



# HORIZON EUROPE CLUSTER 5 REGIONAL INFO DAY

ENHANCING EU-CENTRAL ASIA RESEARCH COLLABORATION IN HORIZON EUROPE Almaty, 20 May 2025

Insights into Kazakhstan's Participation Landscape

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## **Horizon Europe**

- Mechanism and structure
- Success stories
- Kazakhstan's participation

#### **Activities of National Coordination Centre**

- Activities in 2023-2024
- MSCA NET Project
- Next steps











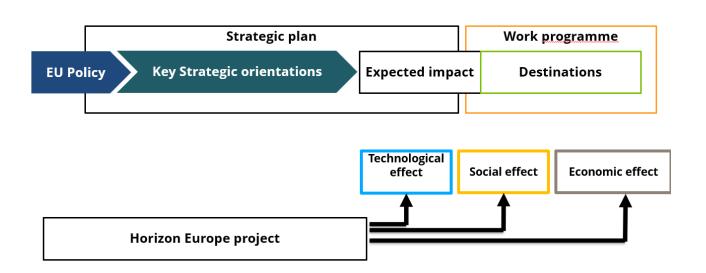






Major EU program on research and innovation with a €95,5 bln budget for 2021-2027

## The mechanism of the Program



#### Objectives:

Ensuring scientific, economic and social impact of EU

investments in R&I

- Fostering competitiveness in EU and beyond
- Addressing global challenges in sustainable development















### **Programme Structure**

#### SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT\*

Exclusive focus on civil applications



Pillar I EXCELLENT SCIENCE

**European Research Council** 

Marie Skłodowska-Curie

**Research Infrastructures** 



Clusters

Pillar II
GLOBAL CHALLENGES &
EUROPEAN INDUSTRIAL
COMPETITIVENESS

- Health
- Culture, Creativity & Inclusive Society
- · Civil Security for Society
- Digital, Industry & Space
   Climate Energy & Mobility
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre



European Innovation Council

European Innovation Ecosystems

European Institute of Innovation & Technology\*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system















### Pillar I

#### European Research Council

- Funding for individual researchers (and their teams) to pursue excellent frontier research
- Schemes: Starting Grants, Consolidator Grants, Advanced Grants and Synergy Grants
- Budget of €16 billion (2021-2027)

#### Research infrastructures

• facilities that provide resources and services for the research communities to conduct research and foster innovation in their fields open to the best researchers from Europe and beyond

#### Marie Sklodowska-Curie Actions

- flagship funding programme of the EU for doctoral education and postdoctoral training of researchers
- Actions: Doctoral Networks, Postdoctoral Fellowships, Staff Exchanges, COFUND, MSCA and Citizens

ERC Work programme 2025



RI Work programme 2023-2025



MSCA programme 2023-2025

















Research and Innovation Actions (RIA)	new knowledge and/or improved technology, product, process, service or solution TRL 3-6	100% EU funding for all types of organizations+ a flat rate of 25 % for all types of actions and beneficiaries
Innovation Actions (IA)	plans or designs for new or improved products, processes or services	100% EU funding rate for non-profit organizations – 70% for all other types of participants+a flat rate of 25 % for all types of actions and beneficiaries
Coordination & Support Actions (CSA)	standardization, dissemination, awareness-raising, communication and networking activities, policy dialogues, mutual learning or studies	<ul><li>100% EU funding for all types of participants</li><li>+a flat rate of 25 % for all types of actions and beneficiaries</li></ul>
COFUND	multi-annual co-funding for European partnerships bringing together public and private partners.	Funding rate <b>30-50%</b>















#### Success stories



Recovery of valuable rare earth elements (REEs) from phosphogypsum, a waste by-product of fertilizer production

A cost-efficient, eco-friendly process using biodegradable lixiviants to extract REEs.

Enables circular economy in fertilizer industry while reducing environmental waste and dependence on imported REEs.



