

# BIOEAST Conference Brussels, 20-21 February

**Agroecology research  
in H2020 and Horizon Europe**

**Candidate European Partnership  
“Accelerating farming systems transition:  
agro-ecology living labs and research  
infrastructures”**



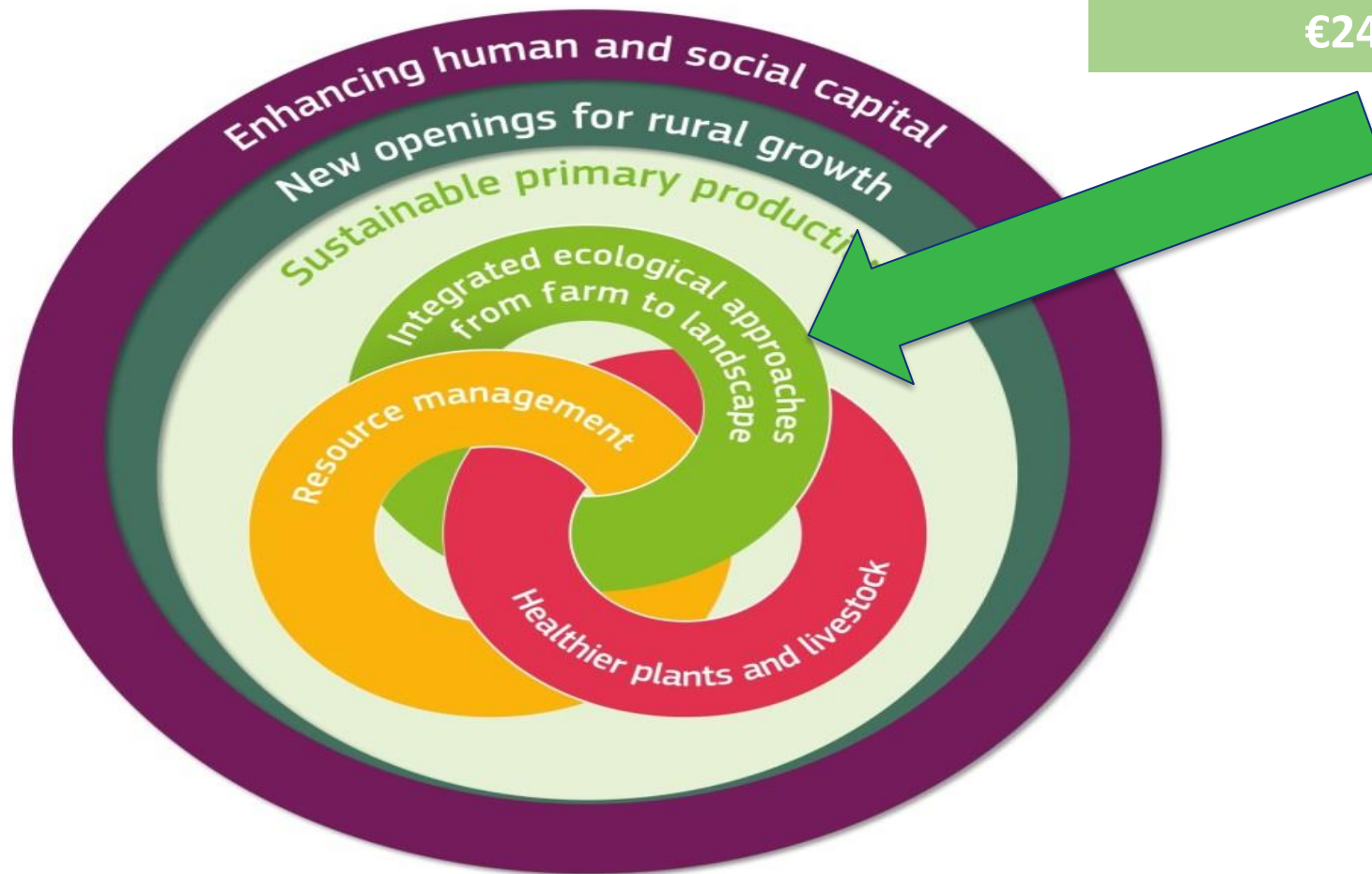
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- 1. Agro-ecology research under Horizon 2020 (2014-2020)**
- 2. Preparations for Horizon Europe (2021 – 2027)**
- 3. Opportunities agro-ecology research in Horizon Europe**

