



Infoday Horizon Europe 2024

Sustainable food systems: from primary production to consumption

Cluster 6 – Farm 2 Fork

20/04/2023



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Agenda



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- ▶ Horizon Europe : qu'est-ce que c'est ?
- ▶ Présentation du programme de travail 2024 :
 - 👉 Cluster 6, Destination "Fair, healthy and environment-friendly food systems from primary production to consumption"

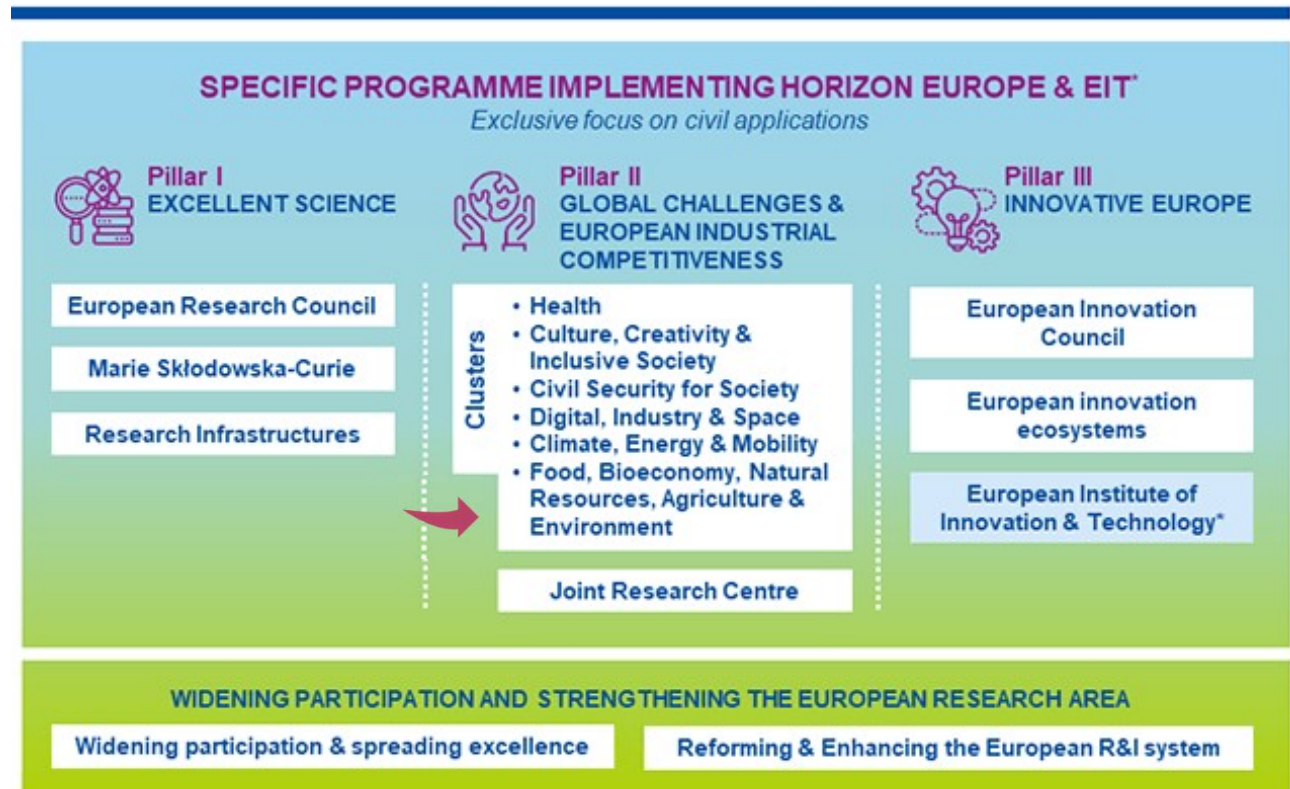
Horizon Europe: le programme UE de R&I

- ▶ €95.5 milliards d'€ (2021-2027)
- ▶ Pour les entreprises, universités et acteurs publics dans leurs activités de recherche et d'innovation

