

EURAXESS Korea Quarterly Newsletter Issue 15 Q4 2021



Dear Colleagues,

I hope you successfully concluded the year 2021 despite difficulties created by the challenging COVID-19 situation and that the New Year brings good luck, prosperity, and exciting opportunities.

The last EURAXESS Korea newsletter this year brings you to Bosnia and Herzegovina – a land steeped in heritage, natural beauty and a healthy dose of innovation fit for the 21st century.

Secondly, we take a closer look at actions at the EU level on tackling Climate Change. The EU has led the way by establishing and investing in mission-based technological solutions aligned to industrial policy, finance, and long-term research goals and we explore the COP26 backstory, and what it means for research and the wider scientific landscape.

Finally, we examine how the green transition guides significant parts of Horizon Europe's investments. The commitment to spend at least 35% of resources on climate action and strengthen investments in biodiversity applies to the entirety of Horizon Europe including the European Research Council (ERC), the European Innovation Council (EIC) and institutional partnerships.

As always, do not hesitate to contact me, I remain open to any inquires and suggestions for collaboration. May you find peace, health, and success through the whole year 2022.

Tomasz Wierzbowski.

- Tomasz Wierzbowski, EURAXESS Korea Representative

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Web: korea.euraxess.org

Mail: korea@euraxess.net

Twitter: [@EURAXESS_Korea](https://twitter.com/EURAXESS_Korea)

Address: #302, Main Building HUFS,
Seoul Campus, 107, Imun-ro, Seoul, 02450

*Edited by Dr. Tomasz WIERZBOWSKI
EURAXESS Korea Representative*

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EURAXESS members in focus: BOSNIA AND HERZEGOVINA



Bosnia and Herzegovina



Zmijanje embroidery

For the last edition of EURAXESS WORLDWIDE newsletter in 2021 we revisit a story about Bosnia and Herzegovina, a land steeped in heritage, natural beauty and a healthy dose of innovation fit for the 21st century.

Zmijanje embroidery, national cultural heritage

This elegant form of embroidery is famed throughout the Balkans for its blue cross-stitching technique, earning it a place on UNESCO's list of intangible cultural heritage in 2014. Today, the craft is preserved in the region of Krajina by skilled artisans. The iconic patterns can be found on traditional clothing, wedding dresses and shawls. A blouse featuring Zmijanje embroidery was declared the "most beautiful" entry at the 1936 Folk Costumes Fair in Paris.

Did you know? The name 'Bosnia' comes from an Indo-European word Bosana, which means water. This is fitting as the country is covered with beautiful lakes, rivers, waterfalls, and a strip of the Adriatic Sea.

Capital	Sarajevo
Government	Federal Democratic Republic
Currency	Convertible Mark (BAM)
Area	51,129 sq km
Population	3,531,159 (2013)
Language	Serbian , Bosnian , Croatian
Religion	Muslims 50.7%, Orthodox Christians 30.75%, Roman Catholics 15.19%, others 3.36%
Electricity	220V/50Hz (European plug)
Country code	+387
Internet TLD	.ba
Time Zone	UTC+1

EURAXESS Centre BiH was formed as part of project BAMONET, Development of Bosnia and Herzegovina's Network of Service Centres.

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Sutjeska National Park



One of the last oases of untouched nature in Europe...

When you think of rainforests, places like the Amazon and the Congo spring to mind. But Europe has a UNESCO-recognised patch of its own on the border between Bosnia and Herzegovina (BiH) and Montenegro.

Situated in the heart of the Sutjeska National Park, and hugged by the Maglić and Snježnica mountains, Perućica has resisted human development for millennia. Today, it is a strictly protected nature reserve and one of the last remaining primeval forests in Europe. Called the “lungs of Europe”, Sutjeska is the oldest and largest national park in BiH with trees that have been standing for up to 300 years.

Entrepreneurship and Innovation

Creating future-oriented jobs based on new knowledge and technological development is a key feature and priority of programmes and support aimed at helping BiH bridge the gap between R&I and successful entrepreneurial activities that lead to fast-growing companies.

Academic and professional opportunities can be explored in a range of higher education and career-oriented centres in BiH, which are increasingly adapted to the needs of the digital economy and international collaboration both within the Western Balkans and with the European Union and further afield.

