

COUNTRY REPORT

Social Sciences and Humanities in Montenegro

2011 Report

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- regularly updated country profiles of SSH systems in 42 countries;
- a news service;
- annual monitoring reports for all countries covered;
- synthesis reports bringing together key points;
- links to relevant reports and websites.

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1. Country Overview

1.1 Overview of SSH System

1.1.1 Brief Description of the structure of the SSH research system

Montenegro declared its independence on 3 June 2006, following a referendum held on 21 May 2006. In October 2007 a Stabilisation and Association Agreement between the European Communities and their Member States and Montenegro was signed. Montenegro presented its application for membership of the European Union on 15 December 2008. Montenegro is a candidate country for membership of the EU.

Following these developments, Montenegro begun creating a legal and institutional framework in the area of STI.

Science and research policy, including SSH, is under the authority of the Ministry of Science. In accordance to the Law on Scientific Research Activities, a Council for Scientific Research Activities, established in 2006, acts as an independent advisory body. The Montenegrin Academy of Sciences and Arts is the most important public research and scientific institution in the country, covering natural sciences, social science and humanities as well as the arts. The State University of Montenegro is the key research performer.

Research policy implementation is through the annual budget cycles allocated by the Ministry of Science for scientific and research projects. The programme finances:

- scientific and research projects (national, bilateral and participation in multilateral projects),
- professional development of researchers in the country and abroad,
- procurement of scientific and research equipment.

As there is no national policy document dealing exclusively with SSH research, the main policy document which impacts on SSH research is the Strategy for Scientific Research Activities 2008-2016 (including an action plan). Two key priorities were identified in order to facilitate integration into the European Research Area:

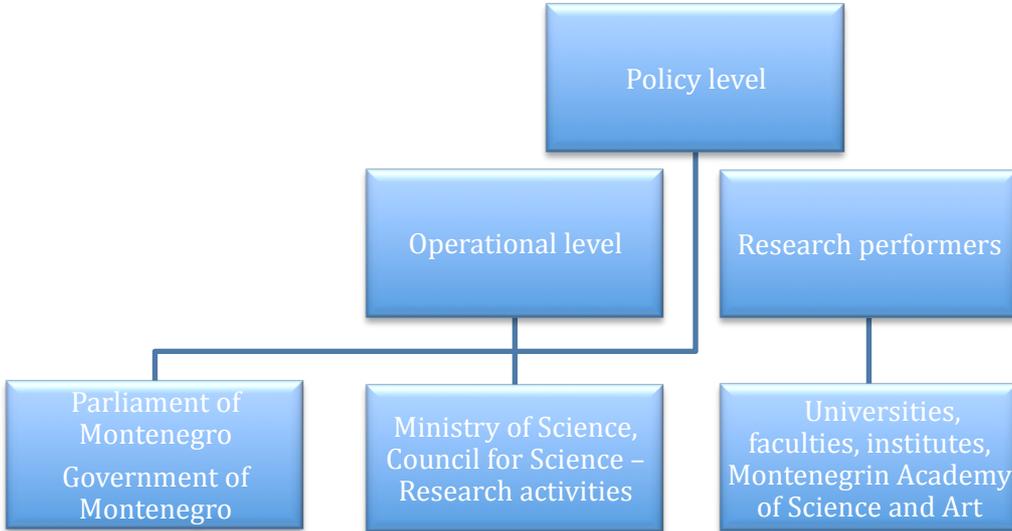
- The increase in research cooperation with the EU and;
- The reform of the national scientific community.

The action plan includes a roadmap for increasing investment in science and research, both by the public and private sector, aiming at an investment level of 1.4% of Montenegro's GDP in research by 2013. The current level of investment is very low (estimated at 0.13% of GDP in 2007). The lack of reliable statistics makes the monitoring of indicators very difficult.

Montenegro has started its preparations towards the alignment with the *acquis* in the STI. However, the country now needs to shift its attention from policy design to implementation. Close monitoring of the implementation of reforms and the ambitious targets set is necessary.

1.1.2 Overview of structure

Figure 1 Overview of the governance structure of the Montenegrin research system



1.2 Policy challenges and developments

1.2.1 Main societal challenges translated into SSH research

It is important to note that there is no national policy focusing exclusively on SSH research in Montenegro. The basic policy document in the area of R&D (Strategy for Scientific Research Activities 2008-2016) is mainly generic in character, however. It states that “like every other society in transition, Montenegro faces a number of specific problems that should be permanently studied in order to reduce their negative effects such as natural and cultural heritage, demographic structure, national identity and language”¹.