HORIZON EUROPE



- 👉 no net emissions of greenhouse gases by 2050
- 👉 economic growth decoupled from resource use
- 👉 no person and no place left behind



Horizon Europe: Cluster 6

Horizon Europe: Cluster 6 - Food, Bioeconomy, Natural Resources, Agriculture and Environment

▶ 7 Destinations ~ expected impacts (Strategic Plan 2021 – 2024*)

- ▶ Biodiversity and ecosystem services (*BIODIV*)
- ▶ Fair, healthy and environment-friendly food systems from primary production to consumption (*FRAM2FORK*)
- ▶ Circular economy and bioeconomy sectors (*CIRCBIO*)
- ▶ Clean environment and zero pollution (*ZEROPOL*)
- ▶ Land, ocean and water for climate action (*CLMATE*)
- ▶ Resilient, inclusive, healthy and green rural, coastal and urban communities (*COMMUNITIES*)
- ▶ Destination - Innovative governance, environmental observations and digital solutions in support (*GOVERNANCE*)

F2F Expected impact
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.



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

FARM2FORK

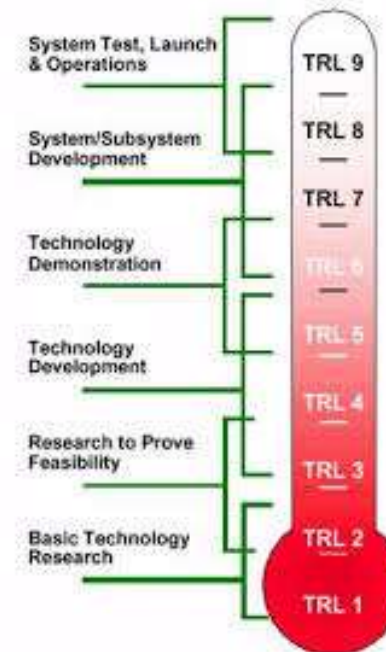


- ▶ **Enabling sustainable farming systems**
 - ▶ 6 topics 2024 (5 TS)
- ▶ **Enabling sustainable fisheries and aquaculture**
 - ▶ 2 topics 2024 (2 TS)
- ▶ **Transforming food systems for health, sustainability and inclusion**
 - ▶ 8 topics 2024
- ▶ **Targeted international cooperation**
 - ▶ 2 topics 2024

Légende

RIA	RESEARCH & INNOVATION ACTIONS	100% funding
IA	INNOVATION ACTIONS	70% funding, Entreprises
		100% funding - non profit organisations
CSA	COORDINATION & SUPPORT ACTIONS	100% funding

- RIA → **TYPE D'ACTION**
- € → **BUDGET / PROJET**
- 6 M€
- 🕒 → **DEADLINE**
- 12.04.23
- 📄 4 → **NB PROJETS FINANCÉS**
- 🌡️ 3-5 → **TRL TECHNOLOGY READINESS LEVEL**



Calls - Fair, healthy and environment-friendly food systems from primary production to consumption FARM2FORK



- ▶ **Enabling sustainable farming systems**
- ▶ Transforming food systems for health, sustainability and inclusion
- ▶ Targeted international cooperation



HORIZON-CL6-2024-FARM2FORK-01-1: Agro-pastoral/outdoor livestock systems and wildlife management

Scope

- Agro-pastoral/outdoor livestock farming systems offer **beneficial effects** not only to animal production but also to **habitat maintenance, carbon sequestration, biodiversity conservation and soil protection**
- Increased demand for natural resources => consequent fragmentation of wildlife habitat, change in land use => human-wildlife conflicts, damages to both sides + conflicts farming systems vs natural resources.
- ⇒ **Review** of current wildlife management approaches in agro-pastoral/outdoor production systems + assessment of the effectiveness of different prevention measures
- ⇒ **Map** common types of damages/ positive externalities from wild animals
- ⇒ **Tools/technologies** for (real time) analysis to assess, monitor and control (wild) animal behaviour and damages
- ⇒ Cost/benefit analysis + Socio-economic, environmental, cultural and political aspects.

