

# Electronic Waste and How it became one of Major Problems and it's Consequences

Siddhesh Sanjay Ghanekar

*M.Sc. in information technology, keraleeya samajam's Model College, Maharashtra, India.*

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**Abstract** – This paper is about e-waste meaning ELECTRONIC WASTE. It covers topics like what exactly is electronic waste and how it is different from regular waste, what causes this electronic waste, how is it harmful to our health and also how it effects our environment, reasons why it increasing day by day in exponential manner and what we can do to avoid it's rapid increase. We initiated a research also to understand approximately how many people have idea about e-waste and further what they know about the matter .And what consequences we face if continue to produce e-waste in this much quantity. We cannot overcome this individually but we need collective effort of every individual to reduce this carbon pollution.

This paper not only focuses on what harm e-waste do but also solutions to overcome it. What we can do from our side is briefly discussed below.

**Key Words:** Electronic waste, e-waste, consequences, reasons for increase

## 1. WHAT IS ELECTRONIC WASTE

We are living in era where most of our lives are dependent on electronic appliances and machines from calculators to computers, televisions, smart phones, batteries we are surrounded by machines but have you ever thought what happens to these electronic appliances once they stop serving their purposes what we do with this waste we just throw them away along with the garbage Which is improper disposal method and leading it to become e-waste.

Most of all electronic appliances are made up of toxic materials which harm our bodies as well as our environment also as it contains toxic substances such as polyvinochloride, Mercury, chromium, beryllium, cadmium, lead, gallium arsenide, etc.

E-waste is responsible for E-pollution. E-pollution means pollution which is caused by electronic appliances on our surrounding, nature. It is discussed briefly in upcoming pages.

## 2. HOW E-WASTE EFFECTS OUR HEALTH AND OUR ENVIRONMENT

we dispose these e-waste with improper methods by throwing them the toxic chemicals that they contains expose

to the nature mixing with water, air and even soil and when we breath these they enter our body and make us ill. And we are not When talking about viral fever or something small but constant exposure to these harmful substances can cause deadly diseases such as reproductive issues making our body infertile meaning human body cannot reproduce and also developmental problems as in our body and brain stops growing, damage to the immune system, kidney damage, lung cancer, effect our regulatory hormones.

As of for how it effects our environment is when we dispose these waste or send it back to the manufacturing factories and some of these factories are more interested in money so they do not recycle the waste but they burn it or process them in such a way to get substances such as gold, copper and other expensive materials and during this process many harmful elements such as hydrocarbon, brominated dioxins and other heavy particles are released in air without any filter which are inhaled by us and other living beings and not only that but they also have the properties to penetrate

In the soil making it lose all it's nutritional values and effects the plants which are eaten by us and animals.

Moreover it doesn't there these substances gets mixed with the water which is underground and also our stored water resources such as our dams which animals drink as well as it comes to our homes through tap water. If these scenarios continues we know what future holds for us nature is constantly alarming. And if these keeps up earth's future seems meek.

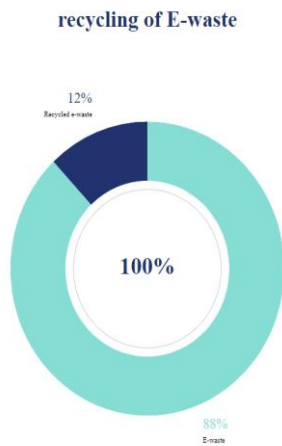
## 3. SAMLL STEPS WE CAN DO AT INDIVIUAL LEVEL TO AVOID CREATING E-WASTE

When any of your electronic appliance stops working simply you want buy a new one instead of throwing it give to your friends or relatives of someone in need who might need it or who can make most use out of it. Or you can exchange it with electronic vendor that way you can also save some money that old thing will be sent to that particular company who manufactures it they will make use of some old components of that device which is called reusability.

