



# Engaging the wider public in farmland biodiversity monitoring: campaign design and implementation

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## 1. Background to the FRAMEwork project

### 1.1 FRAMEwork Project Executive Summary (*abbreviated*)

Biodiversity is essential for agroecosystem resilience, sustainability, and long-term food security. Traditionally, management for short-term economic returns has taken priority over management for the environment. Current mechanisms for compensating and encouraging farmers to apply biodiversity sensitive management strategies are often inefficient, being applied at individual farm rather than landscape level, and tend to be generic solutions, imposed from the top down at an EU or national level. Monitoring is rarely carried out and there is therefore little scope for evaluating the success of strategies in achieving improvements to farmland biodiversity.

The FRAMEwork project has been designed and develop a novel alternative to this called the **FRAMEwork System for Biodiversity Sensitive Farming** to enable the transition of EU farming systems to a position where they can conserve biodiversity and benefit from the enhancement of ecosystem services, while mitigating agronomic or economic risks. The FRAMEwork System combines the following elements:

- **Advanced Farmer Clusters** – local farmer groups working as a collective to deliver landscape scale management, supported by a Cluster Facilitator with expertise in agriculture and the environment, and linked to a local Cluster Stakeholder Group to inform and promote policy and practice, organised into regional, national, and international networks.
- **Technical Resource** – technical specialists associated with the regional, national, international networks to provide technical information, methods, and tools to support agrobiodiversity monitoring, management and policy including the dedicated DSTs – FRAMEselect and FRAMEtest.
- **Scientific Innovation** – researchers associated with regional, national, international networks to provide knowledge on the ecology, sociology and economics that underpins the functioning of sustainable agricultural systems.
- **Citizen Observatory and Information Hub** – an open access platform to support FRAMEwork networks, sharing activities, information, data and resources between farmers, scientists, policy makers, and citizens.

The FRAMEwork project will design, build, test, and deploy a prototype of the FRAMEwork System for Biodiversity Sensitive Farming and will work with 3 concepts important to the success and delivery of the project: (i) promoting collective landscape management; (ii) applying the approach across a diversity of European farming systems; and (iii) understanding and supporting the social and ecological change associated with a transition to biodiversity sensitive farming.

## 1.2 Project Partners

No	Participant organisation name	Type	Country
1*	The James Hutton Institute (HUTTON)	Research Inst	UK
2	Game and Wildlife Conservation Trust (GWCT)	Non-profit	UK
3	Groupe de Recherche en Agriculture Biologique (GRAB)	Non-profit	FR
4	Universitaet fuer Bodenkultur Wien (BOKU)	University	AT
5	Eesti Maaulikool (EMU)	University	EE
6	Hoehere Bundeslehr- und Forschungsanstalt fuer Landwirtschaft Raumberg-Gumpenstein (AREC)	Research Inst	AT
7	Fundacion Artemisan (ARTEMISAN)	Non-profit	ES
8	Scuola Superiore di Studi Universitari e di Perfezionamento Sant'anna (SSSA)	University	IT
9	The University of Hertfordshire Higher Education Corporation (UNI OF HERTS)	University	UK
10	Centro de Investigacion Ecologica Yaplicaciones Forestales Consorcio (CREAF)	University	ES
11	Institut National de la Recherche Agronomique (INRAE)	Research Inst	FR
12	Internationales Institut fuer Angewandte Systemanalyse (IIASA)	Research Inst	AT
13	Universiteit van Amsterdam (UvA)	University	NL
14	Luxembourg Institute of Science and Technology (LIST)	Research Inst	LU
15	Universitaet Osnabrueck (UOS)	University	DE
16	Taskscape Associates Limited (TAL)	SME	UK
17	Ceska Zemedelska Univerzita v Praze (CULS)	University	CZ
18	Nordisk Fond for Miljo og Udvikling (NORDECO)	SME	DK

\*Coordinating institution

## 1.3 Purpose of the Deliverable

The report summarizes and demonstrates the activities undertaken in each Farmer Cluster to engage the wider public in citizen science activities, i.e., observations of farmland biodiversity, in their areas.

