

# 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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# BOSNIA AND HERZEGOVINA

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## Introduction

It seems that after a long sleep, Bosnia and Herzegovina is waking up and taking a position among the countries that are reflecting on climate change and their contribution to it, and on the role of information and communications technologies (ICTs) in this context. This year, a number of events support this observation. One of them was a regional conference which brought to light two new organisations: the IT Services Management Forum (itSMF) of Bosnia and Herzegovina, which organised the conference, and the Energis Centre for Education and Raising Awareness of Energy. This year also saw the launch of a website on climate change which concluded a long effort by the United Nations Development Programme (UNDP) office in Bosnia and Herzegovina for the adoption of the Initial National Communication (INC) report under the United Nations Framework Convention on Climate Change (UNFCCC). Both events happened in the last days of May 2010. For those following the ICT scene in Bosnia and Herzegovina it has been reminiscent of 2004 when, thanks to the efforts of the UNDP office, the policy, strategy and action plan for the development of an information society were adopted and signed by the Bosnia and Herzegovina Council of Ministers. Furthermore, green civil society actors have been encouraged to use the Aarhus Convention and become more and more visible through the strategic use of ICTs for networking and communication.

## Policy and legislative context

Bosnia and Herzegovina signed the UNFCCC in 2000, and a UNFCCC Focal Point was nominated: the Ministry of Physical Planning, Civil Engineering and Ecology of the Republic of Srpska.<sup>1</sup> In 2002, a Climate Change Committee with 32 members was formed, and later on a Bosnia and Herzegovina Sub-Committee for Climate Change was established too. In 2004 Bosnia and Herzegovina formalised its relationship with the Global Environmental Facility (GEF), becoming eligible for technical assistance. Still, due to the weakness of the specific institutional composition of the Bosnia and Herzegovina state, nothing was initiated even after signing, in 2007, the Kyoto Protocol. That year, in December, “to overcome internal technical difficulties of the government in preparing the tender for the INC, it was agreed that the UNDP should take the administrative

responsibility for its implementation.”<sup>2</sup> Finally, in 2009, the INC was approved at the entities level by the Republic of Srpska, the Ministry of Environment and Tourism of the Federation, and the Bosnia and Herzegovina Council of Ministers at the state level. However, the limited state jurisdiction of the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina (MOFTER) is still visible, with a vacuum at state level in policy and legislation on the environment.

## ICTs and the environment: Fragmented spaces, new possibilities

### Government

The Bosnia and Herzegovina mosaic of responsible ministries looks at first sight like a crazy puzzle where pieces are missing or have not been properly shaped, so that it is difficult to build a proper and functional system. Going through the INC report, a very thick and comprehensive document, the final recommendations present the scenario of Bosnia and Herzegovina being strongly dependent on and influenced by international developments which framed the relevant issues of policy. While the report put together multidisciplinary groups, and provides recommendations, the implementation will depend on the Bosnia and Herzegovina government administration. But the risk that Bosnia and Herzegovina’s internal institutional fragmentation will act as a major constraint is aggravated by its track record of poor planning, poor investment and poor knowledge. For example, previous strategic documents developed with funds from international agencies such as the UN, World Bank and European Commission, even if drafted in collaboration with the entity authorities, have never become official state documents (of the Bosnia and Herzegovina government) and remain only on paper.

The main question for Bosnia and Herzegovina society is how to make strategies work and how to monitor what has been produced with the support of international funds and expertise. Government accountability is the critical point, shown by the fact that some of the projects designed to reduce CO<sub>2</sub> are considering building small hydroelectric plants. This looks like nonsense in a framework of climate change and environmental protection, since building these

<sup>1</sup> Bosnia and Herzegovina encompasses two entities with their own governments and parliaments: the Federation of Bosnia and Herzegovina and the Republika Srpska (also known as the Republic of Srpska).

