

Organic research & innovation to deliver sustainable food and farming systems

Priorities for Horizon Europe Work Programme 2025-2027

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Introduction

Our food and farming systems need to respect the planetary boundaries, be climate neutral, circular, diverse, and fair. They need to be resilient and prepared for external shocks and crises like we recently experienced with the Covid-19 pandemic, the Russian war in Ukraine and the related energy, fertiliser and food prices crisis, as well as for more long-term trends like the digitalisation of our economies. To achieve this, all actors in the food chain need to embrace change – farmers, input suppliers, processors, retailers, marketers as well as consumers. Policymakers have a crucial role to play in this transformation by ensuring a common, integrated, and holistic vision to food and farming policy. The **EU Farm to Fork Strategy**¹ launched by the European Commission offers such a vision and ambitious targets to reduce the dependency on pesticides and antimicrobials, reduce excess fertilisation, restore soil health and surface water quality, and reverse biodiversity loss. Organic and agroecological farming offers multiple benefits for climate and biodiversity (see Figure 1), guaranteeing the health of both people and the planet, and therefore the bases of food production and long-term food security, for example better protecting soil and water than conventional agriculture.

ORGANIC AGRICULTURE AND ITS BENEFITS FOR CLIMATE AND BIODIVERSITY

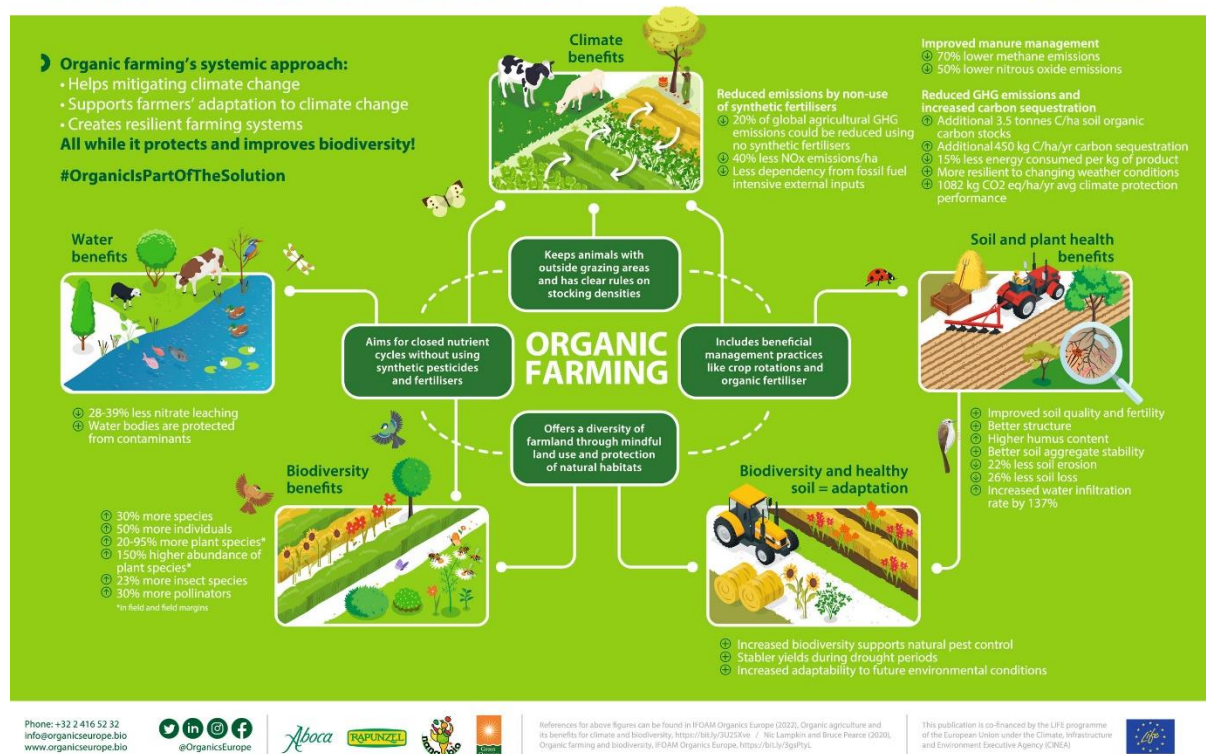


Figure 1: Organic agriculture and its benefits for climate and biodiversity (c) IFOAM Organics Europe

Recognising the potential of organic agriculture to drive the transition to sustainable food systems, the Farm to Fork Strategy has set the objective of **achieving at least 25% of the EU's agricultural land under organic farming by 2030**. While ambitious, we can reach this target if we all work together.

¹ European Commission (2020). A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions COM(2020) 381 final. Available at https://ec.europa.eu/info/sites/info/files/communication-annex-farm-to-fork-green-deal_en.pdf.

The [EU Organic Action Plan](#) recognises the importance of research and innovation (R&I) for organic, knowledge exchange on organic farming, and building organic agricultural knowledge and innovation systems (AKIS): At least 30% of the budget for R&I actions in the field of agriculture, forestry and rural areas (Intervention Area 3 of Cluster 6 of Horizon Europe) are to be dedicated to topics specific to or relevant for the organic sector. [Food 2030](#), the EU's R&I policy to transform food systems and ensure everyone has enough affordable, nutritious food to lead a healthy life, provides a holistic vision and policy narrative to develop impactful solutions to the urgent, complex and interconnected challenges inherent to food systems. [TP Organics](#), the European Technology Platform for R&I in Organics and Agroecology, offers its expertise to achieve the Farm to Fork targets. Recognised by the European Commission for giving input into R&I programmes at European, national, and regional levels, TP Organics unites the entire organic value chain: production, input and supply, food processing, marketing, and consumption. Together with our members, we are willing and have the tools to contribute to facing the challenges. Our mission is to shape R&I for organic and other agroecological approaches that contribute to sustainable and resilient food and farming systems. We are convinced that R&I can help to achieve the Farm to Fork targets in a constructive way, reaching the environmental and social goals behind and enabling the transition of our food systems towards a more sustainable future for all. The organic stakeholders we are collaborating with are eager to work with researchers to tackle these needs and transform the food and farming systems of Europe.

