




TECHNOLOGY
CENTRE PRAGUE

HORIZON EUROPE CLUSTER 6

—
Nad'a Koníčková, Technology Centre Prague
Gudrun Langthaler, The Research Council of
Norway



HORIZON EUROPE STRUCTURE

 PILLAR I EXCELLENT SCIENCE	 PILLAR II GLOBAL CHALLENGES & INDUSTRIAL COMPETITIVENESS	 PILLAR III INNOVATIVE EUROPE
European Research Council	Clusters <ul style="list-style-type: none">HealthCulture, Creativity & Inclusive SocietyCivil Security for SocietyDigital, Industry & SpaceClimate, Energy & MobilityFood, Bioeconomy, Natural Resources, Agriculture & Environment <p>Joint Research Centre</p>	European Innovation Council
Marie Skłodowska-Curie		European Innovation Ecosystems
Research Infrastructures		European Institute of Innovation & Technology

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA
Widening participation & spreading excellence | Reforming & Enhancing the European R&I system

CLUSTER 6 WORK PROGRAMME FOR 2023-2024

- 7 destinations
- Separate calls for each destination
- Calls open 17 October 2023, deadlines in February 2024
- Both one and two stage submission procedure
- Type of Instruments:
 - Research and Innovation Actions
 - Innovation Actions
 - Coordination and Support Actions
 - Cofund
- In some topics specific requirements for **multi-actor approach**
- In some topics **lump sum funding**
- In some **international cooperation** encouraged
- In some topics **blind evaluation pilot** (1st stage of 2-stages calls)

THE MULTI-ACTOR APPROACH



Why?

- Demand-driven innovation
- Responsible R&I and sharing
- Relevance for society

How?

- **Involve** end users
- **Researchers, farmers, foresters**, advisors, businesses, civil society, NGOs, policy makers, etc.
- **Involve** from proposal development to results and demo

What evaluators are asked to look for

- **Proper integration** in project structure and planned activities?
- Access to **practical (tacit) knowledge** from the users – how?
- EU-wide communication – use **EIP-AGRI** (practice abstracts) and CAP-features

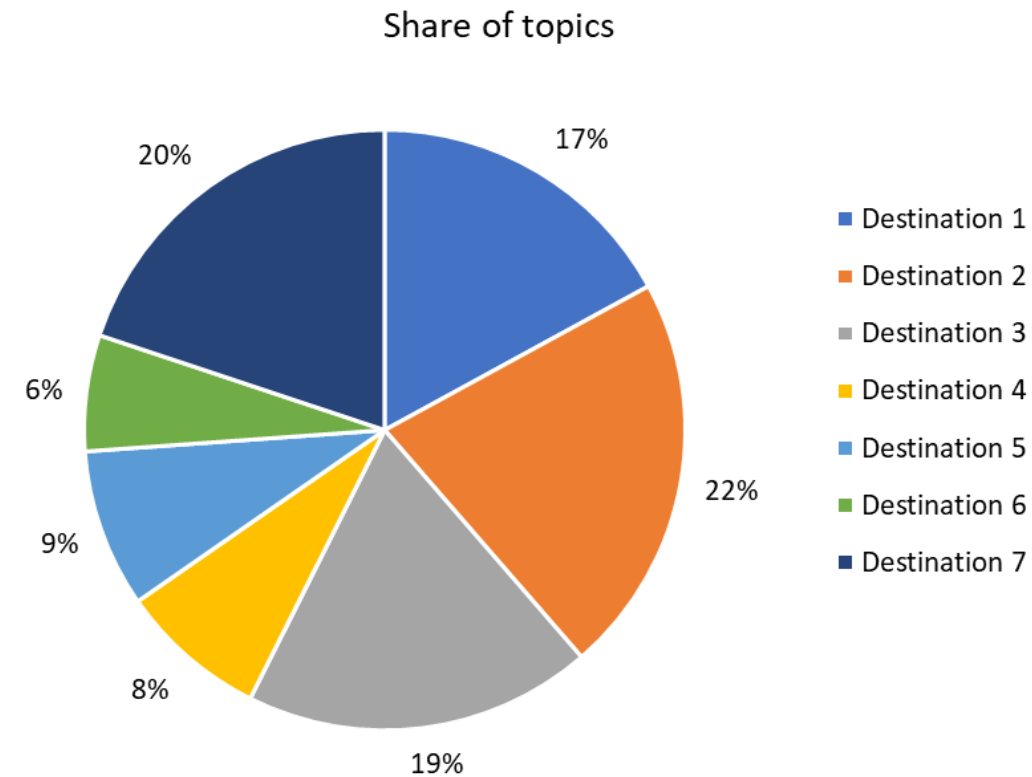
Explain concrete measures on how to integrate, involve and deliver

