



# H2020 FRAMEwork Legacy Guide

Farmer Clusters for  
Realising Agrobiodiversity  
Management across  
Ecosystems



This project received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862731.

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Find us on [CORDIS](#)

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# 1. Project Overview

## What was H2020 FRAMEwork?

Globally, biodiversity loss and ecosystem degradation threaten many people's resilience and natural heritage. Interactions between agriculture, biodiversity and ecosystems often sit at the heart of these issues, presenting both challenges and solutions. In response, H2020 FRAMEwork piloted a joined-up approach to agrobiodiversity management across Europe.

Our starting point was the 'Farmer Cluster' concept. Developed and expanded over more than a decade in the UK, it seeks to empower farmers to achieve cross-boundary conservation and sustainability interventions important to them and their localities, alongside peers and other enabling stakeholders.

FRAMEwork brought this concept into the EU for the first time - establishing nine Clusters, from northern Estonia to southern Spain, as well as two new Clusters in the north and south of the UK. These Clusters served as 'living labs' across different climatic zones and farming systems, presenting valuable opportunities for generating interdisciplinary research-in-action insights.

Project research spanned environmental monitoring and assessment, investigating and manipulating the agroecological knowledge underpinning beneficial management decisions, and evaluating systems-level pathways towards biodiversity-sensitive farming which leverage multi-benefits and landscape-scale impacts while balancing risks.

Project outputs range from the academic (data sets, journal articles and reports), and the applied (software tools, websites, guidelines, briefs and courses) to the experiential - with content on key topics and activity (podcast, blogs, substack articles and videos) locating FRAMEwork within broader conversation on these issues. Read on to learn how to access project resources and who they benefit!

## H2020 FRAMEwork in Numbers

12K+

Hectares  
Monitored

40K+

Observations  
Recorded

20K+

People  
Engaged

100+

Resources  
& Events

8M

€  
Funding

18

Consortium  
Partners

11

Farmer  
Clusters

50+

Farm  
Businesses

# This Legacy Guide walks you through FRAMEwork, signposting insights, tools and resources from the project 2020-2025. It's designed so that:

## Consortium partners

Can consolidate materials for internal records and future activity.

## Similar projects

Can discover materials to inform their design and operations.

## Policymakers

Can find summary briefs, headline papers and tools to help them assess the risks and rewards of landscape-scale collective approaches.

## Agri-economy Stakeholders

Like land managers, business and community groups and NGOs can access practical guidelines, training resources and decision-support tools.

## Researchers

Can explore peer-reviewed publications, monitoring protocols and open datasets.

## Funding initiatives

Can discover project aspects and tools positioned for potential further uptake or development.

## Legacy Materials: Quick Access

1

### Information Hub

Explore FRAMEwork's community of practice online, from the pilot Cluster network to resources created and curated by the project.

2

### Zenodo

Explore the project's open-access publications, from research to reports and policy briefs on specific project deliverables.

3

### Project Website

Learn more about the project and its outputs from start to finish. Access project content channels and collaborations across the web.



**Please Note:** This guide highlights useful resources published at time of writing, not including papers which remain in development or awaiting publication. Until 2030 the project Info Hub, website and associated links can be accessed at [www.recodo.io](http://www.recodo.io) and [www.framework-biodiversity.eu](http://www.framework-biodiversity.eu). After, please find these sites and the signposted content archived at <https://recodo.nodes.iiasa.ac.at/> and <https://taskscapewebdesign.wixsite.com/h2020-framework-project>. Project content on third-party channels will remain available indefinitely at the linked locations.



# Webinars

Several slide sets and recordings of webinars held by the project are available online. Below are some highlights, with more available on YouTube:



## Transforming Agroecosystems Together

Three-day hybrid conference covering the whole project, streamed live from the Czech University of Life Sciences.

[View Slides](#)

## Halting Biodiversity Decline: Policy and Practice

Brings together experts on EU+UK contexts, held with the Natural Capital Initiative, UK.

[Watch Now](#)

## Introduction to the FEAST DST

An overview of FEAST, with project case-studies and a broader panel discussion on spatial approaches to biodiversity management with expert guests.

[Watch Now](#)

## Introduction to FRAMEtest DST

Provides an overview of the project's decision support tool for stakeholders evaluating the Cluster model in transition contexts, for example organic conversion.

[Watch Now](#)

## History of Farmer Clusters

Provides a helpful short overview of the Farmer Cluster concept's development and roll out in the UK, up to the point of FRAMEwork's kick-off in 2020.

[Watch Now](#)

## Inside Farmer Clusters: Lessons from the EU and UK

A final project webinar which covers highlights and learnings, including overviews from several Cluster Facilitators and research leads.

[Watch Now](#)



## 2. Cluster Network

### Creating the pilot network and best-practice resources

The project established 11 pilot clusters across Europe, hiring and training a facilitator to oversee each local groups' activities and associated admin. Farmers were invited predominantly, but not exclusively, via existing relationships with consortium partners and local NGOs. As a bottom-up structure is vital to the Cluster concept, the project often relied on identifying and recruiting a pioneering 'lead farmer' for each group who then invited peers. Cluster facilitators worked with their group to identify specific shared interests such as: improving on-farm functional biodiversity, mitigating declines in species important to local natural heritage and rural pursuits, improving ecosystems services and mitigating disservices, and enhancing peer support networks and local environmental reputation.