The main debate about societal challenges discussed in the media and civil society reports are related to Montenegro’s integration into the EU. The international community, in the area of European integration, civil society, corruption, social cohesion and human rights, mainly supports this topic.

¹ Strategy for Scientific Research Activities 2008-2016

1.2.2 New SSH policy developments

The National Programme for the Integration of Montenegro into the European Union In June 2008 the Government of Montenegro adopted the National Programme for the Integration of Montenegro into the European Union for the period of 2008-2012. This document is a national plan for the adoption of the *acquis* and set out short-term and medium-term priorities. The most important short-term priorities were: reform of the statistical system in the areas of science and research; expansion and development of the National Contact Point (NCP) network for the Seventh Framework Programme of the European Union; promotion of researcher mobility; strengthening of links between the research sector and the economy as well as the adoption of a number of bylaws.

The Strategy for Scientific -Research Activities 2008-2016

Montenegro, as a potential candidate country, has been associated to the 7th EU Research Framework Programme (FP7) since January 2008. In July 2008, the government adopted a Strategy for Scientific Research Activities 2008-2016 (including an action plan) in which increased research cooperation with the EU and reform of the national scientific community were identified as key priorities in order to facilitate integration into the European Research Area. The strategy's action plan includes a roadmap for increasing investment in science and research, both by the public and private sector, aiming at reaching an investment level of 1.4% of Montenegro's GDP by 2013.

Law on Scientific - Research Activities

The current law on scientific research activities was adopted in November 2005 with the following goals:

- Integration into the ERA and the Framework Programme,
- Sustainable development of the country,
- Introduction of international quality standards,
- More investment in scientific and research activities, connecting researchers.

Amendments to the law on scientific research activities were prepared in September 2010, because the research environment had changed significantly and there was an urgent need for defining, promoting and rewarding quality in research, establishing parameters for funding on a competitive basis and the introduction of quality assurance measures. It is expected to be published by the end of 2010.

2. Policy Setting System

2.1 Government policy making and coordination

2.1.1 Policy formulation and coordination

Montenegrin research policy, including social science and humanities (SSH), is the responsibility of the Ministry of Science, which is responsible for all research funding streams and horizontal policies. The Ministry of Science is also responsible for the implementation of research support instruments.

The main advisory body that assists the Ministry of Science in the strategic development of science is the Council for Science and Research Activities (Official Gazette of the Republic of Montenegro 56/06, 25/07 and 38/08²). The council is established by the Montenegrin Government. The council is a strategic and advisory body for the development and quality control of all scientific activity in Montenegro and its task include: preparing and proposing the Strategy on Scientific Research Activities; proposing priorities from the strategy for the current year; offering opinion on criteria for election to academic positions; giving opinion on laws and other regulations within the area of scientific research activities and of other areas which provide general conditions for fostering scientific research activity and utilization of its results; giving opinion during the procedure of laying down the range of mechanisms for financing priorities from the strategy; monitoring of the strategy implementation and cooperation with the Council for Higher Education.

2.1.2 SSH policy Advice

There exists no single body charged with the task of giving SSH policy advice. Instead, there is the Council for Science and Research Activities, and the main advisory bodies that assist the Ministry of Science in the strategic development of science which are appointed by the Montenegrin Government.

At present, SSH research is at early stage of contributing and/or influencing policy making in Montenegro. While the regulatory environment in Montenegro is favorable for development of the civil sector, many challenges remain and some are even growing. NGO representatives are included in various working groups or consulted, but their suggestions and comments are often ignored, as in the development of the Action Plan for the Fight against Corruption and Organized Crime³.

In a highly publicised effort to address the lack of meaningful communication between government and civil society, the government committed to the creation of a new advisory body composed of governmental appointees and civil society representatives selected by the NGO sector. The council first assembled in autumn 2010. It remains to be seen how effective it will be in transmitting the needs of civil society to policymakers.

² <http://www.slistcg.me/Naslovna.aspx>

³ Nations in Transit 2011, Country report Montenegro, p.397

Many NGOs are becoming stronger, more vocal and more influential, but they are not equally well developed in all focus areas or regions of Montenegro. The strongest are those based in Podgorica, dealing mainly with good governance, human rights, corruption and EU affairs and which have been strengthening their capacity for public advocacy.

