

BOSNIA AND HERZEGOVINA

NATIONAL RESEARCH LANDSCAPE

1. GENERAL INFORMATION ABOUT THE COUNTRY

1.1 Population by Years

Year	Population (mid-year estimate) 000
1992-1995 ¹	
1996 ²	3645
1997 ²	3738
1998 ²	3653
1999 ²	3725
2000 ²	3781
2001 ²	3798
2002 ²	3828

¹ There is no data for the period during the war (1992-1995)

² Population "de facto"

1.2 GDP

Indicators	1999	2000	2001	2002	2003
GDP, billion Euro	4.6	5.1	6.0	5.9	6.2
GDP per capita, Euro	1,231	1,356	1,472	1,553	1,608
Real GDP growth rate, %	10.0	5.5	4.5	5.5	3.5
Annual unemployment rate, %	39.3	39.7	40.3	40.9 *	42,0*
Current account balance, million Euro	-1,029	-1,464	-1,360	-1,835	-1,840
External Debt of Government Sector, billion Euro	1.9	2.1	2.3	2.2	2.1
Net foreign reserves, million Euro	432.85	510.6	1,333.3	1,231.6	1,418.2

Source: Central Bank of B&H, Statistical Office of Bosnia and Herzegovina, Federal Office of Statistics, Institute for Statistics RS

1.3 Economic System

1.3.1 Introductory Remarks

Bosnia-Herzegovina (B&H) is in the process of transformation from a non-market, previously self-managed economy to a modern market economy. The process was started at the beginning of 1996, immediately after the Dayton Peace Accord was signed.

Between the Second World War and 1991, when Bosnia-Herzegovina was one of the six republics of former Yugoslavia, it achieved significant economic transformation. Economic growth averaged 5% a year. In 1991 per capita income was USD 2400, excluding the service sector, as was the practice in former socialist economies.

Official statistics record quite impressive GDP growth rates: 21 per cent in 1995, 69 per cent in 1996, 30 per cent in 1997 and 18 per cent in 1998. But GDP had fallen to such a low level during the war (92-95) that the increases achieved since then are proportionately high as percentages of a small base. The country produces much less than before the war. Many pre-war production capacities have not been repaired or replaced.

From the perspective of economic development of Bosnia-Herzegovina and the structure of GDP one can conclude that:

- The industrial structure and production in B&H is in a state of deconstruction, and
- The trade sector is in a state of expansion, particularly foreign trade.

Therefore, a huge trade deficit is an outcome of such economic relationships.

Two external factors have determining influence. The first is the process of globalization of the world economy, and the "Washington Consensus" which provides the basis for the treatment of transition countries and their transformation into "small open economies." The other is the 1995 Dayton Peace Accord.

The development prospects in such a poor country are remote since the starting position is so low. It has no developed market institutions and no strong government that might implement an alternative package of development and macroeconomic policies. The policy package coming from, and implemented by, the IMF and The World Bank is seen as the only way of achieving stabilization, preparing the ground for privatization, and developing macro-economic policy under more favorable political circumstances.

The package of economic reforms for transition, both for Eastern European countries and for B&H, is based on several postulates of neo-liberal mainstream economics. The fundamentals of the "standard package" are as follows:

- a) Speed of implementation. The sooner the package is implemented, the better for society;
- b) Openness of the national economy/liberalization of the external sector;
- c) Export, as an engine for economic growth;
- d) Convertibility of currency;
- e) Restrictive monetary policy;
- f) Financial discipline following the rule of "hard budget constraints";
- g) The role of the state is limited to the creation of a healthy macro-economic climate and the creation of the institutions needed for a market economy;
- h) Replacement of inefficient and big state firms by SMEs;
- i) Privatization of state property as a fundamental element of the package, to be carried out as soon as possible;
- j) Absence of any coherent industrial, foreign trade or income policy.

B&H has achieved a so-called "nominal convergence" with other transition countries, and even to some extent with the EU. The country enjoys:

- A stable and convertible currency (KM),
- The foreign exchange rate is stable,
- Inflation is almost nonexistent.

On the other hand, the country is faced with:

- A dangerously high level of unemployment,
- An unsustainable level of balance of payments deficit,
- An unsustainable level of foreign debt
- Industrial capacity operating at 30% of its pre-war capacity
- Lack of capital
- Lack of technology
- Lack of management
- Lack of foreign markets

	2002				2003				2004		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
percentage											
Retail Prices Growth	0,3	-1,1	-0,5	1,6	0,5	-0,7	-0,5	1,3	0,2	-0,6	-0,7
Total Credit Growth "	3,88	6,61	8,49	6,72	4,52	4,90	5,13	3,78	5,80	-1,85	5,91
Total Deposits Growth	2,49	2,23	6,08	6,85	0,84	4,48	6,73	4,25	5,84	6,85	6,35
Long term Lending Rate ³⁾	11,41	11,03	10,26	10,61	10,65	9,98	9,26	9,00	9,36	8,85	8,77
Long term Deposit Rate ³⁾	4,81	4,54	4,40	4,36	4,19	4,28	4,19	3,45	3,64	3,50	3,79
Narrow Money Growth (M1)	8,29	0,93	2,99	-0,76	-4,53	4,14	1,22	2,86	4,87	3,92	6,32
Broad Money Growth (M2)	5,23	-1,25	3,32	1,16	-1,90	3,03	2,96	4,15	5,86	5,61	5,94
in millions of KM											
Trade Balance ⁴⁾	-1.506	-1.692	-1.746	-1.797	-1.820-1	-1.797	-1.818	-1.820	-1.384	-1.904	
Exports	467	552	609	658	535	644	652	652	663	748	
Imports	-1.973	-2.245	-2.355	-2.605	-1.906	-2.0	-2.470	-2.471	-2.047	-2.652	
Current Account Balance	-635	-829	-920	-1.095	-592	-960	-1.015	-942	-628	-1.064	
Foreign reserves	-157,2	-130,3	50,3	45,1	-235,9	38,7	263,1	250,3	234,8	153,4	241,2
Foreign Debt Servicing	50	55	61	69	53	78	50	73	44		
Exchange Rate BAM/USD	2,2308	2,1360	1,9876	1,9566	1,8243	1,7255	1,7408	1,6454	1,5653	1,6015	1,6015

Foreign Trade

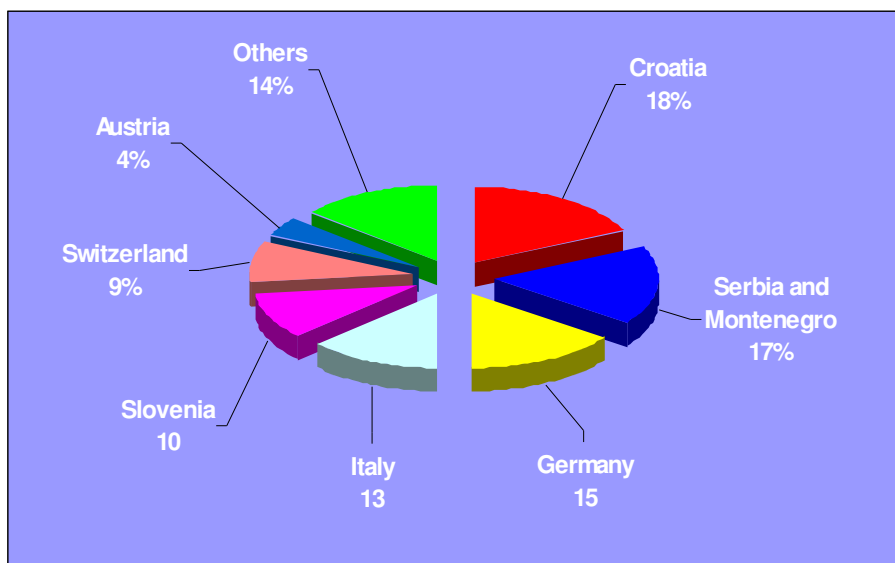
The cost of recovering from the war has been high and B&H is running a balance of trade deficit that is only slowly being reduced as more industries make an impact in export markets. There is a continuing need to import capital equipment, food processing and construction products, together with a wide variety of consumer durable and non-durable goods.

