



# APRE

Agenzia per la Promozione  
della Ricerca Europea



Università di Scienze  
Gastronomiche di Pollenzo  
University of Gastronomic Sciences of Pollenzo

## PRESENTATION OF HORIZON EUROPE

# The new framework program for research and innovation

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09° of June 2021

## Agenda

- Overview of the new framework programme
- Main novelties
- Opportunities in Cluster 6 - Food, bioeconomy, natural resources, agriculture and environment



# HORIZON EUROPE

## THE EU RESEARCH & PROGRAMME 2021 – 27 INNOVATION



This presentation is based on the political agreement of 11 December 2020 on the Horizon Europe. Information on some parts is pending revision.

19 March 2021



**Mariya Gabriel**, European Commissioner for Innovation, Research, Culture, Education and Youth

*“The programme aims at giving Europe a new push to a global positioning. Horizon Europe is to be **the biggest and most ambitious EU Research Innovation programme ever**. It builds on the success of Horizon 2020 and improves it further by fostering a stronger support to **breakthrough innovation** through the European Innovation Council, by creating greater **impact** through R&I **missions** and by streamlining **partnerships** landscape.”*



## Our vision

A sustainable, fair and **prosperous** future for **people** and **planet** based on European values.

- Tackling **climate change** (35 % budgetary target)
- Helping to achieve **Sustainable Development Goals**
- Boosting the Union's **competitiveness and growth**





## Europe can shape its future through research and innovation

- Focusing research and innovation on the **twin transitions (The Green Deal and the Digital Transformation)** and related societal challenges
- Leveraging Europe's scientific strengths into **leadership in breakthrough and disruptive innovation**
- Setting **ambitious goals** for issues that affect us daily, such as skills development, the fight against cancer, harmful emissions, and the state of the oceans, including plastics
- Focusing on **cutting-edge research and innovation** projects spanning from research and innovation to deployment



# 6 Commission priorities for 2019-24

## A European Green Deal

Striving to be the first climate-neutral continent



## A Europe fit for the digital age

Empowering people with a new generation of technologies

## An economy that works for people

Working for social fairness and prosperity



## A stronger Europe in the world

Europe to strive for more by strengthening our unique brand of responsible global leadership

## Promoting our European way of life

Building a Union of equality in which we all have the same access to opportunities.



## A new push for European democracy

Nurturing, protecting and strengthening our democracy



# HORIZON EUROPE

**95,5 miliardi €**  
*(prezzi correnti)*

The ambitious EU research and innovation framework programme  
(2021-2027)



to strengthen the EU's scientific and technological bases and the European Research Area (ERA)



to boost Europe's innovation capacity, competitiveness and jobs



to deliver on citizens' priorities and sustain our socio-economic model and values

**Scientific**

**Economic**

**Social**

**DIMENSION**



## Lessons Learned

from Horizon 2020 Interim Evaluation



Support breakthrough innovation



European Innovation Council



Create more impact through mission-orientation and citizens' involvement



EU Missions



Rationalise partnerships' landscape



New approach to partnerships



Reinforce openness



Open science policy



Strengthen international cooperation



Extended association possibilities



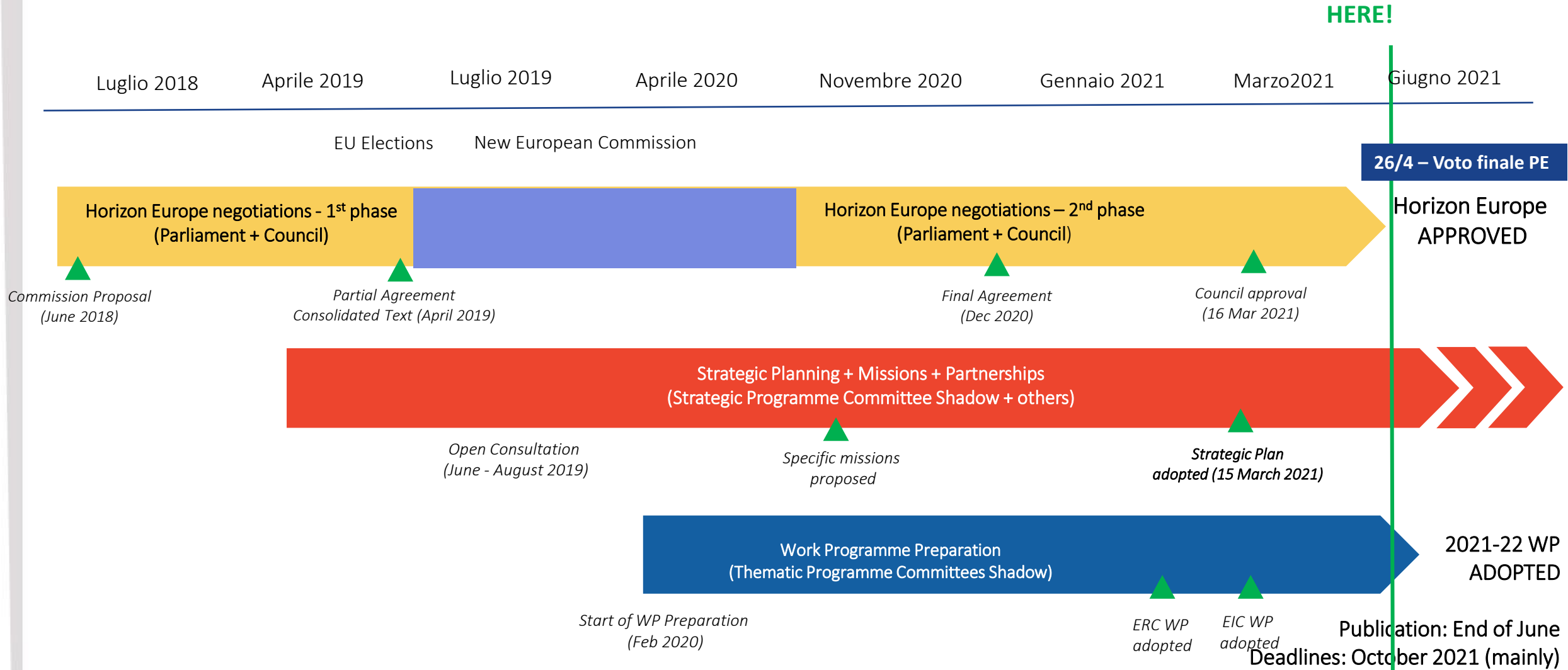
Encourage participation



Spreading Excellence

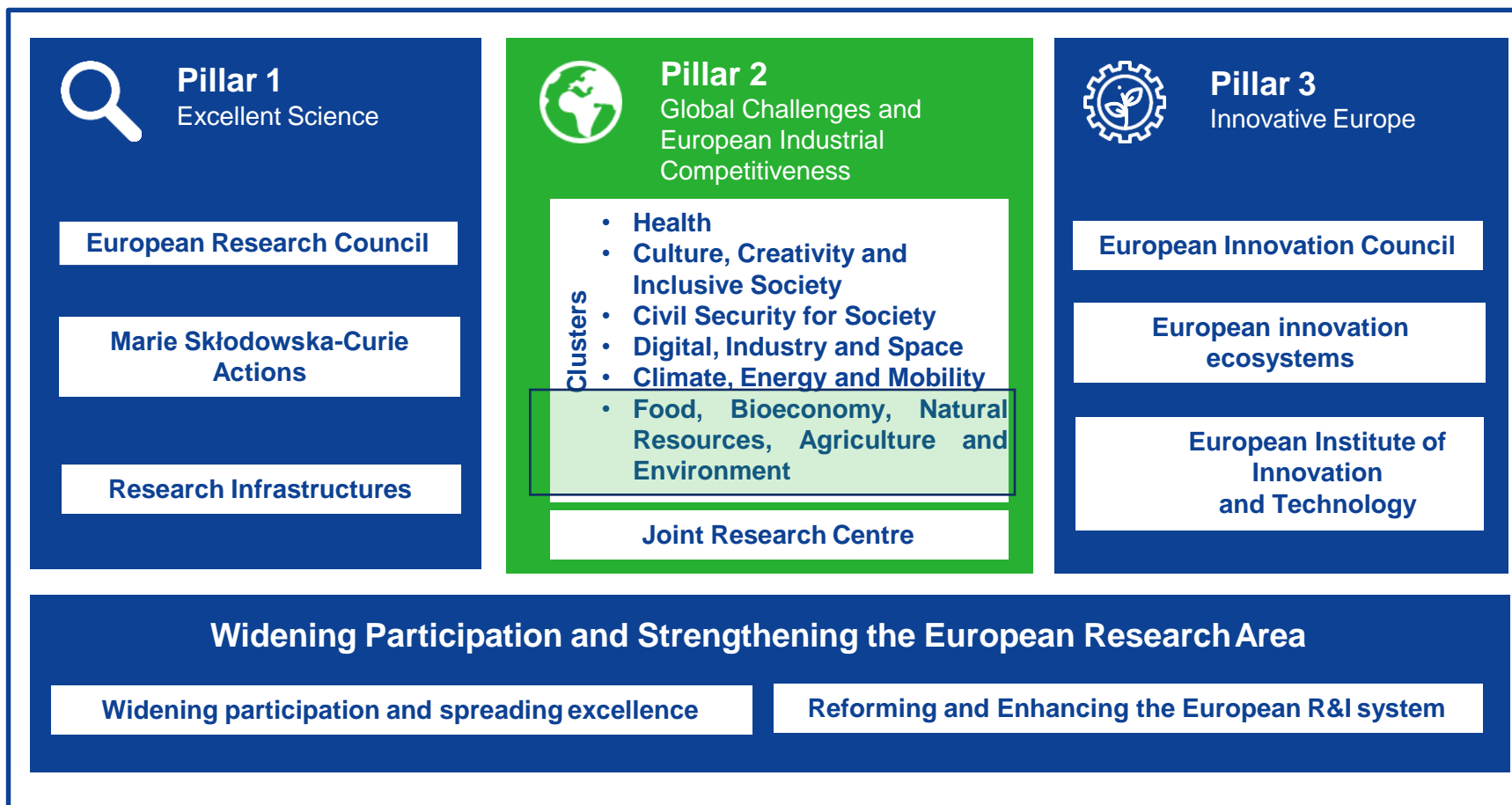


# WHERE WE ARE

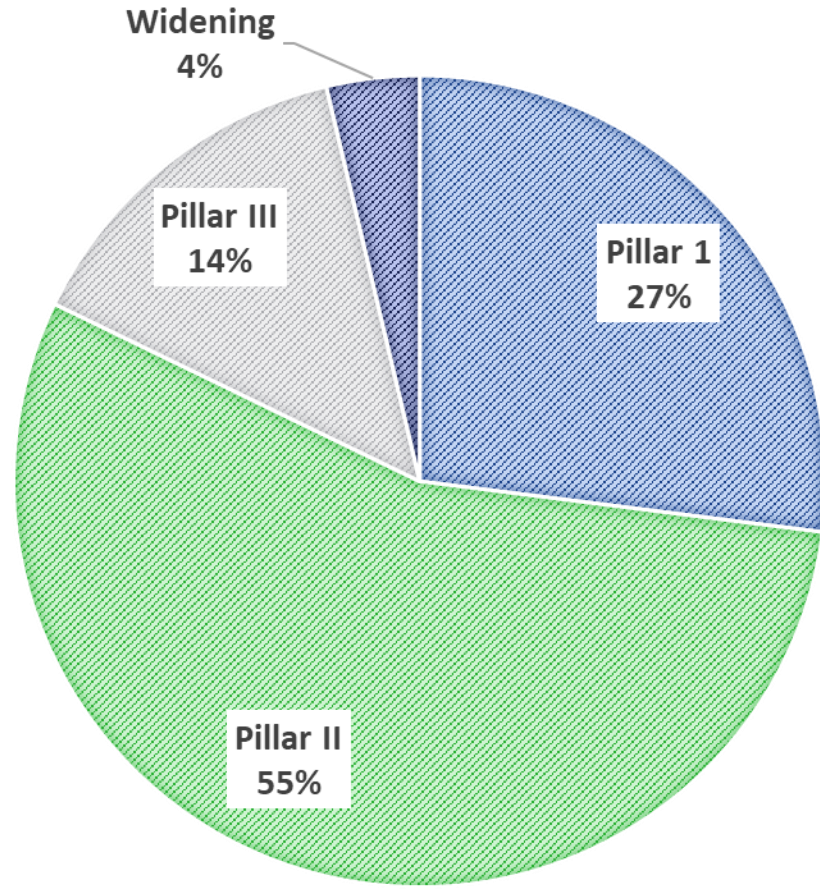




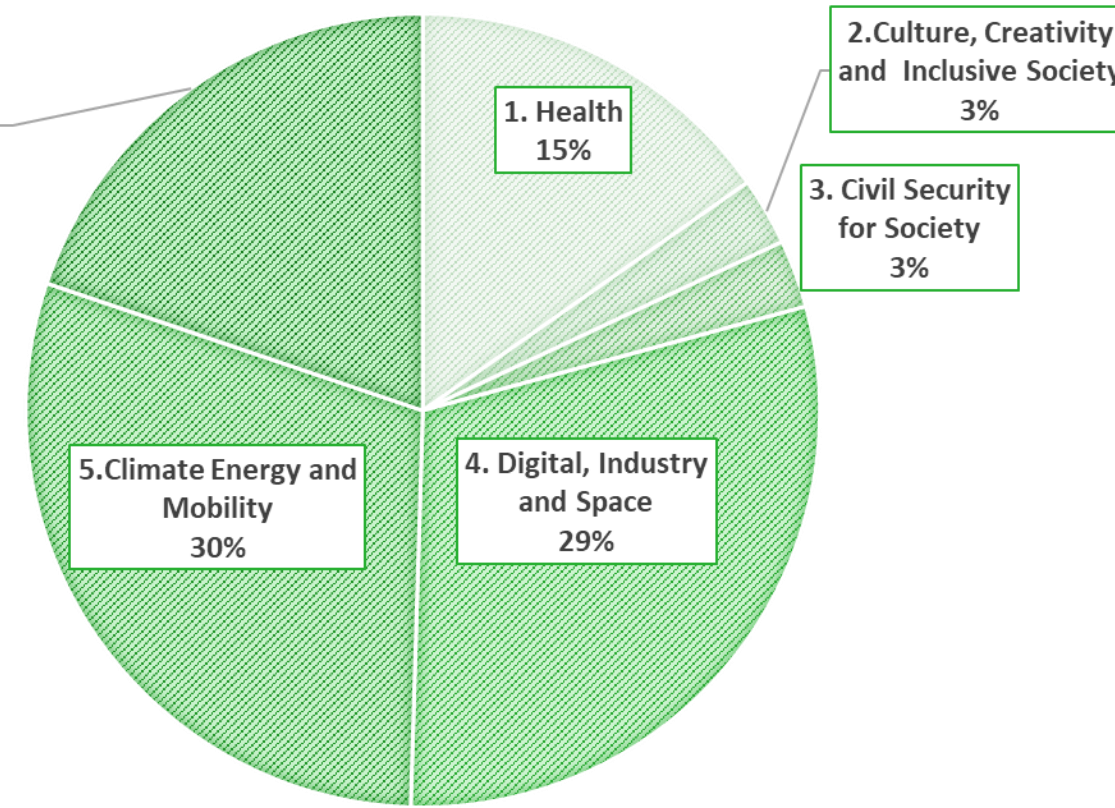
# Horizon Europe: structure



# Budget - Distribuzione



**6. Food, Bioeconomy, Natural Resources, Agriculture and Environment**  
20%  
**8,952 mlr €**



# Pillar I EXCELLENT SCIENCE:

reinforcing and extending the **excellence of the Union's science base**

## European Research Council

Frontier research by the best researchers and their teams

**€16 billion**

## Marie Skłodowska-Curie Actions

Equipping researchers with new knowledge and skills through mobility and training

**€6.6 billion**

## Research Infrastructures

Integrated and inter-connected world-class research infrastructures

**€2.4 billion**



# European Research Council

Competitive funding to support investigator-driven frontier research across all fields, on the basis of scientific excellence.

