# **BOSNIA and HERZEGOVINA**

OneWorld Platform for Southeast Europe (OWPSEE)<sup>1</sup> Valentina Pellizzer

## Introduction

The war and the post-war environment left Bosnia and Herzegovina far behind other countries in the Balkans. Damaged infrastructure and a "knowledge and digital divide" are affecting ordinary life, as well as the ability to compete in regional and global markets.

This report offers an overview of the current status of information and communications technology (ICT) development in the country. It highlights two areas of concern which are essential when speaking about policy-making and the strategic development of ICTs.

On the one hand, two bodies are currently deadlocked in the complex political environment of Bosnia and Herzegovina: the Agency for Information Society (AIS) and the Bosnia and Herzegovina Academy and Research Network (BIHARNET). Both are relevant in the development of a legislative framework and strategic plan for channelling resources and monitoring the implementation of ICTs.

The second important issue is that of access. This report focuses on primary and secondary schools and the status of broadband provision. This is directly linked to the existing urban-rural "digital divide" within the country, the divide between Bosnia and Herzegovina and its neighbouring countries in South East Europe (SEE), and the gap between the reality in the country and EU standards.

This report also provides an overview of participation in policy processes. A list of key players in the ICT arena is provided. Despite Bosnia and Herzegovina's participation in the World Summit on the Information Society (WSIS), the outcomes of the Summit have remained largely invisible. While international organisations and the Bosnia and Herzegovina government have promoted public-private partnerships, public participation in the policy development process has not been significant.

The methodology has included a review of relevant documentation and interviews with individuals in relevant associations, institutions or organisations. ICT policy actors were identified through online research using available public information.

# **Country situation**

The second half of the 1990s had seen a general effort to cope with and overcome the humanitarian disaster caused by the Bosnian War (1992-1995). While the first phase focused on the reconstruction of infrastructure, the return of displaced persons and the implementation of the Dayton Peace Agreement,<sup>2</sup> 2000 saw a new phase where development approaches and issues, as well as their implementation, became more visible and coherent. It is in this second phase that ICTs were recognised as a cross-cutting and strategic issue for social and economic development.

According to analysts, a key catalyst to the mainstreaming of ICTs was a programme undertaken by the United Nations Development Programme (UNDP) in Bosnia and Herzegovina which aimed to develop the capacity of government and civil society. The UNDP aligned its work with the country's Poverty Reduction Strategy Paper (PRSP), emphasising the importance of ICTs and a strategic approach to the ICT sector. Key areas included governance reform, the delivery of basic social services and education (Bakarsic *et al*, 2004, p. 43).

To help understand the way in which decision-making and consensus are built in the country and the challenges that any relevant process encounters, it is necessary to provide a short overview of how the government is structured. The country of Bosnia and Herzegovina encompasses two entities with their own governments and parliaments: the Federation of Bosnia and Herzegovina and the Republika Srpska. There is also one internationally supervised district, the Brcko District. This system of government was established by the Dayton Agreement to guarantee the representation of the country's three major groups (Muslim, Serb and Croat), with each having a veto on anything that goes against what is defined as "the vital interest of the constituent people".<sup>3</sup>

The country or federal level of government comprises a tripartite presidency, the Council of Ministers and the Parliamentary Assembly. The Federation of Bosnia and Herzegovina and the Republika Sprska both have their own sets of ministries. In the Federation there is an additional administrative level of ten cantons, while the municipal level exists in both entities. Another peculiarity is the fact that a country with less than four million people has four "official" cities.<sup>4</sup>

The presence of so many levels of government, which respond more to the post-war situation and political interests than to administrative functionality, is specifically relevant whenever there is an attempt to create state-independent and efficient bodies.

## National strategies for information society development

At the beginning of 2002, the UNDP office in Bosnia and Herzegovina launched the ICT Forum. The initiative lasted eighteen months, with forum meetings held in Banja Luka, Mostar and Sarajevo. In the same year the eSouthEastEurope (eSEE) Initiative<sup>5</sup> under the Stability Pact for South Eastern Europe<sup>6</sup> umbrella was signed by all governments of the SEE region. A secretariat was established in Sarajevo at the UNDP office. These two factors played a crucial role in keeping the

- 4 Sarajevo is the capital of Bosnia and Herzegovina. "Official" cities represent the entity and ethnic levels.
- 5 See: <www.eseeinitiative.org>.
- 6 The Stability Pact for South Eastern Europe was adopted at a special meeting of foreign ministers and representatives of international organisations, institutions and regional initiatives in Cologne on 10 June 1999. The Pact establishes a political commitment to a comprehensive coordinated and strategic approach to the region. It is a forum for its members to identify measures and projects that can contribute to the stability and development of the region. See: <www.seerecon.org/region/sp/index.html>.