Trade volume, million €	1998	1999	2000	2001	2002	2003
Exports	596	799	1,271	1,265	1,171	1,319
Imports	3,393	3,867	4,111	4,566	4,756	4,912

Source: Central Bank of B&H

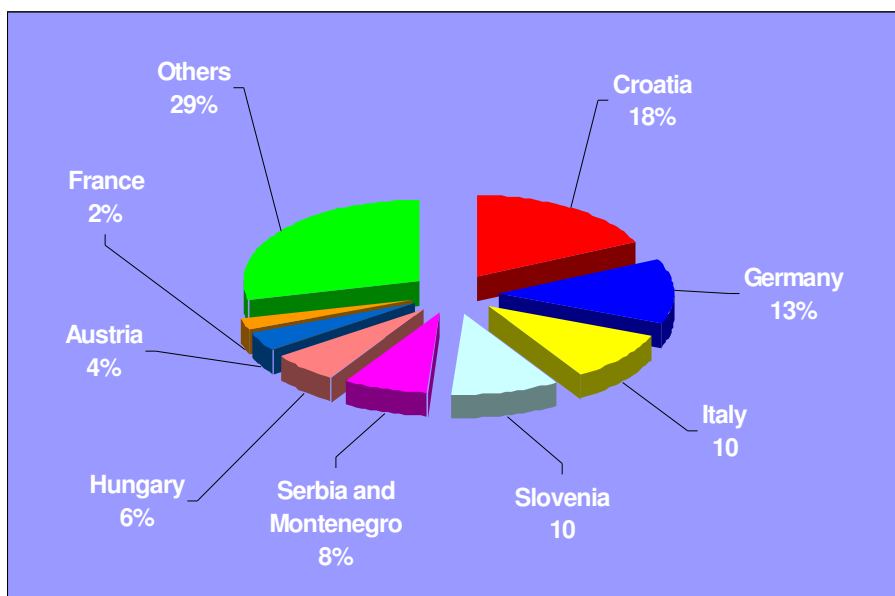
Major B&H trade partners (year 2003):

EXPORT



Source: Central Bank of B&H

IMPORT



Source: Central Bank of B&H

1.4 R&D Situation

The R&D system in Bosnia and Herzegovina (B&H) was developed within the Yugoslav R&D system. A significant number of industrial plants, notably those in special-purpose production, tended to be developed within institutes outside B&H. Only some enterprises within B&H, which had licenses or direct partnership with foreign component suppliers, were successful in developing a full scientific and technological development (STD) cycle. Unlike the Republics of Slovenia, Croatia and Serbia (the Jozef Stefan, Ruder Boskovic, Vinca and Mihajlo Pupin Institutes), a strong S&R State structure was not developed in Bosnia and Herzegovina. Rather, development research was conducted by industrial institutes which also played the role of coordinators of strategic development projects of what became known as Social Objectives.

The initial impulse in the system came from technology transfer and knowledge in production, from which other components of the system gradually developed, including:

- Applied research in Research and Development Centres in industry.
- Developmental research in industrial institutes (Energoinvest, RMK, Rudi Cajavec, UNIS,) and certain public (state-owned) institutes.
- Basic research was mainly done by and within universities and the academic community.

Only some faculties, mostly the technical ones, had significant co-operation with large industrial complexes such as Rudi Cajavec, Incel, Jelsingrad, Energoinvest, UNIS, UPI, RMK, HAK-Tuzla, SOKO-Mostar, Petrol industry-Brod, Oil industry – Modrica, etc. The participation of faculties in R&D was inconsequential. The STD management system was based on support to large industrial systems, their development centers and institutes. Although RTD funding was organized through the B&H Science Fund, the sources of development were not faculties but “industrial” research and development centers and institutes. This is especially true for projects with so-called ‘social objectives’, as strategic priorities of BH in STD, and also for strategic programs, which were funded by the Federal Government of SFRY. In brief, the participants in STD were large industrial systems and their research divisions. The participation in S&R international programs was coordinated through the B-H Institute for Scientific, Technological, Educational and Cultural Co-operation (ZAMTES).

The 1990s brought both war and independence to Bosnia-Herzegovina. War had a disastrous effect on the scientific institutions and higher education in Bosnia-Herzegovina. Funding was all but cut-off, infrastructure could not be maintained and scientific and international co-operation projects could not be sustained.

The war also caused many of the best scientific minds, not to mention young researchers, to leave Bosnia-Herzegovina and head to countries where conditions, facilities and pay were much better. Universities in Bosnia-Herzegovina are still being used primarily at the undergraduate level and not in a postgraduate capacity. Part of the reason for the poor state of the science community in Bosnia-Herzegovina is that international aid, following the war, did not allocate funds to science but rather to the construction of institution buildings, rehabilitating health services and mine clearance. This means that the facilities of the scientific community received little or no help in recovering from the damage and “brain drain” brought about by the war.

Bosnia-Herzegovina suffered greatly in the war that lasted from 1992 until 1995. In the last ten years the international community, which supervises the reconstruction and recuperation of Bosnia-Herzegovina, has had its priorities. Unfortunately, these priorities did not include the sector of science, research and technology.

Shortly before the war 1.5% of the GDP in Bosnia-Herzegovina was spent on research and development. Further, if we take into consideration that in the year 2001 the GDP in Bosnia-Herzegovina was approximately 40% of that from 1990 we come to the conclusion that the total research and development spending in Bosnia-Herzegovina at the present is meagre. Training conditions are bad and equipment is very scarce. Owing to the fact that the research infrastructure has been either destroyed in the war or is outdated, university professors have not been able to pursue scientific work at an appropriate level, which is the basis of high-quality university education. At the same time, our country is facing many other problems more urgent

than that of higher education. Therefore, education and science are at the last place on the priority scale for reconstruction. In a country like Bosnia-Herzegovina, where GDP is below 1500\$, and the unemployment rate about 40%, one cannot expect much for the sectors of science, research and higher education.

2. SCIENTIFIC POLICY

2.1. Legal Base

**The law concerning science has not yet been adopted.
At the moment the Framework Law on Science at the state level is being drafted.**

The legislative framework for R&D activities in B&H was formed in three main ways: by taking over the former SFRY legislation, by the legislative activities of the entities, and by the adoption of regulations of the State of B&H. The legislation that has been taken over does not suit the new needs simply because of the time when it had been made.

The following list includes the most important of these acts:

- The Law on Freedom of Access to Information (Official Gazette of B&H 28/00)
- The Law on the Central Database and Exchange of Information (Official Gazette of B&H 32/01)
- The Law on Establishment of the Institute for Standards, Metrology and Intellectual Property (Official Gazette of B&H 19/01)
- The Law on Consumer protection in Bosnia and Herzegovina (Official Gazette of B&H 17/02)
- The law on Industrial Property (Official Gazette of B&H 3/02)
- The Law on Copyright and Related Rights (Official Gazette of B&H 7/02)
- The Law on Telecommunication (Official Gazette of B&H 2/01)
- The Law on Standardization (Official Gazette of B&H 19/01)

The Laws that should be drawn up or harmonized and adopted:

- The Law on University education
- Law on Scientific and Research Activity
- As well as the corrections to the legislation on the customs and taxes on purchasing equipment and software by education and research institutions, as incentives to the purchases

2.2 Main Strategies

The main strategy in the RTD sector is to reach the pre-war percentage of GDP (1,5%) that was spent on research and development.

The strategy of economic and social development of Bosnia and Herzegovina in the period of 2000-2010 foresees as the priority of the state policy the structural reconstruction of the industry, development of the innovation model of economic growth, strengthening of B&H as a country with high technologies.

Strategies for development and enabling conditions for scientific and research activities in Bosnia and Herzegovina are documents that provide strategic guidelines and plan of actions for next period. At present, there are some documents from this area:

- Strategy of Economic Development of B&H (UNDP funded project, 1996)
- Global B&H Economic Strategy Framework 2000-2004 (the B&H Council of Ministers' project supported by the World Bank)
- B&H Medium Term Development Strategy 2004-2007 / PRSP - Poverty Reduction Strategy Paper (B&H Council of Ministers, Federation Government and RS Government adopted the final version of the Strategy – April 2004)
- Policy, Strategy and Action Plan of the Information Society of Bosnia and Herzegovina for the period 2004 -2010 (UNDP funded project, Document has been adopted by Council of Minister of Bosnia and Herzegovina at 69th session held on November 2004)

2.3 Orientation

The main orientation in the RTD sector should be applied research.

Bosnia and Herzegovina has very good prerequisites for developing into a modern civic state. Its geographical position and climatic conditions are favourable. The agricultural production is one of the most important sectors of economy. The availability of considerable mineral resources, forestry and water makes possible the development of many branches of industry. The statement of programs and development of many scientific and technical projects should be connected with the requirement of solving the strategic tasks of economic development of the country, meeting the demands of the market for scientific and technological products and the needs of the regions.

In the coming period of reconstruction and development of industry in Bosnia-Herzegovina, applied research should be the most important orientation of scientific and research activities in the following areas:

- Electric power industry
- Information and communication industry
- Food industry
- Wood-working and wood-pulp industry
- Mining and ferrous metallurgy
- Machine-building and metal working
- Chemical and petrochemical industry

2.4 Priority Tasks

What are the urgent requirements for Bosnia-Herzegovina that, once fulfilled, can solve the problems listed above?

