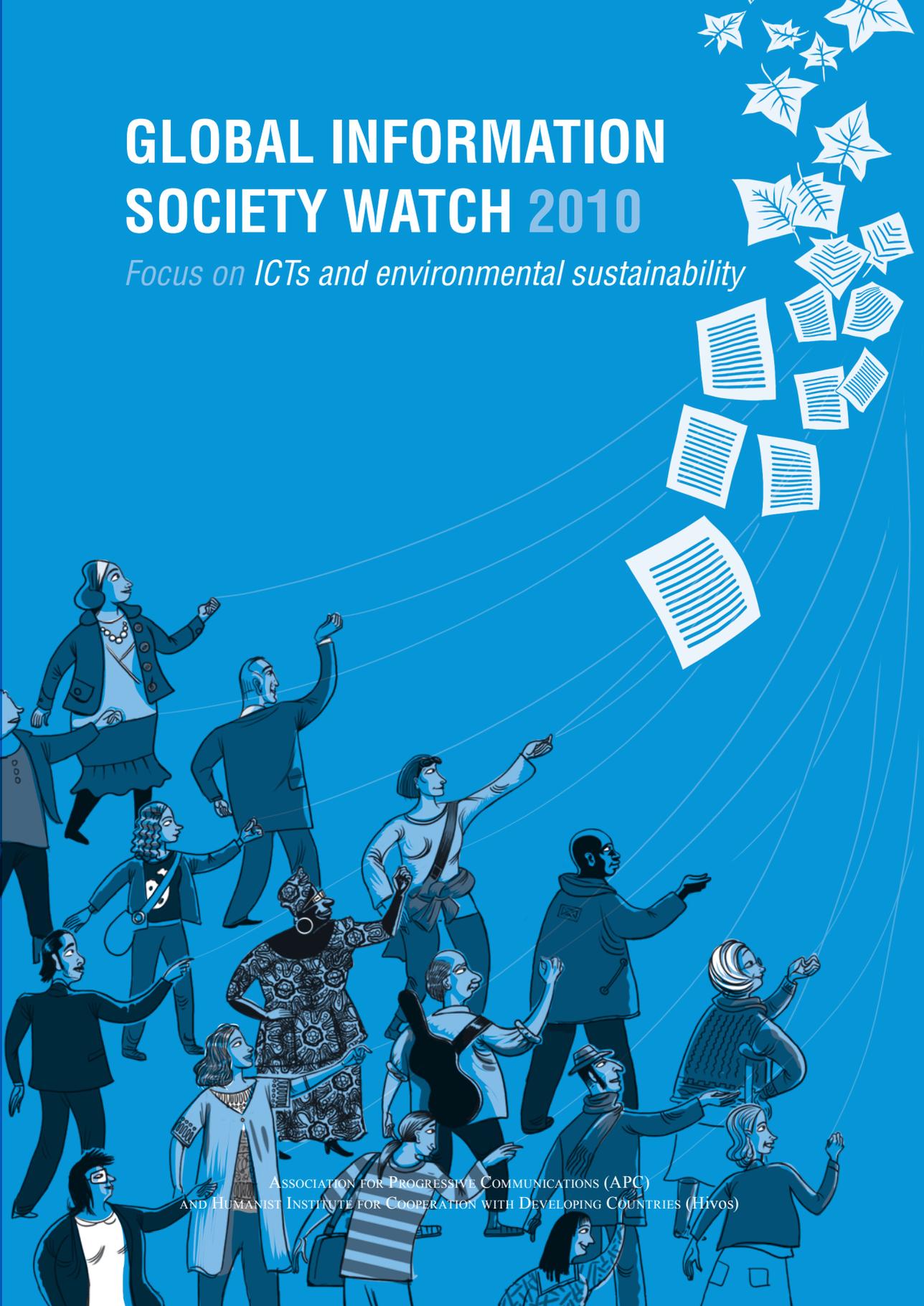


# GLOBAL INFORMATION SOCIETY WATCH 2010

*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



## Global Information Society Watch 2010

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## Introduction

In Ecuador, new constitutional principles that are the legal framework in which new laws, rules and regulations are developed have defined a development model of environmental sustainability that in addition guarantees universal access to information and communications technologies (ICTs).

Climate change has been an ongoing concern on the public agenda, particularly focused on the Yasuni-ITT<sup>1</sup> project. Yasuni Park is one of the areas with the greatest biodiversity in South America. Yasuni-ITT aims to stop the exploitation of oil reserves in the area, in return for monetary compensation from the international community. The main purpose of this project is to prevent the emission of 410 million tonnes of carbon dioxide through the exploitation of oil, ensuring the conservation of biodiversity, and respecting indigenous populations who have yet to be contacted but are known to live within the park's boundaries.

