GLOBAL INFORMATION SOCIETY WATCH 2010

Focus on ICTs and environmental sustainability

Global Information Society Watch

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Olinca Marino
LaNeta
www.laneta.apc.org

In combating climate change, monitoring and early warning systems, information and communications technologies (ICTs) are an essential factor, and several governments in the Latin American and Caribbean (LAC) region have been implementing programmes that use ICTs for these purposes. There is a tendency in the region to emphasise the potential of ICTs to mitigate and adapt to the "new" conditions resulting from climate change.

ICTs were seen as an essential element for reducing greenhouse gases (GHGs) globally during the 2007 Climate Change Conference in Bali, Indonesia. They have been considered an important support tool in adaptation to and mitigation of climate change.[1] Some governments, academic institutions, civil society organisations and businesses in the LAC region have provided continuity to that conference by responding to the International Telecommunication Union's (ITU's) call for the Symposium on ICTs and Climate Change held in 2009 in Ecuador. This was perhaps the most outstanding official event in the region because of the attempt to bring together contributions from a multi-sectoral perspective focused on providing analysis and opinions, and to stimulate actions aimed at confronting the effects of climate change.

Nevertheless, for their part, various civil society groups in Latin America are increasingly calling attention to the particular conditions generated by climate change, and focusing the analysis of the causes that provoke it on the patterns of consumption and production developed by modern societies. Numerous civil society forums have been held in Latin American countries to reflect on climate change and its human-made causes, which are considered to result from forms of consumption and production and market structures that entail excessive use of resources, directly resulting in high GHG levels.

Without a doubt, the most highly publicised event in this regard was the World People's Conference on Climate Change and the Rights of Mother Earth, which was held in Cochabamba, Bolivia in April of this year and drew together more than 20,000 participants from 130 countries around the world. The People's Agreement adopted at the conference stresses: "The 'shared vision for long-term cooperative action' in climate change negotiations should not be reduced to defining the limit on temperature increases and the concentration of greenhouse gases in the atmosphere, but must also incorporate in a balanced and integral manner measures regarding capacity building, production and consumption patterns, and other essential factors such as the acknowledging of the Rights of Mother Earth to establish harmony with nature."[2]

With regard to technology in particular, the conference participants resolved that the development of knowledge and technology should be seen as an integral part of a broader effort to deal with the fundamental, structural and root causes of climate change. They further stated that in order to reduce emissions over the next decade, and to deal with the growing damage caused by climate change, it is essential to implement socially and environmentally sound technologies in every country, sector and place, to help us live well and in harmony with one another and with "Mother Earth".

Several conclusions of the People's Conference were incorporated in a United Nations document on climate change used as a negotiation text for the 192 countries that gathered in Bonn, Germany in August of 2010.[3] Some points that were incorporated for consideration in the negotiations are:

- A 50% reduction of greenhouse gas emissions by developed countries for the second period of commitments under the Kyoto Protocol, covering the years 2013 to 2017.

- To guarantee an equitable distribution of atmospheric space, taking into account the developed countries' climate debt to the developing countries, based on their historic responsibility for greenhouse gas emissions.

- Promotion of measures that change the consumption patterns of the developed countries.

- The adoption of necessary measures in all relevant forums that will give access to intellectual property rights to technologies that can be used for climate change adaptation and mitigation.

This is particularly relevant, given that the LAC region's population faces constant danger as a result of climate change-related events such as droughts, hurricanes, floods, a rise in sea levels, overflowing rivers, changes in rainfall levels, degradation of the Amazon basin,[4] and Andean glacial melting, added to the already imbalanced natural resource management system (deforestation, extraction of raw

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1   www.tendencias21.net/Las-TIC-son-esenciales-para-resolver-el-cambio-climatico_a3544.html

2   pwccc.wordpress.com/support

3   pwccc.wordpress.com/2010/08/16/the-proposals-of-%E2%80%9Cpeoples-agreement%E2%80%9D-in-the-texts-for/#more-2380

4   rainforests.mongabay.com/amazon/amazon_climate_change.html

materials and monocultures). According to observations by the Intergovernmental Panel on Climate Change (IPCC), they expect, among other consequences for the LAC region, corn yields to diminish in temperate zones, production in tropical and subtropical regions to be reduced to a third of current levels, and a possible increase in salinisation and desertification in dry zones. Climate change threatens to destroy many rural communities in the region because a rise in sea levels may force those in low-lying coastal areas and deltas to move to higher land.[5]

The LAC region produces between 4% and 12%[6] of total GHGs worldwide, but its population, which accounts for 8.6% of the world's population with its great biological and cultural diversity is constantly in an emergency situation due to GHG emissions from other regions in the world.