CLUSTER 6 WORK PROGRAMME FOR 2023-2024

Number of topics per destination

Destination	Number of topics (2023 and 2024)
1. Biodiversity and Ecosystem Services	18 + 12
2. Fair, healthy and environmentally-friendly food systems from primary production to consumption	20 + 18
3. Circular economy and bioeconomy sectors	17 + 16
4. Clean environment and zero pollution	9 + 5
5. Land, oceans and water for climate action	8 + 7
6. Resilient, inclusive, healthy and green rural, coastal and urban communities	6 + 5
7. Innovative governance, environmental observations and digital solutions in support of the Green Deal	22 + 12
Total	175

- Other actions excluded



1. BIODIVERSITY AND ECOSYSTEM SERVICES



- Understand and address direct drivers of biodiversity decline
- Plan, manage and expand protected areas
- Mainstream biodiversity, ecosystem services and natural capital in the society and economy
- Develop and improve practices in agriculture, forestry, fisheries and aquaculture
- Interconnect biodiversity research and support policies and processes

2024:

- 1 and 2 stage evaluation calls
- deadline: **22 February 2024** (2 stage: **17 September 2024**)
- **12 topics** (9 RIA, 3 IA), examples:
 - alien species; digital for nature; pollinators; organic aquaculture; sustainable management of water resources; minor crops in farming systems; ...

HORIZON-CL6-2024-BIODIV-01-8: CONSERVATION AND PROTECTION OF CARBON-RICH AND BIODIVERSITY-RICH FOREST ECOSYSTEMS

- RIA, 2 projects, 6 mil. eur, multi-actor approach
- project outcomes:
 - ✓ impacts of climate change on **forest biodiversity** and forest **species migration**
 - ✓ management practices and ecosystem protection and restoration methods and tools
 - ✓ drivers and barriers for **natural co-migration** of forest communities
 - ✓ joint **monitoring** of biodiversity and climate aspects on forests
 - ✓ analysis of the current forest management and conservation practices in European forests
 - ✓ strict protection of **primary and old-growth forest** in Europe by 2030
- **scope:**
 - case studies
 - particularly forests of high ecological value (primary and old-growth forests, Mediterranean forests, peat swamp forests or mangroves)
 - predictive models of biodiversity changes
 - assisted tree migration to maximize dynamic gene conservation
 - protection strategies that consider the larger landscape and regional context to allow natural species and community migration
 - approaches and guidelines for forest managers and conservationists
 - connection with relevant institutions at all levels + relevant stakeholders to regularly disseminate the research results.
 - monitoring techniques, including remote-sensing and field-data methods (AI, IoT, robotics or blockchain)



2. FAIR, HEALTHY AND ENVIRONMENTALLY-FRIENDLY FOOD SYSTEMS FROM PRIMARY PRODUCTION TO CONSUMPTION



- Sustainable, climate neutral and biodiversity friendly farming systems
- Sustainable fisheries and aquaculture
- Sustainable, healthy and inclusive food systems

2024:

- 1 and 2 stage evaluation calls
- deadline: **22 February 2024** (2 stage: **17 September 2024**)
- **18 topics** (10 RIA, 7 IA, 1 CSA), examples:
 - healthy and sustainable food products; food fraud; food safety; alternative source of proteins; prevention and reduction of food waste; EU-Africa agroforestry management; EU-Africa fair trade food systems; organic farming; plant health; plant pests; animal nutritional requirements; minimizing climate impact of fisheries / aquaculture; ...