## 2. HOW E-WASTE IS RECYCLED

As all the electronics devices and components which make up devices are artificially manmade such as plastic and many

more hence all this are recyclable. In EPA report it is stated that 100 percent of e-waste is recyclable but only 12 percent of e-waste is recycled and nearly 88 percent is directly disposed on landfills.



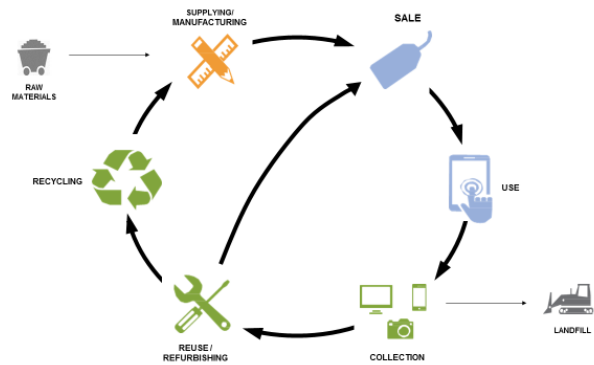
There are different ways in which the e-waste gets bifurcated for recycling namely:

**1. Usable and repairable:** Some electronic devices we throw are reusable and refurbished and again make use of by just repairing some minor parts and are again being sell as refurbished products.

**2. Classic electronics:** for say if you get an old gramophone You cannot just throw the classic piece of history instead they are sent for restoration and are being sent to pawn shops where they sell it.



**3. Damaged devices:** For the devices we cannot reuse are being sent to crushing factories where the components are being shred to small pieces and are further bifurcated accordingly such as plastic is separated, ferrous metals which is iron based metal and non-ferrous metal which are metals like aluminum and copper and sent to manufacturing factories where they are reused to make new devices.



### Life cycle of e-waste

As you can see in the above background first we buy device from seller the we use it and send it to e-waste scrapper where item are segregated where reusable and refurbished items are sent to the seller where they sell it as second hand. And non-reusable items are sent for recycling process which we explained in detailed in above section. Usually this is how it should go.

### 3. HISTORY OF E-WASTE

During mid 70's and after that technology was booming and advance engineering was making breakthrough every day And electronic appliances such as computers were needed in every company during what we called industrialization era. After that when windows developed personal computer. every household were able to afford computer hence every one was buying not just computers but other electronics also such as refrigerator, vending machines, washing machines, coffee machines, coolers many others also this was start of E-waste as initially there were no laws for preventing disposal of e-waste in wrong manner.

### 4. SUGGESTION FOR OVERCOMING OF RATHER REDUCING E-WASTE

As we all know many companies are competing against each other over who makes the most high-end phones and hence result of that they are releasing phones every six months with weird name to them such as max, ultra max, pro .and this is not just with it is with phones but every electronic device.

And as a result, for how much period of time we use a device is been drastically reduced former we used to use a phone for 3-4 year then 2-3 years now people rarely use their phone for 2 years some people even change every 6 months to keep themselves updated with latest technology. So my suggestion is to that companies should launch phones with certain time period for say 2-3 years. Companies don't need to launch a new version just because they added few more megapixels to the camera. They can just include all their

technological advancement in one phone. This is just my opinion.

**Below is short survey regarding awareness of e-waste**

Are you aware of what e-waste is?

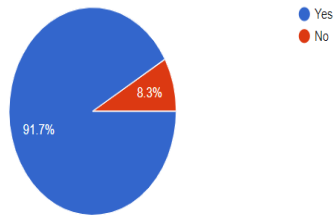


Chart 1: how many people knows about e-waste

In what time interval you change your smart phone and other devices

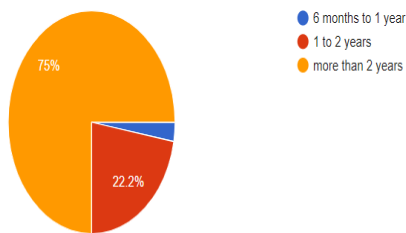


Chart 2: internal between changing devices

What do you do with your electronic appliances that stop serving their purpose?