2.4.1. There is an urgent need for the rebuilding and reconstruction of the S&T and R&D sectors (laboratories, equipment and materials)

2.4.2. There is a great need for more cooperation

- inside the country
- within the region
- with international partners

2.4.3. S&T policy and R&D strategy have to be created (and implemented) on the state level including:

- decision making
- general objectives for S&T policy
- main legal provisions in the S&T field
- network of S&T institutions
- human resources – employment in S&T sector
- R&D strategy has to be created (and implemented) on the state level including as a priority:
- reconstruction and building up of the research infrastructure
- revitalization of scientific institutions and research capacities
- investment in education and high level training of young researchers and scientists

2.4.4. R&D Cooperation Priorities should include the following:

- Environment
- Energy efficiency
- Agriculture and Food Processing
- Public Health
- Industrial technologies for the reconstruction of the country (materials-related technologies)

3. STATISTICAL INDICATORS

3.1 Expenditure of R&D as Share in GDP

There are no official databases for the areas of science and research.

In 2005 the Federal Agency for Statistics has begun a project to collect and monitor data in the area of science and technology.

The basic criterion used for estimating the scientific and technological development of Bosnia-Herzegovina is the competitive capability of the state. This is because Bosnia-Herzegovina is a small, economically marginal country and has not yet reached economic sustainability. The Global Competitiveness Report (GCR) of The World Economic Forum has observed and ranked the competitiveness of 59 countries from a number of continents. The countries are ranked based on 184 criteria divided into 8 relevant groups. Bosnia-Herzegovina is not among these countries but our experts have made a study using the same methodology and have ranked Bosnia-Herzegovina among these 59 countries.

For spending on research and development, 0.05% of the GDP, Bosnia-Herzegovina ranks as 56th, in between Indonesia and Ecuador. Based on the number of Internet hosts per one million inhabitants (950 in Bosnia-Herzegovina) Bosnia-Herzegovina is at the 37th place, in between Russia and Costa Rica. According to the number of PCs per one thousand inhabitants Bosnia-Herzegovina would be 40th, between Bulgaria and Columbia.

Bosnia-Herzegovina does not have any science funds whatsoever. Expenditures are periodical and minor (the percentage of the GDP allocated to research is between 0.3% and 0.5%, which is, admittedly, a trifle when compared with the EU average of 1,9%).

Shortly before the war 1.5% of the GDP in Bosnia-Herzegovina was spent on research and development. Further, if we take into consideration that in the year 2001 the GDP in Bosnia-Herzegovina was approximately 40% of that from 1990 we come to the conclusion that the total research and development spending in Bosnia-Herzegovina at the present is meager.

There is no statistical data of total expenditure (for business, high education and private and non-profit sectors) of R&D in Bosnia-Herzegovina.

Share of R&D Expenditure in GDP by Sectors is also not known.

3.2 Government / Ministry Budget for Science

Year	Budget (in KM)
1996	N/A
1997	N/A
1998	N/A
1999	N/A
2000	N/A
2001	1.713.700
2002	2.900.000
2003	2.900.000

3.3 Budget of Official Authorities of Bosnia and Herzegovina for Scientific Discipline (based on data for 2003):

Sectors	Budget (in KM)
Natural science	209000
Engineering and technology	354000
Medical sciences	138000
Agricultural sciences	262000
Social sciences and humanities	423000

3.4 Number of Professors and Assistant Professors

No.	Faculty	Professors	Assistant Professors
1	University of Sarajevo		
	Faculty of Natural Sciences and Mathematics	48	42
	Faculty of Architecture	21	21
	Faculty of Civil Engineering	23	29
	Faculty of Mechanical Engineering	29	36
	Faculty of Transport and Communications	24	9
	Faculty of Electrical Engineering	23	21
	Faculty of Medicine	31	54
	Faculty of Dentistry	13	24
	Faculty of Pharmacy	11	16
	Faculty of Agriculture	22	30
	Faculty of Forestry	9	22
	Veterinary Faculty	25	43
	Law Faculty	20	16
	Faculty of Economics	29	37
	Faculty of Political Sciences	28	20
	Faculty of Philosophy	72	72
	Academy of Education (Pedagogical Academy)	12	9
	Faculty of Physical Education	12	7
	Faculty of Criminology	11	8
	Faculty of Islamic Studies	10	2
	Theologia catholica vrhbosnensis	20	0
	Theology of Saint Francisci Assisiencies	17	0
	Academy of Fine Arts	20	22
	Music Academy	19	7
	Academy of Dramatic Arts	13	7
2	University of Banja Luka		
	Academy of Arts	12	26
	Faculty of Architecture and Civil Engineering	2	73
	Faculty of Economics	19	31
	Faculty of Electrical Engineering	13	33
	Faculty of Mechanical Engineering	17	32
	Faculty of Medicine	17	89
	Faculty of Agriculture	12	10
	Faculty of Law	16	6
	Faculty of Natural Sciences and Mathematics	16	54
	Faculty of Technology	22	18
	Faculty of Philosophy	29	65
	Faculty of Forestry	8	32
	Faculty of Physical Education and Sport	13	20

3	University of East Sarajevo		
	Academy of Arts	7	2
	Spirit's Academy "Sv. Vasilija Ostroskog"	4	22
	Faculty of Economics, Pale	7	13
	Faculty of Economics, Brcko	7	13
	Faculty of Electrical Engineering	12	31
	Faculty of Philosophy	23	60
	Faculty of Physical Education	6	21
	Faculty of Production and Management	4	26
	Faculty of Mechanical Engineering	5	30
	Music Academy	17	36
	Faculty of Medicine	24	61
	Faculty of Pedagogy	11	18
	Faculty of Agriculture	6	22
	Faculty of Law	9	6
	Faculty of Dentistry	17	52
	Faculty of Technology	13	20
4	University of Zenica		
	Faculty of Mechanical Engineering	13	15
	Faculty of Metallurgy	10	13
	Pedagogical Faculty	5	1
5	University of Bihać		
	Faculty of Mechanical Engineering	6	14
	Faculty of Economics	5	6
	Faculty of Biotechnology	4	5
	Pedagogical Faculty	5	10
	Law Faculty	6	2
6	University of Tuzla		
	Faculty of Natural Sciences and Mathematics	6	14
	Faculty of Electrical Engineering	9	15
	Faculty of Mechanical Engineering	7	9
	Faculty of Mining and Geology	30	23
	Faculty of Chemical Engineering	20	15
	Faculty of Medicine	18	8
	Faculty of Philosophy	7	20
	Faculty of Economics	12	13
	Faculty of sport	4	7
	Special-education faculty	14	19
	Academy of dramatic arts	3	1
7	University Džemal Bijedić – Mostar		
	Faculty of Civil Engineering	3	8
	Faculties of Business Management	4	7
	Law Faculty	1	11
	Faculty of Information Technology	1	2
	Faculty of Philology	1	7
	Faculty of Mediterranean Culture Studies	0	2
8	University of Mostar		
	Faculty of Economics	19	15
	Law Faculty	9	10
	Faculty of Mechanical Engineering	19	9
	Faculty of Civil Engineering	13	17
	Faculty of Agronomy	14	23

	Faculty of Medicine	3	2
	Faculty of Pedagogy	25	37

3.5 General Comments about Scientific Infrastructure

The quantity of equipment and other scientific infrastructure in higher education and research institutions in Bosnia-Herzegovina is entirely unsatisfactory. Procurement of equipment is mostly done in an unsystematic manner (from case to case). Under such circumstances, the incompatibility and diversity of equipment between different users or with just one of them is evident. In cases where users are not also investors, the lack of uniformity is even more distinct.

There are several very aggravating circumstances related to scientific infrastructure in R&D and educational institutions:

- Successful and useful research usually requires significant resources, firstly in terms of scientific and other staff, and secondly in terms of infrastructure, equipment, funding, etc. Research activity at the B&H universities is very low, and it is, de facto, on teaching activity. A general recommendation is that the universities should concentrate on applied research in a limited number of strategic fields that have the most relevance to the university's partners.
- Universities and other institutions which have switched to a treasury operation system, are encountering serious difficulties in daily operation, especially when it comes to the procurement of new equipment.
- Adopting a new Decree for Public Procurement is making the procurement of equipment even more complicated. A particular danger is presented in the obvious priorities given to the cheapest options in comparison to some more important aspects that are relevant for the purchase of equipment (compatibility, quality etc).
- Obtaining approval from competent ministries to purchase new equipment for R&D or education purposes with custom and tax deductions is a long-term process that is often discouraging to the institution and slows down the process of equipment purchase.
- Participants in the research and education process do not have any custom or tax deductions.

