BRIDGET McCREA | Contributor

Global E-Waste Increases 21% Over the Last Five Years

A new report highlights the lack of progress that's being made in reducing the world's massive amount of e-waste.

A term that loosely defines the consumer and business electronic equipment that is near or at the end of its useful life, e-waste includes computers, televisions, phones, stereos, copiers and other electronic products. While some e-waste is recycled or refurbished, the rest of it winds up in the world's landfills.

The Global E-waste Monitor 2020 says the amount of e-waste created on a global basis has increased by 21% over the last five years. The world generated a record 53.6 million metric tons (Mt) of old electronic equipment in 2019 alone, it says, and is on track to throw out another 81 tons by 2030.

"Between our reliance on technology and 'the upgrade culture' that has become pervasive in recent years, it's clear why electronic waste is rising at such an incredibly high rate," Decluttr's Liam Howley told *TechRepublic*. "Around 130 million cell phones are thrown away each year in the U.S., with that number growing."

What You Probably Didn't Know About E-Waste

Electrical and Electronic Equipment (EEE) has become indispensable in modern societies and is enhancing living standards, but its production and usage can be very resource-demanding, according to the Global E-waste Monitor.

A collaborative effort that involves the Global E-waste Statistics Partnership (GESP), UN University (UNU), the International Telecommunication Union (ITU), the International Solid Waste Association (ISWA) and other participants, the 2020 study found that:

- Higher levels of disposable incomes, growing urbanization and mobility, and further industrialization in some parts of the world, are leading to growing amounts of EEE.
- On average, the total weight (excluding photovoltaic panels) of global EEE consumption increases annually by 2.5 million Mt.
- In 2019, collection and recycling totaled 9.3 Mt, or 17.4% compared to the total amount of e-waste generated. In other words, recycling activities are not keeping pace withthe global growth of e-waste.
- In 2019, the continent with the highest collection and recycling rate was Europe with 42.5%, Asia ranked second at 11.7%, the Americas and Oceania were similar at 9.4% and 8.8%, respectively, and Africa had the lowest rate at 0.9%.
- The growing amount of e-waste is mainly fueled by higher consumption rates of EEE, short lifecycles and few repair options. After its use, EEE is disposed of, generating a waste stream that contains hazardous and valuable materials.
- Around 8% of the e-waste is discarded in waste bins and subsequently landfilled or incinerated. This is mostly comprised of small equipment and small IT. Discarded products can sometimes still be refurbished and reused, and thus are usually shipped as second-hand products from high-income to low- or middle-income countries.
- The majority of undocumented domestic and commercial e-waste likely comingles with other waste streams, such as plastic waste and metal waste. "This means that easily recyclable fractions might be recycled but often under inferior conditions without depollution and without the recovery of all valuable materials," the report's authors point out. "Therefore, such recycling is not preferred."

- E-waste contains toxic additives and hazardous substances, such as mercury, brominated flame retardants (BFR), and chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs). "The increasing levels of e-waste, low collection rates, and non-environmentally sound disposal and treatment of this waste stream pose significant risks to the environment and to human health," the report's authors warn.
- Improper management of e-waste also contributes to global warming. For example, the report states that a total of 98 Mt of CO2-equivalents were released into the atmosphere from discarded fridges and air-conditioners that were not managed in an environmentally sound manner. This represents approximately 0.3% of last year's total global energy-related emissions.

Government Participation

Since 2014, the number of countries that have adopted a national e-waste policy, legislation or regulation has increased from 61 to 78, according to the report. As of October 2019. "With these, 71% of the world's population is currently covered," the report states. This represents an increase of 5% (from 66% in 2017). "The coverage rate can be misleading, as it gives the impression that there is little left to do in terms of regulating the management of e-waste," the report's authors point out. "In many countries, policies are non-legally binding strategies, but only programmatic ones."