



R&D Project in BiH

*Isa-bega Isakovića 6/1; 71 000 Sarajevo
Tel: +387 33 236 172
Fax: +387 33 441 548
E-mail: sarajevo@technopolis-group.com*

***Capacity building and institutional strengthening of Science and Research in BiH
Izgradnja kapaciteta i institucionalno jačanje nauke i istraživanja u BiH***

POLICY WORKSHOP

Messages to the consideration of STI policy makers in BiH

*Based on the presentations and contributions of the
international experts who participated at the workshop*

WP3, Action 1, Task 2 (WP3.1.2.)

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Version 2

There has been considerable progress in 2009 on research. Bosnia and Herzegovina signed the Memorandum of Understanding for the 7th Framework Programme for Research and Development (FP7) and became an associated country and eligible to fully participate in the programme. An FP7 national coordinator was appointed and the FP7 national contact points have improved their work. Bosnia and Herzegovina is a full member of the COST programme and has National Information Point status in Eureka. The State Framework Law on Scientific and Research Activities, includes the establishment of a Science Council, which has yet to be nominated. The Strategy for the development of science: 2010-2015 has recently been adopted.

However, the current status still contains noticeable gaps which has to be addressed. In this regard, the international experts through their presentations, and the ensuing discussions, drew attention to the following elements that explain the present status of science, technology and innovation (STI) in BiH. They also made a number of suggestions concerning priorities, actions and measures for policy setting and implementation.

1. Status of BiH

[A] On STI policy making

- Very complex multi-governance system, which would need more efforts to coordinate, harmonise and co-operate
- Lack of basic elements of evidence-based policy making (statistical data collection, STI indicators, registry of researchers and research organisations, etc.)
- Limited competences and insufficient supporting infrastructure at each level of government authorities
- Limited number of skilled and trained staff.

[B] On financing RTDI (research, technology development and innovation)

- Very low RTDI expenditure, in absolute terms and as a share of GDP
- Too large a weight of public (government) funding in total expenditure,
- Extremely limited private sector efforts to undertake RTDI

[C] Innovation potential

- BiH is lagging in comparison with most other countries in the West Balkan in terms of most of the internationally applied indicators (capacity for innovation, quality of research institutes, university-industry linkages – e.g. WEF Global Competitiveness Report 2009-2010)

- Low level of research activities in the academic institutes and universities, and unsatisfactory impact of scientific research on both social and economic development
- Poor international relations of the research community, unsatisfactory level of integration to the ERA
- Inadequate and underdeveloped research infrastructure
- The challenges of brain drain (both leaving the country abroad and leaving research jobs for more attractive jobs)

[D] General conditions of STI policy

- Insufficient understanding on the role of STI in economic and social development, with limited political commitment. Hence, STI is still a very low priority in political and social dialogues

2. ORIENTATIONS

The international experts gave the following recommendations to the STI policy makers and stakeholders in formulating and implementing strategies for promoting research, technology development and innovation in BiH:

[A] General recommendations

- The optimum development of the RTDI and education systems is a long process. It requires long-term commitment, transcending political changes and interventions beyond political rhetoric.
- Create leadership in STI policy making and implementation
- Be realistic and detailed in policy planning –take into consideration the state of STI and its framework conditions and always adjust to the actual situation tools, measures, solutions (adapting those successfully applied elsewhere).

[B] Policy setting/formulation process

- Develop policies, strategies and programmes in a participative and transparent way using evidence-based inputs, introduce policy tools regularly applied in other countries (like foresight, monitoring, evaluation, impact assessment, etc.)
- Monitor and evaluate policies, system and programmes as well as the performance of organisations involved in the design and implementation of STI policies and programmes

- Streamline the research activities of the higher education by identifying the key scientific competencies
- The coordination of STI policies and their implementation in the multi-level governance system would need much more efforts and strong political commitments (for example in the Federation of BiH create a cross-canton steering committee to harmonise and coordinate activities; not necessarily top-down solutions may lead to success)
- Launch broad social dialogues on RTDI policies/strategies, and make awareness building campaigns on the role of research and innovation in modernising the society and increase the competitive position of business in BiH
- Invest in the “third function”¹ of universities (like science park or technology centres), but only after the demands, of business sector, have been carefully assessed and give priority first to projects and real services (functions), and only later buildings (organisations)
- The recently approved Science strategy is a very good step towards re-establishing a viable science system in B&H, but
 - ✓ Action plan has 79 measures. They all cannot be of equal priority given very limited policy / administrative capacities
 - ✓ It is not quite clear what are the major priorities.
- Short and medium term priority can (should) be:
 - ✓ Expand further current support to participation in FP7/CIP projects (cf. indicator of international excellence)
 - ✓ Support fund for research, technological development and engineering (cf. local relevance)
 - ✓ Develop operational models of new forms of support

[C] Targets of STI policy

- Focus on innovation (and research commercialisation), not only on science and research
 - ✓ Stimulate innovation in traditional industries, not only in technology sectors
 - ✓ Encourage innovation-based entrepreneurship
 - ✓ Focus on new technologies and ICT diffusion
 - ✓ Quality (ISO9000 etc is a precondition to export) and vocational training (key to developed production capability)
 - ✓ Support for domestic firms to become quality suppliers for multi-national enterprises (MNEs)

¹ In addition to the traditional functions of higher education institutes (teaching and research) the dissemination of knowledge and active contribution to the development of local and regional social development are considered as the third function

- ✓ Support programmes for engineering and software
- Train and educate those involved in policy-making, programme design and implementation
- Mobilise the scientific and business diaspora to generate an in-flow of funds and create linkages for BiH research team and innovative businesses.

[D] **Financing RTDI**

- The first and most important issue is how to mobilise domestic and foreign funds to reach a minimum level of investment into RTDI activities
- It would also be important to improve the ways of funding as well (what to fund and how to fund it)
- Differentiate the policy formulation structure (Ministry level) from the financing structure (implementation agencies, etc.)
- Promote common procedures for launching calls for tender in all levels of governance, start the coordination and harmonisation process in this area
- Increase the competition for public funding and improve the share of excellence-based funding
- Introduce more complex funding measures (direct funding as grants, loans and fiscal incentives), but their introduction should be carefully designed based on assessing the local business and financial environment and their impact assessed regularly in order to identify the necessity of changes when necessary
- In financing RTDI follow the approach as specified in the next table:

	Locally relevant	Locally Irrelevant
Internationally excellent	FIRST STRATEGIC PRIORITY Must support!	Islands of excellence, but not relevant locally. REORIENT TO INTERNATIONAL (EU) FUNDING
Internationally non-excellent	Locally relevant, but mediocre RTD ONLY SECOND PRIORITY	Locally irrelevant and mediocre in terms of quality STOP FUNDING

List of experts:

1. Chioncel Mariana Institute for Prospective Technological Studies, Spain
2. Bečić Emira Ministry of Science, Education and Sport, Croatia
3. Elci Sirin Technopolis Group, Turkey
4. Korez Silvo Zentrum für Soziale Innovation
5. Kutlača Đuro Institute „Mihajlo Pupin“, Republic of Serbia
6. Radošević Slavo UCL, UK
7. Reid Alasdair Technopolis Group Belgium
8. Ruoss Engelbert UNESCO-BRESCE
9. Stroylopoulos George Logotech SA, Greece
10. Westholm Gunnar Key expert of the Project