



MONTENEGRO

PROGRESS REPORT

on recent developments regarding research and innovation cooperation in/with Western Balkans (Period: June 2016 – June 2017)

1 Policy actions and legislative initiatives (legal and strategic framework)

Dr Sanja Damjanović was appointed as **Minister of Science in the Government of Montenegro** on 28 November 2016. She earned her doctoral degree at the Faculty of Physics and Astronomy, Ruprecht-Karls University, Heidelberg, Germany, in 2002 with the Grade 'Magna cum laude'. After obtaining doctoral degree, she took on a postdoc position at GSI-FAIR (Darmstadt, Germany) and Heidelberg University. She was embedded in international research teams, working in two large International Organizations, CERN (Geneva, Switzerland) and GSI-FAIR (Darmstadt, Germany) both in basic and applied research in the field of high-energy nuclear physics. In 2007 she also played a key role in initiating the cooperation agreement between Montenegro and the European Organization for Nuclear Research, CERN.

The Government of Montenegro appointed the **new Council for Scientific-Research Activities** at its session held on 12 July 2017. The Council has nine members, one member of the Council has been appointed from among the representatives of the Ministry, while eight members have been appointed from among prominent experts who contribute to the development and application of scientific research activity from research institutions, institutions of higher education, the academies of sciences and arts and the economy, with respect for the principle of equal representation of the fields of science.

In order to enhance participation in H2020, the **H2020 National Office** has been established in March 2017. **The system of NCPs for H2020 and the delegates in the PCs of H2020** have been reorganised: Montenegrin NCPs work on the dissemination of opportunities, awareness raising and support for participants.

The Strategy of Innovation Activity (2016-2020) was adopted at the Government session on 28 July 2016. The main objective of the Strategy on Innovation Activity is creating a sustainable and effective national framework, which will, in legal and institutional terms, but also in terms of human resources, enable the scientific research and development activities to be directed at innovation and application of new technologies, thereby raising the capacity of Montenegro to develop and grow in these areas.

Innovative activities are carried out within the framework of the new instruments in the institutional and research framework, such as:



- Centre of Excellence in bioinformatics BIO-ICT implements activities related to the possibilities of transfer of research results to business entities and other potential users; ensuring its sustainability, and thus, further work and functioning.
- Within the framework of 8 large research grants, whose research participants are coming from the academic and economic sectors, the final research year is being implemented.
- Innovation Entrepreneurship Centre “Tehnopolis” in Nikšić, opened on 17 September 2016, provides the services of pre-incubation and incubation with incentive measures. In this manner, closer cooperation is enabled between the research and industry. Our goal is to equip two laboratories, from IPA funds, in the near future.
- Activities have been initiated on the establishment of the Science and Technology Park of Montenegro in Podgorica, in which primary activities will be aimed at strengthening the links between the academic and economic sectors and at encouraging innovation. Conceptual Design is under preparation.

Good example of business-academia cooperation is implemented through the IPA grant scheme “Transfer of knowledge between the sectors of higher education, research and economy”, financed from IPA IV funds under the Operational Programme for Human Resources Development (2012–2013). The basic criterion for grant financing was the existence of cooperation between the academic and economic sectors.

Funds are allocated for the following activities:

- Market-oriented research and innovation;
- Improvement and / or innovation of existing technological processes, products and / or services;
- Design and dissemination of innovative forms of work organization;
- Increasing the capacities in technological development and innovation;
- Transfer of knowledge and innovative skills between the academic sector and companies.

The activities have been initiated on the preparation of the **Smart Specialization Strategy (S3)**. The processing authorities for the S3 are the Ministry of Science and the Ministry of Economy. An Interministerial working group for the preparation of the S3 has been formed, as well.

An expert mission has been organized through TAIEX instrument, held by Dr. Nicholas Sammut, a Full Professor at the University in La Valetta, Malta, for the needs of creating the S3, on 21 and 22 February 2017. In addition to that, representatives of the Ministry of Science and the Ministry of Economy met with the representatives of the EC's Joint Research Centre (JRC), on 5 July 2017 in Belgrade. The representatives of the Joint Research Center gave useful guidelines for continuing creation of the document and accession to the JRC S3 platform, as well. They announced their participation at Open Science Days festival (Podgorica, October 2017), at the Information session where government, academia, businesses and citizens' representatives would become more familiar with the goals of the S3.

2 Development of international cooperation and actions on integration into ERA

Since December 2016, the Ministry of Science has started the implementation of a **new programme of internationalization** – team up with large infrastructures (CERN, EMBL, EMBO, ESA, GSI-FAIR). Montenegro is full member of the CMS experiment at the CERN-LHC (MoU for MO signed between the Government of Montenegro and CERN in July 2017); by the end of 2017, Montenegro is expected to be a full member of EMBL and EMBO (application already sent). This would allow the networking of our scientists and could, in partnership with other institutions, increase the number of applications and success rate in H2020.



