

Venerdì
1 Dicembre 2023



*La salute è
solo questione
di fortuna?*

Le Azioni di Food Policy



UNIVERSITÀ
DEGLI STUDI DI BARI
ALDO MORO



HORIZON EUROPE

THE EU
RESEARCH
&
INNOVATION
PROGRAMME 2021–27



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

Research and
Innovation

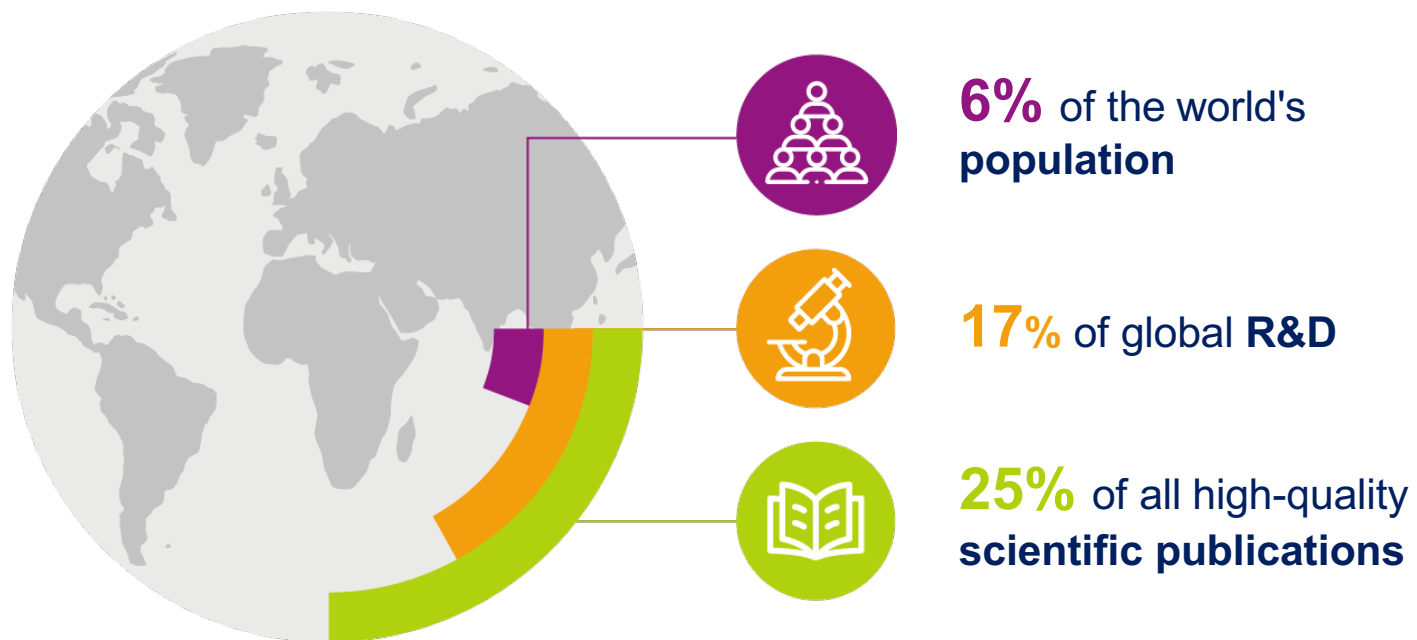


Mariya Gabriel, European Commissioner for Innovation, Research, Culture, Education and Youth
(current: Deputy Prime Minister and Minister of Foreign Affairs of Bulgaria)