<sup>1 &</sup>lt;www.oneworldsee.org>.

<sup>2</sup> The Dayton Peace Agreement was signed in December 1995 and implemented in 2000.

<sup>3</sup> More than 95% of the population of Bosnia and Herzegovina belongs to one of its three constitutive ethnic groups: Bosniaks, Serbs and Croats. The term 'constitutive' refers to the fact that these three ethnic groups are explicitly mentioned in the constitution, and that none of them can be considered a minority or immigrant. See: <en.wikipedia.org/wiki/ Constitutive\_nations\_of\_Bosnia\_and\_Herzegovina> and <www.oefre.unibe.ch/ law/icl/bk00t\_\_\_.html>.

ICT issue on the government's agenda, and supported the efforts of high-ranking officials in developing a strategic approach and securing federal government-level commitment.

While the eSEE Agenda lent credence to the policy process, with support from the UNDP, an information society policy, strategy and action plan were finalised in 2004. These three documents involved expert teams from government ministries, the private sector and academia. This momentum was maintained with a conference in February 2005 on the information society, which also emphasised the regional and eSEE dimensions (Ó Siochrù and Nath, 2005, annex 1, p. 3).

# The Agency for Information Society (AIS)

The establishment of the AIS, a cabinet-level body, was expected to be the most important outcome of the government's strategic approach to key development processes, and a concrete expression of the political will to speed up transformation and extend benefits to all citizens.

The information society policy and action plan envisaged an independent agency that would report to the Council of Ministers on a regular basis about its activities, and would be overseen by the Ministry of Communications and Transportation, except for activities related to protected documents (ID cards, driver licences, passports, etc.). In the latter instances, the agency would report to the Ministry of Civil Affairs.

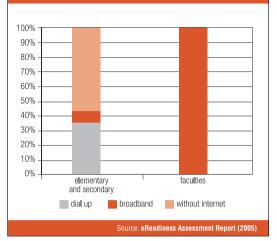
However, the establishment of the AIS has been delayed. Most recently, the Traffic and Communications Commission was supposed to provide a final draft law for its establishment by the middle of September 2006, fifteen days before the general parliamentary election. With the new government established at the beginning of February 2007, four months after the general elections, the draft law could finally start its parliamentary process again and be put before parliament for discussion, amendment and approval.

In light of the internal dynamics of Bosnia and Herzegovina, the reason behind the delay could be understood as an attempt to avoid the creation of an agency as a body independent from the state. There is also strong opposition to centralised functions at the federal or country level. The Traffic and Communications Commission received a series of amendments to the draft law from the Republika Srpska government. It maintains that the AIS, the brainchild of the Ministry of Telecommunications, contravenes the constitutions of both Bosnia and Herzegovina and the Republika Srpska. It states that jurisdictions are assigned to the joint institution that do not belong to it, but are administrated at the level of the two entities, specifically in the fields of administration, education and health. It also wants to keep the current directorate for the implementation of the electronic database of the Citizens Identification and Protection System (CIPS) – a project which has developed a citizens registry available online from all 139 municipalities - within the Ministry of Civil Affairs, instead of merging it with AIS responsibilities (CSS, 2006).

The information society in Bosnia and Herzegovina is uncertain. While the action plan identifies 109 projects to be promoted, supported and financed, and has been approved by the Council of Ministers, it is entangled in a complex political and administrative web, involving all levels of government, from federal and entity ministries to cantonal ministries and agencies.

There is also a risk that instead of the independent agency envisaged in the AIS, we will be faced with further delays or a diminished agency, dependent on approval and permission. An even worse scenario would entail the establishment of two complementary information society agencies, which could put at risk the harmonised and

Graph 1: Percentage of schools with internet access



efficient development of the ICT sector in the country as a whole. Already in 2005 the Republika Srpska tried to launch its own agency, but postponed the move because of a lack of financial resources.