Expected outcomes

- ⇒ Help policy makers and other actors to monitor and improve the management of farming and terrestrial wildlife relationships ⇒ contributing to sustainable agriculture and ecosystem services
- ⇒ Innovative and sustainable **practices and tools** to prevent and control negative consequences of interactions between livestock and wild animals → protect wildlife and pastoral/outdoor production systems
- ⇒ **Recommendations**/policy advice on optimal management of wildlife and agro-pastoral systems
- ⇒ Decision-making process on **wildlife management and land planning**
- ⇒ **Improved coordination** across Europe in terms of wildlife management, surveillance and data collection systems

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1 PROJET



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- ▶ Enabling sustainable farming systems
- ▶ Transforming food systems for health, sustainability and inclusion
- ▶ Targeted international cooperation



HORIZON-CL6-2024-FARM2FORK-01-2: New healthy and sustainable food products and processes

Scope

- ☞ Scientific concordance between consumption of **ultra-processed foods** ⇔ **higher risk** of cancer, irritable bowel syndrome, obesity, type 2 diabetes and hypertension
- ☞ **plant-based food** (fruits, vegetables, wholegrain cereals, legumes and nuts) ⇒ reduce the incidence of chronic diseases + beneficial against obesity and metabolic diseases
- ⇒ Further research ⇒ to determine how the **structural characteristics** of plant-based foods deliver health benefits in modulating **digestibility** and in improving **bioavailability** of nutrients and how the **physical structure** may be modified **by processing**.

Expected outcomes

- ⇒ to develop **new food products** and **processes** in conventional or organic production systems.
 - new products **healthier** and overall **more sustainable** < natural ingredients
- ⇒ to optimize **nutritional, structural** and **functional food properties** of raw materials
 - Ingredients/products: nutrition/sensorial/structural/functional properties
- ⇒ ↗ **health** and **well-being** benefits for citizens ⇐ New knowledge
- ⇒ Alignment goals of consumers ≡ food solution providers ⇒ more healthy, tasty, minimally processed, affordable and sustainable food.
- ⇒ **low impact** on the environment/climate
- ⇒ New **market** and **job opportunities** for sustainable food SMEs and industries



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HORIZON-CL6-2024-FARM2FORK-01-3: Thematic network tackling food fraud by translating research and innovation into practice

Scope

- ⇒ to contribute to the **creation of a thematic network** in the area of **food fraud**:
 - Development of a **community of practice** ⇒ **knowledge exchange** between end-users and research and innovation ecosystems who will work together **mapping existing food fraud practices**.
 - Traditional and local food products;
- ⇒ Multi-actors approach (along food chain)
- ⇒ Build on **existing and new available knowledge and trends, data and models** (big data tools and/or AI)
- ⇒ Synergies with other **networks** (EU, National, Regional)

Expected outcomes

- ⇒ To increase **authenticity, traceability and transparency** in food systems
- ⇒ **To facilitate progress to preventing food fraud**
 - **by translating** research and innovation knowledge **into practical applications**.
- ⇒ To widespread use of innovative solutions by end-users/practitioners (official control authorities, food businesses, etc.)
- ⇒ Better incorporation of the **needs of end-users** into the activities of research and innovation communities
- ⇒ Improved skills and long-term availability of **training and education** material



CSA



2 M€

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1 PROJET



N/A



HORIZON-CL6-2024-FARM2FORK-01-4: Climate change and food safety: effects of climate change on food safety across food systems



Scope

- ⇒ Anticipate (via modelling) **how climate change may affect food safety** and in particular by increasing the potential for the (re-)emergence of new hazards and the changes in exposures and risks
- ⇒ Propose methods → **monitor the impact of climate change** on food safety across food systems.
 - ⇒ + Explore how climate change could impact risk assessment methods and understand how risk assessment **methodologies** may need to evolve to meet new climate changed related challenges
- ⇒ Increase the use of **big data and/or AI** → elucidate the **complex interactions** climate change / food safety
 - ⇒ to develop **models to understand** these interactions + their replication potential
- ⇒ Multi-actors approach (along food chain)