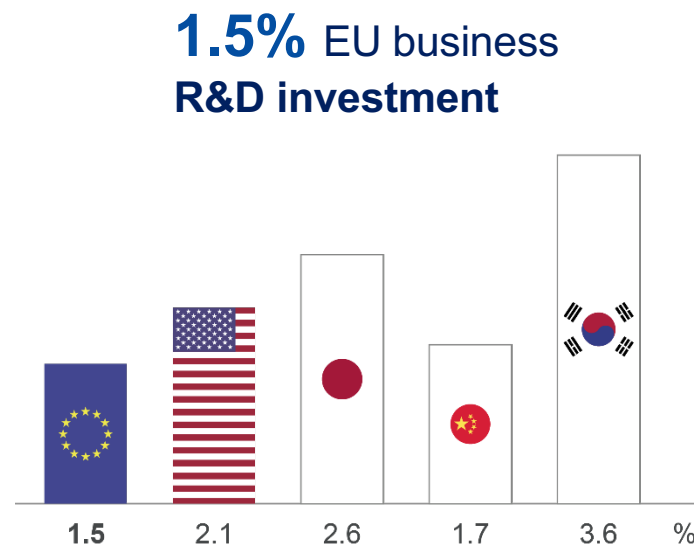
*“The programme aims at giving Europe a new push to a **global positioning**. Horizon Europe is to be **the biggest and most ambitious EU Research Innovation programme ever**. It builds on the success of Horizon 2020 and improves it further by fostering a stronger support to breakthrough innovation through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



... about **global positioning**: EU knowledge and skills are our main resources.



...Europe can do better at transforming this into **leadership in innovation** and **entrepreneurship**



EU data is for 2019.

Data for USA, Japan, China and South Korea are for 2018.

Numbers represent R&D as % of GDP



Four Key Strategic Orientations

KSO A: Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains to accelerate and steer the digital and green transitions through human-centred technologies and innovations

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

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

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



Strategic Plan: starting from the Key Strategic Orientations

The **key strategic orientations** have been defined to set out the R&I contribution to EC **political priorities**. They aim at creating a strong bridge between R&I and EU **policy priorities**, and at giving directionality towards the UN **SDGs** –across all clusters (and HE parts) (KSO)

Commission Von der Leyen political priorities:

- “European Green Deal”

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”

EU policies:

- 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**

SDG:





Food 2030

The EU's research and innovation policy to support the transition towards sustainable, healthy and inclusive food systems.

What is Food 2030?

Food 2030 is the EU's research and innovation **policy framework** supporting the transition towards sustainable, healthy and inclusive food systems.

Why food systems need to change

Our food systems today are unsustainable. They are both affected by and drivers of climate change, resources scarcity, pollution and waste, environmental degradation, loss of biodiversity, population growth, malnutrition and diet-related non-communicable disease

Food 2030 has inspired and led to the creation of the Partnership for Safe and Sustainable Food Systems and is supportive of the goals of the EU Mission: A Soil Deal for Europe.





Horizon Europe legislation defines three types of **impact** tracked through Key Impact Pathways

1. Creating high-quality new knowledge
2. Strengthening human capital in R&I
3. Fostering diffusion of knowledge and Open Science

**Scientific
Impact**



4. Addressing EU policy priorities & global challenges through R&I
5. Delivering benefits & impact via R&I missions
6. Strengthening the uptake of R&I in society