Entrepreneurship advice and support exists in several forms, including:

- [CERK Centre for Career Development](#)
- [iDEALab, University of Banja Luka](#)
- [University Entrepreneurship Centre, University of Banja Luka](#)
- [Faculty of Economics, University of Banja Luka](#)
- [School of Economics and Business, University of Sarajevo](#)
- [Centre for Student Career Development, University of Sarajevo](#)
- [American University in Bosnia and Herzegovina, Sarajevo](#)
- [Pan-European University Apeiron, Banja Luka](#)
- [Faculty of Economics, International University Travnik](#)

Since 2004, the Ministry of Science and Technology has applied specific evaluation criteria for awarding scientific research degrees. A Scientific Commission was made responsible for the evaluation of the candidates with criteria including scientific publications, work experience in science and research, science projects, etc. There are three categories of scientific career titles: scientific assistant, senior scientific assistant, and scientific adviser.



Information for Incoming Researchers

Temporary residence on the basis of scientific work may be granted to foreigners participating in BiH-relevant research projects, researchers and representatives of international organisations or members of international scientific missions conducting research in BiH, university professors, educators, scientists, experts, teachers and lecturers involved in a range of fields including cultural and educational cooperation.

To enter BiH as a temporary resident on these grounds, certain general conditions need to be met, including:

- Evidence that the foreigner is engaged in research projects
- Confirmation by Bosnian authorities that the project, initiative or research is important to BiH and foreign expertise is needed
- A contract or cooperation agreement between the competent authority/institution and a foreigner with details about the foreign expert's stay*
- A specified period of stay in the contract of engagement, typically not more than one year (conditions and exceptions apply)

* Information includes rights, obligations guarantees for example on accommodation, medical and other costs incurred by foreigners during their stay, and that they will leave BiH upon completion of the assignment.

Introduction of the National Research Landscape

Two main entities – the Federation of Bosnia and Herzegovina (FBiH) and Republic of Srpska (RS) – and a regional authority, Brčko District, are responsible for education in the country.

In FBiH, this responsibility is further devolved into ten autonomous Cantons. There are also several education management subsystems as well as administrations within the public universities.

Following the Council of Ministers's decision, Bosnia and Herzegovina is embracing a [Smart Specialisation Strategy \(S3\)](#) to strengthen innovation-led territorial development. The S3 process will follow the EU's [Joint Research Centre's \(JRC\) methodological framework](#) for Smart Specialisation in the EU Enlargement and Neighbourhood countries.

Scholarships and education funding opportunities

Several universities in Bosnia and Herzegovina offer various scholarships and tuition waivers to many international students every year. Scholarships are provided to encourage high-achieving young individuals in their academic pursuit, and to promote other successful young talents in leadership, entrepreneurship, artistry, and research. Although scholarships are available all year long, interested candidates who require some sort of funding must indicate early on in their application.



In addition to the University of Banja Luka and the University of Sarajevo, five service centres have been established:

- International University Sarajevo,
 - EUROPROJEKT Centre,
 - Innovation Centre Banja Luka,
 - City Development Agency Banja Luka,
 - University of East Sarajevo.
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The BiH government also awards scholarships to international students via its Ministry of Education, under which students are given specific funds towards their education and living costs in the country. Many post-graduate students have benefitted from this scholarship due to its favourable application procedure.

Other private organisations and companies offer scholarships to both local and international students in BiH, thanks to a number of streamlined funding schemes. These entities offer annual or biannual grants and scholarships to applicants meeting the requirements. Successful candidates receive between \$5,000 and \$20,000 towards their education and stay in the country.

Universities also offer special tuition discounts for early payment, special needs, post-grad students (masters), specific countries, and other grounds

HOT TOPIC: Climate and research

With great promise comes great challenge

That climate change is one of the most challenging problems facing society is now patently clear and undisputed. But to understand the EU's strong commitment and leadership in this area, EURAXESS WORLDWIDE takes a closer look at the COP26 backstory (goals and outcomes), and what it means for research and the wider scientific landscape.

The UN Climate Change Conference (COP26) might be over, but the vital research needed to better understand and respond to climate imperatives continues with vigour at the EU level and worldwide.