<sup>2</sup> “With reference to the MDGs 7, Achieve environmental sustainability, and 8, Develop a global partnership for development, UNDP is supporting the government to establish the institutional and legislative framework (Designated National Authority – DNA, Clean Development Mechanisms – CDM) and to develop and implement the National Climate Change Plans.” UNDP (2009) *Initial National Communication of Bosnia and Herzegovina under the United Nations Framework Convention on Climate Change (UNFCCC)*, Banja Luka, UNDP.

small hydro plants will destroy the biodiversity of the rivers in the country and impoverish its natural resources. It also shows the weakness of both entity ministries responsible for environmental issues, which are not vetoing the plans.

When it comes to green ICTs, there is an apparent absence of strategic thinking, judging by the process of public tenders, which show the tendency of public institutions to buy new equipment (hardware) without any thought to the optimisation of their use to prevent the growth of electronic waste (e-waste) and an increase in energy consumption (e.g. maintenance and cooling of the machines/servers). The initial INC report states that “the most significant source of CO<sub>2</sub> emissions is certainly the energy sector, which contributes 74% of total CO<sub>2</sub> emissions.”<sup>3</sup> While waiting for the establishment of a national body to coordinate climate change response, there are four reported Clean Development Mechanism (CDM) projects, created in order to reduce N<sub>2</sub>O, CH<sub>4</sub>, SF<sub>6</sub> and CO<sub>2</sub>. These projects focus on the possibility of obtaining energy from renewable sources (biodiesel, wind power, solar energy and small- to medium-sized hydroelectric power plants), and on better waste management.<sup>4</sup> Since Bosnia and Herzegovina’s ICT policy and strategy need to enter a new cycle of planning (the first one covered 2004-2010),<sup>5</sup> there is a window of opportunity for non-state actors (the private sector and civil society) to contribute to setting priorities, plan interventions, or propose cross-cutting approaches. The possibility of working with CDM projects and paying attention to energy issues when it comes to ICT implementation should be explored.

### Private sector

Technology requires investment and strategic thinking. The recent regional conference showed an emerging interest in green ICTs from some of the main industry players in Bosnia and Herzegovina, such as BH Telecom (Federation of Bosnia and Herzegovina) and Elektroprivreda Bosnia and Herzegovina (the public energy company in the Federation of Bosnia and Herzegovina). It is important to say that the expertise regarding green ICT solutions is also coming from abroad, from some of the main global vendors: Microsoft, Oracle, IBM and EMC.<sup>2</sup> Even if government representatives did not participate in the conference it is encouraging that

two public giants in the Bosnia and Herzegovina IT market have shown interest in saving costs and energy and are developing their plans in this direction. Considering the dependency of a number of small IT companies and IT professionals on these giants, this could start a very positive and interesting trend of green ICT solutions contributing to the better management of existing resources, the localisation of global solutions, and, possibly, the development of original and local responses.

### Civil society

When thinking of civil society engagement we need to distinguish between two groups of organisations: environmental organisations, which mainly use ICTs for promoting their goals and focus on quality-of-life standards and respect for natural resources; and ICT organisations, which have their focus on enhancing and introducing green technologies. The latter are also interested in proposing solutions for the management and development of big ICT departments inside ministries and the private sector (e.g. banks, industries). These solutions also look at electrical power consumption for running servers, and consider the short life cycle typical in institutions when it comes to buying and decommissioning hardware. These two types of civil society organisations are still not well networked. Environmentalist organisations focus on monitoring and lobby for development and implementation of green policies, while ICT organisations focus on the relationships with the ICT industry (big vendors and local small and medium-sized enterprises) and IT professionals.

However, collaborations do exist. A good example was the recent collaboration on the Energis Centre for Education and Raising Awareness of Energy and the itsFM, a not-for-profit network organisation that connects IT professionals, vendors and clients. The regional conference on green ICTs held in Sarajevo was the first of this type and had more than 100 participants, mainly IT professionals and the main industry players.