# **1. Agro-ecology research under Horizon 2020 (2014 – 2020)**

## Agri-research priorities

More than 40 projects relevant to  
organic farming and agroecology  
amounting to  
€240 m 2014 - 2017





## H2020 research supporting the organic sector

8 "organic"  
projects + 1 ERA-  
NET  
(CORE Organic)

€46 m  
EU  
funding

> 20 EU  
MS

+ assoc. and int.  
partners

> 150  
partners



More than 40 projects relevant  
to organic farming and  
agroecology amounting to €240  
m 2014 - 2017

## **2. Preparations for Horizon Europe (2021-2027)**



# Horizon Europe (2021-2027)

Pillar 2:  
EUR 52,7bn out of a total of  
€ 100bn  
(implemented through **calls, missions  
and partnerships**)

**EUR 10 bn proposed for R&I on food,  
bioeconomy, natural resources, agriculture  
and the environment**



# Horizon Europe Cluster 6 – Seven key R&I orientations



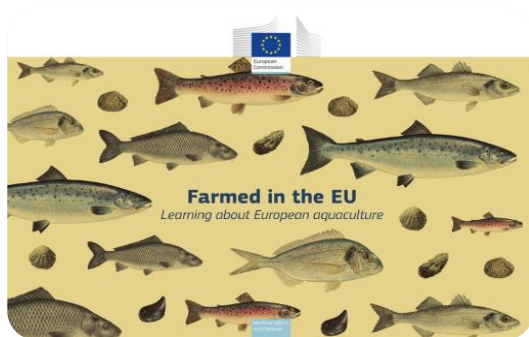
Environmental  
Observation



Biodiversity and  
Natural Capital



Agriculture, Forestry  
and Rural Areas



Sea and Oceans



Food Systems



Biobased Innovation  
Systems



Circular Systems

Under one cluster: the interlinked challenges of eco-systems, health of our planet, sustainable agriculture, forest and marine production, and sustainable consumption





# Horizon Europe – Where are we?



### **3. Opportunities for agro-ecology research in Horizon Europe**

# Policy context for R&I on agro-ecology



## Legal base of Horizon Europe + Orientations document:

- ❑ *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 agro-ecology***
- ❑ ***Cluster 6 six targeted impacts -> agro-ecology relevant for all of them:** climate neutrality; biodiversity; sustainable and circular management of natural resources (healthy soils); sustainable primary production; innovative approaches that drive sustainability; environmental observations, tools to enable sustainability*



## Green Deal Communication (Farm to Fork Strategy):

- ❑ *future **CAP Plans** should lead to the use of **sustainable practices**, such as **organic farming, agro-ecology, and agro-forestry**; increased level of ambition to **reduce use of chemical pesticides, fertilisers and antibiotics***
- ❑ ***area under organic farming will need to increase** in Europe*
- ❑ *role of **local communities, experimentation**, working across sectors and disciplines...*



# New approach to European partnerships: overview

New generation of objective-driven and more ambitious partnerships in support of agreed EU policy objectives

## Key features

- Simple architecture and toolbox
- Common set of criteria
- Coherent life-cycle approach
- Strategic orientation

### Co-programmed

Based on Memoranda of Understanding / contractual arrangements; implemented independently by the partners and by Horizon Europe

### Co-funded

Based on a joint programme agreed by partners; commitment of partners for financial and in-kind contributions & financial contribution by Horizon Europe

### Institutionalised

Based on long-term dimension and need for high integration; partnerships based on Articles 185 / 187 of TFEU and the EIT-Regulation supported by Horizon Europe