As anyone with access to the internet will know, the annual COP meeting of signatories to the UN Framework Convention on Climate Change has recently ended in Glasgow, Scotland. COP26's goal was to push forward progress on prior commitments as part of the Paris Agreement from December 2015.

Paris was hailed as ground-breaking by the UN because, for the first time, "a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects". It set a clear and now famous target, to limit global warming to well below 2, and preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

A stark realist will point out that the planet is continuing to warm at an alarming rate, seemingly despite these targets and resulting efforts to stop pumping CO₂ and other greenhouse gases into the atmosphere. Many countries and regions, such as the EU through its [Green Deal](#) ambitions and

integrated [climate policies and action](#), are going further and aiming for zero-emissions by 2050.

The Green Deal acknowledges that its 2050 “no net emissions” target needs to go hand in hand with actions to decouple economic growth from resource use (best captured by the notion of a circular economy which keeps resources in use, or a closed loop, for longer), and it is rooted in the idea that a green economy is one where “no person and no place is left behind”.

“The transition to a climate-neutral society is both an urgent challenge and an opportunity to build a better future for all,” notes the European Commission, the EU’s executive branch, adding that “all parts of society and economic sectors will play a role – from the power sector to industry, mobility, buildings, agriculture and forestry.”

Here, the EU has led the way by establishing and investing in mission-based technological solutions aligned to industrial policy, finance, and long-term research goals. The current Horizon Europe framework funding programme has dedicated research lines for climate action which includes mitigation and adaptation measures, with the latter acknowledging that climate change is already happening.

Scientists confirm evidence of faster warming

Even casual observers of the weather and news events, from deepening droughts and raging bushfires in Australia to uncharted flood levels in Europe, can see something unprecedented is going on with the climate.

Indeed, the latest Intergovernmental Panel on Climate Change (IPCC) report, *Climate Change 2021: the Physical Science Basis*, confirms observed changes in the Earth’s climate in every region and across the whole climate system.

“Many of the changes observed in the climate are unprecedented in thousands, if not hundreds of thousands of years, and some of the changes already set in motion – such as continued sea level rise – are irreversible over hundreds to thousands of years,” according to the [UN’s panel of scientists](#) in charge of charting global climate change.

Based on evidence of faster warming, the planet could cross the Paris threshold in just decades unless large-scale and immediate reductions in emissions can be achieved. The report shows that greenhouse gases from human activities are responsible for around 1.1° Celsius of warming since 1850-1900: “Averaged over the next 20 years, global temperature is expected to reach or exceed 1.5°C of warming,” the scientists predict.

Nobel-winning work

Modelling climate change and especially connecting it to natural disasters is notoriously complex work, but it is improving thanks to growing computing power, better data and associated statistical developments, such as stochastic equations (see [Nature Reviews Physics](#)) that can factor in chance



events, but also smarter software and better-trained artificial intelligence to reach vast datasets (see [‘The story behind Europe’s AI ambitions’](#)).

Climate modelers hail from different branches of the Earth and planetary sciences, with strengths in applied physics, mathematics, and computational science. According to *National Geographic*, they “combine physics and chemistry to create equations, feed them into supercomputers, and apply them to simulate the climate of Earth [or other planets](#).”

For decades, climate scepticism has been fuelled by criticism that the modelling is based on “magical thinking”, but the science is too strong now for these arguments to stand up. The Nobel Committee for Physics would agree. In October, it acknowledged the contribution of pioneering climate modelers, Syukuro Manabe and Klaus Hasselmann, and theoretical physicist Giorgio Parisi to the “scientific foundations [and] rigorous analysis of observations” informing robust climate and weather predictions.

[The Guardian](#), a British newspaper, captures this evolution in a story debunking the arguments of climate-change deniers: “We understand the fundamentals about how the climate operates well enough to accurately reproduce the observed changes, based on solid, well-understood physical mechanisms like the increased greenhouse effect. That’s not about to get overturned by magical thinking.”

COP26 outcomes

The Paris Agreement carved out a path for concrete action to (re)shape policy and achieve transformation change. COP26 was all about delivering on these promises, according to a [Commission statement](#), which outlined some outcomes of the conference where progress will be deterministic, whether investing in R&D for green tech or regulating the use of high-polluting and emission-generating industrial practices.