Cluster facilitators coordinated knowledge exchange via Cluster meetings and workshops, whether peer-to-peer, with project experts, or external organisations. This included, for example, training in farmer-led biodiversity monitoring via accessible tools as well on specific species and agroecosystem components. In most Clusters, aside from one where existing activity was extensive, facilitators helped implement biodiversity measures that were locally defined but standardised enough to relate to the project's wider research strands. All Clusters took part in community engagement activities, these presented opportunities for two-way knowledge sharing, centering on citizen science and raising awareness of local ecosystems, agroecological operations and products.

The project was funded to specifically pilot 'Advanced Farmer Clusters'. In practice this meant distilling methodologies from the established UK Cluster Network, as well as creating additional best-practice resources based on learnings from both the UK and new European project Cluster network. A series of guidelines were created covering each phase of establishing and running a Cluster, translated into project region languages, as well as a free online course which incorporates European case studies and contexts. An Information Hub was also launched to provide a home for the pilot European Cluster network online as well as the project's broader community of practice, with useful resources for internal and external stakeholders.

### Legacy Highlights:

#### Journal Articles:

- [Forming and managing a Farmer Cluster for improved farmland biodiversity in Europe](#) - Ecological Solutions and Evidence

#### Guidelines:

- [Farmer Clusters: An Overview](#)
- [Starting A Farmer Cluster](#)
- [Managing A Farmer Cluster](#)
- [Monitoring Biodiversity in Farmer Clusters](#)
- [Engagement in Farmer Clusters](#)
- [Communications for Farmer Clusters](#)
- [Translations of Guidelines](#)

#### Interactive Resources:

- [Project Cluster Network](#)
- [Landscape Leaders: Advanced Farmer Cluster Training Programme](#)
- [Cluster Mini-Documentaries](#) | [Substack Profiles](#)

#### Reports:

- [Guidelines on setting-up, managing and promoting Advanced Farmer Clusters](#)
- [Report on the Advanced Farmer Cluster Facilitator Training Programme and Events](#)
- [Report on the impact of Cluster approach on Farmer's self-identity and behaviour](#)
- [Farmer Cluster Network Activity Summary Overview](#) | [Cluster Activity Briefs](#)



## 3. Biodiversity Monitoring

### Assessing biodiversity through environmental and citizen science

The project developed standardised but flexible approaches to biodiversity monitoring suitable for implementation by consortium partners' specialist teams, Cluster farmers and local communities across diverse European contexts. Professional protocols were created for surveying habitats, vegetation, insects and farmland birds. These surveys generated extensive datasets across all 11 Clusters, providing both locally valuable baselines and cross-comparable information for the project's wider research.

Alongside professional monitoring, the project invested significantly in citizen science approaches. Training materials were developed to support farmer-led and community-based recording, with the Biodiversity Observatory (hosted on iNaturalist) providing a platform for farmer and community observations across project areas. This dual-track approach aimed to pilot ways biodiversity monitoring can be scientifically useful, gathered at scale and socio-economically valuable for farming communities and their collaborators.

The resulting data was made openly accessible via the project's Data Hub, offering a place to explore, use and contribute to its biodiversity monitoring datasets. Methods developed through the project are also documented, providing a practical legacy for other initiatives seeking to evaluate and implement similar approaches. Read on to discover ways collected data was used in specific research outputs seeking to enhance agroecological understanding and decision making.

#### Legacy Highlights:

##### Journal Articles:

- [The Farmer Cluster approach for effective agroecology: a standardised protocol for measuring farmland biodiversity outcomes at the landscape-scale across Europe](#) – PLOS One
- [Citizen science in environmental and ecological sciences](#) – Nature Reviews Methods Primers
- [The Concept, Practice, Application, and Results of Locally Based Environmental Monitoring](#) – BioScience
- [Data Sovereignty in Community-Based Environmental Monitoring](#) – BioScience
- [Community monitoring of natural resource systems and the environment](#) – Annual Review of Environment and Resources
- [Creating Synergies between Citizen Science, Indigenous, and Local Knowledge](#) – BioScience

##### Interactive Resources:

- Project Data Hub – [Info Hub](#) | [CREAF](#)
- Project Citizen's Observatory - [Info Hub](#) | [iNaturalist](#)

##### Reports:

- [The FRAMEwork approach to farmer-based biodiversity and ecosystem services monitoring](#)
- [FRAMEwork Monitoring Tools](#)
- [FRAMEwork Database of metrics and indicators of farmland biodiversity and Ecosystem Services](#)
- [FRAMEwork citizen science protocols and materials for Farmer Clusters](#)





## 4. Agroecological Understanding

### Providing insights on biodiversity-sensitive management

Understanding the ecological relationships between farming practices and biodiversity outcomes was central to the project's research. Work in this strand investigated drivers of biodiversity change in agricultural landscapes, including crop-habitat-biodiversity relationships and the role of conservation biological control in integrated pest management. Literature synthesis and meta-analyses addressed key knowledge gaps, while ecological modelling explored management impacts on agrobiodiversity, including natural pest regulation dynamics and the effects of land abandonment.

