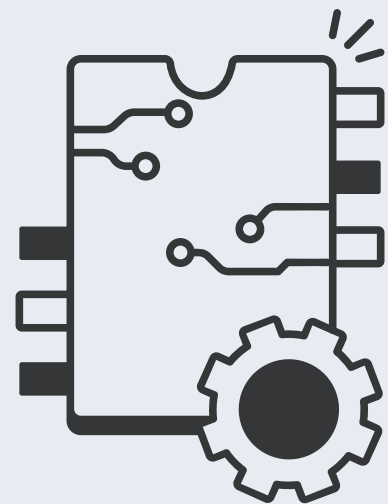# Hardware Dumping in Africa

"As the Global North advances, Africa bears the burden of e-waste dumping, highlighting the need for sustainable practices and global cooperation to achieve environmental justice and technological equity."

In the relentless march of technology and innovation, the developed regions of the world, often referred to as the 'Global North,' continue to dominate. As these powerhouses forge ahead, a darker narrative unfolds in less developed regions, particularly in Africa.

This paper aims to examine the practice of hardware dumping in Africa and how developed countries often see the Global South as their dumping grounds. By shedding light on the environmental and ethical implications of these actions, we seek to provide a comprehensive understanding of the intersection between geopolitics, AI, and IT asset disposition, highlighting the need for sustainable and ethical practices in the rapidly evolving AI landscape.

The systemic practice of hardware dumping in Africa by developed nations, driven by technological advancements and geopolitical dynamics, exacerbates environmental degradation and public health crises in the region. However, implementing sustainable IT asset disposition (ITAD) practices and robust international cooperation can mitigate these adverse impacts, fostering a more equitable and environmentally responsible global technology landscape.

By focusing on Africa as a primary case study, this paper aims to highlight how ethical ITAD practices and stringent enforcement of international e-waste regulations can transform the current narrative of environmental injustice into one of sustainable development and technological equity.

BACKGROUND

The play of power dynamics in geopolitics leads to hardware dumping in Africa by the 'Global North'. The escalating practice of IT dumping in Africa underscores severe environmental, health, and geopolitical challenges. Despite generating only 2.9 million metric tons of e-waste, Africa has become a primary dumping ground for affluent 'Global North' countries, receiving 77% of e-waste from England and Wales in 2019 alone. Weak enforcement of international regulations like the Basel and Bamako Conventions exacerbates the issue, allowing hazardous materials to harm local communities and environments.

1.1 E-Waste Statistics and Global Distribution

In a stark revelation of modern environmental injustice, the world generated a record 57.4 million metric tons of e-waste in 2021, up from 53.6 million metric tons in 2019. This deluge of electronic waste is disproportionately distributed, with affluent 'Global North' nations offloading their hazardous waste onto the impoverished 'Global South,' a practice aptly termed "toxic colonialism." The Basel Convention and the Bamako Convention were established in the 1990s to protect vulnerable developing countries, including Ghana, from exploitation. However, in 2019, Ghana and Nigeria alone received 77% of e-waste from England and Wales, with Europe exporting approximately 352,474 metric tons of e-waste annually to developing countries under the guise of donations. Despite generating a mere 2.9 million metric tons of the global e-waste, Africa has become a primary dumping ground.

The current disruption in the supply of new AI chips further influences the e-waste landscape. Scarcity and high replacement costs force companies to retain their assets longer, emphasizing the importance of effective IT Asset Disposition (ITAD) practices. Proper ITAD management helps businesses avoid contributing to the growing e-waste problem while ensuring environmental compliance.

Addressing e-waste dumping in Africa requires robust international cooperation and strict enforcement of regulations. Developed nations must take responsibility for their electronic waste and support sustainable recycling practices in the Global South. Investing in local recycling infrastructure, training for safe e-waste handling, and promoting ITAD practices are essential. Furthermore, policies aimed at reducing e-waste production through extended producer responsibility (EPR) can incentivize manufacturers to design longer-lasting, easily recyclable products.