Expected outcomes

- ⇒ detecting, assessing, and mitigating food safety risks influenced by climate change
 - Improved understanding of the medium to longer-term **climate change impacts in relation to food safety**
 - Identification, development and dissemination of **mitigation and adaptation measures** to reduce/prevent climate change-related food safety risks



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HORIZON-CL6-2024-FARM2FORK-01-5: Creating smart and attractive tools to enhance healthy and sustainable food provision, eating and treating of food at home

Scope

- ☞ Urban lifestyles => to more consumption of **ultra-processed** and **packaged** food
- ☞ **Cooking skills** may enhance healthy and sustainable diets, so supporting consumers provides potential
- ☞ There are also indications, that **social change** might be enhanced by encouraging minorities to **publicly challenge unsustainable norms** during social interactions => to drive change in behaviour by citizen engagement.
- ⇒ Develop **tools and applications** → enhance citizens to have a healthy and sustainable food provision, diet and treating of food at home/ or discourage unhealthy and unsustainable choices
- ⇒ Include in approaches '**culinary culture dimension**', - nationality, religion, culture, regionality and seasonality etc., and time and financial constraints
- ⇒ to create **inclusive solutions** for broad uptake
- ⇒ national nutritional policies and advice + food safety
- ⇒ solutions → food waste + reduce household wastes (plastics)

Expected outcomes

- ⇒ **Empowered citizens**
 - ⇒ supported **by tools and applications** → healthy and sustainable food provision, cooking and eating
- ⇒ Enhanced uptake of beneficial tools and applications by citizens, especially those who need it most, considering socio-economic characteristics and differences across EU and Associated countries.

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HORIZON-CL6-2024-FARM2FORK-01-6: Citizens' science as an opportunity to foster the transition to sustainable food systems

Scope

- **Transformation of food systems** → needs for **more data-driven** decision making, engaging citizens in research through the provision of data on their practices, choices and attitudes towards the food system
- ⇒ potential for a **more direct citizen engagement** → exchange ideas, solutions, and opinions in driving sustainable food system transformation.
- ⇒ **Explore the potential** of 'citizen's science' in the food systems by engaging and empowering citizens
 - in **using and providing data** and technology to ensure inclusive solutions → to drive to sustainable food consumption, reducing food waste, and creating a resilient food system
 - **Challenges and drivers** → to share data to ensure inclusive food system transformation
 - Tools to enhance **uptake** of **healthy and sustainable diets** and foster sustainable food system transformation
 - Types of data are useful to share and how to meaningfully harmonize data to use

Expected outcomes

- ⇒ Better understanding of citizens' **food consumption behaviour**,
 - **factors** influencing choices and drivers → **changes in behaviour** in an inclusive manner towards healthy and sustainable food consumption practices
- ⇒ Contribution to positive changes in individual behaviour towards healthy and sustainable food consumption and sustainable food system transformation.

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HORIZON-CL6-2024-FARM2FORK-01-7: Impact of the development of novel foods based on alternative sources of proteins

Scope

- Assess the potential of insect protein, algae-based (micro/marco), microbial proteins, food/aquaculture by-products **in terms of market development**
- Assess **economic impact** (e.g. price, production cost, share of market, etc.) + on other sectors (food & biobased)
- Assess **social impact** (e.g., health aspects, consumer acceptance - gender and age, cultural aspects).
- Assess **environmental impact** (Green Deal)

Novel food = newly developed, innovative foods, foods produced using new technologies and production processes, + foods traditionally eaten outside of the EU.

Alternative sources of proteins i.e. ≠ conventional sources of proteins – meat, dairy, mainstreamed from classical crops

Expected outcomes

- ⇒ Better and complete **information** about the impact of the development of novel food for the food system in terms of sustainability (particularly economic and social aspects).
- ⇒ Identify solutions → achieving the objectives of the European Green Deal: sustainable healthy diets/ climate and environment/ zero pollution/ circularity and resource efficiency/ innovation and empowering communities (e.g., meeting needs/ values/ expectations of society in a responsible and ethical way).