During the last few years there has been some improvement concerning the development of scientific infrastructure of Bosnia-Herzegovina. The most promising step is the enrolment of B&H in FP6 projects of the European Union. The main goal of these projects is to strengthen the B&H research area and participation of B&H in scientific and research activities.

4. STATE SUPPORTED RESEARCH

4.1 Instruments of Support

Bosnia-Herzegovina does not have any science funds at the state level whatsoever. Expenditures are periodical and minor and are mainly realized at the entity and cantonal level.

4.2 List of R&D Programs and Grant Projects of National Authorities

	Program / project	Research institution	Year	Grant (KM)
	International Research Center "Bardača"	Faculty of Natural Sciences and Mathematics, Banja Luka	2001	25000
	Laboratory for machine dynamics equipping	Faculty of Mechanical Engineering, Banja Luka	2001	2000
	Research of geology potential of RS	Center for Geology Research, Zvornik	2001	3000
	Reconstruction and reorganization of Institute	Institute of Agriculture, Banja Luka	2002	25000
	International Research Center "Bardača"	Faculty of Natural Sciences and Mathematics, Banja Luka	2002	15000
	Tracking of corn moth appearing and spreading in the area of Semberija. Research of the soil chemical properties in order to apply appropriately mineral fertilizers in Semberija's agro-ecological conditions.	Institute of Agriculture, Bijeljina	2002	10000
	Dialectological Atlas	Faculty of Philosophy, Banja Luka	2003	10000
	Soybean production improvement in B&H and Slovenia	Institute of Agriculture, Banja Luka	2003	44000
	Testing the content of heavy metals, pesticides and the radioactivity level in the soil and the subterranean water of Lijevče polje	Faculty of Agriculture, Banja Luka	2003	10000
	Analysis of physical and chemical properties of special materials	Faculty of Mechanical Engineering, Banja Luka	2003	3000
	Project of old scientific publication editing	Faculty of Philosophy, Banja Luka	2003	8000
	Noise and vibration, training and research equipment	Faculty of Mechanical Engineering, Banja Luka	2003	3500
	The integrated management of SMEs	Faculty of Mechanical Engineering, Banja Luka	2003	3500
	The integral development of tourism and tourist zones in RS	Faculty of Economics, Banja Luka	2003	20000
	Supply of scientific and professional publications	University Library, Banja Luka	2003	10000
	Implementation of sport science in system of population life quality	Faculty of Physical Education and Sport, Banja Luka	2003	10000
	The development system for microprocessors, signal processors and picture processing in real-time	Faculty of Electrical Engineering, Banja Luka	2003	20000

	Implementation of e-Learning process at the University of Banja Luka	Faculty of Electrical Engineering, Banja Luka	2003	10000
	The Economy politics in 2004.	Institute of Economics, Banja Luka	2003	84000
	Economic position objectivization and Republic of Srpska development and macroeconomic vision	Institute of Economics, Banja Luka	2003	80000
	Establishment of the labour market and the youth perspective in the conditions of its functioning in Republic of Srpska	Faculty of Economics, Banja Luka	2003	80000
	Possibility of the Bacillus stearothermophilus wide application, as the test organism, in finding residua antibiotic during the line of slaughter the veterinary – sanitary checking and in the products of animal origin during production and distribution	Institute of Veterinary medicine “dr Vaso Butozan”	2003	30000
	Ambrosia artemisofolia L weeds suppression	Faculty of Agriculture, Banja Luka	2003	10000
	Virus "šarka" plums PPV identification in Republic of Srpska	Faculty of Agriculture, Banja Luka	2003	15000
	New information about the Unsko - Sanski canton Paleozoic and correlation of carbon, "permski" and "trijanski" sediments Jadran block, Sana - Una development	Institute of Mining, Prijedor	2003	30000
	Prijedor's Institute of Mining participation in European Union project, named the "6th Framework programme for research"	Institute of Mining, Prijedor	2003	15000
	Iron and aluminium joining by energy explosion with elimination of diffusion by intermedial layer of titanium	TOMEX A.D. Ljubija	2003	15000
	The Printing-house of Goražde, its position in printing and importance for the Cyrillic printing of 16th century	Faculty of Philosophy , East Sarajevo	2003	10000
	Tourist arrangement of Orlovača spa	Faculty of Philosophy , East Sarajevo	2003	20000
	Formation of "rožnaca uzlomaca" – geochemical criteria setting for "rožnaca" species distinguishing	Center for Geology Research, Zvornik	2003	8000
	Litostratigrafic and tectonics reconstruction of Romanija and Devetaka tria-jura carbonat complex	Center for Geology Research, Zvornik	2003	10000
	Experimental research on the efficiency of hybrid systems (sun + fossil fuels) in heating and the preparation of sanitized water in health system	Faculty of Mechanical Engineering, Sarajevo	2003	11000
	Tensions in wood, a porous orthotropic material, caused by dryness	“	2003	10000
	The visualisation and measurement of the dynamics of two-phase flow	“	2003	10500

	Laboratory and numerical research of the possible application of burner for pulsating burning in high power	“	2003	10500
	Systems for the oxygenation of water on fish farms	“	2003	11000
	Characteristics of internal friction in highly elastic elements in a torsio-oscilating system	“	2003	10500
	Autonomous mobile robot systems as simulators of wheelchair performance	Faculty of Electrical Engineering, Sarajevo	2003	10000
	Analiza sklopnih prenapona u 400KV elektroenergetskoj mreži	“	2003	10500
	The consequences of privatisation on society and employment, a dynamic and holistic approach to a system change: the case of B&H	Faculty of Economics, Sarajevo		9500
	Image-building strategy for B&H as a determining factor in the economic development of the country	“	2003	11500
	The genetic and pomolyc characterisation of the indigenous gene-fund of fruits in B&H	Faculty of Agriculture, Sarajevo	2003	8500
	Chemical and microbiological methods in estimations of maturity levels and quality of traditional Bosnian cheese as an important factor in the development of their industrial production	“	2003	6500
	Research of fiteconaza for use in determining zones under protection	Faculty of Forestry, Sarajevo	2003	9500
	Forest biomass – a potential source of renewable energy for B&H	“	2003	11000
	A new concept for environmentally friendly management of waterways	Faculty of Civil Engineering	2003	11000
	Atomic and molecular processes in a strong laser field	Faculty of Natural Sciences and Mathematics, Sarajevo	2003	8500
	Analytic and geometric inequalities	Faculty of Natural Sciences , Sarajevo	2003	4500
	Current problems in harmonic analysis, argotic theory and dynamic systems	“	2003	6500
	Analytic and algebraic structures in the theory of numbers	“	2003	11000
	Research of new chemical compounds for use as potential anti-cancers and in the development of biosensors	“	2003	12500
	Biodiversity in the indigenous plant gene-fund in B&H and its efficient protection and conservation	“	2003	12500

	Revitalization of the roentgen laboratory as support for education and research in geology	“	2003	8500
	Total anti-oxygenating capacity of different regions of the brain in patients suffering from Parkinson's and Alzheimer disease	“	2003	12500
	Ferromagnetic material from granite from Jablanica and its use as a transformational nucleolus	“	2003	12000
	Some problems of algebra, functional analysis and information technology	“	2003	8500
	Research into the existence of genetically modified organisms (GMO) and their products in B&H	Institute for Genetic Engineering and Biotechnology, Sarajevo	2003	10500
	DNK identification of the indigenous B&H population of <i>Salmo trutta m. fario</i> in the upper regions of the Neretva river and some of its tributaries	“	2003	12000
	Uloga i značaj antagonista adrenergičkog i opioidergičkog sistema u patogenezi hemoragičkog šoka kod pasa	Veterinary Faculty, Sarajevo	2003	15500
	The effect of herbal remedies on the healing process of burns on a rat model	Institute for Pharmacology, Clinical Pharmacology and Toxicology, Faculty of Medicine, Sarajevo	2003	6500
	Patho-histological studies on the mechanism of nerve damage during interneural application of a local aesthetic in combination with epinefrin	“	2003	16000
	Research of cardio specific markers in conditions of experimental necrosis (heart attack) miokarda štakora izazvane izoproterenolom	Institute for Physiology and Biochemistry, Institute for Histology and Embryology, Faculty of Medicine, Sarajevo,	2003	12000
	Education of educators on epilepsy	Faculty of Medicine, Sarajevo	2003	10000
	Synthesis and QSPR/QSAR study of kumarinskih derivatives	Faculty of Pharmacy, Sarajevo	2003	10500
	Research of stereomernih medicine using chromatographic methods	Faculty of Pharmacy, Sarajevo	2003	15500
	The biological niche of <i>Cryptococcus Neoformans</i> in B&H	“	2003	7500
	Contemporary literary analysis and literary theory and criticism of the 20 th century (methods and schools)	Faculty of Philosophy, Sarajevo	2003	7500

