GLOBAL INFORMATION SOCIETY WATCH 2010

Focus on ICTs and environmental sustainability

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East Africa

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Introduction

The landing of three fibre optic cables in East Africa heralds an era of exponential growth of access to and use of information and communications technologies (ICTs). With this growth, it is expected that the region will produce more electronic waste (e-waste) as East Africans discard obsolete computers, television sets, mobile phones and other ICT equipment. Further donations of second-hand equipment, the transition to digital broadcasting and the rapid turnover in technology are likely to compound the problem.

In the past ten years, East African governments have been preoccupied with universal affordable access to ICTs without paying equal attention to the environmental impact of access. Most of East Africa's e-waste is dealt with by the informal sector with little or no regulation and no existing strategy for e-waste management and recycling systems. Some countries like Uganda and Kenya have just begun to deal with and develop basic waste management systems, but still lack the capacity, skills, resources and infrastructure to address the challenge effectively.

Regional trends in e-waste policy and legislation

None of the East African countries has a specific policy on e-waste in place. However, there is recognition of international conventions regulating hazardous waste, among them the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and the Bamako Convention, which aims at introducing preventive measures and guaranteeing appropriate disposal of hazardous waste in Africa. A proposal to amend the Basel Convention banning all transfers of hazardous wastes from developed to developing countries has been hindered by lack of support since it was introduced in 1995. Similarly, the Bamako Convention aims to criminalise the import of hazardous waste into Africa from outside the region and from non-contracting parties and also prohibits dumping hazardous waste at sea as well as incinerating it.

Although East African countries do not have specific e-waste legislation there are provisions found in other laws governing the environment, air, water, public health, waste and hazardous substances. For example, in Tanzania, the main environmental governance legislation is the Environmental Management Act (2004), which addresses the management of hazardous waste. It is largely aimed at regulating movement of this waste and placing responsibility for its disposal on those who generate it. Uganda

applies the non-specific National Environment Act (1999) to e-waste; however, in 2010 the government released a draft Electronic Waste Management Policy for comments from stakeholders. The draft policy aims at enforcing several strategies for e-waste management. Kenya, on the other hand, has a mix of laws and regulations addressing waste, and some recent references to e-waste, but there is no coordinating framework. Two important pieces of legislation under which e-waste can be considered in Kenya are the Environmental Management Co-ordination Act, and the Public Health Act, which places responsibility for waste management at the local authority level. There is also provision for e-waste management contained in the National ICT Policy (2006), which calls for appropriate recycling and disposal facilities as requirements for the renewal of communications licences.

The Rwanda National Environment Policy sets principles for management of the environment as well as institutional legal reforms and established the Rwanda Environment Management Authority. Nevertheless, the application of these legal instruments is typically unspecific to e-waste, and the practical implementation of environmentally progressive waste regulations when it comes to discarded technology is virtually impossible in countries where basic waste management is still a priority.

Challenges and the roles of stakeholders

Although awareness and readiness for improving the management of e-waste in the region are increasing rapidly, major obstacles still exist. Lack of reliable data poses a major challenge to the development of e-waste management strategies, policy and regulation. The reliance on the informal sector, without appropriate infrastructure and regulations, where e-waste is commonly burnt in open air or dumped into landfills and bodies of water where it releases toxic substances, continues to contribute to environmental degradation and serious health challenges.

An East African Community Secretariat report of the 13th Meeting of Permanent Secretaries Responsible for Environment and Natural Resources noted that there is increased dumping of second-hand equipment in the region in the form of donations. The report recommends fast-tracking the establishment of electronic and hazardous waste management frameworks, and building capacity for handling electronic and hazardous waste.

The current waste management experience in the region demonstrates that informal organisations and the few formal ones cannot deal adequately with the increasing volumes, diversity and complexity of e-waste. It needs to be addressed through a multi-stakeholder partnership approach within a

relevant and appropriate framework, at both the national and regional levels. Clear responsibilities must be placed on each stakeholder group to ensure that each is playing its role effectively and efficiently. However, the role of governments in ensuring that the appropriate legislation and new frameworks are drafted is paramount.

Studies conducted in the East Africa region identify the main stakeholders in e-waste generation and management as the government/policy makers, private sector (manufacturers, distributors/importers), and civil society (refurbishment centres, consumers, collectors, recyclers).

Governments/policy makers

While governments seem to be taking e-waste seriously, they are still struggling with the issue of used ICT equipment being promoted as access solutions and the dumping of e-waste. Their reaction has tended to be severe: placing bans or levying taxes on the importation of second-hand computers. Kenya recently imposed a 25% tax on refurbished computers, while Uganda established a total ban. Rwanda, Burundi and Tanzania are still accepting refurbished computers for rural communities, schools and other development initiatives. However, these sorts of reactions may not be constructive. A United Nations Environment Programme (UNEP) study published in February 2010 revealed that reusing a computer is twenty times more effective at saving life cycle energy use than recycling.

