



#HorizonEU

THE EU RESEARCH & INNOVATION PROGRAMME

2021 – 2027

France National Information Day Horizon
Europe Cluster 6

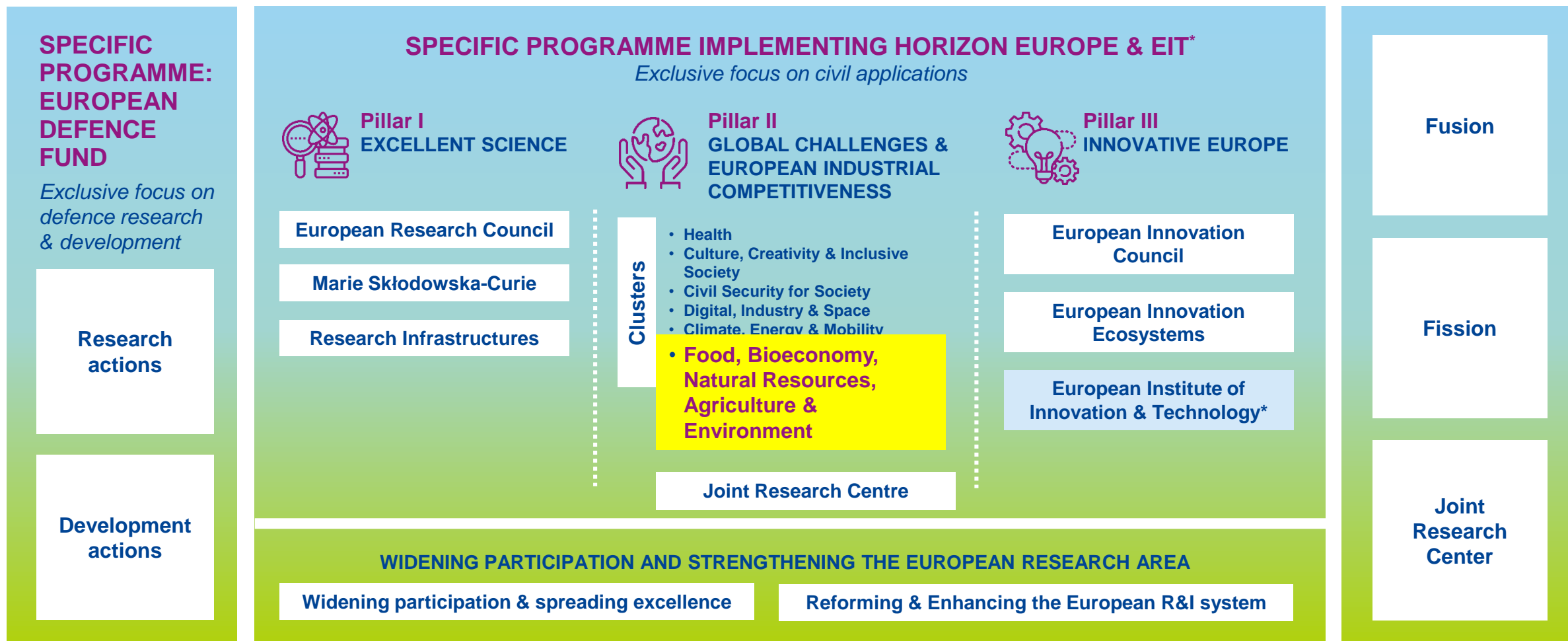
15 Décembre 2021

Marc Duponcel, Head of Sector
Research, DG AGRI

Research and
Innovation

CLUSTER 6 IN HORIZON EUROPE

EURATOM



* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

Cluster 6 budget over 7 years: 9 bio EUR

From policy priorities to concrete action





**CLIMATE
PACT AND CLIMATE
LAW**

**PROMOTING
CLEAN
ENERGY**



**INVESTING IN
SMARTER, MORE
SUSTAINABLE
TRANSPORT**



PROTECTING NATURE



**Cluster 6
&**

The European Green Deal



**STRIVING
FOR GREENER
INDUSTRY**



**FROM FARM
TO FORK**



**ELIMINATING
POLLUTION**



**LEADING THE
GREEN CHANGE
GLOBALLY**



**MAKING
HOMES ENERGY
EFFICIENT**



**FINANCING
GREEN
PROJECTS**



**ENSURING
A JUST TRANSITION
FOR ALL**



Horizon Europe Cluster 6 – from expected impacts to destinations...