## Funding



10,000+  
Projects funded  
since 2007



Over 70% of completed  
ERC projects led to  
breakthroughs or major  
advances (according to  
independent studies)



7 Nobel Prizes, 4 Fields  
Medals, hundreds of  
important prizes awarded  
to ERC grantees



80+  
Nationalities  
(ERC grantees)



**Starting Grant:** up to €1.5 million. Duration: up to 5 years.  
2-7 years of experience since completion of PhD.



**Consolidator Grant:** up to €2 million. Duration: up to 5 years.  
7-12 years of experience since completion of PhD.



**Advanced Grant:** up to €2.5 million. Duration: up to 5 years.  
An excellent scientific track record of recognized achievements  
in the last 10 years.



**Synergy Grant:** 2-4 researchers (one can be based outside  
Europe). Up to a maximum of €10 million for a period of 6  
years.

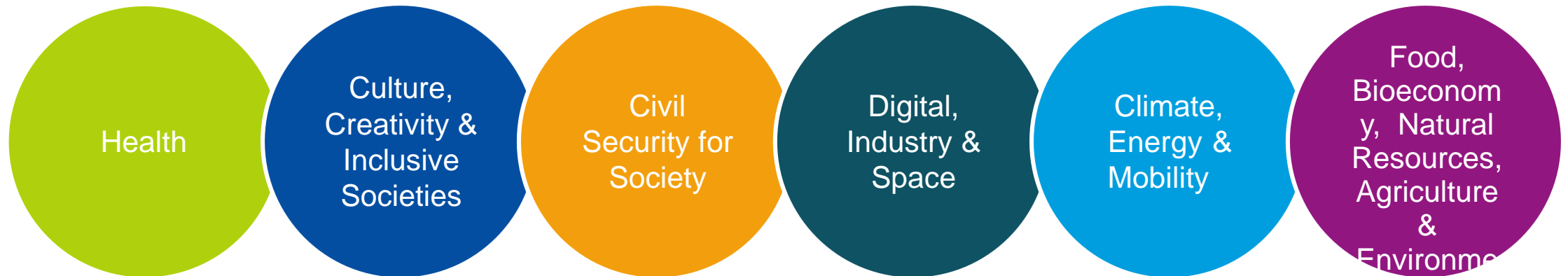
*“The expertise that we gathered in cancer trials encouraged us to extend the use of mRNA vaccines towards the prevention of infectious diseases. Groundbreaking innovation requires decades of research and contributions from multiple research frontiers until it reaches maturity to provide benefit for humanity.”*

**ERC Grantee Uğur Şahin, Mainz University**

Pillar II - Clusters

# GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS:

boosting **key technologies** and solutions underpinning **EU policies & Sustainable Development Goals** (6 clusters and JRC – non-nuclear direct actions)



€53.5 billion

# Pillar II Budget for clusters & for JRC

*in current prices*

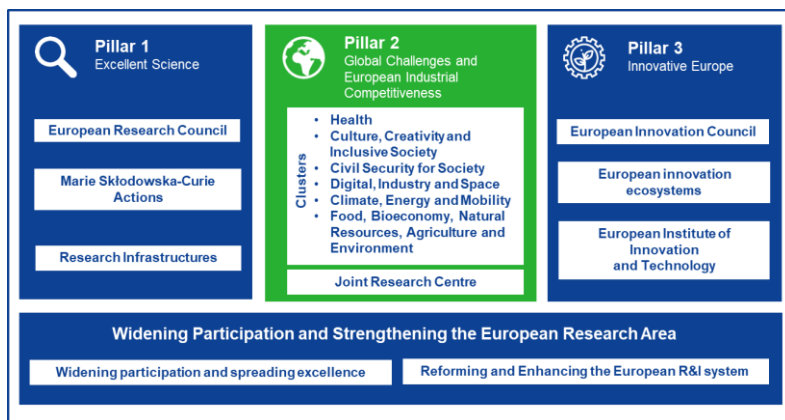
<b>Cluster 1</b>	<b>Health</b>	<b>€8.246 billion</b> (including €1.35 billion from NGEU)
<b>Cluster 2</b>	<b>Culture, Creativity &amp; Inclusive Societies</b>	<b>€2.280 billion</b>
<b>Cluster 3</b>	<b>Civil Security for Society</b>	<b>€1.596 billion</b>
<b>Cluster 4</b>	<b>Digital, Industry &amp; Space</b>	<b>€15.349 billion</b> (including €1.35 billion from NGEU)
<b>Cluster 5</b>	<b>Climate, Energy &amp; Mobility</b>	<b>€15.123 billion</b> (including €1.35 billion from NGEU)
<b>Cluster 6</b>	<b>Food, Bioeconomy, Natural Resources, Agriculture &amp; Environment</b>	<b>€8.952 billion</b>
	<b>JRC (non-nuclear direct actions)</b>	<b>€1.970 billion</b>

Clusters are including a budget for Partnerships and Missions  
NGEU is Next Generation EU programme – Recovery Fund



# SPECIFIC OBJECTIVES

## Pillar 2- Global Challenges and European Industrial Competitiveness



to generate knowledge, strengthen **the impact of research and innovation** in developing, supporting and implementing Union policies and support the access to and uptake of innovative solutions in European industry, notably in SMEs, and society to address global challenges, including climate change and the Sustainable Development Goals;



## KEY ELEMENTS

### Pillar 2- Global Challenges and European Industrial Competitiveness

- ❏ **Impact-driven approach** - The impact defines the wider effects on society, the economy and science to be targeted by research and innovation activities, but not the manner in which to achieve them. This is entirely up to the imagination and skill of the applicants.
- ❏ **Top-down approach** – R&I topics are predefined (difference with ERC/MSCA)
- ❏ **Collaborative approach** – Target: multi-beneficiary consortia made up of participants from different countries (difference with ERC/MSCA)
- ❏ **Industry role and citizen**
- ❏ **European Partnerships and Missions**

## Pillar III

# INNOVATIVE EUROPE:

stimulating **market-creating breakthroughs** and **ecosystems** conducive to innovation

### European Innovation Council

Support to innovations with breakthrough and market creating potential

### European innovation ecosystems

Connecting with regional and national innovation actors

### European Institute of Innovation and Technology (EIT)

Bringing key actors (research, education and business) together around a common goal for nurturing innovation

The budget: **€10.6 billion**, incl. up to **€527 million** for ecosystems (including NGEU – Recovery Fund parts dedicated to EIC).

**circa €3 billion**

## Part

# Widening Participation & Strengthening the European Research Area (ERA):

### Widening Participation and Spreading Excellence

- Teaming, Twinning, ERA Chairs,
- European Cooperation in Science and Technology (COST)
- Boosting National Contact Points' (NCPs) activities, pre-proposal checks and advice
- Brain circulation
- Excellence initiatives:
- Possibility for entities from widening countries to join already selected collaborative R&I actions
- Recognition of participation
- Matchmaking services

**€2.96 billion**

### Reforming and enhancing the EU R&I system

- Strengthening the evidence base for R&I policy
- Foresight
- Support for policy makers to the ERA development
- Support to national R&I policy reform, including Policy Support Facility
- Attractive researcher careers and links with higher education
- Open science, citizen science and science communication
- Gender equality
- Ethics and integrity
- Support to international cooperation
- Scientific input to other policies
- Support to the Programme implementation
- Support for National Contact Points
- Support to dissemination & exploitation

**€0.44 billion**



## RULES for participation (few elements)



## Entities eligible for participation



Art. 18: «Any legal entity, regardless of its place of establishment, including legal entities from non associated third countries or international organisation may participate in actions under the Programme, provided that the conditions laid down in this Regulation have been met together with any conditions laid down in the work programme or call”

### **New eligibility condition: Gender Equality Plan (applicable only from 2022 on)**

Participants that are public bodies, research organisations or higher education establishments from Members States and Associated countries **must have a gender equality plan**, covering minimum process-related requirements.

- A self-declaration will be requested at proposal stage (for all types of participants).
- Included in the entity validation process (based on self-declaration)



# Entities eligible for funding

## EU COUNTRIES

- Member States (MS) including their outermost regions
- The Overseas Countries and Territories (OCTs) linked to the MS.

## NON-EU COUNTRIES

- Countries associated to Horizon Europe (AC)
- Low and middle income countries: See [HE Programme Guide](#).
- Other countries when announced in the call or exceptionally if their participation is essential

## SPECIFIC CASES

- Affiliated entities established in countries eligible for funding.
- EU bodies
- International organisations (IO):
  - International European research organisations are eligible for funding.
  - Other IO are not eligible (only exceptionally if participation is essential)
  - IO in a MS or AC are eligible for funding for Training and mobility actions and when announced in the call conditions

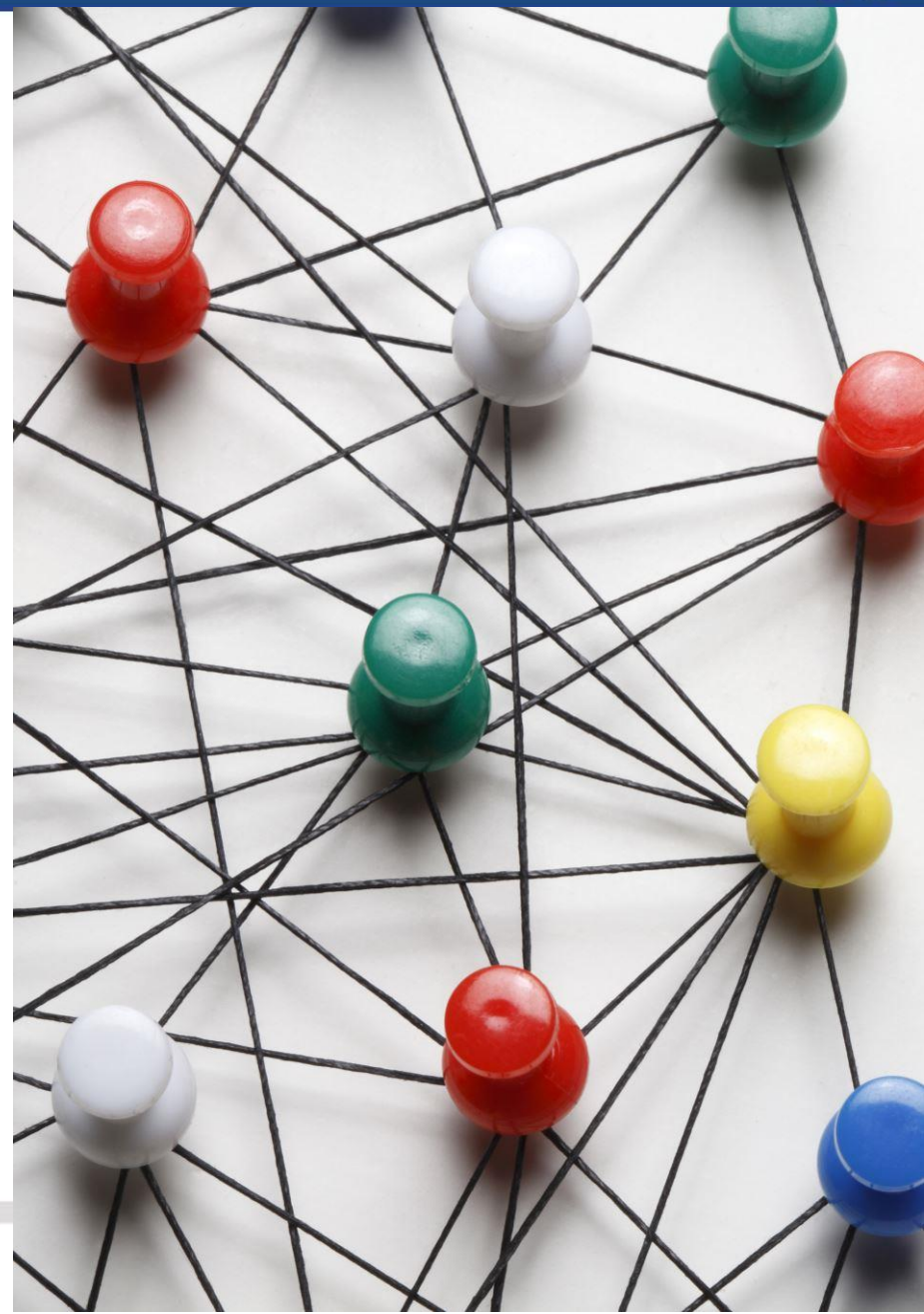


## Minimum requirements

- Art. 18: «Entities shall be part of a consortium that shall include at least three independent legal entities each established in a different Member State or associated country and with at least one of them established in a Member State, unless:  
(a) the work programme provides otherwise, if duly justified”

**SPECIAL/ADDITIONAL CONDITIONS**

MAY BE OUTLINED IN THE WORK PROGRAMME (No of participants, type of participants)





## Third countries' association

- ↗ Most third countries associated to H2020 are expected to associate to Horizon Europe (HE) with an intention to secure uninterrupted continuity between H2020 and HE. In addition, other third countries can also become associated to HE.
- ↗ ***“For the purposes of the eligibility conditions, applicants established in H2020 Associated Countries or in other third countries negotiating association to HE will be treated as entities established in an Associated Country, if the HE association agreement with the third country concerned applies at the time of signature of the grant agreement.”*** (source: General Annex WP)



# Status of UK association

## **What parts of Horizon Europe will the UK be associated to?**

The UK is associating to the full Horizon Europe programme with the only exception of the EIC Fund (which is the loan/equity instrument of the EIC, see below). The scope of association includes the European Research Council (ERC), the Marie Curie-Skłodowska Actions, the six 'Global Challenges' clusters and Missions, the partnerships, the European Institute of Innovation and Technology, etc.

UK entities are not eligible to participate in the EIC Fund part of the EIC Accelerator, since the UK decided not to take part in financial instruments of the EU. This means UK entities can apply for grants under the Accelerator but they will not be eligible for loans or equity. They can also participate on an equal footing with entities from EU Member States and other associated countries in the EIC's Pathfinder component.

The UK will also be associated to the Euratom Research and Training Programme, as well as fusion-related activities carried out under the European Joint Undertaking for ITER and the Development of Fusion Energy (F4E), the ITER Agreement, and the Broader Approach Agreement.

The UK will not participate in the European Defence Fund, which has a different legal basis and is not covered by the Trade and Cooperation Agreement.

### ***Details***

*In duly justified exceptional cases for actions related to Union strategic assets, interests, autonomy or security, Horizon Europe work programmes may provide that the participation can be limited to those legal entities established in Member States only, or, to those legal entities established in specified associated or other third countries in addition to Member States.*

*Moreover, for duly justified and exceptional reasons, in order to guarantee the protection of the strategic interests of the Union and its Member States, the work programmes may also*



Source:  
[https://ec.europa.eu/info/sites/info/files/research\\_and\\_innovation/strategy\\_on\\_research\\_and\\_innovation/documents/ec\\_rtd\\_uk-participation-in-horizon-europe.pdf](https://ec.europa.eu/info/sites/info/files/research_and_innovation/strategy_on_research_and_innovation/documents/ec_rtd_uk-participation-in-horizon-europe.pdf)





## «HE: As open as possible, as closed as necessary»

«For actions related to Union strategic assets, interests, autonomy or security, **the work programme may provide that the participation can be limited to those legal entities established in Member States only**, or to those legal entities established in specified associated or other third countries in addition to Member States.»

This creates the possibility to exclude - in duly justified and exceptional cases - legal entities controlled by non-associated third countries.





## Eligible activities (Main types of action)

### **RESEARCH AND INNOVATION ACTION (RIA)**

Activities aiming primarily to establish new knowledge or to explore the feasibility of a new or improved technology, product, process, service or solution.

This may include basic and applied research, technology development and integration, testing, demonstration and validation on a small-scale prototype in a laboratory or simulated environment.

