

European Partnerships under Horizon Europe

EC input paper for the discussion on the partnership on agroecology living labs and research infrastructures

*Input paper presenting European Commission views and questions
to kick-start discussion with partners and stakeholders*

Preamble

The present document is an updated version of the first fiche¹ prepared by the European Commission in 2019 and reflects the comments received from Member States and other stakeholders in the context of the Horizon Europe Shadow Programme Committee and ad hoc consultations. It follows the template provided by DG RTD. The purpose of this document is to, first of all, present the European Commission views on the different elements to be considered in the process of building this partnership, and secondly, to present different options for tackling the different aspects and proposed ways to develop those. The following elements have to be taken into account when preparing the partnership, and further versions of this fiche:

- **This draft, presenting mainly the views of the European Commission, is intended as an input into a discussion to be organised from May 2020 onwards:**
 - Updated fiches or draft partnership proposals are expected for all candidate Horizon Europe partnerships by early May 2020 to inform Member States about the partnership landscape and, for those scheduled to be funded under the 2021-2022 work programme (WP), to secure their inclusion in the WP.
 - The present candidate partnership is proposed to be funded from the Horizon Europe 2023-2024 work programme, which provides more time to develop it.
 - DG AGRI had scheduled a workshop on 6-7 May 2020 to kick-start dialogue with potential partners and relevant stakeholders (research funders, public authorities, scientists, farmers, industry and civil society representatives, etc.) to lay the foundations of the partnership. This participatory workshop had four main objectives:
 - build a **shared understanding of the concepts and scope** of the initiative;
 - get **inspired from existing examples** and start **mapping the community**;
 - start a **conversation on how to implement** the partnership in practice;
 - list the **preparatory actions to be undertaken**.

¹ <https://www.era-learn.eu/partnerships-in-a-nutshell/r-i-partnerships/european-partnerships-under-horizon-europe/partnerships-under-preparation/candidates-for-european-partnerships/27-towards-more-sustainable-farming>

- Early April, the workshop has been cancelled due to the COVID-19 pandemic and replaced by a series of webinars and other forms of on-line interaction (same objectives, adapted content) structured in three parts:
 - build a shared understanding of agroecology, living labs and research infrastructures (two webinars on 6-7 May);
 - get inspired from examples and concrete cases (two webinars on 4-5 June); and
 - start co-creating the partnership: vision, objectives, activities, funding etc. (interactive sessions as from 25 June).
- Given that discussions on co-creating the partnership in practice will start after this updated fiche has to be delivered, the present document reflects mostly the European Commission's views. In-depth interaction with potential partners and stakeholders is needed to co-design all parts of the partnership proposal.
- **Resources have been allocated to prepare the candidate partnership:**
 - Under Horizon 2020 (work programme 2020), DG AGRI is funding a coordination and support action (CSA) 'Strengthening the European agroecological research and innovation ecosystem'. Funded proposal(s) will prepare the ground for the implementation of this partnership by developing the framework for a European network of agroecological living labs and research infrastructures.
 - Proposal evaluation concluded in March 2020 and up to two funded project(s) should start in November 2020 if grant agreement preparations go according to plans. This will also need to be taken into consideration when spelling out the concrete actions to be carried out under the partnership.

Contents

1	General information	5
1.1	Draft title of the European Partnerships	5
1.2	Lead entity (main contact).....	5
1.3	Commission services (main contact).....	5
1.4	Summary (max 500 characters).....	5
2	Context, objectives, expected impacts.....	6
2.1	Context and problem definition	6
2.1.1	Problems	6
2.1.2	Strategic opportunities	7
2.1.3	R&I bottlenecks and lock-ins	8
2.1.4	Ways forward: combining agroecology, living labs and research infrastructures.	8
2.1.5	Overview of past EC support to agroecology and/or living labs	10
2.1.6	How would the partnership fill the gap and with which benefits in terms of public goods?	11
2.2	Common vision, objectives and expected impacts	11
2.2.1	General, specific and operational objectives.....	11
2.2.2	Common vision and ambition of the Partnership	133
2.2.3	How will the Partnership trigger relevant transformational changes in the broader R&I ecosystem.....	13
2.2.4	Links and/or collaboration opportunities identified at this stage with other partnership candidates	14
2.2.5	Exit-strategy and measures for phasing-out from the Framework Programme funding	15
2.2.6	Amount of R&I investments needed to achieve impacts	15
2.2.7	Description of the planned process for developing a Strategic Research and Innovation Agenda/roadmap.....	15
2.2.8	Expected timeframe to deliver the results.....	17
2.3	Necessity for a European Partnership.....	17
2.3.1	Necessity for a European Partnership.....	17

2.3.2	Expected impacts: how does the partnership address the objectives of Horizon Europe and common political priorities of the EU and its Member States	18
2.3.3	How will the partnership establish collaboration with Member States /Associated Countries and national/regional authorities.....	20
2.4	Partner composition and target group.....	21
2.4.1	How will the partnership build on and strengthen or expand existing collaboration networks and initiatives?	21
2.4.2	Type and composition of partners	22
2.4.3	Target groups and stakeholder community	22
3	Planned Implementation	23
3.1	Activities.....	23
3.1.1	Activities that will support the achievement of the objectives	23
3.1.2	Mechanisms that will ensure the complementarity of activities	24
3.1.3	Coherence and synergies in relation to major national (sectorial) policies, programmes and activities	24
3.2	Resources.....	25
3.3	Governance	25
3.4	Openness and transparency	25
3.4.1	How will the partnership establish a broad, open and transparent approach towards different sectors and geographical areas	25
3.4.2	How will the partnership ensure easy and non-discriminatory access to information about the initiative and dissemination of and access to results	25
3.4.3	How will the partnership establish a proactive recruitment policy	25
3.4.4	Process for establishing annual work programmes	26
4	Moving the discussion forward.....	26

1 General information

1.1 Draft title of the European Partnerships

“Accelerating farming systems transition: agroecology living labs and research infrastructures”

1.2 Lead entity (main contact)

AGRI (Unit B-2)

1.3 Commission services (main contact)

RTD, ENV, CLIMA, JRC

1.4 Summary (max 500 characters)

The partnership aims to accelerate the transition towards sustainable, climate and ecosystem-friendly farming practices by enabling to better grasp short to long-term agroecological processes from farm to landscape levels, by boosting place-based innovation in co-creative environments ensuring farmers and other key stakeholders’ engagement (including consumers) and by improving the flow and uptake of knowledge and innovations on agroecology across Europe.

2 Context, objectives, expected impacts

2.1 Context and problem definition

2.1.1 Problems

Farmers manage almost half EU land², which makes them the first stewards of Europe's natural resources. As primary producers of food and biomass for non-food uses, they are also very strategic economic actors, as the COVID-19 crisis showed, despite their ever decreasing share of the EU workforce and population. The bioeconomy, which, so far, depends on farmers for the production of raw materials, is of major importance to the EU economy and trade. Last but not least, farming is an important part of the rural economy. Maintaining and increasing productivity per hectare to compensate the outflow of labour from farming to industry and services after World War II has been possible mainly thanks to a mix of technological innovations including machinery, breeding, chemical inputs such as fertilisers and pesticides and value chain structuring that favoured the specialisation of farmers in the primary production of a limited number of products while supplies, processing and marketing were delegated to cooperatives or industry and retail.