These research insights informed the identification of best-practice approaches for place-specific biodiversity-sensitive management, recognising that effective interventions vary significantly across farming systems and biogeographical contexts. The project sought to connect generalised ecological understanding with the practical realities faced by farmers in different Cluster regions, from Mediterranean olive groves to northern European arable systems. Beyond academic papers, two tools were developed to support practical application of agroecological insights.

The first minor tool, DigiFarms, provides virtual landscape experiences that visualise several Clusters' biodiversity information in local languages. Created with specialist consortium input and tested with Cluster farmers, their feedback on the tool highlighted further potential as an interpretive online experience for visitors and educational use. A second more expansive tool, the FEAST DST (Farmland Ecosystem Assessment Support Tool), helps land managers evaluate relationships between management, agrobiodiversity and ecosystem services to support informed decision making. The tool incorporates data and case studies from several project Clusters, and was also used to model longer-term possibilities such as habitat improvement measures and species reintroductions being considered.

### Legacy Highlights:

#### Journal Articles:

- [Modelling agricultural landscape complementation for natural pest control](#) – Journal of Applied Ecology
- [Effectiveness of flower strips on insect restoration in intensive grassland](#) – Agriculture, Ecosystems and Environment
- [Soil-Dwelling Arthropods' Response to Land Abandonment in Mediterranean Olive Groves](#) – Land
- [Is the Abandonment of Organic Grassland a Threat to Alpine Insect Diversity?](#) – Land
- [Spontaneous flowering vegetation favours hoverflies and parasitoid wasps in apple orchards](#) – Agriculture, Ecosystems & Environment

#### Interactive Resources:

- FEAST Decision Support Tool: [Info Hub](#) | [University of Hertfordshire](#)
- TAPIS Protocol Selection Tool: [Info Hub](#) | [Grumets](#)

#### Reports:

- [A functional landscape complementation model with recommendations](#)
- [Report on landscape complementation modelling including validation](#)
- [FRAMEwork Practitioner Sustainability Assessment Tool](#)
- [Novel DST for Agrobiodiversity Management](#)





## 5. Transition Pathways

### Analysing systems-level barriers and opportunities

Achieving lasting change in how farming systems relate to biodiversity requires understanding socio-ecological dimensions at an even broader scale - what motivates farmers, what barriers they face, and how policy and economic incentives shape decision making. So the project investigated farmer attitudes, motivations and behavioural drivers through surveys and qualitative interviews across the Cluster network. Findings pointed to factors that increase biodiversity appreciation as a driver of engagement, as well as practical and economic constraints on adopting new practices.

The project also examined how public and private incentive mechanisms could better support biodiversity-sensitive farming and the Cluster approach specifically. This included evaluation of existing agri-environment schemes and exploration of novel financing routes. Social-ecological systems modelling and natural asset profiling methods were developed to explore wider costs and benefits of the Cluster approach, assessing its potential to deliver system-level change beyond individual farm boundaries. A DST, FRAMEtest, was created to help decision makers evaluate the Cluster model in transition contexts, for example organic conversion. The tool supports scenario exploration and risk assessment, reflecting the project's recognition that transitions to biodiversity-sensitive farming involve navigating complex trade-offs.

To bring all systems-thinking activity together, the project distilled its approach into a 'FRAMEwork System' for Biodiversity-Sensitive farming. Sustained policymaker outreach throughout the project sought to translate findings into recommendations for systems-level change, and position collective approaches like Farmer Clusters within evolving European and national policy frameworks. A series of policy briefs and headline articles were ultimately published and can be explored below.

#### Legacy Highlights:

##### Journal Articles:

[Dynamic trajectories and maturity of farmer collaboration for biodiversity sensitive farming – Insights from the FRAMEwork Farmer Clusters](#) – Agricultural Systems / Elsevier

[Advancing Agri-Environmental Policy with Behavioral and Experimental Economics: Insights, Innovations, and Future Directions](#) – Journal of Agricultural and Resource Economics

##### Interactive Resources:

[FRAMEtest Decision Support Tool](#)

[Video Abstracts and Webinars](#)

##### Policy Briefs & Reports:

[Summary information notes and policy briefs](#)

[Report on result-based payments to promote agrobiodiversity](#)

[Report on current and potential private incentives](#)

[Review of existing public incentive schemes plus design options](#)

[Report on the NAP and regional impact forecasting](#)

[Report on the drivers and barriers to the provision of biodiversity and ecosystem services](#)

[A protocol for Natural Assets profiling and assessment](#)

[Farmer Clusters Matter: How Clusters can enhance participation in Agri-Environmental Schemes](#)

[From Neighbours to Nature Stewards: How social learning in Clusters Strengthens Biodiversity Action](#)



## Consortium Partners



Written and compiled by © Taskscape Associates - Consortium Partner for Communication, Participation & Knowledge Exchange



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