There is a ***new proposal for the future research in the South East Europe fostering the science excellence based on peaceful collaboration.***

The Initiative for establishment of the South East European International Institute for Sustainable Technologies was proposed by Prof. Herwig Schopper, former Director General of CERN, aiming to promote collaboration between science, technology and industry, but also to provide platforms for the education and training of young scientists and engineers based on knowledge and technology transfer from European laboratories like CERN and others. An essential feature of such activities would be fostering cooperation of the countries in the Region. The combination of all these tasks would make such an initiative unique for the region and would imply another case of the 'CERN model'. Moreover, a real international cooperation, bringing people together in the spirit 'Science for Peace', could contribute to develop the economic situation, to improve the standard of living, to produce attractive jobs, in particular for young people, and to revert the 'brain drain' which is one of the largest problem in our region.

The main contenders for the projects are a new type (4th generation) of Synchrotron Light Source with a broad spectrum of research and industrial applications, and a Facility for Tumour Radiation Therapy and Biomedical Research with protons and heavier ions.

This Initiative was first officially supported by the Government of Montenegro, and is now embraced by almost the whole region. The Initiative will soon be formalized as a Regional project, after signing the Declaration of Intent scheduled for October at CERN.

The regional cooperation in scientific and technological R&D, based on a large-scale facility, is a significant means for addressing the common challenges and for fostering sustainable economic development and social cohesion in the Region. This also permits excellence and internationally competitive S&T activities.

The activities of ***promotion and strengthening of national participation in the Horizon 2020*** programme are underway, and intensive trainings for the development and implementation of project ideas, as well as individual coaching for proposers are organized, with the assistance of experts from the EU (the project is implemented through IPA Component IV "Operational Programme for Human Resources Development" 2012–2013).

In the context of strengthening bilateral scientific cooperation, Minister of Science of Montenegro, Sanja Damjanović and Minister of Education, Science, Research and Sport of the Slovak Republic, Peter Plavčan signed the ***Memorandum of understanding on scientific and technological cooperation between the Ministry of Science of Montenegro and the Ministry of Education, Science, Research and Sport of the Slovak Republic, on 21 June 2017, in Podgorica.***

In 2017/2018, Montenegro will finance 9 bilateral scientific projects with Croatia; 10 bilateral scientific projects with Austria; and 5 bilateral scientific projects with Italy.

Montenegro expressed interest to join the ***Bluemed Initiative***, at a meeting in Sliema, the Republic of Malta, in April 2017.

National scholarships for excellence are awarded to support 49 candidates for master, 7 for doctoral and 10 for postdoctoral studies, for the second year successively, in the framework of the project "Higher Education and Research for Innovations and Competitiveness - HERIC".



Scholarships for doctoral studies are awarded to students of doctoral studies at the universities of Montenegro, with obligation to carry out a study/research stay abroad in the duration of minimum three months. Scholarships for postdoctoral studies are awarded to researchers working in Montenegro, for their research stays from 6 to 12 months at prestigious institutions abroad in order to gain international research experience.

The **annual Call for co-financing of scientific-research activities** was announced in February 2017. There are several instruments for scientific-research community of Montenegro: Co-financing of approved H2020 projects and stimulating researchers – project coordinators for submitting applications, which are positively evaluated in H2020; Stimulating participation in EUREKA projects; Scholarships for PhD studies; Co-financing of travel costs - mobility of researchers, students and technical staff through the mechanism of involvement in research teams in renowned international scientific institutions in Europe, etc.

3 Important events, meetings, training activities, studies etc.

Minister of Science Sanja Damjanović paid her first official visit to Brussels, where she met with EU Commissioner for Research, Science and Innovation Carlos Moedas, on 10 May 2017. The aim of the meeting was to present the progress in the field of science and research in Montenegro, establishment of new instruments and initiatives that will strengthen the Montenegrin scientific and research system, but also open up new opportunities for Montenegrin researchers. Minister Damjanović presented the Initiative for establishment of the South East European International Institute for Sustainable Technologies to Commissioner Moedas, who gave his full support to the Initiative, confirming that the European Commission looks for such an Initiative and, in this respect, the Region will be given priority in the future.

Minister of Science Sanja Damjanović met with ministers of science/corresponding ministers of the region in the period May – July 2017, as follows: Minister of Education, Science and Sport of the Republic of Slovenia, Maja Makovec Brenčič; Minister of Education and Science of Croatia, Pavo Barišić; Minister of Education, Science and Technological Development of the Republic of Serbia, Mladen Šarčević; Minister of Education and Science of the Republic of Macedonia, Renata Deskoska; Minister of Federal Ministry of Education and Science of Bosnia and Herzegovina, Elvira Dilberović; and Minister of Innovation and Public Administration of the Republic of Albania, Milena Harito.