Interaction between NGOs and the media, especially independent outlets, has become more common, resulting in successful coverage of important social issues where NGOs served as story initiators and sources. NGOs remain largely dependent on foreign funds, a trend that favors those organisations that are already strong and well developed. Allocation of public funds for NGOs remains controversial. There is a need for transparent and criteria-based procedures for distribution of these resources at the national and local level, and for mechanisms to monitor the allocation procedure and implementation of approved projects.

2.1.3 Main implementing bodies

The Ministry of Science, as the national authority responsible for science is also responsible for the implementation of research support instruments. Aiming to achieve its scientific and research policy objectives, the Ministry of Education and Science announces calls for funding for scientific and research activities in the following areas:

- scientific and research projects (national, bilateral and participation in multilateral projects),
- professional development of researchers in the country and abroad,
- procurement of scientific and research equipment.

In these three calls, the Ministry of Science is responsible for: managing the call process; setting up of scientific, technical and financial criteria for assessment of projects proposals; collecting evidence of delivery of scientific results; measuring delivery of results relevant to social and economic development needs; setting up of a programme of professional development for scientists; setting up of a programme and financial criteria for financing of scientific infrastructure and the work of public scientific institutes.

In terms of research performers, most of the financial resources go to public research institutes and higher education institutions. Although Article 36 paragraph 2 of the law on scientific and research activity provides for the possibility that private institutions and other natural and legal persons can access finances from the state budget as long as their scientific and research programme is in accordance with the overall strategy, none have applied to competitions of the ministry so far.

2.2 Impacting factors

2.2.1 Policy fields influencing SSH policies

The SSH sector in Montenegro is characterised by the absence of a national SSH research strategy which in turn means that there are no SSH research policies or major SSH thematic research priorities. Montenegro's SSH research is, by and large, the responsibility of the Ministry of Science.

The policies in other areas such as SSH, agriculture, competition policy, public administration, transport, housing etc. do not have a major direct impact on R&D policy. There are no special programmes or action plans for SSH research from other ministries.

2.2.2 Influence of European and International Developments

The international influence on national SSH policy is mainly limited to European Commission policy developments of the ERA as well as European programmes like TEMPUS and the Bologna process while the influence of other global institutions is negligible.

One of the greatest European influences was the Bologna process adopted in Montenegro in 2003. The Montenegrin Higher Education Act was adopted in October 2003, in the same year that Montenegro officially became a Bologna signatory country. The changes and amendments of the Law on Higher Education were adopted in the Parliament of Montenegro on 27 July 2010. The major novelties that the new Higher Education Act brought were: integrated universities, the three-cycle system, introduction of ECTS, introduction of the Diploma Supplement, the creation of the Council of Higher Education and the implementation of a quality assurance system (internal and external).

2.2.3 Relevance of European and International SSH research

Montenegro possesses some experience in the opening of national scientific and research programmes in the context of EU programme initiatives.

Participation in the 7th Framework Programme (FP7) is mostly through projects of coordination and support. Participation in large research projects is minimal. Out of the total number of projects financed up to date (16), 4 are research projects, 2 are European networks of National Contacts for FP7, and 10 are projects of coordination and support⁴. Montenegro is neither a member of COST nor of EUREKA.

Montenegro has been associated to one of the components of CIP EU programme since March 2008 (i.e., the EU Competitiveness and Innovation Programme (EIP), specifically, the component designed for entrepreneurship and innovation), through which support for development of entrepreneurship and innovation capacity development is provided, particularly for small and medium sized enterprises.

⁴ Questionnaire, Information requested by the European Commission to the Government of Montenegro for the preparation of the Opinion on the application of Montenegro for membership of the European Union, Chapter 25, available from <http://www.questionnaire.gov.me>

2.2.4 Impact of evaluations

The culture of evaluation and accountability has not yet been developed in Montenegro research policy. An action plan for research evaluation has still to be formulated by the relevant ministries in the country. In this context, evaluations do not have impact on shaping research policy or scientific disciplines including SSH. Evaluation practice is limited to the evaluation of individual researchers for their scientific promotion into the higher scientific grades and evaluation of research projects for awarding research grants. The evaluation of individual research projects (ex-ante, interim, ex-post) is a decisive tool for shaping the course of research within each scientific discipline, including SSH.

The evaluation of funding programmes, in summary, is not a common practice in science policy. The Ministry of Science provide short, mainly financial reviews, of programmes in their annual reports.

The Council for Higher Education was established in 2004 to analyse the conditions and achievements of the higher education system. In 2007 the Council of Higher Education adopted the Guidelines on Re-accreditation of Higher Education Institutions and Study Programmes. Evaluations of higher education institutions, university departments and state institutes were done in 2008. Work on evaluation and re-accreditation of the education programmes is expected to start in 2012.