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

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

Cluster 6 WP 2021-2022: 2022 calls

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

Cluster 6 WP 2021-2022: Topics of calls 2022

Type of Action	Number of topics	%	% Budget
Research and Innovation Action (RIA)	42	54%	54%
Innovation Action (IA)	21	27%	25%
Coordination and Support Action (CSA)	13	17%	18%
Co-funded partnership*	1	1%	3%
Total	77	100%	100%

*climate neutral, sustainable and productive Blue Economy

Cluster 6 Co-funded partnerships

Co-funded partnership	Work Programme where the topic is introduced	Proposed EU budget for 7-years
Rescuing biodiversity to safeguard life on Earth	2021-2022	€165 mln
Water Security for the Planet (Water4All)	2021-2022	€126 mln
A climate neutral, sustainable and productive Blue Economy	2021-2022	€150 mln
Accelerating farming systems transition: agroecology living labs and research infrastructures	2023-2024	€150 mln
Animal health: fighting infectious diseases	2023-2024	€180 mln
Agriculture of data	2023-2024	€100 mln
Safe and sustainable food systems for people, planet and climate	2023-2024	€175 mln
TOTAL		€1,046 Bio

Synergies with EU Missions

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



Adaptation to
Climate change



Cancer



Restore our
Oceans and
Waters



Climate-
neutral &
smart cities



Soil Deal for
Europe



Soil Deal for Europe



Create 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

- Protect and restore soils in Europe and beyond.
- Put communities and stakeholders at the centre of the innovation process to co-create knowledge and solutions in real-life conditions.
- Have to act together so that future generations inherit clean, productive and resilient soils for food, people, nature and climate.



CALL HORIZON-CL6-2022-FARM2FORK-01

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

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



FAIR, HEALTHY AND ENVIRONMENT-FRIENDLY FOOD SYSTEMS FROM PRIMARY PRODUCTION TO CONSUMPTION

Expected impacts

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

Impact areas: sustainable food systems from farm to fork on land and sea; climate change mitigation and adaptation; enhancing ecosystems and biodiversity on land and in waters; good health and high-quality accessible healthcare; clean and healthy air, water and soil; a resilient EU prepared for emerging threats; inclusive growth and new job opportunities

