Quarterly Newsletter
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EURAXESS India Newsletter is a quarterly electronic publication. It provides information about conducting research in Europe or with European partners and gives insights for Indian and European researchers who are interested in the European research landscape.

Please email to india@euraxess.net for any comments on this newsletter, contributions you would like to make.

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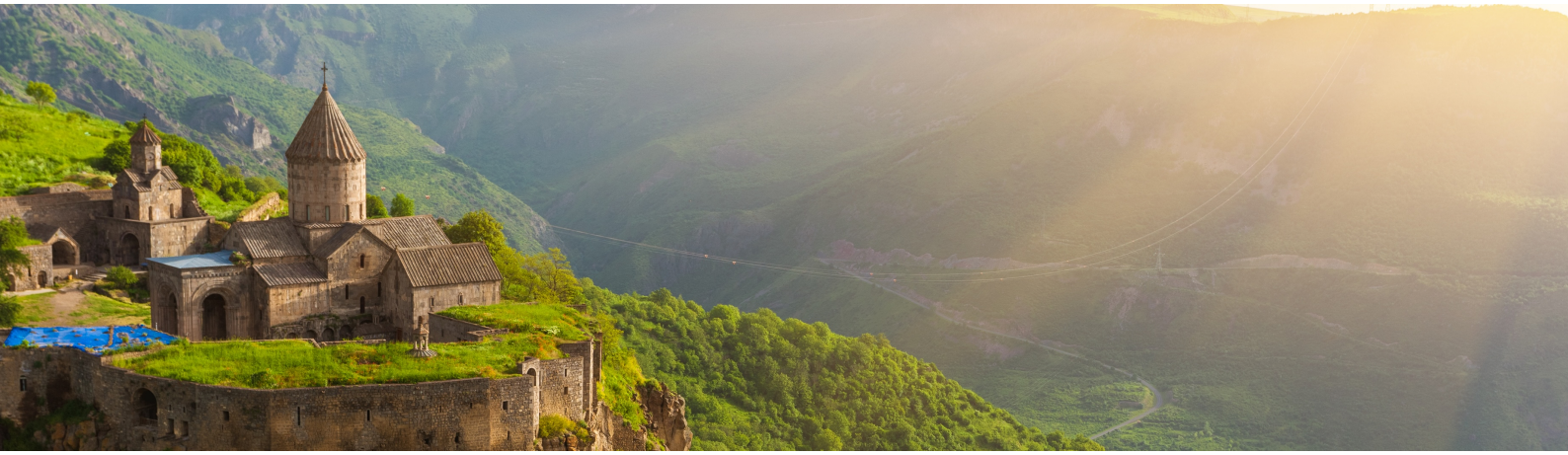
Contents



1 EURAXESS Country in Focus: Armenia

Armenia is a landlocked country in the Armenian Highlands of Western Asia
Capital: Yerevan
Area: 29,743 km^2
Population: 3,015,400
Religion: Christianity
Church: Armenian Apostolic
Language: Armenian
Government: Unitary Parliamentary Republic
Currency: Dram (AMD)

Located in the South Caucasus region, Armenia is at the crossroads of Europe and Asia, making it a key hub for regional collaboration. It shares borders with Georgia, Azerbaijan, Iran, and Turkey. Yerevan is the capital and largest city of Armenia; it is easily accessible from major cities. The history of Yerevan dates back to the 8th century BC

Introduction of the national research landscape

Armenia's research landscape is characterised by a rich scientific heritage, a highly skilled diaspora, and a growing emphasis on technology and innovation. Historically, Armenia was a leading research and technology hub in the Soviet Union, particularly in fields such as physics, engineering, and computational sciences. Today, the country is working to modernise its research ecosystem, strengthen international collaborations, and enhance the commercialisation of scientific output. Education in STEM is strongly supported, and in recent years, the importance of science has been reassessed as a crucial factor for national, social and economic development.