	The identification, search for and restoration of cultural, historic and artistic heritage of B&H that has been appropriated or moved to foreign countries	Faculty of Philosophy, Sarajevo	2003	12000
	The speech of Sarajevo: Old Sarajevan speech, sociolinguistic research into contemporary Sarajevan speech	Faculty of Philosophy, Sarajevo	2003	9500
	A study of contemporary methods of environmental management of waste oils, as a special type of dangerous waste, from the aspect of the protection of environment and health and a rational use of natural resources	Centre for the Development of Technology for Automatics, Thermo-technology and RTC-AMT, ENERGOINVEST d.d., Sarajevo	2003	11000
	Study on the implementation of GIS 40. technology on the religious heritage of Sarajevo		2003	11000
	A new standard <i>štokavština</i> and the linguistic situation in B&H	Institute for Language, Public Institute for Science, Sarajevo	2003	10000
	The development and application of a knowledge base in reengineering and production processes in a system	University of Bihać	2003	13000
	Research of particular matter in the Una river and the microbiological characteristics of the sediment	Biotechnical Faculty, Bihać	2003	12500
	Analiza strujnih procesa rotacionih automobilskih hladnjaka	Faculty of Mechanical Engineering, University of Tuzla,	2003	7000
	Identification of the weak spots of electro energetic systems and the removal of their consequences	Faculty of Electrical Engineering, University of Tuzla,	2003	9500
	Analysis of the stability of Fuzzy operative systems	Faculty of Electrical Engineering, University of Tuzla,	2003	6500
	Composting as an efficient and useful way of taking care of solid biodegradable organic waste in B&H	Faculty of Technology, University of Tuzla,	2003	9000
	Analysis of the possibility of applying nuclear techniques in the detection of explosive materials in contaminated areas of B&H	Faculty of Natural Sciences and Mathematics, University of Tuzla, Natural Sciences	2003	11000
	Unvarijantne amplitude pion-nukleon raspršenja na niskim energijama i u nefizikalnoj oblasti unutar Mandelstamovog trokuta	Faculty of Natural Sciences and Mathematics, University of Tuzla,	2003	9000
	Primjena krunastih etera za selektivnu separaciju Fe (III) iona iz vodenih otopina	Faculty of Technology, University of Tuzla,	2003	10000

	The advantages of laparoscopic surgery when compared to conventional surgical techniques	Faculty of Medicine, University of Tuzla,	2003	15500
	Estimate of the efficiency of iodine prophylaxis in the Federation of B&H	Faculty of Medicine, University of Tuzla,	2003	16000
	Stress in the workplace, burn out, mobbing and changes in the work ability in a group of B&H doctors	Faculty of Medicine, University of Tuzla,	2003	11500
	Philosophy of science in <i>"The Philosophy of Scientific Progress"</i>	Faculty of Philosophy, University of Tuzla, Humanities	2003	3000
	Effects of surface quality on the safety of foundations and prevention of puncturing	Faculty of Civil Engineering, University of Mostar,	2003	10000
	The effects of genetics and enrichment in the improvement of wheat and barley harvest and quality	Faculty of Agriculture, University of Mostar,	2003	7500
	Inventory, maintenance and use of plant genetic sources	Faculty of Agriculture, University of Mostar,	2003	10500
	Research into the fauna of <i>Hemiptera, Aphidoidea</i> and their natural enemies in order to establish high quality and efficient production of vegetables	"	2003	11000
	Quick methods in the diagnosis and use of nitrogen	"	2003	10500
	The contents of omega-3 fatty acids in meat produced by different systems of farming and feeding	"	2003	8000
	Improvement in the production of indigenous cheese from sheep and cow milk	"	2003	11000
	Competitiveness of B&H milk production: case study of farms with up to 50 animals	Faculty of Agriculture, University of Mostar,	2003	5500
	Quantitative analysis of the contents of pesticides in waterways and the ground in the valley of the Neretva river	Faculty of Agriculture, University of Mostar,	2003	12500
	The effect of pedo-genetic characteristics in the production features and contents of the red soil of Herzegovina	Faculty of Agriculture, University of Mostar,	2003	12000
	Introduction of a self-sustaining system of management for mountainous pastures in the production of indigenous cheese	The Faculty of Pedagogy, University of Mostar,	2003	10500
	Annex material in research on individual and total load of poly-level tools for pulling with a reduction of wall-thickness	Faculty of Mechanical Engineering, University of Mostar-«Džemal Bijedić»,	2003	10000

	Server Ware-based Continuous Computing Technologies for E-business	Faculty of Information Technology, University of Mostar- «Džemal Bijedić»,	2003	10000
	Ecological and Agro-technological effects on the quality of seeds and planting materials	Faculty of Mediterranean Agriculture, University of Mostar- «Džemal Bijedić»	2003	7500
	Use of photolysis of neural-red in measurements of the anti-oxidising capacity of pure organic substances of bio molecules and homogenate tissues of animal of plant origin	Faculty of Natural Sciences Sarajevo	2004	23000.-
	The study, protection and conservation of the indigenous gene-fund of B&H: a cytogenetic and palinological approach	Faculty of Natural Sciences Sarajevo	2004	22000.-
	Professional scientific laboratory for the plastination of biological preparation	Veterinary Faculty Sarajevo	2004	20000.-
	The dependence of Auger profiles of thin layers on temperature	Faculty of Natural Sciences Sarajevo	2004	21000.-
	Navigation of mobile robots in unstructured 2D and 3D environments	Faculty of Electrical Engineering, Sarajevo	2004	20000.-
	Numerical and experimental analysis of the conduction of heat, humidity and air through a window	Faculty of Mechanical Engineering, Sarajevo	2004	20000.-
	Molecular and genetic characterization of human, animal and plant resources in B&H	Institute for Genetic Engineering and Biotechnology, Sarajevo	2004	20,000.-
	Comparative analysis of the absorption of xenobiotic	Faculty of Medicine, Sarajevo	2004	20000.-
	Chromatographic testing of natural and synthetic steroid hormones – a growth promoter for animals	Faculty of Medicine, Sarajevo	2004	20000.-
	Mechanical and chemical effects of anaesthetics when applied intra- or para-neurally for diagnostic or therapy procedures	Faculty of Medicine Sarajevo	2004	20000.-
	Comparative analysis of environmental, economic and technical aspects of the most often used methods for treatment of water in the European Union – current practice and tendencies	Energoinvest – Centre for the Development of Technology Sarajevo	2004	20000.-
	Stereo-selective division of enantiomers in drugs using bio-localisers	Faculty of Pharmacy Sarajevo	2004	15000.-
	Research into the specific problems of the burning of local coals as a precondition for the application of	Faculty of Mechanical Engineering	2004	20000.-

	clean coal technologies			
	Continuous computing solutions for e-business continuity	Faculty of Economics Sarajevo	2004	13000.-
	Strategies for the marketing and promotion of Sarajevo as a key for the successful realization of the "Strategy of Reconstruction and Development of Sarajevo Canton until 2015"	Faculty of Economics Sarajevo	2004	13000.-
	Theories of simple geodesies lines in Fuchs' groups	Faculty of Natural Sciences Sarajevo	2004	11000.-
	Investigations in the physics of hadrons: in A(1) symmetry and multi quark systems	Faculty of Natural Sciences Sarajevo	2004	10,000.-
	Foundations of a system for the improvement of cattle raising in Sarajevo Canton	Faculty of Agriculture Sarajevo	2004	17,000.-
	Analysis of the presence of polychlorinated biphenyl in the groundwater of the Sarajevo Canton	Faculty of Pharmacy Sarajevo	2004	20000.-
	Mass Graves in B&H	Research Institute for Crimes Against Humanity and International Law, Sarajevo	2004	30000.-
	Application of burning techniques in a porous medium on solar systems for the use of heating and treatment of sanitized water in apartment building and industry	Faculty of Mechanical Engineering Sarajevo	2004	12000.-
	Revitalisation of the geological collection of the Faculty of Natural Sciences (mineralogy, petrography and palaeontology) and the drawing up of maps for metal and non-metal diffusion in B&H	Faculty of Natural Sciences Sarajevo	2004	20000.-
	Contemporary problems of algebra and analysis	Faculty of Natural Sciences Sarajevo	2004	12000.-
	The effects of the conversion of beech forests of low degradation levels	Faculty of Forestry Sarajevo	2004	15000.-
	The development of new metal complexes for use as anti-tumour agents and new biosensors	Faculty of Natural Sciences Sarajevo	2004	20000.-
	The influence of pre-voltage on the reliable supply by the electric energy in the transferring network of Sarajevo Canton	Faculty of Electrical Engineering Sarajevo	2004	10000.-
	Discovering histaminic receptors in the colon walls of animals	Veterinary Faculty, Sarajevo	2004	13000.-