All ministers expressed the interest in this Initiative, while further steps have been taken in order to transform this Initiative into the Regional Project.

Minister of Science Sanja Damjanović met with the delegation of the **EMBL/EMBO**, paying an official visit to Montenegro in April 2017, where the potential of Montenegrin researchers, cooperation possibilities and benefits were discussed. By end of the year, we are expecting to be full member of the EMBL/EMBO.

The first **Western Balkans Research and Innovation meeting** was organised in Podgorica on 12-13 June 2017 within the framework of the European Commission's Support for the Steering Platform (SP) on Research and Innovation for the Western Balkan countries (WBC). The meeting was co-chaired by the Ministry of Science, Montenegro who hosted the event and the European Commission (DG Research and Innovation, Directorate for International Cooperation).



Representatives of the Ministry of Science participated at the **Subcommittee on Innovation, Human Resources, Information Society and Social Policy** on 24–25 April 2017, in Brussels.

Director General of the Ministry of Science, Darko Petrušić, participated at **the Ministerial meeting within the 5th Annual Forum of the EU Strategy for the Danube Region** on 03 November 2016. Also, representative of the Ministry of Science participated at the 3rd Meeting of the Danube Funding Coordination Network, held in Bratislava, on 26 June 2017, as well as 13th PA7 SG Meeting, on 27 June 2017.

Montenegro for the fourth time celebrated the **UNESCO World Science Day for Peace and Development** on 10 November 2016.

Several meetings and workshops of the **COST actions** are held in Montenegro in the previous period.

Director General of the Directorate for Scientific-Research Activities in the Ministry of Science, Darko Petrušić, paid a visit to **Bavaria** from 19 to 23 March 2017, as a result of the Montenegro-Bavaria Cooperation Initiative.

Director General of the Ministry of Science, Darko Petrušić, participated at the **Trieste Western Balkans Summit 2017 and the Business Forum**, on 12 July 2017.

Two information sessions were organised in the previous period: on **Individual „Marie Skłodowska-Curie“ actions** for researchers, on 5 May 2017; and on **Development of innovations in Montenegro**, on 19 June 2017, when representatives of the Ministry of Science and the Ministry of Economy presented the possibilities of financing innovation through several instruments of the Horizon 2020: Instrument for SMEs, New and Emerging Technologies and Fast Track to Innovation, as well as the financial program of the European Union and the Investment and Development Fund for Investing Risk Capital in Promising Innovative Firms and Projects (WB EDIF).

4 Outlook and perspectives

- *Adoption of the new Strategy for Scientific-Research Activities (2018-2021) by end of October 2017*
- *Open Science Days Festival, 9 – 11 October 2017*
- *The concrete steps necessary for the implementation of the Initiative for establishment of the South East European International Institute for Sustainable Technologies are as follows:*
 1. On a Montenegrin initiative a meeting in Montenegro was organized on September 8, 2017, on the level of the Directorates of the different Ministries, to agree on a joint statement in preparing a proposal for a 'Declaration of Intent'.
 2. A meeting of the Ministers of Science / Corresponding Ministers of the South East European countries will be organized at CERN in October 2017. The purpose of this



- meeting is to finalize and sign the ‘Declaration of Intent’ in order to transform the Initiative into the Regional Project.
3. Groups of international experts for each of the two project options, composed of technical experts and representatives of future users, to work out Concept Studies have been established. The first results will be presented at a meeting in Montenegro on 30-31 October.
 4. Following the official visit of Minister of Science Sanja Damjanović and prof. Herwig Schopper to “Abdus Salam ICTP” Institute in Trieste the organizer of a planned Scientific Forum (Forum on New International Research Facilities in South East Europe) will be indeed the ICTP. The Forum will be held on 25-26 January 2018, with the main goal to present the final results of the Concepts Studies.
 5. Start a training programme for young technical people and future users as soon as possible (2018) to prepare them for leadership in the frame of the selected new project.

5 Other relevant information related to Research and Innovation cooperation in/with Western Balkan economies)

(e.g. relevant publications, relevant online (information) platforms etc.)

Since 2016, the Ministry of Science has become the official collector and producer of R&D statistics, whereas MONSTAT is in charge of the innovation statistics.

During 2016, the Ministry of Science has upgraded the information system “Scientific Network” (www.naucnamreza.me), enabling the system to become a database of statistics on R&D, obligatory for all licensed scientific research institutions. It aims to gather in one place all relevant information regarding researchers and research work in Montenegro.