This evolution has been successful in ensuring food security in Europe but came at the cost of a series of environmental and social drawbacks. Unsustainable agricultural practices and land use have adverse impacts on the environment and the preservation of natural resources, such as soil, water and air, and are the cause of habitat fragmentation and biodiversity loss. EU agriculture, including land use and land use change (LULUC) of grassland and cropland, represented 12 % of all EU greenhouse gas (GHG) emissions in 2016. The use of fertilisers in agriculture is a significant source of nitrogen discharge (over 50% of total discharge into surface waters) and phosphorus loading. Agriculture is considered the largest contributor to raising pesticide levels in EU surface and groundwater bodies (groundwater at risk appears to be generally located in areas of intensive agriculture), and about 7% of groundwater monitoring stations in the EU have reported excessive levels for one or more pesticides in recent years. Around 13% of arable land in the EU is estimated to be affected by moderate to high water erosion - which equates to an area of 140 000 km². Soil degradation in general is a threat to EU's long-term capacity to produce food. The environmental impact of current farming practices is increasingly criticised by people and the media. Trust in agricultural production systems has weakened as well as relations between producers and consumers.

In parallel, a significant proportion of farmers do not draw a sufficient income from the farming activity. Farmers are squeezed between requirements for healthy and -at the same time- affordable products on one side, raising input prices or bans imposed on some inputs, and increasing debt on the other side. Generation renewal in EU's agriculture is endangered and, together with it, our food and nutrition security.

² https://ec.europa.eu/agriculture/cap-indicators/context_en

2.1.2 *Strategic opportunities*

There is growing consensus that farming systems need to be re-diversified in order to become more resilient³, better adapted to local conditions and less reliant on the use of external non-renewable inputs, which are increasingly perceived as unsustainable from an environmental (biodiversity, depletion of natural resources), economic (costly), social (health impact on farmers and society), climate and strategic points of view (growing sourcing uncertainty as we approach planetary boundaries or in the case of crisis such as COVID-19). The EU [Farm to Fork](#) and [Biodiversity](#) strategies published on 20 May pave the way for a fair, healthy and environmentally-friendly food system that contributes to protecting nature and reversing ecosystem degradation. Both strategies have recognized the urgent need to reduce dependency on pesticides and antimicrobials, reduce excess fertilisation, increase organic farming, improve animal welfare, and reverse biodiversity loss.

The objective in re-diversifying farming systems is to substitute the use of external inputs by the delivery of ecosystem services that are more easily produced in a diversified farming system than in a specialised one. Crop diversity strategies, such as rotation, can for instance reduce pests and weeds' capacity to spread over big surfaces and act positively on the soil structure and biodiversity. The inclusion of nitrogen-fixing crops in rotations can capture nitrogen in the soil and reduce the need for chemical fertilisers, while improving soil structure and health, soil capacity to store carbon or retain water and producing plant-based protein increasingly demanded by the market. In addition, there is a growing demand from consumers for a greater diversity of products and a growing appetite for local food that have the potential to trigger transformative changes in farming and food systems. This appetite for local food might increase in the aftermath of the COVID-19 pandemic and the food supply uncertainty it has created for people.

As the farming sector in the EU is today quite specialised, re-diversifying and in general, adopting agricultural practices that are inspired by ecological processes, and therefore knowledge-intensive rather than input-intensive, represent a major shift. This shift requires the development of technical solutions that are economically and socially viable and customised to farmers' needs, as well as increased attention to the factors that affect farmers' perception and decision-making. Farmers tend to be risk-adverse in the face of changing market and climatic conditions and pressure on income. This is likely to increase in the future because of increased market volatility and more extreme climatic events. Many farmers are locked-in specialised farming activities through heavy investments, high levels of debt, strong dependency on the upstream sectors for advice and dependency on downstream sectors for commercialisation, with very demanding standard prescriptions on certain product attributes that may be modified by a change in farming practices. At the same time, increasing input prices and societal demand for more sustainable farming practices, increasingly relayed by industry and some retailers, can drive change. Many farmers have jumped into agroecological experimentation, leading the way towards different practices that can cater for a suite of societal demands. These frontrunners are a strong capital on which the transition can be built if they are provided with an enabling environment to further experiment, upscale and share their knowledge and experiences.

³ <http://www.fao.org/3/ca5602en/ca5602en.pdf>

2.1.3 R&I bottlenecks and lock-ins

The transition to more sustainable farming practices that maximise the use of ecological processes, as an alternative to practices that rely mostly on the use of external inputs (e.g. synthetic fertilisers and pesticides) with increasing costs, supply uncertainty and potential negative impacts on the three dimensions of sustainability, is hindered by factors that include:

- a) insufficient knowledge on ecological processes at the relevant spatial level, including a lack of long-term data series on agro-ecosystems;
- b) a general lack of knowledge from farmers and advisors on the practical implementation of agroecological practices in their specific contexts, on their benefits on the environment and on their economic performance;
- c) the absence of structures/mechanisms at the relevant level to facilitate the co-creation of innovative solutions to the local challenges of the farming sector and to ensure the involvement of end users along with other relevant stakeholders, including researchers, advisors, companies, consumers and public authorities;
- d) insufficient consumer awareness of the costs and added value of agroecological practices and insufficient incentives that could trigger increased demand for products produced under agroecological principles, beyond products coming from organic farming;
- e) the absence of a specific mechanism to ensure the sharing of experience and best practices across Member States on the adoption of agroecological approaches.

2.1.4 Ways forward: combining agroecology, living labs and research infrastructures

Agroecology

The approach and implementation of agroecology vary widely throughout the world, and there is no widely accepted, common definition of agroecology, which can be considered at the same time as a scientific discipline, a set of agricultural practices and a social movement.

Agroecology, defined in the context of this document as “*the science of ecological processes applied to agricultural production systems*”, can help mitigate climate change and strengthen the sustainability and resilience of farming and land use systems. Agroecology is a knowledge-intensive, systemic approach that has implications for the whole span of agricultural practices, from breeds and varieties used to farming practices related to soil management and crop diversification strategies, integration in value chains, and business models that can economically and socially sustain these more locally adapted practices and provide greater market opportunities for farmers and consumers. Agroecology is already well established in many European countries and, as recognised by the Communication of the European Commission on the Green Deal⁴, it could become a fundamental tool for the EU in its effort to respect planetary boundaries and in response to increasing consumer demand for healthy, pesticide-free and nutritious food. But in order for this to realise and to attain tangible results beyond the farm level, large initiatives are needed that promote the development, uptake and upscaling of these practices at the adequate landscape and regional levels. The Food and Agriculture Organisation of the United Nations (FAO) also promotes agroecology at

⁴ https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

international level. For the FAO, “agroecology is based on applying ecological concepts and principles to optimise interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system”⁵. In this context, the FAO has developed “The 10 Elements of Agroecology”⁶.