	The oral health of children in the Federation of B&H – a clinical and epidemical study	Faculty of Dentistry, Sarajevo	2004	13,000.-
	Computer simulation and experimental verification of the spread of polluting material from moving and stationary sources in Sarajevo during critical meteorological conditions	Faculty of Mechanical Engineering Sarajevo	2004	10000.-

5. RESEARCH INSTITUTIONS

5.1 Introduction

5.1.1 The higher education institutions in Bosnia and Herzegovina:

UNIVERSITY OF SARAJEVO 23 Faculties, 3 Academies (www.unsa.ba)

UNIVERSITY OF ZENICA 3 Faculties, 1 Academy (www.unze.ba)

UNIVERSITY «DŽEMAL BIJEDIĆ» MOSTAR 8 Faculties (www.unmo.ba)

UNIVERSITY OF MOSTAR 7 Faculties, 1 Academy (www.sve-mo.ba)

UNIVERSITY OF TUZLA 11 Faculties, 1 Academy (www.untz.ba)

UNIVERSITY OF BIHAĆ 5 Faculties, 2 Higher Schools (www.unibihac.cjb.net)

UNIVERSITY OF BANJA LUKA 13 Faculties (www.uni.bl.ac.yu)

UNIVERSITY OF EAST SARAJEVO 16 Faculties (www.unsa.rs.ba)

5.1.2 Research institutes

1. Agronomy Institute at the University of Mostar, Mostar
2. Institute for Protection, Mostar
3. Institute for Genetic Engineering and Biotechnology, Sarajevo
4. Institute for Civil Engineering, Building Materials and Non-metals, Tuzla
5. Mining Institute, Tuzla
6. Metallurgy Institute *Kemal Kapetanovic*, Zenica
7. Institute for Mechanical Engineering at the University of Mostar, Mostar
8. UNIS Institute, Sarajevo
9. Institute for Architecture, Urban Development and Area Planning, Sarajevo
10. Earth Science Institute – Institute for Research, Projects, Engineering and Monitoring in the Area of Geo-Science, Sarajevo
11. Institute for Hydro-Technology at the Faculty of Civil Engineering, Sarajevo
12. Institute for Materials and Construction at the Faculty of Civil Engineering, Sarajevo
13. Agriculture Institute, Sarajevo
14. Institute for Geology, Sarajevo
15. Energoinvest – Center for the Development of Technology in Automatics, Thermo-Technology and Measurements, Sarajevo
16. Energoinvest – Institute for Materials and Quality, Sarajevo
17. Research and Development Center for Gas Technology, Sarajevo
18. Institute for Protection against Fires and Explosions, Sarajevo
19. Institute for Development, Mostar
20. Institute of Economy, Sarajevo
21. Institute of Physical Education, Sarajevo
22. LOK – Institute of Organization and Economy, Sarajevo
23. Institute for Research into Crimes against Humanity and International Law, University of Sarajevo Sarajevo
24. Academy of Sciences and Arts of Bosnia and Herzegovina, Sarajevo
25. Institute of the Croatian Language, Literature and History, University of Mostar, Mostar
26. Public Scientific Institute of Language, Sarajevo
27. Institute of Oriental Studies, University of Sarajevo, Sarajevo
28. Research Institute “IBN SINA”, Sarajevo
29. Center for Geology Research, Zvornik
30. Institute of Agriculture, Banja Luka

31. Institute of Agriculture, Bijeljina
 32. Institute of Mining, Prijedor
 33. Institute of Veterinary medicine "dr Vaso Butozan"
 34. Istitut of Economics, Banja Luka,
 35. Institute of International Law and International Relations, Banja Luka,
 36. Center for Interdisciplinary Studies and Scientific Research, Banja Luka, Tel: + 387 51218 989
 37. Center for Geostrategic Research, Banja Luka,
 38. Center for Human Rights, Banja Luka,
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TOTAL:	
The national research institutes	21 Institutes (Government sector)
The private research institutes	14 Institutes
Other institutions	3 Centres

6. INTERNATIONAL COOPERATION

6.1 Bilateral co-operation

Desirous of encouraging cooperation in the fields of science, technology, education, culture and sports Bosnia and Herzegovina signs international bilateral agreements, protocols and memorandums, respecting the principles of the Helsinki Final Act of the Conference on Security and Cooperation in Europe and the Paris Charter for a New Europe of November 21, 1990. Bosnia and Herzegovina is convinced that such cooperation will contribute to better understanding and enhancement of bilateral relations at different levels.

The procedure for concluding these agreements is in accordance with the Law for the Practice of Concluding and Carrying out International Agreements (Official Gazette of BiH no 29/00).

ITALY: Agreement on cooperation in the fields of culture, education and sport between the Government of the Republic of Italy and the Council of Ministers of Bosnia and Herzegovina.

INDIA: Agreement between the Government of the Republic of India and the Council of Ministers of Bosnia and Herzegovina on cooperation in the fields of culture, science and education.

HUNGARY: Agreement between the Government of the Republic of Hungary and the Council of Ministers of Bosnia and Herzegovina on cooperation in the fields of education, science and culture.

LIBYA: Agreement on scientific, technological and cultural cooperation between Bosnia and Herzegovina and the Great Socialist People's Libyan Arab Jamahiriya.

FRANCE: Agreement on cultural, scientific and technical cooperation between the Government of the Republic of France and the Council of Ministers of Bosnia and Herzegovina.

CROATIA: Agreement on scientific and technological cooperation between the Council of Ministers of Bosnia and Herzegovina and the Government of the Republic of Croatia.

CROATIA: Agreement of cultural, educational and sport cooperation between the Council of Ministers of Bosnia and Herzegovina and the Government of the Republic of Croatia.

ALBANIA: Agreement between the Council of Ministers of Bosnia and Herzegovina and the Council of ministers of the Republic of Albania on cooperation in the fields of education and science.

GREECE: Agreement on cooperation in the fields of culture, education and science.

BULGARIA: Agreement between the Republic of Bulgaria and Bosnia and Herzegovina on cooperation in the fields of education, science and culture.

SERBIA AND MONTENEGRO: Agreement on scientific and technological cooperation between the Council of Ministers of Bosnia and Herzegovina and the Council of Ministers of Serbia and Montenegro.

SAUDIA ARABIA: General agreement on cooperation in the fields of economy, trade, investments, technology, culture, youth policy and sport between the Council of Ministers of the Kingdom of Saudi Arabia and the Council of Ministers of Bosnia and Herzegovina.

FEDERAL REPUBLIC of GERMANY: Agreement between the Government of the Republic of Bosnia and Herzegovina and the Government of the Federal Republic of Germany concerning cooperation in the field of technology.

SLOVENIA: Agreement between the Government of the Republic of Bosnia and Herzegovina and the Government of the Republic of Slovenia concerning cooperation in the fields of science and technology.

USA: Agreement on cooperation in the field of patents (PCT) completed in Washington on the 19th of June 1970, revised by an amendment on the 28th of September 1979 and redrafted on the 3rd of February 1984.

KUWAIT: Agreement between the Government of the Republic of Bosnia and Herzegovina and the Government of the State of Kuwait concerning cooperation in the fields of science, economy and technology.

IRAN: Agreement between the Government of the Republic of Bosnia and Herzegovina and the Government of the Islamic Republic of Iran concerning cooperation in the fields of culture, science and technology.

EGYPT: Agreement between the Government of the Republic of Bosnia and Herzegovina and the Government of the Arabian Republic of Egypt concerning cooperation in the fields of economy science and technology.

USA: Agreement between the Government of the Republic of Bosnia and Herzegovina and the Government of the United States of America concerning aid in the fields of economic, technological and other assistance to Bosnia and Herzegovina.

SLOVENIA: Agreement between the Council of Ministers of Bosnia and Herzegovina and the Government of the Republic of Slovenia concerning cooperation in the fields of culture, education and science.

FEDERAL REPUBLIC OF GERMANY: Agreement between the Government of the Federal Republic of Germany and the Government of Bosnia and Herzegovina concerning cooperation in the fields of culture, education and science.

PROGRAMS

KINA: Program of cultural cooperation for 2002 -2004 between the Government of the People's Republic of China and the Council of Ministers of Bosnia and Herzegovina.

