



Subgroup on Innovation for agricultural productivity and sustainability

13th Meeting

7 March 2019

#RNSubInnovation - @EIPAGRI_SP

Subgroup on Innovation for agricultural productivity and sustainability

13th Meeting – 7 March 2019



9:00 – 10:00 Welcome and introduction – DG AGRI
Session I "Recent and future networking activities"

10:00 – 11:00 Session II "Assessment study on OGs and its implications for the future"



11:00 – 11:30 Coffee break

11:30 – 12:30 Interactive part Session II "Assessment study on OGs and its implications for the future"



12:30 – 13:30 Lunch break

13:30 – 15:00 Session III "Strengthening the links between CAP and Horizon through the EIP-AGRI network: today and tomorrow"



15:00 – 15:30 Coffee break

15:30 – 16:30 Interactive part Session III "Strengthening the links between CAP and Horizon through the EIP-AGRI network: today and tomorrow"

16:30 – 16:45 AOB / Wrap up / next steps



Session III “Strengthening the links between CAP and Horizon through the EIP-AGRI network: today and tomorrow”

Horizon Europe Proposal and state of play of interinstitutional negotiations

Alberto D’Avino
DG AGRI

SUBGROUP ON INNOVATION
for agricultural productivity and sustainability
13th meeting
7 March 2019





The new Horizon Europe programme: key elements of the new legislative proposals

Alberto D'AVINO

European Commission

DG Agriculture and Rural Development

Strategic approach to EU agricultural R&I



O B J E C T I V E S



ensure food and nutrition security in the long term

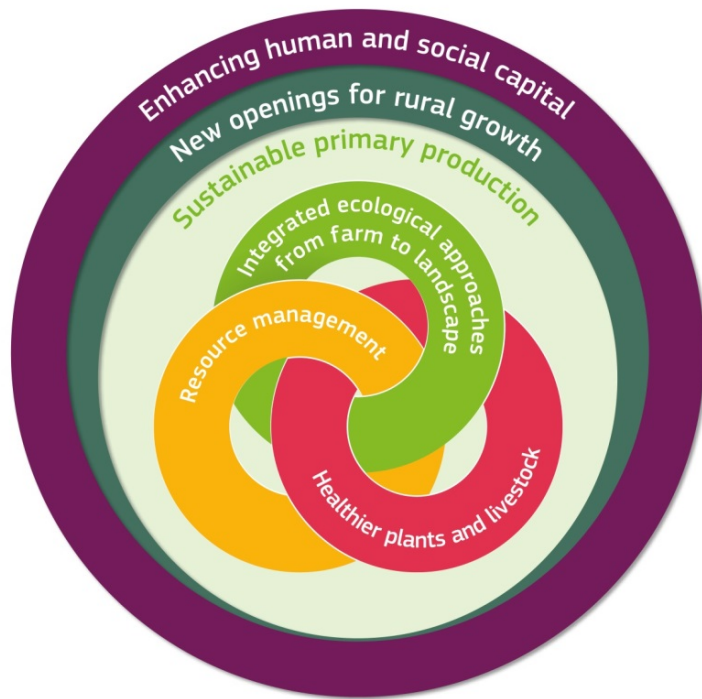


address the environmental sustainability and resilience of competitive land-based primary production for food and non-food systems