Living labs

As indicated above, adoption by farmers of more ecological practices largely depends on the availability or development of well-adapted, cost-effective solutions and trustworthy information on their benefits both for the environment, the quality of their products and the sustainability of the farming activity. Living labs are defined by the European Network of Living labs (ENoLL) as “*user-centred, open innovation ecosystems based on systematic user co-creation approach, integrating research and innovation processes in real life communities and settings*”⁷. They allow innovation users, such as farmers, scientists and civil society to collaborate in finding solutions to context-specific challenges. At the global level, the living lab approach is regarded as a methodology that can speed up the development and upscaling of innovative practices in farming. In the context of the G20 Meetings of Agricultural Chief Scientists⁸ (MACS), the European Commission has actively contributed to a discussion on the potential of agroecosystem living laboratories (henceforth living labs) that can improve the effectiveness and adoption of more sustainable agricultural practices⁹. Agroecosystem living labs (ALL) have been defined in this context as “*transdisciplinary approaches which involve farmers, scientists and other interested partners in the co-design, monitoring and evaluation of new and existing agricultural practices and technologies on working landscapes to improve their effectiveness and early adoption*”.

Research infrastructures

Research infrastructures are facilities that provide resources and services for research communities to conduct research and foster innovation. They can be used beyond research e.g. for education or public services and they may be single-sited, distributed, or virtual. They include: major scientific equipment or sets of instruments; collections, archives or scientific data; computing systems and communication networks; any other research and innovation (R&I) infrastructure of a unique nature which is open to external users. In this context, the EU has funded several initiatives, strategies and networks, such as a research infrastructure on analysis and experimentation on ecosystems under FP7 (Analysis and Experimentation on Ecosystems - AnaEE). The partnership will aim at linking existing research infrastructures to

⁵ <http://www.fao.org/agroecology/home/en/>

⁶ <http://www.fao.org/agroecology/knowledge/10-elements/en/>

⁷ <https://enoll.org/about-us/>

⁸ <https://www.macs-g20.org/>

⁹ https://www.macs-g20.org/fileadmin/macs/Annual_Meetings/2019_Japan/ALL_Executive_Report.pdf

the living lab network with a view to ensure the provision of services required for the activities that will be carried out in the living labs.

2.1.5 Overview of past EC support to agroecology and/or living labs

The EU has supported living labs for over fifteen years, notably under FP 6¹⁰, with a limited uptake in the farming and rural community so far. The introduction of the multi-actor approach (MAA) under Horizon 2020 has triggered an increased interest in open innovation methods and in the creation of living-lab-like approaches as part of the structure of several research projects¹¹. These remain, however, time-bound and theme-specific, and are therefore not suited to sustain activities in the long-run, nor are they integrated in grassroots initiatives in specific territories since they normally lack focus on specific national and regional contexts, which is key for agroecological approaches.

The EU has also supported a stream of projects on integrated ecological approaches, including organic farming, under Horizon 2020's Societal Challenge 2¹². These projects address relevant aspects to agroecology such as integrated weed management, crop diversification strategies or soil management practices that enhance soil biodiversity, breeding for diversified farming systems or socio-economic aspects of agroecology. The portfolio also includes research projects, thematic networks and one ERA-NET (CORE Organic) that address specific needs of the organic sector. These projects provide a very important contribution to building the scientific knowledge needed for the implementation of the activities under this proposed partnership. While much more knowledge is still needed to unlock the transition in the wide diversity of socio-economic, ecological and geographical contexts that can be found across the EU, for which further research will be needed, past and ongoing Horizon 2020 projects already provide a sound starting base to tailor solutions to the ground through hands-on experimentation in living labs.

Moreover, the Common Agricultural Policy (CAP) also supports innovation in the agricultural sector, in particular through the European Innovation Partnership for Agricultural Productivity and Sustainability ([EIP AGRI](#)), and notably through Operational Groups (OGs). OGs are collaborative innovation projects that bring together farmers and researchers to find solutions to a specific problem in a specific context, with farmers and on-farm testing at the heart of this collaboration. OGs are therefore an important tool for boosting innovation, and bring research results closer to farm practices, including in the field of agroecology, such as those presented at the Agri-Innovation Summit in Lisieux (France, 2019)¹³. However OGs are time-bound, subject to funding under the Rural Development Programmes, and hence not suited to deliver the long-term transition efforts and data time series needed. But although OGs do not necessarily work at landscape level and some can be established with a few farmers involved

¹⁰ See collaboration@rural (<https://cordis.europa.eu/project/id/034921>) funded under the call IST-2005-2.5.9 - Collaborative Working Environments together with [other projects](#)

¹¹ ROBUST, COASTAL, LIVERUR, LIAISON, AGRILINK etc...

¹² https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/factsheet-agri-research-ecological-approaches_en.pdf

¹³ https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/2019_pei_carnet_projets_ais_web.pdf

in a specific value chain without taking a territorial look at environmental challenges, some work in ways that could trigger the creation of a living lab.

The EIP-AGRI also supports knowledge exchange and pooling of resources on agricultural innovation in general and organisation of events (such as the Agri-Innovation Summit). However, it does not have enough resources to sustain the intense interactions that are needed among all relevant stakeholders at different levels to support the large scale uptake of agroecological practices by farmers.

2.1.6 How would the partnership fill the gap and with which benefits in terms of public goods?

The present partnership proposal is built on the basis that, in order to speed up the adoption of agroecological practices in Europe, there is a need to structure and support a network of long-term and place-based experimentation spaces, that would be embedded in the national and regional knowledge and innovation ecosystems and would cater both for knowledge creation and innovation upscale needs. Such a network would capitalise and build on the results of ongoing R&I activities under Horizon 2020 and upcoming ones under Horizon Europe.

The diversification of farming systems and adoption of agroecological practices in farming that would be triggered by the partnership would improve the provision of public goods such as e.g. freshwater quality and quantity, air quality, carbon sequestration in soils, biodiversity enhancement, landscape improvement. It would also foster relations between the farming sector and consumers by providing them with agroecological products, which would help moving towards more sustainable and resilient food systems, anchored in territories and closer to citizens, including at times of crisis.

2.2 Common vision, objectives and expected impacts

2.2.1 General, specific and operational objectives

The **general objective** of the partnership would be to accelerate farming systems transition to sustainability in line with global commitments made by the EU, notably the Sustainable Development Goals (SDGs) and the Paris Climate Agreement, and deliver on EU policy priorities linked to the CAP and the European Green Deal, in particular the [‘Farm to Fork’ Strategy](#) and the [Biodiversity Strategy](#).

To do so, the partnership would aim to speed up the adoption of ecological approaches in farming systems by (**specific objectives**):

- (i) strengthening the agroecology innovation ecosystem by creating spaces for long-term, site-specific and real-life experimentation and innovation delivering ready-to adopt practices, engaging all relevant stakeholders and ensuring end-user involvement (including citizens and consumers);
- (ii) improving farmer’s knowledge on context-specific practical implementation of agroecological practices and on their benefits – social, economic, environmental - with a view to support farmers in implementing agroecological practices in their specific contexts; and

- (iii) improving the sharing of knowledge and experience on agroecological practices and processes across Member States and beyond with international partners.

The expected timeframe to achieve the specific objectives will be determined once the Strategic research and innovation agenda (SRIA) is developed.

