

MONTENEGRO

PROGRESS REPORT

on recent developments regarding research and innovation cooperation in/with Western Balkans (Period: October 2017 – June 2018)¹

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

Please inform about essential changes/updates/reviews in political authorities, administrative bodies, agencies, institutions, personnel, development/launch of new national funding programmes, etc.

The **new Rulebook on Internal Organization and Job Descriptions of the Ministry of Science** was adopted by the Government at its session held on 17 May 2018. This Rulebook introduces, for the first time, an internal organizational unit for innovation called Directorate for Innovation and Technology Transfer, composed of the two sub-units – one dedicated to the EU Framework Programme on Research and Innovation H2020 and one dedicated to Innovation and Infrastructure.

The **state R&D budget for 2018 has increased by 60% compared to 2017**. However, R&D investment from the private sector is still rather low (only 1/3 of the total R&D investment). Therefore, priority efforts are made to try to optimize, as much as possible, public R&D investment, as well as to encourage higher investments in R&D, particularly from the private sector. The measures to stimulate R&D investments include: National funding for research and innovative activities and Support to the participation in H2020 and COST, as well as support to the internationalization initiatives.

The **new national funding programmes** are:

- **Call for support to participation in H2020 and COST**, launched in November 2017. Two types of national S&R&I projects were supported: preparation of projects for the forthcoming H2020 calls; and projects strengthening activities at the national level for the already-involved research teams in the ongoing H2020 and COST projects. 17 projects have been adopted for co-financing, in the total amount of EUR 268,275. Through this Call, financial support has been provided to five research teams that have joined the ongoing H2020 projects, nine research teams that have joined the ongoing COST projects, and three research teams preparing project proposals for the upcoming H2020 calls.
- **Pilot Call for Innovative Projects**, launched in November 2017. Scope of the instrument was to provide smaller financial support in order to identify relevant innovative organizations in Montenegro, their potentials and plans for the future activities. The maximum eligible amount

¹ The last Steering Platform was held in Belgrade on September 27-28, 2017. All related information is also available online here: <https://wbc-rti.info/object/event/16372> (including links to the conclusions and minutes).

per project was up to EUR 20,000, with projects lasting at least one to two years. The applicants were able to propose innovative solutions or improvement of the existing ones in the following thematic priorities identified in the Strategy on Innovation Activity (2016-2020): Energy; Agriculture and Food; Sustainable Development and Tourism; ICT; Medicine and Health; and New Materials, Products and Services. Five innovative projects were approved for co-financing in the total amount of EUR 61,000. The implementation of these projects covers the period of 2018-2019. A new **Call for Larger Innovative Projects** is under preparation. The main goals are: to strengthen competitiveness of companies by supporting their innovative activities, support the transfer of innovative ideas from the research sector to the market, strengthen the HR and job creation and to create new values at the market. The focus will be on technological innovation.

- **Public Call for Fellowships for PhD Research**, launched in May 2018, with a view to developing excellence by strengthening human resources and research capacities. Candidates can apply for fellowships up to three years. The fellowships cover PhD candidates' expenditures in the amount of EUR 700 per month and research, training and networking costs in the amount of up to EUR 10,000 per year. The deadline for applications expires on 15 October 2018.

As of 06 June 2018, **BIO-ICT** succeeded by the Centre of Excellence for Research and Innovation, as a separate unit of the University of Montenegro (same level as institutes and faculties). New unit will take up on the BIO-ICT achievements, and be also TTO and project support unit for the entire University, as planned within the project Sustainability Strategy and Business Plan.

Is there a national strategy on research and innovation policy in place? Has it been implemented? How is it being implemented? Is its implementation and impact monitored and what are the findings?

The **new Strategy on Scientific Research Activity (2017-2021) with the Action Plan** was adopted by the Government of Montenegro on 21 December 2017. The Strategy introduces new measures and instruments leading to better-quality research, access to modern technologies and infrastructures, better absorption of the EU funds and strengthening of the initiatives of the knowledge-based economy. Three strategic goals were adopted: Developing HR and Research Capacities; Enhancing International Cooperation and Networking; and Strengthening Synergy between Science and Industry. The Ministry of Science of Montenegro implements the Strategy together with all relevant partners. The first report on its implementation, i.e. the report on the implementation of the AP in 2017, will be adopted by the Government in the second quarter of 2018.

