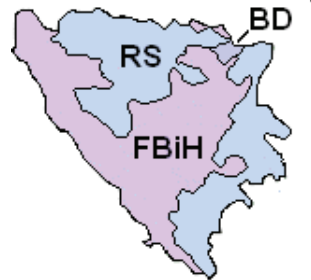




**BOSNIA AND HERZEGOVINA – R&D Strategies and Public
Funding, Forschung Austria Workshop, Alpbach,
25 August 2010**

Ammar Mirascija
Department for Science
Ministry of Civil Affairs



BiH AT GLANCE

Official name: Bosnia and Herzegovina (locally *Bosna i Hercegovina*, most commonly abbreviated as BiH)

Capital city: Sarajevo (population 450,000)

Other major cities: Banja Luka, Bihać, Mostar, Tuzla, Zenica

Geographic location: South Eastern Europe, borders with Croatia (932km), Serbia (312km) and Montenegro (215km).

Area: 51,209 km² (land 51,197 km² and sea 12,2 km²)

Population: 3.9 million

Religions: Muslim (44%), Orthodox Christian (32%), Roman Catholic (17%), Others (7%)

Ethnic groups: Bosniaks, Serbs, Croats and others

Official Languages: Bosnian, Serbian, Croatian

Administrative organization: Two entities (Federation of BiH and Republika Srpska) and Brčko District of BiH

Government Structure: BiH is a parliamentary democracy with a bicameral parliament (House of Representatives and House of Peoples), a three-member rotating Presidency, a Council of Ministers, and Constitutional Court.

GDP: 11.6 billion EUR (2007)

GDP per capita: 3,412 EUR (2007)

Currency: *Konvertibilna Marka* (BAM-official; KM-common use)

Exchange rate: 1 EUR = KM 1.95 (fixed exchange rate)



CONTENT

- R&D infrastructure
- National R&D programmes
- System and rules of funding
- Involvement in international R&D programmes
- Innovation policy
- Link between R&D and industrial application including support of SMEs



- According to Dayton Peace Agreement, Annex IV -The Constitution, establishes Bosnia and Herzegovina (BiH) as a sovereign State which “shall consist of the two entities, the Federation of BiH (FBiH) and the Republika Srpska (RS)” (Article 1).
- In March 2000, Brčko District (BD) as a condominium of FBiH and RS, was added (Constitution changed in 2009).
- The FBiH itself is further divided into ten cantons which have a rather high degree of autonomy.



- Constitution also defines the responsibilities of the institutions of the BiH and of the entities (Article 4).
- Thus, foreign policy, defence, foreign trade policy, customs, monetary and immigration policies, and the operation of common and international communications facilities are among the main policy functions of the BiH.
- Many areas of policy and law were left to the *entities* neither education nor scientific research are considered as responsibilities of the BiH.



- Research system in BiH is decentralised across several authorities, each enjoying autonomy of decision-making power.
- The authority over science and research lies within the entities, FBiH and RS as well as BD.
- In FBiH, the authority has further been transferred to 10 cantons.
- The BiH has limited competence in research policy through the Ministry of Civil Affairs (MoCA) representing the country in the international scientific and technical cooperation activities.



Institutions

The main part of public research today is done at the Universities and less at research institutes.

- 8 public universities (6 in FBiH and 2 in RS).
- 14 private universities, 8 in FBiH and 6 in RS.
- In total, there are 140 faculties and 10 art academies.
- 22 research institutes in RS (16 public with different organization, and 6 private) and around 30 in FBiH (20 public and 10 private).
- 3 Innovation Centres and several Technology Parks
- There are two Academy of Science: Academy of Science and Arts of BiH and Academy of Science and Arts of RS.
- National Patent Office and Institute for Intellectual Property of Bosnia and Herzegovina



- In RS, National Assembly of RS defines and approves the national R&D policy framework and its main objectives through the preparation and adoption of legislation, as well as Strategy for development of science and technology.
- The Strategy is prepared by the MoS&T on recommendation of the Scientific Council of RS.
- Responsibility for developing and administering R&D funding lies within the Ministry of Science and Technology of RS.