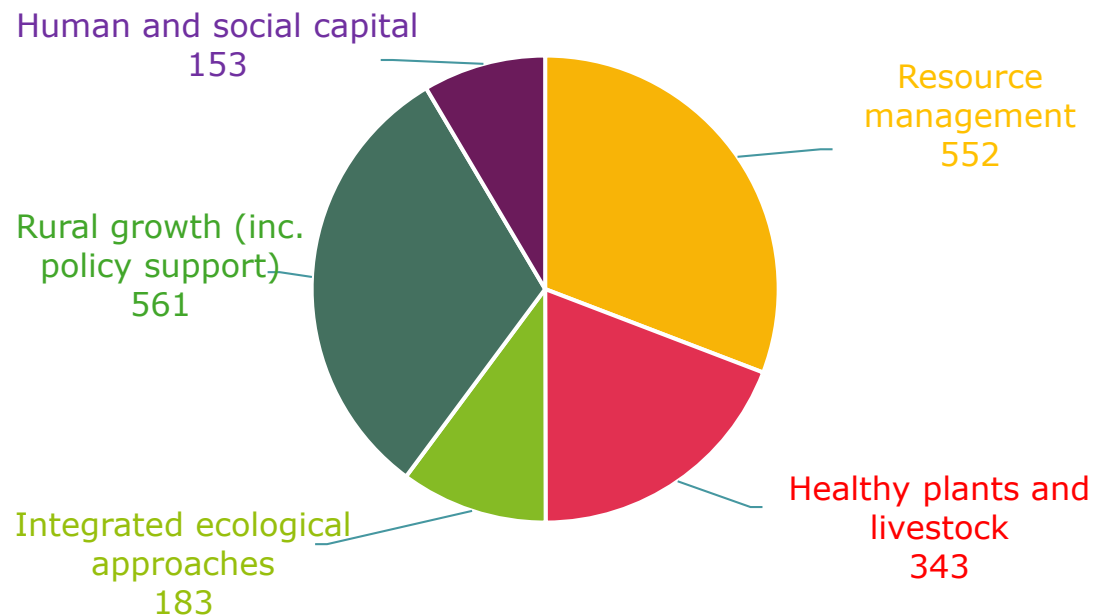


boost the sustainable growth of rural territories

R&I priorities



Distribution of H2020 SC2 budget over priorities (EUR million - 2014-2020)



R&I cross-cutting areas



Systems approaches
1/3 Grants



Socio-economic research
30% SSH – 2/3 value chain approaches



*New approaches
and infrastructure*



*Using information
technologies*



Engaging with society



From strategy to action...

https://ec.europa.eu/agriculture/research-innovation/documents-links_en



Why do R&I on public goods from agriculture and forestry matter?

Agriculture and forests are unique sectors delivering agricultural products, societal public goods such as biodiversity, water regulation, landscape, erosion control, resilience to floods and climate change mitigation. The increasing demand for public goods by society is the heritage of rural

Farmers and foresters are managers of the land and depend on it. Their activities are essential for the production of public goods. The increasing demand for public goods by society is the heritage of rural



Why do R&I on agricultural and rural digital transformation

Smart and sustainable, reducing problems related to innovation and improving access to services. Digital transformation in agriculture and rural areas is essential for the growth of Europe's rural areas. It enables farmers and rural businesses to improve their productivity and resilience, and to provide better services to their customers. Digital transformation is also essential for the development of rural areas and for the well-being of rural communities.



Why do research and innovation on soils matter?

Research is crucial to better understand, monitor and measure the specific effects of agricultural and forestry activities on soils and their various productive and ecosystemic functions. Additional knowledge is needed on long-term processes of soil formation, on soil fertility and other above-mentioned functions and how to improve them. Further research and innovation can contribute to a better understanding of soil health and its role in the food system.



Why do research and innovation support ecological approaches and organic farming?

Agriculture and forestry have to meet the growing needs of society and ensure the sustainability of the environment. Ecological approaches and organic farming are essential for this. Research and innovation can help to improve the efficiency and productivity of these systems, and to ensure their long-term viability. Organic farming is a key element of the European Green Deal and the Farm to Fork strategy.



Why do research and innovation on animal production matter?

Growing population, rising income and global shifts towards consumption patterns which are richer in animal products will further increase pressure on agricultural resources. Research and innovation will tackle the various dimensions of resource use, including animal health and welfare, and the relationship between animal feed and feeding and health needs to be further investigated. In addition, the possibilities for improving animal welfare, e.g. through more appropriate measurement methods, need to be further investigated.



Why do research and innovation on rural and farm policy matter?

Rural areas across the EU have undergone and are still undergoing profound changes. In many primary sectors, income from agriculture is declining. This is due to various factors, including the increasing costs of production, the need for more efficient production systems, and the need for more sustainable production systems. Research and innovation can help to address these challenges and to improve the resilience of rural areas.



