



## **Greek Info Day**

CLUSTER 6 FOOD, BIOECONOMY, NATURAL RESOURCES, AGRICULTURE & ENVIRONMENT

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THE EU RESEARCH & INNOVATION PROGRAMME 2021 – 2027



## From policy priorities to concrete action



## **Horizon Europe: intervention logic**





## **Horizon Europe: terminology**

	EC POLICY PRIORITIES	Overall <b>policy priorities</b> of the European Union
WORK PROGRAMME	KEY STRATEGIC ORIENTATIONS	Set of strategic objectives within the EC policy priorities where R&I investments are expected to make a difference
	IMPACT AREAS	Group of expected impacts highlighting the most important transformation to be fostered through R&I
	<b>EXPECTED IMPACTS</b> = DESTINATIONS	Wider long-term effects on society, environment, the economy and science enabled by the outcomes of R&I investments
	<b>EXPECTED OUTCOMES</b> = TOPICS	<b>Medium-term effects</b> of Horizon Europe projects such as uptake, diffusion, use and deployment of the projects' results by direct target groups
	<b>EXPECTED OUTPUTS</b> = <i>PROJECT RESULTS</i>	Short-term results produced during the project implementation.

## Strategic Plan: four key strategic orientations (KSO)

#### KSO A

Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains to accelerate and steer the digital and green transitions through humancentred technologies and innovations

#### KSO B

Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources to ensure food security and a clean and healthy environment

#### KSO C

Making Europe the first digitally enabled circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction and production systems

#### KSO D

Creating a more resilient, inclusive and democratic European society, prepared and responsive to threats and disasters, addressing inequalities and providing high-quality health care, and empowering all citizens to act in the green and digital transitions



## From expected impacts to destinations...

Strategic Plan

Work Programme





### Cluster 6 WP 2021-2022: Calls 2022 at a glance

Cluster 6 - WP 2022 - Overview							
Destinations	Number of Calls		Budget (in mio EUR)				
1. Biodiversity	2	13	141				
2. Farm to Fork	2	20	230.5				
3. Circular economy and bioeconomy	2	13	142				
4. Zero pollution	1	4	51				
5. Land, ocean and water for Climate action	1	5	75				
6. Communities	2	7	75				
7. Governance	1	15	147				
Total 7 Destinations	11	77	861.5				



### Cluster 6 WP 2021-2022: 2022 calls

Name of the destination	Call identifier	Opening date	Deadline	Deadline 2nd stage	Number of topics
Biodiversity and Ecosystem	HORIZON-CL6-2022- BIODIV-01	28/10/2021	15/02/2022		10
Services	HORIZON-CL6-2022- BIODIV-02	28/10/2021	15/02/2022	01/09/2022	3
Fair, healthy and environmentally-friendly food	HORIZON-CL6-2022- FARM2FORK-01	28/10/2021	23/02/2022		15
systems from primary production to consumption	HORIZON-CL6-2022- FARM2FORK-02		23/02/2022	06/09/2022	5
Circular economy and	HORIZON-CL6-2022- CircBio-01	28/10/2021	15/02/2022		7
bioeconomy sectors	HORIZON-CL6-2022- CircBio-02		15/02/2022	01/09/2022	6
Clean environment and zero pollution	HORIZON-CL6-2022- ZEROPOLLUTION-01	28/10/2021	15/02/2022		4
Land, oceans and water for climate action	HORIZON-CL6-2022- CLIMATE-01	28/10/2021	23/02/2022		5
Resilient, inclusive, healthy and green rural, coastal and urban	HORIZON-CL6-2022- COMMUNITIES-01	28/10/2021	23/02/2022		5
communities	HORIZON-CL6-2022- COMMUNITIES-02	28/10/2021	23/02/2022	06/09/2022	2
Innovative governance, environmental observations and digital solutions in support of the Green Deal	HORIZON-CL6-2022- GOVERNANCE-01	28/10/2021	10/03/2022		15
TOTAL					77

#### Cluster 6 WP 2021-2022: Topics of calls 2022 per type of action

Type of Action	Number of topics
RIA	42
IA	21
CSA	13
Co-funded partnership (climate neutral,	
sustainable and productive Blue Economy)	1
Total	77

