

GLOBAL INFORMATION SOCIETY WATCH 2010

Focus on ICTs and environmental sustainability



ASSOCIATION FOR PROGRESSIVE COMMUNICATIONS (APC)
AND HUMANIST INSTITUTE FOR COOPERATION WITH DEVELOPING COUNTRIES (HIVOS)

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Introduction

According to an International Telecommunication Union (ITU) online publication on “e-environment”,¹ e-environment can be discussed in three main ways: the use of information and communications technologies (ICTs) as an instrument for environmental protection and the sustainable use of natural resources; the environmentally sustainable way of consuming, disposing, recycling and discarding hardware and components used in ICTs; and the use of ICTs in forecasting, monitoring and measuring the impact of natural and human-made disasters in developing countries. The Zimbabwean research component focuses on the environmentally sustainable way of consuming, disposing, recycling and discarding hardware and components used in ICTs – that is, electronic waste (e-waste).

How serious is the problem of e-waste in Zimbabwe?

In Zimbabwe, the numbers of imported electronic goods are increasing and the cost of purchasing is getting lower and lower. This research found that some of these electronic goods have a very short life span. This is confirmed by the United Nations Environment Programme (UNEP) through reports warning of a dangerous increase in the amount of e-waste, which is often simply dumped in waste disposal sites. These sites are usually frequented by the urban poor and unemployed scavenging for reusable plastics or metals for resale, posing serious health hazards to themselves as well as residents near the dumps. Developed countries manufacture millions of tonnes of products like computers, TV sets and mobile phones, as well as household appliances like refrigerators, microwaves, etc. Some of these products are exported to developing countries as new items but some, which are exported second-hand, are effectively dumped.

This research did not find any evidence of such wilful importation of electronic goods for dumping in Zimbabwe. This could be happening, however.

Disappointingly, this researcher found a very low level of e-waste readiness for Zimbabwe. Discussions with ministries and departments on ICTs, the environment and waste management revealed there is neither awareness nor preparedness at all on issues of e-waste management. As the section on policy and legislative issues will show, there is also no legislation on e-waste. With the removal of import duty, it only takes some unscrupulous businessperson to import e-waste and dump it in Zimbabwe under the guise of bringing much-needed technology into the country.

In the course of researching this article, the people interviewed initially did not think that Zimbabwe has a serious problem with e-waste. However, they changed their minds after a short exposé on the potential hazards contained in e-waste. In an Association for Progressive Communications (APC) issue paper on e-waste,² Alan Finlay wrote that there is a correlation between the economic strength of a country and the levels of potential e-waste. Finlay says that “in a strong economy, imported technology will be cheaper and old technology will be more readily replaced,” in this way increasing the levels of e-waste. The converse could be true, so that in a recovering economy like Zimbabwe, electronic goods may be used for longer periods before replacement.

Although e-waste might not be a big issue now in Zimbabwe, it could soon become a critical issue. Companies, ministries and waste management services interviewed showed that they are just beginning to be aware of the potential hazards that e-waste poses. One ICT retailer said:

Although prices of electronic goods have gone down, each purchase is a considerable opportunity cost [sacrifice of the enjoyment of another good]. So the purchaser will use that electronic good until it stops working. Once it has stopped working, one would take it to every dealer around town to get it working again. If all fails, one would still keep it in the house in the hope that someone somewhere would be able to repair it in the future rather than dump it.

Psychologically, people cannot really throw away electronic goods; they believe the electronic good could still have some value even in a non-functional state. Even if one was able to throw away the non-working electronic good, someone else would probably pick it up and try to make good use of it. So there is a sense in which, in this context, the possibility of electronic goods polluting the environment is very negligible.

Another respondent summarised the issue by saying, “Zimbabwe has a more advanced repair and servicing industry compared to most African countries. If you take it to *Siyaso*,³ someone will be able to get that discarded electrical good to work in one form or another.”

Harare has many shops that profess to repair any electrical good. The repair industry is very effective and most electronic equipment is either efficiently repaired or the parts are always reused in one way or another. Interviewees

1 Labelle, R. et al. (2008) *ICTs for e-Environment: Guidelines for Developing Countries, with a Focus on Climate Change*, ITU, Geneva. www.itu.int/ITU-D/cyb/app/docs/itu-icts-for-e-environment.pdf

2 Finlay, A. (2005) *E-waste Challenges in Developing Countries: South Africa Case Study*, APC, Johannesburg. www.apc.org/en/pubs/issue/e-waste-challenges-developing-countries-south-afri

3 A Zimbabwean phrase that means “Leave it like that, it works.” This phrase is the name for the location in Mbare (a high-density suburb of Harare) where you find self-employed artisans who can fix anything and everything.

attributed this to the depressed economic growth in the country, which translates into fewer imports, forcing second-hand recycling companies to boom.