ITALY: Program of cultural, scientific and technological cooperation between the Government of the Republic of Italy and the Council of Ministers of Bosnia and Herzegovina for 2003-2005.

IRAN: Program of exchange in the fields of culture, science and education between the Islamic Republic of Iran and Bosnia and Herzegovina.

TURKEY: Protocol on cooperation in the implementation of help projects between the Government of the Republic of Turkey and the Council of Ministers of Bosnia and Herzegovina.

HUNGARY: Program of cooperation in the fields of culture, science and education between the Government of the Republic of Hungary and the Council of Ministers of Bosnia and Herzegovina.

6.2. Multilateral co-operation

EU – BOSNIA-HERZEGOVINA RTD CO-OPERATION - 5TH FP PROJECTS

Project Title		Participating Country	Project Cost (€)	EU Funding (€)
1	Environmental regulation of mine waters in the European union	Spain, Slovenia, United Kingdom, Germany, Bosnia and Herzegovina, Sweden, Netherlands	1.450.000	1.230.000
2	Mediterranean network to Assess and upgrade the Monitoring and forecasting Activity in the region	Italy, Spain, Malta, Israel, France, Turkey, Greece, Cyprus, Slovenia, Egypt, Syria, Croatia, Algeria, Yugoslavia, Albania, West Bank and Gaza Strip, Tunisia, Bosnia and Herzegovina, Lebanon, United Kingdom	2.370.000	2.370.000
3	Treatment seeking and treatment outcomes in people suffering from posttraumatic stress following war and migration in the Balkans	United Kingdom, Croatia, Germany, Bosnia and Herzegovina, Yugoslavia	1.080.000	799.976
4	Assessment of the selected Pops (pcbs,pcdds/ps,pocps) in the atmosphere and water ecosystems from the waste materials generated by warfare in area of former Yugoslav	Croatia, Yugoslavia, Greece, Austria, Slovenia, Czech Republic, Bosnia and Herzegovina	828.735	648.761
5	Reducing mortality and long-term disability of TBI victims through research into treatment procedures used in Bosnia-Herzegovina, Macedonia and Croatia	Austria, Czech Republic, Slovakia, the Former Yugoslav Republic of Macedonia, Croatia, Bosnia and Herzegovina	447.373	447.373
6	Environmental protection in the Balkan countries: reuse of industrial mineral waste for waste water treatment and improvement of landfills	Germany, Latvia, the Former Yugoslav Republic of Macedonia, Croatia, Bosnia and Herzegovina, Yugoslavia	806.505	649.778
7	Safety of traditional fermented sausages: Research on protective cultures and bacteriocins	Yugoslavia, Hungary, Greece, Croatia, Italy, Bosnia and Herzegovina	1.340.000	1.000.000
8	Health problems, mental disorders and cross-cultural aspects of developing effective rehabilitation procedures for refugees of the war-affected countries	Croatia, Italy, Austria, Bosnia and Herzegovina, Yugoslavia, Albania	576.654	430.852
9	Low cost Flue Gas Desulphurisation (FGD) technology	Slovenia, Austria, the Former Yugoslav Republic of Macedonia, Bosnia and Herzegovina	540.003	270.000
10	Cost-effective technologies for wastewater treatment and waste biodegradation in agro-industries with reclamation of resources	Netherlands, Germany, Bosnia and Herzegovina, Yugoslavia, Italy	1.420.000	996.159
11	Study of anthropogenic pollution after the war and establishing of measures for protection of Plitvice national park and bihac region at the border area of Croatia and Bosnia-Herzegovina	Spain, Bosnia and Herzegovina, Germany, Croatia, Bosnia and Herzegovina	770.758	511.879

12	Sustainable Development and Sustainable Use of Natural Resources in Bosnia & Herzegovina	Bosnia and Herzegovina, Italy	74.340	43.498
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EU – BOSNIA-HERZEGOVINA RTD CO-OPERATION - 6TH FP PROJECTS

Prop. Num	Proposal acronym	PROPOSAL Title	Organization .Name
002399	SAWWAT	Sava River Basin Research on Transboundary Water Quality and Flood Control Management	Hydro-Engineering Institute Sarajevo Institut za hidrotehniku, tel. 212 466; fax 207 949
002399	SAWWAT	Sava River Basin Research on Transboundary Water Quality and Flood Control Management	Zavod za vodoprivredu d.o.o. Bijeljina tel.055 202 175;fax 211 866
002399	SAWWAT	Sava River Basin Research on Boundary Water Quality and Flood Control Management	Zavod za vodoprivredu d.d. Sarajevo tel. 213 858;fax 201 588
003614	NERETVA	Water quality survey of persistent organic pollutants in the Neretva River basin Bosnia and Herzegovina	University of Sarajevo
003650	CNS REPAIR NET	Neuroscience network in service of post-conflict central nervous system trauma repair	Clinical Centre Banja Luka tel. 051 216 725 ;fax 310 530
012013	POCOREL	Post-conflict Rehabilitation in Locomotion	poliklinika za fizikalnu i rehabilitaciju Tuzla, Univerzitetski klinički centar Tuzla Tel/fax 035 280 103/101
012066	RECOVER	Renewable Energy CO-ordinated Development in the Western Balkan Region	Centre for Environmental Technological Development CETEOR Centar za ekonomski, tehnički, i okolišni razvoj Sarajevo Tel/fax 033 447 881;447 875
012067	GEOSUPPORT-BALKAN	Prospective Study and Investment Encouragement for the Rational Approach to West Management in the Western Balkan Countries	Centre for Environmental Technological Development CETEOR
012076	BALKAN WASTE	International Cooperation in service of Implementing the Regional Approach to Waste Management in the Western Balkan Countries	The City Government of Tuzla Vlada kantona Tuzla, Minis. prostornog uređenja, Sektor zaštite okoliše. Tel/fax 035 251 293/292

012076	BALKAN WASTE	International Cooperation in service of Implementing the Regional Approach to Waste Management in the Western Balkan Countries	Center for Ecology and Energy Centar za ekologiju i energiju –Tuzla Tel.035 249 310;Fax.249 311 Institut za hemijsko inženjerstvo – Tuzla Tel.035 398 072;Fax 398 073
012077	SEENENERGY	D Cooperation in Information System in the Fields of Environment and Health	Ministry of Foreign Affairs of BiHŽ
502260	ERA WESTBALKAN	Opening up the European Research Area to the Western Balkan	Ministry of Foreign Affairs
502431	SEENENERGY	Establishing see R&D Cooperation Information System	Ministry of Foreign Affairs
509160	SARIB	Sava River Basin Sustainable Use Management and Protection of Resources	Hydro –Engineering Institute Sarajevo Tel.212 466;Fax 207 949
509160	SARIB	Sava River Basin Sustainable Use Management and Protection of Resources	University of Banja Luka Faculty of agriculture Poljoprivredni fakultet- Banja Luka Tel.051 461 392; Fax
509161	RISE	Renewables for Isolated System- Energy Supply and Waste Water Treatment	Faculty for Electrical Engineering University of Tuzla Elektrotehnički fakultet – Tuzla Tel.035 259 600; Fax 259 617
509162	SWEET	Sustainable Water, Energy& Environmental Technology in Sugar Production	University of Tuzla
509165	FLEXHEAT	Flexible Premixed Burners for Low-Cost Domestic Heating System	Faculty of Mechanical Engineering Banja Luka Mašinski fakultet – Banja Luka Tel.051 468 3207971 Fax
509170	CNS TRAUMA& REPAIR	Central nervous system trauma and repair mechanisms-a biomedical study	Clinical Center Banja Luka Klinički centar Banja Luka Tel.051 216 725;Fax 310530
509170	CNS TRAUMA& REPAIR	Central nervous system trauma and repair mechanisms-a biomedical study	School of medicine University of Tuzla Medicinski fakultet Tuzla Tel.035 300 600;Fax 300 601
509173	RECOAL	Reintegration of Coal ASH Disposal Sites and Mitigation of Pollution in the West Balkan Area	Faculty of Agriculture Poljoprivredni fakultet Sarajevo Tel.033 653 033;Fax 667 429
509173	RECOAL	Reintegration of Coal ASH Disposal Sites and Mitigation of	JP Elektroprivreda BiH Termoelektrana Tuzla”