Advanced Design Tools for Ocean Energy Systems Innovation, Development and Deployment
Open-source software tools—the Structured Innovation Tool, Stage Gate Tool, Deployment Tools, and Assessment
Tools—that support the entire innovation, development, and deployment process for ocean energy systems.
Impact in providing clean, affordable and sustainable energy.



Mapping Corporations to Understand Economic Complexity
Interactive network visualizations and databases integrating millions of corporate and economic links.
Enhances policymaking and transparency by revealing global corporate influence and economic interdependencies.

More information can be discovered here <a href="https://projects.research-and-innovation.ec.europa.eu/en/projects/success-stories">https://projects.research-and-innovation.ec.europa.eu/en/projects/success-stories</a>















# **Current projects**

Project title	Research Organization
MOCCA Multilevel Orders of Corruption in Central Asia	Jetisu university
ORCA Open(ing) Research in Central Asia: consolidating a culture of research ethics, data management, and open science, in Eurasia and beyond	Al-Farabi Kazakh National University Suleiman Demirel University
EuAsiaN-ROOT Eurasian Network for Collaborative Research on Tree-Root-Mycorrhizal-Pathogen Interactions in Forest Soils	Kazakh Research Institute of Soil Science and Agrochemistry named after Uspanov
CLEANWATER Multifunctional sustainable adsorbents for water treatment assisted with plasma technologies and for health protection from xenobiotics	Satpayev University
CARSI Caucasus and Central Asia Research on Social Innovation: Development Assistance, Innovation and Societal Transformation	Al-Farabi Kazakh National University
PRELAB Precarious Labour in Asia: Exploring Challenges and Solution to Labour Insecurity through Case- Study-Based Evidence from 8 Asian Countries	KIMEP
LOC3G Localization in Geophysics, Geohazards and Geoengineering	Nazarbayev University
FunctiGlass Structured functional glasses for lasing sensing and health applications	Nazarbayev University
MARS Non-Western Migration Regimes in a Global Perspective	Nazarbayev University
UPGRADE multiscale IoT equipped long linear infrastructure resilience built and sustainable development	Nazarbayev University
Contributing to anti-corruption programmes and efforts in Central Asia	Jetisu University
Soil Salinity Estimation for South Kazakhstan Based on SAR Sentinel-1 and Landsat-8,9 OLI Data with Machine Learning Models Earth Observation for Early Warning of Land Degradation at European Frontier''	Institute of Automation and Information Technologies Satpayev University