One concrete achievement to come out of COP26 was to agree on a ‘rulebook’ for meeting the Paris Agreement which fixes the transparency and reporting requirements for all parties to track progress against their emission-reduction targets. The rulebook includes articles on how international carbon markets should function, to support further global cooperation on emission reductions.

While science is critical to both understanding the climate problem and tackling it with green solutions, ultimately much of the progress anticipated by successive COPs comes back to one thing: climate finance. Here, leaders committed to help vulnerable countries, especially low-lying islands faced with rising seas, cope with current and impending climate changes.

There was agreement to double the collective share of so-called “adaptation finance” within the \$100 billion annual target for 2021-2025, and to reach the \$100 billion goal as soon as possible, according to the Commission. Parties also committed to a process for long-term climate finance beyond 2025.

Commenting on the outcome, the EU’s lead negotiator and Executive Vice-President, Frans Timmermans, said: “It is my firm belief that the text that has



been agreed reflects a balance of the interests of all Parties, and allows us to act with the urgency that is essential for our survival.”

New and improved EU commitments

Among the EU commitments announced during COP26 were a €1 billion fund for the [Global Forests Finance Pledge](#), a [Just Energy Transition Partnership](#) with South Africa, and a [Global Methane Pledge](#). The latter is a joint EU-US initiative mobilising over 100 countries to cut their collective methane emissions by at least 30% by 2030, compared to 2020 levels.

Another initiative, the [EU-Catalyst Partnership](#), was announced together with the European Investment Bank to boost cooperation in climate innovation and technologies. A Climate Adaptation Fund worth €100 million was also launched. One of the biggest pledges by COP26 donors on climate adaptation, the Fund comes on top of significant contributions already announced by Member States, and also confirms the EU's supporting role to the informal Champions Group on Adaptation Finance.

In February 2021, the Commission adopted a foresighted [EU Strategy on Adaptation to Climate Change](#) to prepare Member States and other regions for the “unavoidable impacts of climate change” and help them become climate-resilient by 2050. It charts a course to make adaptation efforts “smarter, swifter and more systemic in the years ahead, and also aims to significantly step up international action”. Research and further cooperation with international partners no doubt plays a driving role in achieving these objectives.

A climate of strong research

EU and international research has already significantly furthered our understanding of the causes of climate change. Today's pressing challenge is to further explore and more accurately forecast the impacts of climate change and provide effective responses to it.

To limit warming to 1.5-2.0° Celsius, the world needs to “act now and use every tool and solution” at our disposal. Novel and strengthened research, leading to smart innovations and green solutions, plays a crucial role in our collective effort to tackle climate change. Here, the EU is committed being a leading force, [according to the Commission's RTD team](#).

They offer a summary of some current RTD-funded activities in climate science but also in more dedicated fields such as [polar and ocean research](#), [climate resilience and adaptation to climate change](#), and [knowledge for climate neutrality](#). EU research also examines the nexus between climate change and natural disasters around the world, such as [forest fires and extreme weather events](#), as well as [nature-based solutions](#) needed to tackle these challenges.

Awareness-raising and education on climate change both play an important role in preparedness and greater understanding of what lies ahead, as too research and actions to improve citizen engagement and behaviour change.

EU climate action links

[Horizon Europe's Climate Adaptation Mission](#)

[Research and innovation driving the climate pact \(factsheet\)](#)

[Q&A on the EU at COP26](#)

[Acting together for the planet \(factsheet\)](#)

[European Commission COP26 webpage and side-events](#)

[Revising EU emissions trading system \(EU-ETS\)](#)

[Integrating land use, land-use change and forestry \(LULUCF\) into emission-reduction efforts](#)

[National emissions \(effort-sharing\) targets for sectors outside the EU-ETS and LULUCF](#)

[Renewable energy, energy efficiency and Energy Union and climate action governance](#)



The rationale here is that individual and collective choices – on everything from transport and travel modes to recycling and upcycling goods – matter in the climate change ‘big picture’.