3. CIRCULAR ECONOMY AND BIOECONOMY SECTORS



- climate-neutrality, zero pollution, fair and just circular and bioeconomy transitions
- safe, integrated circular solutions at territorial and sectoral levels
- key bioeconomy sectors such sustainable bio-based systems, forestry, small-scale rural bio-based solutions, environmental services and aquatic value chains

2024:

- 1 and 2 stage evaluation calls
- deadline: **22 February 2024** (2 stage: **17 September 2024**)
- **16 topics** (5 RIA, 8 IA, 3 CSA), examples:
 - biodegradation capability of bio-based materials; digital systems for bio-based products; circular bioeconomy start-up villages; circular solutions for textile, plastics and electronics value chains; water and wastewater management; ...

4. CLEAN ENVIRONMENT AND ZERO POLLUTION

- Halting pollution of air, soil and water
- Enhancing circular bio-based systems
- **2024:**
 - 1 and 2 stage evaluation calls
 - deadline: **22 February 2024** (2 stage: **17 September 2024**)
 - **5 topics** (2 RIA, 2 IA, 1 CSA), examples:
 - limiting nitrogen and phosphorus emissions at regional level; recovering or recycling fertilising products from secondary raw materials; envi impacts of food systems; monitoring of water quality in cities; zero pollution, zero-waste biorefineries



HORIZON-CL6-2024-ZEROPOLLUTION-01-1: DEMONSTRATING HOW REGIONS CAN OPERATE WITHIN SAFE ECOLOGICAL AND REGIONAL NITROGEN AND PHOSPHORUS BOUNDARIES

- **IA, 3 projects, 9 mil. eur, TRL 8, SSH should be included**
- **project outcomes:**
 - ✓ best practice to reduce N/P emissions into water, air and soil from all emitting sectors
 - ✓ demonstrate environmental, economic and behavioural effects of aforementioned N/P limiting solutions
 - ✓ guidance on practices to control regional N/P flows and recommendations to relevant actors (policymakers, local administrations, practitioners, industries etc.)
- **scope:**
 - N/P budgeting methodology to identify the maximum allowable input of N/P at regional/river basin scale (by respecting existing EU legislation)
 - practices that help balance emissions from N and P-based fertilisers in agriculture, enhance soil health, reduce eutrophication and water pollution and limit harmful emissions to air
 - test innovative practices to make use of secondary raw materials and produce N and P-based fertilisers recovered from organic waste, wastewater, biological residues or by-products
 - novel governance approaches and other incentives supporting practices to limit N/P emissions and develop respective guidelines and recommendations for all concerned stakeholders
 - provide recommendations on the design of harmonised, coherent and efficient regional policies and regulatory instruments that facilitate eliminating and preventing N/P pollution

5. LAND, OCEANS AND WATER FOR CLIMATE ACTION

- adaptation and resilience of natural and managed ecosystems
- climate change mitigation in the primary sectors
- sustainable management of scarce resources

2024:

- 1 stage call
- deadline: **22 February 2024**
- **7 topic** (5 RIA, 2 IA), examples:
 - irrigation practices and technologies in agriculture; paludiculture; climate-smart use of wood in construction sector; ...



Paludiculture

Rewetting of 500' hectars (Climate goals, Biodiversity strategy, Nature Restoration Law, links to the Soil, Ocean and Climate Adaptation Missions

