

Bioeconomy and Circular Economy in the European Research Area

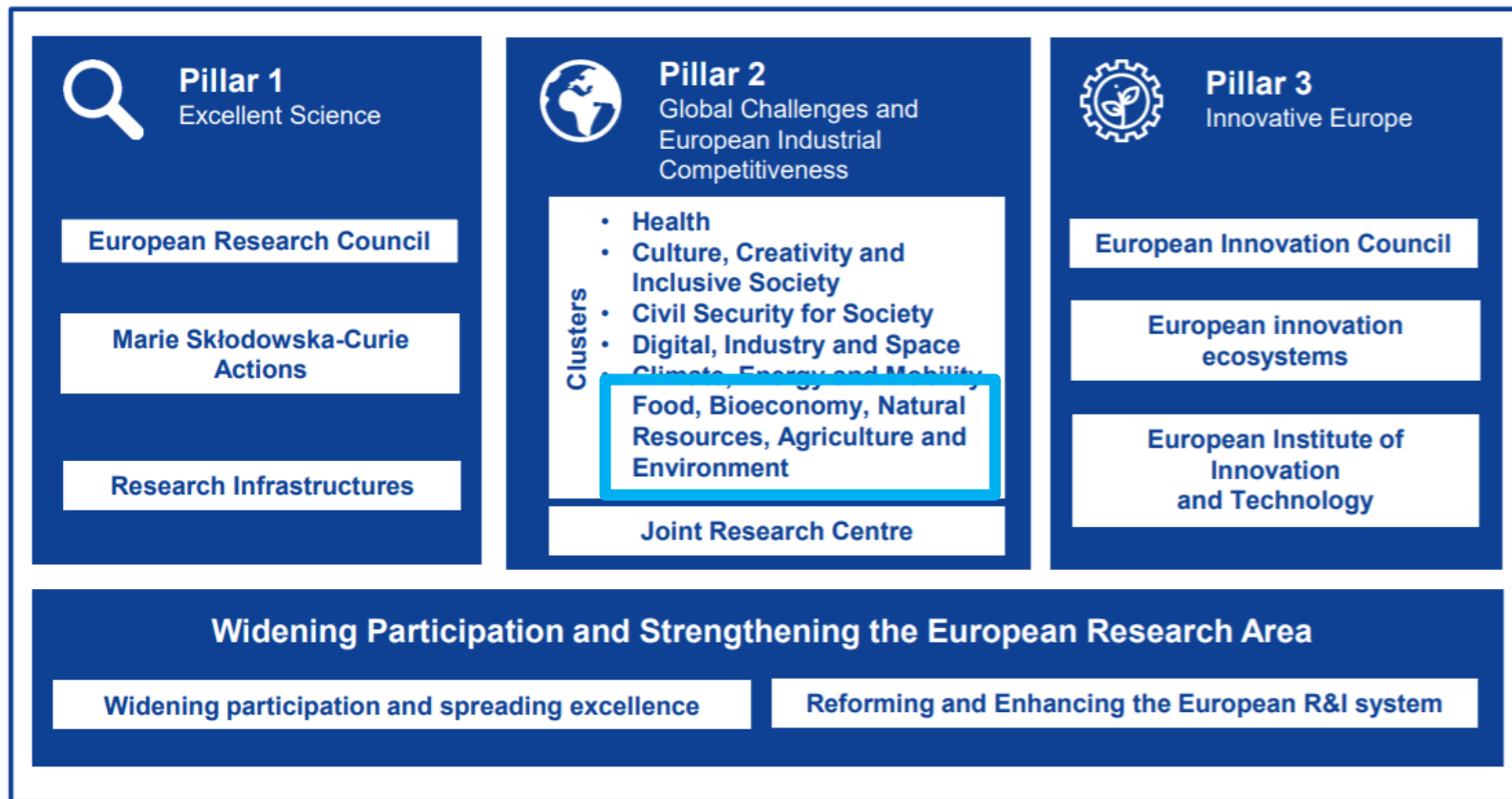
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Horizon Europe - Cluster 6



Strategic documents and initiatives

- UN's Sustainable Development Goals (SDGs) -
<http://www.un.org/sustainabledevelopment/sustainable-development-goals/>
- European Green Deal
- EU Biodiversity Strategy for 2030
- Circular economy Action Plan
- Bioeconomy Strategy
- EU Forest Strategy
- ...