Cluster 6 – WP 2021- 2022 2022 topics per type of actions



RIA 
IA 
CSA 
Partnerships



## CALL HORIZON-CL6-2022-BIODIV-01 CALL HORIZON-CL6-2022-BIODIV-02 (TWO-STAGE) Biodiversity and Ecosystem Services













Understanding biodiversity decline

**2 topics** 

Valuing and restoring biodiversity and ecosystem services

Managing biodiversity in primary production Enabling transformative change on biodiversity Interconnecting biodiversity research and supporting policies

1 topic



2 te

2 topics

6 topics

2 topics



#### **POLICY CONTEXT**

- European Green Deal
- EU Biodiversity Strategy for 2030
- Farm to Fork
- Nature Directives
- Global post-2020 Biodiversity Framework
- Convention on Biological Diversity
- IPBES / IPCC



#### IMPACT FROM STRATEGIC PLAN

Biodiversity is back on a path to recovery, and ecosystems and their services are preserved and sustainably restored on land, inland water and at sea through improved knowledge and innovation



#### **IMPACT AREAS**

- Enhancing ecosystems and biodiversity on land and in water
- Climate change mitigation and adaptation
- Clean and healthy air, water and soil
- Sustainable food systems from farm to fork on land and sea
- A resilient EU prepared for emerging threats



#### **Expected impacts**



- **Biodiversity decline**, its main direct drivers and their interrelations are better understood and addressed.
- **Biodiversity and natural capital are integrated into public and business decision-making** at all levels for the protection and restoration of ecosystems and their services.
- Europe builds competitive sustainability and tackles climate change and natural disasters through the deployment of nature-based solutions.
- The interrelations between biodiversity, health, food, soil, water, air and climate are better known.
- Practices in agriculture and forestry support biodiversity and the provision of other ecosystems services.
- Access to a **wider range of crops and breeds with a broadened genetic base** is improved in line with global biodiversity commitments.
- Approaches for **enabling transformative changes** in society are developed: **'do not harm' biodiversity policies become mainstream** in all sectors.
- Biodiversity research is **interconnected across Europe** and supports national, EU and international policies.





#### Call HORIZON-CL6-2022-BIODIV-01 Call HORIZON-CL6-2022-BIODIV-02-two-stage

2 7 4 RIA IA CSA

Number of topics



#### CALL HORIZON-CL6-2022-FARM2FORK-01

CALL HORIZON-CL6-2022-FARM2FORK-02-TWO-STAGE

Fair, healthy and environment-friendly food systems from primary production to consumption













Enabling sustainable farming

8 topics

Enabling sustainable fisheries and aquaculture 3 topics Transforming food systems for health, sustainability and inclusion

**5 topics** 

Targeted international cooperation

4 topics

European Commission



- European Green Deal
- Farm to Fork Strategy
- Common Agricultural Policy
- Food2030
- Strategic Approach to EU Agricultural Research and Innovation



Food and nutrition security for all within planetary boundaries is ensured through knowledge, innovation and digitalisation in agriculture, fisheries, aquaculture and food systems, which are sustainable, resilient, inclusive, safe and healthy from farm to fork



- Sustainable food systems from farm to fork on land and sea
- Climate change mitigation and adaptation
- Enhancing ecosystems and biodiversity on land and in water
- Good health and high-quality accessible healthcare
- Clean and healthy air, water and soil
- A resilient EU prepared for emerging threats
- Inclusive growth and new job opportunities



#### **Expected impacts**

- Sustainable, productive, climate-neutral and resilient **farming systems** providing consumers with affordable, safe, traceable healthy and sustainable food, while minimising pressure on ecosystems, restoring and enhancing biodiversity, improving public health and generating fair economic returns for farmers;
- Sustainable **fisheries and aquaculture** increasing aquatic biomass production, diversification and consumption of seafood products for fair, healthy, climate-resilient and environment-friendly food systems with low impact on aquatic ecosystems and high animal welfare; and
- Sustainable, healthy and inclusive **food systems** delivering co-benefits for climate mitigation and adaptation, environmental sustainability and circularity, sustainable healthy nutrition, safe food consumption, food poverty reduction, the inclusion of marginalised people, the empowerment of communities, and flourishing businesses