The innovation policy is implemented through the **Strategy on Innovation Activity (2016-2020) with the Action Plan**. The first report on the implementation of the Strategy, i.e. the report on the implementation of the AP in 2017, was adopted by the Government in December 2017. Only two measures have not been implemented according to the plan envisaged in the AP for 2017, but due to the objective reasons – respective internal organizational unit was not formed in the Ministry and the planned project was not accepted for financing.

At the **R&I policy level**, Montenegro is trying to shape the innovative and start-up ecosystem. Three large events have been organized so far, gathering all relevant stakeholders, in order to receive feedback and inputs for planning the future publicly funded activities and programmes supporting innovation.

Montenegro is the first country from the region that applied for the **EC Policy Support Facility (PSF)**, by proposing the following:

- Legislative amendments that are necessary to create a start-up friendly environment;
- Proposal of an organizational model for a functional start-up ecosystem; and
- Proposal for funding scheme(s) for start-ups and other innovation actors.

PSF will provide Montenegro with useful comparative practices and clear recommendations about the possible funding schemes for start-ups and other innovative actors, which could be in line with the legislative framework and the support system model. The main outcome of the PSF will be a Support Programme for Start-Ups (2018-2020), to be adopted by the Government by the end of 2018.

A measure entitled “Establishment of the Science and Technology Park (STP) in Podgorica” is a part of the structural reform in Research, Development and Innovation within the Economic Reform Programme of Montenegro (2018-2020). STP in Montenegro has been designed as a networked structure with a seat in Podgorica and three decentralized units – impulse centres in Nikšić, Bar and Pljevlja. The establishment of the STP in Podgorica, jointly implemented by the Government of Montenegro and the University of Montenegro, will enable the creation of the necessary conditions for supporting entrepreneurship and developing high-value products. The STP will operate as a generator of innovative activities and will support cooperation between academic and research institutions on the one, and the economic sector on the other hand, which is facilitated by its location at the University campus. Terms of Reference for the Conceptual Design were prepared in December 2017, while the preparation of technical documentation and documentation on the legal establishment of the STP is underway. The procurement of equipment and training of STP staff has been planned to take place during the ongoing programming process for the IPA 2018 Action Document for “Competitiveness and Innovation” Sector.

The first phase of the STP project in Montenegro has been successfully completed by the official opening of the Innovation and Entrepreneurship Centre “Tehnopolis” Nikšić in September 2016. In its first year of full operation, Tehnopolis has achieved significant results in terms of positioning in the local, regional and international entrepreneurial and innovation scene. More than 100 business events with more than 5,000 participants were organized in 2017, as well as the initial activities on staff training and planning of the innovation ecosystem (one of them supported by TAIX). Tehnopolis has been approved five EU cooperation projects, worth a total of EUR 736,000 for the period of 2017-2020. The remaining task is to put into function the three planned laboratories (Industrial Design, Biochemical and Data Centre). The **Public Calls for Design of the Pre-Feasibility Study for Laboratory of Industrial Design and Biochemical Laboratory** were published in December 2017 and the preliminary results were presented in early 2018. Through IPA II, Financial Perspective 2014-2020, “Competitiveness and Innovation” Sector, Technical Assistance has been envisaged for drafting tender dossier for supply of the equipment for Tehnopolis laboratories and for on-site training for Tehnopolis staff and stakeholders. Related Calls for proposals were published in March 2018. The delivery of equipment for the laboratories is expected through IPA 2016.

Do you have a country-wide and/or regional Smart Specialisation Strategy/Strategies? Are there sector specific scientific priorities?