2.2.4.1 Project evaluation

There is no effective monitoring and review system in place making full use of output indicators due to weak system for collecting and processing of data. As for the competitive project funding, the Ministry of Science adopted the Rulebook on criteria for appointing experts and procedure of assessment of scientific - research projects by experts. This Rulebook prescribes more precisely the criteria for appointing experts (reviewers) by the Ministry of Science as well as the procedure for the assessment of research projects. The Ministry of Science keeps a register of experts, by scientific areas, on the basis of references from other researchers, which the ministry has in its database. The national funding is not allocated through an international evaluation procedure. Public funding mechanisms encourage trans-national cooperation but due to the small size of the grants offered there is no interest from scientists from abroad.

2.2.4.2 Programme evaluation

The evaluation of funding programmes is not a common practice of science policy. The Ministry of Science provide short reviews of programmes i.e., the funded projects of institutions or individuals in their annual reports with no further elaborations.

2.2.4.3 Institutional evaluation

The Ministry of Education and Sports of Montenegro is the highest authority responsible for overall education policy in the country. The 2003 Act on Higher Education also established the Council of Higher Education. Its functions, among its other roles, are those of an accreditation body and conducting external evaluations through its commissions. The Government of Montenegro appointed the Council in 2004. It was composed of 11 members and was responsible for making its conclusions, recommendations and opinions accessible to the public. With the new changes and amendments of the Law on Higher Education, the Council increased its membership to 13, including the President. The Government appoints the Council for a period of four years. In May 2011, the Ministry of Education and Sports drew up a list of local and international experts for the process of accreditation and re-accreditation of higher education institutions and study programmes. So far, the Council of Higher Education has carried out accreditation of three universities (one state owned and two private) and six private faculties.

2.2.5 Impact of other factors

One particular feature although not SSH specific, is the small size of the Montenegrin population (666,730 inhabitants in July 2010 est.⁵), and, therefore, also of the research community. Human research capacity is very limited: in 2008 Montenegro counted 766 full-time research equivalents (researchers, who together with part-time colleagues and external research associates work in the country's 3 universities, 6 private higher education institutions, government and the private sector). This corresponds to about 0.3% of the total workforce in Montenegro. Montenegro still suffers from brain drain following the wars in the 1990s. The government has launched some measures to attract young researchers, in particular PhD students, to the University of Montenegro. A database on scientific diaspora is also being established. Montenegro suffers from a lack of modern research infrastructure, which hampers its engagement in research activities and research cooperation with the EU.

⁵ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL, Commission Opinion on Montenegro's application for membership of the European Union, p.128 available from: http://ec.europa.eu/enlargement/candidate-countries/montenegro/index_en.htm

2.3 Important policy documents

There are no separate policy documents for SSH. The general policy documents adopted by the state/entity governments address the issues in SSH in the same manner as in the other scientific fields. The most important policy documents are as follows:

1. Law on Scientific - Research Activities (Official Gazette of the Republic of Montenegro 71/05)
2. The Law on Higher Education (Official Gazette of the Republic of Montenegro 60/03)
3. The Strategy for Scientific -Research Activities 2008-2016
4. Strategy for Development and Funding of Higher Education in Montenegro
5. Thematic priorities at national level

There has been no identification of SSH priorities at a national level.

The Strategy for Scientific Research Activities 2008-2016 states that, when selecting priority areas of scientific and research work in Montenegro, special attention should be paid to meeting the following conditions:

- it will result in an increase in the GDP in Montenegro;
- it is in harmony with the strategic documents of Montenegro i.e.: the National Strategy for Sustainable Development, the Spatial Plan, the Directions for Development of Montenegro as an Ecological State, the Energy Development Strategy, etc. as well as with the existing laws in the area of higher education and scientific and research activity;
- it provides the possibility of linking international projects with the existing scientific and research capability (staff and equipment), i.e., that it promotes research in areas that can be competitive at the European level;
- it helps create conditions for the further development of scientific and research staff and institutions in the area selected;
- it ensures the preservation of natural and cultural heritage.

Therefore, SRA 2008-2016 sets out the following priorities: science and education, ecology, tourism, agriculture, the health of the population and energy.

