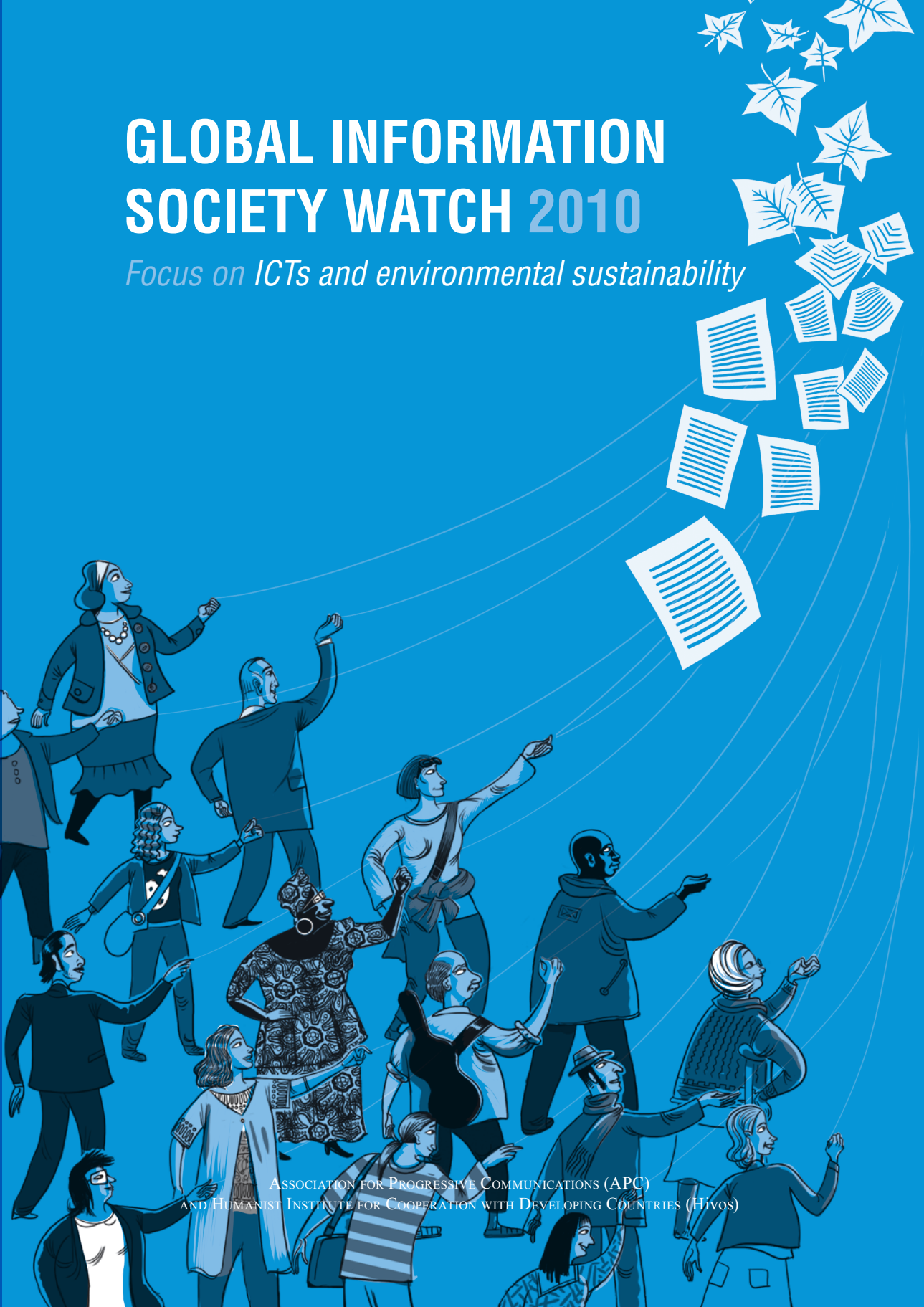
GLOBAL INFORMATION SOCIETY WATCH 2010

Focus on ICTs and environmental sustainability



Association for Progressive Communications (APC)
and Humanist Institute for Cooperation with Developing Countries (Hivos)

Global Information Society Watch

2010

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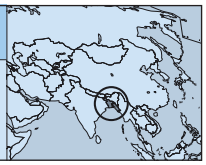

Introduction

Like other countries in the region, Bangladesh has adopted information and communications technologies (ICTs) as tools for development. The ruling party currently has a declaration on building a "Digital Bangladesh" by 2021, which shows the government's commitment. Although Bangladesh got its first mainframe computer in 1963, mobile phones and PCs only started to penetrate the market in large quantities after 1997. Two things happened in that year: Bangladesh liberalised its telecom policy by allowing multiple private telecom operators to operate, and withdrew all import duties from computers and their peripherals. At the same time, operators, especially internet service providers (ISPs) were also allowed to use VSAT (very small aperture terminal) satellite systems for overseas communication, resulting in internet connectivity being opened up in the country.