Operational objectives to achieve the specific objectives could involve for example:

- setting up a common framework of methodologies, protocols and data management systems, for the analysis of agroecological processes and their costs and benefits, applicable to the diversity of situations in the EU, building on similar work already carried out at EU and international levels;
- setting up living labs or similar types of open innovation and user-centred innovation approaches in a sufficient variety of sites representing the geographic diversity of the EU, that respond to the need of promoting agroecological practices within the farming community;
- setting up a network connecting these living labs and research centres and infrastructures and ensuring an efficient flow of knowledge and innovation exchange.

The Partnership would foster place-based open innovation in co-creative settings such as living labs, from the development of solutions to their testing, piloting and upscaling on individual farms as well as on groups of farms.

These objectives would be fully in line with policy objectives of the European Commission and with global commitments made by the EU. At the EU level, the proposals for the CAP beyond 2020, published in 2018 and currently under negotiation, set a higher environmental and climatic ambition, providing more incentives and options to support farmers that adopt more sustainable practices. The activities proposed under this partnership could provide opportunities for the long-term measurement of the outcomes of ecological practices implemented by European farmers in various contexts across Europe. This would enable the European Commission and the Member States to assess the benefit and the efficiency of the measures proposed under the future CAP's greening architecture, and to increase feedback on the performance of these measures.

Moreover, the European Green Deal, published by the European Commission on 11 December 2019, led to the adoption by the European Commission of the '[Farm to Fork Strategy](#)' to pave the transition to a fair, healthy and environmentally-friendly food system. It recognises the key role that farmers play in managing this transition and the need to strengthen their efforts to tackle climate change, protect the environment and preserve biodiversity. The [EU Biodiversity Strategy for 2030](#) underpins the need for an increased protection of biodiversity and for measures to address the main causes of biodiversity loss. The Green Deal Communication highlighted the need for the future national CAP strategic plans to ensure reduction of use and risk of chemical pesticides, fertilisers and antibiotics. The Farm to Fork Strategy confirms that the new 'eco-schemes' will offer a major stream of funding to boost sustainable practices, such as precision agriculture, agro-ecology (including organic farming), carbon farming and agro-forestry. At the international level, the Paris Climate Agreement and the SDGs are policy commitments from states that have recognised the key role of agriculture in climate change mitigation and adaptation and the need for transformative changes in the sector.

In its report on ‘*Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition*’¹⁴, the High-level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, promotes agroecological approaches for sustainable agriculture and food systems that enhance food security and nutrition, emphasising the importance of investing in R&I to fill existing knowledge gaps including on yields, performance of agroecological practices, how to link agroecology to public policy and how to support transitions to agroecological food systems. The report also recognised the importance of reconfiguring the relationship between formal scientific research and the local knowledge and experience of farmers, and that one first step towards achieving greater integration of local and scientific knowledge is investing in strengthening capacity around supporting local innovation.

2.2.2 Common vision and ambition of the Partnership

The ultimate ambition of the partnership would be to accelerate the transition to more sustainable EU agriculture by speeding up the uptake and upscaling of agroecological practices across the EU territory. It would do so by structuring and supporting a European network of living labs and research infrastructures that will be strongly based on the premise that open innovation settings have potential to accelerate the transition towards agroecology throughout Europe. Such a network would promote transdisciplinary, highly participatory, inclusive and coordinated experimentation in real life settings, ensure knowledge exchange at EU level, and the delivery of series of long-term data on ecological processes applied to agriculture in diverse conditions across the EU. It would support farmers – at farm, landscape and regional level - in understanding and implementing agroecological practices at the scale needed for significant positive economic, environmental and social impact.

The Partnership would benefit all EU citizens by contributing to reducing the environmental impact of agriculture and its contribution to healthier and more sustainable diets, and by offering possibilities for regional businesses and citizens’ involvement in experimentations, thus helping connect consumers with producers and foster access to agroecological products. It would benefit producers by creating spaces in which they can experiment and test their own solutions for more sustainable practices, learn from peers and get the support of scientists. Working on groups of farms would also be supported. This is necessary in order to ensure complementarities between farms and to ensure impact at the landscape level. It would provide scientists with a network of close to the ground research sites that would deliver harmonised data with a long-term perspective.

2.2.3 How will the Partnership trigger relevant transformational changes in the broader R&I ecosystem

The partnership would trigger transformational changes in the broader research and innovation (R&I) ecosystem and set direction for knowledge creation, facilitating experiments that would improve understanding and uptake of agroecological processes, and ultimately the use of these results in policy making. Activities would be backed by a robust SRIA. Technology readiness levels (TRL) will go from low to high, for the scaling up in real environments and the

¹⁴ <http://www.fao.org/3/ca5602en/ca5602en.pdf>

demonstration of prospective implementation strategies. Ultimately, the partnership would greatly contribute to fill existing knowledge gaps on agroecology, contribute to more open-innovation and user-driven research on agroecology, allow to address the wide geographical/territorial specificities in the EU through place-based approaches with long-term perspectives, and to improve the sharing of knowledge within and across EU countries.

The Partnership would contribute to achieving the objectives of the EU Green Deal, notably the Farm to Fork strategy and the Biodiversity Strategy, as well as those of the future CAP (2021-2027) to foster sustainable development and efficient management of natural resources by reducing the environmental impacts of agriculture while ensuring their social and economic sustainability.

2.2.4 Links and/or collaboration opportunities identified at this stage with other partnership candidates

The partnership would build on the results of and ensure cooperation with previous and ongoing relevant initiatives, such as FACCE-JPI, and the ERA-NETs SusCrop, SusAN, IPM, Core Organic, Biodiversa, the PRIMA initiative, the BIOEAST initiative on Bioeconomy, the European Joint Programme EJP SOIL, as well as with the activities of the EIP-AGRI. The partnership would also ensure linkages with other relevant proposed Horizon Europe partnership candidates and mission areas, in particular:

- ‘Rescuing biodiversity to safeguard life on Earth’: e.g. cooperation on measuring biodiversity in agroecosystems, agroecological practices for the preservation of biodiversity, monitoring of pollinators;
- ‘Safe and Sustainable Food Systems’: e.g. activities to promote agroecology/organic products, food safety of agroecological products;
- ‘Agriculture and Data’: e.g. ICT and environment data as enabler of agroecology practices and as a tool to describe status of agroecosystems;
- ‘Animals and Health’: e.g. agroecology as tool for reduced use of antimicrobials, increased animal welfare as a way to enhance health, safety of animal effluents used as fertilisers;
- Water4All: e.g. links with demonstrating sites and water-oriented living labs working on agriculture;
- Circular Bio-based Europe: e.g. agroecology as a system that ensures circularity, resource efficiency and recycling in agriculture; and
- Mission area ‘Soil Health and Food’: e.g. agroecology as a tool to improve soil health and increase carbon sequestration in soils;
- Mission area ‘Adapting to climate change, including societal transformation’: depending on the scope of the mission, the partnership could contribute with agroecology as way to adapt to climate change in specific geo-climatic regions;
- Mission area ‘Climate-neutral and smart cities’: the partnership could contribute to climate-neutrality of food supplies to cities.

Activities to ensure synergies could include coordination of programming, joint calls, and regular exchange of results/knowledge.