**Societal
Impact**



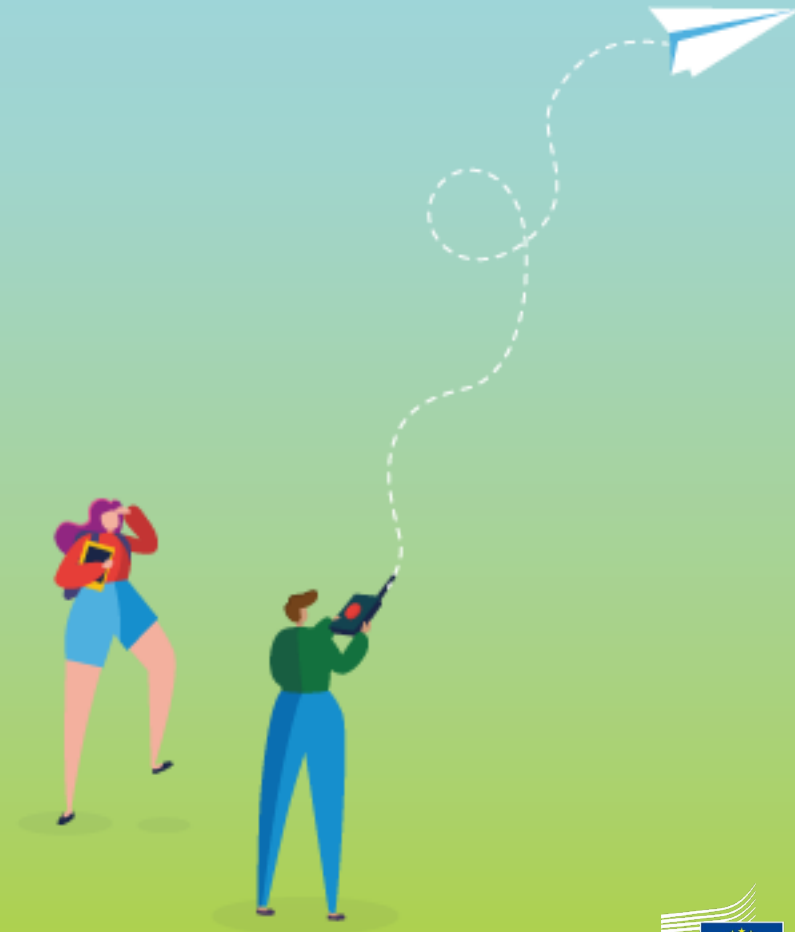
7. Generating innovation-based growth
8. Creating more and better jobs
9. Leveraging investments in R&I

**Economic
Impact**



HORIZON EUROPE

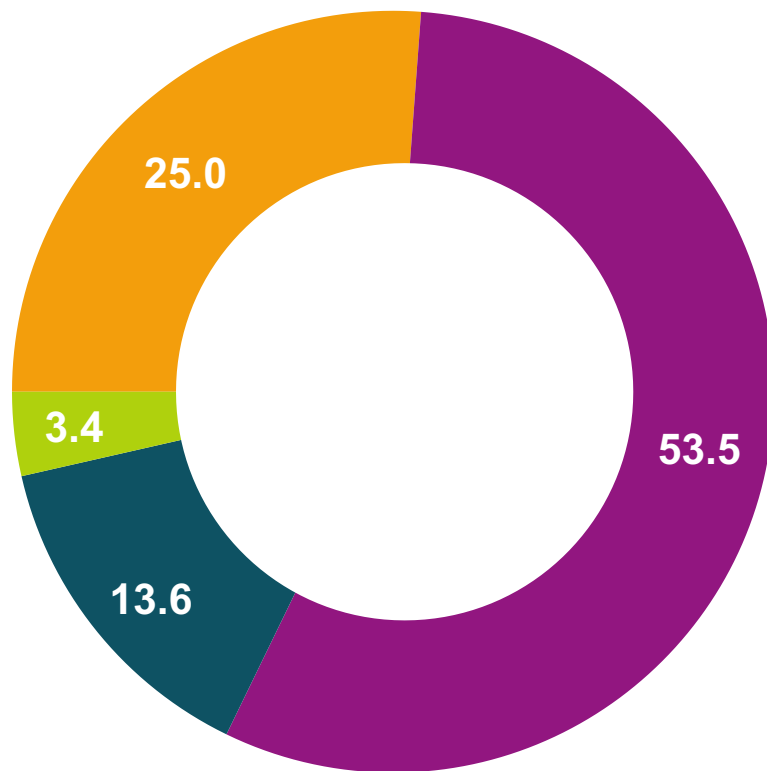
... few details
...about the budget





Horizon Europe Budget: € 95.5 billion (2021-2027)

(including € 5.4 billion from NGEU – Next Generation Europe – programme of EU for Recovery from COVID-19 crisis)



- Excellent Science (Pillar I)
- Global challenges and European ind. comp. (**Pillar II**)
- Innovative Europe (**Pillar III**)
- Widening Part and ERA



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 researches with new knowledge and skills through mobility and training