#### CALLS HORIZON-CL6-2022-CIRCBIO-01 & HORIZON-CL6-2022-CIRCBIO-02-TWO-STAGE

## Call Circular economy and bioeconomy sectors













Enabling a circular economy transition

2 topics

Innovating sustainable bio-based systems and the bioeconomy

8 topics

Safeguarding the multiple functions of EU forests

2 topics

Innovating for blue bioeconomy and biotechnology value chains

1 topic





#### **POLICY CONTEXT**

- European Green Deal
- Circular Economy Action Plan
- Biodiversity Strategy
- Bioeconomy Strategy
- Forest Strategy
- Plastics Strategy
- Industrial Strategy
- SME Strategy



#### IMPACT FROM STRATEGIC PLAN

Sustainable and circular management and use of natural resources as well as prevention and removal of pollution are mainstreamed, unlocking the potential of the bioeconomy, ensuring competitiveness and guaranteeing healthy soil, air, fresh and marine water for all, through better understanding of planetary boundaries and deployment of innovative technologies and other solutions, notably in primary bio-based production, forestry and systems



#### **IMPACT AREAS**

- Climate change mitigation and adaptation
- Enhancing ecosystems and biodiversity on land and in water
- A resilient EU prepared for emerging threats
- Inclusive growth and new job opportunities
- Industrial leadership in key and emerging technologies that work for people



#### **Expected impacts**

- Regional, rural, local/urban and consumer-based transitions towards a sustainable, regenerative, inclusive and just circular economy and bioeconomy across all regions of Europe based on enhanced knowledge and understanding of science;
- European **industrial sustainability, competitiveness and resource independence** by lowering the use of primary non-renewable raw materials and reducing greenhouse gas emissions and other negative environmental footprint;
- Improved consumer and citizen benefits;
- **Multi-functionality and management of forests** in Europe based on the three pillars of sustainability (economic, environmental and social);
- Enlarged potential of marine and freshwater biological resources and blue biotechnology to deliver greener (climate-neutral circular) industrial products and processes, and to help characterise, monitor and sustain the health of aquatic ecosystems for a healthy planet and people.





Number of topics



RIA IA CSA



#### CALL HORIZON-CL6-2022-ZEROPOLLUTION-01

## Clean environment and zero pollution









Halting emissions of pollutants to soils and waters Protecting drinking water and managing urban water pollution



Addressing pollution on seas and ocean



Increasing environmental performances and sustainability of processes and products no topic



**3 topics** 

1 topic

no topic





#### **POLICY CONTEXT**

- European Green Deal
- Clean environment and zero pollution ambition..
- Bioeconomy Strategy
- Circular Economy action plan
- Farm to Fork strategy
- Soil strategy
- Marine strategy
- EU water policy

#### IMPACT FROM STRATEGIC PLAN

 Sustainable and circular management and use of natural resources as well as prevention and removal of pollution are mainstreamed, unlocking the potential of the bioeconomy, ensuring competitiveness and guaranteeing healthy soil, air, fresh and marine water for all, through better understanding of planetary boundaries and deployment of innovative technologies and other solutions, notably in primary production, forestry and biobased systems

#### **IMPACT AREAS**

- Climate change mitigation and adaptation
- Enhancing ecosystems and biodiversity on land and in water
- Good health and high-quality accessible healthcare
- Clean and healthy air, water and soil
- A resilient EU prepared for emerging threats
- Inclusive growth and new job opportunities



#### **Expected impacts**

- Advanced understanding of diffuse and point sources of water pollution in a global and climate change context, enabling novel solutions to protect water bodies, aquatic ecosystems and soil functionality, and further enhancing water quality and its management for safe human and ecological use, while fostering the EU's and Associated Countries' position and role in the global water scene.
- Balanced **N/P flows** well within safe ecological boundaries at EU and Associated Countries, regional and local scale, contribute to restoring ecosystems.
- **Clean, unpolluted seas** in the EU and Associated Countries as a result of successful behavioural, social-economic, demographic, governance and green-blue transitions.
- **Circular bio-based systems** reversing climate change, restoring biodiversity and protecting air, water and soil quality along supply chain of biological feedstock and industrial value chains, within the EU and Associated Countries and across borders.
- **Innovative biotechnology** creating zero-pollution bio-based solutions.





