TAHA SAHOO

by Sadia Bilal

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INDIVIDUAL REPORT

M. Taha Sahoo

Topic: Environment, Pollution and Conservation

Q: Should tackling e-waste be a primary focus in efforts to conserve the environment?

The rapid pace of technological advancement has revolutionized modern life but it has also given rise to one of the most pressing issues. Electronic Waste or E-Waste which refers to the discarded electronic appliances such as laptop, mobile phones and house appliances etc. Most of this discarded material carry intoxicant metals and gases including cadmium, lead and mercury which are released in the environment. Every year around millions of e-waste is being produced and the measures to recycle it are inefficient. It is one of the most growing solid waste streams in the world**. As Government of Victoria** states **"E-waste (electronic waste) is growing 3 times faster than any other waste stream. E-waste contains potentially hazardous and valuable materials, which don't belong in landfill."** (Recycle e-waste | Sustainability Victoria 2023)

In the back of my mind Seeing e-waste dump I always wondered that where does it go and later reading about it made me realize how big the issue was. The amount of e-waste is increasing at an alarming rate. This rate is even underscoring predictions and there is a huge difference between production and recycling rates. It is predicted by experts of global waste monitor that the recycling rate would further decrease while there is no stop to the amount of e-waste being produced. **"Worldwide, the annual generation of e-waste is rising by 2.6 million tonnes annually on track to reach 82 million tonnes by 2030, a further 33% increase from the 2022 figure."** (The Global E-waste Monitor 2024 n.d.) The aim of my research is to explore the environmental impacts of e-waste, the report would also discuss the causes and consequences in terms of different perspectives and would suggest suitable courses of action.

There are a lot of significant causes leading to e-waste, despite a massive increase in the amount of e-waste the recycling efforts have not kept up with same speed**.** In countries like Pakistan and India recycling is being done on **informal lines** and without reliable waste management, not only people working in the informal sector are affected but our environment also bears significant damage as without proper disposal a lot of harmful and toxic substances are released into the environment. "**E-waste doesn't just pose a health risk though. It also contributes directly to global warming. Dumped temperature-exchange equipment, found in fridges and air conditioners, can slowly release greenhouse gases."** (Forti 2020) The report `further mentions` that this leaked amount from scrapyards is equal to **0.3% of global emissions from the energy sector.**

Secondly as we all are aware that our technology is changing rapidly along with it people are also changing devices and appliances in order to keep up with the latest technology. According

to Global e-waste monitor report **“A record 62 million tonnes (Mt) of e-waste was produced in 2022, Up 82% from 2010”.** This increase led to a lot of old electronics to be discarded, our electronic appliances are made using precious stones such as copper and silver etc. With electronics being discarded these precious stones are also lost. The world economic forum estimates the **e waste discarded in 2019 was worth around $57 billion.** Other than e-waste This leads to depletion of mineral resources and further result in environmental degradation due to mining activities.

Another significant cause leading to E-waste is the planned obsolescence, Jim Pucket the founder and director of Basel Action network told **CNN “Manufacturers have to be dragged, kicking and screaming,” to make products that last, he said, “and not just design products for the dump, hoping they can sell us a new one as soon as possible.”** (Ramirez 2024) This clearly indicates the intention of manufacturers who often design products less efficient compelling people to buy new ones. This leads to more electronics being discarded which contain lead and mercury whose exposure is harmful to humans. **“ILO and WHO estimate that millions of women and child labourers working in the informal recycling sector globally may be at risk of hazardous e-waste exposures”.** (Organization 2024) Health issues include adverse neonatal outcomes, neurodevelopment issues and respiratory issues due to high exposure of lead and mercury.

Looking it from a global perspective many countries are prioritizing this global issue of e-waste but the issue still persists. WEEE Forum was founded in 2002 as the biggest organization to deal with e-waste However, only 54 countries took this initiative with 28 being from Europe. Countries like China and Russia are also not part of this forum. European union along with WEEE has played a key role in tackling e-waste. According to statistics **“In 2022, 14 EU countries surpassed the 45% WEEE collection target. In addition, 2 countries reported a rate close to this target, at 43.0% and 42.7% respectively. Three EU countries achieved the more ambitious target of a 65% collection rate in 2022.”** (Waste statistics - electrical and electronic equipment - Statistics Explained n.d.) but still they haven’t been able to address it at a global level and have failed to prevent planned obsolesce.

Many western countries also dump their discarded materials in other countries over time this has happened in India, China, Malaysia, Nigeria and Ghana. Making these countries a dumping ground have not only led to increase in waste but have affected economies and health. China and Malaysia have raised concerns implemented stricter laws. As reported by the times **“Malaysia seizes 100 containers of electronic waste dumped by west”** (Parry 2024)**.** Still many countries continue to suffer from e-waste crisis especially Agbogbloshie a place in Nigeria has been reported as one of the most biggest dumping grounds for e-waste.