€ 6.6 billion

Research Infrastructures

Integrated and inter-connected world-class research infrastructures

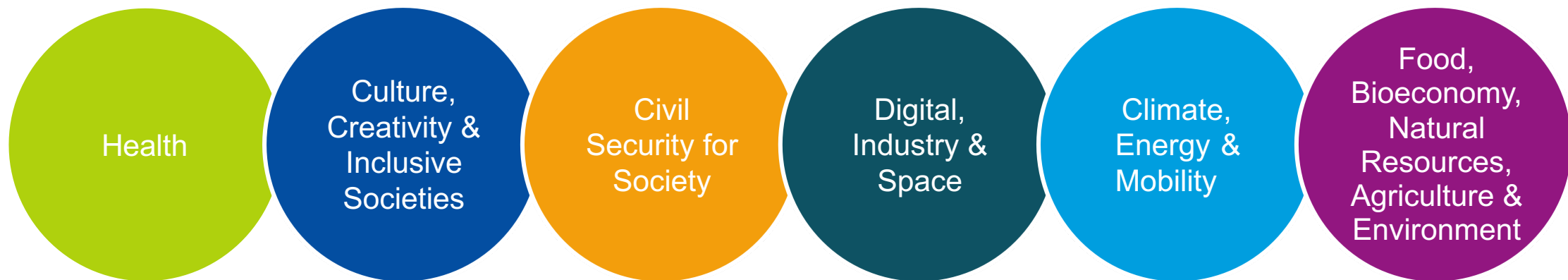
€ 2.4 billion



Pillar II

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 III

INNOVATIVE EUROPE:

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

European Innovation Council

Support to innovations with breakthrough and market creating potential

€ 10.6 billion, incl. up to **€ 527 million**

for ecosystems (including NGEU – Recovery Fund parts dedicated to EIC).

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

circa € 3 billion



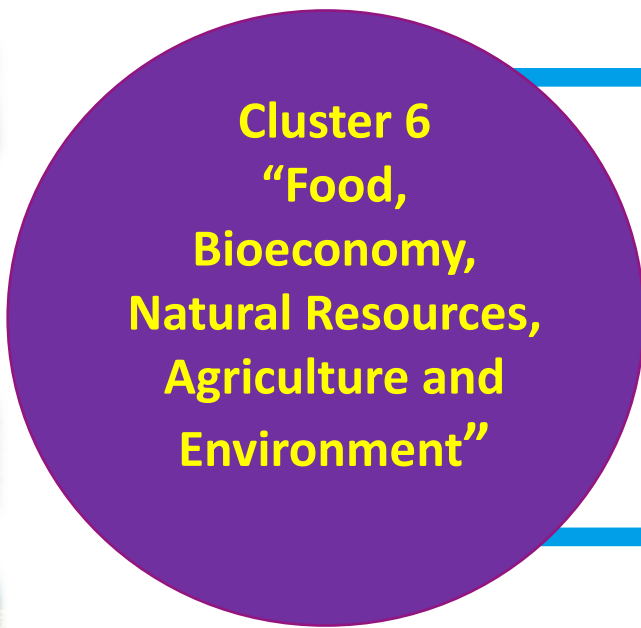
Intervention Areas

(-> Impacts -> Destinations -> Calls)

- Environmental Observation
- Biodiversity and Natural Resources
- Agriculture, Forestry and Rural Areas
- Seas, Oceans and Inland Waters
- Food Systems
- Bio-based Innovation Systems in the EU Bioeconomy
- Circular Systems



Overview Cluster 6



€8.952 bn
Including Missions
and Partnerships
(2021-2027)

Cluster 6 work programme
(including co-funded European Partnerships)

