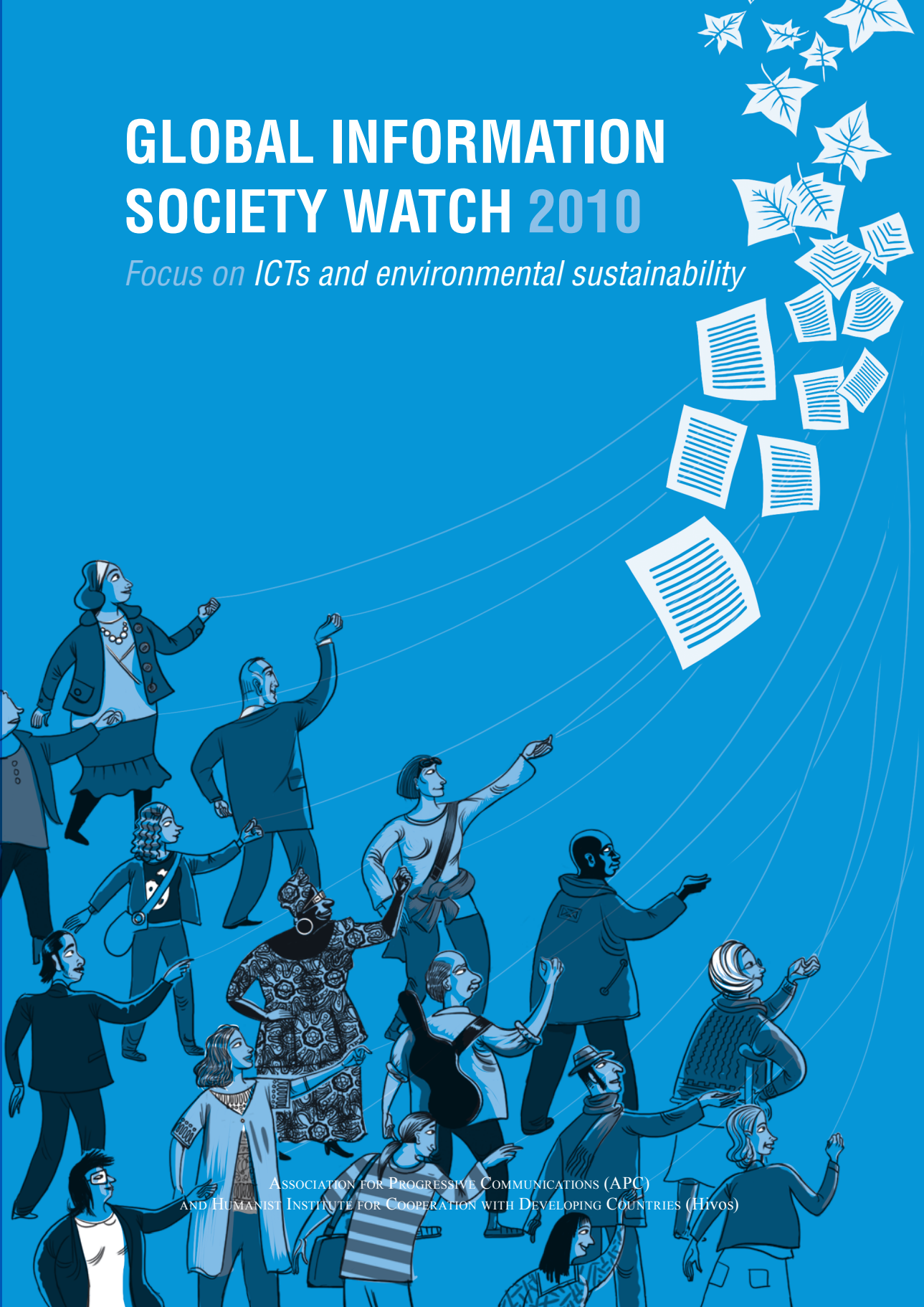
GLOBAL INFORMATION SOCIETY WATCH 2010

Focus on ICTs and environmental sustainability



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

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Steering committee
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Coordinating committee
Karen Banks (APC)
Monique Doppert (Hivos)
Karen Higgs (APC)