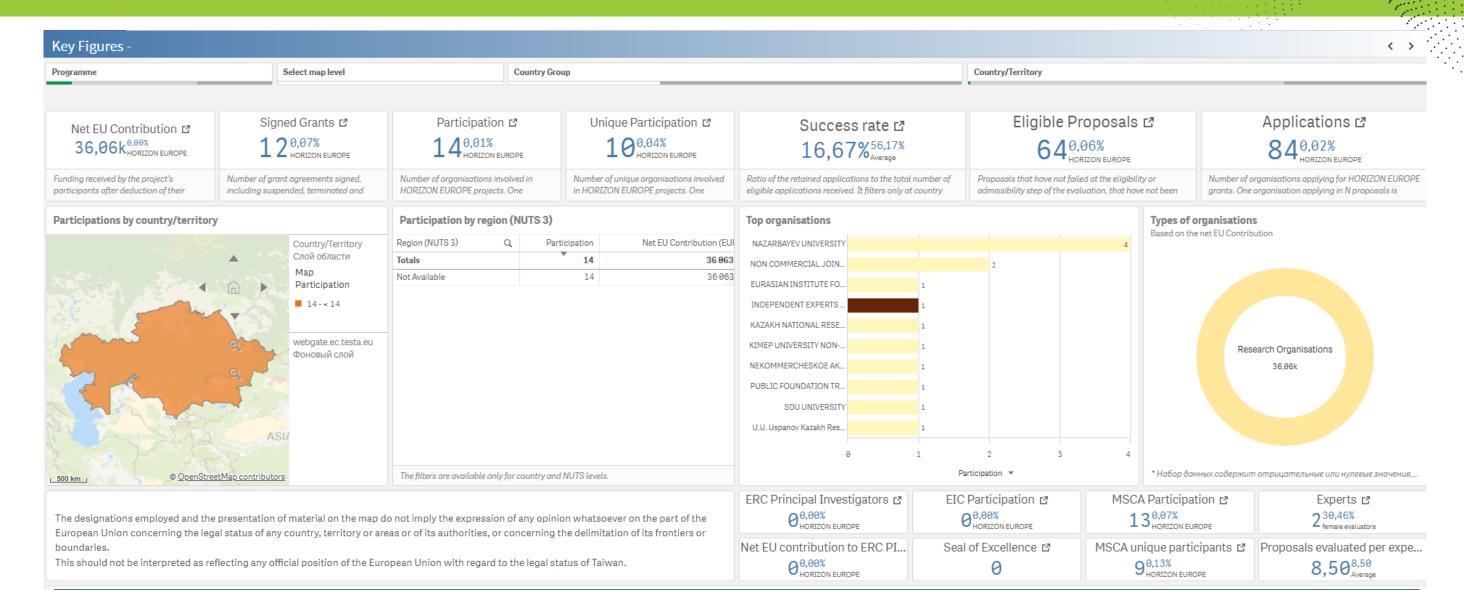






## Glȯ̀bal ∗Gateway

# Participation profile: Kazakhstan



















# **Activities of the National Coordination Centre**













# National Coordination Center for EU Framework Programmes on R&I in Kazakhstan (Decree of the MSHE RK dated April 27, 2023)

2023



2024



2025

- Program Orientation
- Participation in training sessions by EU
- Preparation of NCP Presentation Materials
- Trainings for Kazakhstani ROs

- EU DG RTD visit to Astana
- EU Partnerships for NCP
- Proposal Preparation for Call Participation
- Trainings for Kazakhstani ROs
- Exchange of expertise with Central Asian NCPs
- Establishment of NCP Network

- Regional info day on May 20
- EU DG RTD visit to Kazakhstan
- Agreement for the Implementation of the MSCA-NET Project
- Kazakhstan in the Work Program

# **Priority areas**



REM mining and processing



Agriculture



Sustainable energy



5

**Coordinators for Pillar II clusters** 

4 Clusters and MSCA



7

**Webinars** 

For 200 attendees



5

**Offline seminars** 

For 150 attendees



#### Activities in 2023-2024



# International Workshop on Exploration, Production, Processing and Supply Chains of Critical Raw Materials

(with Nazarbayev University and speakers from industry)
<a href="Date: 05 September 2023">Date: 05 September 2023</a>



#### **Expert Seminar on the Health Cluster**

(with the Batpenov Research Institute of Traumatology and Orthopedics, Nazarbayev University School of Medicine and the National Scientific Cardiac Surgery Center. Speaker: Prof. Dr Sarria-Santameraof Nazarbayev University School of Medicine)

Date: 27 October 2023



**Information Session** on program components and participation procedures (with Astana IT University)

<u>Date: 01 March 2024</u>

# Horizon Europe in Central Asia: Promoting Sustainable Research Excellence and Collaboration (by SECCA project



(with EU project on Sustainable Energy Connectivity in Central Asia, with the participation of a representative of the EU Directorate General for Research and Innovation, the National Coordinators of Poland and Georgia.)

Date: 14 May 2024

#### **Key results**

- ➤ 10 trainings held for 200 attendees
- Application submitted to the European Cooperation in Science and Technology (COST) program with EU partners
- a network of cluster-based coordinators from HEIs established (Nazarbayev University, Daulet Serikbayev EKTU, Satpayev University).
- a database of Kazakhstani research organizations in sustainable energy research
- joined Horizon Europe MSCA-NET project, aimed at strengthening cooperation and improving the services of national coordinators.