## 2. Executive Summary

This report summarizes the activities and outcomes of Task 3.3 within the FRAMEwork project, focusing on engaging the public through citizen science campaigns to monitor farmland biodiversity and promote sustainable farming practices among diverse stakeholders.

The project utilized bioblitzes - intensive, time-bound events where volunteers, scientists, and nature enthusiasts collaborate to identify and record species - as a primary tool for public engagement. Other event formats included Open Science Days, National Bee Counting, school visits, and the creation of permanent biodiversity paths. All events were designed to be inclusive, educational, and adaptable to local contexts. The iNaturalist platform was used for recording and sharing observations, enabling real-time data identification and public participation, as well as valuable data collection for scientific research and local conservation efforts.

In summary, 38 citizen science events were organized across 11 Farmer Clusters in nine European countries. Over 13,000 participants were engaged, including hundreds of youth, farmers, students, and local communities. 10,189 biodiversity observations were recorded, identifying 2,190 species via iNaturalist by July 2025. These events successfully demonstrated the power of citizen science and community engagement in promoting, monitoring and reporting of agrobiodiversity. The use of bioblitzes, other events, and digital tools like iNaturalist provided a scalable, inclusive model for biodiversity monitoring and public awareness raising and education.

## 3. Introduction

The aim of Task 3.3 is to develop citizen science campaigns that engage the wider public in biodiversity monitoring around Farmer Cluster regions to strengthen Farmer Cluster activities and to amplify awareness and acceptability of agrobiodiversity and pro-biodiversity farming across different stakeholder groups. There is no single 'right' way of undertaking citizen science campaigns. The approach will vary and what is suitable to ensure effective engagement will vary from one place to another, although there are a number of features which, in many cases, will be shared.

One of the most effective ways to engage the public in observing farmland biodiversity in Europe is through bringing people together and enabling them to be part of a **bioblitz**. A **bioblitz** is a citizen science event where volunteers, scientists, and nature enthusiasts work together to identify and record as many species as possible in a specific area within a set time frame. It combines biodiversity exploration with public engagement, helping to document local wildlife and plants. Bioblitzes raise awareness about conservation and contribute valuable data for scientific research. The Facilitators of the Farmer Clusters were introduced to, and trained in, facilitating bioblitzes using iNaturalist as the monitoring platform, and with participation by the Farmer Cluster in Luxembourg in the 2022 global City Nature Challenge to showcase how it could be done. The training materials are available in Zenodo (Kragh et al., 2025).

Over the course of the FRAMEwork project, from October 2020 to June 2025, the project partners