Project coordinator
Karen Banks

Editor
Alan Finlay

Assistant editor
Lori Nordstrom

Publication production
Karen Higgs

Graphic design
MONOCROMO
info@monocromo.com.uy
Phone: +598 2 400 1685

Cover illustration
Matías Bervejillo

Proofreading
Stephanie Biscomb, Lori Nordstrom, Álvaro Queiruga

Financial partners
Humanist Institute for Cooperation with Developing Countries (Hivos)
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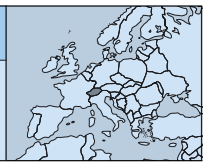

Introduction

In the mountains and valleys of Switzerland you will hardly find any dumped electronic waste (e-waste). Neither is e-waste an issue in public discourse – compared to other waste management concerns. Switzerland is known to be the homeland of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and Geneva hosts its secretariat.[1] When it comes to e-waste, the public perception seems to be: "Out of sight, out of mind."

Yet according to the Federal Statistics Office (FSO), the figures for computers per household are still increasing. The proportion of households with at least one computer is now around 76%.[2] So where do all the old computers and communications devices go?

Policy and legislative context

In early 1998, Switzerland passed legislation on the Return, Take-Back and Disposal of Electrical and Electronic Equipment (ORDEE).[3] Under this ordinance, retailers, manufacturers and importers are required to take back, at no charge, appliances of the kind that they normally stock. Consumers, for their part, are obliged to return end-of-life appliances, and are not allowed to dispose of them via household waste or bulky item collections. The ordinance covers all sorts of electrical/electronic devices, including IT and telecommunications equipment.

Collection and disposal are managed by the Swiss Foundation for the Disposal of Wastes (SENS) and the Swiss Association for Information, Communication and Organisational Technology (SWICO). The purchase price of all appliances covered by the ORDEE includes a prepaid disposal charge based on voluntary sectoral agreements (co-regulation). Equipment can, as a result, be returned free of charge.[4]

According to observers, this e-waste management system is well organised and has been fairly implemented over the years. The average Swiss is known to be disciplined and has a rather developed sense of environmental issues. Nevertheless, at the end of 2008, the Swiss Federal Council commissioned an examination on how the potential of information and communications technologies (ICTs) for sustainable development could be realised to a greater extent, and how the risks of technology could be reduced. To this end the Federal Office of Communications (OFCOM), together with the Federal Office for Spatial Development (ARE), commissioned INFRAS, an independent consulting group providing policy analysis and implementation services,[5] to draw up an inventory and identify deficits and possible courses of action.[6]

E-waste competence

Their report was published at the end of 2009, and concludes: "From the ecological viewpoint, it is the consumption of energy and resources in particular which is particularly relevant. In this area there is great potential for reducing consumption over the total lifecycle [of ICTs] (i.e. in the production and utilisation of scarce resources, in both operation and use, as well as in recycling and disposal). In addition, ICTs play an important role in making processes 'smarter' (i.e. more intelligent and therefore more efficient, or in replacing energy-intensive applications)."

The three main recommendations of the comprehensive report that runs to some 100 pages include targets like "developing and implementing the national strategy on 'Green ICT'," and notes "a lack of overall coordination and targeted linking of the various activities under the umbrella of a comprehensive concept." A national "Green ICT" strategy, the report says, would have to be drawn up by the Confederation with the involvement of businesses, research institutions and NGOs. The problem of e-waste plays a peripheral role in the report, while the question of ICT and sustainable development more broadly is considered "relevant on many levels."[7]

Governmental representatives emphasise that Switzerland has one of the "best established e-waste management systems worldwide." From the beginning, the Swiss Federal Laboratories for Materials Testing and Research (Empa) has been part of the technical control system for Swiss operators. The system is organised in four categories of producer responsibility organisations (PRO), which handle specific categories of e-waste.[8] One of the partners is SWICO Recycling – the unit of SWICO which handles mainly ICT and consumer electronics waste, including personal

1 The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 22 March 1989, is the most comprehensive global environmental agreement on hazardous and other wastes. The Convention came into force in 1992. www.basel.int

2 www.bfs.admin.ch/bfs/portal/de/index/themen/20/22/press.Document.91920.pdf

3 Verordnung über die Rückgabe, die Rücknahme und die Entsorgung elektrischer und elektronischer Geräte (VREG), 14 January 1998. www.admin.ch/ch/d/sr/c814_620.html

4 www.bafu.admin.ch/abfall/01472/01478/index.html?lang=en

5 www.infras.ch/e/index.php

6 Federal Office of Communications (OFCOM) (2009) *ICT and Sustainable Development in Switzerland.* www.bakom.admin.ch/themen/infosociety/03451/index.html?lang=en