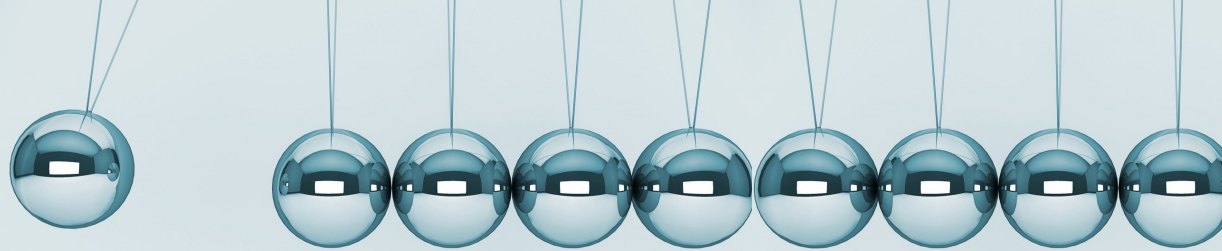
CBE JU

EU Missions
(Climate Adaptation, Oceans, Soil)





Cluster 6 Impacts



These impacts are:



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



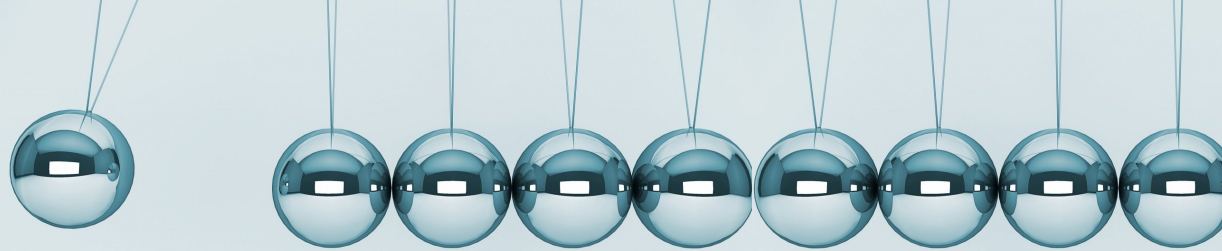
Biodiversity is back on a path to recovery, and ecosystems and their services are preserved and sustainably restored on land, inland water and at sea through improved knowledge and innovation.