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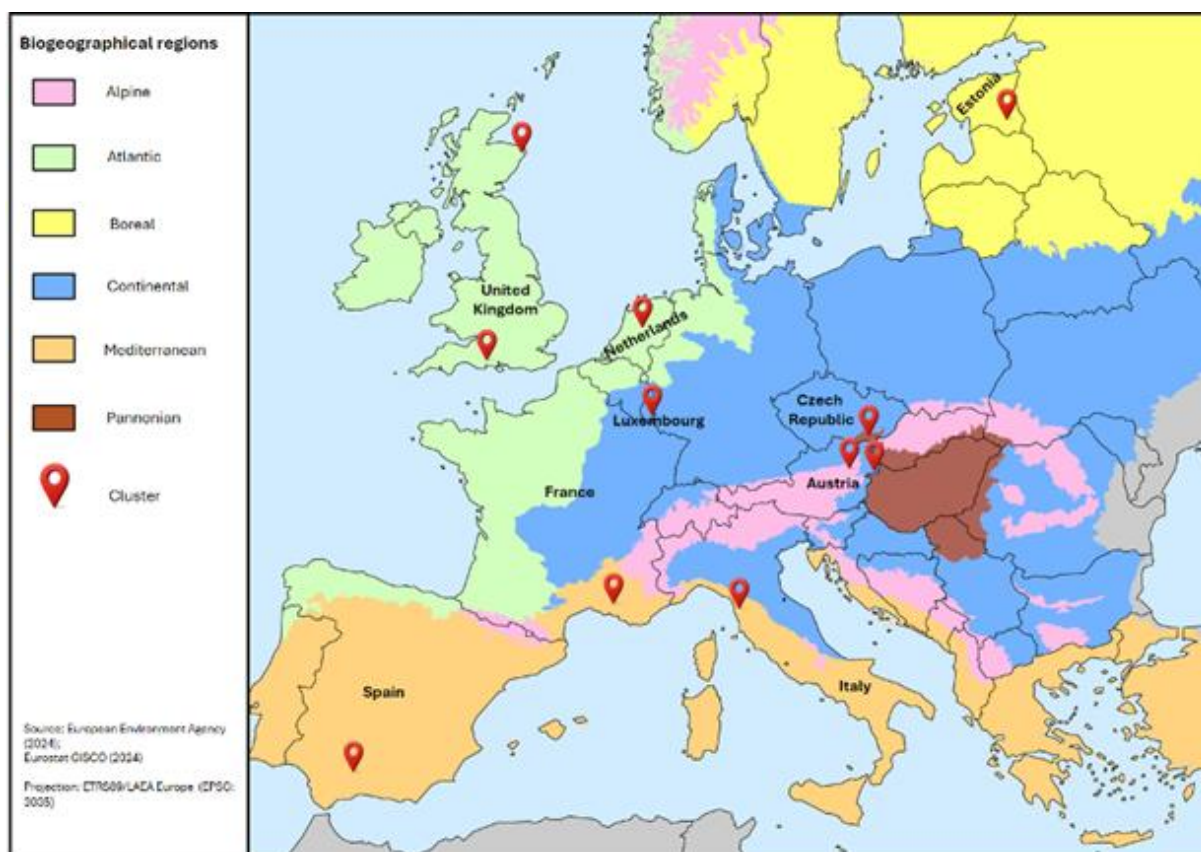
organized or co-organized a total of 38 bioblitzes and other events to engage local citizens and public bodies in observing biodiversity in the farmlands of the Farmer Clusters. Collectively, these events attracted over 13,000 participants including citizens of at least nine European nations. Notably, several hundred youths took part, particularly in the Farmer Clusters in [Mostviertel](#) (Austria), [Kanepi kihlkund](#) (Estonia), [Basse-Durance](#) (France), and [Val Graziosa](#) (Italy). All Farmer Clusters in the FRAMEwork project, with the exception of two, organized bioblitz events. Most of the clusters organized one or two bioblitz events, but the [Born](#) cluster (Luxembourg) held three, and the [Val Graziosa](#) (Italy) cluster conducted four. The two Farmer Clusters that opted for alternative engagement formats organized Open Science Days (Basse-Durance, France) and the National Bee Count ([Zeeasterweg](#), Netherlands) to involve the public in biodiversity observation. This document provides a comprehensive summary of the public engagement events conducted by each Farmer Cluster to promote biodiversity in the farmlands.



## 4. Farmland biodiversity monitoring by the wider public

Task 3.3 has developed citizen science campaigns that engaged the wider public in biodiversity monitoring around Farmer Cluster regions (Figure 1), complementing farmer-based biodiversity monitoring. This strengthened Farmer Cluster activities and amplified awareness and acceptability of agrobiodiversity and pro-biodiversity farming across different stakeholder groups, including policy makers and the general public.

The project was envisaged to run one public monitoring campaign around each Farmer Cluster and a concerted activity across all Clusters. This task included project set-up and testing of iNaturalist as the monitoring tool and platform. The public monitoring campaigns were organised as part of public events around Farmer Clusters, engaging local citizens and public bodies in broader awareness raising and knowledge exchange events on biodiversity and ecosystem services.