***Funding rate: 100% of eligible costs***

### **INNOVATION ACTION (IA)**

Activities directly aimed at producing plans and arrangements or designs for new, altered or improved products, processes or services, possibly including prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

***Funding rate: 70% (except for non-profit legal entities, where the funding rate is up to 100%) of the total eligible costs***

### **COORDINATION AND SUPPORT ACTION (CSA)**

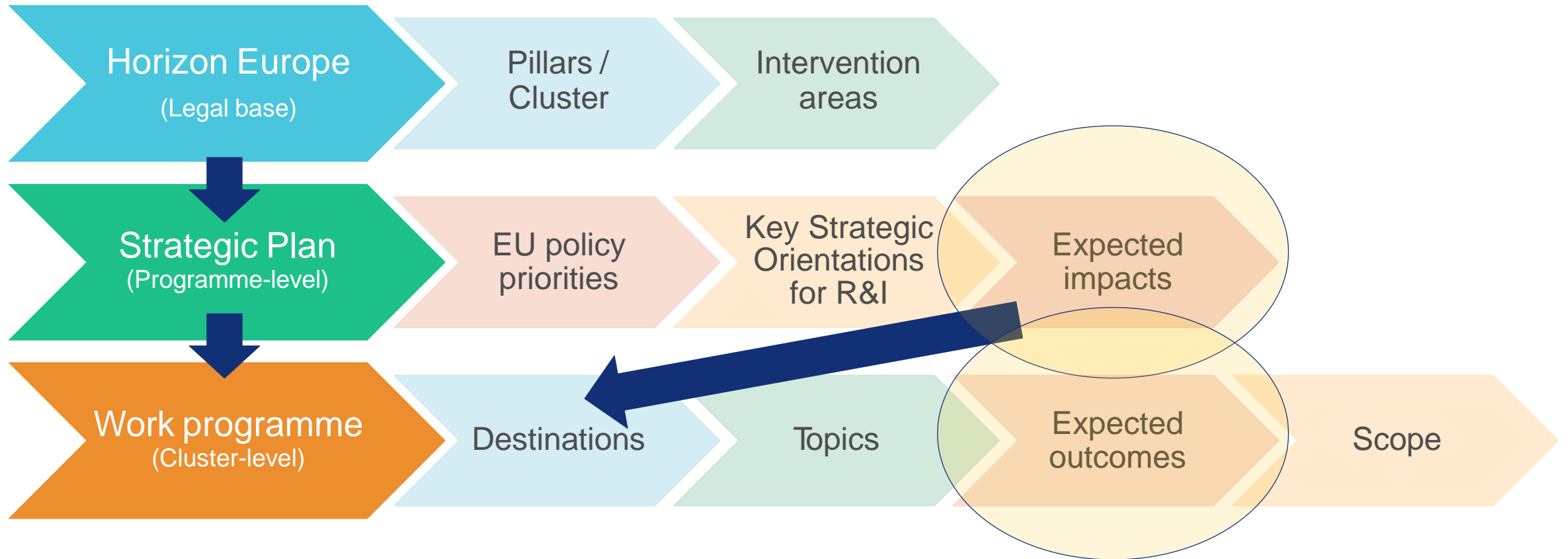
Activities contributing to the objectives of the Horizon Europe Programme, excluding R&I activities (e.g. networking, awareness raising, coordination, stakeholder engagement)

***Funding rate: 100% of the total eligible costs***

# From policy priorities to concrete action



# Horizon Europe Intervention Logic





STRATEGIC PLAN

**EC POLICY PRIORITIES**

Political Guidelines for the European Commission 2019-2024 (and other key strategic documents - e.g. Green Deal)

**KEY STRATEGIC ORIENTATIONS FOR R&I**

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

**EXPECTED IMPACTS**  
=> DESTINATIONS

= General objectives

Wider effects on society (incl. the environment), the economy and science enabled by the outcomes of R&I investments (long term)

<b>EXAMPLE</b>	<i>Strategic Plan &amp; Work Programme: R&amp;I contribution to seamless, smart, inclusive and sustainable mobility services</i>	<i>Project : Increase maximum passenger capacity by 15% and passenger average throughput by 10%, leading to a 28% reduction in infrastructure expansion costs</i>
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**EXPECTED OUTCOMES**  
=> TOPICS

= Specific objectives

Effects of Horizon Europe projects such as uptake, diffusion, use and deployment of the projects' results by direct target groups (medium term)

<b>EXAMPLE</b>	<i>Work Programme : Innovative accessibility and logistics solutions applied by the European Transport sector</i>	<i>Project : At least 9 European airports adopt the advanced forecasting system that was demonstrated during the project</i>
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**EXPECTED OUTPUTS**  
=> PROJECT RESULTS

= Operational objectives

What is produced during the project implementation, such as innovative solutions, algorithms, new business models, guidelines, policy recommendations, methodologies, publications, database, prototypes, trained researchers, new infrastructures, proof of feasibility, networks, etc. (short term)

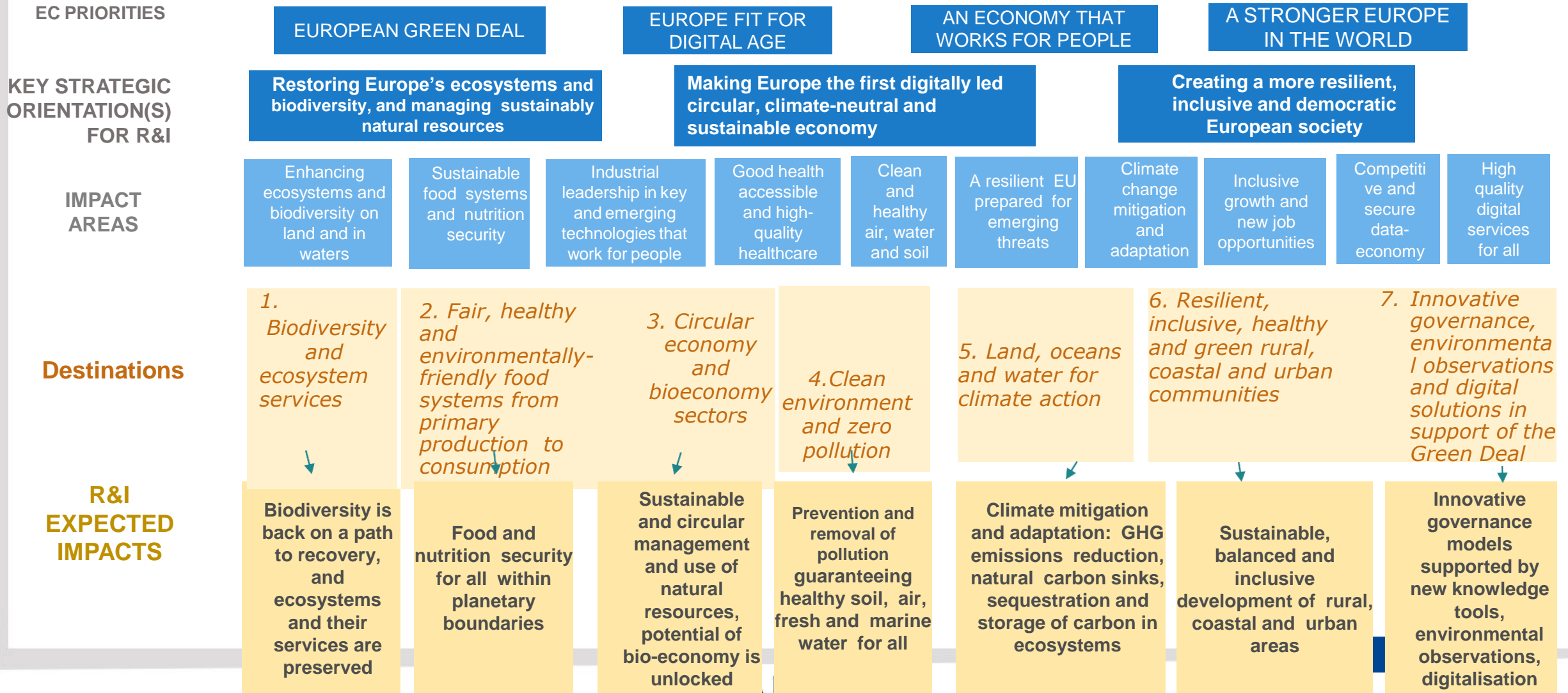
<b>EXAMPLE</b>	<i>Project (by the end of its implementation): Successful large-scale demonstration trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management</i>	
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# CLUSTER 6 INTERVENTION LOGIC



SDG 2 – Zero Hunger; SDG 3 – Good Health and Well-Being; SDG 6 - Clean Water and Sanitation; SDG 8 – Decent Work and Economic Growth; SDG 9 – Industry, Innovation, and Infrastructure; SDG 11 – Sustainable Cities and Communities; SDG 12 - Responsible Consumption and Production; SDG 13 – Climate Action, SDG 14 – Life Below Water and SDG 15 - Life on Land".



# CL6: Food, bioeconomy, natural resources, agriculture and environment

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- aims at reducing **environmental degradation**, halting and reversing the decline of **biodiversity** on land, inland waters and sea and better managing **natural resources** through social and economic changes in both urban and rural areas.
- will ensure **food and nutrition security** for all through knowledge, innovation and digitalisation in agriculture, fisheries, aquaculture and food systems and accelerate the transition to a **circular economy** and sustainable bioeconomy, including forestry.
- R&I activities under CL6 will contribute to the objectives of the [European Green Deal](#) related to the [Biodiversity Strategy to 2030](#), the [Farm to Fork strategy](#), the [European Climate Pact](#) and initiatives under [sustainable industry](#) and [eliminating pollution](#), as well as the [long-term vision for rural areas](#), and the Sustainable Development Goals.

Intervention Areas
Environmental Observation
Biodiversity and natural resources
Agriculture, Forestry and rural areas
Seas, oceans and inland waters
Food systems
Biobased innovation systems in the EU Bioeconomy
Circular systems



## ELEMENTI POLICY

### Policy priorities Commission Von der Leyen

- **“European Green Deal”**, con le iniziative:

*Climate Action, Farm to Fork Strategy, EU Biodiversity Strategy, Circular Economy Action Plan, Zero Pollution Ambitions, EU Industrial Strategy for Europe*

- **“An economy that works for people”**
- **“A Europe fit for the digital age”**
- **“A stronger Europe in the world”**

### Other policies/strategies

- Common Agricultural Policy,
- Common Fisheries Policy,
- Maritime Policy
- EU Arctic Policy
- EU General Food Law,
- EU Bioeconomy Strategy,
- EU Forest Strategy,
- Blue Growth Strategy,
- Chemicals Strategy for Sustainability,
- EU Plastics Strategy,
- Data Strategy for Europe,
- Food 2030 initiative



**KEY  
STRATEGIC  
ORIENTATIONS  
FOR R&D**

**KSO B: Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources**

Enhancing ecosystems and biodiversity on land and in waters

Clean and healthy air, water and soil  
Sustainable food systems from farm to fork on land and sea

KSO C: Making Europe the first digitally enabled circular, climate-neutral and sustainable economy

Circular and clean economy

**IMPACT AREAS**

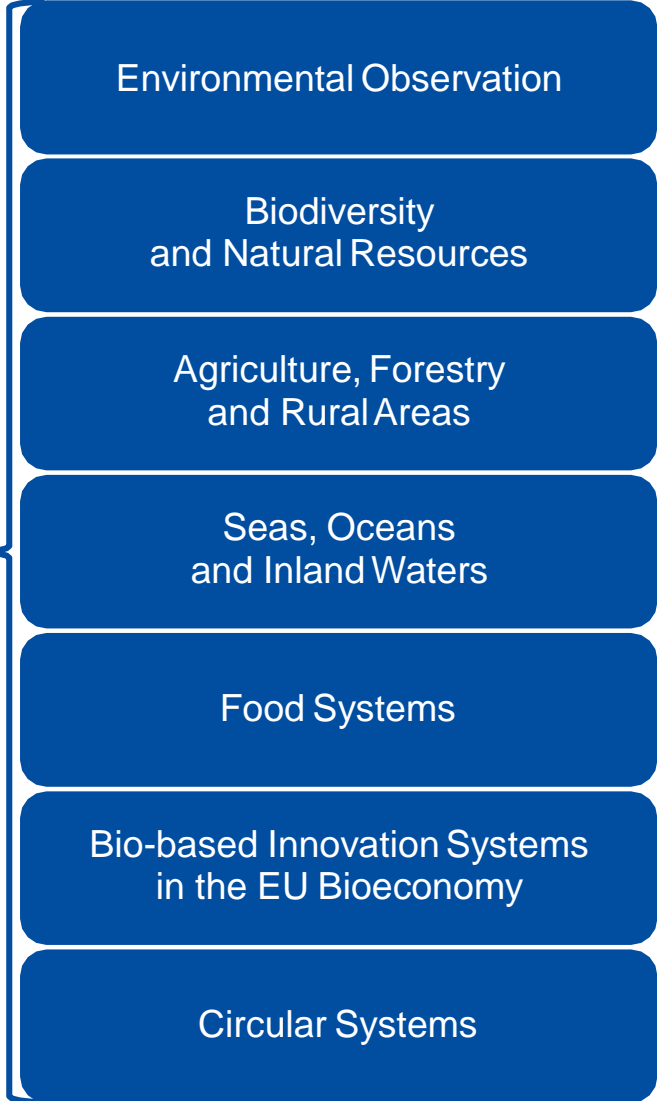
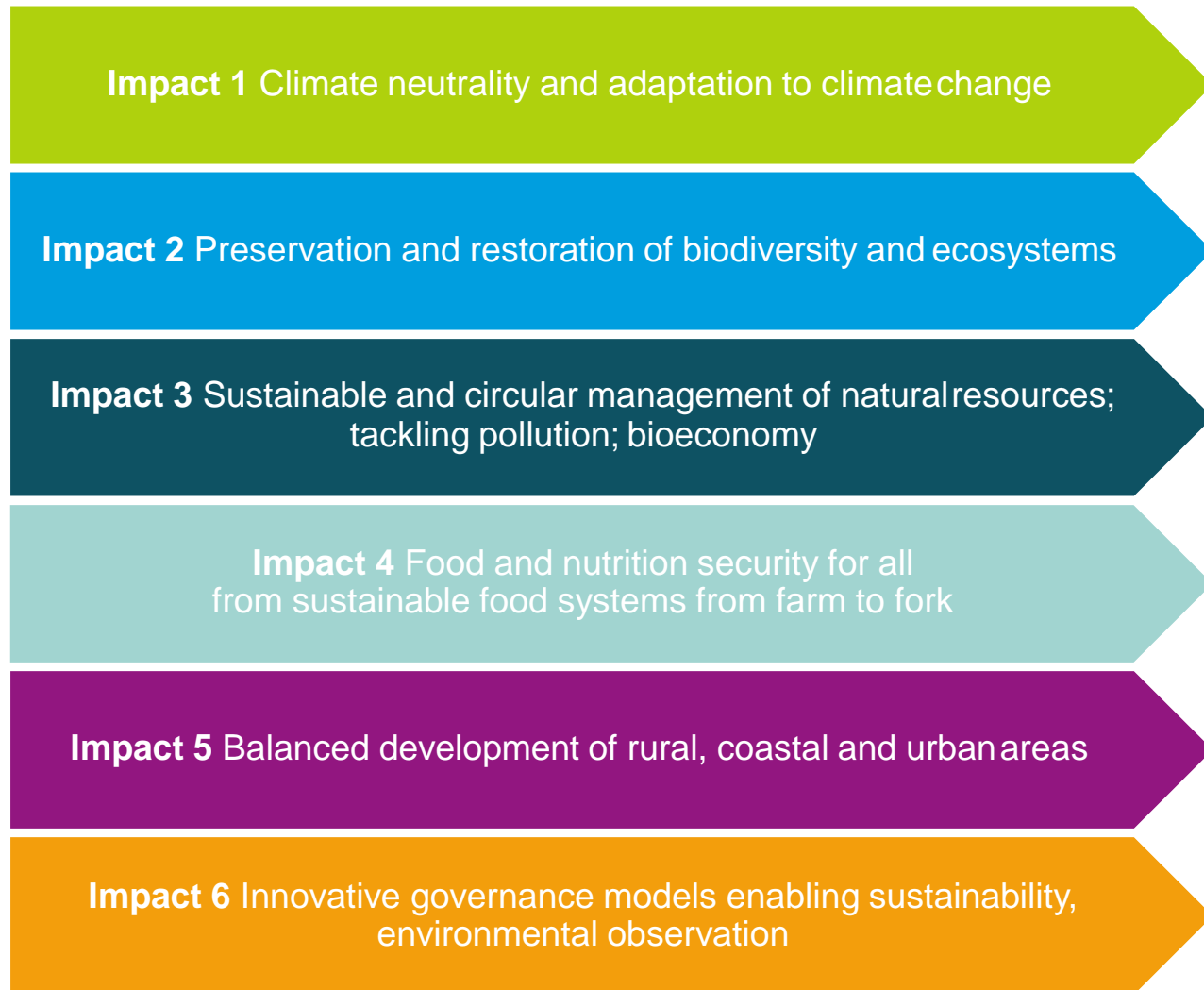
**EXPECTED IMPACTS**