- **Socioeconomic, climate and environmental aspects**

- RIA - 5 million Euro

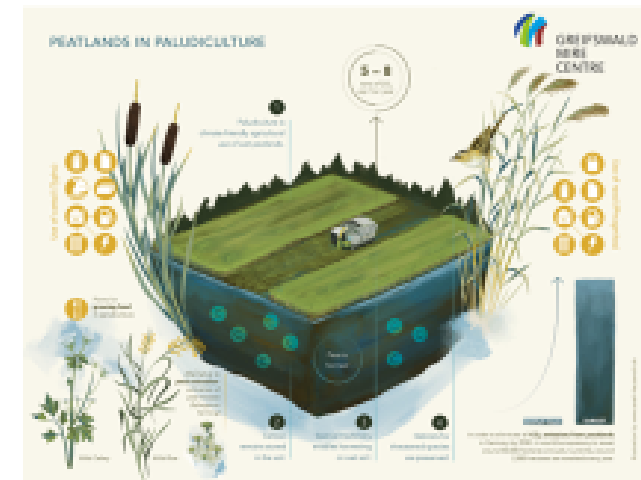
Provide jobs and income, climate benefits, water quality, nature conservation

- **Large scale demonstrations**

IA – 10 million Euro, 2 projects

Practical options – min 50 ha in three areas –

Multi-actor approach



HORIZON-CL6-2024-CLIMATE-01-1: IMPROVING IRRIGATION PRACTICES AND TECHNOLOGIES IN AGRICULTURE

- RIA, 2 projects, 5 mil. eur, multi-actor approach, TRL 6-7
- **project outcomes:**
 - ✓ solutions and prevention tools for water management in areas of **water scarcity**
 - ✓ support for end-users seeking innovative solutions in **irrigation technologies**
 - ✓ potential of **recycled sewage sludge and other biowaste streams** as alternative resources for agriculture
 - ✓ socio-economic and environmental potential of **alternative** irrigation practices such as fog harvesting
 - ✓ **reduced** agricultural **water demand** (optimized irrigation systems, more sustainable farming systems)
- **scope:**
 - sewage sludge and other biowaste streams
 - on-farm water management practices, water recycling, reducing run-off patterns
 - use of water and fertilizers via irrigation for different agricultural systems
 - alternative water for agriculture (e.g., superabsorbent polymers/‘solid water’), incl. socio-economic, environmental, health impacts
 - practices and solutions in farms to deal with the effects of water abundance (rapid showers, floods) and/or water scarcity
 - societal and regulatory barriers hampering upscaling of recycled water-use
 - recommendations for incentives and policies to reduce financial risks for early adopters of practices developed in project

6. RESILIENT, INCLUSIVE, HEALTHY AND GREEN RURAL, COASTAL AND URBAN COMMUNITIES



- sustainable development of rural, coastal and urban areas
- their preparation to achieve climate-neutrality
- innovative and smarter circular solutions

- **2024:**
 - 1 and 2 stage evaluation calls
 - deadline: **22 February 2024** (2 stage: **17 September 2024**)
 - **5 topics** (3 RIA, 2 IA), examples:
 - New European Bauhaus in urban food system transformation; rural life and jobs; business and production models for farmers and rural communities; ...

7. INNOVATIVE GOVERNANCE, ENVIRONMENTAL OBSERVATIONS AND DIGITAL SOLUTIONS IN SUPPORT OF THE GREEN DEAL



- innovative governance models enabling sustainability and resilience
- further deployment and exploitation of environmental observation data, products and “green” solutions
- strengthened Global Earth Observation System of Systems

2024:

- 1 stage call
- deadline: **28 February 2024**
- **12 topics** (2 RIA, 8 CSA, 1 Cofund, 1 PCP), examples:
 - food systems transformation at regional level; organic farming thematic networks; EU advisory network on forestry and on sustainable livestock systems; ...