Armenia offers various research support options, including institutional funding for universities and research centres, competitive grants for research teams, as well as special grants for international researchers, young scientists, and women in research. Armenia is an active participant in international research collaborations. As an Associated Country to the EU Horizon Europe (HE) programme and a full member of COST Actions, it provides numerous opportunities for research partnerships. The country is also a member of key intergovernmental organisations, including the Technology Centre (ISTC), and the High Energy Stereoscopic System (HESS).

Science, technology and innovation (STI) in Armenia

The Ministry of Education, Science, Culture, and Sport of the Republic of Armenia (RA MESCS) oversees the country's research policies. The Higher

MAIN UNIVERSITIES

[Yerevan State University]
[American University of Armenia]
[Yerevan State Medical University]
[Russian-Armenian University]
[Armenian State University of Economics]
[National Polytechnic University of Armenia]
[French University in Armenia]
[Yerevan Brusov State University of Languages and Social Sciences]
[Armenian National Agrarian University]
[Armenian State Pedagogical University]
[National University of Architecture and Construction of Armenia]

Source: AUA

[AUA Centre of Excellence on Journalism]

[AUA Entrepreneurship and Product Innovation Centre (EPIC)]

Scientific-Educational Centre for Fundamental Brain Research (COBRAIN) is an EU H2020 project coordinated by YSMU with its primary mission to establish a new regional centre of excellence in neuroscience and brain research.

Source: NAS RA

Education and Science Committee (HESC) plays a key role in shaping research funding mechanisms and supporting innovation-driven projects. The state budget remains the primary funding source for research. Government investment in science has significantly increased, from 0.24% of GDP in 2018 to 0.43% in 2024. Ongoing reforms aim to enhance research quality, expand scientific collaboration, and modernise research infrastructures. To further strengthen the research capabilities, the government upgraded research institutions in 2024 by acquiring 100 large research equipment units.

The Armenian academic system consists of 60 universities, including 23 public institutions, and 83 research institutions. The research workforce comprises 3,584 researchers, of which 91 are foreign researchers. Armenia has a growing ecosystem of research and innovation, with its leading universities and research institutions playing a crucial role in advancing science, technology, and entrepreneurship.

Established in 1919, **Yerevan State University (YSU)** is the oldest public university in Armenia and the country's primary research hub. YSU has made significant contributions to research in quantum mechanics, biotechnology, and nanotechnology. It houses multiple research institutes, including the Research Institute of Physics that has played a key role in quantum mechanics studies, while its biotechnology and biofuel innovation centre contributes to advancements in microbiology and bioengineering. With a high output of scientific publications, patents, and international partnerships, YSU continues to be the leading University in Armenia.

The **American University of Armenia (AUA)** brings a different approach to research and innovation, combining Western-style environmental studies and public health. The university has become a hub for entrepreneurship and innovation, with many of its graduates founding successful tech startups in Armenia. AUA has several research centres and hosts a Centre of Excellence on Journalism and plans to set up a **Centre for Ethics in Public Affairs (ETICA)** within EU HE ERA Chair Grant. Through the **Entrepreneurship and Product Innovation Centre (EPIC)** and various grant programmes, AUA has been empowering researchers to develop projects that have a direct impact on Armenia's socio-economic development.

Founded in 1920, **Yerevan State Medical University (YSMU)** has long played a key role in the advancement of medical education, biomedical research, and healthcare technologies in the country. The university has made significant contributions to clinical research, medical genetics, and pharmacology, often collaborating with international medical institutions and research centres. YSMU also actively participates in telemedicine development, artificial intelligence in diagnostics, and research into regenerative medicine. YSMU is a regular participant in EU Framework Programmes.

The National Academy of Sciences of Armenia (NAS RA) is the leading scientific institution in the country, overseeing a network of 34 research institutes and other research organisations, and fostering scientific development. NAS RA coordinates research efforts, promotes international collaboration, and advises the government on science policy. It covers multiple scientific

NAS RA Byurakan Astrophysical Observatory is known for the discovery of stellar associations and Markarian galaxies, as well as housing one of the world's largest Schmidt telescopes.