	Behaviour, cognition
	Competitiveness, Innovation
	Conflicts, peace, security and human rights within the EU and beyond
	Crime and Crime prevention (including drugs, organised crime etc.)
	Cultural heritage (including preservation and conservation)
	Democracy, governance, accountability and responsibility
	Demography (Ageing, Fertility)
	Economy and finance
x	Education, skills, knowledge and life-long learning
	Employment, Work, Working conditions
	Ethics
	Families, life-styles and well-being
	Gender, gender equality
	Globalisation
x	Health and Health systems
	Identity, religion, language, multiculturalism
	International relations
	Migration
	Social cohesion, exclusion, inequalities, poverty
	Sustainable development
	Urban and rural development
x	Others: science, ecology, tourism, agriculture, energy

2.5 Important research programmes

There is no programme specifically related to social sciences and humanities.

To implement its scientific and research policy, the Ministry of Science publishes a call for funding of scientific and research activities in respect to:

- scientific and research projects (national, bilateral and participation in multilateral projects),
- professional development of researchers in the country and abroad,
- procurement of scientific and research equipment.

Programme title	The call for financing scientific and research projects in Montenegro
Start date	2000
Planned end date	No fixed end date
Planned total budget	€2.34m
Budget 2011/2012	€ n.a.
Implementing organisation	Ministry of Science
Target group	All of the research institutions recorded in the Ministry of Science register of scientific organisations are eligible to submit project proposals and participants can come from the public sector (universities, public institutes, academies) or the private sector (corporate institutes, independent research units).
Key goals	To increase public investments in R&D and encourage research performers to adopt a more active role in acquiring new knowledge and developing innovations.
Website	http://www.mna.gov.me/biblioteka/konkursi
Tags	

2.6 SSH research infrastructures

2.6.1 National infrastructures

In compliance with the CERIF (the Common European Research Information Format) recommendations, the web application E-CRIS (Current Research Information Systems) for Montenegro was developed which offers to all users of COBISS (Co-operative Online Bibliographic Systems and Services) applications the register of research and development providers. The register is essential for research monitoring and evaluation. E CRIS systems are linked to national COBISS library information systems, thus allowing direct access to the bibliographies of researchers and institutions.

2.6.2 International infrastructures

Montenegro has its ESFRI Delegate. No National roadmap has been made yet.

3. Funding System

3.1 Overview of funding flows

3.2 National public SSH research funding

3.2.1 Overview of funding importance

Research funding is divided into institutional funding (block grant) and competition-based research grants. The main funding agency is the Ministry of Science of Montenegro.

According to the existing official available data collected by the national Agency for statistics (MONSTAT), the average funds allocated from the state budget for RTD as % of GDP is within the range 0,03-0,05, while the total spending on RTD, as % of GDP is within the range of 0,14 to 0,3 in the last five years. Montenegro cannot set itself the objective of following the EU target allocation of 3% but it can make various hypothetical projections in order to analyze the problem and choose the way forward which is the most acceptable and realistic. The main problem is how to change the structure of funding and increase the private, business and industrial funding vs. public funding. The National Strategy for scientific-research activities (2008-2016) predicts that there should be 1% of total spending on RTD as % of GDP by 2012 with the ratio 0,8% of public investment vs. 0,2% of investment from other sources.

3.2.2 Institutional funding

The institutional funding is aimed at covering the costs of overheads in universities and public institutes and also includes salaries for researchers. The budget for 2008 was €1.67m. The criteria for institutional funding are based on the number of employees

3.2.3 Individual funding

The funding provided directly to individual researchers or research teams to carry out specific projects of their own choosing are carried out through the competition-based research programmes financed by the Ministry of Science. The programmes follow broadly defined research priorities determined by the science law that allow researchers to propose research projects of their own interest and choosing.

3.2.4 Programme Funding

To implement its scientific and research policy, the Ministry of Science publishes a call for funding of scientific and research activities according to the Article 39 of the law on scientific research activities (Official Gazette of the Republic of Montenegro 71/05) in respect to:

- scientific and research projects (national, bilateral and participation in multilateral projects),
- professional development of researchers in the country and abroad,
- procurement of scientific and research equipment.

The call for financing scientific and research projects in the period 2000-2010 was published 5 times: in 2000, 2005, 2007, 2008 and 2010. Call applications for financing of scientific and research projects are divided according to scientific areas:

- natural sciences and mathematics;
- technical and technological;
- biotechnological;
- medical;
- social sciences and humanities;
- interdisciplinary projects.