FAIR, HEALTHY AND ENVIRONMENT-FRIENDLY FOOD SYSTEMS FROM PRIMARY PRODUCTION TO CONSUMPTION



**Enabling
sustainable
farming**

8 topics
€79.5 million



**Enabling
sustainable
fisheries and
aquaculture**

3 topics
€40 million



**Transforming food
systems for health,
sustainability and
inclusion**

5 topics
€57 million



**Targeted
international
cooperation**

4 topics
€54 million

Call HORIZON-CL6-2022-FARM2FORK-01
Call HORIZON-CL6-2022-FARM2FORK-02-two-stage

€231 million

Farm to Fork Strategy: overall goals



climate
footprint



global
transition



new
opportunities



resilience

Reduce the
**environmental
and climate
footprint** of the
food system

Lead a
global transition
towards competitive
sustainability from
farm to fork

Tap into
**new
opportunities**

Create a **robust
and resilient** food
system



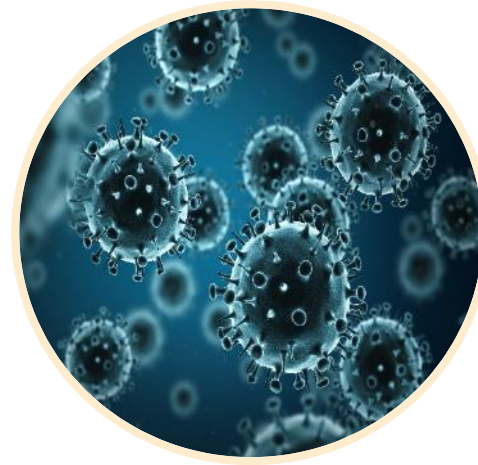
Farm to Fork Strategy: targets



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 %

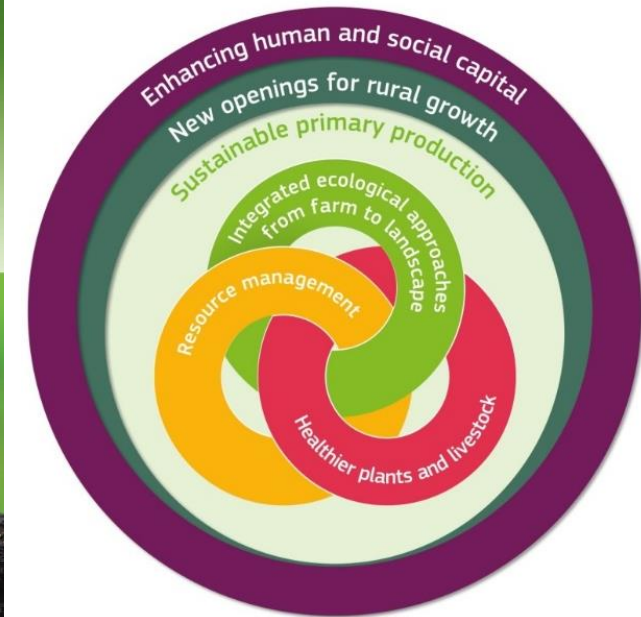
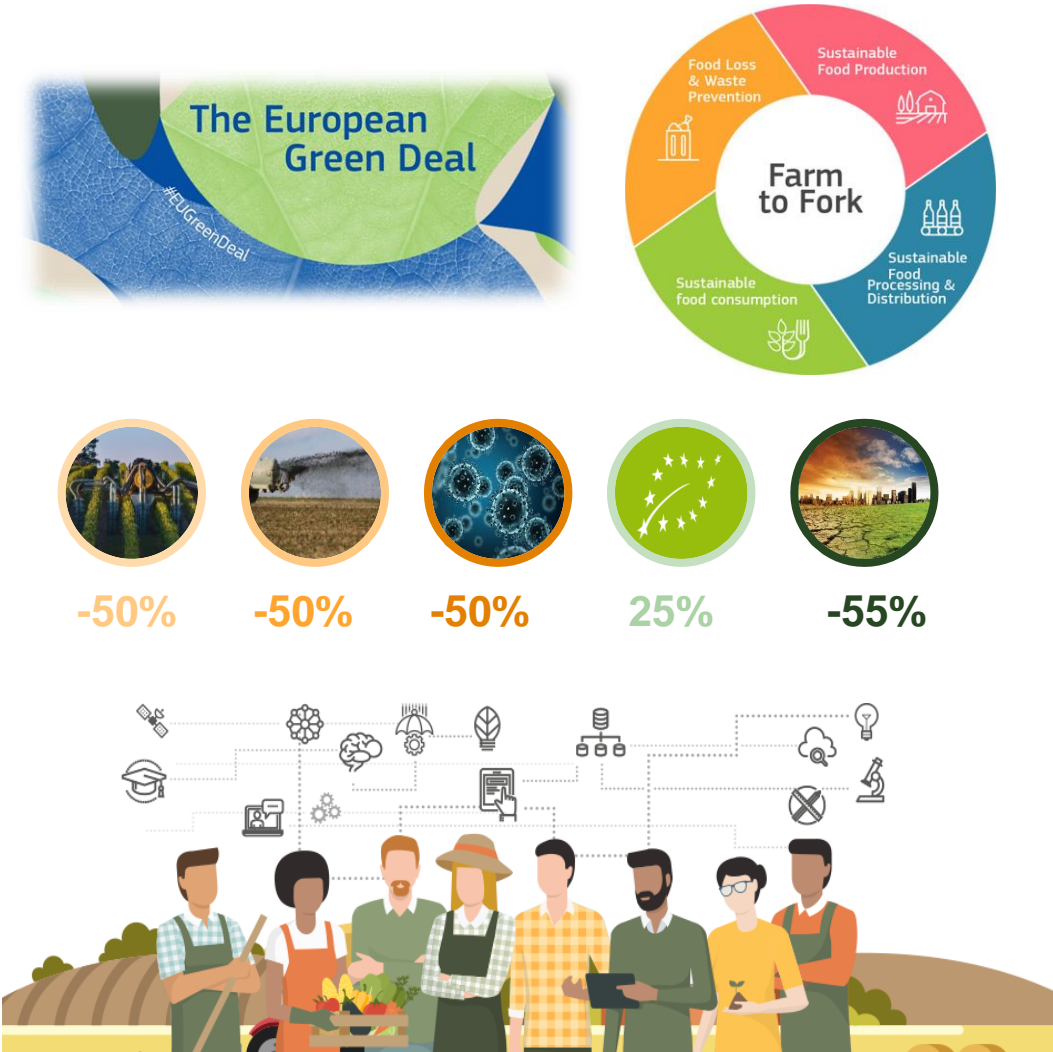