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HORIZON-CL6-2024-FARM2FORK-01-8: Preventing and reducing food waste to reduce environmental impacts and to help reach 2030 climate targets



Scope

- **Food waste prevention and reduction** → to climate change mitigation and adaptation, pollution reduction, better air quality, biodiversity preservation
- ⇒ Collect reliable quantitative **data** on the **environmental footprint of food waste**, (LCA, PEF method)
 - Climate change (main focus), Land use, Water use, Resource use
- ⇒ Different **pathways** of **food waste prevention/reduction interventions** assess their potential for
 - climate change adaptation/mitigation
 - reduction of pollution
 - preservation of biodiversity

Expected outcomes

- ⇒ Reliable data on the **environmental impacts** related to food waste (GHG emissions)
- ⇒ Better **understanding** of the **food waste prevention efforts**
 - that will accelerate EU's progress to reach climate targets and
 - will help reduce environmental impacts (including on biodiversity) across the food supply chain
- ⇒ **Integration of actions** related to food waste prevention/reduction into emission reduction instruments
- ⇒ Contribution to the farm to fork objectives and to the Food 2030 priorities

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HORIZON-CL6-2024-FARM2FORK-01-9: Microbiome for flavour and texture in the organoleptic dietary shift

Scope

- ⇒ Develop and pilot innovations to provide **new precision fermentation/ post-fermentation techniques** → foster dietary shift by enhancing organoleptic properties (smell, texture, colour, taste)
- ⇒ Development of **new microbial biomasses** that can be a **source of nutrients (micro/ macro) for humans**.
- ⇒ Produce food with **higher nutritional quality** + potential for positive effects on the human microbiome.
 - i Safety + EU regulatory frameworks
- ⇒ Assess the **economic and social impact**
- ⇒ '**multi-actor approach**': academia, RTO, SME, restaurants ...

Expected outcomes

- ⇒ **Applicable business solutions** in new *precision* fermentation/ post-fermentation techniques
- ⇒ Develop **bioinformatics prediction** of smell, texture, colour and taste of microbes → to create new nuances and flavours in cooperation with chefs/restaurants
- ⇒ New, improved and demonstrated microbial fermentations → dairy, fish or meat flavours and textures to plant-based foods and ingredients
- ⇒ **Co-benefits** to each of the Food 2030 priorities: nutrition for sustainable healthy diets, climate, biodiversity and environment, circularity and resource efficiency, innovation and empowering communities.



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- ▶ Enabling sustainable farming systems
- ▶ Enabling sustainable fisheries and aquaculture
- ▶ Transforming food systems for health, sustainability and inclusion
- ▶ Targeted international cooperation



HORIZON-CL6-2024-FARM2FORK-01-10: EU-African Union cooperation on agroforestry management for climate change adaptation and mitigation

Scope

- ☞ **Agroforestry systems** have the potential to **increase ecosystem services** – soil carbon sequestration, water retention, erosion control, soil nutrients, pollination, pest- and disease-control – and biodiversity, while improving farming productivity, profitability and sustainability of farmers' incomes
- ⇒ Identification of the **most suitable plant and animal species** for agroforestry - different geographic regions in Africa + with positive impact on local communities
- ⇒ Assess local **multi-purpose agroforestry species** with benefits for food, pharmaceutical uses + ecosystem functions for the soil, biodiversity
- ⇒ Assess **specific agroforestry management measures** → preserving/enhancing biodiversity
- ⇒ Assess the **potential of carbon farming** → possible future business for farmers/ foresters,
 - analysis of its potential to contribute to reaching climate-neutrality in a few decades
- ⇒ Local agroforestry **pilot plots**