Montenegro has started the development of the Smart Specialization Strategy, as a high priority policy task, in early 2017. It has obtained the support of DG JRC in the S3 preparation process and joined the JRC S3 Platform in August 2017. The Quantitative Analysis: Mapping of the Economic, Scientific and Innovation Potentials in Montenegro, prepared by Hugo Hollanders, was drafted on 15 March 2018. The Qualitative Analysis: Analysis of Priority Areas for S3 of Montenegro was completed by the

Ministry of Science / Inter-Ministerial Working Group for S3 Preparation in May 2018. The next phase in the S3 preparation process, the Entrepreneurial Discovery process (EDP), has officially started with the organization of the Conference S3.me – Smart specialization: Innovation, Entrepreneurship and Competitiveness, which took place on 11 May 2018. The second round of the consultations with public, private, academic and civil sectors regarding the identification of the S3 priority sectors is underway. Health and quality of life and Tourism (cross-sectoral relations) consultations were held on 7 June 2018, with more than 30 participants. Consultations with representatives from the Energy sector were held on 8 June 2018, with 30 participants – mostly representatives of the Energy Association of the Chamber of Economy of Montenegro. The next round of consultations is planned for 20-22 June 2018, with the stakeholders from the following preliminary priority areas: ICT, Agriculture, Construction and Manufacturing, with support of experts from Technology Park Ljubljana. The forthcoming S3 activities are:

- Web Questionnaire on EDP planned to be published by the end of June 2018.
- The Final conference on EDP planned to be organized in mid-September 2018.
- The adoption of the S3 by Montenegrin Government planned for the fourth quarter of 2018.

The National S3 is participating at all relevant EU events, workshops and trainings on S3.

To what extent is business-academia cooperation and exchange taking place? Please name good practice examples.

A 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 I Financial Perspective 2007-2013, IPA IV component under the Operational Programme for Human Resources Development (2012–2013). The basic criteria for grant funding was the existence of cooperation between the academic and economic sectors. The implementation of 14 projects for strengthening cooperation between the academic sector and economy adopted for funding was successfully completed in December 2017. Overall, including the national participation, the projects amounted to a total of EUR 354,598.

Another good example is the **Grant scheme for R&D subprojects**, financed under the Higher Education and Research for Innovation and Competitiveness (HERIC) Project, implemented thanks to a World Bank loan. One of the conditions for applying for the grant was the mandatory partnership of a research institution with a partner from the industry. In total, eight R&D subprojects were adopted for funding, in the amount of EUR 2.66 million. Six projects have been completed and the completion of the remaining two is expected in 2018.

2 Development of international cooperation and actions on integration into ERA

Regarding the **participation in H2020**, Montenegro achieved net-gain in 2017 (for the first time since 2014), i.e. the absorption of the EU funds through the approved H2020 projects exceeded the annual financial contribution. Montenegro focuses its attention on strengthening the capacities of the NCP network and two important instruments for supporting the participation in H2020 were funded in 2017: the Annual Call for co-financing the scientific research activities and the Call for supporting the participation in H2020 and COST. The funding for both instruments is available in 2018. Montenegro participates in 78 COST Actions at the moment.

One of the most important activities in the field of international cooperation is the Initiative for the Establishment of **the South East European Institute for Sustainable Technologies (SEEIIST)**. In the reporting period, the Ministerial meeting was held on 25 October 2018 at CERN, Genève, where the Declaration of Intent for establishment of SEEIIST was signed by eight Signatory Parties from SEE

region. The establishment of the SEEIIST Steering Committee (SC) ensued in December 2017. The Concept Study Reports (CSR) for both project options, prepared by two international committees of experts, were presented for the first time to the scientific and political public at the Forum on New International Research Facilities in South East Europe, held at the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, Italy, on 25-26 January 2018. Eventually, SEEIIST SC passed a unanimous decision on **the Facility for Tumour Therapy and Biomedical Research with Protons and Heavy Ions** as the option for the Institute. The application for the IAEA Regional project related to the capacity building connected to the SEEIIST was submitted on 31 May 2018. The first discussions on the organization and financing of the next step, the Preparatory Phase, are underway.

As of 2017, the international cooperation in science and research in Montenegro is oriented towards **internationalization activities**, i.e. teaming up with the excellent research teams and enabling Montenegrin scientists and researchers to access the European large research infrastructures.

Montenegro became a **full member of the European Molecular Biology Organization and European Molecular Biology Laboratory** on 27-28 November 2017.