Reduce sales of **antimicrobials** for farmed animals and in aquaculture by 50%



Achieve at least 25% of the EU's agricultural land under **organic farming** and a significant increase in **organic aquaculture**

Enabling sustainable farming



Enabling sustainable farming

Examples of priority R&I actions in **destination FARM2FORK...**

R&I priorities 2021

- ✓ Developing sustainable and competitive land-based **protein crop** systems and value chains
- ✓ R&I scenarios for boosting **organic farming** and organic aquaculture in Europe
- ✓ **Digitalisation** as an enabler of **agroecological farming systems**
- ✓ Research & innovation roadmap for **blockchain** technologies in the agri-food sector
- ✓ Tackling outbreaks of **plant pests**
- ✓ EU-China international cooperation on **integrated pest management** in agriculture
- ✓ **Animal welfare 2.0**
- ✓ **Vaccines** and **diagnostics** for priority animal diseases
- ✓ **One health approach** for food nutrition security and sustainable agriculture
- ✓ Uncovering **lock-ins and levers** to encourage **farmers** to move to and stay in **sustainable food production systems**
- ✓ Towards an EU approach to assess and **internalise positive and negative externalities** of food for incentivising sustainable choices



R&I priorities 2022

- ✓ **Agroecological approaches** for sustainable weed management
- ✓ **Agroecological approaches** in African agriculture systems
- ✓ Innovative solutions to **prevent adulteration of food bearing quality labels**: focus on **organic** food and **geographical indications**
- ✓ Smart solutions for the use of **digital technologies** for small- and medium-sized, farms and farm structures
- ✓ Risk assessment of new **low risk pesticides**
- ✓ Socio-economics of **pesticide use** in agriculture
- ✓ Emerging and future **risks to plant health**
- ✓ **Enhancing biosecurity** in terrestrial livestock production
- ✓ **Ecology of infectious animal diseases**
- ✓ Support for international research on **infectious animal diseases**



Enabling sustainable farming

Examples of priority R&I actions
in **other destinations...**



- ✓ Demonstration network on **climate-smart farming**
- ✓ International Research Consortium on (agricultural) **soil carbon**



- ✓ Fostering **breeding** of organic crops, legumes and root-base traits



- ✓ Optimization of **nutrient budget** in agriculture
- ✓ EU-China international cooperation on **nature-based solutions** for **nutrient management** in agriculture



- ✓ **Smart solutions for smart rural communities**



- ✓ Supporting knowledge exchange between all **AKIS** actors in the Member States by means of an **EU-wide interactive knowledge reservoir, thematic and advisory networks**