- 27. Reduced emissions and enhanced CSS in ecosystems
- 28. Biodiversity and ecosystems preservation and restoration on land, inland water and at sea
- 30. Food and nutrition security for all from farm to fork
- 31. Sustainable rural, coastal and urban areas

- 29. Sustainable and circular management and use of natural resources
- 32. Innovative governance models enabling sustainability and resilience

# Strategic Plan: Cluster 6 expected impacts

## Intervention Areas



# From expected impacts to destinations...

## Strategic Plan

## Work Programme



**Impact 1** Climate neutrality and adaptation to climate change

- Destination: Land, oceans and water for climate action



**Impact 2** Preservation and restoration of biodiversity and ecosystems

- Destination: Biodiversity and ecosystem services



**Impact 3** Sustainable and circular management of natural resources; tackling pollution; bioeconomy

- Destination: Circular economy and bioeconomy sectors
- Destination: Clean environment and zero pollution



**Impact 4** Food and nutrition security for all from sustainable food systems from farm to fork

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



**Impact 5** Balanced development of rural, coastal and urban areas

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



**Impact 6** Innovative governance models enabling sustainability, environmental observation

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

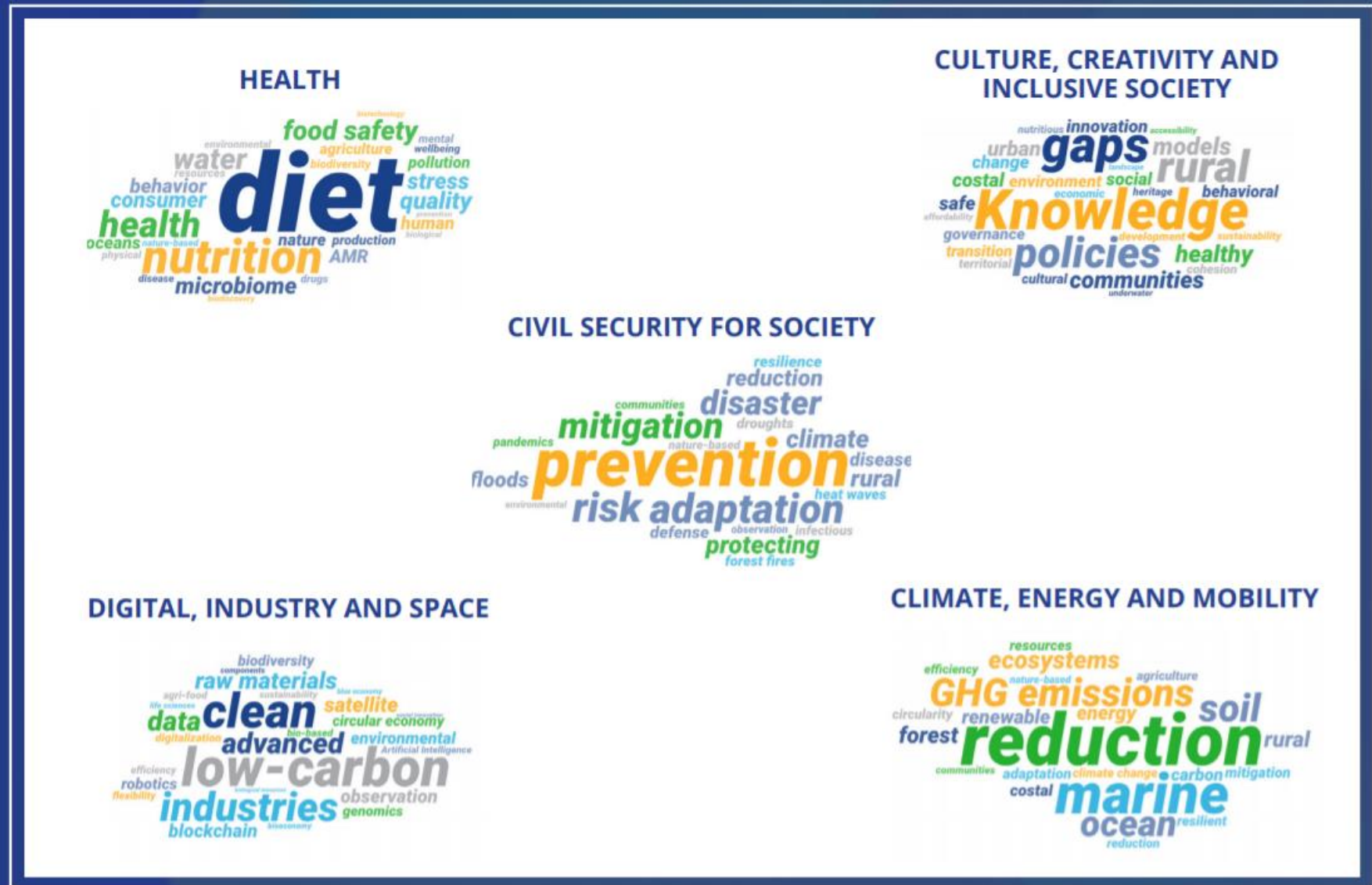


## DESTINATIONS




- Biodiversity and Ecosystem Services
- Fair, healthy and environmentally-friendly food systems from primary production to consumption
- Circular economy and bioeconomy sectors
- Clean environment and zero pollution
- Land, oceans and water for climate action
- Resilient, inclusive, healthy and green rural, coastal and urban communities
- Innovative governance, environmental observations and digital solutions in support of the Green Deal



# CROSS CLUSTER COMPLEMENTARITIES



# Cluster 6 Budget over 7 years

<b>Overall budget</b>	<b>€8.952 billion</b>
Operational budget	€8.4 billion
10% for missions  	- €0.9 billion
CBE partnership 	- €1 billion
Available budget for the Work Programmes	€6,5 billion

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# Cluster 6: Work Programme 2021-2022

## budget distribution per destination

### DEADLINES

Call 2021:

September/October 2021

Call 2022: February 2022



Destination	Number of topics	Budget [mln EUR]	% Share
Biodiversity and ecosystem services	36	375,5	20%
Fair, healthy and environmentally-friendly food systems from primary production to consumption	39	416,5	22%
Circular economy and bioeconomy sectors	22	268,5	14%
Clean environment and zero pollution	14	116	6%
Land, oceans and water for climate action	16	193	10%
Resilient, inclusive, healthy and green rural, coastal and urban communities	13	128	7%
Innovative governance, environmental observations and digital solutions in support of the Green Deal	43	370	19%
Other actions	12	38,5	2%
<b>Total</b>	<b>198</b>	<b>1906</b>	<b>100%</b>



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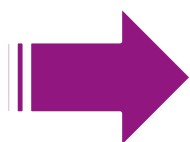
# Cluster 6 WP calls structure

DESTINATION	Call Id 2021 one stage	Call Id 2022 one stage	Call Id 2022 two stage
Biodiversity and Ecosystem Services	HORIZON-CL6-2021-BIODIV-01 HORIZON-CL6-2021-BIODIV-02	HORIZON-CL6-2022-BIODIV-01	HORIZON-CL6-2022-BIODIV-02-two-stage
Fair, healthy and environmentally-friendly food systems from primary production to consumption	HORIZON-CL6-2021-FARM2FORK-01	HORIZON-CL6-2022-FARM2FORK-01	HORIZON-CL6-2022-FARM2FORK-02-two-stage
Circular economy and bioeconomy sectors	HORIZON-CL6-2021-CircBio-01	HORIZON-CL6-2022-CircBio-01	HORIZON-CL6-2022-CircBio-02-two-stage
Clean environment and zero pollution	HORIZON-CL6-2021-ZEROPOLLUTION-01	HORIZON-CL6-2022-ZEROPOLLUTION-01	
Land, oceans and water for climate action	HORIZON-CL6-2021-CLIMATE-01	HORIZON-CL6-2022-CLIMATE-01	
Resilient, inclusive, healthy and green rural, coastal and urban communities	HORIZON-CL6-2021-COMMUNITIES-01	HORIZON-CL6-2022-COMMUNITIES-01	HORIZON-CL6-2022-COMMUNITIES-02-two-stage
Innovative governance, environmental observations and digital solutions in support of the Green Deal	HORIZON-CL6-2021-GOVERNANCE-01	HORIZON-CL6-2022-GOVERNANCE-01	

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# Cluster 6 Co-funded partnerships in Work Programmes

	Co-funded partnership	Work Programme where the topic is introduced	HE expected contribution (7 years; mIn EUR)
	<b>Rescuing biodiversity to safeguard life on Earth</b>	2021-2022	165
	<b>A climate neutral, sustainable and productive Blue Economy</b>	2021-2022	150
	<b>European Partnership Water Security for the Planet (Water4All)</b>	2021-2022	126
	<b>Accelerating farming systems transition: agroecology living labs and research infrastructures</b>	2023-2024	150
	<b>Animal health: fighting infectious diseases</b>	2023-2024	180
	<b>Environmental observations for a sustainable EU agriculture</b>	2023-2024	100
	<b>Safe and sustainable food systems for people, planet and climate</b>	2023-2024	175



**Total budget for all co-funded partnerships around EUR 1 billion**  
(figures are subject to changes depending on MS commitments).

**Outside the WP: Circular bio-based Europe (Joint Undertaking): EUR 1 billion**

# Destination 1: Biodiversity and Ecosystem Services

# Destination 1



Convention on  
Biological Diversity



**HE 1<sup>st</sup> Key Orientation**  
**'Protecting and restoring ecosystems and biodiversity and managing sustainably natural resources on land and at sea, and achieving climate neutrality and adaptation'.**

- R&I for the Green Deal - EU Biodiversity Strategy – EU policies & global conventions
- Impacts in the nexus biodiversity-food-health-water-climate and to achieving the goal of healthy and resilient ecosystems by 2030
- Enable transformational change
- Develop Nature-based Solutions and holistic approaches to address the main causes of biodiversity loss
- Restore the integrity of terrestrial, aquatic and marine ecosystems, currently under multiple pressures, and their capacity to deliver a wide range of essential services.
- Long-term strategic research agenda for biodiversity across natural and managed ecosystems

# Five Headings in Destination 1

11. **Understanding Biodiversity Decline**
12. **Valuing and restoring biodiversity and ecosystem services**
13. **Managing biodiversity in primary production**
14. **Enabling transformative change on biodiversity**
15. **Interconnecting biodiversity research and supporting policies**

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Understanding biodiversity decline	HORIZON-CL6-2021-BIODIV-01-01: European participation in global biodiversity genomics endeavours aimed at identifying all biodiversity on Earth.	RIA	EUR 20.00 million	Between EUR 10.00 and 20.00 million
Understanding biodiversity decline	HORIZON-CL6-2021-BIODIV-01-02: Data and technologies for the inventory, fast identification and monitoring of endangered wildlife and other species groups.	RIA	EUR 10.00 million	Between EUR 3.00 and 5.00 million
Understanding biodiversity decline	HORIZON-CL6-2021-BIODIV-01-03: Understanding and valuing coastal and marine biodiversity and ecosystems services	RIA	EUR 16.00 million	Around EUR 16.00 million
Understanding biodiversity decline	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	EUR 10.00 million	Around EUR 10.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2021-BIODIV-01-05: The economics of nature-based solutions: cost-benefit analysis, market development and funding.	RIA	EUR 5.00 million	Around EUR 5.00 million
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2021-BIODIV-01-06: Nature-based solutions, prevention and reduction of risks and the insurance sector	CSA	EUR 4.00 million	Around EUR 4.00 million
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2021-BIODIV-01-07: Ecosystems and their services for an evidence-based policy and decision-making.	RIA	EUR 13.00 million	Around EUR 13.00 million
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2021-BIODIV-01-08: Supporting the development of a coherent and resilient Trans-European Nature Network .	IA	EUR 10.00 million	Around EUR 10.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2021-BIODIV-01-09: Assessing and consolidating recent scientific advances on freshwater ecosystem restoration.	CSA	EUR 0.50 million	Around EUR 0.50 million
Valuing and restoring biodiversity and ecosystem services	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	EUR 10.00 million	Around EUR 10.00 million
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2021-BIODIV-01-11:What else is out there? Exploring the connection between biodiversity, ecosystems services, pandemics and epidemic risk	RIA	EUR 13.00 million	Between EUR 4.00 and 6.00 million
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2021-BIODIV-01-12: Improved science based maritime spatial planning and identification of marine protected areas	RIA	EUR 7.00 million	Between EUR 3.00 and 4.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Managing biodiversity in primary production	HORIZON-CL6-2021-BIODIV-01-13:Breeding for resilience: focus on root-based traits .	RIA	EUR 16.00 million	Around EUR 8.00 million
Managing biodiversity in primary production	HORIZON-CL6-2021-BIODIV-01-14:Fostering organic crop breeding	IA	EUR 10.00 million	Around EUR 5.00 million
Enabling transformative change on biodiversity	HORIZON-CL6-2021-BIODIV-01-15:Quantify impacts of the trade in raw and processed biomass on ecosystems, for offering new leverage points for biodiversity conservation, along supply chains, to reduce leakage effects	RIA	EUR 10.00 million	Between EUR 2.00 and 3.00 million
Enabling transformative change on biodiversity	HORIZON-CL6-2021-BIODIV-01-16:Biodiversity, water, food, energy, transport, climate and health nexus in the context of transformative change	RIA	EUR 5.00 million	Around 5.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling transformative change on biodiversity	HORIZON-CL6-2021-BIODIV-01-17:Policy mixes, governance (including financing) and decision-making tools for transformative action on biodiversity	RIA	EUR 8.00 million	Between EUR 2.00 and 3.00 million
Enabling transformative change on biodiversity	HORIZON-CL6-2021-BIODIV-01-18:Understanding the impacts of and the opportunities offered by digital transformation, new emerging technologies and social innovation on biodiversity	RIA	EUR 5.00 million	Between EUR 2.00 and 3.00 million
Interconnecting biodiversity research and supporting policies	HORIZON-CL6-2021-BIODIV-01-19: A mechanism for science to inform implementation, monitoring, review and ratcheting up of the new EU biodiversity strategy for 2030 ('Science Service').	CSA	EUR 13.00 million	Between EUR 11.00 and 13.00 million
Interconnecting biodiversity research and supporting policies	HORIZON-CL6-2021-BIODIV-01-20: Support to processes triggered by IPBES and IPCC	CSA	EUR 5.00 million	Around 5.00 million
Interconnecting biodiversity research and supporting policies	HORIZON-CL6-2021-BIODIV-01-21: Impact and dependence of business on biodiversity	RIA	EUR 5.00 million	Between EUR 2.00 and 3.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling transformative change on biodiversity	HORIZON-CL6-2021-BIODIV-02-01: European partnership rescuing biodiversity to safeguard life on Earth	Programme Co-fund Action	EUR 40.00 million	Between EUR 40.00 and 165.00 million
Understanding biodiversity decline	HORIZON-CL6-2022-BIODIV-01-01: Observing and mapping biodiversity and ecosystems, with particular focus on coastal and marine ecosystems	RIA	EUR 14.00 million	Between EUR 4.00 and 14.00 million
Understanding biodiversity decline	HORIZON-CL6-2022-BIODIV-01-02: Building taxonomic research capacity near biodiversity hotspots and for protected areas by networking natural history museums and other taxonomic facilities	IA	EUR 6.00 million	Around EUR 6.00
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2022-BIODIV-01-03: Network for nature: multi-stakeholder dialogue platform to promote nature-based solutions	CSA	EUR 6.00 million	Around 6.00 million
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2022-BIODIV-01-04: Natural capital accounting: Measuring the biodiversity footprint of products and organizations	IA	EUR 10.00 million	Around EUR 10.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling transformative change on biodiversity	HORIZON-CL6-2021-BIODIV-02-01: European partnership rescuing biodiversity to safeguard life on Earth	Programme Co-fund Action	EUR 40.00 million	Between EUR 40.00 and 165.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Understanding biodiversity decline	HORIZON-CL6-2022-BIODIV-01-01: Observing and mapping biodiversity and ecosystems, with particular focus on coastal and marine ecosystems	RIA	EUR 14.00 million	Between EUR 4.00 and 14.00 million
Understanding biodiversity decline	HORIZON-CL6-2022-BIODIV-01-02: Building taxonomic research capacity near biodiversity hotspots and for protected areas by networking natural history museums and other taxonomic facilities	IA	EUR 6.00 million	Around EUR 6.00
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2022-BIODIV-01-03: Network for nature: multi-stakeholder dialogue platform to promote nature-based solutions	CSA	EUR 6.00 million	Around 6.00 million
Valuing and restoring biodiversity and ecosystem services	HORIZON-CL6-2022-BIODIV-01-04: Natural capital accounting: Measuring the biodiversity footprint of products and organizations	IA	EUR 10.00 million	Around EUR 10.00 million