- In FBiH, the authority over S&T is transferred to Cantons.
- The cantonal Parliaments adopt the legislative acts while the Cantonal Governments through the relevant ministry develop and administer R&D funding, usually Ministry of Education and Science.



- At the international level, the BiH scientific community has maintained links with partners abroad.
- Programmes of the EU, such as Tempus, have also contributed to cooperation with European universities.
- In the Fifth and Sixth Framework Programme of the European Union, BiH institutions for the first time participated in the project consortia as partner members.
- Since Jan. 2009 BiH has a status of associate country in FP7. Strengthening the international cooperation and the way to materialise the BiH status in FP7 programme represent an important challenge for the development of research policy in BiH.



Changes in last year

- *Framework Law on scientific & research work basis and coordination of internal and external scientific & research collaboration* is adopted by BiH Parliament in May 2009 (BiH Office Gazette 43/09)
- *Strategy of Science Development in BiH (STI Strategy)* is adopted by Ministry of Civil Affairs on 22nd December, 2009.



- Framework Law on Science has created a more transparent legal basis for multi-level coordination in the country, with a specified role of MoCA at state level.
- The law provides for the creation of a new advisory body, called the Science Council that was established and began its activities in 2010.
- The law also underline the importance of the need to improve significantly the current S&T information system, including the statistical data collection, according to international standards (EUROSTAT, OECD and UNESCO).



- STI Strategy, prepared by the MoCA, specifies actions in line with the implementation of the Framework Law on Science (like the renewal of the RTDI statistical and information system) and the role of the public authorities at each level (state, entity, canton and district).
- It also identifies priorities for and the main focus of RTDI policy in the coming five years.



Nine priority areas are explicitly named as urgent, short-term activity lines and these are:

- Strengthening the Science Department in the MoCA
- Stronger co-operation with the European Union with the aim of using the Instrument for Pre-Accession (IPA) funds for strengthening the scientific research activities in BiH
- Participation in the activities of the 7th Framework Programme (FP7) of the EU as well as in other international programmes
- Planning funds in the budget of the MoCA for co-financing of international projects;
- Establishing a mechanism of collecting statistical data and monitoring scientific activities
- More intensive co-operation on exchanging information between the ministries responsible for science and education
- Establishment of the Science Council
- Tax incentives for companies that invest in research activities;
- Possibility of access to scientific information (scientific journals, data bases, etc.) via the Internet and various electronic systems.



Action Plan

- An action plan for the implementation of the Strategy is also prepared, in parallel to the Strategy.
- It consists of 79 actions and specifies the stakeholders involved in the implementation, and provides a short description of each action and the expected results.



The Council of Ministers of BiH has achieved progress in relation to the country's position in international scientific collaborations. The major milestones are:

- Signing the Memorandum of Understanding (MoU) between the EU and BiH on S&T co-operation (November 2008). It has resulted in the associated status of BiH in the FP7.
- Since May 2009, BiH is a full member of the COST. The programme provides a platform for BiH to cooperate on a particular project and exchange expertise with European scientists allowing the coordination of nationally-funded research on a European level.
- BiH has National Information Point status in EUREKA; a pan-European network for market-oriented, industrial R&D. With this status, BiH should participate in EUREKA projects through a network of [National Information Points \(NIPs\)](#), as well as preparing BiH for full EUREKA membership. Also, the NIP-status should provide BiH's industry and research institutes easy interface with EUREKA and facilitate participation in projects.



Main instruments of research policy

- In RS, the Ministry of Science and Technology budget for research amounts €2.3m in 2008 as well in 2009.
- App. 43% is dedicated to R&D activities through support to projects (basic, applied and experimental development).
- These public research grants comprise the bulk of the research policy resources. They however are not linked to any specific research policy focus.
- Grants are offered for mobility of researchers but with minor resources, in 2008 it amounted to 3.56%.