Conditions for applying for calls and the for approval of applications are provided by:

- the law on scientific research activities, article 33 paragraphs 2 and 3 which specifies that the:
- scientific research project is managed by a project manager and that the ministry sets out conditions that are to be fulfilled by the project manager;
- the article 9 of the rulebook on utilisation of funds for scientific activities No. 1200/95 sets out the competence of project coordinators on the basis of a score of coefficients of the published scientific papers, the value of which has to be more than 30, and in last 5 years more than 10;
- the Article 9 paragraph 4 of the rulebook on criteria for appointment of experts and procedure of evaluation of scientific and research projects by the experts, No. 314/05 states that the positively evaluated project is to have at least 24 points, against 8 criteria from the model for expert project evaluations (marks used are 05).

Once a year, the ministry announces a call regarding professional development of researchers in the country and abroad, namely for:

- encouraging researchers and project coordinators to submit applications to FP7;
- scholarships for postgraduate studies;
- scholarships for PhD studies;
- submission, assessment and defence of PhD dissertations;
- technical processing of PhD dissertations;
- participation of researchers in scientific congresses abroad;
- organising scientific congresses in Montenegro;
- CEEPUS programme and other mobility programmes of university professors, researchers and students.

The call for co-financing of procurement of capital equipment (medium and small scientific and research equipment) was announced by the ministry in 2007 and 2010.

Capital equipment is equipment the value of which is over €20,000, and medium and small equipment has a value under €20,000.

The ministry co-finances procurement of equipment for those scientific and research institutions which fulfil the condition that by providing the equipment:

- the existing science and research equipment would be completed and improved, which would significantly improve characteristics of existing devices or methods;
- existing laboratory qualifies for scientific and professional expertise and research in European projects;
- the qualification of researchers for scientific and research work would be improved;
- levels of participation in research in scientific and research projects would be improved, particularly in international cooperation projects.

Co-financing of equipment procurement is allowed for scientific and research institutions in which there are qualified personnel.

For the equipment which is used exclusively for scientific and research work a contribution is not to be provided, and for the equipment which is used for carrying out professional tasks (diagnostics, market activity etc.) a contribution of 20% of equipment value can be provided.

Research institutions also acquire scientific equipment on the basis of donations of foreign governments, foreign institutions and organizations or cooperative institutions within bilateral cooperation on projects, as well as by purchasing from their own funds.

3.3 Private research funding

Apart from the competitive grants, no other programme support is available.

3.4 Foundations/ not-for-profit funding

Montenegro has a vibrant civil society with many active NGOs, but their presence is uneven, both regionally and in terms of thematic focus. The strongest are those in Podgorica, which deal mainly with good governance, human rights, anticorruption, and EU affairs, and have considerable capacity for public advocacy.

3.5 European and international funding

The Memorandum of Understanding between the European Community and Montenegro on association of Montenegro to the 7th Framework Programme was adopted by the Government of Montenegro on 13 December 2007 in order to provide researchers with the opportunity to apply for calls for proposals for participation in research projects and to associate Montenegro to this programme starting from 2008. The Memorandum was signed in Brussels on 25 January 2008.

In general, participation in the 7th Framework Programme (FP7) is mostly in projects of coordination and support. Participation in large research projects is minimal. Out of the total number of projects financed to date, 1 is a research project, 2 are European networks of National Contacts Points for FP7, and 4 are projects of coordination and support actions.

Montenegro has been involved in the scientific programme for peace and security of NATO, and has had a representative on the Committee since 2007. The priorities of Montenegro in this programme are:

- information security;
- environmental protection;
- socio-economic sciences and humanities;
- biotechnology.

Montenegro has been associated to one of the components of the CIP EU programme since March 2008, namely the EU Competitiveness and Innovation Programme - EIP, a component designed for entrepreneurship and innovation, through which support for development of entrepreneurship and innovative capacities is provided, particularly regarding small and medium-sized enterprises. Participation in EIP will equip researchers for better use of other components of the CIP Programme. The responsible institution is the Directorate for Development of Small and Medium-Sized Enterprises. From the budget of this programme, the directorate got support for establishing the European Centre for Innovation and Information of Montenegro. As a consequence of this, the Directorate was proposed by the Ministry of Science as the institution which would be responsible for the EUREKA initiative (pan-European network for market oriented research).

4. Performing System

4.1 Overview of the performers

There are three universities in Montenegro and all of them offer education in SSH. The University of Montenegro is the only public university. As of the 2006 academic year, the first private University Mediterranean was established. A second private university, the University of Donja Gorica (UDG), was accredited in April 2010. There are few structures in BiH besides the universities, which perform SSH-related research (e.g., the Academy of Science and Art of Montenegro).