NAS RA Scientific and Production Centre 'Armbiotechnology' is a pioneering consolidation of the Biotechnology Institute, Microbiology Institute, and the Microbial Depository Centre.

NAS RA Institute of Physiology will establish a regional bio-visualisation centre of research excellence within the HE ERA Chair project.

Grants for foreign researchers

Several programmes including the Integration Grant, Remote Laboratory Grant, and Postdoc-Armenia Grant are aimed at the international community – foreign researchers wishing to continue their careers in Armenian research organisations.

Synopsys Armenia is a leading R&D hub for electronic design automation (EDA), design for manufacturing (DFM), and semiconductor IP solutions.

Source: Engineering City

Engineering City contributes to the further development of the engineering and high-tech sector and the increase in competitiveness and productivity of the Armenian economy.

Microsoft Innovation Centre Armenia provides IT communities with programs and services to expand work-force skills, create jobs, market incubation for the local startups, strengthen innovation and improve competitiveness.

disciplines, including physics, biology, mathematics, social sciences, and humanities. NAS RA maintains cooperation with numerous scientific institutions, including the Chinese Academy of Sciences, Chinese Academy of Social Sciences, and Indian Academy of Sciences.

Research and technological development

In Armenia, research and technological development was one of the core sectors of the economy before the collapse of the USSR. A newly independent Armenia inherited a developed network of research and education institutions covering a range of sectors.

The State budget is the main source of funding for science, supplemented by targeted and grant-based funding. Spending on research and development planned for 2025 is around AMD 40.2 billion (~0.36% of GDP). The STI funding framework supports research through three main programmes. **Basic funding**: foundational support for research institutions, ensuring the maintenance and development of essential scientific infrastructure and capabilities. **Targeted funding**: focused on national priority areas, this programme allocates resources to projects that align with Armenia's strategic research objectives, fostering advancements in key disciplines. **Grant funding for research teams**: encouraging collaborative research, this programme offers competitive grants to teams proposing innovative projects across various scientific fields.

Thanks to increases in the State budget for science, RA HESC launched several grant programmes aimed at integrating foreign researchers into the Armenian research community, further 'internationalising' research, and consolidating research potential at the national level. Around 20 types of grant programmes are available under State funding, including a special call for the empowerment of women in research.

The Government consistently supports STI projects to boost scientific excellence, strengthen international networks, and regionalise scientific-technological activities focusing on innovation-related aspects. One such project is the **Centre for the Advancement of Natural Discoveries** (**CANDLE**)**,** which uses third-generation synchrotron light source for fundamental, industrial and applied research in biology, physics, chemistry, medicine, material and environmental sciences.

Innovation and business enterprise sector

Armenia is actively fostering a dynamic innovation ecosystem, ranking competitively in global innovation indexes. It has made notable progress in innovation, ranking 63rd in the Global Innovation Index 2024. This marks an improvement in its position, solidifying its place among the top 70 most innovative economies worldwide.

The business enterprise sector in Armenia is growing rapidly. Government actively supports R&D-driven startups and the commercialisation of research by offering tax incentives to stimulate business growth and attract investment across multiple sectors. The country has an emerging startup ecosystem, particularly in AI, biotech, and IT sectors. The IT and high-tech industries are expanding, with companies such as **Synopsys Armenia** leading semiconductor design and software development.

Innovative Solutions and Technologies Center aims to enhance Armenian higher education in high-tech, strengthen research capabilities, and foster a product development environment for sustainable tech businesses.

Garni Temple dates to 77AD

Source: Silk Road Armenia

Source: Matenadaran

The '**Matenadaran' Mesrop Mashtots Institute of Ancient Manuscripts** houses a vast collection of some 23,000 manuscripts and serves as a major centre for the study and preservation of Armenian written heritage.

FAST is dedicated to fostering scientific and technological innovation in Armenia by supporting researchers, entrepreneurs, and scientists through various initiatives and calls in fields like AI, robotics, biotechnology, and advanced engineering. Some of the initiatives are designed to engage the Armenian diaspora in innovation projects.