#### CALL HORIZON-CL6-2022-CLIMATE-01

## Land, ocean and water for climate action





This call is not partitioned into « headings ». It includes 5 topics on:

- Climate sensitive water allocation systems and economic instruments
- Understanding the oceanic carbon cycle
- Demonstration **network on climate-smart farming** boosting the role of advisory services
- Fostering the resilience of food security: from observation of changes to the development of resilience strategies
- Forestry European observatory of climate change impacts and demonstration network of climate smart restoration





#### **POLICY CONTEXT**

- European Green Deal
- Climate Action
- Biodiversity Strategy
- Farm to Fork Strategy
- Common Agricultural Policy
- EU Arctic Policy, All-Atlantic Ocean Research Alliance

#### IMPACT FROM STRATEGIC PLAN

Climate neutrality is achieved by reducing GHG emissions, maintaining natural carbon sinks, and enhancing the sequestration and storage of carbon in ecosystems, including by unfolding the potential of nature based solutions, production systems on land and at sea as well as rural and coastal areas, where adaptations to climate change are also being fostered for enhancing resilience



#### IMPACT AREAS

- Climate change mitigation and adaptation
- Enhancing ecosystems and biodiversity on land and in water
- Clean and healthy air, water and soil
- Sustainable food systems from farm to fork on land and sea
- A resilient EU prepared for emerging threats
- A secure and open EU society
- Inclusive growth and new job opportunities



#### **Expected impacts**

- Better understanding and enhancing the **mitigation potential of ecosystems and sectors** based on the sustainable management of natural resources;
- Advanced understanding and science to support **adaptation and resilience** of natural and managed ecosystems, water and soil systems and economic sectors in the context of the changing climate;
- Efficient monitoring, assessment and projections related to climate change impacts, **mitigation and adaptation potential** in order to bring out solutions for **tackling emerging threats** and support decision-making in climate change mitigation and adaptation policies at European and global levels;
- Fostered climate change mitigation in the primary sector, including by the reduction of GHG emissions, maintenance of natural carbon sinks and enhancement of sequestration and storage of carbon in ecosystems;
- Improved adaptive capacity of water and soil systems and sectors including by unlocking the potential of nature-based solutions;
- Better managed scarce resources, in particular soils and water, thus **mitigating climate related risks**, in particular desertification and erosion, thanks to informed decision-makers and stakeholders and integration of adaptation measures in relevant EU policies.



Budget 2022 calls 75 M EUR



Number of topics



RIA IA CSA



## CALL HORIZON-CL6-2022-COMMUNITIES-01 CALL HORIZON-CL6-2022-COMMUNITIES-02-TWO-STAGE Resilient, inclusive, healthy and green rural, coastal and urban communities




The two calls are not partitioned into « headings ». They include 7 topics on:

• Empowerment of actors to innovate and act for transitions (all)

#### Call HORIZON-CL6-2022-COMMUNITIES-01

- Boosting **women-led innovation** in farming and rural areas
- Assessing and improving labour conditions and health and safety at work in farming
- Integrating marine ecosystem service valuation, conservation and restoration in socio-economic models
- Social innovation in food sharing to strengthen urban communities' food resilience
- Assessing the **socio-politics of nature-based solutions** for more inclusive and resilient communities

#### Call HORIZON-CL6-2022-COMMUNITIES-02-two-stage

- Empowering rural communities and smart villages to innovate for societal change (Smart solutions for smart rural communities)
- Developing nature-based therapy for health and well-being







- European Green Deal
- Biodiversity Strategy
- Farm to Fork Strategy
- Zero pollution ambition
- Bioeconomy Strategy
- EU long-term vision for rural areas
- Digital age & digital decade
- European pillar of social rights
- Sustainable Development Goals

#### IMPACT FROM STRATEGIC PLAN

 Rural, coastal and urban areas are developed in a sustainable, balanced and inclusive manner thanks to a better understanding of the environmental, socio-economic, behavioural and demographic drivers of change as well as deployment of digital, social and community-led innovations



#### **IMPACT AREAS**

- Climate change mitigation and adaptation
- Enhancing ecosystems and biodiversity on land and in water
- Sustainable food systems from farm to fork
- Good health and high-quality accessible healthcare
- A resilient EU prepared for emerging threats
- A competitive and secure data-economy
- Inclusive growth and new job
  opportunities





