



Policy brief

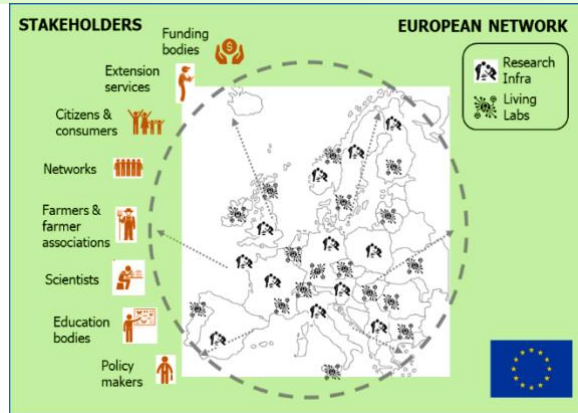
# Living Lab Networks in Agriculture: Success Factors and Policy Implications

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### Key messages

The heterogeneous nature of the European Network of Agroecology Living Labs and Research Infrastructures amplifies the importance of allowing for consolidation processes as a key factor for long-term success. Important consolidation processes include the building of trust in relationships to enable open exchange, the establishment, review and adaptation of network governance, and the evolution of network infrastructure.

Funding programmes need to encourage research into defining network types and their characteristics as these have implications for how a network functions and how it may need to be supported by both policy and practice.



AAFC's nationwide network of living labs and the future European Network. Source: AAFC and ALL-Ready project.

## Introduction

Over the last 5 years, the agriculture sector worldwide has seen increasing attention being paid to the application of the living labs approach to innovation management due to its potential for addressing urgent environmental, economic, and social challenges. Policy makers and practitioners are attracted to the living labs approach because it holds great promise for

accelerating the co-development and adoption of innovations, for enabling transitions towards more resilient and sustainable agricultural systems, for fostering increased scientific collaboration and knowledge exchange, and for strengthening the link between long-term policy objectives and the practical challenges faced by farmers on a daily basis.

The living labs approach to innovation management is now generally well established and is supported by a large body of scholarly literature (e.g., see reviews by Hossain et al., Greve et al., 2021, Hossain et al., 2019; Westerlund et al., 2018) and ample practical cases describing the implementation of individual living labs. However, new challenges are emerging through the recent trend towards large-scale networks of living labs. This is particularly evident in the agriculture sector.

## Living Lab Networks

An individual living lab can be seen as a type of small-scale network necessary for open innovation processes, and it therefore functions as a local innovation ecosystem (Leminen et al., 2012). However, this policy brief focuses on broader networks that link together living labs and other organizations at regional, national, or international scales. Such networks may also function as “networks of networks” that enable sharing not only between living labs and other organizations (e.g., research infrastructures) but also between networks and can therefore play a key role in system-wide transitions, as expected in the case of agroecology (Mambrini-Doudet et al., 2022). Examples include the [Canada Agroecosystem Living Labs Network \(CALL-Net\)](#), the French network of living labs under the [Territoires d’innovation](#) scheme, the [European Network of Living Labs \(ENoLL\)](#) subnetwork of agriculture and agri-food living labs, the [Long-Term Agroecosystem Research Network \(LTAR\)](#) in the United States, the proposed set of soil health living labs under the [Soil Mission](#) and the future European Network of agroecology living labs and research infrastructures as part of the [Horizon Europe Partnership on Agroecology](#), which is the focus of the [ALL-Ready](#) project.

Such networks are becoming increasingly common, but they may not share common characteristics, largely owing to differences in how they are created. Accordingly, this policy brief synthesizes experiences from the Canadian Agroecosystem Living Lab Network and the assessment of key factors for the future European Network of Agroecology Living Labs and Research Infrastructures. As these contrasting experiences show, certain network characteristics have implications for how a

network functions and how it may need to be supported by both policy and practice.