These sentiments may be true at an individual level, but it becomes another issue at the institutional level. Zimbabwe imports thousands of refurbished computers to equip its many schools through international bodies like Computer Aid International.⁴ However, the life span of these refurbished computers is no more than three years. Through the years, schools, ministries and companies have stockpiled outdated computers that have long outlived their productive lives. Most of these institutions cannot dispose of the non-functional computer inventory due to limitations of writing off the goods from asset registers.

World Links Zimbabwe, an organisation whose focus is to facilitate the use of computers in pedagogy, encourages schools to bring obsolete computers to their workshop in Harare. World Links has a salvaging programme at its warehouse where computers are broken down to their basic parts; reusable parts are put back to use and the waste is sent to City Council municipal dumps and landfills. However, the cost of transporting these computers from remote locations to Harare is very high and there is no incentive to encourage schools to respond positively to the call. So these computers remain in cupboards gathering dust and taking up valuable space.

This state of affairs shows that although technical solutions may be available, there is a need for a legal framework, an organised collection system, logistics, and other services. The issue of e-waste needs to be discussed at national level to raise the general public's awareness and to identify places where old electronic goods could be collected for stripping down, recycling and safe disposal. As far as this research could ascertain, there is no formal institution designated to grind unusable e-waste products in Zimbabwe; maybe the individual stripping down of components and re-using the usable ones could be an effective way of dealing with e-waste and there could be no need for a formal institution to play this role. These issues could be addressed by a legislative framework on e-waste.

Dealing with hazardous waste

According to the World Computer Exchange,⁵ “[a]n average computer may contain up to 1,000 toxins including lead, mercury, cadmium and other heavy metals that are known to cause damage to the nervous system, the brain, the kidneys, and can cause birth defects and cancer. It is estimated that up to 40% of heavy metals in landfills come from electronic equipment discards.” The Waste Management Department of the Municipality of Harare has protocols of proper disposal for hazardous waste, but does not address the proper treatment of e-waste.

For the safe disposal of e-waste, toxic materials must first be removed. However, Zimbabwe does not have a facility that focuses on removing toxic materials from electrical goods. There is a statutory instrument on disposal of hazardous waste in general as discussed under policy and legislative processes below. Currently, companies pay a certain amount to the local waste management facility to dispose of hazardous waste substances in proper landfills. Both the Environmental Management Agency (EMA) and the Waste Management Department of the Municipality of Harare, institutions with the responsibility of waste management, agree on the need and urgency to draft procedures and processes necessary for the safe disposal of e-waste. Currently, there is no data on the percentage of e-waste or heavy metals in the landfills of Zimbabwe – another advocacy and lobby point for civil society organisations.

Environmental groups claim that the informal processing of e-waste in developing countries causes serious health and pollution problems. Zimbabwe, just like many developing countries in the world, is experiencing an increase in the take-up of ICTs.

Mobile technology usage has significantly increased, and mobiles are readily discarded due to rapid technological changes and their low average life span. Recently there has been an influx of cheap second-hand mobile phones on the market from the East. The availability of SIM cards means that anyone who wants to own a mobile phone can do so; many people now actually own more than one line. These developments are due to the relentless activities of the new Ministry of Information and Communication Technology that succeeded in removing import duty on electronic goods and reducing the cost of SIM cards to about the same amount as a loaf of bread.

Policy and regulation for e-waste

According to a report published by the UNEP Regional Office for Africa,⁶ Zimbabwe signed the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal on 22 March 1989, but has not yet ratified it. The Basel Action Network's International Toxics Progress Report Card⁷ also confirms that Zimbabwe has not ratified the Basel Convention. According to the UNEP report, since the Rio Earth Summit in 1992, Zimbabwe has carried out activities aimed at enforcing and strengthening existing legislation, the establishment of a radiation protection services department, the institution of a Hazardous Substances Control Advisory Board, and the introduction of hazardous waste management regulations and national guidelines for the disposal of hazardous waste for local authorities. The national priority, according to the report, is to promote the environmentally sound management of toxic chemicals through education and awareness, the development of a register of toxic chemicals as well as their classification, and the promotion of cleaner production technologies.