Moreover, given that the partnership will aim at build a network of living labs and research infrastructures in the field of agroecosystems and agroecology, and existing research infrastructures will be asked how they can contribute with service delivery to the research done

in the living labs, synergies will also be sought with Pillar I of Horizon Europe (Research Infrastructures). In addition, since the living labs to be established are expected to contribute to strengthening the local/regional innovation ecosystem, activities will also be relevant for Pillar III (European innovation ecosystems).

2.2.5 Exit strategy and measures for phasing out from the Framework Programme funding

This is a new initiative hence the focus at this very early stage would be on developing it rather than on phasing out. However, the question of how living labs, research infrastructures and networking facilities set up or interlinked in the partnership context could sustain themselves after the partnership funding from the EU Framework Programme has ended should be addressed from the beginning of the discussions.

Indeed, the proposal of a partnership as instrument instead of classical project funding is largely motivated by long-term sustainability concerns. A partnership approach can ensure coordination of activities at different scales, taking into account the timing of programming exercises. Involvement of Member States authorities – national, and where relevant regional and local authorities - will facilitate Member State's ownership of the process. It will also facilitate embedment of activities in the local and regional innovation ecosystems and will provide for a more strategic approach in the longer-term along with a broader coverage of the EU territory. The synergies that would be developed in the course of partnership implementation would largely underpin authorities' motivation to sustain them afterwards.

Moreover, the coordination and support action (CSA) funded under Horizon 2020 call FNR-01-2020 aims among others at designing a framework and approach to strengthen the agroecology knowledge and innovation system in the long run. The selected project(s) should contribute to the elaboration of the exit strategy, for example by identifying the stakeholders and R&I ecosystem actors that are likely to ensure the continuation of the networking activities after the end of the Framework Programme funding.

2.2.6 Amount of R&I investments needed to achieve impacts

The amount of R&I investments should be discussed in line with objectives and proposed activities, hence this would be determined at a later stage. However, partnerships in the framework of Horizon Europe are large-scale initiatives that will require a sufficient critical mass at EU level.

2.2.7 Description of the planned process for developing a Strategic Research and Innovation Agenda/roadmap

The partnership would be backed by a robust Strategic Research and Innovation Agenda (SRIA) that would provide a framework to define the aim, the ambition, the thematic priorities and the kind of R&I actions needed, with enough flexibility to define new priorities stage-by-stage. The SRIA needs to be ready for the adoption of the Horizon Europe work programme 2023-2024, which means tentatively between spring and autumn 2022.

Once the consortium partners have been identified and the objectives and available funding have been defined, the consortium will develop the SRIA in close consultation with the European Commission and with the relevant stakeholders who would be identified during the

preparation process of the present fiche. The CSA funded under the Horizon 2020 call FNR-01-2020 will be ideally placed to contribute to the development of such a SRIA.

Once the consortium defines its internal governance, which could include a Management Board/Scientific Advisory Committee/ Partnership Management Board/Governing Board/Stakeholder Board/Advisory Board/Steering Group, etc, it should decide in consultation with the European Commission which bodies will have a leading role in developing and implementing the SRIA and will be responsible for its outputs. Feedback loops between the different partnership's bodies for setting the policy and research priorities and activities would need to be regularly ensured. Co-development of the SRIA with external stakeholders as appropriate – research funders, research institutes, research organisations, scientists, ministries, policy makers, NGOs, businesses, etc, within the EU and at international levels – would be fundamental. Evidence of the strong, genuine and broad stakeholders' involvement along the process – identification of research priorities, validation, implementation, review - will be essential for the development and implementation of the SRIA.

The SRIA should therefore clearly spell out the activities to be carried out at these different levels. In order to do so, the consortium should lead a process to identify the challenges, the policy needs and the research priorities in the area at national and European levels, the prioritisation of research activities and their translation into annual work plans, to be further discussed and defined among the partners. The following broad phases and possible activities for the development of the SRIA could be envisaged:

- **identification phase:** policy discussions with the European Commission, Member States (national, regional, local authorities) to identify challenges and R&I needs; mapping of existing national and transnational research activities; workshop(s) involving Member State authorities and stakeholders; development of a first draft proposal;
- **consultation phase:** consultation on thematic priorities and implementation; meetings to synthesise the feedback and concretise the R&I actions that will be needed; definition of roles and commitments; final draft; and
- **implementation phase:** call for proposals preparation and launching.

This process could include:

- a) Definition of overarching challenges, strategic mechanisms and guiding principles of operation of R&I activities, matching European Commission and Member States national / regional priorities. Joint foresight and mapping of challenges at national and transnational levels.
- b) Identification of national and European research priorities. This could include:
 - national coordination to ensure commitment and match with national priorities; national hubs to ensure coordination and continuous dialogue policy – science – end users;
 - ensuring transnational policy coordination, yet respecting national and regional differences;
 - periodic reviews to take policy needs into consideration;
 - SWOT analysis, regular mobilisation of key stakeholders in the strategic process and bringing together complementary research communities and skills;

- consultations: open public consultations; stakeholder workshops for the prioritisation of activities; dedicated consultations to raise awareness and collect input on key questions; consultation with end users to define R&I priorities; additional consultation with strategic groups for feedback on specific issues;
 - experts reviews.
- c) Preparation of implementation plans, detailing calls and other major activities, framing each action in terms of user needs and policy needs, and including a robust monitoring and evaluation framework.

2.2.8 Expected timeframe to deliver the results

The partnership is expected to be funded from the Horizon Europe work programme 2023. Hence it would begin end of 2023 or in 2024. The SRIA has to be ready ahead of work programme adoption, hence in 2022. Depending on how well the community will have been prepared by the CSA funded under Horizon 2020 call FNR-01-2020 and on how quickly the living labs will be set up, first results could be expected after one or two years, which means 2025-2026.

Part of the impact of living lab approaches is to be expected however in the medium to longer run, when the expected change (in values, behaviour, practices, etc) triggered by work in living labs will have really spread at landscape / territorial level. The ‘snowball effect’ can take an additional two-three years to materialise.

2.3 Necessity for a European Partnership

2.3.1 Necessity for a European Partnership

Agroecological processes are complex and site-specific. In order to increase understanding and uptake of agroecological processes, the availability of long-term data series that allow for an accurate analysis of the evolution of ecological processes in the long term is necessary. Assessing agroecological processes therefore requires long-term approaches along with landscape scale coverage that go beyond individual farms and across Member State borders. Moreover, agroecological processes are knowledge-intensive and require that farmers are equipped with the necessary skills and knowledge for the effective adoption of agroecological practices. In addition to this, the agroecological landscapes differ among Member States and their regions, and given that one single country or region will only be able to provide partial solutions to a common challenge, ensuring an exchange of good practices and experiences across Member States becomes crucial.

Regular collaborative research projects can contribute to launching facilities or setting up networks, but are not suited to sustain them in the long run nor to integrate them in bottom-up grassroots initiatives in specific territories. They are also not suited to ensuring the long-term involvement of Member States in the process and the coordination of their activities, all of which are essential factors to ensure the long-term approaches that agroecological processes require. The partnership will ensure the involvement in the long term of the various elements of the AKIS which will be key to provide the whole range of knowledge and practices which are necessary for a transition towards agroecology of a substantial part of the EU farming sector. The adoption of agroecological practices requires the development of an ambitious and

longer-term joint action at European level involving European, national and regional funders. This will also help build bridges at international level.