This position paper represents a first input for the final Work Programme of Horizon Europe (2025-2027). The presented research priorities reflect the knowledge and innovation needs identified in [TP Organics' Strategic Research & Innovation Agenda](#), while also taking into account the new policy environment and practical challenges imposed by the current crises Europe and the world are facing. TP Organics will provide more elaborated input ahead of upcoming deadlines.

Advancing the organic sector through research, innovation and exchange

R&I budgets for organic farming under Horizon Europe need to be in line with the Farm to Fork target of 25% organic farmland. **Investing in organic R&I is investing in solutions for sustainable farming systems that fulfil all Farm to Fork targets.** While it is welcome that the second Work Programme of Horizon Europe (2023-2024) included 7 calls addressing specific challenges of the organic sector, the Work Programme 2025-2027 will be key to reach the Farm to Fork and Organic Action Plan targets as the last opportunity under this framework programme to properly fund organic R&I needs, and considering the process of R&I policy development (including Strategic Planning, Work Programme drafting etc.) through to the actual funding of research projects and finally the implementation of results is very time intensive, the 2030 horizon of the EU strategies and targets is very close.

Enhance knowledge for organic through advice, exchange, and research & innovation Organic being knowledge intensive, strong AKIS for organic and advisory services are needed to **support new entrants, existing organic farmers and conventional farmers willing to convert to organic** agriculture by promoting knowledge exchange through farmers' networks and on-farm research and assisting in market development. In addition, training of farm advisors is crucial, as there are currently not enough well-trained consultants in Europe. The online platform [Organic Farm Knowledge](#)², which provides practice-oriented tools and scientific information to allow for local co-creation of solutions, should have a more prominent role. The international open access archive

² Organic Farm Knowledge (<https://organic-farmknowledge.org/>) is a product of OK-Net Arable and OK-Net EcoFeed. These projects have received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements No. 652654 and No. 773911, respectively.

[Organic Eprints](#) for more academic-oriented knowledge related to research in organic food and farming is widely recognised and its role should be strengthened.

To leverage the potential of organic food and farming as a systemic solution and a beacon for the transition to sustainable development, the European Commission should stimulate and foster cooperation between research communities working on organic and conventional food and farming. Building on organic approaches can inspire the conventional sector to become more sustainable. Therefore, research should be conducted in **co-creation**, engaging both the conventional and organic sector, and all calls under Horizon Europe where organic could be relevant should state that they “**will benefit and address both the conventional and organic sector**”, even if they are not specifically aimed at the organic sector. Research capacity for the organic sector adequate for reaching the goal of 25% organic by 2030 will only be created if there is further investment now in this capacity. In case organic is not explicitly mentioned in call texts, the needs of the organic sector might easily be disregarded or overlooked. The involvement of national, regional and local actors is vital for actions related to public procurement and the promotion and implementation of bio-districts.

Recognise the organic sector as a pioneer regarding soil health, agroecology, regenerative agriculture, carbon farming and sustainable food systems

In order to achieve a balanced development of the organic sector across the EU, transnational collaboration in research is crucial, including in the context of the new European R&I Partnerships under Horizon Europe as well as with extra-EU countries like Mediterranean and African countries. The [European partnership on accelerating farming systems transition – agroecology living labs and research infrastructures](#) in particular will be a key strategic instrument to support the upscaling of organic food and farming and agroecology. It presents a huge opportunity to align Member State efforts, pool resources, and bring R&I for agroecology and organic to a higher level. **Organic farmers are the pioneers of agroecology**, implementing agroecological practices as defined by [EU legislation for the organic sector](#). The experience of organic presents a key asset to make the partnership successful. Therefore, organic farmers and organic stakeholders should be fully involved in the partnership. Likewise, the [Sustainable Food Systems Partnership](#) should build on organic as a **sustainable food system model**. Organic is regenerative by design and, compared with conventional agriculture, results in an increased carbon (C) sequestration of 450 kg C/ha/year³. The **EU Mission “A Soil Deal for Europe”** should recognise organic farmers as central actors that are already implementing a range of practices proven to sustain and improve soil health.

Organic priorities for the last Work Programme of Horizon Europe

As outlined in this position paper (see Part 1, proposed calls 4 and 5), more efforts are required to increase market transparency in the organic sector. **Improved collection of statistics on inputs and outputs in organic agriculture** remains a top priority put forward by TP Organics for the final Work Programme of Horizon Europe (see proposed call 1 in Part 1). Similarly, while generally better in terms of animal health and welfare as well as the environment (e.g., due to reduced livestock numbers)⁴, **organic animal production needs more attention**. Animal breeding in particular takes a lot of time, thus needs to start early.