**Figure 1.** Location of the eleven Farmer Clusters (red dots) (credit: Alon Zuta, JHI).

This deliverable features 38 citizen science biodiversity monitoring activities, conducted by the Farmer Clusters. The number of participants in each event is provided in brackets after the description of the event (Table 1). In total, Farmer Clusters engaged with over 13,000 participants. The citizen science events cover a wide range of activities to engage the wider public in biodiversity monitoring.

**Table 1.** List of citizen science biodiversity monitoring activities by Farmer Clusters (FCs alphabetically listed). Number of participants indicated in brackets. Links to stories about the events added.

FC (Country, Partner)	Oct. 2020 - Sep. 2023	Oct. 2023 - Jun. 2025
<a href="#">Basse-Durance</a> France (GRAB)	<ul style="list-style-type: none"> <li>Preparation of <b>Open Science Day</b> to engage the public in FC bat box monitoring (21).</li> </ul>	<ul style="list-style-type: none"> <li><b>Bat Observation Open Science day</b>, Oct 2023 (21: 15 students and 6 people from the general public).</li> <li><b>(Bat Observation Open Science day</b>, Oct 2024, cancelled because lack of participation).</li> <li><b>Bat monitoring</b> in Basse-Durance Valley on 7 May 2025 with students from University of Avignon (17). Organized together with INRAE and GCP (a regional chiropterologist organization).</li> </ul>
<a href="#">Born</a> Luxembourg (LIST)	<ul style="list-style-type: none"> <li>Public <b>bioblitz</b> as part of CNC 2022 (300).</li> <li>Public <b>bioblitz</b> as part of CNC 2023 (150).</li> <li><b>Nocturnal cameras</b> operated by citizens (6). Link: <a href="#">The Night Comes Alive</a>.</li> </ul>	<ul style="list-style-type: none"> <li>City Nature Challenge <b>bioblitz</b>, April 2024 (180), co-organised with the Museum of Natural History, Ramborn Cider Co, &amp; the NGO BeeTogether.</li> </ul>
<a href="#">Buchan, Scotland</a> UK (HUTTON)	<ul style="list-style-type: none"> <li><b>Bioblitz</b> as part of NHS festival in Aden Country Park - May 2023 (200).</li> </ul>	
<a href="#">Burgenland</a> Austria (BOKU)	<ul style="list-style-type: none"> <li><b>Wild bee exhibition</b> for wider public at Seehof Open Farm Days - March 2023 (1,500).</li> <li><b>Workshop with Farmers</b> as part of the ÖKL (<a href="https://oekl.at">https://oekl.at</a>) Information Event on Biodiversity Monitoring (100). The focus was on identifying specific indicator plants and insects for biodiversity in the Seewinkel region (10).</li> <li><b>Wild bee exhibition</b> for farmers during Open School day at Agricultural School Güssing - June 2023 (300).</li> </ul>	<ul style="list-style-type: none"> <li><b>Bioblitz, exhibitions and demo workshops</b> at the BioFeldTage (Organic Field Days event) at Seehof, May 2024 (8,000).</li> <li><b>Bioblitz <a href="#">City nature Challenge 2025</a></b> 28 April 2025 Neusiedler See – Seewinkel Nationalpark (66).</li> </ul>
<a href="#">Cazadores de Aguilar</a> Spain (ARTEMISAN)	<ul style="list-style-type: none"> <li><b>School visit and bioblitz</b> planned both 2022 and 2023 - both events had to be cancelled due to early heat wave.</li> </ul>	<ul style="list-style-type: none"> <li>City Nature Challenge <b>bioblitz</b> with Vicente Nuñez high school of Aguilar in May 2025 (45).</li> </ul>