Why do R&I on sustainable, circular and innovative value chains matter?

Sustainable, diverse and resilient value chains are essential for a secure and healthy food system. Research and innovation can help to improve the efficiency and productivity of these systems, and to ensure their long-term viability. Circular and innovative value chains are key elements of the European Green Deal and the Farm to Fork strategy.



Why do research and innovation on water, nutrients and waste matter?

Agriculture and forestry heavily depend on the availability and quality of natural resources such as land, nutrients or water. At the same time, primary production impacts directly and indirectly on the integrity of those resources and contributes to their depletion. Natural resources are under farmer pressure from increased environmental variations linked to climate change, to which agriculture in particular is also contributing. The European Commission communication 'Closing the loop - An



Why do R&I on human capital and innovation systems matter?

Innovation has been a key driver of economic growth and social progress. Research and innovation can help to improve the efficiency and productivity of these systems, and to ensure their long-term viability. Human capital and innovation systems are key elements of the European Green Deal and the Farm to Fork strategy.



Why do research and innovation on animals and health matter?

Animal production is under constant pressure from new and re-emerging zoonotic diseases, transmissible animal diseases and other zoonotic pathogens. Research and innovation can help to improve the efficiency and productivity of these systems, and to ensure their long-term viability. Animal and human health are key elements of the European Green Deal and the Farm to Fork strategy.



Why do research and innovation on plant and animal genetic resources and breeding matter?

Genetic Resources play a crucial role in agricultural and forest-based activities. They hold the key to a more resilient and sustainable food system. Research and innovation can help to improve the efficiency and productivity of these systems, and to ensure their long-term viability. Genetic resources and breeding are key elements of the European Green Deal and the Farm to Fork strategy.



Why do research and innovation on plant health matter?

The above-mentioned threats to ensure their vital functions, avoid trade disruptions and ensure consumer confidence in food by mitigating the potential risks to plant health. Tackling zoonotic and high dynamic zoonotic threats requires integrated approaches and the development of a wide range of tools for prevention, monitoring, control and management of pests and diseases along with risk management strategies. This includes seeking alternatives to conventional pesticides.



Agriculture and Rural Development

Commission proposal for
Horizon Europe

THE NEXT EU RESEARCH & INNOVATION
PROGRAMME (2021 – 2027)

#HorizonEU



Horizon Europe

is the Commission proposal for a **€ 100 billion** research and innovation funding programme for seven years (2021-2027)