Ghapama, traditional Armenian dish

Source: Armenia Travel

Enterprise Incubator Foundation (EIF) is Armenia's leading innovation and research agency, fostering business-led innovation in high-tech sectors and promoting regional advancement. EIF creates a productive environment for innovation and startup growth, boosting the competitiveness of IT and high-tech companies while stimulating foreign and direct investment (FDI) and global partnerships. Its projects cover all aspects of industry development – from nationwide ICT policy and global market representation to tailored startup services, skill development, and research. EIF connects multinational corporations, startups, public institutions, and international organisations to drive excellence in IT and engineering. With 23 years of experience, EIF has led industry studies, startup acceleration, R&D, training, and public-private-partnership (PPP) projects, and established venture funds, tech parks, and innovation centres. EIF also fosters an entrepreneurial culture and startup incubation within Armenia's higher education institutions. Three noteworthy projects include the **Engineering City**, **Innovative Solutions and Technologies Center** and **Microsoft Innovation Centre Armenia** (see boxes). **Other initiatives** are the Armenian-Indian Centre for Excellence in ICT (AITC), tech centres in Gyumri and Vanadzor, Start-up Grant Programmes, Cybersecurity Incubator and R&D Lab, National Supercomputing Centre of Armenia, R&D Ecosystem Development Programme, Science Incubation Programme, and many others.

Why choose Armenia for research?

Source: pixabay.com

The country offers a strong tradition in STEM fields, opportunities for international researchers, modernised research infrastructure, a collaborative research ecosystem, and a rich cultural and scientific heritage. Armenia also provides world-class resources such as the Matenadaran, a major centre for ancient manuscript studies. Scenic and cultural attractions, including Lake Sevan, the Greco-Roman temple of Garni, the UNESCO-listed Geghard Monastery, and many others add to the appeal. Armenia is also known for its diverse cuisine and unique culinary experience. The country's food culture is deeply rooted in hospitality, making it an inviting destination.

In addition to its strong research environment, Armenia's business and enterprise sector is expanding rapidly, driven by a growing startup ecosystem, Government support for innovation, and increasing FDI. The country has become a regional hub for IT and biotech industries, providing opportunities for collaboration between academia and the private sector.

Scientific diasporas in EURAXESS Worldwide (EWW) hubs

Around 7 million Armenians reside abroad. The Armenian scientific diaspora plays a crucial role in advancing global research collaboration, with over 100 distinguished foreign members of NAS RA contributing across various disciplines around the world, including 33 members in EWW countries: **USA (27), Canada (2), Japan (1), South Korea (1), Australia (2)**. They serve as key partners in advancing scientific research, education, and innovation by fostering international collaborations, mentoring young researchers, and facilitating knowledge exchange. Through joint projects, academic guidance, and technological expertise, they contribute to Armenia's global scientific

integration while strengthening ties between Armenian institutions and leading research centres worldwide. Armenia actively leverages its global diaspora to attract investment, expertise, and collaboration in research fields. Programmes such as the **Foundation for Armenian Science and Technology (FAST)** facilitate diaspora-led innovation projects.

Lake Sevan

Lake Sevan, often called the "blue-eyed beauty" of Armenia, is one of the largest freshwater alpine lakes in Eurasia, situated at an altitude of 1,900 metres above sea level. A must-visit destination in Armenia, Lake Sevan captivates visitors with its ever-changing hues, ranging from crystal-clear azure to deep, mystical blue, depending on the season and time of day.