FC (Country, Partner)	Oct. 2020 - Sep. 2023	Oct. 2023 - Jun. 2025
<a href="#">Cranborne Chase, England</a> UK (GWCT)	<ul style="list-style-type: none"> <li>• <b>Series of public engagement in citizen science</b> activities (farmland bird ID training, training event at Launceston Farm, monitoring mammals, pollinator and butterfly ID event at Chettle House, arable plant survey event) - Feb 2023 (16).</li> <li>• <b>Family activities and Mini-bioblitz</b> at Open Farm Sunday on Rawston Farm - June 2023 (1,500).</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Big Farmland Bird count</b> and farmland bird ID training also open to volunteers (9).</li> <li>• <b>Pollinator Identification</b> at Canada Farm also open to volunteers (2).</li> <li>• <b>Harvest mouse surveying training session and field survey</b> 9 December 2024 (20).</li> </ul>
<a href="#">Kanepi kihlkund</a> Estonia (EMU)	<ul style="list-style-type: none"> <li>• <b>Bioblitz, Educational excursion</b> with high school at cluster farm Väike-Hauka,- May 2023 (11).</li> <li>• <b>Kindergarten visit</b> to FC and biodiversity observations - May 2023 (19).</li> </ul>	<ul style="list-style-type: none"> <li>• <b>School visit and bioblitz, Biodiversity and farming - education in nature</b>, May 2024 (11 high school and 15 kindergarten kids).</li> <li>• <b>Farmland biodiversity information booth and game</b> at the 69th World Ploughing contest 2024, August 2024.</li> <li>• <b>31<sup>st</sup> international agriculture, forestry, gardening and food expo stall</b>, Maamess in May 2025.</li> <li>• <b>School visit and bioblitz</b>, May 2025 (10 high school and 12 kindergarten kids).</li> </ul>
<a href="#">Mostviertel</a> Austria (AREC)	<ul style="list-style-type: none"> <li>• <b>Conservation Practitioner Workshop</b> - Guided tour through the meadows of a Cluster Farm: Identification of grassland plant species and insects, as well as wild bee collection and identification - May 2023 (25)</li> <li>• <b>Bioblitz</b> - guided tour and collection of biodiversity observations for families, Farmer Cluster event at Aubauernhof - May 2023 (15).</li> </ul>	<ul style="list-style-type: none"> <li>• <b>School pupils visit</b> to Schuller family's farm, <a href="#">Landwirtschaft pur! Citizen Science am Biohof Schuller</a>, 25 June 2024 for iNaturalist scavenger hunt followed by plant and animal discussions (13 pupils).</li> <li>• <b>Mostviertel Farmer Cluster meets Salzburger Flachgau</b> - guided tour through the meadows of a farm, insect collection and identification - November 2023 (28).</li> </ul>
<a href="#">Val Graziosa</a> Italy (SSSA)	<ul style="list-style-type: none"> <li>• <b>Bioblitz</b> as part of <a href="#">City Nature Challenge 2023</a> (120).</li> <li>• <b>Bioblitz</b> with schoolkids as part of the Bright Night 2023 and during the year at some schools in the region - September 2023 (100).</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Bioblitz</b> in Monte Pisano co-organised with Natural History Museum of Calci and Sportello Agroecologico, 4 May 2024 (45).</li> <li>• <b>Bioblitz</b> in Monte Pisano co-organised with <a href="#">Natural History Museum of Calci</a> and Sportello Agroecologico, part of <a href="#">City Nature Challenge 2025</a>, 25-28 April 2025 (94).</li> </ul>