1.2 Environmental and Health Impacts

Ghana, home to the infamous Agbogbloshie scrapyard, stands as a grim testament to the fallout from this technological race. The 'Global North' countries are not just leaders in innovation; they are also primary sources of the e-waste that buries Agbogbloshie. This deluge of electronic waste, combined with locally produced and other African countries' scrap, fuels a toxic value chain. From collection and sorting to recovery and reprocessing, the cycle inevitably concludes with a significant portion of waste ending up in landfills, devastating the environment and public health. Agbogbloshie, located in Ghana's capital, Accra, was initially a bustling central business district fueled by food trading.

The relocation of markets in 1993 led to the establishment of a scrap market supporting vehicle repair, spare parts trading, and welding services essential for the transportation of food items. By 2001, Agbogbloshie had evolved into a major e-waste site, partly due to developed countries using manipulative labeling tactics to access the area for dumping. Infamous for its dire health and safety conditions, Agbogbloshie ranked among the top ten most toxic threats globally. Although demolished by the Ghanaian government in July 2021, its legacy persists as informal e-waste recycling sites proliferate across Accra and nearby cities.

Workers, using rudimentary methods to extract metals, face increased exposure to hazardous chemicals, leading to respiratory issues, skin conditions, and chronic illnesses. Children are particularly vulnerable due to their proximity to the ground and higher relative chemical intake. Despite these health risks, e-waste processing remains a critical economic activity for many locals, highlighting a complex economic dilemma.

Pile of metal and old electronics in Accra, the capital of Ghana. (Bloomberg)

"E-waste management in Ghana is divided into two categories: formal and informal."

Formal electronic waste processes are more expensive, but less physically demanding. Waste management companies such as Zeal Environmental Technologies offer services such as the incineration of materials, following both US and Ghana Environmental Protection Agency guidelines.

On the other hand, in the informal e-waste management sector, toxic materials such as lead, mercury, beryllium, and cadmium are released from the dismantling of material, creating an unhealthy environment. Despite the dangers of informal e-waste management, the scavenging, sorting, dismantling, and reselling of e-waste provides employment opportunities for residents of Agbogbloshie.

Waste picking and burning of wires to separate copper and other valuable parts are performed without protective equipment. Scrap dealers build bulks of waste to sell, and refurbishers use old electronic waste to rebuild other electronics. In some countries, informal e-waste workers have been found to be less than 16 years old, and as young as 8 years old.
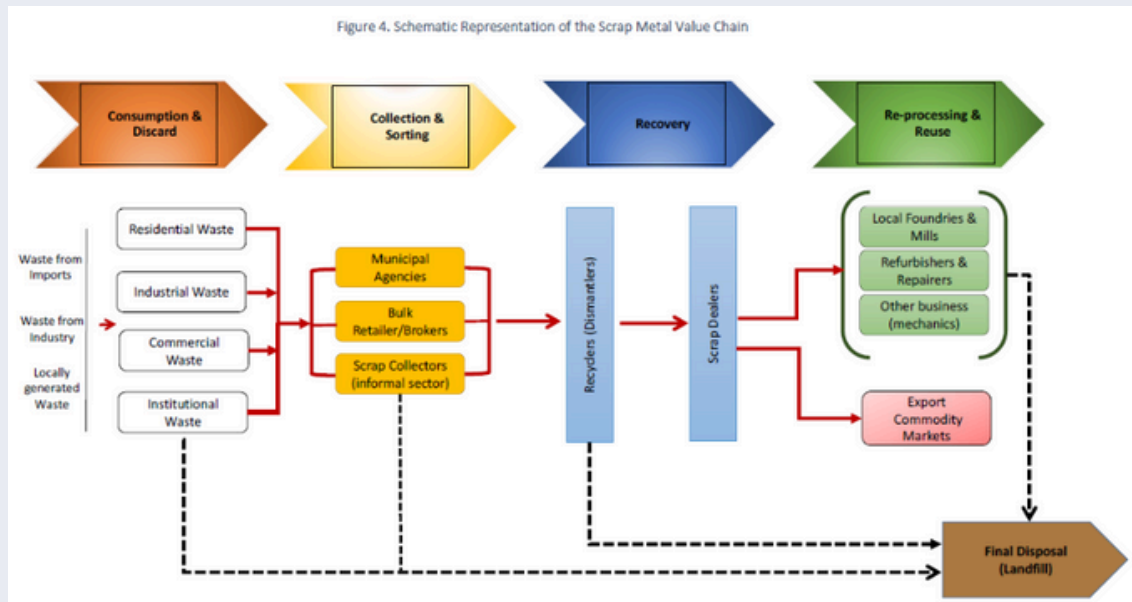
Schematic Representation of the Scrap Metal Value Chain (Fevrier).