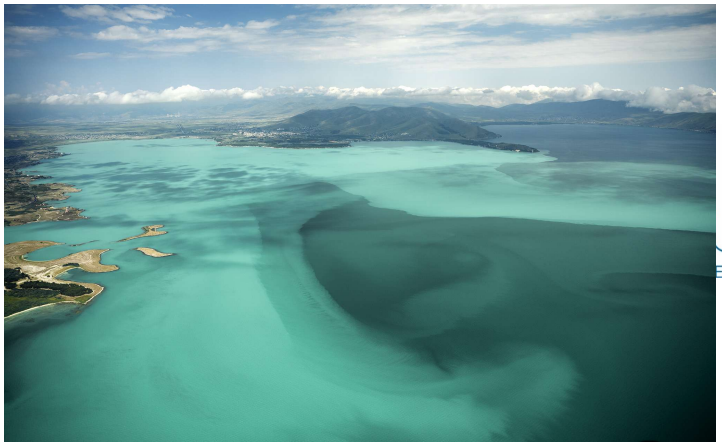
Contacts

National Contact Point for EU Horizon Europe

Scientific and Innovation Partnership Assistance Centre (SIPAC) was established by HESC MESCS RA as a foundation to support the Government's science internationalisation efforts and facilitate international scientific cooperation. SIPAC serves as National Contact Point of the EU's HE Programme and supports the participation of Armenian research teams and science-intensive organisations in European and international programmes.

EURAXESS Armenia

EURAXESS Armenia is part of a European Commission initiative to support mobile researchers through its Service Centres and Contact Points. SIPAC is the EURAXESS Service Centre of Armenia and together with EURAXESS Contact Points including Yerevan State University, Yerevan State Medical University and International Scientific-Educational Centre of NAS RA forms EURAXESS Armenia Network which offers personalised assistance and support to incoming and outgoing researchers and their families, as well as resources to support their professional development.



Source:Tiv1

2 HOT TOPIC: Misson Roundup - Adaptation to Climate Change

As we adjust to the rigours of a new year, EURAXESS Worldwide Newsletter brings a touch of the familiar with its continuation of the Mission Roundup series, this time zeroing in on Adaptation to Climate Change. We provide an overview of the mission, the EU Adaptation Strategy, and how activities are helping to meet European Green Deal commitments. We bring some statements on key initiatives and announcements, and remind researchers outside the European Union how they can access Horizon Europe (HE) programmes, projects, and funding.

Climate chaos reveals 'harsh truths' about our preparedness, research perspectives

With the echoes of COP29 still reverberating, news of raging winter fires in the USA, flash floods in Spain, and other extreme weather events across the planet, experts are calling for an end to climate delusions.

In statement after last November's UN Climate Change Conference, the EU's Mission Climate Change Manager Elina Bardram said the climate crisis is already here and we need to prepare for more extremes.

"Even as we accelerate climate action, the harsh truth is that global warming and its impacts will keep getting more drastic for years to come, even if we hit net-zero [carbon emissions targets] tomorrow," she said. Cutting CO2 is only part of the solution, she added, Europe also needs to step up its resilience to climate impacts and reduce the risks already faced.

This stark warning was followed by a series of observations and testimonials by members of the Adaptation to Climate Change Mission Board.

"Say 'Valencia' and all Europeans now realise what kind of challenges we have to prepare for," noted Connie Hedegaard, Chair of the Mission Board and former European Commissioner for Climate Action. Referring to the devastating flash floods experienced by the Spanish city in October 2024, she said everyone must work together more efficiently to fill knowledge gaps and develop innovative technical/financial solutions.

The Mission is helping to create National Hubs and fund relevant climate adaptation research. Through its tools and Charter, it is also helping to raising awareness of climate risks, showcasing adaptation measures and providing much-needed knowhow, funding and technical expertise to help climate-vulnerable communities implement their Climate Adaptation Plans (responding to the EU Adaptation Strategy).

Board member Eleni Myrivili, who is Global Heat Officer at UN-Habitat and the Atlantic Council, echoed these concerns: “Europe is the world’s fastest warming continent, with localised heatwaves taking a high toll on lives and livelihoods.” More heat means more droughts, wildfires, cloudbursts, and flash floods. She cited the European Environment Agency’s (EEA) concerns that European regions and cities are not properly prepared and struggling to streamline “multi-level governance solutions”.

This is where the Climate Adapt Mission is critical, she added, because it shows regional and local authorities how to become more resilient, developing “risk assessments, early warning systems, resilience infrastructure and nature-based solutions, while also connecting their efforts to national ministries and EU governance and funding”. (See *box* for more about the five missions.)