to strengthen the EU's scientific and technological bases



to boost Europe's innovation capacity, competitiveness and jobs

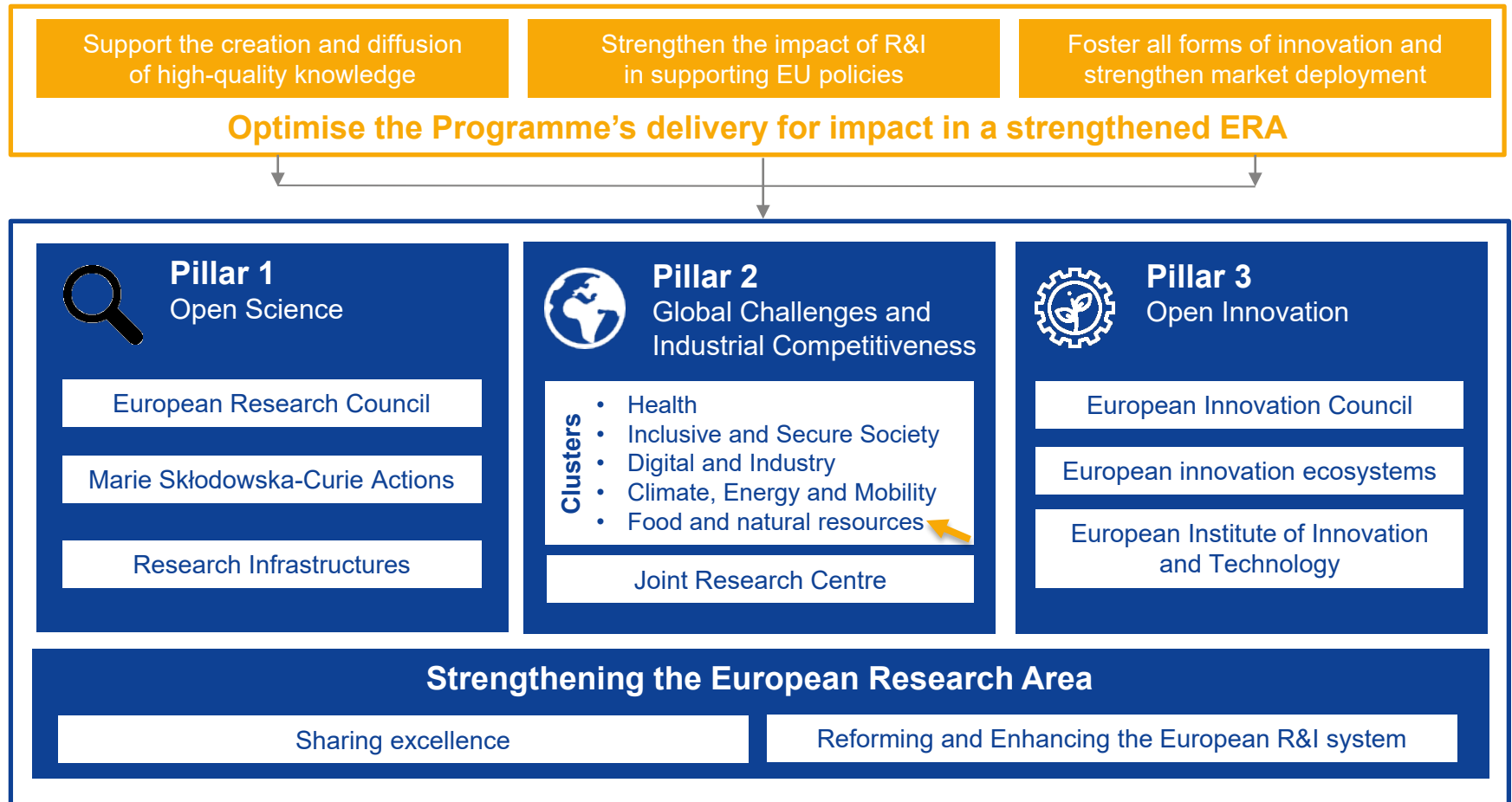


to deliver on citizens' priorities and sustain our socio-economic model and values

€ 4.1 billion are proposed to be allocated for defence research, in a separate proposal for a European Defence Fund