Next Work Programme 2023-2024
– **large-scale R&I partnerships:**



**Agroecology living labs
and research infrastructures**

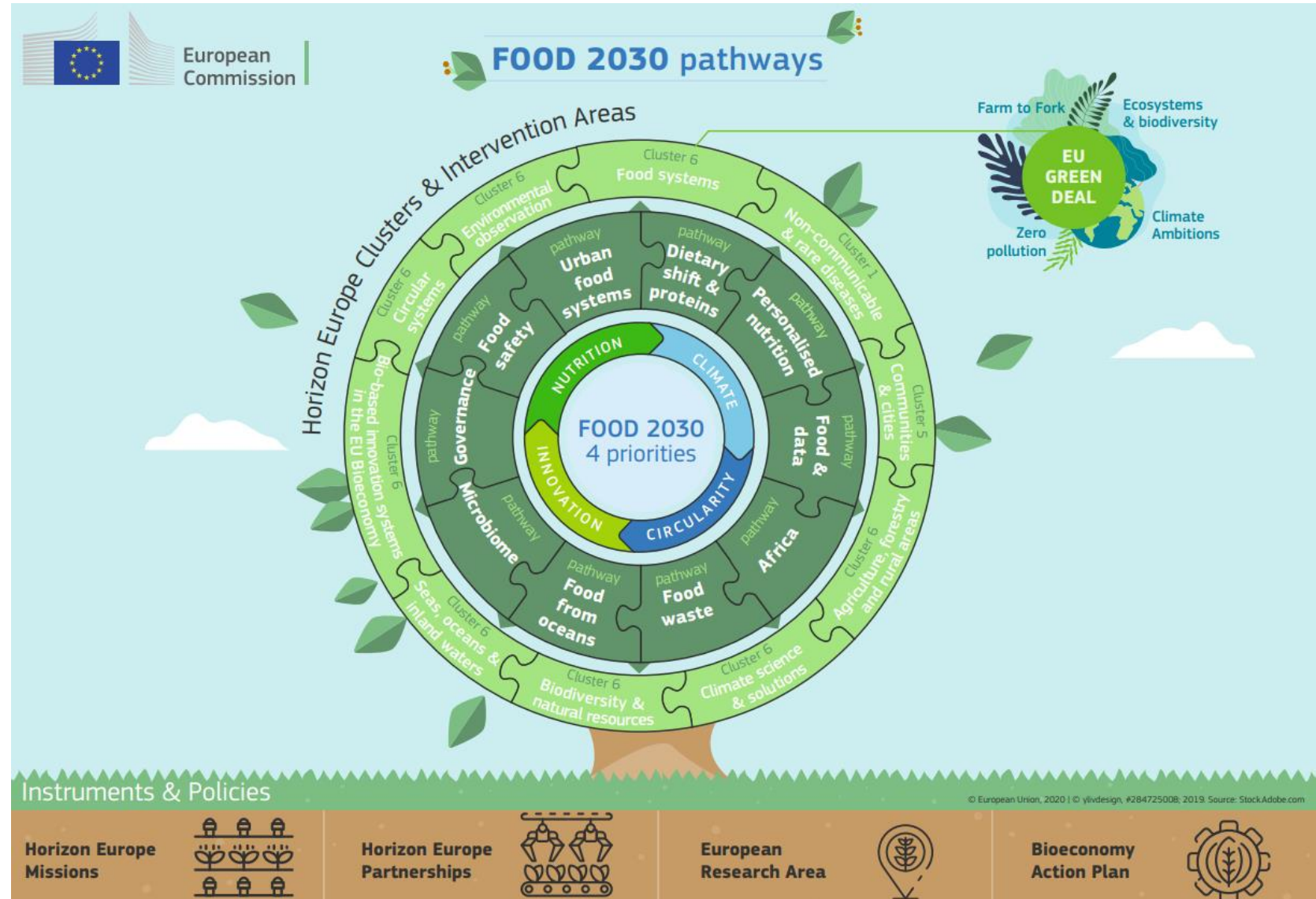


Animal health and welfare



Agriculture of data

Transforming food systems for health, sustainability and inclusion



Transforming food systems for health, sustainability and inclusion

Examples of priority R&I actions in **destination FARM2FORK**...

