

# 'Tsunami of e-waste' to hit the world soon, warns new UN report

The sheer volume of production, lack of recycling and poor abiding of laws means that the globe could be in for a doomsday scenario, it notes

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A child dismantling e-waste in Moradabad, Uttar Pradesh. Credit: Sadia Sohail

A new report by the United Nations has warned that the world is soon going to be hit by a tsunami of electronic and electrical waste (e-waste), due to the sheer amount of e-waste being generated currently and the lack of its recycling.

The report, titled 'A new circular vision for electronics', was released on January 24, 2019. It notes that the waste stream has already reached 48.5 million tonnes (MT) in 2018 and the figure is expected to double if nothing changes. Moreover, only 20 per cent of global e-waste is recycled.

The report describes the sheer scale of global e-waste. "Imagine the mass of 125,000 jumbo jets — it would take London's Heathrow Airport up to six months to clear that many aircraft from its runways. If you find it difficult to envisage, then try the mass of 4,500 Eiffel Towers, jam them all in one space, side by side, and they would cover an area of the size of Manhattan," it says while trying to explain the severity of the crisis.

E-waste comprises not just electronic items, but also all electrical equipment that involves anything with a plug, electric cord or battery. It may represent only 2 per cent of the solid waste stream, yet it can represent 70 per cent of the hazardous waste that ends up in landfills. One-half of all e-waste is personal devices such as computers, screens, smart phones, tablets and TVs, and the rest is larger household appliances, as well as heating and cooling equipment.

The report says it is hard to forecast the volume of e-waste that will be generated, but by 2021, the annual total volume is expected to surpass 52 MT, considering the fact that the number of devices connected to the internet is going to be between 25-50 billion by 2020, which is nearly triple the number of people on the planet today. By 2050, the volume of e-waste in the worst-case scenario, could top 120 MT annually.

E-waste will also contribute to carbon emissions. "By 2040, the e-carbon emissions from the production and use of electronics will reach 14 per cent of total emissions. This is one half of the total global transport sector," the report says.

So where is the crisis? It lies in the fact that globally, only up to 20 per cent of e-waste is recycled. The rest is undocumented and experts predict that it gets buried under the ground in landfills for centuries as it is not biodegradable. And how does it impact us? "From lead-lined, cathode ray tubes to old TVs, to lead and chromium in circuit boards (of various devices), e-waste contains substances that are hazardous to human health, including, mercury, cadmium and lead. E-waste can pollute water sources and food-supply chains."

A big majority of the e-waste is recycled by the informal sector, where very crude methods are used. Women and children are particularly affected as they burn the plastic from electronic goods, in the process getting to metals and other toxins that are also carcinogenic and enter their blood stream. "Findings from many studies show increases in spontaneous miscarriages, still and premature births, as well as reduced birth weights and birth lengths associated with exposure to e-waste."

According to the report, North America, Western Europe, Japan, South Korea and Australia are the regions which send most of the e-waste to other countries while India, China, Vietnam, Brazil, Mexico, Senegal, Ghana, Nigeria, Ivory Coast and Egypt are the regions receiving the bulk of e-waste.

E-waste export, though, is regulated under the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal, which has been ratified by 188 nations. "Even with the convention in place, large amounts of e-waste continues to be shipped illegally," the report admits, stating the regulatory environment is complex and fragmented.

On the other hand, as many as 67 countries have legislation in place, including India, to deal with the e-waste they generate which involves the 'extended producer responsibility' (EPR) aspect. As per this, any electronic/electrical e-waste producer is supposed to have designated collection centres in a city where the customers can drop their products. And they have to ensure that those dropped products are recycled. Every producer has to ensure that the product reaches a designated dismantler or recycler. Every producer has a certain target of recycling of its products which is directly proportional to the weight of the total annual production of their products. Regarding the implementation of the law, the report says, "In many regions of Africa, Latin America or Southeast Asia, electronic waste is not always high on political agenda, and (law is) often not well-enforced."

India figures as one of the regions that receives most of the e-waste export. India notified the E-waste (Management) Rules, 2016, on October 1, 2016, which made EPR mandatory. The phase-wise collection target for e-waste, which can be either in number or weight was 10 per cent of the quantity of waste generation as indicated in the EPR Plan during 2017-18, 20 per cent in 2018-19, followed by 30 per cent, 40 per cent, 50 per cent, 60 per cent and 70 per cent during second, third fourth, fifth, sixth and seventh year respectively. They have to file annual returns with the Central Pollution Control Board (CPCB) stating they have fulfilled their targets. However, CPCB solely relies on the returns filed by them and does not have any independent mechanism to verify those claims, as *Down To Earth (DTE)* reported [earlier](#).

Chitra Mukherjee of Chintan, a Delhi-based non-profit working on solid waste management, told *DTE*, "The figures are not surprising. As far as India is concerned, the implementation of EPR remains extremely poor. The informal sector recycles 95 per cent of the e-waste in India but still there is no tangible method to link the formal sector with the informal one. Also, there is an acute lack of awareness among people as they simply don't know that there exist collection centres that collect items for recycling. The law will fail to serve the purpose unless these changes are made on the ground."

The organisations which supported the preparation of the report included International Labour Organization (ILO); International Telecommunication Union (ITU); United Nations Environment Programme (UNEP); United Nations Industrial Development Organization (UNIDO); United Nations Institute for Training and Research (UNITAR); United Nations University (UNU), and Secretariats of the Basel and Stockholm conventions.