There are no national policies related to the treatment of electronic waste (e-waste) in Ecuador. There are private initiatives by mobile companies regarding the recycling of mobile phones, but there are no consistent and structured approaches with regard to e-waste such as computers, printers, fax machines, batteries, and so on. These materials are being deposited in municipal landfills and mixed with normal trash, becoming a danger to public health.

## Policy and legislative context

In recent years, Ecuador has experienced important changes and progress in environmental matters. One of the biggest changes happened in 2008 with the adoption of the new constitution, in which the rights of nature were recognised. The objective of this change was to strike a balance between development and the environment.

The most relevant part of the constitution is Article 71, which states that *Pachamama*, or nature, has the right to be respected. This refers to respect for its existence, and responsibility for its maintenance and regeneration.

On the other hand, the constitution also states in Article 16 that "All persons, individually or collectively, have the right to: ... 2) Universal access to information and communication technologies."

In 2009 the government drafted the National Development Plan, called the National Plan for Living Well (2009-2013). This plan is used by the government as an instrument to coordinate public policies within the administration and public investment. Among the strategies related

to the environment and ICTs are the drive towards universal connectivity, the change of the energy mix, and social investments in the context of sustainable macroeconomics.

## Green ICTs: First steps in Ecuador

Environmental awareness is just starting to emerge in Ecuador. Despite being a country with a unique biodiversity, there has not been a culture of environmental protection or waste recycling. The delay in the country regarding access to ICTs is perhaps the main reason that recycling of e-waste has not been taken seriously into account.

In recent years there has been an unusual interest in the issue of climate change, not only for being a very interesting topic on the global agenda, but also due to the following initiatives promoted by the government:

- The Yasuni-ITT initiative.
- With regard to changing the energy mix, the state has promoted the construction of hydroelectric plants to reduce dependency on fossil fuels. At the same time, the first pilot wind-power plants are being developed and photovoltaic solar panels installed. The state is also promoting the use of renewable energies such as biofuels and other alternative fuels.
- Energy efficiency projects have been launched, such as those that replace incandescent lights with energy-saving light bulbs and encourage the gradual replacement of inefficient household appliances.

The Ministry of Telecommunications and Information Society (MINTEL), through the National Connectivity Plan,<sup>2</sup> is actively promoting digital inclusion; nevertheless, potential environmental impacts that could result from the introduction of computers on a large scale have not been considered. The exponential growth of mobile telephony and the ongoing renewal of terminal equipment should be a concern with respect to the management of e-waste, including batteries – especially taking into account that in the last five years, the number of users of ICTs has tripled.

According to figures from the Central Bank of Ecuador, during the last decade the country imported a total of USD 947 million in computers and other electronic data processors. This is equivalent to 21,000 tonnes of equipment, which in the next five years is likely to become e-waste.

The Superintendency of Telecommunications (SUPERTEL), the institution responsible for the control of telecommunications, has recommended establishing

1 ITT: the initials of three oil exploration blocks in the Ecuadorian Amazon region that fall within the protected area of Yasuni Park: Ishpingo-Tambococha-Tiputini. For more information see [www.yasuni-itt.gov.ec](http://www.yasuni-itt.gov.ec)

2 The National Connectivity Plan for the period 2008-2011 foresees the investment of some USD 900 million in connectivity and technology infrastructure.

regulations for smart devices in terms of energy conversion, types of plugs used, and their reuse; encouraging research into energy accumulation and storage systems; promoting integrated technologies for services; and developing capacity for the recycling and safe disposal of technological waste, especially the most polluting technologies.<sup>3</sup>

In addition, SUPERTEL is promoting policies that contribute to the development and implementation of remote services, such as telework, tele-education, and tele-health.

For the National Telecommunications Council (CONATEL), the strategies designed to mitigate the consequences of climate change focus on the implementation of networks and devices that have low power consumption, promoting the use of next-generation technologies. It also supports the reuse and recycling of computers and peripherals (e.g. batteries, circuit boards, LCD monitors, cables), to prevent the proliferation of e-waste, and to enable the diffusion of ICTs in less-developed areas.<sup>4</sup>

Another important initiative was the approval of regulations on access and sharing of physical infrastructure necessary to promote healthy competition in telecommunications services. One of the greatest benefits of this is likely to be environmental benefits, especially energy saving.

Even if the telecommunications-related projects promoted by various governmental institutions are aimed at the efficient use of energy and the use of integrated technologies, the country does not have a law-making policy that deals in a coordinated and systematic way with the e-waste that is being discarded by citizens, private companies and public institutions. This waste is increasingly occupying space in landfills in cities.