2.3.2 Expected impacts: how does the partnership address the objectives of Horizon Europe and common political priorities of the EU and its Member States

The proposed partnership would be fully in line with both the objectives of Horizon Europe, and the wider EU political priorities in relation to sustainable development.

In relation to **Horizon Europe**, the Specific Programme underlines the importance of research activities that contribute to achieving a resilient and sustainable agriculture that provides economic, environmental and social benefits, that sustainably manages land and natural resources, as well as delivers public goods including carbon sequestration and biodiversity preservation. It highlights that integrated and place-based approaches are needed to promote the multiple functions of agro-(eco)systems. In particular, the Specific Programme identifies the following relevant broad lines of action under Intervention Area “Agriculture, Forestry and Rural areas”:

- the use and delivery of ecosystem services in agriculture and forestry systems applying ecological approaches and testing nature-based solutions from farm to landscape level;
- the use and delivery of ecosystem services in primary production, e.g. through agroecology;
- fostering international partnerships for sustainable agriculture for food and nutrition security.

Moreover, the partnership would provide a key contribution to achieving the six targeted impacts spelled out in the Orientations Document under Cluster 6 “Food, Bioeconomy, Natural Resources, Agriculture and Environment”:

- *Climate neutrality is built by reducing GHG emissions and enhancing the carbon capture and storage in ecosystems, production systems on land and at sea as well as rural, coastal and urban areas, where the adaptation to climate change is also fostered.*
 - R&I activities would fill knowledge gaps on the implementation of agroecological practices and their important contribution to climate neutrality and to foster adaptation of the agricultural sector to climate change, and would promote its uptake by farmers at the relevant spatial level.
- *Biodiversity decline is halted and ecosystems are preserved and restored on land and at sea through improved knowledge and innovation.*
 - R&I activities would fill knowledge gaps on the implementation of agroecological practices and their important contribution to preserving and restoring biodiversity, and would promote its uptake by farmers at the relevant spatial level.
- *Sustainable and circular management and use of natural resources as well as prevention and removal of pollution are mainstreamed, unlocking the potential of the bioeconomy, boosting competitiveness and guaranteeing healthy soil, freshwater, seas and air for all, through better understanding of planetary boundaries and deployment of innovative solutions, notably in primary production, forestry and bio-based systems.*
 - R&I activities would fill knowledge gaps on the implementation of agroecology as a circular farming system that minimises the use of external inputs and

- prevents water and soil pollution as well as soil degradation, and would contribute to the deployment of innovative solutions to context-specific challenges through a living lab approach.
- *Food and nutrition security for all within planetary boundaries is ensured through knowledge and innovations in agriculture, fisheries, aquaculture and food systems, which are sustainable, inclusive, safe and healthy from farm to fork.*
 - R&I activities would fill knowledge gaps on the implementation of agroecology as a circular farming system that produces healthy and nutritious food while respecting planetary boundaries.
 - *Rural, coastal, peri-urban and urban areas are developed in a sustainable, balanced and inclusive manner thanks to a better understanding of the behavioural, socio-economic and demographic drivers of change as well as digital, social and community-led innovations.*
 - R&I activities would be centred around the concept of living labs as open innovation sites for experimentation and cooperation among stakeholders in finding solutions to context-specific challenges of a given community, that will lead in finding the innovations needed to solve the problems, thus would also promote rural development. The potential of digital innovation in both facilitating cooperation among actors in living labs and in fostering the implementation of agroecological approaches would be considered. Social innovation would be at the core of the activities and is central in the living lab concept.
 - *Innovative governance models enabling sustainability are established in collaboration with international partners through enhanced use of new knowledge, tools, foresight, environmental observations as well as digital, modelling and forecasting capabilities.*
 - R&I activities would promote the use of existing knowledge and building new one on agroecological processes. Collaboration with international partners would be considered.

Concerning the **European Green Deal**, the Communication spells out the ambition for the EU to become climate neutral by 2050. It paved the way for the ‘‘Farm to Fork’’ strategy to design a fair, healthy and environmentally-friendly food system, and for the new EU Biodiversity strategy to protect nature and reverse the degradation of ecosystems, and has the following objectives that the partnership could provide an important contribution to achieve:

- future CAP strategic plans should be assessed against robust climate and environmental criteria and lead to the use of sustainable practices, such as organic farming, agroecology, agro-forestry and stricter animal welfare standards;
- measures such as eco-schemes should reward farmers for improved environmental and climate performance, including managing and storing carbon in the soil, and improved nutrient management to improve water quality and reduce emissions;
- the CAP strategic plans will need to reflect an increased level of ambition of member States to reduce significantly the use and risk of chemical pesticides, as well as the use of fertilisers and antibiotics;
- the area under organic farming will need to increase in Europe;
- the new EU biodiversity strategy, and associated specific actions, will address the main causes of biodiversity loss;

- development of innovative ways to protect crops from pests and diseases and consideration of the potential role of new innovative techniques to improve the sustainability of the food system, while ensuring that they are safe;
- the new Circular Economy Action Plan¹⁵ underlines that the circular economy can significantly reduce the negative impacts of resource extraction and use on the environment and contribute to restoring biodiversity and natural capital in Europe;
- the recent proposal of the European Commission establishing the framework for achieving climate neutrality¹⁶ sets the ambition of no net emissions of greenhouse gases in 2050, to which all sectors will need to contribute;
- research should look at the role of local communities, experimentation and working across sectors and disciplines.

European farmers are key to manage the transition to sustainability and one of the objectives of the Farm to Fork Strategy, which is also fully in line with the general objective of this partnership, is to strengthen their efforts to tackle climate change, protect the environment and preserve biodiversity. Moreover, the EU Farm to Fork and Biodiversity strategies set out important targets to which the partnership should contribute, including:

- reducing the overall use and risk of chemical pesticides by 50% and the use of more hazardous pesticides by 50% by 2030,
- increasing the share of organic farming to at least 25% of the EU's agricultural land by 2030;
- bring back at least 10% of agricultural area under high-diversity landscape features in order to provide space for wild animals, plants, pollinators and natural pest regulators;
- protect soil fertility, reduce soil erosion and increase soil organic matter.

2.3.3 How will the partnership establish collaboration with Member States /Associated Countries and national/regional authorities

Place-based innovation serves local sustainable development needs that are fundamental in order to achieve the global challenges embedded in the SDGs. In order to foster action at these levels, it is important:

- that funders at the local, regional and national levels are in the driving seat to structure support to these approaches; this is not possible under centrally managed EU calls;
- to explore the possibilities to combine funding sources that support innovation for rural or regional development (such as EAFRD, ERDF, ESF) and EU funding for R&I under Horizon Europe.

This partnership would provide the framework to ensure collaboration and coordination of actions between European, national and possibly regional funders in this area. A partnership would be the right instrument to, on the one hand, ensure support to experimentation that responds to local challenges and, on the other hand, enable Europe-wide knowledge creation,

¹⁵ https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf

¹⁶ https://ec.europa.eu/info/sites/info/files/commission-proposal-regulation-european-climate-law-march-2020_en.pdf

sharing of innovative practices and scientific methodologies and structure a long-lasting R&I ecosystem, which classic research instruments such as RIAs or IAs are not able to establish. In order to achieve these objectives, the involvement of Member States' authorities is fundamental, both at national and regional levels.