Horizon Europe Work programme – Cluster 6


- Work programme for 2021-2022



1 paradigm

- » need for a transformative change of the EU economy and society
- » aimed at reducing environmental degradation, halting and reversing the decline of biodiversity and to better manage natural resources
- » serving the EU's climate objectives and ensuring food and water security

6 impacts

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- » climate neutrality
 - » biodiversity aiming to recovery, ecosystems preserved
 - » circular management and use of natural resources, bioeconomy
 - » food and nutrition security
 - » sustainable development of rural, coastal and urban areas
 - » innovative governance models

7 destinations

- Separate calls for each destination (1 for 2021, 1-2 for 2022)
- Opening: (indicative) 15 April 2021

Table of all topics under preparation by TC



HORIZON EUROPE
Témata „CLUSTER 6“ (Food, Bioeconomy Natural Resources, Agriculture and Environment)
pro období 2021-2022

Destination 1 - Biodiversity and Ecosystem Services	Nástroj	Příspěvek EU na projekt (mil. €)	Rozpočet tématu (mil. €)	Odhad podpoř. projektů
Výzva HORIZON-CL6-2021-BIODIV-01 pro rok 2021, uzávěrka 1.9.2021				
HORIZON-CL6-2021-BIODIV-01-01: European participation in global biodiversity genomics endeavours aimed at identifying all biodiversity on Earth	RIA	10-20	20	2
HORIZON-CL6-2021-BIODIV-01-02: Data and technologies for the inventory, fast identification and monitoring of endangered wildlife and other species groups	RIA	3-5	10	2
HORIZON-CL6-2021-BIODIV-01-03: Understanding and valuing coastal and marine biodiversity and ecosystems services	RIA	16	16	1
HORIZON-CL6-2021-BIODIV-01-04: Assess and predict integrated impacts of cumulative direct and indirect stressors on coastal and marine biodiversity, ecosystems and their services	RIA	10	10	1
HORIZON-CL6-2021-BIODIV-01-05: The economics of nature-based solutions: cost-benefit analysis, market development and funding	RIA	5	5	1
HORIZON-CL6-2021-BIODIV-01-06: Nature-based solutions, prevention and reduction of risks and the insurance sector	CSA	5	5	1
HORIZON-CL6-2021-BIODIV-01-07: Ecosystems and their services for an evidence-based policy and decision-making	RIA	13	13	1
HORIZON-CL6-2021-BIODIV-01-08: Supporting the development of a coherent and resilient Trans-European Nature Network	IA	7	10	1
HORIZON-CL6-2021-BIODIV-01-09: Assessing and consolidating recent scientific advances on freshwater ecosystem restoration.	CSA	0,5	0,5	1
HORIZON-CL6-2021-BIODIV-01-10: Demonstration of measures and management for coastal and marine ecosystems restoration and resilience in simplified socio-ecological systems	IA	10	10	1
HORIZON-CL6-2021-BIODIV-01-11: What else is out there? Exploring the connection between biodiversity, ecosystems services, pandemics and epidemic risk	IA	4-12	12	2

Destination 1 - Biodiversity and Ecosystem Services

- all action should contribute to the impact = **biodiversity back on path to recovery**; ecosystems and their services preserved and sustainably restored on land, inland water and at sea through improved knowledge and innovation
- under HE long-term strategic research agenda for biodiversity will be developed
- **for 2021:**
 - 1stage call
 - budget: 218,5 mil. eur; deadline: **1 September 2021**
- **22 topics** (13 RIA, 4, IA, 4 CSA, 1 Cofund):
 - DNA-based biodiversity identification; monitoring of endangered wildlife; impact of stressors on marine biodiversity; economics of nature-based solutions; Trans-European Nature Network; freshwater ecosystem restoration; biodiversity in primary production; crop breeding; governance and decision-making tools, ...

Destination 2 - Fair, healthy and environmentally-friendly food systems from primary production to consumption

- **sustainable** farming systems, fisheries and aquaculture
- food systems for health, sustainability and inclusion
- **for 2021:**
 - 1stage call
 - budget: 175 mil. eur; deadline: **1 September 2021**
- **18 topics** (12 RIA, 4 IA, 2 CSA):
 - organic farming and aquaculture; digitalisation in agroecological farming systems; plant pests; animal diseases and welfare; decision-making towards zero food waste; microbes for healthy food; dietary behaviour; food safety issues; EU-China pest management in agriculture, ...