Expected outcomes

- ⇒ ↗ availability of qualitative and quantitative **data** ⇔ the contribution of agroforestry to climate change adaptation and mitigation, biodiversity preservation, and to sustainable agriculture;
- ⇒ ↗ **management** of agroforestry systems in Africa
- ⇒ ↗ **capacities** to evaluate the socioeconomic and environmental performance of agroforestry for climate change resilience



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HORIZON-CL6-2024-FARM2FORK-01-11: EU-African Union – towards climate-neutral, social just fair trade food systems

Scope

- ⇒ Explore the climate, biodiversity and social **impacts of food supply** and linked products due to **land-use change**
- ⇒ Study the tipping points to scale-up climate-neutral, fair and just food supply
- ⇒ Contribute towards **scaling-up of business models** of climate-neutral fair and just and efficient food supply
- ⇒ **Multi-actor approach** by involving a wide range of food system actors and conducting inter-disciplinary research;
- ⇒ Link to previous projects on urban / rural food systems for solutions to strengthen resilience of food systems in view of supply and/or price shocks.

Expected outcomes

- ☞ Improved assessment systems for sustainable food trade regimes with co-benefits for producers, climate and citizens, biodiversity, assessment of certification schemes (organic, carbon neutral, de-forestation free, conventional), testing innovative solutions with food systems/certification actors;
- ☞ Provide data and recommendations for improved Non-Tariff Measure (NTM) regimes;
- ☞ Provide solutions to food trade, Ministries in charge, border regime management (digital solutions).



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Farm2Fork

two stages: 1st stage 22/2/24 + 2nd stage 17/9/24

- ▶ Enabling sustainable farming systems
- ▶ Enabling sustainable fisheries and aquaculture



HORIZON-CL6-2024-FARM2FORK-02-1-two-stage: Increasing the availability and use of non-contentious inputs in organic farming

Scope

- ☞ EU legislation authorises the use of a specific set of products with a lower impact on the environment and on the soil. ⚠ some of these substances → **harmful effect** on terrestrial and aquatic species ⇒ need **to replace these substances** either by lower impact products or methods
- ⇒ → alternative products and solutions
 - to the use of copper fungicides, mineral oils (organic plant production)
 - to the use of anthelmintics, antibiotics and synthetic vitamins used (livestock production) .
- ⇒ → **biologically active substances** (microorganisms/natural substances), **(micro)biological agents** for soil amelioration or cultivation **techniques**
- ⇒ safety / EU regulatory framework / market / data to enable the registration
- ⇒ Analyse farmers' and consumers' **acceptance**
- ⇒ Business plans

Expected outcomes

- ⇒ ↗ availability, accessibility + adoption by farmers of **cost-efficient alternatives**
- ⇒ Reliable and implementable **rules** on their use
- ⇒ ↘ **environmental impact** of practices and input use in organic farming systems
- ⇒ Provision of **scientific support and recommendations** for EU **policies** for organic production
- ⇒ **Networking and knowledge exchange / ecosystem** on organic farming

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HORIZON-CL6-2024-FARM2FORK-02-2-two-stage: Sustainable organic food innovation labs: reinforcing the entire value chain

Scope

- ✎ Organic farming - mainly at the **primary production level**, while the **processing of organic farm products is less developed and regulated**
- ✎ Limited number of processor and retailers
- ⇒ Develop, test and pilot innovations in **organic small-scale food processing**, and new, sustainable and reusable **packaging** (≠ non-renewable and fossil-derived plastics),
 - ⇒ **i** optimising the preservation of nutritional quality, reducing perishability and ensuring food safety
- ⇒ Diverse innovative solutions/approaches **tailored to the needs** of farmers / SMEs and adapted to the **seasonal** character of raw material production and processing in **small(er)** batches
- ⇒ Explore innovative **supply and distribution models** (- business models, market outlets and marketing strategies, short trade circuits, public procurement, food services) **adapted to proposed** innovative solutions
- ⇒ **Assess the impacts** on sustainability (climate, environmental, social, including health, and economic)
- ⇒ Build a **community of practice** to share learnings, build capacity and support adoption of innovations at scale.