Horizon Europe: evolution not revolution

Specific objectives of the Programme



Lessons Learned from Horizon 2020 Interim Evaluation



Support breakthrough innovation



Create more impact through mission-orientation and citizens' involvement



Strengthen international cooperation



Reinforce openness



Rationalise the funding landscape



Key Novelties in Horizon Europe

European Innovation Council

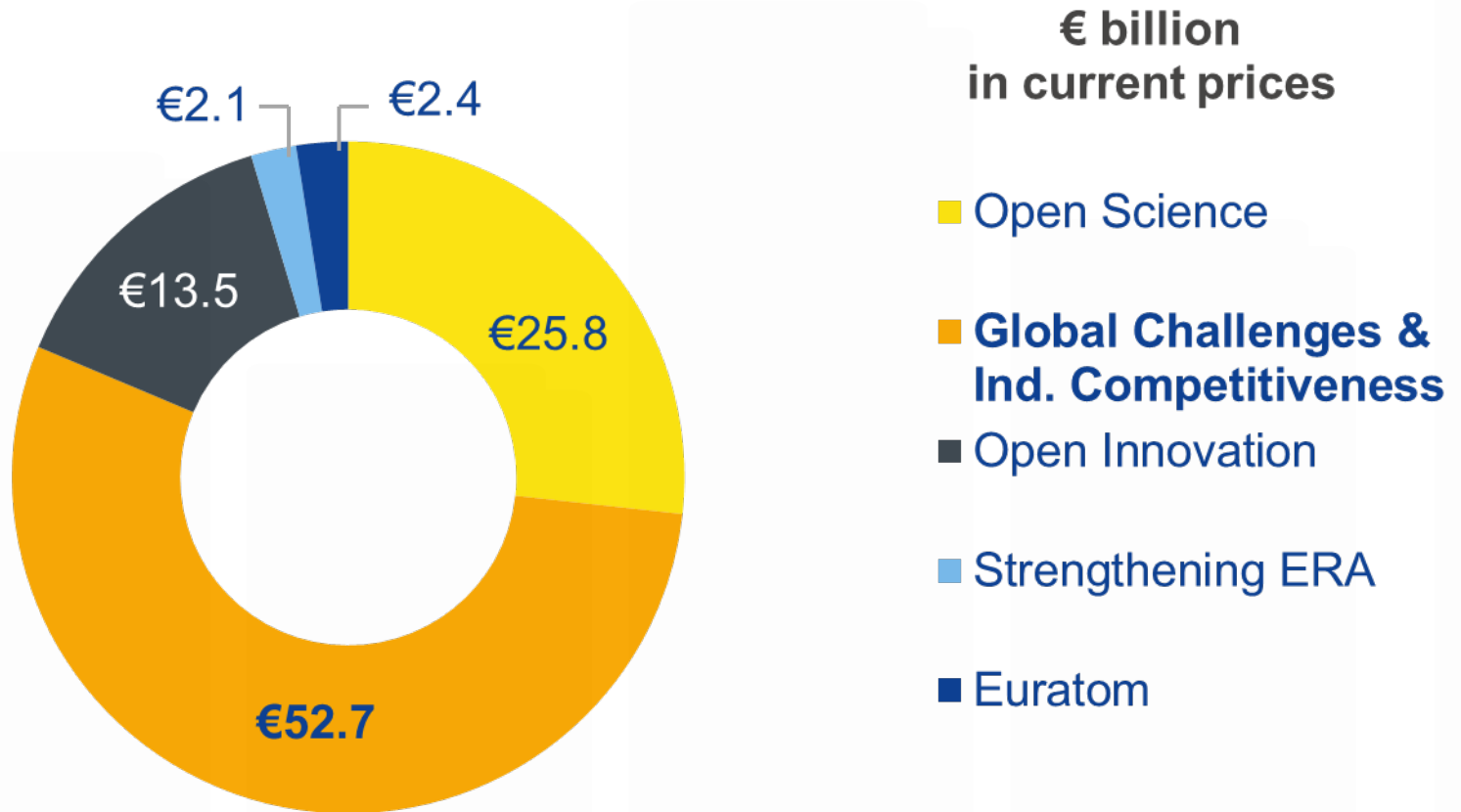
R&I Missions

Extended association possibilities

Open science policy

New approach to Partnerships

Budget: €100 billion*



* This envelope includes EUR 3.5 billion allocated under the InvestEU Fund.

Pillar 2

Global Challenges & Industrial Competitiveness:

boosting key technologies and solutions underpinning
EU policies & Sustainable Development Goals

Clusters	Budget (€ billion)
implemented through usual calls, missions & partnerships	
Health	€ 7.7
Inclusive and Secure Societies	€ 2.8
Digital and Industry	€ 15
Climate, Energy and Mobility	€ 15
Food and Natural Resources	€ 10
Joint Research Centre	
supports European policies with independent scientific evidence & technical support throughout the policy cycle	€ 2.2

