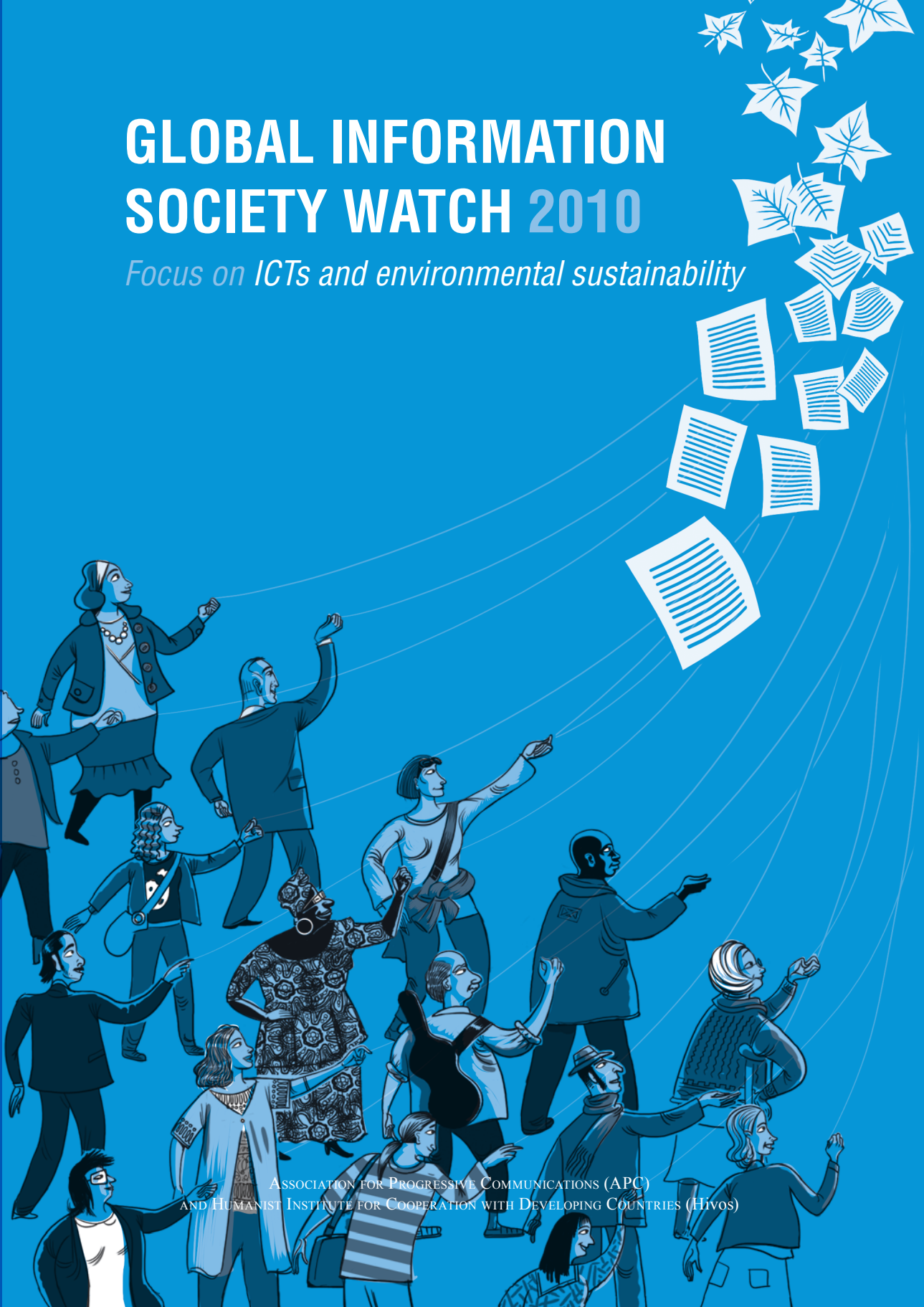
GLOBAL INFORMATION SOCIETY WATCH 2010

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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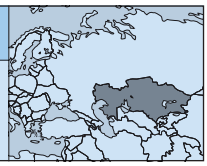

Introduction

Integration into the world economy has its positive and negative aspects. Kazakhstan has had its share of both since it became the last republic to leave the Soviet Union almost twenty years ago. Modern information and communications technologies (ICTs) are certainly one of the benefits of such integration. While not a primary market for many ICT vendors due to the small population, Kazakhstan enjoys most of what the latest technology has to offer. New IT gadgets make their appearance in the country right after they are released abroad. Local businesses cannot function without computers as even tax reports are submitted electronically. The government is spending millions annually to equip schools with the latest learning technology. The inflow of IT equipment into the country has been steadily growing. However, computers and other electronic equipment become old and outdated very fast. Rapid economic growth allows them to be replaced quite quickly but creates another serious problem that Kazakhstan is facing, but has yet to tackle: the problem of electronic waste (e-waste).