The priority topics put forward in this paper will contribute to deliver the **expected impacts of Cluster 6** as described in the [Horizon Europe strategic plan \(2025-2027\)](#):

- [27. Fostering mitigation of and adaptation to climate change](#)

³ https://www.organicseurope.bio/content/uploads/2022/04/IFOAMEU_advocacy_organic-benefits-for-climate-and-biodiversity_2022.pdf?dd

⁴ https://www.organicseurope.bio/content/uploads/2023/02/ifoameu_policy_FarmToFork_25EnviBenefits_202212.pdf?dd

- [28. Biodiversity is back on a path to recovery, and ecosystems and their services are protected and restored](#)
- [29. Guaranteeing healthy soils and sustainable forests, clean air, fresh and marine water, and ensuring the transition to a clean, circular and competitive economy and sustainable bioeconomy](#)
- [30. Healthy food and nutrition security is ensured by sustainable, resilient, and inclusive agriculture, fisheries, aquaculture and food systems within planetary boundaries](#)
- [31. Rural, urban and coastal areas are sustainably developed](#)
- [32. Developing innovative governance models and tools enabling sustainability and resilience](#)

The [EU Organic Action Plan](#) outlines actions for the development of organic production in the EU along three axes:

Axis 1: Organic food and products for all: Stimulate demand and ensure consumer trust

- 1.1. Promoting organic farming and the EU logo (actions 1 and 2)
- 1.2. Promoting organic canteens and increasing the use of green public procurement (action 3)
- 1.3. Reinforcing organic school schemes (action 4)
- 1.4. Preventing food fraud and strengthening consumer trust (action 5)
- 1.5. Improving traceability (actions 6 and 7)
- 1.6. The contribution of the private sector (action 8)

Axis 2: On the way to 2030: Stimulating conversion and reinforcing the entire value chain

- 2.1. Encouraging conversion, investment and exchange of best practices (action 9)
- 2.2. Developing sector analysis to increase market transparency (actions 10 and 11)
- 2.3. Supporting the organisation of the food chain (actions 12 and 13)
- 2.4. Reinforcing local and small-volume processing and fostering short trade circuit (actions 14 and 15)
- 2.5. Improving animal nutrition in accordance with organic rules (action 16)
- 2.6. Reinforcing organic aquaculture (action 17)

Axis 3: Organics leading by example: Improving the contribution of organic farming to sustainability

- 3.1. Reducing climate and environmental footprint (action 18)
- 3.2. Enhancing genetic biodiversity and increasing yields (action 19)
- 3.3. Alternatives to contentious inputs and other plant protection products (action 20)
- 3.4. Enhancing animal welfare (action 21)
- 3.5. Making more efficient use of resources (actions 22 and 23)

In addition, the [Food 2030 pathways for action](#) provide a structured basis for R&I policy and R&I areas relevant for Horizon Europe and future R&I programmes in Europe and beyond. While organic as a systems approach can fit in every pathway and can contribute to all pathways, for each the proposed call topics, the pathway it is especially relevant for is indicated.

1. Governance and system change

2. Urban food systems transformation
3. Food from the ocean and freshwater resources
4. Alternative proteins and dietary shift
5. Food waste and resource efficiency
6. The microbiome world
7. Healthy, sustainable and personalised nutrition
8. Food safety systems of the future
9. Food systems Africa
10. Food systems and data
11. (new) Zero pollution

Short descriptions of the proposed topics can be found in Part 1, together with the total budget proposed per call. For more detailed descriptions, it is also referred to the corresponding topics in TP Organics' [Strategic Research & Innovation Agenda for Organics and Agroecology](#).

TP Organics asks for the following calls to be included in the third Work Programme of Horizon Europe (2025-2027), considering a proper balance between R&I at farm level, in the value chain and in rural areas:

#	Proposed call	Corresponding expected impact(s) Cluster 6	Corresponding action(s) in the Organic Action Plan	Corresponding Food 2030 pathway(s)
1	Improved collection of statistics on inputs and outputs in organic agriculture	32	1, 10 and 11	<i>10. Food systems and data</i>
2	Demonstration sites of agroecological management of organic horticulture (vegetables and fruit)	27, 28, 29 30 and 31	18, 19 and 20	<i>7. Healthy, sustainable and personalised nutrition 8. Food safety systems of the future (New) 11. Zero pollution</i>
3	Improved methods to assess the sustainability of organic farming	30 and 32	1 and 4	<i>10. Food systems and data</i>
4	Reducing the climate impact of organic livestock production	27	1, 9 and 14	<i>8. Food safety systems of the future</i>
5	Deepening the circular economy design of organic livestock production	27 and 29	12, 14 and 16	<i>8. Food safety systems of the future</i>
6	Transforming European diets: solutions for organic food plant-based meat substitutes	27 and 30	1, 9 and 14	<i>4. Alternative proteins and dietary shift 7. Healthy sustainable and personalised nutrition</i>
7	Developing "Organic diets": defining organic diets for highest health and sustainability outcomes	30	1, 9 and 14	<i>4. Alternative proteins and dietary shift 7. Healthy sustainable and personalised nutrition</i>

8	Investigating the impact of organic production methods on the soil, plant, animal, and human microbiome	28, 29 and 30	18	<i>6. The microbiome world</i>
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For the **EU Mission “A Soil Deal for Europe”**, three more calls are outlined in Part 2 that should be part of the next Missions Work Programme:

#	Proposed call	Corresponding expected impact(s) Cluster 6	Corresponding action(s) in the Organic Action Plan	Corresponding Food 2030 pathway(s)
1	Network of organic regenerative living labs and lighthouses	27-31	18	<i>10. Food systems and data</i>
2	Demonstration network of on-farm biodiversity protection	28-31	18 and 19	<i>10. Food systems and data</i>
3	Sustainable nutrient management in organic farming	27-29	20 and 23	<i>9. Food systems Africa</i>

All actions put forward in this position paper are expected to be delivered in a **multi-actor and/or co-creation approach**. As the challenges and expected impacts are highly interconnected, systemic approaches should be encouraged, including inter- and transdisciplinarity, social innovation and citizen engagement.

