

Kiah Friedman
Sustainable Systems
RDA part 3
4/19/17

E-Waste; an Epidemic

E-Waste is defined as electronic products that are outdated or have reached their end-of-life. It comes in the form of phones, computers, televisions, video game consoles, and a number of other electronic devices that use electricity and have motherboards. Humans in developed countries have become more and more reliant on these devices, and have begun to replace them with newer devices more frequently, posing the problem of proper disposal of the devices after they are no longer being used. While electronic devices have made life more convenient in many ways, the way they are disposed of causes many environmental, human, and social issues.

The production of electronic devices is very harmful for both human beings and the environment surrounding the factories that manufacture these products. Manufacturers of electronic devices need energy to create the products, which usually comes from the burning of fossil fuels, which directly harms the environment. Most products are made of very harmful and toxic chemicals such as mercury, cadmium, flame retardants, and lead. Workers of these factories experience many injuries from the machinery as well as compromised immune systems and higher chance of illness from exposure to toxic chemicals. Many of these factories release fumes into the atmosphere that directly relate to pollution and global warming. The pollution from these factories can be tied to climate change issues such as temperature rise, sea level rise, and more frequent natural disaster. The fumes also penetrate neighboring towns, exposing not only factory workers but those who live nearby factories to health risks related to chemicals.

Though most of these electronic devices are being used in developed countries such as the United States and much of Europe, most of the production and waste management of these products takes place overseas in developing countries. These developing countries have far less environmental and labor regulations. Unfortunately, large companies often take advantage of less developed and poorer regions, since they know that they need the income and care less about health and environmental risks.

While the production of electronic devices has a number of negative environmental and human impacts, the waste management of it is a whole other aspect that poses a number of threats. A lot of the time the E-Waste produced in the United States and parts of Europe is shipped to countries such as China, India, and Nigeria. The average U.S. household has over 20 electronic devices, and roughly 23% of all of the United State's electronics are shipped overseas to countries with very informal recycling centers. Workers at these recycling "villages" use an array of dangerous techniques to try to take apart electronics to salvage any valuable material. The remaining material is often piled up in landfills, burned, or just left in the sidewalks and streets of neighborhoods, further releasing chemicals into the atmosphere and directly affecting the people who live there. Soil and water becomes contaminated and unsafe to grow produce in as well as drink.

It is illegal for countries in the European Union to ship E-Waste overseas, but it is still done illegally on a large scale, despite there being serious consequences for being caught. In the United States it is entirely legal to ship E-Waste overseas to developing countries, and now, especially since Trump is president, it doesn't seem like this law is going to change any time soon.

In order to help combat this issue of E-Waste management, I want to raise awareness on how to properly dispose of old electronic devices. Here in New York, we have the Gowanus E-Waste Warehouse, which repairs electronics and responsibly disposes of un-repairable electronics without shipping overseas. I think creating a type of information pamphlet and placing them in stores that sell electronic devices would be useful, so people can think about what happens to their devices after they purchase them.

These pamphlets would explain the dangers that go into the production of electronic devices, and the environmental and human risks that come with disposing of them. Having these at electronic stores would make people think twice before purchasing new products, and have them consider what to do with their products when they reach their end-of-life. Some stores that pamphlets would be useful at are Best Buy, RadioShack, the Apple Store, and other stores that sell cell phones, laptops, etc.

Aside from placing these informational pamphlets around different stores, I would also go door-to-door at different dorm and apartment buildings around the city, with a box to collect people's E-Waste. Personally, I have a bunch of old electronic devices just sitting in different drawers at home, so I think I could collect a good amount of other people's E-Waste and bring it to a proper disposal site such as the Gowanus E-Waste Warehouse. I think it would also be really useful to propose having a separate E-Waste recycling bin in the recycling rooms that are in many apartment and dorm buildings. In the dorm I currently live in, the recycling room only has bins for plastic and paper. Most people, including myself before doing personal research, do not know how to properly dispose of their old electronic devices in a responsible way. It either ends up just piling up in one's living space, or they throw it away with other trash. Designating a

separate bin just for E-Waste would be really useful, and give people more incentive to recycle their E-Waste since it would be easy and accessible to everyone.

Placing the pamphlets in stores could take just a few days, to make the pamphlets and disperse them. Collecting E-Waste by going door-to-door would take up to a week, so as to collect as many electronic devices as possible. Lastly, proposing the idea of E-Waste bins around campus is something that may not be guaranteed to happen, but I could personally place a box in the recycling room designated to E-Waste in the dorm I live in. Starting on just my floor with the bin would be a good way to determine if people are actually using it, and then boxes could be placed on other floors and eventually hopefully around all school residences.

Overall, E-Waste is something not many people know a lot about, and the first step is to inform as many people as possible to diminish ignorance on the topic. People need to understand the effects that informal E-Waste management poses on the place and human beings. Especially since our society has become so reliant on and accustomed to this culture of replacing electronic devices nearly every year to stay “up to date” on new products, E-Waste is an epidemic that needs a solution.

Works Cited

Bradley, Laura. "E-Waste in Developing Countries Endangers Environment, Locals." *Usnews.com*. N.p., 1 Aug. 2014. Web. 20 Apr. 2017.

"Environmental Issues Facing the Refining Industry." *Crude Oil Chemistry* (2003): n. pag. *Engineering.dartmouth.edu*. Web. 20 Apr. 2017.

"Hazardous Chemicals in Electronic Devices." *Greenpeace East Asia*. N.p., n.d. Web. 20 Apr. 2017.