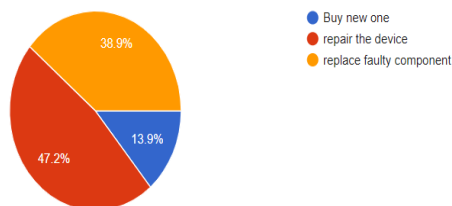


Chart 3: what do they do device that stop working

Do you think E-waste is harmful for our health and our environment ?

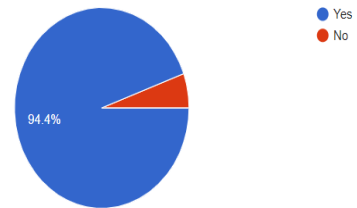


Chart 4: awareness towards consequence of e-waste

what you do with the used cadmium and lithium batteries?

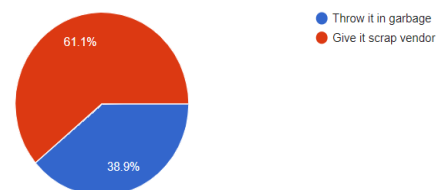


Chart 5: fate of used cadmium and lithium batteries

How many electronic appliances do you have in your household (including your phones)

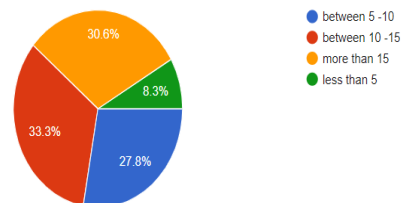


Chart 6: no. of appliances processes

how do you dispose of your devices once they are beyond repairable and useless?

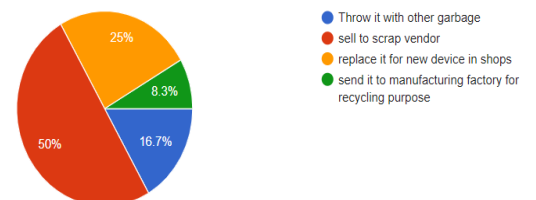
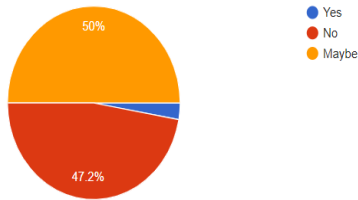


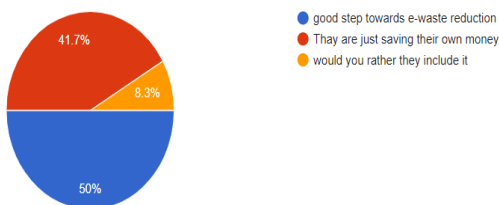
Chart 7: how they dispose the devices

Does your local government have any plan to dispose of electronic waste in appropriate way?



**Chart 8: Do government have any plan dispose of electronic waste**

what do you think of apple's decision of not including charging brick along with iphone is ?



### HERE ARE SOME OF REVIEWS OF PEOPLE

It is harmful. To reduce e-waste all the mobile vendors at least must keep recycling box like airtel and Nokia had kept in vashi location. The thinking of people must change too. They prefer to either keep it with themselves for ages like my father do or else they replace it while buying new one. The upcoming generation change their gadgets within 2 months and sometimes 2 weeks. So, the topic has to be covered in education system during schooling.

Electronic waste for a layman's knowledge is just a non-useful, non-working electric device. Awareness for the same should increase.

Government should eco waste machine vendor just like atm where we can give that particular device for recycle and we can also get a small amount of money while providing our cell phones.

Can be harmful but useful also when it is extracted and used in multipurpose things.

Just like government had taken initiative to collect dry(plastics) waste and wet waste separately they should also have to make some steps regarding e-waste and should be given proper guidelines and knowledge regarding e-waste to common citizen

### REFERENCES

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### AUTHOR

**Name:** Siddhesh Sanjay Ghanekar

B.Sc. (computer science)

Pursuing M.Sc. (information technology)