Expected outcomes

- ✎ Difference between EU countries in land dedicated to organic farming: from 0,5% to 25% → the lack of structures adequate for organic farm products in some countries
- ⇒ establishment of **adequate structures** that enable the proper **channelling of organic production in supply chains**
- ⇒ Reinforced local and small-volume processing of organic food



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HORIZON-CL6-2024-FARM2FORK-02-3-two-stage: Tools to increase the effectiveness of EU import controls for plant health

Scope

- ☞ **Plant health** → global importance for agriculture, forestry, natural ecosystems, ecosystem services and biodiversity.
- ☞ Plant health ⚠ **species injurious** to plants and plant products ← to globalisation of trade and climate change
- ⇒ More rapid, robust, and innovative **solutions** for **detecting and identifying plant pests** during import controls
- ⇒ Make use of **innovative technologies** for the detection of a **broader spectrum** of plant pests
- ⇒ Prove **cost-benefits** of the innovative solutions
- ⇒ Promote a **wider use** of new detection technologies for plant health diagnostics

Expected outcomes

- ⇒ ↗ availability and accessibility to cost-efficient and user-friendly **tools and methods** for the **detection of plant pests** to assist plant health inspectors during import controls
- ⇒ Increased the **effectiveness** of detection of plant pests at import points, by ↘ time and overall costs
- ⇒ Knowledge **exchange and uptake** of the innovative tools
- ⇒ Support plant health inspections and import controls.



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HORIZON-CL6-2024-FARM2FORK-02-4-two-stage: Tackling outbreaks of plant pests

Scope

- ☞ **Plant health** → global importance for agriculture, forestry, natural ecosystems, ecosystem services and biodiversity.
- ☞ Plant health ⚠ **species injurious** to plants and plant products ← to globalisation of trade and climate change
- ☞ EU Plant Health legislative => early detection and eradication
- ⇒ target one or more plant pest(s) from EU quarantine pests (=priority pests - of concern for agriculture and/or forestry).
- ⇒ Improve methods for an **effective implementation of the principles of integrated pest management (IPM)** - reflecting the move towards innovative **biological and other non-chemical control** and resistance breeding
 - **understanding** of the **drivers of plant pest introduction**, spread and establishment (biology/ interactions/ host plants /antagonists + influence of climate change + ecosystem degradation + globalization)
 - efficient **surveillance** methods and strategies for **early-detection** and **(bio)control** of the pest(s)
 - ↗ range of **technologies** for the development of economically and environmentally sound solutions
 - analyse **social/economic** implications + **ecological** impact

Expected outcomes

- ⇒ Find adequate responses for EU quarantine plant pests;
- ⇒ Enhance capacities to prevent, monitor and (bio)control plant pests following under the scope of this topic;
- ⇒ Support to relevant EU and Associated Countries' plant health policies.



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HORIZON-CL6-2024-FARM2FORK-02-5-two-stage: Animal nutritional requirements and nutritional value of feed under different production management conditions

Scope

- ☞ to optimise the use of **local feedstuffs**, shorten **supply chains** and rely more on **local resources** i content, availability and digestibility of nutrients - in different pedo-climatic regions and livestock systems, without compromising feed safety and efficiency.
- ⇒ Determine **nutritional requirements** for **local breeds**
- ⇒ Assess **on-farm practices** and **equipment** to use feedstuffs more efficiently
 - post-harvest technologies, crops mixture, foraging strategies, rangeland management
- ⇒ Evaluate the impacts of **processing technologies** on the efficiency of local feedstuffs
- ⇒ **Improved knowledge** on the effects of **functional additives** (enzymes, gut flora stabilisers, natural plants, vitamins, etc.) on animal performance, health and welfare

Expected outcomes

- ⇒ **↑** use of **locally produced** and more **climate-friendly solutions** → animal feed without compromising **animal performance and productivity**
- ⇒ Optimised **use of feedstuffs**, new plants, forage species and associations at local level
- ⇒ **Guidelines** for processes and policies for production, use, and diversification
- ⇒ **Uptake by farmers** of **practices to diversify sources of feedstuffs**