Civil society and industry are now urging governments to reconsider the ban and taxes and instead place an emphasis on the better management of e-waste. East African governments should focus on developing policy, legislative and regulatory frameworks at a national and regional level. These policy interventions must begin by clearly defining e-waste for effective regulation and provide an integrated policy with both regulatory and operational components. They must also encourage an effective import and export regulatory regime, and ensure that the provisions of international conventions – Basel and Bamako – are implemented and followed. This needs to be done through strengthening cross-border cooperation in the East African region. This is also where governments could aim at harmonising regulations on aspects like approval of equipment types as well as providing support for the growth of a regional recycling industry from their universal access strategy funds or the creation of an e-waste support fund.

Governments should also ensure that there are adequate capacity and skills, including institutional capacity building, and formalise the informal recycling sectors so that there is a protective protocol for workers dealing with e-waste disposal.

Industry/private sector

A study funded by Hewlett-Packard, the Global Digital Solidarity Fund (DSF) and the Swiss Federal Laboratories for Materials Testing and Research (Empa) in 2007 indicates that the private sector has the largest computer stocks and generates two thirds of the related waste flow in Africa. The private sector cites lack of infrastructure and policy as some of the obstacles to contributing to e-waste management.

The lack of an e-waste management system and limited processing capacity has led to e-waste being stockpiled in homes, offices and repair shops. However, some companies, such as Hewlett-Packard and Nokia, among others, have launched or expanded recycling programmes in recent years. Some already provide incentives to their customers for product return through a "buy-back" approach.

Manufacturing companies need to assume their responsibilities and obligations in setting up appropriate solutions and mechanisms to recycle their products. Policies for the return of goods at the end of their useful life and plans for safe and clean disposal of equipment and e-waste should be adopted. Some solutions that industry could adopt include, but are not limited to, adapting precautionary principles by employing sustainable product designs, for example through the use of renewable, biodegradable components and material and waste minimisation techniques, among others. Industry could also work with governments to implement extended producer responsibility as an appropriate framework that combines major principles of environmental justice. This approach would shift responsibility for safe disposal to manufacturers.

Civil society

East African civil society organisations have tended to lead in optimising the life cycle of electric and electronic equipment through various community projects attempting to increase access to affordable technologies by reusing equipment. They are also often at the forefront in searching for and implementing solutions for e-waste management and recycling; for example, by participation in the creation of National Cleaner Production Centres in Uganda, Kenya and Tanzania as part of initiatives led by UNEP and United Nations Industrial Development Organization (UNIDO). Civil society initiatives include the Second Life recycling initiative in Uganda and Computers for Schools in Kenya, among others.

Civil society is also very active in increasing public, scientific and business knowledge on e-waste and continues to play a very important role of awareness creation through

research and advocacy activities, such as those undertaken by I-Network Uganda and the Kenya ICT Action Network (KICTANet). This seems to have encouraged East African governments to take the issue seriously and to begin to act. As mentioned, in Uganda, the Ministry of ICT recently released an e-waste policy for stakeholder comments, while in Kenya, the Communications Commission of Kenya has held several workshops with various stakeholders to begin considering the form of new regulations. Civil society organisations also continue to increase consumers' knowledge of e-waste by placing the issue on the public agenda through collaboration with the media.

Consumers

There is a general lack of awareness among consumers and collectors of the potential hazards of e-waste to the environment and their health. Consumers in the region tend to use equipment until the end of its useful life and then store it in their offices or homes, or sell or donate it as second-hand equipment that can be repaired and used by others. Consumers need to be informed of their role in e-waste management and encouraged to adopt responsible consumerism. For example, while buying electronic products, they could opt for those made with recycled content and few toxic components, or those that are energy efficient, with minimal packaging and that offer take-back options. Furthermore, donating electronics for reuse could extend the life of valuable products and keep them out of the waste management system for longer.

Conclusion

All stakeholders in East Africa, including but not limited to policy makers, manufacturers, civil society and consumers, must be involved in any e-waste management system in order for it to be effective and efficient. Regional cooperation amongst technology-poor countries is also critical, both for sustainability of recycling initiatives and to ensure that e-waste is treated properly. Any strategy must take into account issues of sustainability and approach the matter through technical and policy-level interventions that would also convert this challenge into an opportunity. Policy-level interventions should also look into the import and export of e-waste between regions, and a better understanding of the appropriate interventions at this level are necessary. ∎

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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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