Destination 3 - Circular economy and bioeconomy sectors

- focus on circularity aims at **less waste** and more value by **extending the lifetime** and retaining the value of products and materials
- integrated circular solutions at territorial and sectoral levels
- **key bioeconomy sectors** such as sustainable bio-based systems, sustainable forestry, small-scale rural bio-based solutions, and aquatic value chains
- **for 2021:**
 - 1stage call
 - budget: 93 mil. eur; deadline: **1 September 2021**
- **8 topics** (6 IA, 2 CSA):
 - Circular Cities and Regions Initiative – solutions and project development assistance; over-packaging and single-use plastics; non-plant biomass for industrial applications; algae potential,...

Destination 4 - Clean environment and zero pollution

- **pollution must be halted** and eliminated to guarantee clean and healthy soils, air, fresh and marine water
- it is crucial to advance the knowledge of pollution sources and pathways to enable **preventive measures**, improve **monitoring** and control, introduce effective **remediation** methods
- **for 2021:**
 - 1stage call
 - budget: 65 mil. eur; deadline: **1 September 2021**
- **10 topics** (5 RIA, 1 IA, 4 CSA):
 - N and P load reduction; optimization of nutrient budget in primary production; pollution in urban waters runoff; envi performance in bio-based sectors; certification schemes for bio-based systems; impacts and trade-offs of alternative fertilising products; bioremediation for soil, sediments, water,...

Destination 5 - Land, oceans and water for climate action

- assessing the impacts of climate change on our land and marine environments, natural resources, agriculture and food systems
- identifying **mitigation options and adaptation pathways**
- **for 2021:**
 - 1stage call
 - budget: 108 mil. eur; deadline: **1 September 2021**
- **10 topics** (7 RIA, 2 CSA, 1 Cofund):
 - water resources availability; polar processes driving climate change; network on climate-smart farming; agroecological approaches for climate change mitigation; forests including agroforestry or old-growth forests; EU-China on resilience of forests, ...

Destination 6 - Resilient, inclusive, healthy and green rural, coastal and urban communities

- better understanding of the environmental, socio-economic, behavioural, cultural and demographic drivers of change
- better preparation to achieve climate neutrality, adapt to climate change, and turn digital and ecological transitions into increased resilience
- innovative and smarter solutions
- **for 2021:**
 - 1stage call
 - budget: 52 mil. eur; deadline: **1 September 2021**
- **6 topics** (3 RIA, 1 IA, 2 CSA):
 - rural diversity for tailored policies; training centre for rural innovation; smart solutions for remote farming, forestry and rural areas; urban food system policies,...

Destination 7 - Innovative governance, environmental observations and digital solutions in support of the Green Deal

- activities aim at experimenting with **new ways to govern the transition process** and modernising the governance
- taking advantage of the use, uptake, deployment and exploitation of environmental observations
- develop innovative digital and data based solutions
- **for 2021:**
 - 1stage call
 - budget: 183,5 mil. eur; deadline: **2 September 2021**
- **25 topics** (9 RIA, 2 IA, 14 CSA):
 - furthering food system science; regional governance models; education; environmental observations; land use; data economy, ...

Budget and instruments for 2021

Destination	Budget for 2021 (mil. €)	Number of topics for			
		IA	RIA	CSA	Cofund
1 – Biodiversity	218,5	4	13	4	1
2 – Food	175	4	12	2	
3 – Circular	93	6		2	
4 – Pollution	65	1	5	4	
5 – Climate	108		7	2	1
6 – Communities	52	1	3	2	
7 – Governance	183,5	2	9	14	

Missions related to Cluster 6

- = portfolio of actions across disciplines
 - to achieve a bold and inspirational and measurable goal within a set timeframe
 - impact on society and policy making
 - relevance for the significant part of the European population
- 5 Mission areas (-> concrete missions should be achieved by 2030)
- relevant for cluster 6:
 - **Soil health and food** (-> 75% of soils healthy and able to provide essential ecosystem services)
 - **Healthy oceans, seas, coastal and inland waters** (-> restore our ocean and waters)
- specific WP for Missions; implementation in preparation



Partnerships in Cluster 6

- New architecture, simplified, more transparent
 - » Co-programmed
 - » Co-funded
 - » Institutionalised
- Accelerating farming systems transition
- Animal health: Fighting infectious diseases
- Environmental Observations for a sustainable EU agriculture
- **Rescuing biodiversity to safeguard life on Earth** (Cofund in 2021 WP)
- A climate neutral, sustainable and productive Blue Economy
- Safe and Sustainable Food System for People, Planet & Climate
- **Circular bio-based Europe**
- **Water4All: Water security for the planet** (Cofund in 2021 WP)



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