Part 1: Proposed priority topics for Horizon Europe Work Programme 2025-2027

Call 1: Improved collection of statistics on inputs and outputs in organic agriculture

Follow-up of the call ‘Reaching the farm to fork target: R&I scenarios for boosting organic farming and organic aquaculture in Europe’ (HORIZON-CL6-2021-FARM2FORK-01-01)

Corresponding Organic Action Plan action(s)	1, 10 and 11
Corresponding Food 2030 pathway(s)	10. Food systems and data
Corresponding expected impact(s) Cluster 6	32
Proposed type of action	Coordination and support action (CSA)
Proposed budget and duration	EUR 10 million; 5 years
Corresponding topic(s) in TP Organics’ SRIA	<i>European Market Observatory for organic food & farming (p.15)</i>

Expected Outcome

Market transparency in the organic sector remains a challenge when it comes to collecting, analysing, and pooling data at European level. Hence, the procedures for data collection need to be improved, ensuring high data quality, control, comparability and timeliness. Regulation (EU) 2022/2379 emphasises the importance of data collection on organic production, including information on the conversion process. This data is essential for evaluating the sustainability effectiveness of organic farming policies, tracking the growth of organic agriculture, and identifying areas where support may be needed. Stakeholders, public administrations and academia should also be able to access accurate and timely data on organic products. This type of transparency will help build trust between operators in the food chain, ensure that production matches consumption trends, and ultimately allow operators to take better production and investment decisions⁵. Being able to track land use, crops and animals that are managed organically, including in-conversion land, is crucial for environmental impact assessment purposes.

Projects are expected to contribute to the following outcomes:

- Increased harmonisation and standardisation of data collection on the EU organic sector at farm, supply chain, trade and consumer levels
- Continuous collection of data about production and the environmental, economic and social benefits of organic farming
- Better collection and analysis of data in collaboration with Member States (MS)
- Increased cooperation between public and private data providers in the organic sector at MS and EU level
- Greater user acceptance of collected solutions and a more intensive dissemination of existing knowledge among data providers at various levels
- Better implementation of digitisation and open data policies in relation to the EU organic area

Scope

The funded project should establish sound and effective procedures for collecting, storing, and sharing data on organic production **involving all relevant actors from all Member States**: certification/control

⁵ Quote from p.13 of the EU Organic Action Plan (2021). Available at: https://eur-lex.europa.eu/resource.html?uri=cellar:13dc912c-a1a5-11eb-b85c-01aa75ed71a1_0003_02/DOC_1&format=PDF

bodies, statistical offices of Member States and EUROSTAT as well as end-users of the data (market actors, researchers, policymakers etc.). The data should cover inputs (plant protection products) as well as outputs (animal and crop production). In particular, the project should help strengthening data collection on the use of organic seed and the extent of derogations granted to use non-treated conventional seed. The project should build on the outcomes of [OrganicDataNetwork](#) and [LIVSEED](#).

Proposals should:

- Ensure that all stakeholders are supported to set up the right procedures, and thereby enabling accurate monitoring of the progress of organic farming within the EU
- Identify policy recommendations to improve efficiency in data collection
- Foster harmonisation of data collection at farm, supply chain, and consumer levels, with the following special points of attention:
 - In-conversion data are needed at crop level for all types of crops.
 - The area of permanent grassland should be collected, both in-conversion as well as fully converted
 - Organic animals should be counted in the same way in all MS and a distinction must be made between different types of animals (e.g., for pigs: breeding sows, piglets, and fattening pigs; for bovines: beef and dairy cows). This is essential for calculating the demand for organic feed.
 - If feasible, organisational information about short supply chains (including Participatory Guarantee Systems) and data on employees working on the farm/in enterprises (including a distinction between local employees and foreign employees) should be highlighted.

Call 2: Demonstration sites of agroecological management of organic horticulture (vegetables and (small) fruit)

Corresponding Organic Action Plan action(s)	18, 19 and 20
Corresponding Food 2030 pathway(s)	7. Healthy, sustainable and personalised nutrition, 8. Food safety systems of the future, and (new) 11. Zero pollution
Corresponding expected impact(s) Cluster 6	27, 28, 29 30 and 31
Proposed type of action	Research and Innovation Actions (RIA)
Proposed budget	EUR 2 x 6 million (one project on vegetables and annual crops; one project on fruit and nuts/perennials/agroforestry)
Corresponding topic(s) in TP Organics' SRIA	<i>Agroecological management of protected cropping and greenhouse production (p.29); Diversified fruit orchards and vineyards for functional intensification (p.30)</i>

Expected Outcome

Demand for a diverse and stable supply of horticultural crops and year-round production is rising. There is a need for more diversified horticulture cropping systems and further agroecological management methods in organic production to increase soil health, yield stability, product quality,

biodiversity, and improved use of resources, e.g., better rotation systems, use of companion crops, cover crops, and agroforestry.

Projects are expected to contribute to the following outcomes:

- Increased knowledge about agroecological practices applied to vegetable or fruit growing through demonstration of diversified horticultural production systems throughout Europe
- Higher and more stable yields of high-quality vegetable or fruit products and improved functional biodiversity and weed competition
- Collection and distribution of easily accessible practice-oriented knowledge on organic horticulture
- Development of environmentally friendly pest and disease management towards zero pollution of organic horticulture, so that all contentious inputs (e.g., copper, mineral oils) can be phased out

Scope A: Annual crops

Projects on annual crops should build on previous work (e.g., [BioGreenhouse project](#) and others).