4.2 Higher Education Institutions

4.2.1 HEIs as education performers

The Montenegrin Higher Education Act was adopted in October 2003, in the same year that Montenegro officially became a Bologna signatory country. The changes and amendments of the Law on Higher Education were adopted in the Parliament of Montenegro on 27 July 2010.

The major novelties that the new act brought were: the integrated university, the three-cycle system, the introduction of European Credit Transfer System ECTS, the introduction of the Diploma Supplement, the Council of Higher Education, quality assurance (internal and external).

The Ministry of Education and Sport is the highest authority responsible for overall education policy in the country. The new law on higher education prescribes having the Council of Higher Education, as a national body responsible for higher education nominated by the government. The key role of the council is to analyse the state and achievements of the higher education system and to give professional proposals to the government for the improvement of higher education policy.

There are three universities in Montenegro. The University of Montenegro is the only public university. It was founded in 1974 and it comprises of 19 faculties and 3 scientific research institutes. Currently, the university offers 79 (59 academic and 20 applied) study programmes. As of the 2006 academic year, the first private university (University Mediterranean) was established, comprising 6 faculties with 11 undergraduate study programmes. A second private university, the University of Donja Gorica (UDG), was accredited in April 2010, comprised of 4 faculties. There are also 9 independent private faculties.

The participation of youth in tertiary education is on the increase. The number of students enrolled in tertiary education increased from 13,245 in the 2006/2007 academic year to 16,520 in 2008/2009. Out of its total number of students, the University of Montenegro has 82% of undergraduates, 17.3% graduates and less than 1% doctoral students. There are about 5,500 students at the private institutions of higher education. Currently the funding system for higher education separates educational funding (which follows the number of students enrolled, the number of staff employed and the number of programmes), from research. When it comes to research, HEIs are treated as any other public research unit and apply for research funds through public calls for financing scientific and research projects at the Ministry of Science. The higher education sector has the highest expenditure on research and development in comparison with other national research performers. There are no data available to show whether HEIs obtain support for the research activity from the business sector. The only available data are for gross higher education expenditure on RTD as a percentage of GDP.

Table 1 Expenditure of the HEIs, including financing of scientific and research activities by the Ministry of Science

Year	2002	2003	2004	2005	2006	2007	2008
Gross higher education expenditure	0.46	0.36	1.63	2.66	0.54	3.36	n.a.
GDP in %	0.03	0.02	0.10	0.15	0.03	0.12	n.a.

Source: MONSTAT (Statistical Yearbook of Montenegro 2008). The data are expressed in € million.

Table 2 Number of graduates by sectors that correspond to the number of researchers by sectors

Year	Graduates				TOTAL:
	Mathematics and Natural Sciences	Technical and Technological Sciences	Humanities and Social Sciences	Medical sciences	
2000	151	173	529	26	879
2001	169	196	641	19	1 025
2002	331	189	733	21	1 274
2003	250	171	817	33	1 271
2004	199	279	951	27	1 456
2005	246	254	1 070	86	1 656
2006	412	302	1 080	73	1 867
2007	221	202	1 868	98	2 389

Source: MONSTAT (Statistical Yearbook of Montenegro 2008); these data include information on graduate students from high schools and academies.

The Law on Higher Education, Article 36, defines and regulates the broad purpose of HEIs. "A university is an autonomous institution that in performing its activities combines educational, scientific-research and artistic work, as the components of the unique process of higher education. A university provides for the development of higher education, science, the professions and art, in accordance with its mission of enhancing knowledge, thought and learning and of preparing students for doing professional activities, of the educational, scientific, cultural, social and economic development of Montenegro as well as of the promotion of democratic civil rights and achievement of highest standards of teaching and learning⁶."

4.2.2 HEIs as research performers

There are three universities in Montenegro. The University of Montenegro is the only public university. It was founded in 1974 and it comprises of 19 faculties and 3 scientific research institutes. Currently, the university offers 79 (59 academic and 20 applied) study programmes. As of the academic year 2006/2007, the first private university was established with the University Mediterranean comprising six faculties with 11 undergraduate study programmes. A second private university, the University of Donja Gorica (UDG), was accredited in April 2010, comprising of four faculties. There are also 9 independent private faculties.

In 2008, the estimated value of Montenegro's gross domestic expenditure on R&D (GERD) was 0.095% of GDP, well below the average of the EU27 of 1.84%. The main source of R&D funding is the Government. The public budget for R&D increased in nominal value from €0.57m in 2003 to €2.38m in 2008. MONSTAT, the Statistical Office of Montenegro, currently collects no data on BERD and HERD.

