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THE E-WASTE MENACE IN GHANA

Overview

Electronic waste, commonly referred to as e-waste, is electronic equipment such as broken cell phones, old computers, refrigerators, TV sets, iPods, small appliances, and other obsolete gadgets that no longer serve a purpose and are thus discarded. The United Nations estimates 20 to 50 million tons of e-waste is generated globally each year. In the United States alone, it is estimated 30 to 40 million PCs become obsolete each year. The creation of this huge volume of electronic waste however is not matched by appropriate means of disposal and this has become a daunting challenge to the developed world and the manufacturers.



A stockpile of used computers

In Ghana, the demand for computers and accessories in particular is phenomenal as a result of increasing electronic literacy. Due to the inability of many Ghanaians to afford brand new products, large consignments of used and old fashioned Electronic and Electric Equipment discarded mainly in Europe and North America are imported. The countries of origin, finding this opportunity in most developing nations, conveniently dispose off their electronic waste under the guise of 'bridging the digital gap' but in actual fact they are creating a 'digital dump'. Ghana has been identified as a popular dumping ground for old electronics. Figure 1 shows the total Electronic and Electric Equipment waste in tons, imported into Ghana between 2003 and 2008



Informal e-waste recycling

The current situation has led to an important informal industry that recycles or reprocesses e-waste in Ghana to take advantage of the valuable metals that can be extracted for sale. Unfortunately, proper recycling facilities, management systems and industry standards do not exist. As a result, e-waste handlers and recyclers work in appalling conditions, constantly exposing themselves and communities nearby to serious hazards.

Dangers of E-waste

The menace of e-waste has grave adverse implications on health and the environment. Burning is a common method used to reduce waste volumes and this process releases toxic substances into the atmosphere, soils and water bodies with dire health consequences. Some known health problems include acute damage to the lungs, e.g. from inhalation of fumes of heavy metals such as lead and cadmium.



Smoke from burning e-waste at Agbogbloshe

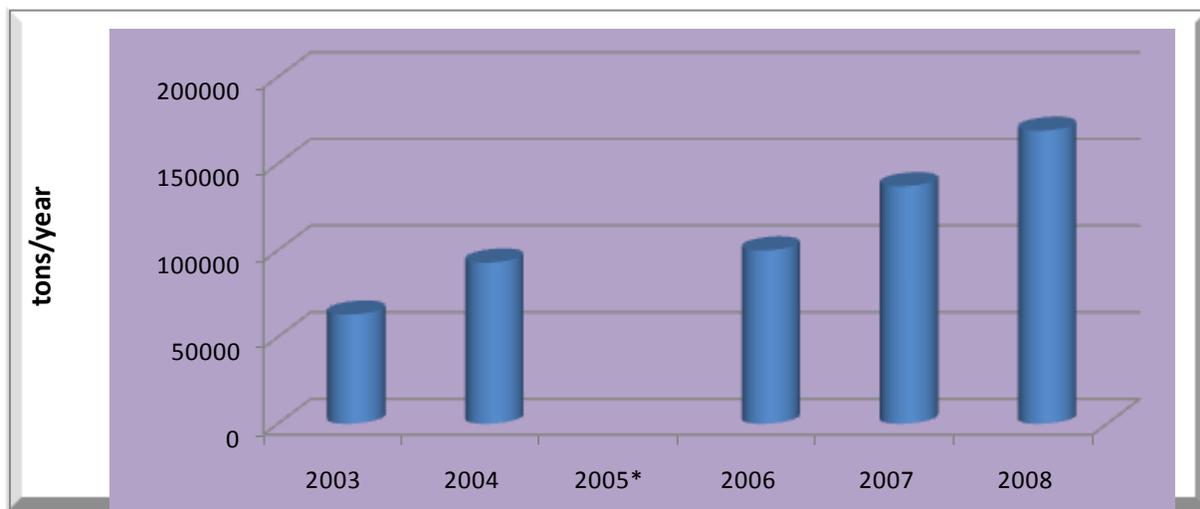


Figure 1. Total e-waste imported into Ghana.

Source: *UN Comtrade* . *2005: No data available

E-waste is known to contain a cocktail of poisonous chemicals such as lead, mercury, arsenic, cadmium, copper, nickel and silver which among others, have the following health effects:

- Arsenic may disrupt cell communication and interfere with the triggers that cause cells to grow, possibly contributing to cardiovascular disease, cancer and diabetes if someone is exposed in chronic, low doses.
- Cadmium affects your body's ability to metabolize calcium, leading to bone pain and severely weakened, fragile bones.
- Chromium can cause skin irritation and rashes and is potentially carcinogenic.
- Copper can irritate the throat and lungs and affect the liver, kidneys and other body systems.
- Lead poisoning can cause a whole slew of health problems including the impairment of cognitive and verbal activity. Eventually, lead exposure can cause paralysis, coma and death.

- Nickel is carcinogenic in large doses.
- Silver probably won't hurt, but when handle too frequently, it might cause **argyria** -- a condition whereby your skin permanently develops a blue-gray shade.

How you can help

1. Rethink the amount of electronics you buy: don't buy a new cell phone just because you can get the newest version that everyone else is getting. Also, consider getting your small appliances repaired before buying new ones. Reduce, re-use and recycle, in that order. Remember that no matter what advertising tells us, things don't make us happy.
2. Support groups that are against e-waste or form groups to raise awareness of dangers of e-waste, teach people where they can safely recycle their electronics, challenge the amount of electronic waste people produce. You can even advocate for an "E-waste Day"

References and Further Reading

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