FC (Country, Partner)	Oct. 2020 - Sep. 2023	Oct. 2023 - Jun. 2025
<a href="#">Velké Hostěrádky</a> Czech Rep (CULS)	<ul style="list-style-type: none"> <li>Co-creation of <b>Public Biodiversity Path</b> - to be opened in 2024 with a large bioblitz (linked to CNC) (15): <a href="#">Czech Community Building</a> and tree-planting action (<a href="#">Farmer collaboration for biodiversity</a>) to mark the completion of the path - Nov 2023 (30).</li> </ul>	<ul style="list-style-type: none"> <li><b>Bioblitz</b> for public opening of 7.8 km biodiversity path and iNaturalist project on <a href="#">Clover day at BIO region Velke Hosteradky</a>, 18 May 2024 (~250). This permanent path includes signboards with information on farmland biodiversity and the barcode for the iNaturalist app to help citizens identify and monitor wildlife and plants. Established in cooperation with the local municipality of Velke Hosteradky.</li> </ul>
<a href="#">Zeeasterweg</a> Netherland (UVA)	<ul style="list-style-type: none"> <li><a href="#">National Bee counting day</a> – May 2022 (30).</li> </ul>	<ul style="list-style-type: none"> <li>Introduction to <b>moth monitoring</b> by BIMAG was also attended by interested citizens from the area, <a href="#">Summer evening meeting of moths</a> July 2024 (5).</li> </ul>

## 5. Farmland biodiversity monitoring activities involving the wider public

### 5.1 Executed activities for Task 3.3

In each of the Farmer Clusters (FC), several activities were undertaken to engage the public in observing biodiversity in the farmlands (citizen science activities). The activities in each FC are summarized and documented below, listed in alphabetical order by FC name. An overview of participant numbers for each event is provided in Table 1.

#### 5.1.1 Basse-Durance, France

In collaboration with a research institute (INRAE), farmers from the FC and a local NGO, two citizen science events were undertaken with a focus on engaging local students and the general public in observing and monitoring bats in boxes in the farmlands in October 2023 (Figure 2) and in May 2025. This monitoring provided additional data on bat box occupation at different periods. The observations in May also provided useful information on how bats come into orchards to feed early in the season.





**Figure 2.** Promoting the bat observation event in October 2023.

### 5.1.2 Born, Luxembourg

Two types of citizen science events were undertaken in Born in Luxembourg: three bioblitzes in the farmlands in 2022, 2023, and 2024 and Citizen-operated nocturnal camera trapping (Figure 3). The bioblitzes were undertaken as part of the City Nature Challenge (Box 1).





**Figure 3.** **A.** Soil biodiversity monitoring for the City Nature Challenge, Luxembourg 2022; **B.** Citizen scientists on their way into the orchards of the Born cluster during the CNC in Luxembourg 2023; **C.** Base camp for the CNC Bioblitz in the Born cluster at the Ramborn Cider Haff in 2023; **D.** Citizen scientist taking a picture of grass (Poaceae) in bloom during the CNC 2024 in Luxembourg; **E.** Briefing of citizen scientists at Ramborn Cider Haff



by a volunteer of the NGO “BeeTogether” during the CNC 2024; **F.** Installing a camera trap with the lead farmer of the Born cluster, 2023; **G.** Picture taken by a camera trap that was installed in an apple tree, 2023.

**Box 1. Bioblitzes in the Farmer Cluster in Luxembourg.** By Marco Beyer, FC Born.

Bioblitzes under the City Nature Challenge (CNC) were conducted along a trail through traditional high-stem fruit tree orchards in Born in 2022, 2023 and 2024. A total of 178 citizens registered on iNaturalist and submitted 2,187 records documenting the presence of various organisms by taking pictures with their mobile phones. More than 178 people participated, as many formed groups where only one person registered and submitted observations. Photos were uploaded to the online platform iNaturalist, where experts identified the organisms based on morphological features. The number of observations provided per citizen scientist peaked during the CNC events, while observations were rare outside of the events. A total of 1,003 records were classified as “research grade quality” by the experts registered in the iNaturalist platform. 88% of the citizen scientists participated only once and participants therefore differed among years. The median number of observations per citizen scientist and day ranged from 6 to 8. The average number of research grade species reported per active citizen scientist was  $2.4 \pm 1.2$ . Most reports were made for plants and insects. Some birds, mollusks and fungi were also reported. Only few reptiles, mammals and amphibians were reported. Six non-cultivated plant species that were flowering during the periods of observation were consistently recorded on each day of the events. The total number of reported taxa identified increased with the number of observers and converged towards 231 taxa.