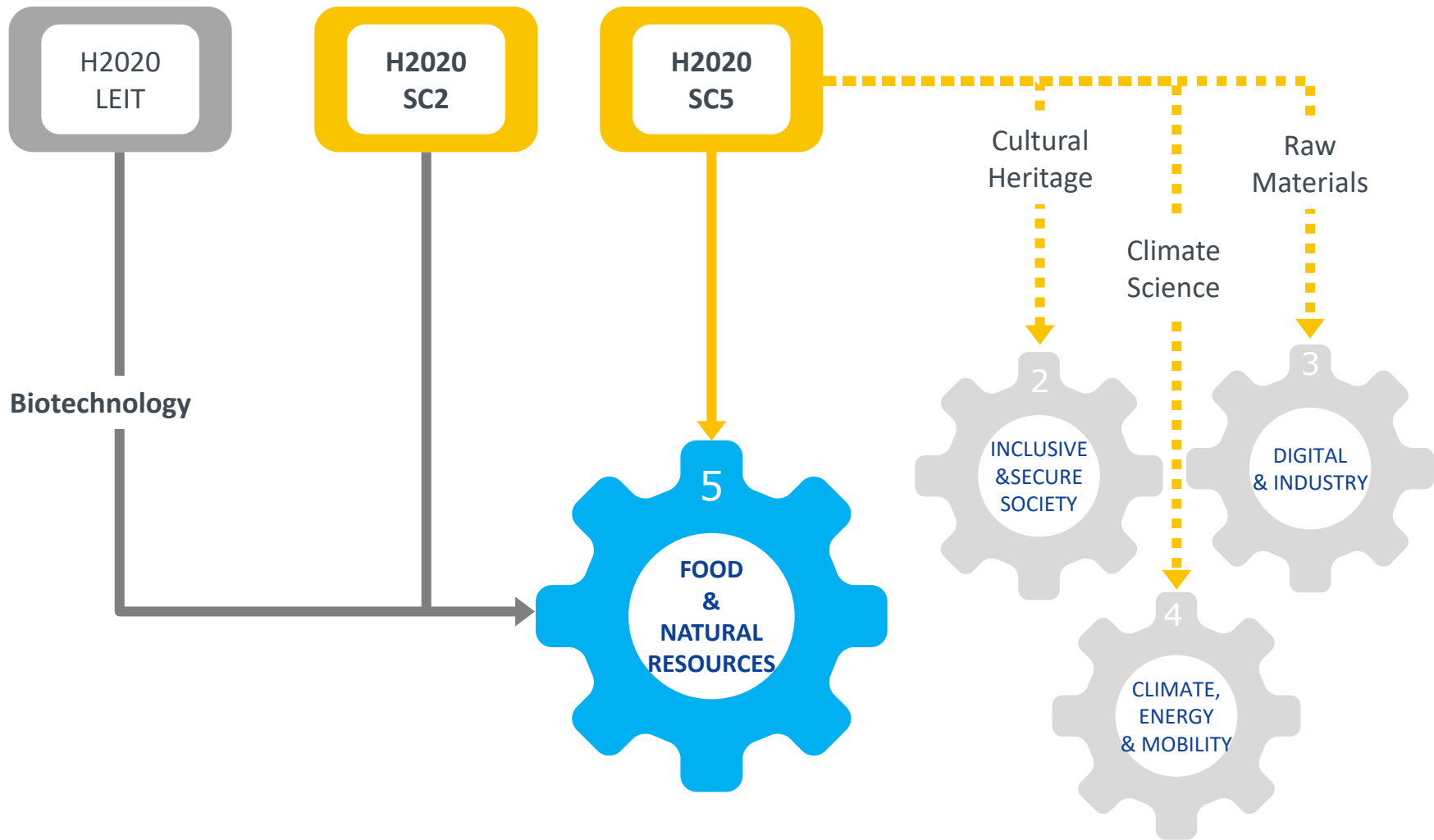
Cluster 5 Food and Natural Resources

Key facts and figures

- **Natural resources:** planetary boundaries are exceeded. We operate beyond safe limits for genetic biodiversity, nitrogen and phosphorus cycles, land-system change and climate change.
- **Agriculture and forestry:** highly diverse sectors covering 85% of the EU territory (agriculture 50 %), driving rural economies; the agri-food sector provides 44m jobs in the EU; EU agriculture contributes to 10% of GHG emissions;
- **Food production:** 12 plant species provide for $\frac{3}{4}$ of world food production. From farm to fork we use 70% of fresh water resources (Europe : 50%) and 30% of energy. By 2050 we need to feed 9 billion people on the planet and meet 60% more food demand.
- **Oceans:** cover $\frac{3}{4}$ of the Earth's surface, but largely unknown; Provide half of the oxygen and the largest carbon sink and host the greatest biodiversity of the planet.
- **Circular economy:** only 40% of EU waste is reused or recycled; the circular economy resource productivity growth potential is up to 3 % annually in the EU;

Cluster 5 Food and Natural Resources

What is in/out?