In recent years the use of mobile phones, PCs, laptops, printers, scanners, etc. have witnessed tremendous growth. Recent data show that Bangladesh now has 59.98 million mobile subscribers (as of June 2010), and 1.02 million fixed-phone subscribers (as of May 2010).[1]

There is a tendency among mobile phone users to change their handsets quite frequently. Every month Bangladesh imports 0.75 million mobile phone handsets (according to the country's mobile phone importers association). While the reuse of technology is also high, nobody knows what happens to used mobile phones when they are abandoned and thrown away. At the same time, the sale of PCs and laptops in the country is rising at a constant rate with an estimated sale of 230,000 PCs and 65,000 laptops in 2009.

It is generally considered that computer dismantling and recycling is a growing business in the informal sector of Bangladesh, but no baseline data is available to show how these computers and mobile phones are being dismantled and recycled or left to be mixed up with other trash. General statistics show that 120,000 urban poor from the informal sector are involved in the recycling trade chain of Dhaka city, and 15% of the total generated waste in Dhaka, which is mainly inorganic, is recycled daily.[2]

Different chemical elements within mobile phones and computers are very harmful both for the environment and for human health. For example, mobile phone coatings are often made of lead, and mobile phone batteries were originally composed of nickel and cadmium (Ni-Cd batteries). Cadmium is listed as a human carcinogen that causes lung and liver damage. Alternatives contain potentially explosive lithium or toxic lead. Lead is present in cathode ray tube (CRT) computer monitors. Mercury is also found in computer circuit boards, along with lead and cadmium. Circuit boards can also include batteries made of mercury, as well as mercury switches.[3]

E-waste policy and legislative context

There is no comprehensive electronic waste (e-waste) policy, although it is briefly mentioned just as an action item in the country's ICT policy. The government established the Department of Environment (DoE) in 1977 under the Environment Pollution Control (EPC) Ordinance, 1977. Then in 1989, as pollution and environment got more attention, the Ministry of Environment and Forest[4] was established as the apex body. The National Environmental Policy, highlighting the regulation of all activities that pollute and destroy the environment, came into effect in 1992. The subsequent Environment Conservation Act (ECA), 1995, authorised the DoE to undertake any activity necessary to conserve and enhance the quality of the environment and to control, prevent and mitigate pollution. The DoE was also mandated to give clearance on environmental issues for any new project.

The subsequent rules under the ECA, the Environment Conservation Rules of 1997, divided industries and projects into different categories depending upon the pollution load and likely impact on the environment. There are some provisions and mandatory rules to build a waste management system within the industry sectors. However, e-waste does not require any compliance under the Act or Rules.

The government is now preparing a solid waste management policy which may cover e-waste. At the same time, the Medical Waste Management Rules, 2008, address waste management issues for the medical sector, including e-waste.

Bangladesh is a signatory to the Basel Convention prohibiting transboundary movement of hazardous waste. Import of any kind of waste requires government permission. The existing import policy allows importation of old computers higher than Pentium III, but importation of old computer parts is not allowed.

1 www.btrc.gov.bd

2 gec.jp/gec/jp/Activities/ietc/fy2010/e-waste/ew_1-9.pdf

3 earth911.com/recycling/electronics/e-waste-harmful-materials

4 www.moef.gov.bd

Lack of awareness

Two things are very important for Bangladesh regarding e-waste: lack of awareness among the citizens and policy makers, and a resulting lack of a proper policy framework exclusively related to e-waste. No social movement or civil society activities are visible. PCs have been a familiar part of society from the early 1980s, and so a good number of PCs have already been discarded in the country. It was also found that due to the absence of e-waste policy and management, most of them were discarded in an environmentally unsound way. In general, there is a tendency in the country to reuse electronic gadgets. A good number of repairing and maintenance shops for electronic devices are now available in the country. People try to use mobile phones and computers to their maximum life span. But once the use is over, people have a tendency not to care about the disposal of these devices and discard them randomly in the general waste stream. The lack of awareness on e-waste is mainly due to a general lack of environmental consciousness – and would include a lack of awareness of issues such as climate change, rising sea levels, and the illegal acquisition of river land.