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



Cluster 6 Impacts



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



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

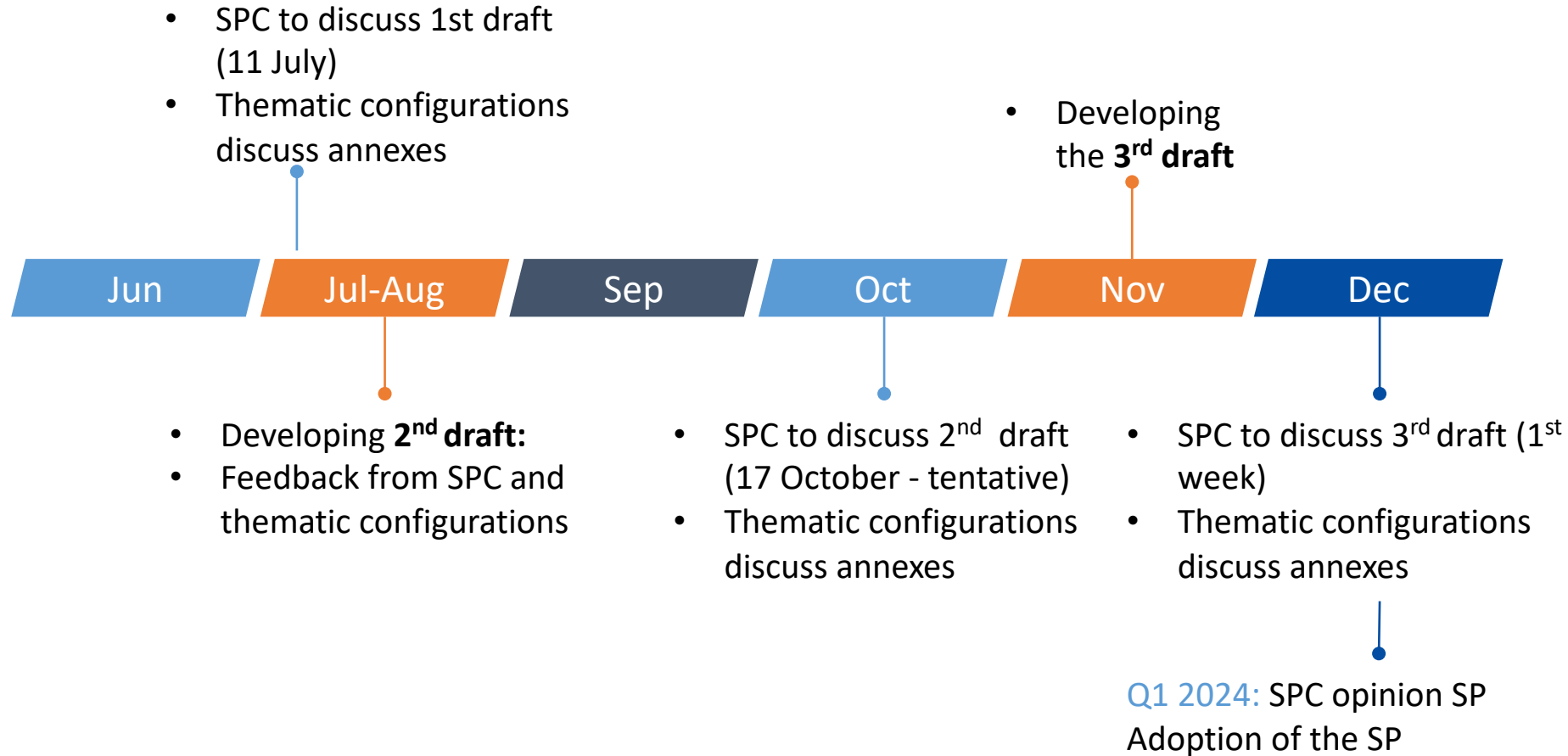


Innovative governance models enabling sustainability and resilience are established and monitored through enhanced and shared use of new knowledge, tools, foresight, and environmental observations as well as digital, modelling and forecasting capabilities

Cluster 6 activities will sustain the ambition of the EU on international fora in areas of paramount importance such as biodiversity, climate change, the management of natural resources, sustainable agriculture, food safety and food and nutrition security.



Tentative timeline - Strategic Plan 2025-27



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Partnerships and Missions

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Co-funded partnerships in Cluster 6

Destination 1 – Biodiversity and ecosystem services

Biodiversa+

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

Agroecology

Animal Health and Welfare

Sustainable Food Systems

Destination 5 – Land, ocean and water for climate action

Water 4 All

Destination 7 – Innovative governance, environmental observations & digital solutions for the Green Deal

Agriculture of Data

Sustainable Blue Economy

Biodiversa+, Water4All, SBEP → launched in WP 2021-2022

Agroecology, Animal Health Welfare, Sustainable Food Systems & Agriculture of Data

.. to start with WP 2023-2024



Agriculture of Data

State of play

- Consortium is being built under the coordination of DK (Danish Ministry of Agriculture)
- SRIA: Public consultation effectively concluded on 23.1.23 – Revision of SRIA ongoing
- Composition Core group: Austria, Belgium, Bulgaria, Czech Republic, Denmark (co-chair), Estonia, Finland, France, Germany, Hungary, Ireland, Italy (co-chair), Latvia, Lithuania, Norway, Poland, Portugal, Slovakia, Spain (co-chair), Sweden, The Netherlands, and Turkey.
- Also involved in Core Group: ICT-AGRI-FOOD ERA-Net and ERA-PLANET ERA-Net

MUR e MASAF



Sustainable Food Systems

State of play

- The French Ministry of Higher Education and Research has mandated the French National Research Agency (ANR) to represent France in the building of a consortium to form a Sustainable Food Systems Partnership, with support of SCAR Food Systems Strategic Working Group, and by CSA FoodPathS
- Indicative commitments from 20 countries (AT, BE, DE, DK, EE, ES, FI, FR, IE, IT, LT, LV, NL, PT, SK, SW, IE, IS, NO, TR) : ~ 170 Mio. EUR in-cash and 114 Mio. EUR in-kind
- SRIA finalised after public open consultation (159 replies) by core drafting group and handed in to DG RTD on 01/02/2023