Scope B: Perennial crops

Perennial fruit proposals should explore new crops (e.g., perennial vegetables, Asian vegetables, nuts) and fruit trees and rootstocks to adapt to and mitigate climate change, building on, e.g., the [BIOFRUITNET project](#), and others.

Funded projects in both scopes should:

- Demonstrate the use of crop rotations, intercropping, cover crops and green manures, and agroforestry in horticulture on a much larger scale
- Set up a network of demonstration sites of diversified production systems distributed throughout Europe and adapted to regional climatic conditions to demonstrate the efficacy and facilitate knowledge sharing
- Improve fertiliser, water, and soil management for better soil health and reduced nutrient leaching
- Provide recommendations to producers on zero-pollution and climate-neutral production with diversified cropping systems, including trees and livestock re-introduction into horticulture, as appropriate
- Produce a set of guidelines or recommendations for the improvement of organic horticulture across Europe

Call 3: Improved methods to assess the sustainability of organic farming

Corresponding to Organic Action Plan action(s)	1 and 4
Corresponding to Food 2030 pathway(s)	10. Food systems and data
Corresponding expected impact(s) Cluster 6	30 and 32
Proposed type of action	RIA
Proposed budget	EUR 6 million

Corresponding topic(s) in TP Organics' SRIA	<i>Measuring agricultural sustainability and public goods (p.37)</i>
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Expected Outcome

For sustainable agriculture, including organic farming, to thrive, farmers must be properly rewarded for the public goods and services they provide, which need to be reflected in the public funding allocated to farming and the prices paid by consumers. Food systems that reveal hidden costs and externalities are a key instrument within the market economy for steering consumption patterns towards environmental and societal sustainability. There are currently not sufficiently robust, standardised and widely accepted methods that are generally used, nor enough data to assess the ecological benefits of organic systems in comparison to conventional systems. For a competent and credible organic sector, the development of better assessment methodologies should be promoted.

Through the collection of data from different geo-climatic areas in Europe and different organic systems and the application of different methodologies that are well-suited to reflect the ecological benefits of organic farming, the delivery of ecosystem services and public goods by organic farmers will be better assessed. This will allow a more complete comparison of the environmental sustainability and production effectiveness of different organic and conventional systems, while also enabling the transfer into economic concepts facilitating true cost systems and modifications of the CAP towards remuneration of public goods.

Projects are expected to contribute to the following outcomes:

- Development of a common framework for measuring sustainability and public goods delivery and concepts for the remuneration of public goods delivered by individual and groups of farmers through the common agricultural policy
- Better assessment of environmental sustainability, ecosystem services and public goods delivery of organic farmers.
- Better understanding of the links between different food systems and environmental impact as well as public goods, and of the contribution of organic farming

Scope

The focus of the proposals should be to impulse and broaden sustainability assessment tools, building on existing frameworks such as the FAO's [SAFA Guidelines](#) and the [Planet-score](#) as well as on recent scientific evidence on how to measure impacts and improvements. Reliable, standardised, and rigorous methodologies to assess the sustainability performance of farms should be further developed and used to: i) compare the performance and environmental impacts of organic versus conventional food systems, ii) make sustainability tangible for farmers, enabling them to develop sustainable farm strategies in line with the CAP objectives. With regards to consumer expectations for more transparency regarding the sustainability of their food, these tools should also be applicable to other actors in the agri-food value chain (retailers, processors, etc.), and be developed with a view towards allowing consumer-oriented communication of the benefits of organic.

Proposals should:

- Develop robust methods to compare different farming systems and practices
- Improve communication of environmental performance and accounting of externalities of different farming systems to facilitate policy change and drive sustainable consumption through consumer-targeted visualisation and communication

- Create guidelines for improved public goods delivery of food systems and integration into policymaking, especially the CAP, through effective impact indicators and incentives for farmers

Call 4: Reducing the climate impact of organic livestock production

Joint topic with ATF & FABRE TP

Corresponding to Organic Action Plan action(s)	1, 9 and 14
Corresponding to Food 2030 pathway(s)	8. Food safety systems of the future
Corresponding expected impact(s) Cluster 6	27
Proposed type of action	RIA
Proposed budget	EUR 6 million
Corresponding topic(s) in TP Organics' SRIA	<i>Breeding of animals for longevity, hardiness, and multi-purpose production (p.27); Agroforestry for climate change mitigation and biodiversity (p.32); Climate-resilient grass-fed ruminants (p.33)</i>

Expected Outcome

Greenhouse gas (GHG) emissions are a source of big environmental impact of livestock farming and has become an issue of the greatest importance for consumers and policymakers. At the same time, grazing livestock utilising Europe's grasslands and silvo-pastures has a strong climate change mitigation potential: According to the FAO, "improved management practices could reduce emissions from livestock systems by about 30%". Organic farming considers animal welfare, biodiversity, carbon storage and climate mitigation and adaptation in a systems approach that leads to multiple co-benefits for producers, consumers, and society. The EU Farm to Fork strategy recognises the potential of organic by calling for 25% organic farmland in Europe by 2030. The increase of organic grassland, especially in mountains and marginal areas, can contribute to achieving this goal.