### Regional initiatives

In such a divided space, potential connectors are regional initiatives and bodies that offer a framework for public policy development at the national level, and regional projects that foster collaborations between research centres and universities. The latter are a strength and an essential element for connecting the otherwise separated worlds of government, the IT industry and civil society. Three relevant initiatives need to be highlighted: the Regional Cooperation Council,<sup>6</sup> whose active involvement resulted in the

3 “Other emissions sources include agriculture (12%), industrial processes (11%), and waste (3%). In the energy sector, solid fuels-coal make the largest proportion (77%), followed by liquid fuels (17%) and gas (6%). The largest source of CO<sub>2</sub> in industrial processes is iron and steel production, with more than 67%. The main sources of methane are agriculture (cattle breeding), fugitive emissions from coal mines, and waste disposal. The largest amount of N<sub>2</sub>O emissions result from agricultural soils through soil cultivation and crop farming. According to the collected data, forests in Bosnia and Herzegovina represent a significant CO<sub>2</sub> sink: 7,423.53 Gg CO<sub>2</sub> for the base year of 1990.” UNDP (2009) op. cit.

4 Omićević, A. (2010) *Climate instability: Basic concepts and the situation in Bosnia and Herzegovina*. [www.ekoakcija.com/en/content/climate-instability-basic-concepts-and-situation-bosnia-and-herzegovina](http://www.ekoakcija.com/en/content/climate-instability-basic-concepts-and-situation-bosnia-and-herzegovina)

5 Konvent (2010) *Treće zasjedanje radne grupe Obrazovanje, mladi i informacione tehnologije*. [eukonvent.ba/konvent/stream.daenet?kat=48](http://eukonvent.ba/konvent/stream.daenet?kat=48)

6 Launched on 27 February 2008 as the successor of the Stability Pact for South Eastern Europe, the RCC is intended to foster regional cooperation and support for European and Euro-Atlantic integration in Southeast Europe. Its work focuses on six priority areas: economic and social development, energy and infrastructure, justice and home affairs, security cooperation, building human capital, and parliamentary cooperation. [www.rcc.int](http://www.rcc.int)

first Ministerial Conference on Combating Climate Change in Southeast Europe, in Sarajevo on November 2008; the Belgrade Climate Change Initiative,<sup>7</sup> which saw the establishment under ministerial agreement of the South-eastern Europe Virtual Climate Change Centre for Research and Systematic Observation, Education, Training, Public Awareness and Capacity Building (SEE/VCCC), a network of national institutions from the different countries which involves, apart from ministries, civil society organisations, scientific institutions and hydro-meteorological services; and the Igman Initiative<sup>8</sup> for the non-governmental sector, which organised an *ad hoc* Energy Forum in Belgrade on the theme “Regional Energy Safety and Solidarity – Challenges and Perspectives” in January 2009.

There are interesting initiatives that focus on improving access to environmental information using ICTs, that could become involved in the implementation of green IT technologies and strategies as a means for improving environmental sustainability. One example is the project of the Regional Environmental Centre (REC)<sup>9</sup> of Bosnia and Herzegovina, which this year in May organised a conference for promoting the Aarhus Convention and its mechanism in Bosnia and Herzegovina. In the same project, the REC together with the Organization for Security and Co-operation in Europe (OSCE) is expected to revamp the section on environment and sustainable development on the MOFTER website. Since access to information has always been critical for civil society organisations, the synergy between the climate change initiatives in the country and an effective use of the Aarhus Convention could eventually bridge the divide between the most active environmental civil society organisations with researchers. In the same direction is the NEWEN<sup>10</sup> project, a very interesting initiative which focuses on establishing environmental curricula in the Southeast Europe region and in Bosnia and Herzegovina. There are four faculties involved in a three-year programme from Tuzla University: the Faculty of Natural Sciences–Department of Environmental Chemistry; the Electro-technical Faculty–Energy and Environment; the Faculty of Mechanical Engineering–Environmental Energetics; and the Faculty of Technology–Process and Environmental Engineering.

## New trends

It might be too early to say that there are new trends emerging in our country. What is true is that there are more and more organisations, both from the private and civil society sectors, which have recognised climate change as a relevant issue of development and sustainability.