# Global Cooperation with EU DG RTD: Key dates

21-26 November 2023	Participation in the 5th Annual Horizon Europe National Coordinators Meeting and Horizon Academy Training in Brussels, Belgium
12-13 November 2024	Participation in the 7th Annual Meeting of Horizon Europe National Coordinators and Horizon Academy Training in Brussels, Belgium
13 May 2024	Visit of the Representative of the EU Directorate for Research and Innovation to Kazakhstan
14 May 2024	Meeting of the EU Directorate Representative with the Vice- Minister of Science and Higher Education of the Republic of Kazakhstan and HEIs and research institutes in Astana.
20-21 May 2025	Regional Info Day on EU-CA Science Cooperation in Almaty
	Visit of the Representative of the EU Directorate for Research and Innovation to Almaty, Kazakhstan

















# MSCA-NET PROJECT "Research Advisors in action, NCP cooperation for excellence" (RADIANCE)



Objective: enhance cooperation between Horizon Europe MSCA NCPs and harmonisation of their services in EU and and third countries



#### Tasks:

- Current analysis and identification
- ✓ Development of communication strategies
- Collaboration and capacity building
- Implementation of digital tools for cooperation development
- ✓ Communication and dissemination

#### **26** consortium members



Independent think tank Switzerland EURESEARCH



Italian Agency for the Promotion of European Research (APRE)



Ministry of Higher Education and Research of France



German Aerospace Center (DLR)



Science Fund JSC (SF)

### Advantages for Kazakhstan

- Increasing the quantity and quality of applications from Kazakhstan
- International cooperaton
- Development of human resources
- Integration into the global research community















### Strategic partnership of EU and KAZAKHSTAN





#### COOPERATION IN THE FIELD OF CRITICAL RAW MATERIALS AND GREEN ENERGY

ENHANCED PARTNERSHIP AND COOPERATION AGREEMENT (EPCA) BETWEEN THE EU AND THE REPUBLIC OF KAZAKHSTAN OF 4 FEBRUARY 2016

MEMORANDUM OF UNDERSTANDING ON SUSTAINABLE RAW MATERIALS, BATTERIES AND GREEN HYDROGEN VALUE CHAINS OF 7 NOVEMBER 2022 SET OF "CONCRETE ACTIONS FOR THE IMPLEMENTATION OF THE MEMORANDUM OF UNDERSTANDING" WITH KAZAKHSTAN FROM MAY 19, 2023



# ON 5 SEPTEMBER 2023, NCC HELD AN INTERNATIONAL WORKSHOP ON EXPLORATION, PRODUCTION, PROCESSING AND SUPPLY CHAINS OF CRITICAL RAW MATERIALS

#### **OBJECTIVE**

Creating a platform for potential applicants to plan project proposals



Key areas identified for cooperation

(additional supply chain requirements, exploration and production technology)

Representatives of academia, industry and commercial organizations, including SMEs

Participants noted the high value of the event for networking and knowledge exchange

#### HORIZON EUROPE 2025 WORK PROGRAMME AND THE EU-RK ROADMAP 2025-2026

Focus on Central Asia and particularly Kazakhstan in Horizon Europe 2025 Work Program Roadmap for the implementation of the EU-Kazakhstan MOU on Raw Materials for 2025-2026















## The Next Steps – Association to Horizon Europe

#### **Rationale:**

Direct access to HE funding, networks, and programs

Elevate national research excellence and innovation capacity

Integration into the European Research Area (ERA)

#### **Enablers:**

Alignment with HE regulatory and policy frameworks

Minimum 3 HE applications annually per Research Organization (RO)

#### **Anticipated Impact:**

Increased HE proposal participation and success rate

Stronger international partnerships for national R&I actors

Accelerated alignment with EU green, digital, and health missions

















# Thank you

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