R&I priorities 2021
✓ Filling knowledge gaps on alternative proteins and dietary shift
✓ Evidence-based decision-making to change social norms towards zero food waste
✓ Microbes for healthy and sustainable food and diets
✓ Transition to healthy and sustainable dietary behaviour
✓ Identification, assessment and management of existing and emerging food safety issues
✓ Increasing the transparency of EU food systems to boost health, sustainability and safety of products, processes and diets

R&I priorities 2022
✓ Building alternative protein -friendly sustainable and healthy food environments
✓ R&I for food losses and waste prevention/reduction through harmonised measurement/monitoring
✓ Microbiomes in food production systems
✓ Integrated surveillance system to prevent and reduce diet-related non communicable diseases
✓ Combatting all forms of malnutrition
✓ Effective systems for authenticity and traceability in the food system
✓ African food cities



Transforming food systems for health, sustainability and inclusion

Examples of priority R&I actions
in **other destinations**...



- Integrated **urban food system policies** – how cities and towns can transform food systems for co-benefits
- Social innovation in **food sharing** to strengthen **urban communities' food resilience**



- Furthering **food systems science** and federating researchers across the European Research Area
- Mapping and improving the **data economy** for food systems

Next Work Programme 2023-2024
– **large-scale R&I partnership:**



Research and
Innovation

Enabling sustainable fisheries and aquaculture



Examples of priority R&I actions in **destination FARM2FORK**...

R&I priorities 2021

Sea to fork transparency and consumer engagement

Digital transition supporting **inspection** and **control** for sustainable fisheries

R&I priorities 2022

Integrated and **sustainable freshwater bioeconomy**

Biosecurity, hygiene, disease prevention and **animal welfare** in aquaculture

Innovative food from marine and freshwater ecosystems

Some relevant topics for the Farm to Fork strategy



Destination 2 Sustainable food systems from farm to fork

- HORIZON-CL6-2022-FARM2FORK-01-06: Biosecurity, hygiene, disease prevention and animal welfare in aquaculture
- HORIZON-CL6-2022-FARM2FORK-01-07: Building alternative protein-friendly sustainable and healthy food environments
- HORIZON-CL6-2022-FARM2FORK-01-09: Microbiomes in food production systems
- HORIZON-CL6-2022-FARM2FORK-02-01-two-stage: Agroecological approaches for sustainable weed management



Destination 1 Biodiversity and ecosystem services

- HORIZON-CL6-2022-BIODIV-01-05: Intercropping – understanding and using the benefits of complexity in farming and value chains
- HORIZON-CL6-2022-BIODIV-02-01-two-stage: Maintaining and restoring pollinators and pollination services in European agricultural landscapes

Some relevant topics for the Farm to Fork strategy



Destination 4 Clean environment and zero pollution

- HORIZON-CL6-2022-ZEROPOLLUTION-01-03: EU-China international cooperation on nature-based solutions for nutrient management in agriculture



Destination 5 Land, ocean and water for climate action

- HORIZON-CL6-2022-ZEROPOLLUTION-01-03: EU-China international cooperation on nature-based solutions for nutrient management in agriculture



Destination 6 Resilient, inclusive, healthy and green rural communities

- HORIZON-CL6-2022-COMMUNITIES-01-02: Assessing and improving labour conditions and health and safety at work in farming

Destination 7 Governance, environmental observations and digital solutions in support of the GD

- HORIZON-CL6-2022-GOVERNANCE-01-01: Mobilisation of society to transform food systems for co-benefits
- HORIZON-CL6-2022-GOVERNANCE-01-05: Innovative tools and methods to evaluate the design and support, monitoring and implementation of effective CAP strategic plans

Organic Action Plan



New Organic Action Plan (OAP) for the EU launched on **25 March 2021**

Some relevant topics for organic farming in the EU



Destination 1 Biodiversity and ecosystem services

- HORIZON-CL6-2022-BIODIV-01-05: Intercropping – understanding and using the benefits of complexity in farming and value chains
- HORIZON-CL6-2022-BIODIV-02-01-two-stage: Maintaining and restoring pollinators and pollination services in European agricultural landscapes



Destination 2 Sustainable food systems from farm to fork

- HORIZON-CL6-2022-FARM2FORK-01-04: Innovative solutions to prevent adulteration of food bearing quality labels: focus on organic food and geographical
- HORIZON-CL6-2022-FARM2FORK-02-02-two-stage: Emerging and future risks to plant health