# Portfolio of candidates for European Partnerships in Horizon Europe (44)

## **HEALTH**

EU-Africa Global Health  
Innovative Health Initiative  
Chemicals Risk Assessment  
Fostering an ERA for Health research  
Large-scale innovation and  
transformation of health systems in a  
digital and ageing society  
Pre-clinical / clinical health research  
Personalised Medicine  
Rare Diseases

## **DIGITAL, INDUSTRY AND SPACE**

High Performance Computing  
Key Digital Technologies  
Smart Networks and Services  
AI, data and robotics  
Photonics Europe  
Clean Steel - Low Carbon Steelmaking  
European Metrology  
Made in Europe  
Carbon Neutral and Circular Industry  
Global competitive space systems

## **PILLAR III AND CROSS-PILLAR**

EIT Climate KIC  
EIT Health  
EIT Manufacturing  
EIT Food  
EIT InnoEnergy  
EIT Manufacturing  
EIT Raw Materials  
EIT Digital  
EIT Urban Mobility

Innovative SMEs

European Open  
Science Cloud  
(EOSC)

## **CLIMATE, ENERGY AND MOBILITY**

Transforming Europe's rail system  
Integrated Air Traffic Management  
Clean Aviation  
Clean Hydrogen  
Built environment and construction  
Towards zero-emission road transport  
Mobility and Safety for Automated Road  
Transport  
Batteries  
Clean Energy Transition

## **FOOD, BIOECONOMY, NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT**

**Accelerating farming systems transition**  
Animal health: Fighting infectious diseases  
Environmental Observations for a  
sustainable EU agriculture  
Rescuing biodiversity to safeguard life on  
Earth  
A climate neutral, sustainable and  
productive Blue Economy  
Safe and Sustainable Food System for  
People, Planet & Climate  
Circular bio-based Europe  
Water4All: Water security for the planet





# WHY a partnership on agro-ecology living labs and research infrastructures ?



# Why a partnership ?



- Need to **speed up the adoption of more sustainable practices in agriculture** -> less reliance on inputs; re-diversification; consumer demands; social aspects (rural development, etc)
- **Agro-ecology** -> **context-specific** (importance of farm and landscape levels), **long-term time scales, increased complexity** (knowledge intensive)...it is under-researched and there is appetite for knowledge
- The **transition** to farming practices that maximise the use of ecological processes **is hindered by** factors that include:
  - **insufficient knowledge** on ecological processes at relevant spatial level
  - **lack of long-term data series**
  - **absence of mechanism** that ensures MS **sharing of experiences and best practices** on adoption of agro-ecological approaches
  - **lack of evidence** on **economic and environmental performance** of innovative ecological approaches
  - **absence of structure/mechanism** that **ensures end user involvement** (ie., farmers) in co-creating innovative solutions to local problems with sufficient place-based focus
- **Living labs** -> **user-centered**, open innovation ecosystems based on **user co-creation** approach, integrate R&I in **real life communities and settings**, can speed up development and scaling up of innovative practices. **Place-based focus**/embedded in real working landscapes/communities. More **systematic use of a wide range of social sciences** (behaviour). Beyond projects, **structuring the innovation ecosystem**

# Why a partnership?

*EU has supported living labs **but not focused on farming/rural issues/place-based** focus*

+

*Regular research projects can contribute to set up networks/facilities, **but less well suited for:** long-term collaborations and data collection at local/landscape-scale level; ensure long-term involvement and coordination of MS authorities at the level needed*



## **Partnership would allow to ensure:**

- MS and regional/local authorities involvement in the long run
- coordination among European, national and regional funders
- combining funding sources under EAFRD, ERDF, ESF... and Horizon Europe
- foster local / national / regional action
- establish a network that would deliver a range of data (agro-biodiversity, climate change, etc.) in the long term



# Key objectives and activities

- **Goal: speed up the adoption of ecological approaches in farming systems**
- Set a **direction for knowledge creation on ecological processes applied to farming**
  - ✓ **Integrated**: agro-ecosystem biodiversity; ecosystem services; climate change adaptation / mitigation; IPM; soil health; agroforestry; organic farming; etc.
  - ✓ **Transdisciplinary**
  - ✓ **User-involvement**
- Creating spaces for **long-term real-life** experimentation and innovation embedded in **working landscapes**
  - ✓ Network of **living labs/farms + research infrastructures**
  - ✓ Place-based innovation
  - ✓ Coordination + knowledge exchange