Leading by doing

Ms Bardram pointed out the EU’s success in reducing greenhouse gas emissions by 37% since 1990 and its steadfast commitment to reaching climate neutrality by 2050 through binding legislation. Such leadership counts for a lot, she felt, but facts on the ground dictate more resources be directed towards climate adaptation.

Europe is heating at twice the global rate and even in a best-case scenario will have to learn to live with a 3°C warmer climate, according to the March 2024 Communication on Managing Climate Risks (Q&A). The EEA’s European Climate Risk Assessment (EUCRA) analyses how this is likely to affect different parts of the European economy and society. It estimates that worsening climate impacts could cut EU GDP by around 7% by the end of the century. The cumulative additional reduction in GDP for the EU as a whole could amount to EUR 2.4 trillion in the period 2031-2050, if global warming stays permanently over the Paris Agreement’s 1.5°C threshold.

EUCRA identifies 36 key climate risks with five levels of urgency to help policymakers see how extreme climate events and amplified risks relate to sectoral policies and societal systems, such as health, food, and material/immaterial assets. Several risk areas have already reached critical levels, the March Communication noted, and more could reach critical levels by the end of this century without decisive action.

Dialogue and policy responses

“Despite the global effort to limit temperature increase to 1.5°C, the devastating effects of climate change are evident,” notes the European Commission on its Climate Resilience Dialogue (CRD) platform. “The financial cost of climate change is already high and on the rise, yet only around 30% of climate change-related losses are currently covered by insurance.”

Through continuous and open discussion, CRD seeks to boost collective understanding among insurers, reinsurers, businesses, consumers, and other stakeholders about the so-called climate protection gap. The platform also serves the Green Deal’s aims to increase and accelerate EU efforts to protect nature, people and livelihoods against climate-related calamities.

The Dialogue fosters exchanges on how the insurance industry can contribute more to climate adaptation through voluntary measures to expand climate risk insurance for industry and society. It is co-chaired by the European Commission's DG CLIMA and DG FISMA, and is one of many actions undertaken to reduce the climate protection gap, as supported by the Strategy for Financing the Transition to a Sustainable Economy.

Indeed, climate action involves diverse policy responses. Many areas fall under the EU's wider plans to become more sustainable and competitive under the Green Deal, Clean Industrial Deal (and Net-Zero Industry Act), circular and resilient economy efforts, and myriad initiatives encouraging a dual green- and digital transition, benefiting from resource efficiency, smarter business, and productivity gains through a cleaner, more efficient industrial base.

Robust science drives progress in green and digital transitions as well as increasingly related developments in health and the life sciences. These connections are touched on in a July 2024 *Euronews* story on EU legislative proposals for both critical medicines and biotech, and a *Politico* opinion piece one month later discussing Commission President von der Leyen's new mandate (2024-2029) and priorities in the face of disruptive global change.

"Geopolitical, societal, economic, health and climate challenges are driving the need for a clear direction and policy coherence with a sense of ambition," writes Nathalie Moll, Director General of EFPIA, an industry association. "That is certainly true for life sciences in Europe, and reflected in the welcomed inclusion of a *life sciences strategy* in the president's political guidelines."

R&I, testing new ideas

Climate action can take many forms, from raising awareness of the threats to better weather monitoring and data-gathering, from developing digital solutions for climate planning to reinforcing essential infrastructure or building capacities and defenses, among many others.

Research and innovation (R&I) plays a vital role in the effort to understand and address climate challenges, and the Mission is seen as making real progress in helping Europe's regions and communities adapt to a changing climate. It provides a platform for testing new ideas, pilots, and policies that put adaptation and resilience firmly in the focus.

Longer timeframes to prepare for the worst consequences of climate change are no longer a luxury. The EU is well aware of this as it works to protect people and prosperity from the gravest impacts of a warming climate, including natural consequences, social strains, threats to business, and geopolitical and territorial tensions.