Policy and legislative context

Kazakhstan has a set of policies related to waste in general, which includes e-waste. All issues related to waste collection, transportation, handling, storage and disposal in the country are included in state policies related to environmental safety.

The major policy related to waste in Kazakhstan is called the Ecological [Environmental] Safety Concept of the Republic of Kazakhstan for 2004-2015.[1] The Concept was adopted in 2003 and sets the major approaches, principles and planned actions related to the environment until 2015. Direct outcomes of the Concept are three state programmes related to the environment: the State Programme on Environmental Protection for 2005-2007,[2] State Programme on Environmental Protection for 2008-2010[3] and Ecology of Kazakhstan State Programme for 2010-2020.[4] Each programme provides an overview and analysis of the current situation with regards to all aspects of the environment, including waste, and proposes an action plan to improve it. As such, the programme for 2005-2007 recognised the need "to prepare recommendations on recycling and reuse of solid waste" and one of the action items for the programme for 2008-2010 is the development of technological processes for recycling solid waste.

The Concept and all three state programmes have led to a number of legal acts being developed, most notably the Ecological Code of the Republic of Kazakhstan. The code was adopted in 2007, with the latest amendments made in March 2010.[5] Among other items, the code governs all aspects of waste, waste management and recycling. Specifically, the code stipulates that the "owners" of waste have to handle the waste safely, following environmental and sanitary regulations. The code also provides that the local government bodies (provincial and city level) are responsible for the organisation of a "rational and ecologically harmless system of collection of community waste." The code does not provide for mandatory recycling of any waste.

Local regulations for the city of Almaty,[6] the largest city in Kazakhstan where the majority of businesses operate, provide for collection, transportation, storage, processing and disposal of waste in the city. The regulations include a section on the main principles of handling waste in the city. These include separation of waste during collection and preparation for processing. Citizens and businesses are responsible for the separation of recyclable waste, according to these principles. Waste recycling is not mandatory, but is one of the methods of waste disposal as long as it is "technologically possible and economically feasible." The regulations also state that "it is not allowed to destroy or dispose of waste that can be used as secondary material resources" – or waste that can be reused.

There are no policy papers or immediate plans to address e-waste specifically. According to the current legislation, e-waste in Kazakhstan is viewed only as one of many types of solid waste.

Current state of the e-waste problem in Kazakhstan

According to the Ecology of Kazakhstan State Programme for 2010-2020, over 95% of solid waste in Kazakhstan ends up in landfills, despite the fact that this waste contains a lot of reusable and recyclable material. Moreover, there is no separation or sorting for the bulk of this waste. Another

1 Ecological Safety Concept of the Republic of Kazakhstan for 2004-2015 (December 3, 2003)

2 State Programme on Environmental Protection for 2005-2007

3 State Programme on Environmental Protection for 2008-2010

4 Ecology of Kazakhstan State Programme for 2010-2020

5 Ecological Code of the Republic of Kazakhstan (as of 19 March 2010)

6 Rules (Regulations) for accounting, processing and disposal of production and consumption waste in the city of Almaty (as of 12 April 2010)

state programme notes that 97% of landfills in Kazakhstan do not meet sanitary and environmental safety regulations and no assessment of their impact on the environment has been made.

There were near three million PCs shipped to Kazakhstan from 2000 to 2010, according to IDC, an international IT market intelligence consultancy.[7] According to industry experts, about half of that or roughly 1.5 million PCs are currently functioning in the country. This means that the other 1.5 million PCs have become e-waste in one form or another. This does not include millions of printers, monitors and other peripheral devices that have been added to the landfills.