# Key implementation principles



- **Co-funded**
- **Place-based** => Local/regional/national levels to play an active role
- **Combining EU funds** (synergies with ERDF/RIS3, CAP/EAFRD, ESF etc...)
- **Wide coverage of the diversity:** agroecosystems, farming systems, sectors, pedo-climatic conditions
- Seek involvement of **wide range of actors & stakeholders:** consumers, citizens, NGOs, authorities, industry etc...
- Ensure **links with other Horizon Europe partnerships** candidates (Biodiversity, Animals and Health, Food systems...), existing initiatives (FACCE, CORE Organic, etc)...**and missions** on soil health and food and on climate adaptation
- **Progressive** creation of the network with **capacity building**
- CSA under Horizon 2020 WP 2020 to help **prepare**



# Who would the partners be?



## Partners:

- National / regional and local authorities, incl. environmental authorities
- Funding organisations
- Research/innovation/education organisations...

## Stakeholders:

- Farmers and the wider farming / rural community
- Civil society representatives / NGOs
- Land owners
- Agricultural Knowledge and Innovation System (AKIS)
- ...



# How to get prepared?

- **Consultations with Member States** (SPC, SCAR) and **multiple stakeholders**
- Synergies / complementarities with other partnership candidates and missions
- CSA FNR-01-2020 "Strengthening the European agro-ecological research and innovation ecosystem" programmed under H2020 calls 2020 (proposals under evaluation)
- Updating fiche describing the partnership idea -> to be further elaborated in co-creation with potential partners
- **Planning workshop 6-7 May 2020 in Brussels to:**
  - ❖ Discuss and build ownership of the concepts
  - ❖ Looking at examples, develop a shared understanding
  - ❖ Discuss implementation aspects
  - ❖ Draw an action plan (in connection with the CSA)
- **Partnership to start end 2023 – early 2024**





## Open questions are many – we are just at the beginning of the process...

- **Understanding** of agro-ecology and living labs in the context of the partnership
- **Scope** (only primary production? Whole agri-food chain?) and focus (climate change-related issues, reduction of pesticide use, soil aspects?...)
- **Implementation, governance, sequence of actions:** how will the partnership work in practice
- **Funding synergies:** ERDF/EAFRD & smart specialization, how to organize it in practice (will depend on the MFF)
- **Partners and commitments**
- Role of **research infrastructures**
- ...

**Your views are welcome!**

# Some take away messages...

**AELL Partnership will be key for catalysing and coordinating Member States R&I activities on agro-ecological approaches:**

❖ **Inclusiveness and representativeness** of all EU MS will be essential:

=> **are Bioeast countries interested to engage?**

❖ Emphasis on solving local problems calls for the **involvement of regional/local authorities:**

=> **would regions in Bioeast countries be interested to engage?**

=> **how to foresee it in the programming of EU Funds?**

**AELL Partnership will be one of the instruments under Horizon Europe:**

=> **“normal calls” will still be an important part** of the Work Programme for trans-national research projects on agro-ecology

=> **ongoing identification of key R&I areas** leading to first work programme of Horizon Europe (2021 – 2024) =>  
**your proposals are welcome!**



## To know more...

### **Strategic approach to EU's Agricultural Research and Innovation:**

<https://ec.europa.eu/programmes/horizon2020/en/news/final-paper-strategic-approach-eu-agricultural-research-and-innovation>

### **Agri-research factsheet 'Ecological approaches and organic farming':**

[https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/factsheet-agri-research-ecological-approaches\\_en.pdf](https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/factsheet-agri-research-ecological-approaches_en.pdf)

### **Horizon Europe:**

[https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme\\_en](https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en)

### **Horizon Europe Partnerships in a nutshell:**

<https://www.era-learn.eu/partnerships-in-a-nutshell/r-i-partnerships/european-partnerships-under-horizon-europe>



**Thank you for your attention**

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