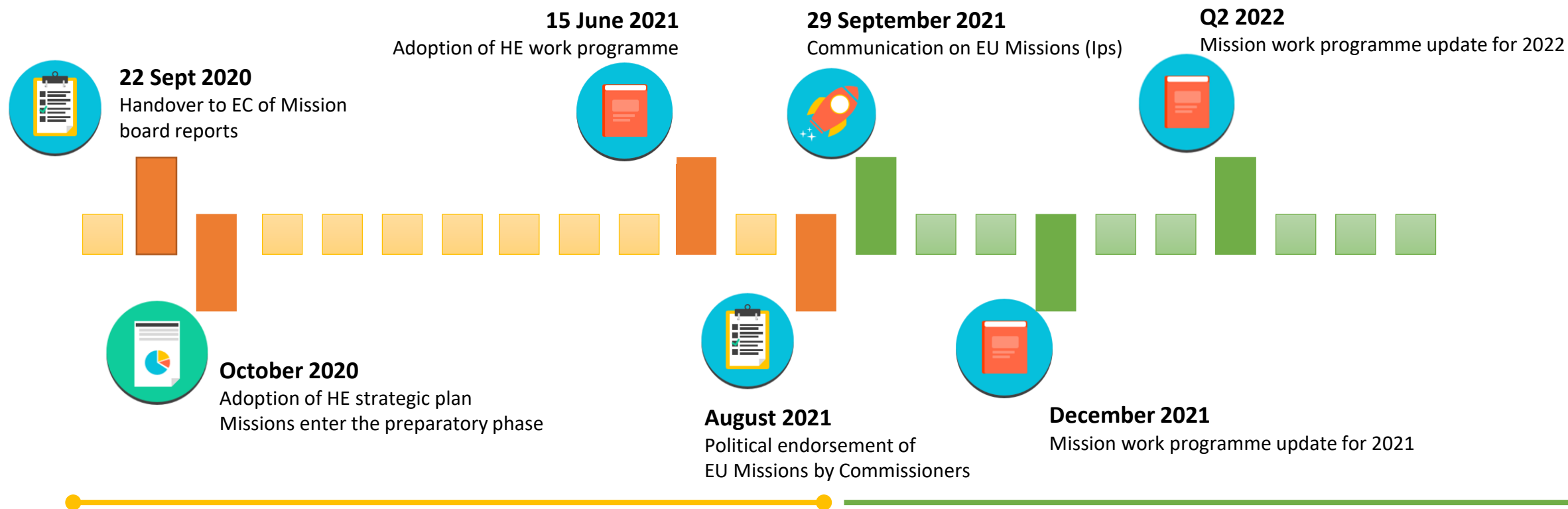


Destination 5 Land, ocean and water for climate action

- HORIZON-CL6-2021-CLIMATE-01-08: Agroforestry to meet climate, biodiversity and farming sustainability goals in agriculture



Timeline



Missions' preparatory phase:

Preparation of solid implementation plans
Preparatory actions in the WP to lay foundation for missions' implementation

Missions' implementation phase:

Two Missions work programme amendments (Q4 2021, Q2 2022) to start missions implementation on the ground.

Useful Links

- **Funding and Tender portal:** https://ec.europa.eu/info/funding-tenders/find-funding/eu-funding-programmes/horizon-europe_en
- **Cluster 6 Info days call 2022:** https://ec.europa.eu/info/research-and-innovation/events/upcoming-events/horizon-europe-info-days/cluster-6_en
- **Cluster 6 Work Programme 2021-2022:** https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-9-food-bioeconomy-natural-resources-agriculture-and-environment_horizon-2021-2022_en.pdf
- **Cluster 6:** https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/cluster-6-food-bioeconomy-natural-resources-agriculture-and-environment_en
- **Horizon Europe Strategic Plan 2021-2024:** <https://op.europa.eu/s/ufOf>
- **Questions to the Research Enquiry Service:** https://ec.europa.eu/info/research-and-innovation/contact/research-enquiry-service_en



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Thank you!