The LAC region's average per capita carbon emissions are 2.6 tonnes annually, low when compared to 7.9 tonnes for Europe, and 19.9 for the United States. Compared to the rest of the planet, a lower proportion of these emissions in LAC come from energy consumption, while a higher proportion come from changes in land use. It is important to note, however, that the region's share of global GHG emissions has declined percentage-wise in recent decades, although in absolute terms, total emissions have continued to rise.

For example, in 1990 the LAC region contributed 15% of total GHGs in contrast to 36% from Organisation for Economic Co-operation and Development (OECD) countries (excluding Chile and Mexico, which belong to the OECD group) and 49% from the rest of the world. Even though in absolute terms the total number of GHG tonnes emitted increased over the next decade, in 2000 the relative percentage of emissions contributed by the LAC region declined to 11%, while that of the OECD countries (again excluding Chile and Mexico) increased to 38%, and that of the rest of the world increased to 51%.

Although it has also been recognised that ICTs could assist other productive sectors in lowering their GHG emissions by optimising and dematerialising products and services, technology cannot solve the problems that we human beings have created or worsened in the environment. According to a recent study, a more effective use of ICTs could help to reduce total global emissions by 15% by 2020 (through video conferences, e-commerce, e-government services, smart buildings, smart devices in cities, etc.),

representing carbon savings five times greater than the emissions estimated for the entire ICT sector.[7] [8] However, it seems unlikely that the sustainability crisis caused by the unjust exploitation of nature, stripping of natural resources from their original peoples, unequal markets, and high consumption models   all factors reflected in climate change will be modified simply with an increased use of ICTs and its smart networks and devices.

It seems important to observe a change in the means of energy production and consumption to truly lower GHGs. That implies changes in the consumption of technology and products including ICTs. The challenge, therefore, is how to consume less and at the same time obtain the maximum benefits of ICTs. Quite a challenge!

Particularly harmful to the sustainability of the planet is the waste from the ICT industry, which results not only from the disposal of tech products, but also their production. Electronic waste (e-waste) is one the fastest growing waste streams.[9] Its potential hazard to human health must be acknowledged. It is known that electronic industry workers as well as those who disassemble ICT products suffer health effects from exposure to toxic compounds such as chromium, cadmium, mercury, lead and brominated flame retardants.[10] We know that 70% of the lead and mercury waste in landfills comes from electronic refuse.[11] Some Latin American countries are gradually including e-waste management in their political agendas, including Costa Rica, Argentina, Brazil, Colombia, Peru[12] and Mexico. Nevertheless, in most LAC countries, the actual amount and destination of outdated electronic equipment is unknown. There are also reportedly only a handful of e-waste recycling centres.

E-waste is reaching critical mass in Latin America.[13] Despite this fact, there are few studies that address this complex panorama. Only a few figures help to sketch the problem of e-waste in the region. Prince indicates, for example, that in the LAC region approximately 8-10% of all computers in service lie in disuse, which for the year 2008 meant some 84.5 million computers.[14]

5   FAO (2010) *Climate change and its impact in agricultural, forestry, and fisheries production in Latin America and the Caribbean*, Thirty-First FAO Regional Conference for Latin America and the Caribbean, Panama, 26-30 April.

6   Statistics from the UN and ECLAC, respectively.

7   The Climate Group (2008) *SMART 2020: Enabling the low carbon economy in the information age*. www.smart2020.org/_assets/files/02_Smart2020Report.pdf

8   www.itu.int/newsroom/press_releases/2009/NP09-es.html#1

9   Silva, U. (ed.) (2009) *Gestión de residuos electrónicos en América Latina*, Plataforma RELAC SUR/IDRC, Santiago, Chile.