Projects are expected to contribute to the following outcomes:

- Definition of optimal and meaningful goals towards "climate neutrality", "carbon neutrality" of ruminant livestock and grazing systems
- Optimised grassland management and restoration of abandoned grassland in marginalised areas and mountains
- Reduced GHG emissions from organic ruminant livestock farming through improved management practices

Scope

Focusing on ruminants, projects should:

- Establish links with the new project OrganicClimateNet
- Identify pathways to increase soil carbon sequestration thanks to grassland, introduction of forages and leys in the crop rotation, N₂-fixing legumes, and agroforestry to reduce net emissions and energy consumption and considering local situations
- Define the link between feed rations and quality of manure in order to optimise and reduce GHG emissions taking into account the whole system: plant-animal- health

- “De-specialise” systems and breeding of healthy animals, including dual-purpose, reducing emissions and making the whole system more efficient by optimising the available (variable) local feed sources, including by-products and former foodstuffs, and considering feed-food competition
- Provide better understanding of the effects of feed diversity, e.g., diversity of grassland and forages to stimulate foraging behaviour of ruminants while also providing resilience to climate hazards including the effect on manure quality
- Better understand, monitor and assess the effects of pasture-borne diseases and parasites on efficiency and emissions and development and provision of control options against pasture-borne disease threats through strategies fit for organic farming
- Develop guidelines, incentives, training materials for farmers and advisors, consumer information and identification/establishment of demo farms to operationalise and implement the proposed solutions

Call 5: Deepening the circular economy design of organic livestock production

Joint topic with Animal Task Force

Corresponding Organic Action Plan action(s)	12, 14 and 16
Corresponding Food 2030 pathway(s)	8. Food safety systems of the future
Corresponding expected impact(s) Cluster 6	27 and 29
Proposed type of action	RIA
Proposed budget	EUR 6 million
Corresponding topic(s) in TP Organics' SRIA	<i>Breeding of animals for longevity, hardiness, and multi-purpose production (p.27); Agroforestry for climate change mitigation and biodiversity (p.32); Climate-resilient grass-fed ruminants (p.33)</i>

Expected Outcome

Considering the finite natural resources of the world, there is a clear need to reduce the degree of and change animal production, the production of animal feed and their impact on the use of natural resources. Therefore, livestock production systems need to be based on sustainable and efficient ecological cycles and the concept of the circular economy, which is a key principle in organic agriculture. Reintegrating livestock and crop production at farm, local or regional level are key elements in this. Projects should address outdoor systems integrating pastures, crops, and agroforestry and livestock (monogastrics and ruminants), as well as mixed animal production systems integrating different species or types of production within animal species (e.g., combining beef and dairy or eggs and poultry meat).

Projects are expected to contribute to the following outcomes:

- Improved use of resources, by-products and waste products from the feed and food chain as animal feed
- New organic feed sources and increased local organic animal feed
- Reduced waste and emissions associated with livestock production
- Enhanced knowledge on possible issues related to organic livestock production and distribution

- Implementation pathways for improved manure/urine management and refinery strategies for fertilisation and sustainable biogas production in line with the organic principles to mitigate GHG and NH₃ emissions, reducing the dependence on external fertilisers in organic plant production
- Strategies to communicate to consumers about the role and importance of a certain degree of animal production as part of a sustainable and circular food system

Scope

In order to close nutrient cycles and reduce nutrient leaching into the environment, funded projects should:

- Identify strategies for the re-integration of livestock and crop production, improved manure management and soil carbon sequestration, and to keep organic by-products and/or rest products within the organic sector (e.g., organic manure has to stay on organic land)
- Investigate the possibility of using marine algae as alternative material for organic animal farming and issues related to the production and use of organic insect
- Explore consumer understanding of the role of animal production in sustainable and circular production systems and based on this, develop consumer-oriented communication recommendations

Call 6: Transforming European diets: solutions for organic food plant-based meat substitutes

Corresponding Organic Action Plan action(s)	1, 9 and 14
Corresponding Food 2030 pathway(s)	4. Alternative proteins and dietary shift and 7. Healthy, sustainable and personalised nutrition
Corresponding expected impact(s) Cluster 6	27 and 30
Proposed type of action	Innovation Action (IA)
Proposed budget	EUR 6 million
Corresponding topic(s) in TP Organics' SRIA	<i>Consumer demand for minimal processing (p.42); Sustainable and healthy organic diets (p.44)</i>

Expected Outcome

Organic meat substitutes in the market are rarely available and when they are, their price is much higher compared to conventional products. One of the reasons for this is the lack of organic vegetable protein products and the lack of homogeneity in their protein content. This makes it difficult to process them. On the other side, there are few alternatives to ultra-processed meat substitutes. There is an urgent need for healthy, organic, short supply chains for organic plant-based meat substitutes. Consumers are critical towards the degree of processing of current plant-based meat substitutes and there is a consumer demand for 'clean label' products.

Projects are expected to contribute to the following outcomes:

- Development of suitable varieties for organic plant proteins that can be transformed into more homogenous, stable and high-quality end products
- Organic 'clean label' products supporting the plant-based market development
- Strategies for marketing and communication towards consumers, explaining the benefits and increasing the market share as well as improving market conditions via addressing barriers

Scope

Funded projects should propose, develop and pilot healthy, organic, low-processed and attractive alternatives to the current highly processed meat substitutes. They should promote a mature organic food processing industry focused on vegetable proteins, with short supply chains and minimum waste along the entire value chain, starting from breeding suited plant varieties up to retail and ending with marketing strategies. Success factors for and successful business cases of the implementation of local, short supply chains and low-waste, minimal organic processing for plant protein products should be identified.