The Commission's efforts to promote smarter, faster, more systematic climate adaptation forms part of its Climate Adaptation Strategy and Plan, further reinforcing the Mission's achievements. "As the EU refines its broader climate adaptation policy, the Mission will remain a catalyst for local and regional action for climate resilience, ensuring adaptation is not only a priority but a tangible reality," Ms Bardram noted. "The key lies in aligning

policy with action, enabling effective implementation of strategies across all EU countries, cities, regions, and local authorities."

Steady flow of best practices

Horizon Europe's direction of flow aligns with the new Commission mandate, as evidenced by its strong emphasis on funding pipelines for breakthroughs and disruptive innovation with scale-up potential, reinforced open science policy (see Factsheet), clearer approach to EU-industry partnerships and global R&I cooperation, and of course the five Missions including 'Adaptation to climate change'.

Researcher mobility is a vital pillar in helping the EU achieve its Climate Adaptation ambitions and wider Green Deal imperatives. Indeed, a high-skilled labour force and advances in research and technology emerging from more opportunities and investment in a greener, net-zero future is a priority under Horizon Europe. An expanded role for the European Research Council (ERC) and European Innovation Council (EIC) is among the many instruments being employed to help deliver R&I from the lab to market faster.

Reports published in 2023 confirm that the Missions serve as a galvaniser and repository of best practice for all interested parties. In the remaining years of Horizon Europe, it is expected to further leverage and respond to Europe's climate risks.

According to the Climate Adaptation assessment, the various Mission calls (none currently open as at mid-January 2025) have boosted visibility by involving a range of stakeholders, including public authorities, in the solution-development process. The mission implementation platform (MIP4Adapt) is a key instrument, the authors noted, because it provides services to Charter signatories as well as other regional and local authorities in the form of information, technical assistance, and networking opportunities. A portfolio of Mission-related projects – funded by Horizon Europe and other sources – has been assembled to foster stronger links between projects and participants.

Today, more than 300 regions have signed up to the Mission's Charter. According to Ms Bardram, they bring diverse perspectives and experiences to the table, reflecting the challenges and successes of building resilience in their regions and countries, and they enhance the EU's readiness to deal with "whatever comes next".

Climate change, EU action, and Horizon Europe Missions

Whether it's from burning fossil fuels, cutting down forests, intensive farming or other forms of carbon emissions, the actions of governments, industries and individuals have a powerful influence on the climate and the Earth's temperature. The resulting climate change poses a serious threat to the planet and people, and its consequences impact many different aspects of our lives.

EU climate action is headlined by forward-looking legislation and the European Green Deal striving to transform the EU into a modern, resource-efficient and competitive economy. That means things like no net emissions of greenhouse gases by 2050, decoupling economic growth from resource use, and making sure no person or place is left behind during the green

transition that unfolds, which includes proposed climate, energy, transport and taxation policies for reducing net emissions by at least 55% by 2030 (so-called 'Fit-for-55' climate-neutrality policies), compared to 1990 levels.

Five in one

The Horizon Europe Missions, launched by the European Commission, are solution-driven initiatives tackling the most pressing challenges of our time. A package of five moonshot missions – 'Adaptation to Climate Change', 'Cancer', 'Soil Health and Food', and the 'Restoration of Oceans and Water' – set out clear targets with matching timescales and initiatives dealing with systemic problems. They draw from a vast network of researchers, policymakers, and diverse stakeholders including grassroots/citizen groups and young people to deliver innovative, tangible and inclusive solutions. Novel formats like living labs (real-life open innovation ecosystems), community manifestos, and lighthouse initiatives are employed to empower communities across Europe through collective effort to secure a sustainable, resilient, and healthier future for all.

While early days in the overall lifecycle of the Missions, thanks to targeted Horizon Europe funding and deep commitment by public and private investors and civil society supporters, they have "demonstrated their potential to accelerate change", according to a Commission Communication on status update (IP 23 3931).

The assessment points out the main achievements of the individual Missions, identifies challenges they faced, and puts forward possible actions to address these.

More info

Mission Climate Change

Climate-Adapt (EEA)

EU Funding and Tenders Portal

MIP4Adapt

3 In case you missed it...

Find latest EU Research and Innovation News and open Calls on our EURAXES India website.

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