In the past decade, many of the old but still functioning PCs in Kazakhstan found a second use in businesses, homes and schools that cannot afford new computers. The current PC penetration is thought to be a little over 10%. This shows that the market for PCs in Kazakhstan is far from saturation and more computers will be sold in the country in the near future. However, as government increases its spending on new computers, the disposable incomes of the population rise and PC penetration increases, there will be less demand for used PCs. This is expected to further contribute to e-waste.

Market analysts suggest that computers are replaced every three to five years depending on the form factor, model and other variables. Some companies, such as banks, have regulations to destroy old hard drives, making a used computer useless and only worth throwing out. While anecdotal evidence suggests that in some organisations working parts are taken to be used as spare parts for other machines, most of the old PCs become waste and only contribute to landfills.

Despite the fact that most waste ends up in landfills, businesses can find recycling services for a lot of things, such as used tires, medical waste, light bulbs, etc. However, there are only a few small firms in all of Kazakhstan that offer recycling for IT equipment. No recycling services are directly advertised or targeted at consumers. The recycling is also limited to harvesting working components for further resale and discarding the rest.

Additionally, companies are discouraged from selling used equipment as it usually involves paying additional income taxes and creates more work for accountants. Large corporations would rather throw away used equipment than get involved in dealing with additional paperwork and taxes that arise from their non-primary business activities.

While there are a number of environmentally focused NGOs in Kazakhstan, there are no NGOs in the country that deal with the e-waste problem specifically, to the extent that the problem of e-waste seems to be non-existent in the country. This is most likely due to the fact that there are many other, more pressing issues related to pollution and the environment, such as pollution from extractive industries and automobiles.

The biggest problem with recycling and proper disposal of e-waste (or any waste for that matter) in Kazakhstan is the perception of recycling by the population at large. Although there are no readily available studies that have been conducted on the matter, it appears that the majority of the population in Kazakhstan does not consider recycling as an option. Everything from food waste to used laptop batteries are thrown into the same garbage containers and end up in landfills. People do not sort their garbage – and there is no point for them to do it anyway, as there is always only one dumpster for general waste available.

In 2007 there was a waste separation initiative in Almaty. Waste containers with three separate trash receptacles (glass, paper, general waste) were installed on street corners and in public areas. The initiative did not last very long as the people were not following the guidelines and were throwing general waste into all three receptacles. The containers were removed within a year.

The e-waste problem in Kazakhstan is growing, but very few are aware of it. The majority of the population is not educated about the environmental damage caused and the impact e-waste will have on future generations.

New trends

Although there are no signs that the government recognises the growing problem of e-waste, there are positive signs that show recognition and understanding of the problem with waste in general. All state programmes concerned with the environment mention the growing landfills and lack of recycling in the country. Moreover, these programmes propose various solutions that include tightening control and increased accountability when it comes to waste and pollution.

However, recent amendments and current efforts are mostly concerned with tightening waste regulations for the extractive industries. These are the most developed sectors of Kazakhstan's economy, and they produce a lot of pollution. Many believe that it is easier for the government to show results by approaching large corporations; so the efforts are centred on large multinationals rather than trying to "hunt down" smaller companies.

E-waste, contrarily, is produced by virtually all companies in the country and the large numbers make it much harder for the state to monitor. A broken mobile phone thrown into a trash can is much harder to spot than an oil leak.

An important development of recent years is the growing recognition by businesses, government and the population at large of worsening environmental conditions. The three state programmes are an example of the concerns on the part of the government. The construction of new paper and automotive tire recycling facilities in the

7 www.idc.com

country provide hope for recycling of other solid waste, including electronics.

Action steps

- The problem of e-waste should be recognised in Kazakhstan. This can be reflected in one of the government policy papers or by implementing regulations for the current Ecology of Kazakhstan State Programme. Additionally, it is necessary to raise awareness of the problem among the population at large through the mass media.
- There is a need for NGOs that specialise in electronic waste reduction, promote recycling and educate the public on various aspects of the e-waste problem.
- Waste separation and recycling need to be implemented across the country and made mandatory. E-waste should be clearly defined in legal acts along with the procedures for its collection, sorting and recycling.
- People need to be educated on the possibilities to reuse and recycle old electronic equipment, especially using electronic channels, such as targeted online advertisements, electronic media and other sources that target users of electronic equipment specifically.
- Both consumers and businesses need to be encouraged to reuse old equipment. Refurbishers should be subsidised. A flourishing second-hand market is a critical part of the e-waste chain. ■

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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