The country has continued its **rich bilateral S&T cooperation** through different bilateral S&T calls, as follows:

- Call for co-financing the S&T cooperation between Montenegro and the Republic of Slovenia 2018-2020 published in December 2017.
- Call for co-financing the S&T cooperation between the Ministry of Science of Montenegro and National Research Council of Italy (CNR) 2019-2020 published in March 2018.
- Call for co-financing the S&T cooperation between Montenegro and the Republic of Austria 2019-2020 published in April 2018.
- Call for joint project proposals (“Exchange of Researchers” and “Particular Relevance”) between the Ministry of Science of Montenegro and the Ministry of Foreign Affairs and international cooperation of the Republic of Italy was published in April 2018.

Within the framework of collaboration with CERN, the Ministry of Science published a Call for the participation in the CERN Programme “Summer School at CERN 2018” and a Call for the participation in the CERN Programme for High School Physics Teachers in December 2018. The Ministry of Science and CERN jointly cover travel and accommodation costs for the selected candidates for these programmes.

As for the integration to ERA, apart from the abovementioned new funding instruments, the annual Call for co-financing of scientific-research activities was announced in February 2017 and in February 2018. The scope of the instrument is to provide support for: participation in H2020, participation in the IAEA TC programme, participation in EUREKA, mobility of researchers, PhD students, participation at the scientific conferences, publication of open access journals, editorial activities, protection and development of inventions/patents and promotion of science in society.

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

- Traditional science promotion festival “Open Science Days” was held on 09-11 October 2017. The core idea of the 7th edition of the festival was connecting science and art, with the main motif “Science discovers – art creates”. The central part of the festival was the interactive Art@CMS exhibition. During the festival, three other exhibitions were also held, of which one was particularly interesting given that Montenegrin artists accepted the challenge of presenting, in an artistic manner, the scientific projects from Montenegro for the first time.



The festival programme included several Montenegrin cities and many other interesting topics, such as astronomic programme, communication with the astronauts, several workshops etc.

- COST Info Day was held within Open Science Days on 09 October 2017, with the active participation of the COST Association representatives, including Director, Dr. Ronald de Bruin.
- Sixth cycle of the trainings for the development and implementation of the project ideas for H2020, organized within the Framework Contract, financed under IPA IV component – Operational Programme “Human Resource Development” 2012-2013, “Increasing Montenegrin capacities for participation in Horizon 2020”, was held on 09-13 October 2017.
- Presentation of the Handbook “How to launch a start-up in Montenegro” co-organized by UNDP office to Montenegro, Ministry of Science and University of Montenegro was held on 13 October 2018.
- The first video conference meeting of the representatives of the Ministry of Science and representatives of the Montenegrin scientific community with the European Space Agency (ESA) on the collaboration opportunities was held on 16 October 2017.
- Workshop “Establishment of the Innovation Ecosystem in Montenegro”, organized by the Ministry of Science and Innovation and Entrepreneurship Centre “Tehnopolis” Nikšić with the EU TAIX support was held on 19-20 October 2017. The best EU practices on creating a favourable environment and organizational models for innovation were presented. Moreover, a discussion was held on the concept of the co-creation in policy design and support instruments for innovation, based on the Quadruple Helix model and LEAN methodology.
- The Declaration of Intent (DoI) for the establishment of SEEIIST was signed during the Ministerial conference held at CERN, Genève, on 25 October 2017. With the act of signing the DoI by eight Signatory Parties from the SEE Region, the former Initiative for the establishment of SEEIIST was transformed into a regional project.
- The first meeting of the Editorial Committees charged with the preparation of the Concept Study Reports for both SEEIIST project options was held in Budva on 30-31 October 2017.
- The final conference for the project “Increasing Montenegrin capacities for participation in Horizon 2020”, financed by the EU and Montenegro under the IPA IV Component of the Operational Programme “Human Resource Development” 2012-2013, was held on 01 November 2018 in Podgorica. In the presence of the interested scientists and potential participants of the programme, the results achieved in the project over the duration of the project (10 months) were presented.
- The Regional Conference on Economy – Montenegro 2017, organized by the Chamber of Economy of Montenegro and the Ministry of Science, was held in Budva on 02-03 November 2017. The central theme of the conference was “Challenges of way to the EU”. 35 scientists and researchers from the Montenegrin diaspora were among the participants of the conference, having an opportunity to discuss the possibilities of the future collaboration with the Ministry of Science and the Montenegrin scientific research and entrepreneurial communities in general.
- The Ministry of Science published a Call for awarding the Scientific Achievement Awards for 2017 on 06 November 2017. The candidates could be proposed for the awards in the following categories: the most successful young talent in science up to 20 years old; the most successful scientist; and the most successful inventor/innovator. The awards ceremony was held on 22 December 2017.
- The UNESCO World Science Day for Peace and Development was celebrated at the Faculty of Economy and Faculty of Electrical Engineering – University of Montenegro on 10 November 2017.