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Managing biodiversity in primary production	HORIZON-CL6-2022-BIODIV-01-05: Intercropping – understanding and using the benefits of complexity in farming and value chains	RIA	EUR 16.00 million	Around EUR 8.00 million
Managing biodiversity in primary production	HORIZON-CL6-2022-BIODIV-01-06: Monitoring and effective measures for agrobiodiversity	RIA	EUR 8.00 million	Around EUR 8.00 million
Managing biodiversity in primary production	HORIZON-CL6-2022-BIODIV-01-07: Protection and sustainable management of forest genetic resources of high interest for biodiversity, climate change adaptation, and forest reproductive materials	RIA	EUR 8.00 million	Around EUR 8.00
Enabling transformative change on biodiversity	HORIZON-CL6-2022-BIODIV-01-08: Assessing the nexus of extraction, production, consumption, trade and behaviour patterns and of climate change action on biodiversity in the context of transformative change	RIA	EUR 12.00 million	Around 3.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling transformative change on biodiversity	HORIZON-CL6-2022-BIODIV-01-09: Understanding the role of behaviour, gender specifics, lifestyle, religious and cultural values, and addressing the role of enabling players (civil society, policy makers, financing and business leaders, retailers) in decision making	RIA	EUR 10.00 million	Between EUR 3.00 and 4.00 million
Interconnecting biodiversity research and supporting policies	HORIZON-CL6-2022-BIODIV-01-10: Cooperation with the Convention on Biological Diversity	CSA	EUR 5.00 million	Around EUR 5.00 million
Managing biodiversity in primary production	HORIZON-CL6-2022-BIODIV-02-01-two-stage: Maintaining and restoring pollinators and pollination services in European agricultural landscapes	IA	EUR 20.00 million	Between EUR 6.00 and 10.00 million
Managing biodiversity in primary production	HORIZON-CL6-2022-BIODIV-02-02-two-stage: Boosting breeding for a sustainable, resilient and competitive European legume sector	IA	EUR 14.00 million	Around EUR 7.00
Managing biodiversity in primary production	HORIZON-CL6-2022-BIODIV-02-03-two-stage: Resilient beekeeping	RIA	EUR 12.00 million	Around 6.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

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

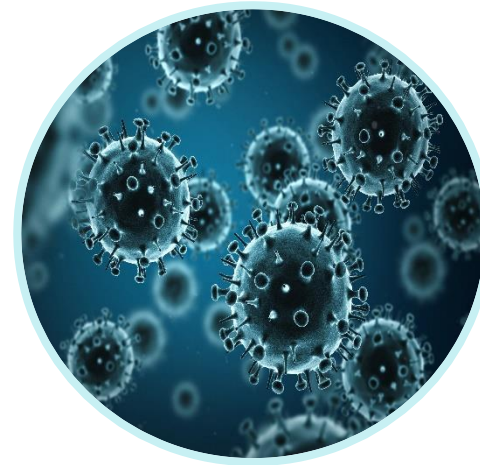
# 2030 Targets for sustainable food production



Reduce by 50% the overall use and risk of **chemical pesticides** and reduce use by 50% of more hazardous **pesticides**



Reduce **nutrient losses** by at least 50% while ensuring no deterioration in soil fertility; this will reduce use of **fertilisers** by at least 20 %



Reduce sales of **antimicrobials** for farmed animals and in aquaculture by 50%



Achieve at least 25% of the EU's agricultural land under **organic farming**

# Challenges to the EU food system

## SOCIAL SUSTAINABILITY



Healthier diets –  
reduce  
overweight



Improve  
animal  
welfare



Social rights  
workers in food  
chain



Food  
affordability

## ENVIRONMENTAL SUSTAINABILITY



Tackle climate  
change



Protect the  
environment



Preserve  
biodiversity



Reduce food  
losses and waste



Circular bio-based  
economy

## ECONOMIC SUSTAINABILITY



Fairer incomes for  
farmers & fishers

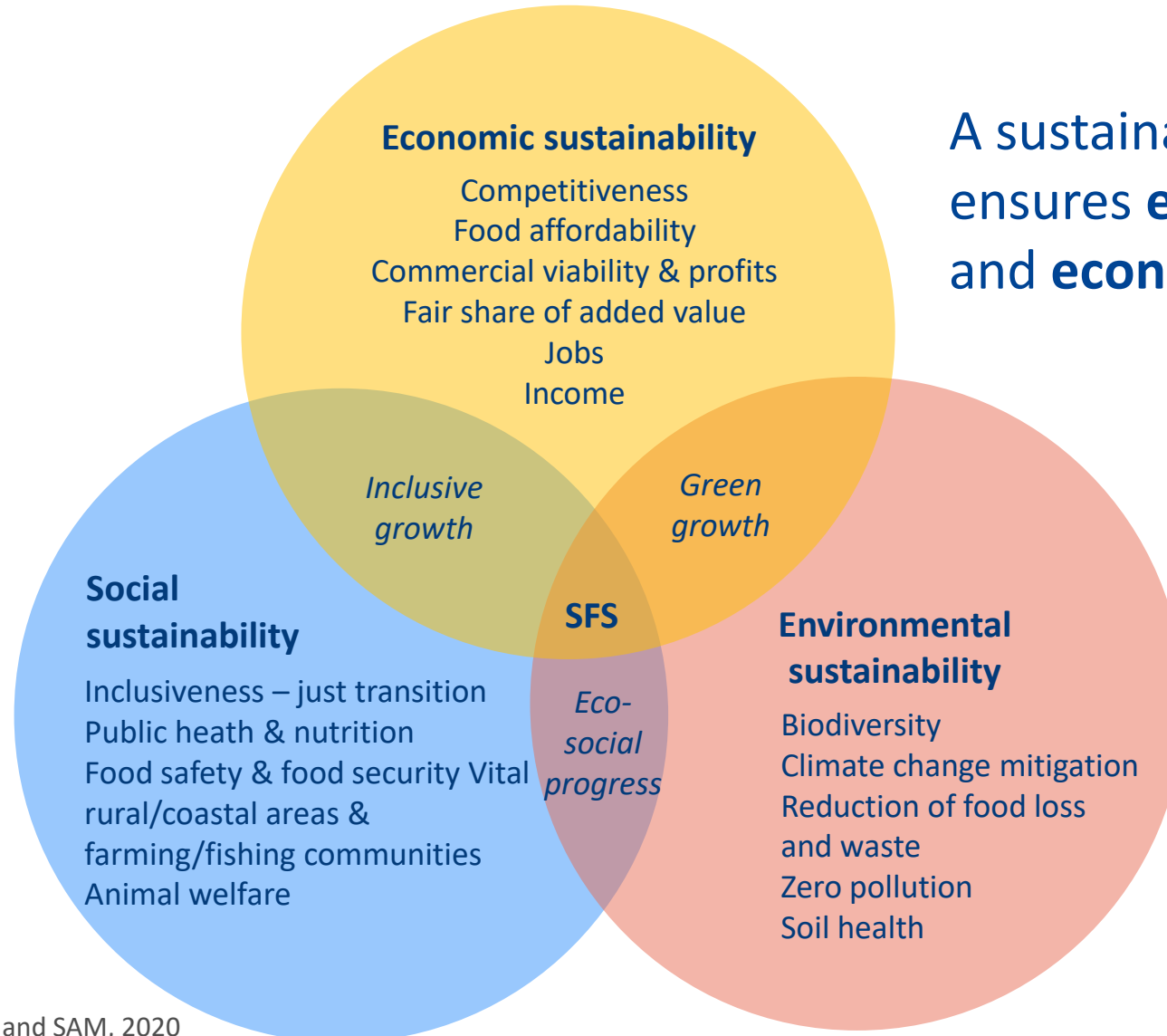


Just  
transition



New business & job  
opportunities

# Sustainable food systems for sustainable societies

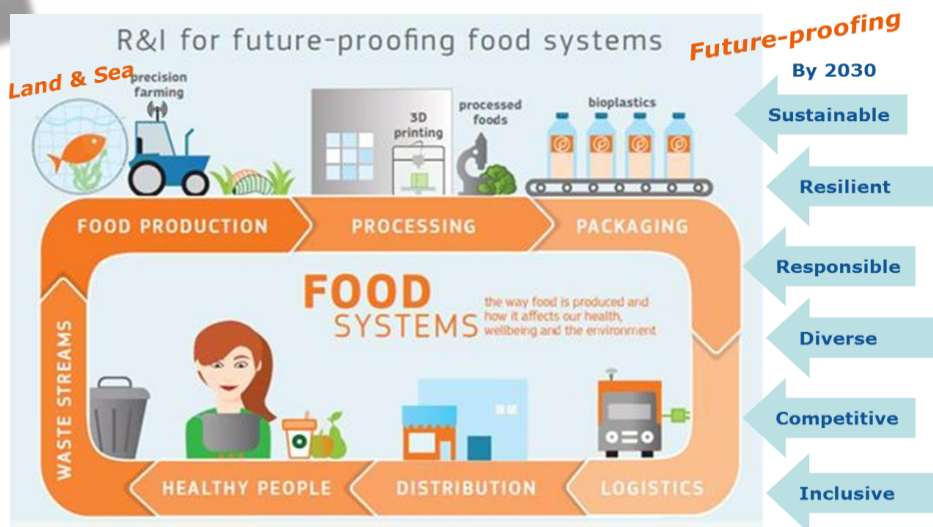


A sustainable food system (SFS) ensures **environmental, social and economic sustainability**



# FOOD 2030

## R&I for tomorrow's nutrition & food systems



- Perfect Storm: climate change, population growth, resource scarcity, malnutrition, obesity & NCDs
- Political opportunity: response to SDGs, COP21+, Juncker priorities
- Investment opportunity: EU underinvesting in food & agri R&I despite high returns on investment
- Need for a systemic approach to future-proofing food systems via more impactful R&I

### Priorities

- NUTRITION** for sustainable and healthy diets
- CLIMATE** smart and environmentally sustainable food systems
- CIRCULARITY** and resource efficiency of food systems
- INNOVATION** and empowerment of communities

### Drivers

- Research breakthroughs**
- Innovation and Investment**
- Open Science**
- International collaboration**

#FOOD2030EU

# Four headings in Destination 2

21. Enabling sustainable agriculture

22. Enabling sustainable fisheries and aquaculture

23. Transforming food systems for health, sustainability and inclusion

24. Targeted international cooperation

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-01: Reaching the farm to fork target: R&I scenarios for boosting organic farming and organic aquaculture in Europe	RIA	EUR 4.00 million	Around EUR 4.00 million
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-02: Developing sustainable and competitive land-based protein crop systems and value chains	IA	EUR 9.00 million	Around EUR 9.00 million
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-03: Digitalisation as an enabler of agroecological farming systems	CSA	EUR 2.00 million	Around EUR 2.00
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-04: Tackling outbreaks of plant pests	RIA	EUR 14.00 million	Around 7.00 million
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-05: Animal welfare 2.0	RIA	EUR 8.00 million	Around EUR 8.00 million
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-06: Vaccines and diagnostics for priority animal diseases	IA	EUR 12.00 million	Around EUR 6.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-07: Research & innovation roadmap for blockchain technologies in the agri-food sector	CSA	EUR 3.00 million	Around EUR 3.00 million
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-08: Uncovering lock-ins and levers to encourage farmers to move to and stay in sustainable, climate-neutral and biodiversity-friendly farming systems: from experiments to systemic mechanisms	RIA	EUR 12.00 million	Around EUR 4.00
Enabling sustainable farming	HORIZON-CL6-2021-FARM2FORK-01-09: Towards an EU approach to assess and internalise positive and negative externalities of food for incentivising sustainable choices	RIA	EUR 8.00 million	Around EUR 8.00 million
Enabling sustainable fisheries and aquaculture	HORIZON-CL6-2021-FARM2FORK-01-10: Sea to fork transparency and consumer engagement	IA	EUR 10.00 million	Around EUR 5.00 million
Enabling sustainable fisheries and aquaculture	HORIZON-CL6-2021-FARM2FORK-01-11: Digital transition supporting inspection and control for sustainable fisheries	IA	EUR 10.00 million	Around EUR 5.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2021-FARM2FORK-01-12: Filling knowledge gaps on the nutritional, safety, allergenicity and environmental assessment of alternative proteins and dietary shift	RIA	EUR 11.00 million	Around EUR 11.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2021-FARM2FORK-01-13: Evidence-based decision-making to change social norms towards zero food waste	RIA	EUR 12.00 million	Between EUR 6.00 and 7.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2021-FARM2FORK-01-14: Microbes for healthy and sustainable food and diets	RIA	EUR 12.00 million	Around EUR 12.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2021-FARM2FORK-01-15: Transition to healthy and sustainable dietary behaviour	RIA	EUR 12.00 million	Around EUR 12.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2021-FARM2FORK-01-16: Identification, assessment and management of existing and emerging food safety issues	RIA	EUR 12.00 million	Around EUR 6.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2021-FARM2FORK-01-17: Increasing the transparency of EU food systems to boost health, sustainability and safety of products, processes and diets	IA	EUR 11.00 million	Around EUR 11.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2021-FARM2FORK-01-18: One Health approach for Food Nutrition Security and Sustainable Agriculture (FNSSA)	RIA	EUR 18.00 million	Around EUR 6.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2021-FARM2FORK-01-19: EU-China international cooperation on integrated pest management in agriculture	RIA	EUR 6.00 million	Around EUR 6.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling sustainable farming	HORIZON-CL6-2022-FARM2FORK-01-01: Risk assessment of new low risk pesticides	RIA	EUR 7.00 million	Around EUR 7.00 million
Enabling sustainable farming	HORIZON-CL6-2022-FARM2FORK-01-02: Socio-economics of pesticide use in agriculture	RIA	EUR 6.00 million	Around EUR 6.00 million
Enabling sustainable farming	HORIZON-CL6-2022-FARM2FORK-01-03: Enhancing biosecurity in terrestrial livestock production	RIA	EUR 10.00 million	Around EUR 5.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2022-FARM2FORK-01-04: Innovative solutions to prevent adulteration of food bearing quality labels: focus on organic food and geographical indications	IA	EUR 8.00 million	Around EUR 4.00 million
Enabling sustainable fisheries and aquaculture	HORIZON-CL6-2022-FARM2FORK-01-05: Integrated and sustainable freshwater bioeconomy: Combining aquaculture, biodiversity preservation, biotechnology and other uses	RIA	EUR 10.00 million	Around EUR 5.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling sustainable fisheries and aquaculture	HORIZON-CL6-2022-FARM2FORK-01-06: Biosecurity, hygiene, disease prevention and animal welfare in aquaculture	RIA	EUR 12.00 million	Around EUR 6.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2022-FARM2FORK-01-07: Building alternative protein-friendly sustainable and healthy food environments	IA	EUR 12.00 million	Around EUR 12.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2022-FARM2FORK-01-08: Research and innovation for food losses and waste prevention and reduction through harmonised measurement and monitoring	RIA	EUR 14.00 million	Around EUR 7.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2022-FARM2FORK-01-09: Microbiomes in food production systems	RIA	EUR 10.00 million	Around EUR 5.00 million
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2022-FARM2FORK-01-10: Integrated surveillance system to prevent and reduce diet-related non communicable diseases (NCDs)	RIA	EUR 11.00 million	Around EUR 11.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Transforming food systems for health, sustainability and inclusion	HORIZON-CL6-2022-FARM2FORK-01-11: Effective systems for authenticity and traceability in the food system	RIA	EUR 10.00 million	Around EUR 10.00 million
Targeted international cooperation	HORIZON-CL6-2022-FARM2FORK-01-12: Agro-ecological approaches in African agriculture systems	RIA	EUR 28.00 million	Around EUR 7.00 million
Targeted international cooperation	HORIZON-CL6-2022-FARM2FORK-01-13: AU-EU Combatting all forms of malnutrition	RIA	EUR 11.00 million	Around EUR 11.00 million
Targeted international cooperation	HORIZON-CL6-2022-FARM2FORK-01-14: African food cities	RIA	EUR 12.00 million	Around EUR 6.00 million
Targeted international cooperation	HORIZON-CL6-2022-FARM2FORK-01-15: Support for international research on infectious animal diseases	CSA	EUR 3.00 million	Around EUR 3.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling sustainable farming	HORIZON-CL6-2022-FARM2FORK-02-01-two-stage: Agroecological approaches for sustainable weed management	RIA	EUR 14.50 million	Around EUR 5.00 million
Enabling sustainable farming	HORIZON-CL6-2022-FARM2FORK-02-02-two-stage: Emerging and future risks to plant health	RIA	EUR 7.00 million	Around EUR 7.00 million
Enabling sustainable farming	HORIZON-CL6-2022-FARM2FORK-02-03-two-stage: Ecology of infectious animal diseases	RIA	EUR 12.00 million	Around EUR 6.00 million
Enabling sustainable farming	HORIZON-CL6-2022-FARM2FORK-02-04-two-stage: Smart solutions for the use of digital technologies for small- and medium-sized, farms and farm structures	IA	EUR 15.00 million	Around EUR 5.00 million
Enabling sustainable fisheries and aquaculture	HORIZON-CL6-2022-FARM2FORK-02-05-two-stage: Innovative food from marine and freshwater ecosystems	IA	EUR 18.00 million	Around EUR 6.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Destination 3: Circular economy and bioeconomy sectors

# The bioeconomy as driver and enabler of the European Green Deal

## The new Circular Economy Action Plan

### TEXTILES



Worldwide, a full truck of **textiles** is sent to incineration or landfilled every second.  
It is estimated that less than 1% of all textiles worldwide are recycled into new textiles.