- Some minor block funding, less than 3%, are given to the Academy of Science and Arts of RS as well as independent research institutes and scientific association.
- Apart from the funds for science, RS also allocates budget for technology development (innovators, conferences, projects for development of new technologies etc.) and project for development of information society with the budget of €0.65m in 2008.
- Apart from the budget of the Ministry of Science and Technology of RS, Government of RS provide some support schemes about €250,000 in 2008 for project activities in sector of agriculture, forestry and water protection, as well about 100,000 € in Ministry of Trade and Tourism.



Main instruments of research policy

- FBiH also annually provide funding through the competitive grants.
- In 2008, €1.25m was given to the research projects which represent the largest part of the overall budget.
- Grants are offered for mobility of researchers, for technology development (innovators, conferences, projects for development of new technologies etc).



Some minor block funding, are given to research institutes and scientific association.

In Canton Sarajevo, Tuzla and Zenica-Doboj the instruments are similar and they are exclusively competitive grants.

Allocation for Canton Sarajevo was €2.19 m, Canton Tuzla €0.04m and Canton Zenica-Doboj €0.03m.

MoCA allocation for supporting participation in FP7, COST and EUREKA is €0.03m.



Interaction between Innovation and Research Policies

- Although there are no strategic measures and policies for targeted investments into development of innovation and technology, certain efforts have been made, recently.
- In 2008 the Government of the Federation of BiH adopted the Information on Development and Limitations in Establishment and Work of Technology Parks in the Federation of BiH.
- It was noted that Technology park Mostar and Science park Tuzla operate at the territory of the FBiH in the capacity of companies with limited liabilities while establishment of Technology park Zenica is in its last phase.



Law on science and research activity of Republic of Srpska defines the possibility and procedure for establishment of science technology parks and defines the goals of their work.

RS actively works on establishment of Innovation Center Banja Luka.
University entrepreneurship centre (University Banja Luka) is established.

There is a project for Technological park Banja Luka which will be established in accordance with European and global experience in the field (Banja Luka Municipality)



Public-Private Collaboration

- Public-private cooperation is weak in BiH. In spite of this, some first policy documents in RS as well as in FBiH call upon the importance of public-private collaboration ([Development of Industrial Policy in FBiH](#), [Development of Industrial Sectoral Strategy of RS](#), [Strategic action plan for development of education in BiH 2008-2015](#), [Strategic Development of SMEs in RS](#)).
- The main forms of research partnerships in BiH are:
- bilateral contracts between public research organisations and enterprises for carrying out ad hoc research projects;
- joint participation by companies and public research organisations in EU Framework Programmes projects;
- financing the study visits of students (most often in the form of scholarships), by firms with an interest in sponsoring the careers of specialists with specific qualifications.



INNOVATION ACTIVITY OF ENTERPRISES IN PERIOD 2006-2008

- Republika Srpska Institute of Statistics, in cooperation with the Ministry of Science and Technology, publishes data on innovation activity of enterprises referring to the period 2006-2008.
- These were obtained on the basis of the experimental pilot survey (INOV) which was carried out. This survey provided data on activities of enterprises concerning innovation of products (goods or service), process innovation, innovation in enterprise organization, and marketing innovation.
- Most of the data refer to new or significantly improved products and services, new or significantly improved processes, logistics and distribution method.



IMPACT OF EU DEVELOPMENTS

In the course of implementation of the FP5, in total 14 projects were realised.

In Sixth Framework Programme (FP 6), BiH had 44 approved projects with the total funding of over 2,7 million EUR, and without having to cover any costs for the „entry ticket“.

On the basis of data available to the office of the BiH National Contact-Point for EU Framework Programmes, in FP7 there are currently 15 approved projects with more that 1,5 mio EUR of EC funding.

12 participations in COST and 3 in EUREKA.