## Experiences from Canada and Europe

Since 2018, Agriculture and Agri-Food Canada (AAFC) has been building a nationwide network of 13 agroecosystem living labs to accelerate the development and adoption of farming practices to address urgent agri-environmental issues, especially climate change. This network comprises more than 1000 participants, whose work is supported at the network level by a dedicated team at AAFC that provides coordination in addition to supporting knowledge exchange, innovation support, capacity building, data sharing, scientific integration, and scaling of solutions.

Through policy development and program implementation since 2018, the network in Canada has been built up “from scratch” in a series of phases. Each living lab is unique and responds to local, place-based challenges and production systems, but across the nationwide network, all of the living labs share a common implementation model, funding source and timelines, and ultimate objectives (e.g., increasing carbon sequestration, reducing greenhouse gas emissions, and providing other environmental co-benefits).

In contrast, the proposed European network of living labs and research infrastructures follows an “assembled” model of network creation, whereby existing or new components are gathered together into a unified but heterogeneous network. Among its component organizations, such a network may display much greater diversity of objectives, funding sources and timelines, and implementation models. We do not argue that one model is better than another, but the differences in the resulting homogeneity or heterogeneity do suggest some advantages and disadvantages in terms of diversity, comparability, coordination, etc.

Regardless, similar to the situation in Canada, the expected benefits of the European network include strengthened networking and collaboration, supporting long-term funding

strategies, continuity and enhanced portfolios of research and innovation activities, and strengthened knowledge creation, exchange and diffusion (Schwarz et al., 2022; McPhee et al., 2021). Examples of mechanisms to deliver these benefits include:

- i) the provision of tools and databases supporting long-term and transboundary data collection and management of interdisciplinary experiments
- ii) thematic working groups or sub-networks
- iii) methodological guidance on, and coordination of, collaboration (e.g. in fundraising, and addressing operational challenges)
- iv) establishment of close linkages to national level networks to ensure good information flow and a wider reach of actors on the ground.

## Key lessons learnt

The heterogeneous nature of the assembled European Network of Agroecology Living Labs and Research Infrastructures needs to be reflected in its implementation and management and has implications for the supporting policy and funding environment.

The European Network will include a diverse range of living labs and research infrastructures with experiences differing in terms of thematic expertise and the level of expertise in running an initiative. Enabling adaptive governance that responds to changes in size and experiences of its members will utilise the benefits from, and values of, the diversity of its composition. The heterogeneous nature of the network requires the allocation of adequate resources for network management and coordination.

Allowing for consolidation processes and activities is a key factor of success for the long-term implementation of a heterogeneous network. Time is needed to develop relationships enabling trusted open exchange, to establish, review and adapt governance processes, as well as objectives, values and activities of the network, and to develop and evolve network infrastructure.

Generating evidence on the benefits of developing and participating in the European Network fosters buy-in and commitment from funding organisations and living labs and research infrastructures. This requires the development of tools or approaches to monitor and evaluate the performance of the network in a transparent and sound manner.

A further key factor in facilitating knowledge exchange, data sharing and integration of scientific methods and results between living labs and research infrastructures is the development of guidelines and protocols to support data harmonization and mobilisation.

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### Policy recommendations

- recognize in research and funding policies the long-term nature of network implementation and continuity that go beyond standard R&I project cycles.
- ensure eligibility of management and coordination activities of the different types of actors engaged in the Network and ring-fence funding for these kinds of activities in funding programmes.
- require in research and funding policies the generation of sound evidence of the performance and impact of the European Network through transparent monitoring and evaluation of its processes and activities.
- ensure common application of EU standards and requirements for data management and protection that facilitate transboundary data harmonization and mobilization
- encourage research into defining network types and their characteristics and develop tools and approaches to increase network coordination and performance

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**About ALL-Ready:** ALL-Ready is a Coordination and Support Action (CSA) funded by the European Commission (EC) with the aim of preparing a framework for a future European network of Living Labs (LL) and Research Infrastructures (IR) that will enable the transition towards agroecology throughout Europe. Based on the premise that agroecology can strengthen the sustainability and resilience of farming systems, the project will contribute to addressing the multiple challenges that they are facing today including climate change, loss of biodiversity, dwindling resources, degradation of soil and water quality.

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