EUROPEAN PARTNERSHIPS IN CLUSTER 6

- Co-funded partnerships (EU + partners from public or private sectors)
 - Rescuing biodiversity to safeguard life on Earth
 - Implemented by TACR
 - Water4All: Water security for the planet
 - Implemented by TACR
- Institutionalised partnership
 - **Circular bio-based Europe**



https://ec.europa.eu/info/horizon-europe/european-partnerships-horizon-europe_en

FUNDING & TENDER OPPORTUNITIES PORTAL

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>

The screenshot shows the 'Funding & tender opportunities' portal. At the top, there is the European Commission logo and the text 'Single Electronic Data Interchange Area (SEDIA)'. The language is set to English. Navigation buttons for 'Register' and 'Login' are visible. A main navigation bar includes 'SEARCH FUNDING & TENDERS' (highlighted in yellow), 'HOW TO PARTICIPATE', 'PROJECTS & RESULTS', 'WORK AS AN EXPERT', and 'SUPPORT'. Below this, a blue banner displays 'Horizon Europe (HORIZON)' with a 'clear filter' button. The left sidebar contains a search bar with the placeholder 'Type your Keywords...' and a search icon. Below the search bar are filters for 'Match whole words only' (checked), 'GRANTS' (checked), and 'TENDERS' (checked). Under 'Submission status', there are three buttons: 'Forthcoming(6)', 'Open for submission(2)', and 'Closed'. The 'Programming period' section has a dropdown menu currently showing 'Horizon Europe (HORIZON)'. The main content area is titled 'Funding and tenders (8)' and includes a 'Need help?' button, a calendar icon, a RSS icon, and a 'Sort by: Submission status' dropdown. Three funding opportunities are listed:

- ERC STARTING GRANTS**
 - Open for submission
 - Programme: Horizon Europe (HORIZON)
 - ID: ERC-2021-STG
 - Types of action: HORIZON ERC Grants
 - Deadline model: single-stage
 - Opening date: 25 February 2021
 - Deadline date: 08 April 2021 17:00:00 Brussels time
- EU Prize for Women Innovators**
 - Open for submission
 - Programme: Horizon Europe (HORIZON)
 - ID: HORIZON-EIC-2021-WomenInnovatorsPrize
 - Types of action: HORIZON Recognition Prize
 - Deadline model: single-stage
 - Opening date: 18 March 2021
 - Deadline date: 30 June 2021 17:00:00 Brussels time
- The European Capital of Innovation Awards**

COOPERATION IN HORIZON EUROPE



PARTICIPATION OF CZ AND NO IN HE – CLUSTER 6 as of 19th June 2023

COUNTRY	PARTICIPATIONS	PROJECTS	ORGANIZATIONS
CZ + NO together cluster 6 total	61 (27 CZ + 34 NO)	19	42 (16 CZ + 26 NO, incl. 1 CZ coor. + 1 NO coor.)
• CZ + NO together SOIL Mission	9 (5 CZ + 4 NO)	4	8 (5 CZ + 3 NO; 0 coor.)
• CZ + NO together OCEAN Mission	3 (1 CZ + 2 NO)	1	3 (1 CZ + 2 NO; 0 coor.)
Czech Republic cluster 6 total	85	67	46 (incl. 3 coor.)
• Czech Republic – SOIL Mission	8	7	6 (0 coordinators)
• Czech Republic – OCEAN Mission	6	3	6 (0 coordinators)
Norway cluster 6 total	184	104	87 (incl. 17 coor.)
• Norway – SOIL Mission	6	6	5 (0 coordinators)
• Norway – OCEAN Mission	35	14	22 (incl. 3 coor.)

THE MOST REPRESENTED ORGANIZATIONS IN CLUSTER 6 PROJECTS WITH COMMON CZ AND NO PARTICIPATION

Czech Republic (total 16 organizations)

Participants:

- Czech University of Life Sciences
- Global Change Research Institute of the CAS
- Mendel University in Brno
- Ministry of the Environment of the CR
- Technology Agency of the Czech Republic

1 coordinator:

- Biology Centre of the CAS

Norway (total 26 organizations)

Participants:

- NIBIO – Norwegian Institute of Bioeconomy Research
- Norwegian Institute for Nature Research (NINA)
- The Research Council of Norway
- SINTEF AS

1 coordinator:

- NIBIO – Norwegian Institute of Bioeconomy Research



NCPs CLUSTER 6

CZ: Nad' a Koníčková and Jana Čejková
NO: Gudrun Langthaler

konickova@tc.cz; cejkova@tc.cz;
gla@forskningsradet.no