- The Info Day on the Call for Co-financing the Innovative Projects was held in “Tehnopolis” on 14 November 2017.
- H2020 Info days “Work programmes 2018-2020 and possibilities of the participation” was held on 23-24 November 2017 in Podgorica with the support of the EC. Key topics were: How to participate in the Horizon 2020 programme; Funding opportunities for researchers from the Balkans; New Horizon 2020 Work Programmes 2018-2020 focusing on Balkan countries; Proposal preparation and submission; and Budgeting and contract preparation.
- The Round table within the process of the public consultations on the Draft of the Strategy of Scientific Research Activities (2017-2021) was held on 24 November 2017.
- SEEIIST was presented by the representatives of the Ministry of Science on the Forum on Innovation held within the frame of the 2nd Ministerial Conference on Innovation in Bratislava, Slovakia, on 26-29 November 2017.
- The Montenegrin delegation led by the Minister of Science, Dr. Sanja Damjanović, participated at the EMBC and EMBL Council meetings held on 27-28 November 2018. On this occasion, Montenegro became a full member of EMBL and EMBO, opening in this way a path for the Montenegrin scientists and researchers to get access to the most advanced research infrastructure in the field of molecular biology in Europe, but also to collaborate with the excellent research teams in their respective fields.
- Minister Damjanović presented the progress report of the Ministry of Science at a conference organized to mark one year of work of the Government of Montenegro, held on 01 December 2017.
- Forum on New International Research Facilities in South East Europe was held at the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, Italy, on 25-26 January 2018. The Concept Study Reports for both project option for SEEIIST were presented, for the first time, to the scientific and political public at the Forum.
- First SEEIIST SC meeting was held in Sofia, Bulgaria, on 30 January 2018. SC adopted the Rules of Procedure and discussed further activities on the implementation of the project.
- Info Day on H2020 MSCA RISE and IF calls was held in Podgorica on 12 February with the support of REA expert, Ms. Joana Silva.
- Art@CMS workshops were held at the Faculty of Arts – University of Montenegro on 21-22 February 2018. Five students of arts were selected to participate in the study visit to CERN.
- Minister Damjanović participated at the Diplomatic briefing „Montenegro’s EU Integration” held on 2 March 2018.
- Minister Damjanović participated at the 4th Annual Meeting of Donor Coordination for the Western Balkans, hosted by RCC in Brussels on 13 March 2018.
- Montenegrin delegation participated at the 2nd Western Balkans Research and Innovation meeting, held in Skopje on 21-22 March 2018 within the framework of the European Commission’s Support for the Steering Platform (SP) on Research and Innovation for the Western Balkan countries (WBC).
- 2nd Master Class “Hands on Particle Physics”, organized by the Ministry of Science of Montenegro, under the auspices of CERN and International Particle Physics Outreach Group (IPPOG), was held on 23 March 2018.
- SEEIIST was presented at the Flagship Conference on Research Infrastructures “Research Infrastructures beyond 2020 – sustainable and effective ecosystem for science and society”, held on 22-23 March 2018 in Sofia, Bulgaria.