On its [climate-research webpage](#), the Commission also offers a handy list of networks and platforms, databases, project results, and job opportunities. These include the Joint Programming Initiative ([JPI-Climate](#)), which aligns national climate research programmes and funds new transnational activities, and the [Climate-ADAPT](#) platform for sharing data and information to improve decision-making on climate adaptation. It also profiles the EURAXESS network for mobile researchers in Europe and beyond.

Several fora are mentioned, such as the [STI Forum](#) on the UN’s Sustainable Development Goals, alongside a number of links to climate research projects, success stories, and opportunities for collaboration. Dedicated ‘results packs’, hosted on the EU’s [CORDIS website](#), can also be found. They illustrate the depth and breadth of EU climate research projects and activities, from innovations in photovoltaics and renewable energy to new thinking on climate services and nature-based solutions for smart/green cities of the future.

Leading by example

The EU is acutely aware that it needs to lead by example on climate action. [According to progress reports](#), it has already cut its greenhouse gas emissions by more than 30% since 1990, while growing its economy by over 60%.

With the ultimate goal of carbon neutrality by 2050, [European Climate Law](#) sets an intermediate target of reducing net greenhouse gas emissions of at least 55% by 2030, compared to 1990 levels. To deliver on these commitments, the Commission presented a [package of proposals](#) in July 2021 to make the EU’s climate, energy, land use, transport, research, and taxation policies all fit-for-purpose.

Research and innovation is, and will always be, a catalyst for impactful climate actions, from modelling and mitigating to monitoring and reporting on progress made between now and the mid-term target of 2030 and, ultimately, the 2050 zero-carbon end game.

Research funding opportunities

[Horizon Europe](#): Information, work programme and links to climate-related calls

[LIFE+ Climate Action](#): Co-financing for climate change mitigation and adaptation research

[Innovation Fund](#): Support for demonstration of innovative low-carbon technologies

[European Structural and Investment Funds](#): Climate research-related calls and regional development research

[COST actions](#): European Cooperation in Science and Technology funds for bottom-up, open R&I networks

This text is extracted from
[Horizon Europe Work Programme 2021-2022](#)

Horizon Europe: Investing in the green transition, climate action and biodiversity

The green transition guides significant parts of Horizon Europe's investments. The commitment to spend at least 35% of resources on climate action and strengthen investments in biodiversity applies to the entirety of Horizon Europe including the European Research Council (ERC), the European Innovation Council (EIC), and institutional partnerships.

Taking into account all work programmes and planning documents for Horizon Europe 2021-2022 it is estimated that overall 37.6% of funds will contribute to climate action; and 7.2% to biodiversity related policy objectives.

The parts of the [present work programme](#) dedicated to the six clusters, research infrastructures, widening participation & strengthening the European research area, European innovation ecosystems and the EU missions together contribute €6.3 billion to climate action, equal to 49.6% of the present work programme budget. Furthermore, these parts will contribute €1.45 billion to biodiversity, equal to 10.7% of the present work programme budget. €181 mio of the contributions to biodiversity are from the activities described in the EU missions. The investment in climate action is a good approximation of investments in the green transitions, monitoring of expenditure will provide more precise data also on other aspects like investments in 'clean air' or specific SDGs.

Contributions to climate action are made by 87% of the budget of cluster 'Climate, energy, transport' (€2.68 billion), 73% of the cluster 'Agriculture, environment' (€1.38 billion), 41% of the cluster 'Industry and digital technologies' (€1.38 billion) and 17% of the cluster 'Health' (€332 million). The actions described in the work programme part on EU missions allocate €493 million, equal to 69% of the missions' allocated budget, to climate action.

To ensure a contribution of over 35% in the lifetime of the Horizon Europe programme the expenditure estimates will be updated continuously. The methodology to generate these estimates is based on the 'EU-markers' methodology¹.

¹ EU-markers are based on the internationally recognized Rio-markers methods originally developed by OECD. The EU markers assign 0-40-100% markers to actions and their budgets depending on climate action having a major impact (100%), a significant impact (40%) or a marginal impact (0%) of an activity. In this work programme the - markers are applied to every topic described for climate action, biodiversity, clean air, digital transition, and artificial intelligence. For other parts of Horizon Europe they are applied to larger groups of actions and in general to awarded projects for expenditure monitoring and documentation. Actions can be assigned more than one marker if they contribute substantially to more than one of the related objectives.

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