The „Action plan on science and technology for the countries of West Balkans“ (approved in June 2003, the EU Thessaloniki Summit) aimed at providing special assistance to the countries in the region, including BiH to increase their participation in the EU's research and technology development (RTD) Framework Programmes and other European initiatives.

The SEE-ERA.NET (Plus) and WBC-INCO.NET projects, as well as the Steering Platform on Research for the Western Balkan countries launched in June 2006, provide support acting as forums for the exchange of experiences and best practices among the Western Balkan countries, as well as through focused and co-ordinated interventions targeted at European Commission services and the EU Member States.



The Austrian Development Agency (ADA) and the Open Society Fund BiH (OSF BiH) have been active for the past five years in supporting the integration of Bosnia and Herzegovina into the European Research Area by providing assistance for the development of a National Contact Point (NCP) system responsible for the provision of information and advice on participation of BiH researchers in the EU's 7th Research and Technology Development Framework Programme (FP7).



The Cooperation Agreement between BiH and Slovenia on promotion of cooperation activities in the areas of science and technology, launches on two years basis competitive grants for co-financing of joint research projects.

BiH academic community signed numerous bilateral agreements on international cooperation with foreign institutions (mutual agreements between faculties/colleges, universities, institutes etc.) that also cover the field of science and research, as well as joint projects.



National priorities:

- Health;
- ICT;
- Food, Agriculture and Forestry;
- Energy;
- Environment;
- Transport;



Network of public infrastructures and significant industrial base:

- Coal and Iron Ore deposits,
- Wood processing;
- Heavy industries (steel and aluminium);
- Water resources for hydro electricity;



FASCINATING FACTS ABOUT BOSNIA AND HERZEGOVINA AND ITS PEOPLE

Bosnia and Herzegovina has a great tradition of success in various fields of science, art, literature, technology, etc. It is also blessed with natural beauties rarely seen anywhere else.

- **Ivo Andrić** received **the Nobel Prize in literature** in 1961, for his novel *The Bridge over the Drina River*, where the author describes the life of this region in which East and West have for centuries clashed with their interests and influences, a region whose population is composed of different nationalities and religions.
- In 1975, **Vladimir Prelog** received **the Nobel Prize in chemistry** for his work in the field of natural compounds and stereochemistry of organic molecules and reaction.
- **Sarajevo** hosted **the Winter Olympic Games**, in 1984, which marked the only time a socialist country has hosted the Winter Olympics. Organizers took full advantage of the opportunity and constructed state-of-the-art sports facilities.
- **In 2002, Danis Tanović** won **the Oscar award** for the best foreign film, *No Man's Land*. This Bosnian writer and director became a celebrity in the international film community practically overnight with the release of his drama about the war in Bosnia and Herzegovina. *No Man's Land* is one of the most highly awarded films in the history of Bosnian cinematography. Numerous awards, 42 in all, include the Golden Globe and the Oscar.
- **Sarajevo Film Festival** has become the largest and the most important event for film professionals and film lovers in this part of Europe. Many film celebrities visit Sarajevo during the Festival, enriching with their presence the Festival programs and contributing to its atmosphere, such as: Bono Vox, Danis Tanović, Steve Buscemi, Vanessa Redgrave, Willem Dafoe, Mike Leigh, Gerard Depardieu, John Malkovich, Nick Nolte, etc.
- **Irfan Skiljan** created the first version of **IrfanView**, in 1996. IrfanView is one of the most popular viewers worldwide. It is very fast, small, compact and innovative FREEWARE (for non-commercial use) graphic viewer for Windows 9x/ME/NT/2000/XP/2003. IrfanView was the first Windows graphic viewer worldwide with Multiple (animated) GIF support, one of the first with Multipage TIF support and the first with Multiple ICO support.
- **Trams** were first regularly used in Europe in Sarajevo, starting in **1885**. These streetcars were an animal railway, usually using horses and sometimes mules to haul the cars.



Thank you for your attention

ammar.mirascija@mcp.gov.ba

www.mcp.gov.ba

www.ncp.ba