E-waste, nevertheless, does from time to time get discussed in the media, and research has been conducted to try to determine its impact. One study conducted by D.Net[5] aimed at quantifying e-waste and assessing the awareness level of residents regarding e-waste in Dhaka city. The findings of the study revealed that a huge quantity of e-waste is generated each year in Dhaka in the form of PCs and mobile phones. The majority of the respondents supported the need for developing a hazard-free e-waste management system in the country. There is a similar study by Brainstorm Researchers that is an overview of awareness and practices regarding the disposal and recycling of mobile phone batteries in the country. However, there are few activities at the grassroots level.

Climate change and ICT policy, legislation and practice

In the adopted national ICT Policy, 2009, environment, climate and disaster management is identified as one of the ten objectives. The policy aims to:

> Enhance the creation and adoption of environment-friendly green technologies, ensure safe disposal of toxic wastes, minimize disaster response times and enable effective climate change management programmes through the use of ICTs. [This] as Bangladesh is facing the dual scourge of environmental pollution due to rising industrial and consumer wastes and also global-warming-induced climate change, due to excessive carbon emissions by the industrialized countries.

Among the five strategic areas identified under this strategy, environmentally friendly green technology (9.1) and the safe disposal of toxic waste resulting from the use of ICTs (9.4) have been mentioned.

In the ICT Policy there are 306 action items. Under strategic area 9.1, three action items were proposed:

> 249. Mandate energy-saving and low-power-consumption ICT devices for government procurement based on pre-determined, internationally accepted consumption benchmarks.
>
> 250. Set and enforce regulatory standards to control the dumping of ICT devices to prevent e-waste. Establish safe disposal and recycling mechanisms and organizations.
>
> 251. Reduce the use of paper in offices by increasing electronic communication, file processing, information sharing and archiving.

However, the implementation of the above action items is yet to be visible. Under action item 251, the government has now established electronic communication in its field and central administration. All field level officers in the administration (Deputy Commissioners and Upazilla Executive Officers) are now provided with laptops for maintaining electronic communications with the central government. The manual of field administration (the Secretarial Instruction) has now recognised email as an official document. A recent initiative by the Cabinet Division (the ministry supervising the field administration) introduced the online submission of fortnightly Deputy Commissioner reports. Previously this generated a good number of paper documents, both at district and central administration levels. Other moves that will result in less paper being used are afoot.

Action item 263, under strategic area 9.4, proposed to build plants for "cannibalising" e-waste to extract precious metals. It also sets labour standards for such an industry. This action item has a five-year time line.

New trends

There are some individual interventions where people have tried to rescue some parts of used PCs and reuse them in assembling a product for the local market. One such initiative involves the conversion of a monitor into a television in the southern district of Bagerhat.

Few corporate offices have taken the initiative regarding their e-waste. Typically, according to corporate policy, businesses have to replace their existing computer setup every few years. Some of them dump the old computers in junkyards. Some have tried to distribute them to different organisations. At the corporate level, it is believed that only Standard Chartered Bank has tried to redistribute their used PCs to schools. They have a programme with D.Net,[6] an

5 www.dnet.org.bd/KP_Files/KP_e-waste_Research_Paper_first_6_pages. pdf

6 www.dnetbangladesh.org

NGO, and Computer Jagat,[7] an IT magazine, to redistribute the used computers to schools in remote areas.

In Bangladesh mobile phone manufacturer Nokia tried to promote its green technology campaign in order to collect used mobile phones for its recycling plant. Each of its eighteen customer centres has a designated collection box for collecting old and used mobile phones. However, the response has not been significant for two reasons: there is a lack of awareness and unfamiliarity with the concept of recycling; and people are interested in getting paid for their old technology. Even a journalist we interviewed asked, "What will I get by handing my old set in?"

Usually people throw their used mobile phones in the nearest dustbin. From there the municipal authority collects them with the solid waste and dumps them on the landfill. There are some mechanisms to separate medical waste and some solid waste, but there are no such activities for e-waste.

Action steps

Bangladesh does not have comprehensive policies nor the capacity to handle e-waste challenges. The action items proposed below address the above two issues:

- Awareness campaign: This should include both the traditional media (newspapers, TV) and new media (web, blogs, social networks). The campaign should address policy makers as well as the general public.
- Baseline and action research: It is important to understand the current and future impacts of e-waste in the country. More research has to be done to find the current status and identify the future trends.
- Policy advocacy: A solid waste management policy is underway in the country. However, no e-waste policy is in sight. Bangladesh needs a comprehensive e-waste policy. The policy advocacy plans should include a facts-based campaign targeting policy makers, and efforts to sensitise lawmakers.
- Pilot projects: Based on the research findings, the government should launch pilot initiatives to establish environmentally and socially friendly e-waste recycling processes in the country. ■

7 www.comjagat.com.bd

GLOBAL INFORMATION SOCIETY WATCH 2010

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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www.GISWatch.org

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