Driving new business models will boost sorting, reuse and recycling of textiles, and allow consumers to choose sustainable textiles. Ecodesign will apply to a broader range of products: clothes will be made to last longer.



### PLASTICS



Consumption of plastics is expected to **double** in the coming 20 years.

By 2050, plastics could account for 20% of oil consumption, 15% of greenhouse gas emissions, and there could be more plastics than fish in the ocean.



Single-use products will be phased out wherever possible and replaced by durable products for multiple use.

Acting on microplastics - restricting intentionally added microplastics, increasing the capture of microplastics at all relevant stages of the product lifecycle.



### FOOD and PACKAGING



In 2017 packaging waste reached in Europe a record of **173 kg per inhabitant**.



New legislative initiatives on reuse to **substitute single-use packaging**, tableware and cutlery by reusable products in food services, as well as targets for reducing packaging waste will be proposed.

### WASTE



Each citizen produces nearly half a **tonne of municipal waste** per year.



Measures will be introduced for **waste prevention and reduction**, increasing recycled content, minimising waste exports outside EU. An EU model for separate collection and labelling of products will be launched.



# Four headings in Destination 3

31. Enabling a circular economy transition
32. Innovating sustainable bio-based systems and the bioeconomy
33. Safeguarding the multiple functions of EU forests
34. Innovating for blue bioeconomy and biotechnology value chains

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling a circular economy transition	HORIZON-CL6-2021-CIRCBIO-01-01: Circular Cities and Regions Initiative (CCRI)'s circular systemic solutions	IA	EUR 21.50 million	Between EUR 5.00 and 10.00 million
Enabling a circular economy transition	HORIZON-CL6-2021-CIRCBIO-01-02: Circular Cities and Regions Initiative's project development assistance (CCRI-PDA)	CSA	EUR 10.00 million	Between EUR 0.40 and 2.00 million
Enabling a circular economy transition	HORIZON-CL6-2021-CIRCBIO-01-03: Innovative solutions to over-packaging and single-use plastics, and related microplastic pollution	IA	EUR 18.00 million	Between EUR 5.00 and 7.00 million
Enabling a circular economy transition	HORIZON-CL6-2021-CIRCBIO-01-04: Increasing the circularity in textiles, plastics and/or electronics value chains	IA	EUR 22.00 million	Between EUR 6.00 and 8.00 million
Innovating sustainable bio-based systems and the bioeconomy	HORIZON-CL6-2021-CIRCBIO-01-05: Novel, non-plant biomass feedstocks for industrial applications	IA	EUR 12.00 million	Around EUR 6.00 million
Innovating sustainable bio-based systems and the bioeconomy	HORIZON-CL6-2021-CIRCBIO-01-06: Contained biomass solutions for sustainable and zero-Indirect Land Use Change (ILUC) production systems for high value applications	IA	EUR 10.00 million	Around EUR 5.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Innovating sustainable bio-based systems and the bioeconomy	HORIZON-CL6-2021-CIRCBIO-01-07: Microbiomes for bio-based innovation and environmental applications	IA	EUR 6.00 million	Around EUR 6.00 million
Innovating sustainable bio-based systems and the bioeconomy	HORIZON-CL6-2021-CIRCBIO-01-08: Mainstreaming inclusive small-scale bio-based solutions in European rural areas	CSA	EUR 9.00 million	Around EUR 9.00 million
Innovating for blue bioeconomy and biotechnology value chains	HORIZON-CL6-2021-CIRCBIO-01-09: Unlocking the potential of algae for a thriving European blue bioeconomy	IA	EUR 18.00 million	Around EUR 9.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Enabling a circular economy transition	HORIZON-CL6-2022-CIRCBIO-02-01-two-stage: Integrated solutions for circularity in buildings and the construction sector	IA	EUR 21.00 million	Between EUR 6.00 and 8.00 million
Innovating sustainable bio-based systems and the bioeconomy	HORIZON-CL6-2022-CIRCBIO-02-02-two-stage: Exploring extreme environments: novel adaptation strategies at molecular level for bio-based innovation	RIA	EUR 10.00 million	Around EUR 5.00 million
Innovating sustainable bio-based systems and the bioeconomy	HORIZON-CL6-2022-CIRCBIO-02-03-two-stage: Sustainable biodegradable novel bio-based plastics: innovation for sustainability and end-of-life options of plastics	IA	EUR 12.00 million	Around EUR 6.00 million
Innovating sustainable bio-based systems and the bioeconomy	HORIZON-CL6-2022-CIRCBIO-02-04-two-stage: Photosynthesis revisited: climate emergency, “no pollution and zero-emission” challenge and industrial application	RIA	EUR 6.00 million	Around EUR 6.00 million
Innovating sustainable bio-based systems and the bioeconomy	HORIZON-CL6-2022-CIRCBIO-02-05-two-stage: Life sciences and their convergence with digital technologies for prospecting, understanding and sustainably using biological resources	RIA	EUR 12.00 million	Around EUR 6.00 million
Safeguarding the multiple functions of EU forests	HORIZON-CL6-2022-CIRCBIO-02-06-two-stage: Harnessing the digital revolution in the forest-based sector	IA	EUR 15.00 million	Between EUR 6.00 and 8.00 million

# Destination 4: Clean environment and zero pollution

# Destination narrative

Combating pollution of  
**water, soils, air and oceans**

- preserving, restoring and monitoring the quality of water, soils, air and oceans
- developing prevention and mitigation strategies while halting biodiversity decline and protecting ecosystems
- limiting nitrogen/phosphorus pollution, i.a. by recovering nutrients from wastewater and adopting agro-ecological practices

**Environmental performance**  
and **sustainable** processes  
and products

- accelerating the transition from a fossil-based to a resource-efficient and zero-pollution circular, blue and bio-economy by tracing, assessing and reducing environmental impacts of bio-based value chains

*Synergies with Destination 1 on Biodiversity, Destination 2 on F2F and Destination 3 on CE&BE sectors*

# Destination 4 – Headings



**Halting emissions  
of pollutants to  
soils and waters**



**Protecting drinking  
water and  
managing urban  
water pollution**



**Addressing  
pollution on seas  
and oceans**



**Increasing  
environmental  
performances and  
the sustainability  
of processes/  
products**

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Halting emissions of pollutants to soils and waters	HORIZON-CL6-2021-ZEROPOLLUTION-01-01: Regional nitrogen and phosphorus load reduction approach within safe ecological boundaries	CSA	EUR 6.00 million	Around EUR 2.00 million
Halting emissions of pollutants to soils and waters	HORIZON-CL6-2021-ZEROPOLLUTION-01-02: Optimisation of nutrient budget in agriculture	RIA	EUR 7.00 million	Around EUR 7.00 million
Protecting drinking water and managing urban water pollution	HORIZON-CL6-2021-ZEROPOLLUTION-01-03: Preventing and managing diffuse pollution in urban water runoff	RIA	EUR 10.00 million	Between EUR 2.00 and 4.00 million
Addressing pollution on seas and ocean	HORIZON-CL6-2021-ZEROPOLLUTION-01-04: Achieving zero polluted seas and ocean	CSA	EUR 3.00 million	Around 3.00 million
Increasing environmental performances and sustainability of processes and products	HORIZON-CL6-2021-ZEROPOLLUTION-01-05: Environmental sustainability criteria for biological resources production and trade in bio-based systems: impacts and trade-offs	IA	EUR 6.00 million	Around EUR 6.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Increasing environmental performances and sustainability of processes and products	HORIZON-CL6-2021-ZEROPOLLUTION-01-06: Increasing the environmental performance of industrial processes in bio-based sectors: construction, woodworking, textiles, pulp and paper and bio-chemicals	RIA	EUR 7.00 million	Around EUR 3.50 million
Increasing environmental performances and sustainability of processes and products	HORIZON-CL6-2021-ZEROPOLLUTION-01-07: International and EU sustainability certification schemes for bio-based systems	CSA	EUR 6.00 million	Around EUR 2.00 million
Increasing environmental performances and sustainability of processes and products	HORIZON-CL6-2021-ZEROPOLLUTION-01-08: New genomic techniques (NGT): understanding benefits and risks – focus on bio-based innovation	RIA	EUR 5.00 million	Around 5.00 million
Increasing environmental performances and sustainability of processes and products	HORIZON-CL6-2021-ZEROPOLLUTION-01-09: Environmental impacts and trade-offs of alternative fertilising products at global/local scale.	CSA	EUR 4.00 million	Around 2.00 million
Increasing environmental performances and sustainability of processes and products	HORIZON-CL6-2021-ZEROPOLLUTION-01-10: Environmental services: improved bioremediation and revitalization strategies for soil, sediments and water	RIA	EUR 11.00 million	Around EUR 5.50 million

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Halting emissions of pollutants to soils and waters	HORIZON-CL6-2022-ZEROPOLLUTION-01-01: Preventing groundwater contamination and protecting its quality against harmful impacts of global and climate change	RIA	EUR 12.00 million	Between EUR 2.00 and 4.00 million
Halting emissions of pollutants to soils and waters	HORIZON-CL6-2022-ZEROPOLLUTION-01-02: Piloting innovative governance solutions to limit nitrogen and phosphorus emissions at the interface of rural/coastal and urban/industrial environments	IA	EUR 12.00 million	Around EUR 6.00 million
Halting emissions of pollutants to soils and waters	HORIZON-CL6-2022-ZEROPOLLUTION-01-03: EU-China international cooperation on nature-based solutions for nutrient management in agriculture	IA	EUR 12.00 million	Around EUR 6.00 million
Protecting drinking water and managing urban water pollution	HORIZON-CL6-2022-ZEROPOLLUTION-01-04: Securing drinking water quality by protecting water sources against pollution, providing innovative monitoring and treatment solutions and ensuring safe distribution	RIA	EUR 15.00 million	Between EUR 2.00 and 4.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Destination 5: Land, oceans and water for climate action

# Policy objectives

- With the **European Green Deal** and the Commission's proposal for a **Climate Law**, the EU objectives are to reach climate neutrality – net zero greenhouse gas emissions - by 2050 and to increase the target of emission reduction for the period 1990-2030 from 40% to 55%
- Ensuring continuous progress in enhancing the **adaptive capacity**, strengthening **resilience** and **reducing vulnerability** to climate change



# Destination narrative

- Assessing impact of climate change and identify pathways for mitigation and adaptation requires inter/multidisciplinary R&I across a large range of activities
- Crucial role of R&I to help design and implement policies that will ensure reaching EU climate objectives
- Need to foster deployment and uptake of solutions for mitigation and for adaptation

# Call 2021

Topic	Type of action	Budget topic	Indicative budget for project
HORIZON-CL6-2021-CLIMATE-01-01: Improved understanding, observation and monitoring of water resources availability	RIA	EUR 10.00 million	Between EUR 3.00 and 5.00 million
HORIZON-CL6-2021-CLIMATE-01-02: European Partnership Water Security for the Planet (Water4All)	Programme Co-fund Action	EUR 20.00 million	Between EUR 20.00 and 126.00 million
HORIZON-CL6-2021-CLIMATE-01-03: Key oceanic and polar processes driving regional & global climate change	RIA	EUR 15.00 million	Between EUR 7.00 and 8.00 million
HORIZON-CL6-2021-CLIMATE-01-04: Demonstration network on climate-smart farming – linking pilot farms	CSA	EUR 23.00 million	Around EUR 23.00 million
HORIZON-CL6-2021-CLIMATE-01-05: Agroecological approaches for climate change mitigation, resilient agricultural production and enhanced biodiversity	RIA	EUR 7.00 million	Around EUR 7.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Topic	Type of action	Budget topic	Indicative budget for project
HORIZON-CL6-2021-CLIMATE-01-06: Resilient livestock farming systems under climate change	RIA	EUR 12.00 million	Around EUR 12.00 million
HORIZON-CL6-2021-CLIMATE-01-07: International Research Consortium on (agricultural) soil carbon	CSA	EUR 3.00 million	Around EUR 3.00 million
HORIZON-CL6-2021-CLIMATE-01-08: Agroforestry to meet climate, biodiversity and farming sustainability goals	RIA	EUR 8.00 million	Around EUR 4.00 million
HORIZON-CL6-2021-CLIMATE-01-09: Enhancing science-based knowledge on EU forests', including old-growth forests, capacities to mitigate climate change	RIA	EUR 10.00 million	Around EUR 5.00 million
HORIZON-CL6-2021-CLIMATE-01-10: EU-China international cooperation on increasing the resilience of forests	RIA	EUR 10.00 million	Around EUR 10.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Topic	Type of action	Budget topic	Indicative budget for project
HORIZON-CL6-2022-CLIMATE-01-01: Climate sensitive water allocation systems and economic instruments.	IA	EUR 10.00 million	Between EUR 4.00 and 5.00 million
HORIZON-CL6-2022-CLIMATE-01-02: Understanding the oceanic carbon cycle	RIA	EUR 15.00 million	Around EUR 15.00 million
HORIZON-CL6-2022-CLIMATE-01-03: Demonstration network on climate-smart farming – boosting the role of advisory services	CSA	EUR 20.00 million	Around EUR 20.00 million
HORIZON-CL6-2022-CLIMATE-01-04: Fostering the resilience of agricultural production: from observation of changes to the development of resilience strategies	RIA	EUR 15.00 million	Around EUR 15.00 million
HORIZON-CL6-2022-CLIMATE-01-05: Forestry - European observatory of climate change impacts and demonstration network of climate smart restoration pilots	RIA	EUR 15.00 million	Around EUR 15.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