Call 7: Developing “Organic diets”: defining organic diets for highest health and sustainability outcomes

Corresponding Organic Action Plan action(s)	1, 9 and 14
Corresponding Food 2030 pathway(s)	4. Alternative proteins and dietary shift and 7. Healthy, sustainable and personalised nutrition
Corresponding expected impact(s) Cluster 6	30
Proposed type of action	RIA
Proposed budget	EUR 6 million
Corresponding topic(s) in TP Organics’ SRIA	<i>Sustainable and healthy organic diets (p.44)</i>

Expected Outcome

Europe is severely affected by non-communicable diseases (NCDs), the leading cause of disability and mortality. Unhealthy diets and the resulting malnutrition are major drivers of NCDs. On the other hand, the consumption patterns of regular organic consumers come close to the FAO’s sustainable diet concept. However, growth in demand for organic food has brought many (ultra-)processed food products on the market that do not fully correspond to the organic principles and sustainable and healthy diets. The clear link between (ultra-)processed food and diet-related diseases underscores this topic’s high relevance.

Projects are expected to contribute to the following outcomes:

- Deeper understanding of the relation between organic food consumption and diets, of the role of organic foods in different European food cultures and diets as well as of the relationship between the consumption of organic food and consumers’ food literacy
- Definition of “organic diet” and link to organic food systems to facilitate more responsible, sustainable and healthy outcomes that benefit society as a whole and help to achieve the SDGs by reducing hunger, improving the health of consumers and the environmental impact of European diets
- Identification of sustainable organic diet elements that are protective and respectful of biodiversity and ecosystems, nutritionally adequate, safe and healthy, culturally acceptable, accessible, economically fair, and affordable
- Improved consumer acceptance and trust in organic food, including through the development of tools to promote more sustainable and healthier organic diets, leading to their increased adoption

Scope

Exploring food habits and current diets as well as consumers' preferences and attitudes to organic food in relation to the sustainability and healthiness of diets can help to identify patterns that distinguish organic consumers' approaches to food and diets.

Funded projects should:

- Better understand food habits and current diets as well as consumers' preferences and attitudes to organic food in relation to the sustainability and healthiness of diets
- Identify patterns that distinguish different organic consumers' approaches to food and diets
- Explore the link between consumer preference for organic food systems and system thinking capability, and develop approaches to communicate the systems approach to consumers
- Inform and educate food processors, retailers, and consumers on the risks associated with the "conventionalisation" of organic diets

Call 8: Investigating the impact of organic production methods on the soil, plant, animal, and human microbiome

Corresponding Organic Action Plan action(s)	18
Corresponding Food 2030 pathway(s)	6. The microbiome world
Corresponding expected impact(s) Cluster 6	28, 29 and 30
Proposed type of action	IA
Proposed budget	EUR 6 million
Corresponding topic(s) in TP Organics' SRIA	<i>Microbiome and sustainable food production (p.24)</i>

Expected Outcome

Microbiomes have a highly important role when it comes to ecosystem functioning and biodiversity and carry out key functions that support planetary health, including nutrient cycling, climate regulation, and water filtration. Although we know that the soil, plant, animal, and our own human microbiome have major impacts on our health and the food we produce, on plants and animals and ecosystems in general, there is still a poor understanding of microbiome transfer and connectivity.

Projects are expected to contribute to the following outcomes:

- Consolidation of the current evidence on the interlinkage between soil and gut health/microbiomes, as well as environment, plant, animal, and human health interactions
- Better understanding of the microbiome, enabling developments, innovations, and co-benefits in areas such as health, food and nutrition security, climate change, higher yield, and nutritious food

Scope

Funded projects should:

- Consolidate the evidence on the link between the soil, plant and animal microbiome and the human microbiome across sciences in an interdisciplinary way
- Investigate how this link is influenced by organic farming practices (such as crop rotation and fertilisation practices, incorporation of seed legumes, various types of mechanical management for weeding, seed bed preparation etc.)
- Study the effects and potential health benefits of organic food/an organic diet on the human microbiome (in comparison to a purely conventional diet)

Part 2: Research priorities for EU Mission “A Soil Deal for Europe”

Call 1: Network of organic regenerative living labs

Corresponding Organic Action Plan action(s)	18
Corresponding Food 2030 pathway(s)	10. Food systems and data
Corresponding expected impact(s) Cluster 6	27-31
Proposed type of action	CSA
Proposed budget	EUR 12 million
Corresponding topic(s) in TP Organics’ SRIA	<i>Healthy crops and stable yields – crop management based on functional diversity (p.24); Agroforestry for climate change mitigation and biodiversity (p.32); Strengthening knowledge and innovation systems for organics through digital tools (p.40)</i>

Expected Outcome

Regenerative organic practices not only maintain resources but also improve them. The number one priority in regenerative organic agriculture is soil health⁶.

Projects are expected to contribute to the following outcomes:

- Better understanding of how intensity and type of mechanical soil management (including no-till farming, organic farming practices) influence carbon sequestration, nutrient availability, biodiversity etc.
- Achieving the goal of the Mission ‘A Soil Deal for Europe’ of setting up 100 living labs to lead the transition to healthy soils by 2030 and specific Mission objectives dealing with urgent soil health challenges, thereby contributing to meeting the European Green Deal ambitions and targets

Scope

Resulting in a network of organic regenerative living labs, funded projects should set up four to five living labs located in different MS and/or Associated Countries to work together on showcasing organic regenerative practices. The living labs should address the same or different land use types and different soil management practices (including practices that may reduce the negative effects of growing root crops such as soil sieving and row growing of potatoes) on soil erosion, carbon sequestration, and micro- and macro soil organisms.

