds allocated and used for creating awareness for e-waste in 2012 and 2013.



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