7 www.bakom.admin.ch/themen/infosociety/03451/index.html?lang=en

8 www.e-waste.ch

computers.[9] Building on this experience, the State Secretariat for Economic Affairs (SECO) first mandated Empa in 2003 to implement case studies of the situation of e-waste recycling in developing and transition countries in Asia and Africa. The case studies share knowledge and experience gained through this system and establish "Knowledge Partnerships in e-Waste Recycling".[10]

And what about transboundary movements of hazardous waste from Switzerland to developing countries? SWICO officials say that devices collected by the Swiss system operators must be recycled in Switzerland – at least that is the target of the SWICO system. The few components that cannot be recycled in the country for technical reasons (like monitor glass and printed circuit boards) are transferred to neighbouring countries such as Germany or Sweden for safe recycling. For the export of electronic junk, however, special permissions from the Federal Office for the Environment (FOEN) are needed.[11]

An information request from Greenpeace Switzerland on the reliability of the official statements showed no particular contradiction between official statements and practice on the ground regarding the handling of e-waste. A spokesperson referred to the rather common practice in other European countries to declare electronic junk from computers and handhelds as "second-hand goods", and thereby circumvent legal restrictions in place. But, the spokesperson said, "we never particularly investigated e-waste handling and potential abuses in Switzerland – nevertheless, there is no evidence so far that e-junk from the country is brought to developing countries."[12]

The only hint on potential export abuses of e-waste from Switzerland was found in a Greenpeace report from 2008 called "Poisoning the poor: Electronic waste in Ghana". A Greenpeace investigation team in the country "saw containers of e-waste from Germany, Korea, Switzerland and the Netherlands being opened at Tema harbour, the biggest port in Ghana."[13] Another Greenpeace spokesman suggested "there is no systematic control mechanism in place" and therefore "we do not know whether intermediaries buy such stuff and recycle it in poor countries."[14]

Switzerland is said to be in the vanguard of dealing with e-waste, including mobile phones. In 2002 it helped to launch a successful initiative to convince the telecom industry to recycle old phones or dispose of them correctly. The deal – the first of its kind – has served as a model and has since given thousands of unwanted mobiles a new lease of life. "We have developed collection strategies in Switzerland, Europe and North America, which represent a very important pillar in combating e-waste," a FOEN representative said. "It is important to assist developing countries to set up similar systems to properly deal with cellphones and computers."[15]

Swiss lobbying for ecological disposal

Switzerland has repeatedly used international conferences and forums, like the Conference of Parties to the Basel Convention held in Bali, Indonesia in June 2008, to lobby for more efficient disposal of old electronic goods. FOEN officials are concerned that as international trade increases, so does potential waste. Waste wrongly disposed can have a serious impact on human health and on the environment. In Bali, the Swiss delegation lobbied conference participants to create partnerships similar to its mobile phone solution to deal with old computers.[16]

The Basel Action Network (BAN), the watchdog of the Basel Convention,[17] testifies that e-waste is increasingly sold and exported from rich countries to developing ones for so-called "reuse". But the stock is often beyond use or repair and is in reality "e-scrap". This ends up being dumped and burned, with serious impacts on the environment and on health, as has been seen in Nigeria. A 2005 study by BAN concluded that up to 75% of scrap TVs and computers shipped to Nigeria for "reuse" ended up buried or burned. In Bali, the network called for the introduction of mandatory testing and monitoring before any second-hand equipment is exported to prevent this from happening.[18]

New challenges

The average life span of computers in developed countries has dropped from six years in 1997 to just two years in 2005. Mobile phones have a life cycle of less than two years in developed countries, specialists say (despite actually lasting for about seven years). Shorter life cycles are an indicator of the increased need and use of raw materials for new computer and mobile production. The ecological consequences of these consumption patterns are often not fairly considered, either by producers or consumers.

Whereas electronic items in general have a return rate in the country of almost 80%, only 15% of the 2.8 million mobile phones sold in Switzerland per year have in the past been returned for recycling. Observers assume that the rest are collected and stored in households for years. The SWICO

9 www.swicorecycling.ch/default.asp?lang=e

10 Swiss e-Waste Programme: ewasteguide.info/node/4141

11 swissinfo (2004) E-Schrott-Weltmeister sein – leicht gemacht!, 22 April. www.swissinfo.ch/ger/index/E-Schrott-Weltmeister_sein_-_leicht_gemacht!.html?cid=3863598

12 Greenpeace Guide to Greener Electronics: www.greenpeace.org/switzerland/de/Publikationen/Chemie/Guide-to-greener-electronics and inquiry by the author.