Pakistan, despite contributing less than 1% of total e-waste in 2022, poor management and less effective recycling has made it a crucial issue locally. Most recycling is handled through informal methods which include burning of electronics and acid baths which releases intoxicants and has severe consequences on health of workers and locals. The experts and many government

bodies mainly related to environment have started to give their attention to the problem. This issue is being highlighted and locally efforts have been started to be made to control the electronic waste. The experts are also emphasizing on better infrastructure and waste management. **The environmental scientists, responding to APP queries stressed that while the government's approach is promising, its success hinges on rigorous enforcement and public participation. "E-waste is not just an environmental issue; it is a health issue, an economic issue, and a social issue. The key to success lies in creating a circular economy where e-waste is seen as a resource, not just a problem,"** (APP 2024)**.**

The most crucial issues leading to e-waste are planned obsolesce, excessive dumping and lack of recycling. The issue of e-waste could be addressed at various levels:

At local level, local governments should partner up with NGOs to set up e-waste collection points as emphasized by (The Global E-waste Monitor 2024 n.d.) where locals could drop off their old electronics so that they could be properly disposed off or are recycled. Repair workshops could be set up to ensure the electronics are repaired and last longer. Another action that could be initiated locally is to raise awareness and educate locals about serious issues that are posed by e-waste. They should also be educated by the benefits of reusing and recycling which would encourage them to reuse or recycle their old electronics.

At national level Pakistan faces challenges especially from informal recycling methods and illegal import of e-waste. The government could address it by changing the informal and hazardous methods to a formalized and safe way of recycling. The focus should be on developing recycling infrastructure that the country lacks and the recycling of e-waste should be handled by skilled workers through this not only e-waste would decrease but the country could also benefit the economy from valuable material recovered. **Saleem Shaikh correspondent from ministry of climate change says "With the right infrastructure, e-waste recycling could not only improve environmental outcomes but also provide a safer, more sustainable livelihood for thousands of workers,"** (APP 2024)

At global level the biggest issue is planned obsolesce, companies intentionally make poorer quality products to increase their sales. The countries should implement stricter laws such as **right to repair laws** and to enforce **extended producer responsibility**. This would give governments a greater control over producers and they would be forced to design durable and repairable products that would last longer. **"According to a 2020 European Environmental Bureau study, "extending the lifespan of all electrical and electronic products by just one year would lead to annual savings of around 4 million tons of carbon dioxide by 2030, which is equivalent to taking over 2 million cars off the roads for a year."** (Group n.d.) International organizations such as ITO and UN should also regulate planned obsolesce.

I have used various sources in my report from news agencies and renowned organizations.

I have used **The Nation** a prominent English language news agency in Pakistan, this has provided me with expert view of Saleem Sheikh and have provided information about

challenges and solutions to e-waste within Pakistan and is likely credible at national level, The report also has a qualitative approach. However, the editor's name is not clear. Similarly, the information about Malaysia seizing 100 containers was taken from **Times** one of the world's oldest and respected newspapers. This is likely to highly credible due to newspapers reputation around the world. The information about the issue of planned obsolesce was taken from a report of **CNN** which is also to be credible as CNN has also earned reputation around the world. It also has provided an expert view of Jim Pucket from Basel action network but the report is overly reliant on general statements.

I have also used statistical and expert data, I have used information from Global e-waste monitor's latest report which have been produced by the UN itself. It has provided me with key statistics and information. This is a credible source and is updated every year. It has not only provided me with statistics but have also shared predictions. I have also taken European statistics from Eurostat which is a website of the EU. It has also provided me with credible information. However, the author's name is missing and could be biased on sharing information of European countries. I have also used information from World Economic Forum which is a renowned private organization and have provided pertinent information. The information is likely credible. I have also used World Bank Group which have provided me with Secondary Data which can also be considered reliable. I have taken information about health impacts of e-waste from WHO's report which is highly credible as WHO is the world's most trusted organization for information on health. I have also used information from an department of Victorian government on sustainability which is also reliable as the data is itself checked by the Government of Australia.

Prior to beginning the research, I had rarely heard the term e-waste and didn't have any idea about its increasing amount or its impact on our environment or health. Since I was a child everywhere the people always emphasized on afforestation etc. to preserve the environment which is also important but after my research, I noticed the need to address the increasing wastage of electronics as I became aware of its significant role in the global warming. I also wasn't aware of the impact e-waste had on people's health especially children and pregnant women who are most vulnerable. This detailed research changed my perspective about this issue and I became aware that it was multifaceted issue which was needed to be addressed urgently.

Yes, I believe addressing e-waste must be primary focus to conserve the environment. Tackling e-waste crisis is crucial for a sustainable future. The rapid growth in e-waste must be met with responsible disposal, recycling and manufacturing practices. Governments through out the world should implement stricter laws and should partner up with organizations such as WEEE, there should be focus on awareness and Extended producer responsibility. Countries should also develop recycling infrastructure. By prioritizing sustainability in e-waste, we can preserve both human health and environment for our future generations.

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