⁶ The Law on Higher Education

4.3 Public Research Organisations

At the moment, there are three scientific institutes in Montenegro: the Institute of History, the Institute of Marine Biology, and the Institute for Foreign Languages (the Institute for Biotechnology has been transformed into the Faculty of Biotechnology). Apart from these, there are also institutes in business organisations, as well as a number of agencies and centres, for example: the Office for Geological Research, the Hydrometeorological Office, the Seismological Office, the Centre for Eco-toxicological Research, the Institute for Public Health, the Institute for Ferrous Metallurgy, the Environmental Protection Agency, the Institute for the Protection of Monuments of Culture, and others. The organisational structure and the scope of operation of these institutions have changed between their establishment and the present day. Previously, they operated as independent organisations or within the University of Montenegro. Financing was for programmes (for various kinds of temporary or permanent expert services) and projects (scientific and research projects). In practice, the programme component of financing was the dominant one. A suitable form of organisation and financing for these institutions in the present circumstances has not yet been found.

4.4 Private research performers

No official data are available for the existence of this type of organisation.

4.5 Research performance

4.5.1 Scientific publications

Beside the number of weaknesses, there is lack of adequate premises and up to date large-scale equipment as well as a well developed library-information system. The current performance of R&D in Montenegro is strongly linked to number of scientific publications and scientific papers per million populations. According to the Thomson Reuters (Scientific) Inc. Web of Science, (Science Citation Index Expanded), compiled for UNESCO by the Canadian Observatoire des sciences et des technologies in 2008 they were 93 scientific publications and 149 Scientific papers per million population in Montenegro

Table 3 Scientific publications in South East Europe 2002 and 2008;
Scientific papers per million population in South East Europe, 2008⁷

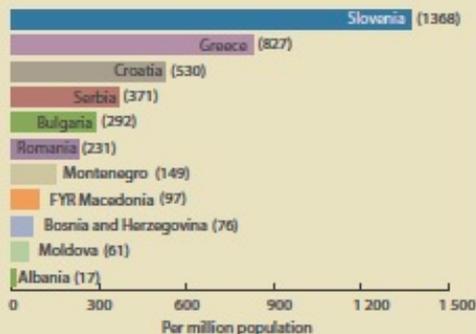
Table 3: Scientific publications in Southeast Europe, 2002 and 2008

	2002	2008	change (%)
Albania	35	52	48.6
Bosnia and Herzegovina	35	287	720.0
Bulgaria	1 528	2 227	45.7
Croatia	1 254	2 348	87.2
Greece	5 588	9 296	66.4
FYR Macedonia	104	197	89.4
Moldova	160	223	39.4
Montenegro	–	93	–
Romania	2 127	4 975	133.9
Serbia*	1 003	2 729	172.1
Slovenia	1 609	2 766	71.9

* Serbia includes Montenegro for 2002.

Source: Thomson Reuters (Scientific) Inc. Web of Science, (Science Citation Index Expanded), compiled for UNESCO by the Canadian Observatoire des sciences et des technologies

Figure 9: Scientific papers per million population in Southeast Europe, 2008



Source: Thomson Reuters (Scientific) Inc. Web of Science, (Science Citation Index Expanded), compiled for UNESCO by the Canadian Observatoire des sciences et des technologies. Population data from Eurostat and World Bank, March 2009

4.5.2 International Cooperation

The Ministry of Science has signed agreements on scientific and technologic cooperation with the following countries:

- the Republic of Slovenia, 2 July 2008,
- Federation of Bosnia and Herzegovina, 1 December 2008,
- the Republic of Albania, 16 December 2008,
- the Republic of Croatia, 26. January 2009, and
- the Republic of Austria, 10. June 2009.

Bilateral cooperation of Montenegro with the Republic of Slovenia for the period 2004/2007 was realised through 15 common scientific and research projects in the following research areas: environmental protection; biology; biotechnology; agriculture; physics; mechanics; mechanical engineering; metallurgy; medicine; protection of cultural heritage and linguistics.

Within the period 2006/2008 bilateral cooperation of Montenegro with the Republic of Greece was realised through 14 common scientific and research projects in the following research areas: environmental protection; marine biology; biotechnology; agriculture; information and communication technology and new materials.

4.5.3 Main prizes

There are no SSH related prizes in Montenegro.

⁷ UNESCO 2009

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