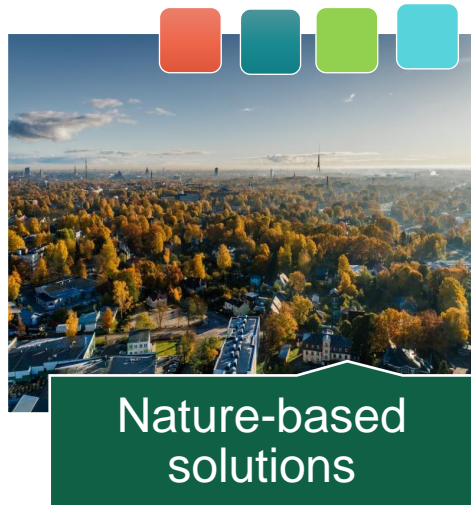
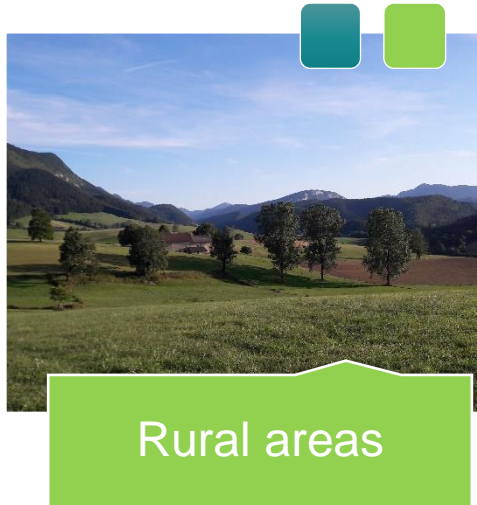
# Destination 6: Resilient, inclusive, healthy and green rural, coastal and urban communities

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

## Context:

- **Places matter:** SDGs, ecological and digital transitions, pandemics raise challenges and opportunities that differ for rural, coastal communities and territories who play a key role in managing, protecting and using natural resources
  - **People matter:** social and behavioural drivers play an important role in enabling or slowing down transitions (as producers, service providers, businesses, consumers, citizens, inhabitants...)
  - To achieve the **Green deal objectives** in an **economy that works for all and leaves no one behind:**
    - Need to better **understand territorial differences** + **social/behavioural drivers** of change
    - Need to **empower communities** to innovate bottom-up: develop, test and upscale solutions tailored to their needs
    - Need to **innovate in tailoring policy responses** at various governance levels
- **Transdisciplinary R&I** with strong focus on social and community-led innovation

# Four groups of topics



# Call 2021

Topic	Type of action	Budget topic	Indicative budget for project
HORIZON-CL6-2021-COMMUNITIES-01-01: Grasping rural diversity and strengthening evidence for tailored policies enhancing the contribution of rural communities to ecological, digital and social transitions	RIA	EUR 15.00 million	Between EUR 7.00 and 7.50 million
HORIZON-CL6-2021-COMMUNITIES-01-02: Expertise and training centre on rural innovation	CSA	EUR 5.00 million	Around EUR 5.00 million
HORIZON-CL6-2021-COMMUNITIES-01-03: Smart XG, last-mile and edge solutions for remote farming, forestry and rural areas	RIA	EUR 10.00 million	Around EUR 5.00 million
HORIZON-CL6-2021-COMMUNITIES-01-04: Socio-economic empowerment of the users of the sea	RIA	EUR 6.00 million	Around 6.00 million
HORIZON-CL6-2021-COMMUNITIES-01-05: Integrated urban food system policies – how cities and towns can transform food systems for co-benefits	IA	EUR 12.00 million	Around EUR 12.00 million
HORIZON-CL6-2021-COMMUNITIES-01-06: Inside and outside: educational innovation with nature-based solutions	CSA	EUR 5.00 million	Around EUR 5.00 million

# Call 2022

Topic	Type of action	Budget topic	Indicative budget for project
HORIZON-CL6-2022-COMMUNITIES-01-01: Boosting women-led innovation in farming and rural areas	RIA	EUR 6.00 million	Around EUR 3.00 million
HORIZON-CL6-2022-COMMUNITIES-01-02: Assessing and improving labour conditions and health and safety at work in farming	RIA	EUR 5.00 million	Around EUR 5.00 million
HORIZON-CL6-2022-COMMUNITIES-01-03: Integration of marine ecosystem service valuation, conservation and restoration in socio-economic models	IA	EUR 9.00 million	Around EUR 9.00 million
HORIZON-CL6-2022-COMMUNITIES-01-04: Social innovation in food sharing to strengthen urban communities' food resilience	IA	EUR 10.00 million	Around 10.00 million
HORIZON-CL6-2022-COMMUNITIES-01-05: Assessing the socio-politics of nature-based solutions for more inclusive and resilient communities	RIA	EUR 12.00 million	Around EUR 6.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Topic	Type of action	Budget topic	Indicative budget for project
HORIZON-CL6-2022-COMMUNITIES-02-01-two-stage: Smart solutions for smart rural communities: empowering rural communities and smart villages to innovate for societal change	IA	EUR 14.00 million	Around EUR 7.00 million
HORIZON-CL6-2022-COMMUNITIES-02-02-two-stage: Developing nature-based therapy for health and well-being	RIA	EUR 19.00 million	Around EUR 6.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

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

# Destination narrative

**Transformative changes require appropriate governance**

**Importance of networks providing data and information**

**Objectives:**

- **experiment new ways to govern the transition process**
- **modernise the governance, in particular by making information and knowledge available and accessible**
- **take advantage of the use, uptake and deployment of environmental observations as well as digital solutions**
- **disseminate knowledge, including with AKIS**

# Four headings in Destination 7

- 71. Innovating with governance models and supporting policies
- 72. Deploying and adding value to Environmental Observations
- 73. Digital and data technologies as key enablers
- 74. Strengthening agricultural knowledge and innovation systems

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Innovating with governance models and supporting policies	HORIZON-CL6-2021-GOVERNANCE-01-01: Mobilising the network of national contact points in Cluster 6	CSA	EUR 3.50 million	Around 3.50 million
Innovating with governance models and supporting policies	HORIZON-CL6-2021-GOVERNANCE-01-02: Furthering food systems science and federating researchers across the European Research Area	RIA	EUR 17.00 million	Around EUR 6.00 million
Innovating with governance models and supporting policies	HORIZON-CL6-2021-GOVERNANCE-01-03: Preparatory action for the Horizon Europe Food System Partnership	CSA	EUR 5.00 million	Around EUR 5.00 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-03: Preparatory action for the Horizon Europe Food System Partnership	CSA	EUR 5.00 million	Around EUR 5.00 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-04: Strengthening bioeconomy innovation and deployment across sectors and all governance levels	CSA	EUR 4.00 million	Around EUR 4.00 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-05: Fostering strategic advice and synergies between national and EU research and innovation agendas, including SCAR foresight	CSA	EUR 4.00 million	Around EUR 4.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-06: Environmental and social cross-compliance of marine policies	RIA	EUR 8.00 million	Between EUR 2.00 and 3.00 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-07: Regional governance models in the bioeconomy	CSA	EUR 5.00 million	Around EUR 2.50 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-08: Improving understanding of and engagement in bio-based systems with training and skills development	CSA	EUR 5.00 million	Around EUR 2.50 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-09: Revitalisation of European local communities with innovative bio-based business models and social innovation	CSA	EUR 5.00 million	Around EUR 2.50 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-10: Raising awareness of circular and sustainable bioeconomy in support of Member States to develop bioeconomy strategies and/or action plans	CSA	EUR 4.00 million	Around EUR 4.00 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-11: Education on the bioeconomy including bio-based sectors for young people in primary and secondary education in Europe	CSA	EUR 2.00 million	Around EUR 2.00 million

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-12: EU agriculture within a safe and just operating space and planetary boundaries	RIA	EUR 10.00 million	Around EUR 10.00 million
Food System Partnership	HORIZON-CL6-2021-GOVERNANCE-01-13: Modelling land use and land management in the context of climate change	RIA	EUR 10.00 million	Around EUR 5.00 million
Deploying and adding value to Environmental Observations	HORIZON-CL6-2021-GOVERNANCE-01-14: User-oriented solutions building on environmental observation to monitor critical ecosystems and biodiversity loss and vulnerability in the European Union	RIA	EUR 20.00 million	Between EUR 3.00 and 5.00 million
Deploying and adding value to Environmental Observations	HORIZON-CL6-2021-GOVERNANCE-01-15: Preparing for pre-commercial procurement (PCP) for end-user services based on environmental observation in the area of climate change adaptation and mitigation	CSA	EUR 2.00 million	Around EUR 2.00 million
Deploying and adding value to Environmental Observations	HORIZON-CL6-2021-GOVERNANCE-01-16: Tools to support the uptake and accessibility/exploitability of environmental observation information at European and global level	IA	EUR 13.00 million	Around EUR 13.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Deploying and adding value to Environmental Observations	HORIZON-CL6-2021-GOVERNANCE-01-17: Common European Green Deal data space to provide more accessible and exploitable environmental observation data in support of the European Green Deal priority actions	IA	EUR 10.00 million	Between EUR 3.00 and 5.00 million
Digital and data technologies as key enablers	HORIZON-CL6-2021-GOVERNANCE-01-18: Mapping and improving the data economy for food systems	RIA	EUR 10.00 million	Around EUR 10.00 million
Digital and data technologies as key enablers	HORIZON-CL6-2021-GOVERNANCE-01-19: Development of the markets and use of digital technologies and infrastructure in agriculture – state of play and foresight: digital and data technologies for the agricultural sector in a fast changing regulatory, trade and technical environment	RIA	EUR 4.00 million	Between EUR 2.00 and 4.00 million
Digital and data technologies as key enablers	HORIZON-CL6-2021-GOVERNANCE-01-20: Data economy in the field of agriculture – effects of data sharing and big data	RIA	EUR 4.00 million	Between EUR 2.00 and 4.00 million
Digital and data technologies as key enablers	HORIZON-CL6-2021-GOVERNANCE-01-21: Potential of drones as multi-purpose vehicle – risks and added values	RIA	EUR 12.00 million	Around EUR 6.00 million

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Digital and data technologies as key enablers	HORIZON-CL6-2021-GOVERNANCE-01-22: Assessing the impacts of digital technologies in agriculture – cost, benefits and potential for sustainability gains	RIA	EUR 15.00 million	Around EUR 7.50 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2021-GOVERNANCE-01-23: Broaden EIP Operational Group outcomes across borders by means of thematic networks, compiling and sharing knowledge ready for practice	CSA	EUR 4.00 million	Around EUR 2.00 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2021-GOVERNANCE-01-24: Supporting knowledge exchange between all AKIS actors in the Member States by means of an EU-wide interactive knowledge reservoir	RIA	EUR 15.00 million	Around EUR 15.00 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2021-GOVERNANCE-01-25: Improving national AKIS organisation in a co-creative process across the EU	CSA	EUR 10.00 million	Around EUR 10.00 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2021-GOVERNANCE-01-26: Deepening the functioning of innovation support	CSA	EUR 5.00 million	Around EUR 5.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2021

Area	Topic	Type of action	Budget topic	Indicative budget for project
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2021-GOVERNANCE-01-27: Developing EU advisory networks on consumer-producer chains	CSA	EUR 8.00 million	Around EUR 4.00 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2021-GOVERNANCE-01-28: Thematic networks to compile and share knowledge ready for practice	CSA	EUR 8.50 million	Around EUR 3.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Innovating with governance models and supporting policies	HORIZON-CL6-2022-GOVERNANCE-01-01: Mobilisation of society to transform food systems for co-benefits	CSA	EUR 8.00 million	Around EUR 8.00 million
Innovating with governance models and supporting policies	HORIZON-CL6-2022-GOVERNANCE-01-02: European Partnership for a climate neutral, sustainable and productive Blue Economy	Programme Co-fund Action	EUR 23.00 million	Between EUR 23.00 and 150.00 million
Innovating with governance models and supporting policies	HORIZON-CL6-2022-GOVERNANCE-01-03: Multi-layer governance performance of marine policies	RIA	EUR 6.00 million	Around EUR 6.00 million
Innovating with governance models and supporting policies	HORIZON-CL6-2022-GOVERNANCE-01-04: Consumer-focused labelling options for bio-based products	CSA	EUR 3.00 million	Around EUR 3.00 million
Innovating with governance models and supporting policies	HORIZON-CL6-2022-GOVERNANCE-01-05: Innovative tools and methods to evaluate the design and support, monitoring and implementation of effective CAP strategic plans	CSA	EUR 4.00 million	Around EUR 4.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Innovating with governance models and supporting policies	HORIZON-CL6-2022-GOVERNANCE-01-06: Water governance, economic and financial sustainability of water systems	RIA	EUR 10.00 million	Around EUR 3.00 million
Deploying and adding value to Environmental Observations	HORIZON-CL6-2022-GOVERNANCE-01-07: New technologies for acquiring in-situ observation datasets to address climate change effects	IA	EUR 20.00 million	Around EUR 3.00 million
Deploying and adding value to Environmental Observations	HORIZON-CL6-2022-GOVERNANCE-01-08: Uptake and validation of citizen observations to complement authoritative measurement within the urban environment and boost related citizen engagement	IA	EUR 14.00 million	Between EUR 3.00 and 5.00 million
Deploying and adding value to Environmental Observations	HORIZON-CL6-2022-GOVERNANCE-01-09: Environmental observations solutions contributing to meeting “One Health” challenges	RIA	EUR 10.00 million	Around EUR 5.00 million
Digital and data technologies as key enablers	HORIZON-CL6-2022-GOVERNANCE-01-10: Piloting approaches and tools to empower citizens to exercise their “data rights” in the area of food and nutrition	RIA	EUR 8.00 million	Around EUR 4.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .

# Call 2022

Area	Topic	Type of action	Budget topic	Indicative budget for project
Digital and data technologies as key enablers	HORIZON-CL6-2022-GOVERNANCE-01-11: Upscaling (real-time) sensor data for EU-wide monitoring of production and agri-environmental conditions	RIA	EUR 15.00 million	Between EUR 5.00 and 7.50 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2022-GOVERNANCE-01-12: Thematic networks to compile and share knowledge ready for practice	CSA	EUR 9.00 million	Around EUR 3.00 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2022-GOVERNANCE-01-13: Broaden EIP Operational Group outcomes across borders by means of thematic networks, compiling and sharing knowledge ready for practice	CSA	EUR 4.00 million	Around 2.00 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2022-GOVERNANCE-01-14: Improving preparation of multi-actor projects to enable the relevant actors to work in a co-creative way	CSA	EUR 5.00 million	Around EUR 5.00 million
Strengthening agricultural knowledge and innovation systems	HORIZON-CL6-2022-GOVERNANCE-01-15: Developing EU advisory networks on water use	CSA	EUR 8.00 million	Around EUR 4.00 million

RIA Research and innovation actions; IA Innovation actions; CSA Coordination and support actions .



# Nuovo approccio ai partenariati europei: panoramica

Una nuova generazione di partenariati più ambiziosi a sostegno degli obiettivi politici dell'UE



## Caratteristiche principali

- Architettura semplificata
- Approccio strutturato e trasparente all'intero ciclo di vita del partenariato
- Orientamento strategico

### Co-programmed

Basati su protocolli d'intesa / accordi contrattuali; attuati in modo indipendente dai partner e dalla Commissione via Horizon Europe

### Co-funded

Sulla base di un programma congiunto concordato dai partner; impegno dei partner con contributi finanziari e in natura e contributo finanziario da Horizon Europe

### Institutionalised

Basati su una visione a lungo termine e sulla necessità di un'elevata integrazione; partenariati basati su Art.185 /187 del TFUE e sul regolamento EIT

# Overview of 49 candidate European Partnerships

## HORIZON EUROPE PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility	CLUSTER 6: Food, Bioeconomy, Agriculture, ...
Innovative Health Initiative	Key Digital Technologies	Clean Hydrogen	Circular Bio-based Europe
Global Health Partnership	Smart Networks & Services	Clean Aviation	Rescuing Biodiversity to Safeguard Life on Earth
Transformation of health systems	High Performance Computing	Single European Sky ATM Research 3	Climate Neutral, Sustainable & Productive Blue Economy
Chemicals risk assessment	European Metrology (Art. 185)	Europe's Rail	Water4All
ERA for Health	AI-Data-Robotics	Connected and Automated Mobility	Animal Health & Welfare*
Rare diseases*	Photonics	Batteries	Accelerating Farming Systems Transitions*
One-Health Anti Microbial Resistance*	Made in Europe	Zero-emission waterborne transport	Agriculture of Data*
Personalised Medicine*	Clean steel – low-carbon steelmaking	Zero-emission road transport	Safe & Sustainable Food System*
Pandemic Preparedness* <i>Co-funded or co-programmed</i>	Processes4Planet	Built4People	
	Global competitive space systems**	Clean Energy Transition	
		Driving Urban Transitions	

- Institutionalised Partnerships (Art 185/7)
- Institutionalised Partnerships / EIT KICs
- Co-Programmed
- Co-Funded

\* Calls with opening dates in 2023-24  
 \*\* Calls with opening dates not before 2022

## PILLAR III - Innovative Europe

EIT (KNOWLEDGE & INNOVATION COMMUNITIES)	SUPPORT TO INNOVATION ECOSYSTEMS
InnoEnergy	Innovative SMEs
Climate	
Digital	
Food	
Health	
Raw Materials	
Manufacturing	
Urban Mobility	
Cultural and Creative Industries	

## CROSS-PILLARS II & III

European Open Science Cloud
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# Partnerships in Work Programme 2021-2022

## Rescuing Biodiversity to Safeguard Life on Earth

- co-funded European Partnership
- Topic in Destination 1 (Interconnecting biodiversity research and supporting policies)

## A climate neutral, sustainable and productive Blue Economy

- co-funded European Partnership
- Topic in Destination 7 (Innovating with governance models and supporting policies)

## Water Security for the Planet (Water4All)

- co-funded European Partnership
- Topic in Destination 5, sub-section 71 (Innovating with governance models and supporting policies) – to be included in the next version

# Four partnerships to be introduced in WP 2023-2024

**Accelerating farming systems transition: agro-ecology living labs and research infrastructures**

- co-funded European Partnership

**Animals and health**

- co-funded European Partnership

**Agriculture of data**

- co-funded European Partnership

**Safe and Sustainable Food Systems**

- co-funded European Partnership

# One institutionalised Partnership

## Circular bio-based Europe

- Outside Cluster 6 WP part



## R&I Missions

### R&I Missions

Relating EU's research and innovation better to society and citizens' needs; with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines mission characteristics and elements of governance, and 5 missions areas.