10 For examples see lib.bioinfo.pl/auid:4058337

11 greenti.wordpress.com/category/tendencias/page/2

12 Silva (2009) op.cit.

13 Ibid.

14 Prince, A. (2006) *Recupero y reciclado de PC's en LAC*, Plataforma RELAC SUR/IDRC, Santiago, Chile.

Nevertheless, it is difficult to judge these statistics accurately, given that in the LAC region it is common to find high amounts of rebuilt computers sold without control or registration. This also makes it very difficult to achieve a measure currently being proposed in Europe – extended producer responsibility (EPR) – since there are no clearly identified producers. EPR is a policy tool that extends manufacturers' responsibilities beyond their current accountabilities (for worker health and safety, consumer safety and production costs) to also include responsibility for life-cycle costs of their products and associated packaging. Essential to EPR is its mandate for producers to "take back" their end-of-life products and create closed-loop systems that prevent pollution and the inefficient use of resources.[15]

Peripheral products should also be measured. For example, during a period of three years (2009-2012), it was estimated that there could be 17 million printers in disuse in the region.[16] Accessories like printer cartridges should be taken into account as well.

Meetings have been held and declarations signed in the effort to search for solutions to the problem of e-waste. The following stand out:

- The Organization of American States (OAS) stated in the Declaration of Santo Domingo: Good Governance and Development in the Knowledge-Based Society,[17] adopted in 2006, the readiness to cooperate and establish appropriate measures to prevent and mitigate the environmental impact of ICT-related products throughout their life cycle and at the stage of recycling and disposal, consistent with international law.

- The Mercosur Policy Agreement signed in 2006 mandated its member states (Argentina, Brazil, Paraguay and Uruguay) to take national measures to ensure that producers and importers take responsibility for their products after sale and use.

- In Trinidad and Tobago a meeting took place to discuss the e-waste problem in the Caribbean sub-region, also in 2006. There was a proposal to form an e-Waste Association of the Caribbean. The Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL) was tasked with coming up with some guiding principles for e-waste management.

- A working group on technological waste was approved during and since the eLAC2010 Ministerial Conference in San Salvador,[18] in pursuit of its goal number 82, which proposes to promote the design of national strategies and regulation of technological waste management to deal with the environmental impact of this waste and take advantage of its potential in recycling and rehabilitation programmes, as well as to create a working group to address this subject.

Conclusions

It is crucial for the region to develop public policies, both national and regional, which promote more sustainable models of ICT production and consumption, based on clean manufacturing models which include reuse and recycling. Production models must be more nature-friendly, respecting the rights of Mother Earth.

Reliable data on ICT-related emissions, obtained using standardised methodologies, are essential to the region. A joint effort by the academic, public, business and civil society sectors to obtain reports and evaluate the impact of ICTs on emissions would be necessary.

To use ICTs as a model for climate change mitigation, broadband internet access must be guaranteed at affordable prices, accompanied by awareness-raising programmes for consumers on the implications of energy consumption and GHG production from the use of ICTs. Through this, citizens would be invited to use them in a more sustainable way.

We must give special attention to the production of e-waste in the region. Due to the increase in the use of ICTs, considerable rises in the levels of electronic refuse are expected. It is especially important to track toxic waste, assuring safe final disposal. Also important is to promote the right to information of the general population, and more specifically, workers, about the risks of e-waste. Actions towards implementing EPR would be positive.

Women are even more affected by the adverse conditions caused by the environmental sustainability crisis. That is why it is especially important to raise funds for educational, health, production support and other programmes using ICTs, which deal with the devastating consequences of climate change from a gender perspective with a special focus on women and children. ∎

15 www.eprworkinggroup.org/epr_principles_aug-2003.pdf

16 Prince (2006) op. cit.

17 www.iin.oea.org/2006/Res_36_AG_OAS/AGDEC_46_ingles.htm

18 www.eclac.org/cgi-bin/getprod.asp?xml=/socinfo/noticias/paginas/6/32566/
P32566.xml&xsl=/socinfo/tpl/p18f-st.xsl&base=/socinfo/tpl/top-bottom.xsl

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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2010 Report
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