An indirect negative indicator of the situation can be found by comparing the Global Information Technology Report published by the World Economic Forum in the years 2005 and 2006. While Bosnia and Herzegovina was ranked 89th out of 104 countries in the first, one year later it had dropped to the 97th place out of 115. This clearly shows the effect of the political stalemate which has paralysed key processes crucial to the development of all sectors of the economy and society.<sup>7</sup>

#### Education: primary and secondary school access to the internet

According to data provided by the World Bank, Bosnia and Herzegovina spends about 2.7% of its GDP on basic education and 1.4% on secondary education. Almost 90% of this budget is spent on salaries for teachers, which means that very few or no resources are available for investing in development.

Throughout the entire territory of Bosnia and Herzegovina there are 596 primary and secondary schools in the Federation of Bosnia and Herzegovina and 195 primary and secondary schools in the Republika Srpska. These provide education to nearly half a million pupils. There are also six universities in total.

Each entity has its own ministry of education (there is no education ministry at the country level). The Federation of Bosnia and Herzegovina also has ten cantonal ministries in charge of funds for primary and secondary schools.

The country is undergoing a systemic change in its efforts to harmonise with EU standards. While its current set of educational laws include little related to ICTs, curricula in most primary and secondary schools are also not geared towards promoting the information society.

The country's eReadiness Assessment Report for 2005 (UNDP, 2006) shows that there is one computer for every 57 pupils in primary and secondary schools, and only one computer per 27 students at the university level (the European average is one computer per 15 students). And while 64% of primary and secondary schools have a

<sup>7</sup> See: <www.weforum.org/gitr>.

computer lab, access to these labs has not been properly measured. In primary and secondary schools, only 43% have internet access, and the vast majority of schools are connected via dial-up.

# Bosnia and Herzegovina Academic and Research Network (BIHARNET)

BIHARNET was established by the University of Banja Luka, the University of Sarajevo, the University of Tuzla, Dzemal Bijedic University in Mostar, and the University of Mostar. The Universities of East Sarajevo and Bosnia and Herzegovina are also members. While the network became a legal body in 1998, money promised by the Ministry of Education of the Republic of Slovenia and the ministers of education and science of both entities for running the network did not materialise. As a result, the network exists primarily as a legal entity, with some investment by the universities, or through joint projects with other institutions.

# Participation

The WSIS Declaration of Principles states: "Governments, as well as private sector, civil society and the United Nations and other international organizations have an important role and responsibility in the development of the Information Society and, as appropriate, in decision-making processes. Building a people-centred Information Society is a joint effort which requires cooperation and partnership among all stakeholders" (ITU, 2003).

While the information society has received attention from highranking officials at the country and entity government levels – largely due to the UNDP – much of the momentum seen in 2004 has been lost. Participation also did not involve all stakeholders equally.

The approach chosen by the UNDP focuses on public-private partnerships. This envisages the involvement of civil society later on in the process – and mainly in the role of support and dissemination of ICTs. While academia was active in the ICT Forum and participated in defining core policy documents, civil society organisations (CSOs) working in the fields of local governance, transparency, advocacy, human rights, environment and gender were notably absent during the first round of the Forum held in 2003. Only eight non-governmental organisations had been included in the consultations and surveys – and two of them were international agencies.

One of the reasons for this low degree of civil society participation is that many CSOs still do not see ICTs as being an important and urgent issue. However, the situation is likely to change. Since 2006 a number of organisations have started to address the issue of access for primary and secondary schools.

During 2006, the Foundation for Creative Development, a community educator working in the field of ICTs and multimedia, and the Youth Information Agency, an independent institute in the field of youth policy development, ran local and national campaigns calling for the issue of ICTs to become an organic part of youth policy, and for financial resources to be made available for ICT development.

The National Gender Action Plan (GAP)<sup>6</sup> included a chapter entitled "Information and Communication Technologies" which specifically addresses the issue of ICTs in connection with gender equality. This could be used in the further development of the national ICT policy processes. If we break down the main actors at different levels that have contributed or are willing to contribute to shaping the ICT policy landscape, we find at the international level: the ICT4D (ICT for Development) department at the UNDP; the eSEE Secretariat; the Organisation for Security and Cooperation in Europe (OSCE); the Norwegian Agency for Development Cooperation (Norad); the Austrian Development Department; K-education; the Canadian International Development Agency (CIDA); the United States Agency for International Development (USAID); Cisco Systems; Oracle; and Hewlett Packard.

At the national level, key institutions that are important for information society development and legislation enforcement are: the Council of Ministers (country level); the entity governments themselves; the Ministry of Transport and Communications (at the country level and entity level); the Directorate for European Integration; the Ministry of Civil Affairs; the Ministries of Internal Affairs; the Ministries of Finance; the Ministries of Law; the Central Bank; the Institute for Standards and Patents; and the Agency for Gender Equality in Bosnia and Herzegovina, among others.