		Pollution in the West Balkan Area	Tuzla Termoelektran Tuzla Tel.035 280 680;Fax 305 006
509173	RECOAL	Reintegration of Coal ASH Disposal Sites and Mitigation Pollution in the West Balkan Area	Hydro-Engineering Institute Sarajevo Institut za hidrotehniku Tel.033 212 466;Fax 207 949
509174	ECOREMED	The eco remediation for the protection of the environment ERM	Institute for Water Management Zavod za vodoprivredu Sarajevo, Tel.033 213 858;Fax 201 588 Zavod za vodoprivredu Bijeljina Tel.055 202 175;Fax 211 866
509175	CONNECT	Components organisation costs and outcomes of health care and community based interventions for people with posttraumatic stress following war and conflict in the Balkans	Klinički Centar Univerziteta Psihijatrijska Klinika Sarajevo Tel.033 297 628;Fax 265 710
509176	LLH	Living Conditions Lifestyle and Health	Media Plan Institut d.o.o. Medija plan institut d.o.o.Sarajevo(Centar za istraživanje) Tel.033 216 226;Fax 213 078/206 542 Medija centar Sarajevo Tel.033 715 840;Fax 715 840
509179	NHITT	Network for Health Information, Training and Telemedicine	University of Sarajevo
509181	info-s we.b	Informatics Support for Water Resources and Environmental Management in the Western Balkans in view of WFD	Faculty for Environmentally Sustainable Development BiH
509181	info-s-we.b	Informatics Support for Water Resources and Environmental Management in the Western Balkans in view of WFD	Faculty of Agriculture and Civil Engineering University of Banja Luka Poljoprivredni fakultet Banja Luka,Tel.051 461 392;Fax 460 832 Arhitektonsko građevinski fakultet BL Tel.051 462 545;Fax
509181	info-s-we.b	Informatics Support for water Resources and Environmental Management in the Western Balkans in view of WFD	Faculty of Architecture and Civil Engineering Banja Luka
509182	HYBRIDA II	PV Genset hybrid systems for rural electrification in Balkan	University of Sarajevo Mechanical Engineering Faculty Mašinski fakultet

			Sarajevo, Tel/Fax 033 653 055
509186	BUON-BSO	Post. Conflict Spatial and temporal effects on cancer incidence and morality in Western Balkan Countries	Institute of Oncology, Clinical Center of sarajevo University KUC Institut za onkologiju, Tel.033 297 000;Fax 033 213 519
509187	ADEG	Advanced Decentralised Energy Generation Systems in Western Balkans	University of Sarajevo, Mechanical Engineering Faculty Sarajevo Mašinski fakultet Sarajevo
509189	DRINAQUA	Drina River Integrated water management distributed decision support system	Architectural and Engineering Faculty in Banja Luka Arhitektonsko građevinski fakultet Banja Luka
509189	DRINAQUA	Drina River Integrated water management distributed decision support system	"Projekt" AD Banja Luka
509190	WEB INWAM	Innovativ policy instruments and institutions for integrated water management in Western Balkan Countries	HYDRO Engineering Institute Sarajevo Institut za hidrotehniku Sarajevo
509192	INNOTECHRES	Innovative technologies for renewable Energy supply in Pilot rural Regions	University Dzemal Bijedić in Mostar, Faculty of Mechanical Engineering in Mostar Mašinski fakultet Mostar, Tel.036 571 258;Fax 571 258
509195	BALKARES	Deriving Strategies for the Promotion of Renewals for Heating in Western Balkan Countries	Centre for Ecology and Energy, Tuzla Centar za ekologiju i energiju Tuzla, Tel.035 249 310;Fax 249 311
509199	ECOURB	Ecological Urbanization	University of Sarajevo-Faculty of Architecture Arhitektonski fakultet Sarajevo, Tel. 633 947;Fax 213 494
509200	STEWART 4 WBC	Sustainable Technologies for wastewater Reuse and Treatment for Western Balkan Countries	Hydro-engineering Institute Sarajevo Institut za hidrotehniku i građevn. fakulteta Sarajevo, Tel.212 466;Fax 207 949
509200	STEWART 4 WBC	Sustainable technologies for wastewater Reuse and Treatment for western Balkan Countries	Prism Research d.o.o. Sarajevo PRIZM, Sarajevo, Tel.033 761 481/482;Fax 612 452 ne javljaju se
509201	AQUAREG	Innovative methods for integrated water management in rural regions and townships	Hydro Engineering Institute Sarajevo
509202	PROHERCASCREEENWB	The Development of the Program for Hereditary cancer screening in the Western Balkan Countries	Institute of Oncology, Clinical Center of Sarajevo University
509203	INNOWASTE	Innovative clean and cost	University of Tuzla Faculty

		effective treatment and use of industrial and municipal waste	of Mining Geology and Civil Engineering Rudarsko geološki, građevinski fakultet- Tuzla, Tel.035 300 550;Fax 300 570
509203	INNOWASTE	Innovative clean and cost effective treatment and use of industrial and municipal waste	Rudarski Institut Tuzla Rudarski institut Tuzla, Tel.035 282 406;Fax 285 127
509205	VBPC-RES	Virtual Balkan Power Centre for advance of Renewable Energy Sources in Western Balkans	University of Tuzla, Faculty for Electrical Engineering Elektrotehnički fakultet Tuzla, Tel.035 259 600;Fax 259 617
509205	VBPC-RES	Virtual Balkan Power for advance of Renewable Energy Sources in Western Balkans	Intrade Energy LTD
509208	RENEWENERGY	Renewable bio fuels production through local resources and low-cost technologies in Western Balkan Countries and establishment of basis to promote extensive high quality oil seed cultivation	Agricultural Institute Banja Luka Poljoprivredni institut Banja Luka Tel.051 303 112; Fax
509208	RENEWENERGY	Renewable bio fuels production through local resources and low-cost technologies in Western Balkan Countries and establishment of basis to promote extensive high quality oil seed cultivation	Bimal DD Bimal dd Brčko Tel.049 220 888;Fax 220 908
509212	CARETRANSLATE ONE	Social inequalities in the Incidence and Outcome of Psychosis in Europe: Foundations for Early Intervention	Department of Psychiatry University Medical Centre Sarajevo KUC Sarajevo, Psihijatrijska klinika Tel.297 628;Fax 265 710
509214	INTAILRISK	Assessment of Environmental Risk for use of Radioactively Contaminated Industrial Tailings	Department of Radiobiology and Biophysics Laboratory for Radioactivity Control Veterinary Faculty University of Sarajevo Veterinarski fakultet, Odjel radiologije, Tel.655 922;Fax 658 301
509215	ISAB	Sustainable Utilisation, Management and Protection of Internationally-shared Aquifer Resources in Western Balkan Countries	Civil Engineering Faculty, University of Sarajevo Građevinski fakultet, Tel.278 400; Fax 200 158
510617	WEB-ENV	Development of environmental guidelines for the region of Western Balkans	Hydro-Engineering Institute Sarajevo Institut za hidrotehniku građevinskog fakulteta
510645	RADIOINVENT	Inventory of radioactively contaminated wastes in the Western Balkan	Department of Radiobiology and Biophysics Laboratory for

			Radioactivity Control Veterinary, Faculty of Sarajevo Veterinarski fakultet, Odjel radiologije, Sarajevo
510681	TEMPOH	Innovative costs effective technologies for the efficient management of solid waste in BiH	The institute for urbanism of Republic Srpska Miinistarstvo za urbanizam RS Banja Luka, Tel.051 215 511
515894	WA.WA.BIH	Efficient technology for wastewater treatment in urban subsystems and rural areas in BiH-application of innovative cost-effective depuration technologies to isolated	University of Banja Luka Tehnološki fakultet Tel.051 468 646
515912	ECOWATER	Green chemical processes for waste water treatment	Institut za zaštitu zdravlja RS Institut zaštite zdravlja RS, Banja Luka, Tel.051 216 509; Fax
515912	ECOWATER	Green chemical processes for wastewater treatment	Institute for hydroengineering
515919	INDUWASTE	Management and remediation of hazardous industrial wastes in Western Balkan	Department of Radiobiology and Biophysics Veterinary Faculty, University of Sarajevo
515919	INDUWASTE	Management and remediation of hazardous industrial wastes in Western Balkan	Department of Radiobiology and Biophysics Veterinary Faculty of Sarajevo
515919	INDUWASTE	Management and remediation of hazardous industrial wastes in Western Balkan Country	Department of Radiobiology and Biophysics Veterinary Faculty, University of Sarajevo
515919	INDUWASTE	Management and remediation of hazardous industrial wastes in Western Balkan	Department of Radiobiology and Biophysics Veterinary faculty University of sarajevo
515923	WEB-MOB	Development of Researchers Mobility policy guidelines for the Region of Western Balkans	Hydro-Engineering Institute Sarajevo
515936	WESTBALKERA	Opening the ERA to western Balkan Countries in DER (distributed Energy Resources) research	University of Tuzla- Faculty for Electrical Engineering Elektrotehnički fakultet Tuzla Tel.035 259 600; Fax 259 617