Support to innovation under the European Regional Development Fund is provided under the condition that authorities develop R&I smart specialisation strategies (RIS3). These can be either national or regional or both. Three quarters of regions have chosen innovation priorities under their smart specialisation strategies that are related to agri-food and some more on bioeconomy in the wider sense. While the focus in this area has been mostly on digital technology aspects, in some cases, ERDF support goes to initiatives that are connected to either agroecology, or living-lab-like approaches. The EU financial regulation foresees that ERDF can be used as co-funding for Horizon Europe actions. Combination of different funding sources is also one of the objectives in Horizon Europe. Synergies could be built between these two funding streams to support living labs that simultaneously contribute to a Smarter and Greener Europe locally, benefitting farmers, consumers and the environment.

Synergies also need to be built with the operational groups funded under the European Innovation Partnership for agricultural productivity and sustainability (EIP-AGRI) with the support of the EAFRD. Much of the OGs work could contribute/connect to the work of the living labs established under this partnership and contribute to them. The partnership can also contribute to the development of agricultural knowledge and innovation systems as foreseen under the future CAP strategic plans.

Synergies will also be sought with the other programmes like LIFE, in the form of joint actions around the living labs and eco-innovations around agroecological products in specific localities, as well as with Copernicus, whose data could be valorised to assess the status of agroecosystems in the various localities in which the living labs would be established.

2.4 Partner composition and target group

2.4.1 How will the partnership build on and strengthen or expand existing collaboration networks and initiatives?

Although there are existing EU-wide initiatives and mechanisms that are related to the technical aspects and, to some extent, the objectives of this partnership (CORE-Organic ERA-NET, FACCE-JPI, EJP Soils, etc.), there is currently no existing network of the kind that this partnership aims at developing and upon which it could build.

Under Horizon 2020, the CSA FNR-01-2020 ‘*Strengthening the European agroecological research and innovation ecosystem*’ has been proposed in the 2020 Work Programme with a view to prepare the ground for the implementation of this Partnership. Funded proposal(s) under this call are expected to develop the framework for the European network of agroecological living labs and research infrastructures that this partnership aims at building and funding. This will include a mapping of existing open innovation initiatives on agroecological production processes, analysing stakeholder involvement in those initiatives, exploring the interest of funders, identifying training needs and providing recommendations to strengthen the European agroecological R&I ecosystem.

2.4.2 Type and composition of partners

The consortium partners would include:

- National / regional and local authorities, including environmental authorities
- Funding organisations
- Research/ innovation/education organisations / institutions

2.4.3 Target groups and stakeholder community

Stakeholders:

- Farmers and the wider farming / rural community would be at the centre of the partnership
- Civil society / NGOs
- Land owners
- Agricultural knowledge and innovation system (AKIS) at national and regional levels (including relevant research stations and experimental farms)
- Other food chain stakeholders: industry / SMEs (biopesticides / machinery / precision application systems / plant breeding, etc.), citizens, consumers, processors, etc.
- Territorial planning, landscape management
- Financial sector

Inclusiveness:

- Theme: the partnership would cover issues related to agroecology, organic farming and could also include agroforestry
- Geography: the partnership would cover a balanced and representative set of locations covering a range of farming systems / sectors, geographical and socio-economic contexts (including different pedo-climatic conditions)
- Public engagement: the partnership will seek the involvement of citizens / consumers in living labs, to contribute from the perspective of product / value chain development and the coherence of the business model (socio-economic / behavioural sciences). The modalities of the involvement of those stakeholders will depend on the governance of the partnership (associate partners / consumer board, etc.).

Moreover, there is a wide international community of practice around living labs, inside and outside the farming sector. Within the agricultural sector, relevant actors with whom the EU has already engaged in the context of the G20 MACS and from whom useful experiences could be exchanged in the context of this Partnership, include Canada, the US, Japan and New Zealand.

3 Planned Implementation

3.1 Activities

3.1.1 Activities that will support the achievement of the objectives

The **focus of the Partnership** would be on land-based crop and livestock production and would cover a large range of R&I themes, from genetics to territories. It would concern all sectors - arable, greenhouse, perennial crops, forestry, mixed farming, agroforestry - and the interface between forestry, aquaculture and agricultural areas. The specific challenges of organic farming, as a system that relies on agroecological principles, would be covered. In order to ensure a holistic approach of the challenges to the sustainability and resilience of farming systems in different parts of Europe, a systems approach would be adopted with a view to consider wider aspects related to the food chain (processing, value addition, consumer issues, etc.).

The Partnership would operate in an integrated manner, looking at agroecological processes at farm, landscape and territorial level, in relation with issues that could include the following:

- agroecosystem biodiversity (below and above-ground, wild and cultivated);
- climate change mitigation and adaptation issues, climate smart farming approaches showing transition pathways towards more ecological and resilient farming practices, with their associated costs and co-benefits for climate and the environment (ecosystem services provided by agriculture) and their implications for other parts of the food value chain;
- pathways for the reduction of pesticide use and integrated pest management (IPM) techniques, development and experiments (high TRL) of bio pesticides;
- improving the circularity of farming systems through practices that increase the efficient use of local streams and by-products for a reduced fertiliser use;
- increasing the diversification of food sources;
- the contribution of landscape elements and sustainable landscape management to circular agriculture;
- consider the possibilities of integration with digital and precision farming techniques;
- consider aspects related to sustainable yields, income and benefit for farmers and partners in the food chain;
- consider livestock-related aspects, including from the perspective of mixed farming.

Different types of soils and land use across different pedo-climatic regions in Europe (forest soils, peatlands, etc.) would be taken into consideration and concerns regarding soil health, carbon sequestration in soils and soil biodiversity would be addressed. As part of the research infrastructure component of the partnership, relevant data to be monitored and methodologies will be developed with the objective to establish harmonised time-series across all participating Member States.

In order to address the three dimensions of sustainability, the Partnership would bring various scientific disciplines together across the EU and in relation with end-users. Social sciences and humanities research and innovation would be an important component. Behavioural sciences, social psychology, understanding of socio-economic drivers are important disciplines to understand lock-ins and barriers to change and how to lift them as well as motivators and what

can drive people to change. In addition processes happening in living labs often include a lot of social innovation that will need to be analysed.

Once the focus of the partnership has been determined, the **concrete activities** would naturally derive from the agreed operational objectives described in section 2.2.1 and should be developed once these objectives are set and in full coherence with the R&I actions defined in the SRIA (section 2.2.7). As a preliminary proposal, activities under the partnership could be designed and carried out at three different levels:

- (i) living lab level (local/regional hubs) – aspects to be defined could include:
 - governance (coordinator, chair, management board, etc., on a rotating basis, for instance);
 - process for problem / challenge identification, development of roadmap of testing and experimentation activities on agroecological practices that will help solve the problem;
 - process for the identification of knowledge needs leading to research activities and involvement of research infrastructures;
 - process for stakeholder identification and involvement, including local/regional authorities, including defining the level of flexibility to involve stakeholders at different stages of the innovation process;
 - process to ensure the alignment of activities with policy needs/development;
 - process for gathering and communication of results;
 - funding aspects.
- (ii) network of living labs at the national level (national hubs) – aspects to be defined could include:
 - governance (coordinator, chair, management board, etc., on a rotating basis, for instance);
 - process for the alignment of agendas of living labs in the different regions, while respecting the specific regional challenges;
 - process for the regular exchange of information on activities, practices, solutions found, etc.;
 - process to ensure the alignment of activities with policy needs/developments, prioritisation of research activities and translation into annual work plans;
 - funding aspects;
- (iii) network of living labs at the European level – aspects to be defined could include:
 - mechanism to ensure coordination among the national hubs
 - funding aspects

3.1.2 Mechanisms that will ensure the complementarity of activities

This section will be developed later on, once the activities have been defined.