- 2nd SEEIIST SC meeting was held on 30 March 2018 in Tirana, Albania. SC passed the a unanimous decision to support Hadron Tumour Therapy and Biomedical Research with Protons and Heavy Ions as the option for the Institute. An agreement was also reached on a draft Memorandum of Cooperation. In addition, it was agreed that the next steps of the SC would be focused on the preparatory activities for developing the main design and the business plan.
- Workshop with the high representatives of EMBL and EMBO was held on 04-05 April 2018 in Podgorica. EMBL and EMBO delegation presented the programmes for researchers and students from Montenegro.
- A high-level ESA delegation paid the first official visit to Montenegro on 4-5 April 2018, presenting the programme, activities implemented by the Agency and the possibilities for further cooperation with Montenegro, at the workshop that took place at the Rectorate of the University of Montenegro.
- The Montenegrin Delegation participated at the Joint Workshop on Governance of S3 and Training on EDP process in WBCs, organized by RCC and JRC, in Ljubljana on 11-12 April 2018.
- The Ministry of Science organized a workshop on financial and administrative matters in the Horizon 2020 programme, intended for accountants and financial and administrative managers of the current and future projects under this EU programme, on 13 April 2018.
- Montenegrin delegation led by Dr. Sanja Damjanović participated in the high-level conference entitled “Smart Specialization and Technology Transfer as Innovation Drivers for Regional Growth”, organized by the DG JRC on 3-4 May in Sofia, Bulgaria.
- The Ministry of Science and the Innovation and Entrepreneurship Centre “Tehnopolis” organized an official ceremony on the occasion of opening a Co-working space, in Tehnopolis, Nikšić, on 10 May 2018. Several lectures on how to create a favourable start-up ecosystem were held during the event.
- In cooperation with the University of Montenegro, the Ministry of Science of Montenegro organized a workshop entitled “Challenges in Establishing the STP in Montenegro”, which took place in Podgorica on 10 May 2018.
- Conference S3.me – Smart Specialization: Innovation, Entrepreneurship and Competitiveness was held in Podgorica on 11 May 2018. Conference gathered 200 participants from public, private, academic and civil sectors in order to promote S3 and to officially launch the EDP phase of the Strategy preparation.
- The Ministry of Science organized a forum and workshop “Establishment of the Centres of Excellence in Montenegro in the light of EU integration”, related to the H2020 Call concerning strengthening the R&I in the Widening countries, in Podgorica on 11-12 June 2018.
- Minister of Science, Dr. Sanja Damjanović, met Director-General of DG Research and Innovation, Jean-Eric Paquet, on 12 June 2018 in Brussels. Prof. Herwig Schopper, who originally proposed the SEEIIST Initiative and Roy Aleksan, Project Coordinator of the TIARA Consortium, a consortium of the most significant organizations in the field of accelerator research and development, attended the meeting.
- PSF Kick-off meeting in Brussels was held on 21 June 2018.

4 Outlook and perspectives

- Publishing a Call for Large Innovation Projects by the end of June 2018
- Programme of strengthening the HR and research capacities at the scientific research institutions in Montenegro to be adopted by the Government in the second quarter of 2018

- Participation of the Minister Damjanović as a speaker at the JRC workshop “Investment Readiness of Innovation Projects in South East Europe”, to be held in Zagreb on 4-5 July 2018
- Third Intergovernmental SEEIIST SC meeting in Skopje on 13 July 2018
- First Country visit within the frame of PSF 26-27 July 2018
- Preparing a Call for the support to the Centres of Excellence in July 2018
- Publishing a Call for supporting the participation in H2020 and COST, September-October 2018
- Final conference on EDP planned to be organized in mid-September 2018
- Publishing the 3rd Call for joint bilateral scientific projects between Montenegro and the Republic of Turkey (scheduled date for publishing 17 September 2018)
- Open Science Days – late September – early October 2018 (tbc)
- Adoption of the Programme for the support to the start-ups by the Government in the fourth quarter of 2018
- Adoption of the S3 by the Government in the fourth quarter of 2018

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

The S3 webpage at the website of the Ministry of Science of Montenegro:

In Montenegrin language: http://www.mna.gov.me/ministarstvo/Strategija_pametne_specijalizacije/

In English language: http://www.mna.gov.me/en/ministry/Smart_Specialisation/

The Ministry of Science has published the Bulletin of the Ministry of Science for 2017 in March 2018.