Call 2: Demonstration network of on-farm soil biodiversity protection

Corresponding Organic Action Plan action(s)	18 and 19
Corresponding Food 2030 pathway(s)	10. Food systems and data
Corresponding expected impact(s) Cluster 6	28-31

⁶ <https://rodaleinstitute.org/why-organic/organic-basics/regenerative-organic-agriculture/>

Proposed type of action	CSA
Proposed budget	EUR 12 million
Corresponding topic(s) in TP Organics' SRIA	<i>Healthy crops and stable yields – crop management based on functional diversity (p.24); Agroecological management of protected cropping and greenhouse production (p.29); Agroforestry for climate change mitigation and biodiversity (p.32); Strengthening knowledge and innovation systems for organics through digital tools (p.40)</i>

Expected Outcome

Organic management of soils systems, refraining from the use of synthetic-chemical pesticides and synthetic fertilisers, regularly amending the soil with various types of organic matter and maximising the time period when the soil is covered by plant materials, all contribute to high biological activity in the soil and hence also generally better soil structure and quality. However, the type and intensity of mechanical management of the soil for seed bed preparation and weeding may have both negative and positive effects on soil qualities and biodiversity.

Projects are expected to contribute to the following outcomes:

- Better understanding of the short- and long-term effects of various farming systems and management practices (including no till and no dig) on soil erosion, compaction and soil biodiversity, i.e. fauna, flora and microbiota, and their influence on soil fertility and health
- Increased knowledge among practitioners about the link between (soil) biodiversity and biological processes in the soil, such as the release of nutrients, decomposition of organic matter, soil compaction, and the sequestration of carbon
- Increased carbon storage in agricultural soil due to better management practices and more areas being managed organically or by agroecological practices
- Increased awareness about the importance of soil organisms and biodiversity for a range of ecosystem services

Scope

Funded projects should establish a demonstration network of on-farm biodiversity protection in order to:

- Validate the application of beneficial organisms to farming systems, and better advice to farmers
- Provide farmers with easy-to-use indicators and monitoring tools for soil biodiversity (management)

Call 3: Sustainable nutrient management in organic farming

Corresponding Organic Action Plan action(s)	20 and 23
Corresponding Food 2030 pathway(s)	9. Food systems Africa
Corresponding expected impact(s) Cluster 6	27-29
Proposed type of action	RIA

Proposed budget	EUR 6 million
Corresponding topic(s) in TP Organics' SRIA	<i>Healthy crops and stable yields – crop management based on functional diversity (p.24); Agroecological management of protected cropping and greenhouse production (p.29); Sustainable concepts for organic and low input monogastric systems (p.31); Diversified fruit orchards and vineyards for functional intensification (p.30); Strengthening knowledge and innovation systems for organics through digital tools (p.40)</i>

Expected Outcome

With increasing economic and environmental costs of synthetic fertilisers and reduced availability of non-renewable resources (e.g., phosphates), circular approaches must be further developed. As a systems approach to sustainable agriculture, organic farming aims to effectively manage ecological processes, whilst lowering the dependency on off-farm inputs. The common practices of crop rotations, nutrient recycling, and biological fixation of nitrogen through legumes, composting, integrating animal and crop production etc. present circular solutions for soil-friendly agriculture. This low-input strategy of the organic sector has great potential for increasing the resource efficiency of European agriculture as a whole. Building soil fertility and optimal nutrient management are key to achieve healthy crops and stable yields.

Projects are expected to contribute to the following outcomes:

- Development of methods and management strategies to reduce or avoid leaching of nutrients into ground- or surface water
- Further development of circular approaches for maintaining and increasing soil organic matter and producing acceptable yields
- Increased access to nutrient resources to reach the Farm to Fork target of 25% organic production in Europe by 2030
- Optimised nutrient management/efficiency and reduced leaching of nutrients into ground- or surface water, and lower GHG emissions/climate impact of organic management
- Assess the accessibility and increase the acceptability and of societal and industrial recycling products, among both professionals and end-consumers

Scope

This call topic aims at identifying strategies for long-term soil fertility in organic farming with better access to nutrients and organic matter, improving the nutrient circles in organic farming, and limiting the leaching of nutrients into the environments. While recent work has already conducted a [meta-analysis of nutrient budgets in organic farms across Europe](#) and has developed a [European roadmap](#), among others, sustainable expansion of the organic sector and hence achieving 25% organic farmland will require an assessment of the volumes and types of organic wastes locally available for use, as well as its position regarding the sources of such wastes (e.g., sewage sludge and digestates)⁷. In addition, consumer understanding and acceptance of procedures and products that improve nutrient management should be addressed upfront, including strategies to communicate these, with a strong research focus on acceptability and availability of resources across the EU.

Therefore, funded projects should:

⁷ Reimer M et al. (2023). Sustainable growth of organic farming in the EU requires a rethink of nutrient supply. *Nutr Cycl Agroecosyst*. DOI: 10.1007/s10705-023-10297-7

- Develop strategies for the maintenance of long-term soil fertility in organic farming, with better access to nutrients and organic matter from recycled fertiliser products, building on previous projects like [NutriNet](#)
- Improve nutrient cycles within fields, including new circular products that allow the phasing out of contentious nutrient inputs in organic agriculture and more sustainable alternative substances for mainstream agriculture, building on projects like [RELACS](#) and [Organic-PLUS](#)
- Improve crop rotations and green manuring in order to close nutrient cycles and minimise nutrient emissions from farming systems without increasing problems with soil-borne pathogens or negative legacy effects on cash crops
- Assess potentials and limitations for increasing Biological Nitrogen Fixation on stockless farms by integration with bioenergy production, and by developing more plant-based food systems