In the local private sector, key role players are: the Bosnia-Herzegovina Association for Information Technologies (BAIT)<sup>9</sup> which has more than 50 IT companies as members, and the country's internet service providers (ISPs). There are currently more than 48 ISPs in the country, some represented by the Bosnian ISP Association (BaISPa).

Key civil society players include: the Youth Development Agency; the Management and Information Technologies Centre, a unit of the Faculty of Economics at the University of Sarajevo; the Linux Users Group of Bosnia and Herzegovina (<www.linux.org.ba>); the International Association of Interactive and Open Schools (<www.ioskole.net>); the Brcko District portal for primary and secondary schools (<www.skole.bdcentral.net>); the International Forum Bosnia (<www.ifbosna.org.ba>); the Foundation for Creative Development (<www.fkr.edu.ba>); owpsee (<www.oneworldsee.org and www.ictpolicy.ba>); and the Sarajevo office of World University Service (WUS) Austria (<www.wus-austria.org/sarajevo>).

The University Teleinformatic Centre (UTIC) deserves a special mention. It was the first ISP provider in Bosnia and Herzegovina and is responsible for the .ba country code top-level domain (ccTLD). It also partnered with the OSCE in creating websites for primary and secondary schools (151 schools now have their own websites).

## Conclusions

While the ICT landscape in Bosnia and Herzegovina is more dynamic than a few years ago, there is a sense that the country is deadlocked, and unable to act according to its declared plans and signed public documents. While the AIS has yet to be properly established, BIHARNET lacks the necessary power and independence. The fact that the body is set up at the country level, while the ministries that should provide finances are at the entity level, raises concerns about its sustainability (the exception is the government of the Republika Srpska, which has set up the network at the entity level).

In order to break the current trend, there is a need for two complementary actions: pressure at the regional level from eSEE through the eSEE Agenda+, as well as through its broadband taskforce bSEE.<sup>10</sup>

<sup>8</sup> The Gender Equality Agency has, in cooperation with each entity's gender centre, started constructing the Bosnia Herzegovina Gender Action Plan, the single most important strategic document for the direct integration of gender equality in all spheres of public and private life.

<sup>9 &</sup>lt;www.bait.org.ba>.

<sup>10</sup> Established by the eSEE governments together with Greece and Romania in March 2006.

While the bSEE parties are expected to establish or update their national broadband strategies to include clear targets for connectivity in education, health institutions and public administration (Government of Serbia, 2006), the eSEE Agenda+ makes clear reference to national policy that must include broadband targets as well as goals to address gender imbalances. The eSEE Agenda+ can offer a wider political framework to support advocacy and policy action coming from CSOs.

Due to the status quo regarding the AIS, a specific role should be created for the Communication Regulatory Agency (CRA).<sup>11</sup> Part of the mission of the CRA is to promote the development of an information society in Bosnia and Herzegovina. It must also encourage the development of a market-oriented and competitive communications sector for the benefit of all citizens of the country, and protect the interests of users and operators of telecommunication services in terms of non-discriminatory access, quality and prices of services. Even though the regulatory role of the CRA has had a significant impact, it seems it could do much more within its mandate.

The local ICT business sector is growing and is willing to engage through its association. A conference organised in November 2006 called for a more integrated and coherent approach towards local companies that feel neglected or not supported enough in comparison to multinationals (such as Cisco Systems and Microsoft).

Given the political environment, it is clear that the process will require a long-term national strategy, as well as a regional strategy at the institutional and civil society level – one of the few ways of diminishing the power of political veto too often played between the federal and entity level.

At the national level there is an evident need for CSOs to develop a joint strategy identifying common goals with local ICT companies who, together with ISPs, are natural allies. It is good news that CSOs have started to recognise the cross-cutting relevance of ICTs in relation to their core missions. Specifically, the partnership between the Foundation for Creative Development and the Youth Development Agency is an encouraging sign.

Two key events could further stimulate civil society's role at the policy advocacy level: the launch of the e-governance project, which will channel the attention of CSOs active in the field of transparency, access to information and active citizenship; and the National Gender Action Plan, which can be effectively used by women organisations that are working in the field of employment and life-long learning, among other developmental concerns.

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<sup>11 &</sup>lt;www.cra.ba>.