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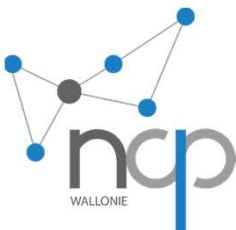
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Farm2Fork two stages: 22/2/24 → 17/9/24

- ▶ Enabling sustainable farming systems
- ▶ Enabling sustainable fisheries and aquaculture



HORIZON-CL6-2024-FARM2FORK-02-6-two-stage: Minimising climate impact on fisheries: mitigation and adaptation solutions for future climate regimes

Scope

- ☞ to **investigate** the **impacts of climate change** on biological and ecological processes such as shifts in stocks distribution, abundance and density, fish health, stock productivity, habitats, regime shifts in ecosystems and altered growth, reproduction rates, seafood safety and overall changes in the ecosystem potential production.
- ☞ **innovative measures to mitigate climate change** (new designs of fishing gears or new fishing strategies - do not resuspend carbon from the seabed or improve energy use efficiency or strengthen circularity aspects) and adaptive solutions

Expected outcomes

- ⇒ Contribution to **sustainable fisheries** for fair, healthy, climate-resilient and environment-friendly food systems with low impact on aquatic ecosystems
- ⇒ Transformation of fisheries to make a significant contribution **to climate-neutrality**
- ⇒ Contribution to more **precise, technologically advanced data collection** (via AI, sensors and robotics) - natural and social ecosystem
- ⇒ Understanding of the **resilience potential** to climate change of exploited resources
 - and build up **the adaptive capacity** for **fisheries management**;
- ⇒ Preparation of the seafood sector to harvest fish stocks in **the most sustainable manner**, taking into account environmental, social and economic considerations.



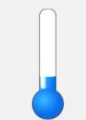
IA



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HORIZON-CL6-2024-FARM2FORK-02-7-two-stage: Minimising climate impact on aquaculture: mitigation and adaptation solutions for future climate regimes

Scope

- ⇒ identify, forecast and assess the **main effects of climate change** on aquaculture production systems
 - **water availability** (e.g., rise in evaporation, decrease in rainfall, extreme weather events like droughts or floods), **water quality** (e.g., acidification, eutrophication, pollution, contamination), temperature rise, sea level rise, spread of diseases, reduced fish welfare, invasive species, ...
- ⇒ Adaptation and mitigation solutions and opportunities - technological, social, economic, and biological/ecological aspects, selection of suitable sites, culture methods, species plasticity and adaptability to changing environments + breeding → more sustainable, productive and resilient.

Expected outcomes

- ⇒ to sustainable **aquaculture systems** (marine and/or fresh waters) for fair, safe, healthy, climate-resilient and environment-friendly food systems with low impact on aquatic ecosystems
- ⇒ Implementation of innovations (dietary shifts and circularity for a **more sustainable and competitive** European aquaculture - resilience to adverse consequences of climate change
- ⇒ European aquaculture production → = global reference for sustainability and quality, ↗ its competitiveness, ↘ EU dependence on imports of fisheries and aquaculture products and ↗ jobs
- ⇒ Contribution to **technologically-advanced aquaculture production** (AI sensors, internet-of-things and robotics), fully embedded in natural, social, ethical and economic sustainability.



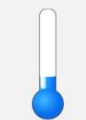
IA



4,5 M€

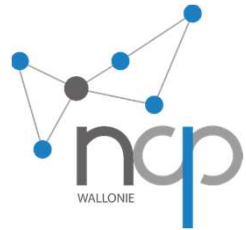
22 FÉVRIER
2024

2 PROJETS



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

Farm2Fork



► Textes complets des appels disponibles

- Site web NCP-Wallonie: <https://www.ncpwallonie.be/secteurs/biotech-food/>
- Portail EU: [HE Cluster 6 – F2F](#)



Merci pour votre attention

Retrouvez-nous sur ncpwallonie.be

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