4 www.computeraid.org

5 www.worldcomputerexchange.org/ewaste

6 www.gridnairobi.unep.org/chm/roa/Country%20Profiles/Zimbabwe.doc

7 www.ban.org/country_status/report_card.html

The Hazardous Substances and Articles Control Act provides the legal framework for the control and management of toxic chemicals; there is however no mention of e-waste. There is therefore a need to raise awareness and lobby for the inclusion of e-waste management issues.

Discussions with the EMA revealed that there are no frameworks on e-waste management. EMA's mandate includes the engagement of multi-stakeholders in its quest to manage natural resources and protect the environment. The most recent legislation is Statutory Instrument 10 of 2007 which covers disposal of dangerous waste products.

Civil society's perspective

It is apparent that civil society organisations that work in the area of ICT for development need to take more active involvement in e-waste management issues. The immediate roles they could play could be to raise awareness on the critical issues of e-waste and hold discussions with local authorities involved in waste disposal. As an example, e-Knowledge for Women in Southern Africa recently held a two-day workshop for local councillors and business leaders in Masvingo city to discuss gender and ICT issues in the ICT bill. Issues on e-waste were raised and were received very enthusiastically as evidenced by the formation of the "Masvingo Citizens' ICT Task Force" made up of nine representatives from the business sector, government departments, local councillors, female informal trade leaders, women's group leaders, girls' group representatives and young men and women with ICT skills. The purpose of the task force is to follow up on ICT issues at a local level and strategise for local coordinated actions for the sustainable use and appropriation of ICTs. This is just one example of how civil society organisations can conduct advocacy and educate public authorities, ICT industry leaders and even work with legislators for the promotion of environmentally sustainable e-waste management and related processes at the local level.

Action steps

- Issues of e-waste need to be discussed and addressed in the review of the ICT Policy Framework which is currently underway.
- The ICT bill that is also under discussion should address issues of e-waste.
- Civil society organisations involved in ICT for development should get involved in the reviews of the ICT policy and the ICT bill and ensure that e-waste is adequately addressed.
- Private companies and even civil society organisations should be encouraged to engage in e-waste programmes and activities at the local level.
- Centres that encourage the general public to bring in non-functional mobile phones, chargers and other related discarded electronic goods should be set up in strategic places around the country, and package the e-waste in bulk containers for export to countries that specialise in e-waste disposal.
- NGOs could assist with the logistics of cost-effectively moving e-waste to collection centres.
- E-waste management content should be disseminated to the public (including youth and businesses) through various forums and networking platforms to raise awareness levels and collective action at local levels.
- NGOs could also work with the government to identify and strengthen electronic repair companies and encourage them to develop into effective electronic recyclers that understand e-waste issues.

This research actually became an awareness-raising activity that agitated for the need for action in the area of e-waste. However, a lot of work still needs to be done, as Zimbabweans collectively endeavour to find ways of consuming, disposing, recycling and discarding ICTs in environmentally friendly ways. ■

GLOBAL INFORMATION SOCIETY WATCH 2010 investigates the impact that information and communications technologies (ICTs) have on the environment – both good and bad.

Written from a civil society perspective, **GISWatch 2010** covers some 50 countries and six regions, with the key issues of ICTs and environmental sustainability, including climate change response and electronic waste (e-waste), explored in seven expert thematic reports. It also contains an institutional overview and a consideration of green indicators, as well as a mapping section offering a comparative analysis of “green” media spheres on the web.

While supporting the positive role that technology can play in sustaining the environment, many of these reports challenge the perception that ICTs will automatically be a panacea for critical issues such as climate change – and argue that for technology to really benefit everyone, consumption and production patterns have to change. In order to build a sustainable future, it cannot be “business as usual”.

GISWatch 2010 is a rallying cry to electronics producers and consumers, policy makers and development organisations to pay urgent attention to the sustainability of the environment. It spells out the impact that the production, consumption and disposal of computers, mobile phones and other technology are having on the earth’s natural resources, on political conflict and social rights, and the massive global carbon footprint produced.

GISWatch 2010 is the fourth in a series of yearly reports critically covering the state of the information society from the perspectives of civil society organisations across the world.

GISWatch is a joint initiative of the Association for Progressive Communications (APC) and the Humanist Institute for Cooperation with Developing Countries (Hivos).

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