Cluster 5 Food and Natural Resources

Why a single cluster?

- New **holistic, system-wide, integrated view**
- Mainstreaming a **participatory approach to R&I** and exploitation of **big data**
- More **impact-focused R&I**: SDGs and EU policy goals
- More **synergies across R&I areas**, along the full innovation cycle:
 - ❑ between **intervention areas** (e.g. circular and bio-based systems)
 - ❑ between **clusters** (e.g. digital and agriculture; marine & maritime)
 - ❑ between **pillars** (through wide / joint Missions)
 - ❑ with other **EU funding instruments**

Cluster 5 Food and Natural Resources

Contribution to SGDs



Cluster 5 Food and Natural Resources

Synergies with other MFF programs

- the European Agricultural Guarantee Fund and the European Agricultural Fund for Rural Development
- the European Maritime and Fisheries Fund (EMFF)
- the European Regional Development Fund (ERDF)
- The LIFE Programme
- The InvestEU Fund
- The Single Market Programme
- ...

Cluster 5 Food and Natural Resources

How will it be implemented?

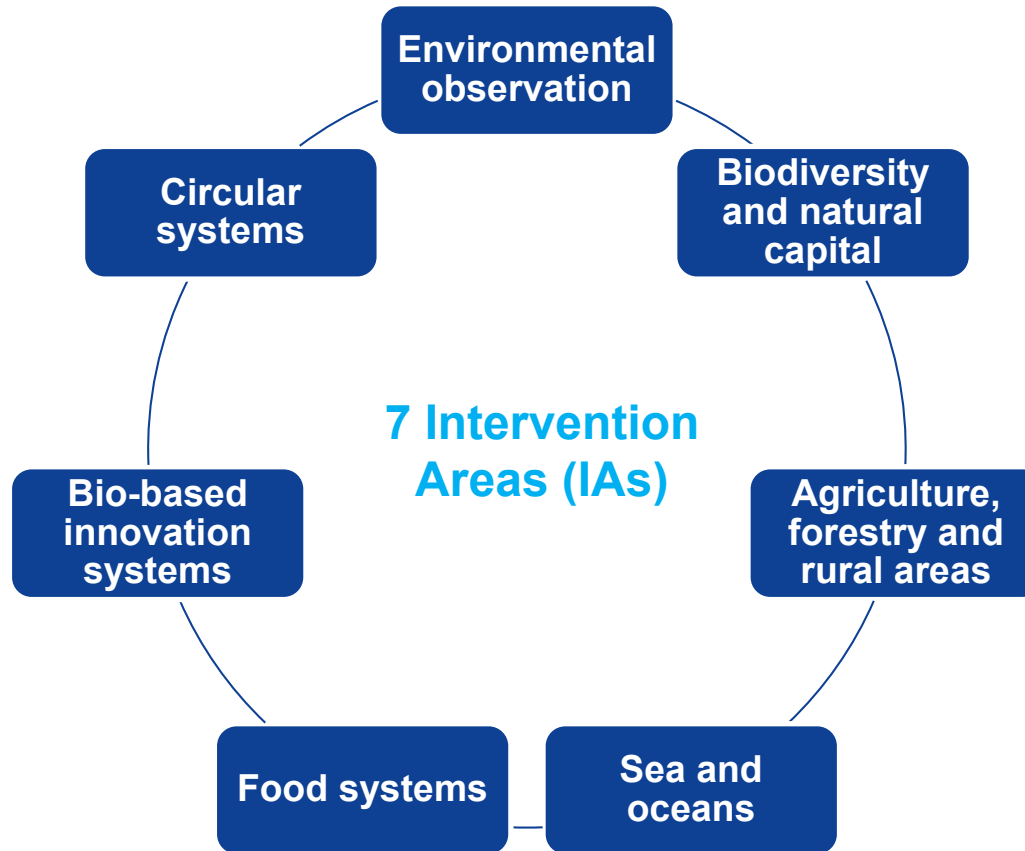
Collaborative projects remain the default:

- Consortiums of **at least three independent legal entities** and with at least one of them established in a Member State (Art. 18.2 FP/RfP)
- Competitive and open calls for proposals

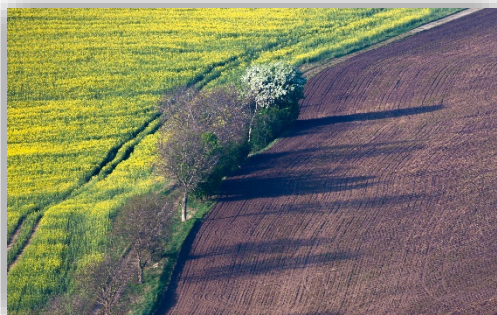
The **Work Programme**, endorsed by the **Programme Committee** for Cluster 5, will identify **topics** for each call.

Cluster 5 Food and Natural Resources

What is in it?



IA: Agriculture, forestry and rural areas



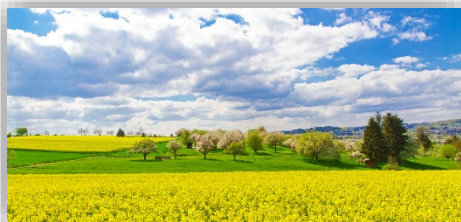
- **Sustainable management and efficient use of natural resources** (e.g. soils, water, nutrients and biodiversity including genetic resources) **in agriculture and forestry**; alternatives to fossil-based resources and adoption of circular economy principles;



- **Climate and environmental impact of activities in the primary sector**; potential of agriculture and forestry as carbon sinks and for mitigation of greenhouse gas emissions including negative emissions approaches;

(SP Annex I, 5.2.3)

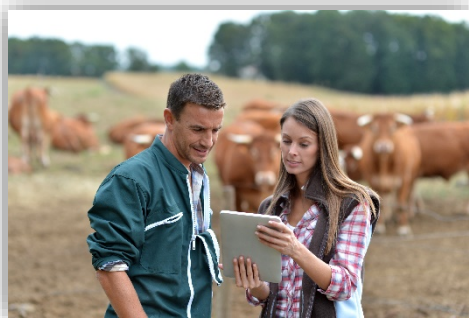
IA: Agriculture, forestry and rural areas



- **Plant pests and diseases and animal health and welfare;** alternatives to the use of contentious pesticides, antibiotics and other substances;
- **Antimicrobial resistance and threats from biological and agrochemical hazards** as well as **chemical contaminants** tackling the links between plant, animal, ecosystems and public health from One-Health and Global-Health perspectives;
- **The use and delivery of ecosystems services in agriculture and forestry systems** applying ecological approaches and testing nature-based solutions from farm to landscape levels for an environmentally friendly agriculture;

(SP Annex I, 5.2.3)

IA: Agriculture, forestry and rural areas



- **Innovations in farming** at the interfaces between agriculture, aquaculture and forestry and in urban areas;
- **Land use, rural development and territorial linkages**; capitalising on the social, cultural, economic and environmental assets of rural areas for new services, business models, value chains and public goods;
- **Digital innovations** in farming, forestry and across value chains and rural areas through the use of data and development of infrastructures, technologies and governance models;
- **Agricultural knowledge and innovation systems** and their interconnection at various scales; advice, building skills and information sharing.

(SP Annex I, 5.2.3)

Next steps





Strategic planning to define multiannual work programmes and calls for proposals

- Transparency and stakeholder involvement
- Prioritisation and flexibility to align to political priorities
- Internal programme coherence & synergies with other programmes

Multiannual Strategic R&I Plan

*** Multiannual orientations and priorities in one document**

*** Areas for Partnerships and Missions**

Strategic discussions with Member States and European Parliament

Consultation with stakeholders

Work Programmes



Thank you!

#HorizonEU

<http://ec.europa.eu/horizon-europe>