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Agroecology living labs and research infrastructure

State of play

- Consortium is being built under the coordination of DE (Jülich); FR (INRAE) is co-coordinator
- Countries (25) and regions (4) engaged so far (governing board): AT; BE; CY; CZ; DE; DK; EE; EL; ES; FI; FR; HU; IE; IS; IT; LT; NL; NO; PT; RO; RS; SE; SI; SK; TK; Pays de la Loire (FR); Bolzano (IT); Andalusia and Extremadura (ES) + contacts with CAN; CH; NZ.
- SRIA under finalisation - coordination by SCAR Strategic Working Group on Agroecology, with key advisors FACCE-JPI, and CSAs ALL-Ready, AE4EU and SMS

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Animal Health and Welfare

State of play

- Consortium is being built under the coordination of Gent University (BE), with support of Sciensano (SCAR CWG AHW); forthcoming webinar 15 February
- Also involved: ICRAD ERA-NET (draft SRIA preparation)
- Indicative commitments from 17 MS (AT; BE; DE; DK; EE; ES; FI; FR; IE; IT; LV; LT; NL; PL; PT; SE; SK) and 4 ACs (IS; IL; NO; TK) + UK . Interest shown by EL and RO
- Draft SRIA revised by EUP AH&W Working Party; open consultation launched on 2 February <link> upon until the 17th February 2023

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5 EU Missions areas



**Adaptation to
climate change,
including societal
transformation**



Cancer



**Healthy oceans,
seas, coastal &
inland waters**



**Climate-neutral
& smart cities**



**Soil health &
food**



EU Missions

What a EU mission is NOT

Missions are an entirely new approach based on **portfolios of actions** working towards broadly defined goals, not be confused with existing methods and instruments.

Missions are not the same as:

- R&I** Programmes
- R&I Partnerships**
- Focus Areas** from Horizon 2020
- Single projects or topics
- Horizon Europe **Clusters**

Implementing Missions

Missions may involve:

- Launch **specific calls** in Horizon Europe and other programmes
- Identify specific actions to change/ improve **policy context** critical for missions success
- Make use of the appropriate **partnerships**
- Mobilise **structural funds**
- Establish the appropriate **links with national programmes**
- Combine efforts with **third country**

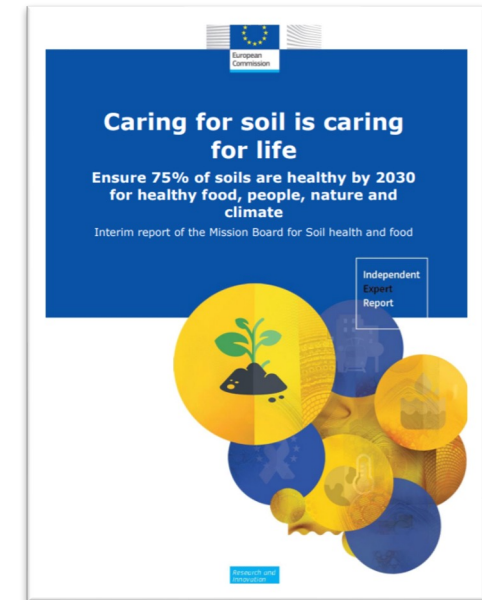


There is no fixed budget for each mission. Article 7 of the draft HE Regulation stipulates that during the first three years of the programme, a **maximum of 10%** of the **annual budget of Pillar II** shall be programmed through specific calls for implementing the missions.



- 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



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Ministero dell'Università e della Ricerca

Segretariato Generale
Direzione generale della ricerca
Ufficio VIII



GRAZIE!

GRAZIE!

HORIZON EUROPE

A little bit ...

.. about the detail of the HE genesis
and of Cluster VI





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 (CCAM)	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	

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	

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

CROSS-PILLARS II & III

European Open Science Cloud

* Calls with opening dates in 2023-24

** Calls with opening dates not before 2022



Horizon
Europe