13 Greenpeace (2008) *Poisoning the poor: Electronic waste in Ghana*. www.greenpeace.org/raw/content/international/press/reports/poisoning-the-poor-electonic.pdf

14 swissinfo (2004) Bessere Sonderabfall-Entsorgung angestrebt, 23 October. www.swissinfo.ch/ger/index/Bessere_Sonderabfall-Entsorgung_angestrebt.html?cid=4160986

15 swissinfo (2006) Reducing the growing e-waste mountain, 1 December. www.swissinfo.ch/eng/index/Reducing_the_growing_e-waste_mountain.html?cid=672494

16 swissinfo (2008) Switzerland lobbies for better e-waste disposal, 22 June. www.swissinfo.ch/eng/top_news/Switzerland_lobbies_for_better_e-waste_disposal.html?cid=672556

17 www.ban.org

18 www.swissinfo.ch/eng/top_news/Switzerland_lobbies_for_better_e-waste_disposal.html?cid=672556

Recycling programme is trying to change this, and is even using Google Maps where mobile owners can verify where the nearest recycling centre is.

Specialised institutions like SWICO Recycling declared at a recent media conference (in the summer of 2009) that the return of old mobiles could be "useful for the environment." Mobiles normally consist of a high concentration of reusable precious metals like copper, aluminium, iron, silver or gold, and up to 40% of these materials can be reused. Around 50% of the material in a mobile phone has to be burned; the remaining 10% needs to be disposed of using special processes.[19]

But even a well-functioning system of waste management may lead to environmental problems, according to an eco-record study conducted by Empa. Used electronic items are transported up to 39 kilometres on average, leading to total CO_2 emissions of 340 tonnes per year. Reducing such disposal distances in the country is a challenge for SWICO Recycling and SENS.[20]

Action steps

- Developing and implementing the national strategy on green ICTs, as suggested in the report on ICT and sustainable development in Switzerland.
- Convincing users to return their mobiles for recycling, to increase the return rate of mobile phones to the level of other e-items (which is around 80%).
- Developing a network of country-wide collection and recycling units to avoid CO_2 emissions that are the result of the long-distance transport of e-waste.
- The introduction of mandatory testing and monitoring before any e-waste is exported to prevent serious impacts on the environment and on health, as suggested by BAN.
- Civil society groups have an important role to play in addressing the e-waste problem as well. Important functions already fulfilled by civil society groups are agenda setting, data collection and education. An important additional role civil society groups could play is to start up a discussion on the usefulness and characteristics of future electronics. In this context, an e-waste policy paper by the Centre for Research on Multinational Corporations (SOMO) offers specific policy options and recommendations for the public sector, businesses and social groups for stimulating the collection, reuse and recycling of e-waste. These have been placed on the agenda of countries that export and import e-waste alike, and several initiatives are being developed to combat (illegal) e-waste exporting.[21] ■

19 Push-Monatsthema: Handys als Rohstofflieferanten. www.umweltschutz.ch/index.php?pid=486

20 Computerworld.ch (2008) Handy-Recycling ist wenig beliebt, 7 April. www.computerworld.ch/aktuell/news/44442/index.html

21 Van Huijstee, M. and De Haan, E. (2009) *E-Waste Policy Paper*, SOMO, Amsterdam. goodelectronics.org/news-en/somo-conference-on-e-waste-in-brussels-1

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Institutions of higher education in Europe to take up sustainable procurement of computers, online petition by Procure IT Fair procureitfair.org/petition

Rights for People, Rules for Business www.rightsforpeople.org/?lang=en

Schmidt-Bleek: Checkliste Dematerialisierung www.nachhaltigkeit.info/artikel/checkliste_fuer_produkthersteller_526.htm

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StEP Initiative (2010) *Solving the E-Waste Problem* www.nachhaltigkeit.info/artikel/step_initiative_1075.htm

Swiss Federal Council (2010) *Sustainable Development Strategy* www.are.admin.ch/themen/nachhaltig/00262/00528/index.html?lang=en

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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