Specific missions will be programmed within the Global Challenges and European Industrial Competitiveness pillar (drawing on inputs from other pillars)

# MISSIONI

Soil health and food

Cancer



Climate-neutral and smart cities

Healthy oceans, seas, coastal and inland waters

Adaptation to climate change, including societal transformation

➤ Le Mission includono un portafoglio di azioni - progetti di ricerca, misure di policy o iniziative legislative - dirette a raggiungere, entro un arco di tempo prestabilito, un obiettivo audace, misurabile e rilevante per la società



## MISSIONS

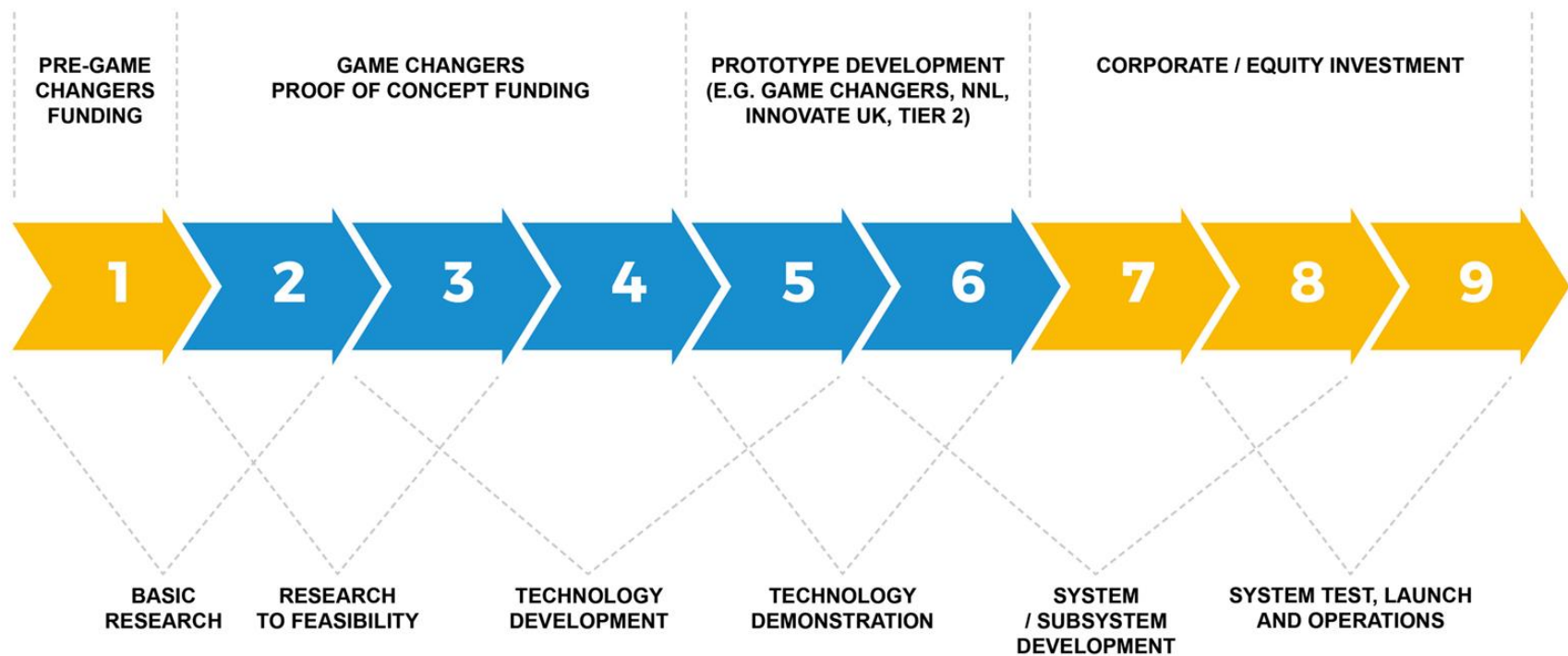
**Mission** means a portfolio of excellence-based and impact-driven R&I actions across disciplines and sectors, intended to:

- achieve, ***within a set timeframe***, a measurable goal that could not be achieved through individual actions
- have ***impact on society and policy-making*** through science and technology
- be ***relevant for*** a significant part of the European population and a wide range of ***European citizens***



# MISSION – TRL

TRL



encompasses activities from a broad range of TRLs, including lower TRLs, as appropriate to achieving the goal of the mission



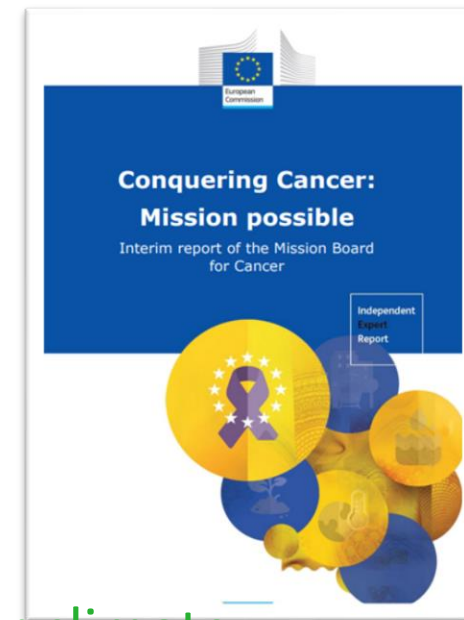
## MISSION – a new instrument?

- Each mission may involve one or more of the following:
  - **Launch specific calls** in Horizon Europe and other programmes. These calls will encourage creativity and bottom-up working from the proposer;
  - Identify **specific actions to change/** improve policy context, which are critical for missions success, such as framework conditions;
  - **Make use** of the appropriate **partnerships**;
  - **Mobilise structural** funds to the alignment to mission goals;
  - **Establish** the appropriate **links** with **national programmes**;
  - **Influence** the **international agenda, combining efforts** with similar **third country programmes**.

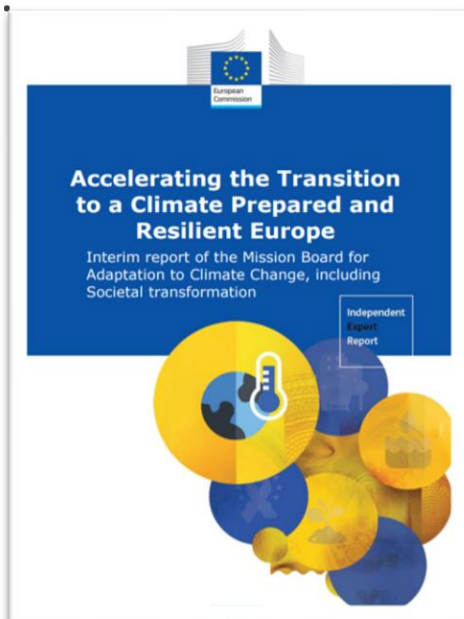


- Conquering Cancer: Mission Possible

Targets by 2030: more than 3 million lives saved, living longer and better: achieve a thorough understanding of cancer, prevent what is preventable, optimise diagnosis and treatment, support the quality of life of all people exposed to cancer, and ensure equitable access to the above across Europe.



- 



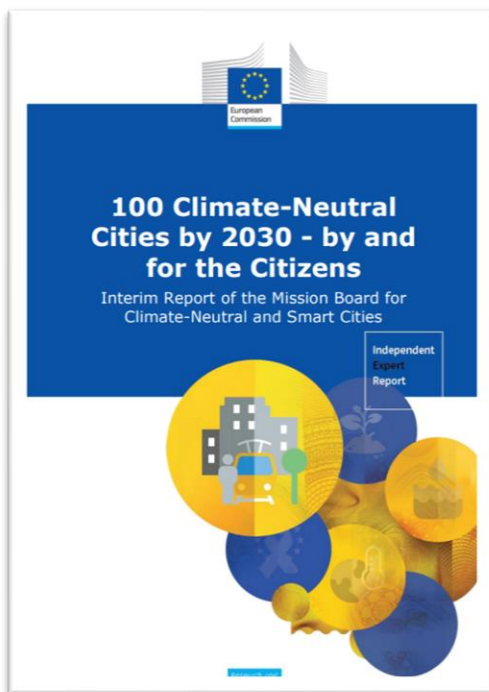
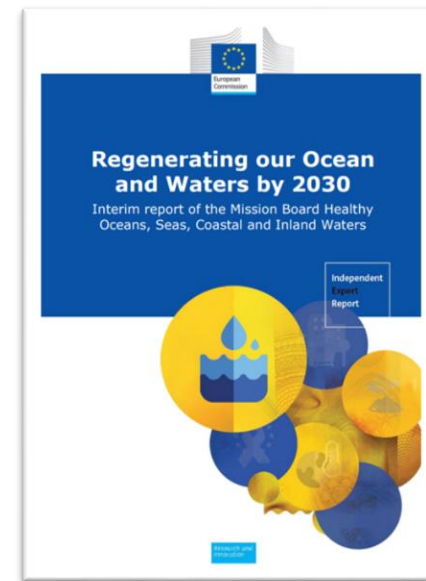
- A Climate Resilient Europe - Prepare Europe for climate disruptions and accelerate the transformation to a climate resilient and just Europe by 2030

Targets by 2030: prepare Europe to deal with climate disruptions, accelerate the transition to a healthy and prosperous future within safe planetary boundaries, and scale up solutions for resilience that will trigger transformations in society.



- Mission Starfish 2030: Restore our Ocean and Waters

Targets by 2030: filling the knowledge and emotional gap, regenerating marine and freshwater ecosystems, zero pollution, decarbonising the blue economy, and revamping governance. These mutually supportive objectives will enable the regeneration of the water cycle as a whole.



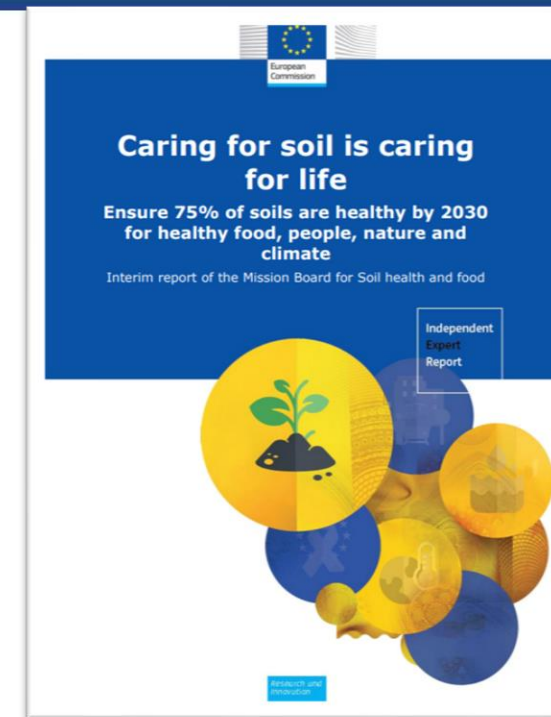
- 100 Climate-Neutral Cities by 2030 - by and for the citizens

Targets by 2030: support, promote and showcase 100 European cities in their systemic transformation to climate neutrality by 2030 and turn these cities into innovation hubs for all cities, benefitting quality of life and sustainability in Europe.



- Caring for Soil is Caring for Life

Targets by 2030: at least 75% of soils in the EU are healthy for food, people, nature and climate. The proposed mission combines research and innovation, education and training, investments and the demonstration of good practices using “Living labs” (experiments and innovation in a laboratory on the ground) and “Lighthouses” (places to showcase good practices).



***The EU missions’ idea is to tackle these societal challenges in a new way: targeted, time-bound and with a measurable goal. They bring together policies and instruments as a coherent, joined-up approach to ensure a strong impact on society and drive long-term, systemic and disruptive change. It is a huge ambition that we plan to fulfil together for a sustainable Europe for all. M. GAbriel***

# 3 Missions with specific interest for Cluster 6

**Mission Starfish 2030: Restore our Ocean and Waters by 2030**

**Mission Caring for Soil is Caring for Life - Ensure 75% of soils are healthy by 2030 for food, people nature and climate**

**A Climate Resilient Europe – Prepare Europe for climate disruptions and accelerate the transformation to a climate resilient and just Europe by 2030**



Ministero  
dell'Università  
e della Ricerca



Istituto Nazionale  
di Oceanografia  
e di Geofisica  
Sperimentale

European Commission  
Mission for Healthy oceans, seas,  
coastal and inland waters

## STARFISH MISSION 2030: RESTORE OUR OCEAN AND WATERS

Evento di presentazione

5 Maggio 2021

h 15.00



#MissionOcean #missionITALIA

[https://www.versohorizoneurope.it/wp-content/uploads/2021/04/Agenda\\_Starfish-mission-2030\\_v4.pdf](https://www.versohorizoneurope.it/wp-content/uploads/2021/04/Agenda_Starfish-mission-2030_v4.pdf)



# 2021, HORIZON EUROPE!

Entra nel nuovo programma quadro  
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**#HorizonEU**





## HORIZON EUROPE – LA GUIDA

COS'È, COSA FINANZIA, COME PARTECIPARE



APRE**brief**  
HORIZON EUROPE



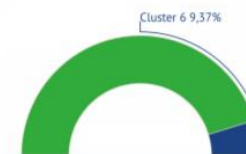
## CLUSTER 6: FOOD, BIOECONOMY NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT

### CLUSTER 6

L'ambizione del Cluster 6 è quella di fornire opportunità per migliorare e bilanciare gli obiettivi ambientali, sociali ed economici e per impostare le attività economiche umane su un percorso verso la sostenibilità.

Il paradigma alla base del Cluster 6 è quindi la necessità di un cambiamento trasformativo dell'economia e della società dell'UE volto a ridurre il degrado ambientale, arrestare e investire il declino della biodiversità e gestire meglio le risorse naturali, al servizio degli obiettivi climatici dell'UE e garantire cibo e acqua in sicurezza.

BUDGET ASSEGNATO: 8,952 (MIO EUR)



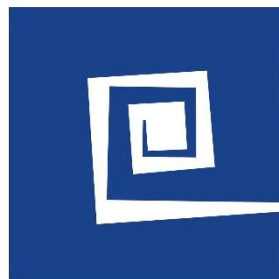
### CLUSTERS

PILLAR 2  
Global Challenges and  
European Industrial  
Competitiveness

1. HEALTH
2. CULTURE, CREATIVITY AND INCLUSIVE SOCIETY
3. CIVIL SECURITY FOR SOCIETY
4. DIGITAL, INDUSTRY AND SPACE
5. CLIMATE, ENERGY AND MOBILITY
6. FOOD, BIOECONOMY, NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT

<https://apre.it/2021horizoneurope>

<https://horizoneurope.apre.it/>



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GRAZIE!

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