The database of practitioners<sup>11</sup> created from climate change initiatives in Bosnia and Herzegovina now has 41 entries. Many of them have been taken from the database of the Western Balkans Environment Programme,<sup>12</sup> a regional initiative by the UNDP. According to the UNDP database, eleven organisations from the public, civil society and private sectors, and 45 individuals (researchers, engineers, pollution specialists, etc.) engage on issues such as air pollution and wastewater management in Bosnia and Herzegovina. This represents a good base for starting an advocacy platform with a specific focus on energy and on the intersection of ICTs and climate change, considering the majority of them are involved in measurement, monitoring and renewable energy.

The novelty compared with previous initiatives is that all the information is available on the internet already, and that a few key things are happening at the same time which push for more interaction and collaboration. So the ICT activist is not necessarily breaking new ground. At the same time MOFTER is involved in climate change initiatives and in the Aarhus Convention, universities and research centres are focusing on technology and are investing in environmental curricula, and REC is involved in many of them. It seems that with some additional effort these parallel initiatives could be joined and cross-cutting initiatives shaped.

What is sure is that we are approaching a new cycle for national ICT policy, the preparation of a national policy on climate change together with the Second National Communication to the UNFCCC, and the active promotion of the Aarhus Convention. All in all this constitutes a very specific and encouraging set of circumstances for the development of an advocacy effort which should join the small pieces of the separate worlds of environmentalists, IT specialists and governmental institutions.

## Action steps

At this time there is the potential for creating real synergies among the different stakeholders. There is a general awareness and comprehension regarding the power of ICTs as a facilitating tool, as well as a generator of changes and jobs. Moreover, there is an interest in environmental issues that goes beyond the usual civil society actors and includes universities, researchers and industry. The combination of

7 “The Belgrade Initiative’s general objective is to support sustainable economic development for the environment in Southeast Europe countries, through attempts to reduce vulnerability to climate change and adaptation, effective implementation of the UNFCCC and its Kyoto Protocol, and the establishment of the Southeast network for climate change research.” Dacic, M. and Spasova, D. (2008) Belgrade Initiative on Climate Change, presentation to the Workshop on Facilitation of Climate Policy in CEE and Turkey for the Post-2012 Period, Budapest, Hungary, 13-14 March. [tinyurl.com/2a87mp2](http://tinyurl.com/2a87mp2)

8 [www.igman-initiative.org](http://www.igman-initiative.org)

9 *Projekat: Podrška implementaciji Aarhuske konvencije u Bosni i Hercegovini Radionica: Uloga i odgovornosti u implementaciji Aarhuske konvencije u Bosni i Hercegovini, 17-18 May 2010, Sarajevo.* [www.rec.org.ba/aarhus%20WS%202010.html](http://www.rec.org.ba/aarhus%20WS%202010.html)

10 NEWEN (Netherlands and Western Balkans Environmental Network) is an environmental cooperation and capacity-building programme with partners from six universities in the Western Balkans and three universities and institutes in the Netherlands. [www.newenproject.org/sitegenius/index.php](http://www.newenproject.org/sitegenius/index.php)

11 [www.unfccc.ba/en/nc-experts](http://www.unfccc.ba/en/nc-experts)

12 The database aims to provide access to a roster of practitioners (i.e. individuals and organisations/institutions who are directly or indirectly related to remediation of environmental hot spots from all participating countries/territories) and to enable the practitioners to offer their services. [westernbalkansenvironment.net/index.php?option=experts&task=list](http://westernbalkansenvironment.net/index.php?option=experts&task=list)

these elements can generate a virtuous cycle for moving from statements and policies into real results on the ground.

To achieve this the advocacy tasks ahead should include:

- Monitoring and following up on the implementation of the recommendations from the INC, which include preparing a national strategy and action plan on climate change and preparation of the Second National Communication report.
- Following up on the nomination of the Bosnia and Herzegovina focal point for communication with the Secretariat of the Aarhus Convention.
- Connecting industry with civil society, and ICT-focused civil society organisations with traditional environmental organisations.
- Raising capacity among environmental civil society organisations on green ICTs.
- Creating an easy-to-access resource/repository platform and following up on the revamp of institutional platforms.
- Involving environmental organisations in public-private partnerships.
- Working with the media to help them understand the intersection between sustainable environment and clean ICTs. ■

**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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