Mobile telephony has experienced unprecedented growth in recent years, and this expansion has become a new threat for the environment. Mobile handsets are composed mostly of non-biodegradable materials – they need specific processes to decompose. Additionally, the unavoidable use of a battery per phone makes these devices a real threat. Faced with this reality, private mobile phone companies in partnership with civil society organisations and universities are carrying out mobile phone recycling programmes. Phone components are then being exported abroad for proper treatment.

The multinational Porta America Movil, in partnership with the NGO Fundación Natura, has promoted the recycling of mobile phones. The campaign was aimed at sensitising the public to the environmental damage produced by discarded phones. This project, entitled “Reduce, Reuse and Recycle for Life”, began with awareness campaigns, which were followed by collection programmes. The mobile phones were then exported to the facilities of the company Belmont Trading for proper recycling.

“Recycle and Communicate with the Earth” is the name of a campaign by Telefónica Movistar, which aims to promote good environmental management practices in Ecuador and collaborate with citizens in the responsible treatment of e-waste. Movistar is also developing its programme in partnership with Belmont Trading.

Telefónica Movistar also promotes a national reforestation programme called “Green Ecuador”, which uses renewable energy in its operations, and promotes the reduction of greenhouse gases, according to its report of best business practices.

In addition to these initiatives that help to decrease the effects caused by global warming, there are others carried out by local governments. The cities of Quito and Guayaquil have departments responsible for the environment that sponsor initiatives to collect batteries in parks and schools. A notable model is the town of Loja, which years ago began campaigns to collect and classify garbage from households. It currently has an awareness campaign and has set up 30 battery collection points in schools throughout the city. The batteries will be treated through a chemical process to neutralise their harmful effects.

In the field of computers, the Ecuadorian market has also benefited from initiatives by companies like Hewlett-Packard (HP). According to its Director of Sustainability for the Americas, “HP has reduced the power consumption of its family of desktop and notebook PCs by 41% compared to 2005.”<sup>5</sup>

Amongst the strategies implemented by the Ministry of Environment to protect the environment are ones that look at efficiency and the optimisation of resources, such as the reduction of paper consumption, saving energy, and maximising the advantages of water resources. The aim is to generate in the medium term a culture focused on good environmental practices in the public and private sectors and civil society.

## New trends

As mentioned earlier, Ecuador is taking its first steps with respect to environmental awareness. This is reflected in recent initiatives related to the contribution of ICTs to the problem of climate change and to electronic recycling. However, in the last five years these initiatives have been emerging in an isolated and disjointed way.

With regard to legislation, there could be a consolidation of governmental proposals and the implementation of programmes and projects included in the National Development Plan. The development of specific laws and regulations to manage e-waste will be very useful. Some local governments have already made progress in this area; however, the challenge is to extend these initiatives nationally.

When it comes to private companies, it is expected that the recycling of electronic devices will continue, especially in terms of mobile technology.

3 Jaramillo, F. (2009) Presentation to the Fourth World Telecommunication Policy Forum, Lisbon, Portugal, 22-24 April.

4 Guerrero, J. (2009) Presentation on the ICT Policy Framework in Ecuador to the Third International Symposium on ICTs and Climate Change, Quito, Ecuador, 8-10 July.

5 [www8.hp.com/mx/es/hp-news/article\\_detail.html?compURI=tcm:230-114362-16](http://www8.hp.com/mx/es/hp-news/article_detail.html?compURI=tcm:230-114362-16)

## Action steps

- It is a priority to start working on a national policy on e-waste recycling technologies so that e-waste being deposited in landfills at the risk of contaminating water sources in cities can be recycled safely.
- It is also important to define the proper recycling process for each class of technological waste. Recycling a computer is not necessarily the same as recycling mobile phones or batteries, the latter being the most risky because they are indiscriminately discarded with ordinary trash.
- It is essential for the state and private companies to invest in the construction of recycling facilities and in the refurbishment of electronic equipment.
- Appropriate treatment of e-waste should include various actors; it requires efforts by the state, the private sector and civil society in order to build a truly sustainable environmental culture.
- To provide an effective solution, the global context should be considered, including for generating legal regulations that are appropriate for the reality of each region or area.
- E-waste management requirements should be incorporated in programmes that deal with universal access.
- The intensive introduction of new computer equipment in schools as part of the government's connectivity drive should include green technology.
- Finally, it is the responsibility of Ecuadorian society as a whole to educate future generations in ethical values related to respecting the environment and the efficient use of scarce resources, to achieve harmonious development in the country. ■

**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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