#### **Expected impacts**

- Rural, coastal and urban areas are developed in a sustainable, balanced and inclusive manner.
- Rural, coastal and urban communities are empowered to act for change, better prepared to achieve climate neutrality, adapt to climate change, and turn digital and ecological transitions into increased resilience to various types of shocks, good health and positive long-term prospects, including jobs, for all including women, young people and vulnerable groups.
- **Rural communities** are equipped with **innovative and smarter solutions** that increase access to services, opportunities and adequate innovation ecosystems.
- The sustainable development of **coastal areas** including coastal protection and resilience reaps the benefits of **social**, **digital and community-led innovations**.
- Tourism, recreational and leisure activity development in natural and coastal areas respects longterm environmental carrying capacity, and social goals.
- Urban and peri-urban communities including the most vulnerable individuals and families can access, afford and choose healthier, nutritious and environmental-friendly food.





### HORIZON-CL6-2022-GOVERNANCE-01

## CALL INNOVATIVE GOVERNANCE, ENVIRONMENTAL OBSERVATIONS AND DIGITAL SOLUTIONS IN SUPPORT OF THE GREEN DEAL





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







#### **POLICY CONTEXT**

- European Green Deal
- European space programme with the Copernicus part on Earth observation, European Space Agency's (ESA) Earth observation programme
- The European digital strategy, the European strategy for data, the common agricultural policy, etc

#### IMPACT FROM STRATEGIC PLAN

 Innovative governance models enabling sustainability and resilience are established and monitored through enhanced and shared use of new knowledge, tools, foresight, and environmental observations as well as digital, modelling and forecasting capabilities

#### **IMPACT AREAS**

- Climate change mitigation and adaptation
- Clean and healthy air, water and soil
- Enhancing ecosystems and biodiversity on land and in water
- Sustainable food systems from farm to fork on land and sea
- High quality digital services for all
- A Competitive and secure data-economy



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

#### **Expected impacts**

- Innovative governance models enabling sustainability and resilience notably to achieve better informed decision-making processes, societal engagement and innovation;
- Green Deal related domains benefit from further deployment and exploitation of Environmental Observation data and products;
- A strengthened Global Earth Observation System of Systems (GEOSS);
- Sustainability performance and competitiveness in the domains covered by Cluster 6 are enhanced through further deployment of digital and data technologies as key enablers;
- More informed and engaged stakeholders and end users including primary producers and consumers thanks to effective platforms such as Agriculture Knowledge and Innovation Systems (AKIS);
- Strengthened EU and international science-policy interfaces to achieve the **Sustainable Development Goals**.



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

# 15 topics in 2022 with a total budget of 147 million, split into:

7 CSAs 5 RIA

**2 IA** 

## 1 co-funded partnership

**Destination 7 per type of Action** 



• RIA • IA • CSA • Co-funded Partn.



## **Synergies with EU Missions**

- On 29 September 2021 the Commission adopted a Communication on European Missions.
- Based on the 5 areas agreed by the co-legislators, the Commission identified 5 Missions on which Horizon Europe will dedicate almost 1,8 billion EUR in the period 2021-2023:
  - Adaptation to Climate Change: support at least 150 European regions and communities to become climate resilient by 2030 (*approximately EUR 368 m*).
  - **Cancer**: improving the lives of more than 3 million people by 2030 through prevention, cure and for those affected by cancer including their families, to live longer and better. (*approximately EUR 378 m*).
  - Restore our Ocean and Waters by 2030 (approximately EUR 344 m).
  - 100 Climate-Neutral and Smart Cities by 2030 (approximately EUR 360 m).
  - A Soil Deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030 (*approximately EUR 320 m*).



## **Synergies with EU Missions**

- Two of the 5 Missions have their clear centre of gravity in Cluster 6 (Oceans and Waters Soil Deal)
- Cluster 6 also has strong links with the Mission on Climate adaptation



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https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon



Funding & tender opportunities Single Electronic Data Interchange Area (SEDIA)

SEARCH FUNDING & TENDERS THOW TO PARTICIPATE PROJECTS & RESULTS WORK AS AN EXPERT SUPPOR

# Thank you !

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