3.1.3 Coherence and synergies in relation to major national (sectorial) policies, programmes and activities

This section will be developed later on. During the process to develop the SRIA, alignment with national / regional policies and programmes will be ensured. In defining the specific activities, mechanisms / processes to ensure policy coherence at the relevant levels would also be put in place.

3.2 Resources

Contributions could be in cash and in kind from funders and managing authorities. It could be in kind from stakeholders involved in the actual living labs and research infrastructures that would be funded through calls. In kind could include time, land or facilities devoted to on-site experimentation for example. These aspects and the different possibilities need to be further discussed with the potential partners and stakeholders during the preparation process.

3.3 Governance

The European Commission proposes a co-funded partnership. Governance and management of the partnership will be defined in later stages. Concerning the involvement of the European Commission in the preparation and involvement of the partnership, the European Commission is taking a proactive role in launching the discussions that will lead towards the preparation of the partnership proposal, including by presenting the initiative to Member States in different fora and to different stakeholders in the context of conferences and bilateral discussions. The European Commission is also leading a consultation process with potential partners and stakeholders that will include workshops, webinars and other types of exchanges. The involvement of the European Commission on the implementation of the partnership will be defined in later stages.

3.4 Openness and transparency

3.4.1 How will the partnership establish a broad, open and transparent approach towards different sectors and geographical areas

Ensuring participation of all relevant stakeholders is at the core of the partnership, from the concept inception phase, which includes consultations with Member States authorities, network of European regions, ERA-NETs, technological platforms, etc., and through the organisation of participatory discussions (workshops, webinars, etc.) to officially kick-start dialogue with researchers, funders, public authorities, scientists, farmers, industry and civil society representatives.

Ensuring stakeholder and end-user involvement is also at the core of the activities that the partnership aims to implement, which are based on the living lab approach.

3.4.2 How will the partnership ensure easy and non-discriminatory access to information about the initiative and dissemination of and access to results

A dedicated website would be set up where results of the R&I activities would be published. Moreover, regular workshops, conferences, meetings, etc. would be organised during the lifespan of the partnership for wider dissemination of activities and results with relevant stakeholders. Setting up a stakeholder board would be particularly important in this regard.

3.4.3 How will the partnership establish a proactive recruitment policy

There are two layers to this question in the context of this partnership:

1. how to select the sites in which to set up the living labs and;

2. how to select actors engaged in these labs and projects supported by them.

Both stages have to be carefully discussed with the potential partners.

The selection of living labs could be imagined in phases or batches, starting with a small number compatible with the needs for capacity building and accompaniment and progressively phasing in various waves. The CSA(s) funded under Horizon 2020 call FNR-01-2020 will be instrumental in preparing the ground for this. The living labs funded under the partnership would define a mechanism to ensure balance among stakeholders, openness and include mechanisms to bring in new stakeholders. Such a mechanism would ensure the timely engagement of actors (who to engage and when) and would take into consideration the power dynamics to help design the process of setting up the living labs. In this way, the living labs would look at stakeholders as enablers of agroecology systems and, as such, they would focus on co-creating solutions to specific problems in a given context, while, at the same time, ensuring a developmental, regenerative process as one of the pre-requisites in placed-based innovation. The living labs would therefore look at innovative ways to engage stakeholders so that they are empowered and develop the will to keep involved, thus helping achieve the impact that is aimed for, looking at the potential of a specific community and what new cooperative arrangements can be put in place to achieve that potential. In this regard, the living lab will look at the capabilities of the actors involved and if they match the needs according to the specific problem it wants to solve (living labs questioning paradigms and not only looking at solving problems). Like this, the living labs will have a two-fold objective of, on the one hand, a more short-term objective to solve specific problems in a given context and, on the other hand, another of a more long-term nature, looking at the potential of a specific community to develop beyond solving the specific problem. This second dimension calls for the involvement of local and regional actors in a longer-term perspective, which is one of the justifications of the partnership approach.

3.4.4 Process for establishing annual work programmes

This should be determined during the development of the SRIA.

4 Moving the discussion forward

The present section aims at presenting and summarising the main aspects, concepts and issues that, from the European Commission's perspective, need to be discussed with the potential partners and stakeholders at the initial stage of development of the partnership proposal in order to reach a common understanding on the different concepts involved and move the preparation of the partnership proposal forward (see table below). It aims at guiding the discussion by offering possible options and ways to move the discussion forward in the midst of the COVID-19 pandemic and the impossibility to convene physical meetings.

What?	How?	When?
Build a shared understanding of agroecology, living labs and research infrastructures	Webinars presenting several view points and inviting comments from a wide audience of potential partners and stakeholders.	6-7 May 2020 (around 140 participants)
Get inspired from concrete examples	<p>On-line survey to map existing initiatives in Member States & regions</p> <p>Webinars presenting concrete examples of initiatives that partly or entirely match the types that would be involved in the partnership</p>	<p>Opens end-May 2020 and remains open</p> <p>4-5 June 2020</p>
Start co-creating the partnership in practice	<p>Interactive on-line sessions on vision, objectives, activities, funding etc. using this document as an input. Examples of questions to address:</p> <ul style="list-style-type: none"> • How will we understand agroecology, living labs and research infrastructures in the context of this partnership? Which key principles to retain? • Scope and focus: shall we focus on some sectors or themes? • How to articulate specific research on organic issues with research on wider agroecological practices in the context of non-organic farming systems? • How to organise place-based research in the context of an EU-wide partnership? How to engage relevant actors at local level in the long-term? • Which balance between basic science and close to market innovation? • What is the specific contribution of research infrastructures to the scheme? Which services will living labs need? • How to ensure complementarities and synergies with other activities and initiatives at EU and international level? • How much resources are needed and how to fund living labs and other partnership activities? 	From end June 2020 onwards (first session 25 June)
Continue co-creation process and prepare the community	<p>Coordination and support action project(s) funded under FNR-01-2020: developing framework, piloting, capacity building, building SRIA, preparing funders etc.</p> <p>Possible event co-organised at the European week of regions and cities with Committee of the regions and ERIAFF.</p> <p>Discussion with SCAR (in particular SWG AKIS), Horizon Europe Programme committee for cluster 6, EIP-AGRI, stakeholder networks (in particular farmers organisations and regions), other partnerships, missions etc.</p>	<p>From Sept-Nov 2020</p> <p>October 2020</p> <p>Throughout preparation</p>
Partnership documents to be ready tentatively by summer 2022.		