Korle Lagoon: A Symbol of the Crisis:

The Korle Lagoon in Accra, once lush and teeming with life, now stands as a grim testament to this crisis, heavily contaminated with toxic substances like lead and mercury. Ghanaian ecologists have lamented the transformation of this once fruitful landscape into a "graveyard of plastics and skeletons of abandoned appliances," a harrowing symbol of the global e-waste catastrophe. The environmental and health impacts of this toxic tide underscore the urgent need for comprehensive policies and sustainable practices to address both the local and global dimensions of e-waste management.

Dead computers and other electronic waste forming a bridge in the Korle Lagoon. (The Guardian)

Local and Global Solutions

Despite other nations offloading their hazardous waste onto less developed countries in Africa, a staggering 85% of the total e-waste dumped in Ghana and other parts of West Africa is produced locally, highlighting the need for regional solutions and the critical role of local communities who depend on e-waste for their livelihoods. While e-waste regulation is more developed in certain parts of the world, only 13 African countries have national regulations to govern the disposal of e-waste.

The Role of International Regulations

Addressing e-waste dumping in Africa requires robust international cooperation and strict enforcement of regulations. Developed nations must take responsibility for their electronic waste and support sustainable recycling practices in the Global South. Investing in local recycling infrastructure, training for safe e-waste handling, and promoting ITAD practices are essential. Furthermore, policies aimed at reducing e-waste production through extended producer responsibility (EPR) can incentivize manufacturers to design longer-lasting, easily recyclable products.

CONCLUSION

The practice of hardware dumping in Africa by developed nations presents a complex interplay of technological progress, environmental justice, and ethical responsibility. The environmental and health crises in Africa, exemplified by the e-waste dumping in Ghana, highlight the urgent need for sustainable and ethical approaches to IT asset disposition.

Addressing these challenges requires a multifaceted strategy involving robust international cooperation, stringent enforcement of regulations, and significant investment in local recycling infrastructure. Extended Producer Responsibility (EPR) policies can incentivize manufacturers to design longer-lasting, easily recyclable products, reducing the volume of e-waste and enhancing the utility of electronics donated to developing countries. By fostering a collaborative and responsible global approach, we can mitigate the adverse effects of hardware dumping and ensure a sustainable future for both the environment and human health. The stakes of this modern technological renaissance are high, and failure to act could turn the promise of technological advancement into a harbinger of environmental and human catastrophe.

As the AI race accelerates, it is crucial that countries like Ghana are not left to bear the brunt of this progress. A concerted effort is needed to foster cooperation between the 'Global North' and the 'Global South', addressing the burgeoning e-waste problem with urgency and care. Investment in local recycling infrastructure, training for safe e-waste handling, and promoting ITAD practices are essential measures to mitigate the environmental and health impacts of this waste. Moreover, policies aimed at reducing e-waste production through extended producer responsibility are imperative. Such policies incentivize manufacturers to design products with longer lifespans and greater recyclability, thus reducing the volume of e-waste and enhancing the utility of electronics donated to countries like Ghana.

The stakes of this modern technological renaissance are high. If the leaders of the AI race do not take heed, the environmental and human toll in the Global South could be catastrophic, turning the promise of technological advancement into a harbinger of doom.