### 5.1.3 Buchan, Scotland, UK

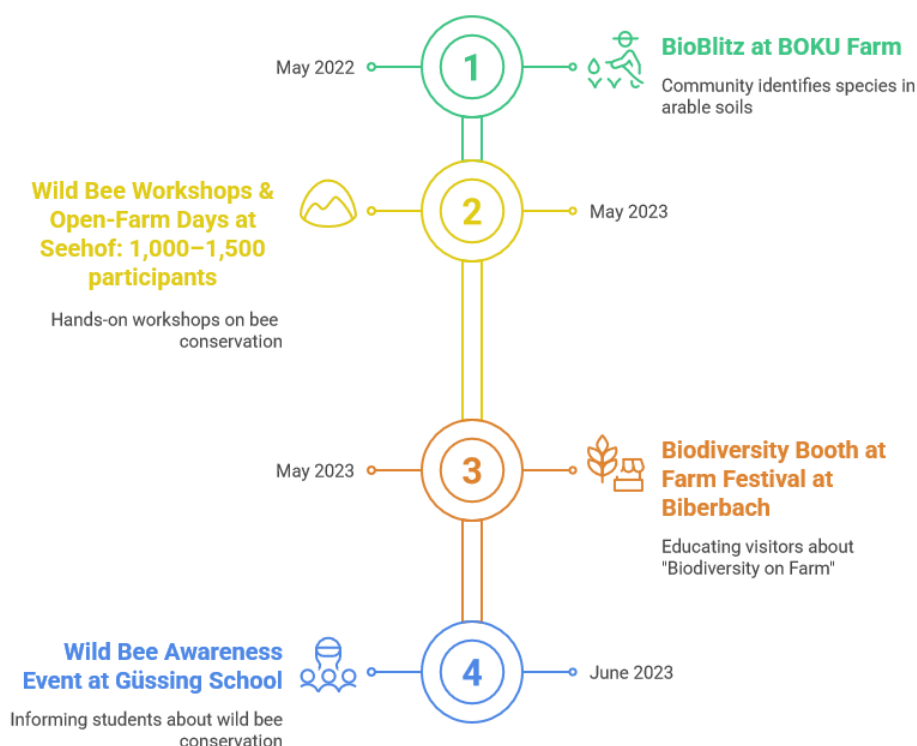
In the Buchan Farmer Cluster in Northeast Scotland, a bioblitz was successfully undertaken in the farmlands in 2023 (Figure 4). Biodiversity monitoring and walks as well as bird monitoring are planned for early August 2025 with members of the public and expert volunteers and will take place in the vicinity of one of the participating farms.



**Figure 4.** Materials from the bioblitz in the Buchan FC, 2023.

#### 5.1.4 Burgenland, Austria

In the Burgenland Farmer Cluster in Austria, bioblitzes were undertaken in both 2024 and 2025. In addition, workshops and exhibitions about plants and insects, including wild bees, as indicator species were organized. A graphical summary of the events in Burgenland is provided in Figure 5.



**Figure 5.** Graphical summary of the citizen science events in Burgenland Farmer Cluster in Austria. Prepared by FC Burgenland.

#### 5.1.5 Cazadores de Aguilar, Spain

Attempts to organize school visits to the farmlands with bioblitzes in 2022 and 2023 had to be cancelled due to heat waves. However, in 2025 a bioblitz with involvement of a local high school was successfully carried out in the farmlands.

#### 5.1.6 Cranborne Chase, UK

A series of activities engaging the public in citizen science were undertaken in Cranborne. The FC organized one bioblitz and participated in the Big Farmland Bird count. In addition, volunteers were trained on the farmlands in:



- identifying farmland birds;
- surveying harvest mice and other farmland mammals (Figure 6); and,
- identifying butterflies and other pollinators.



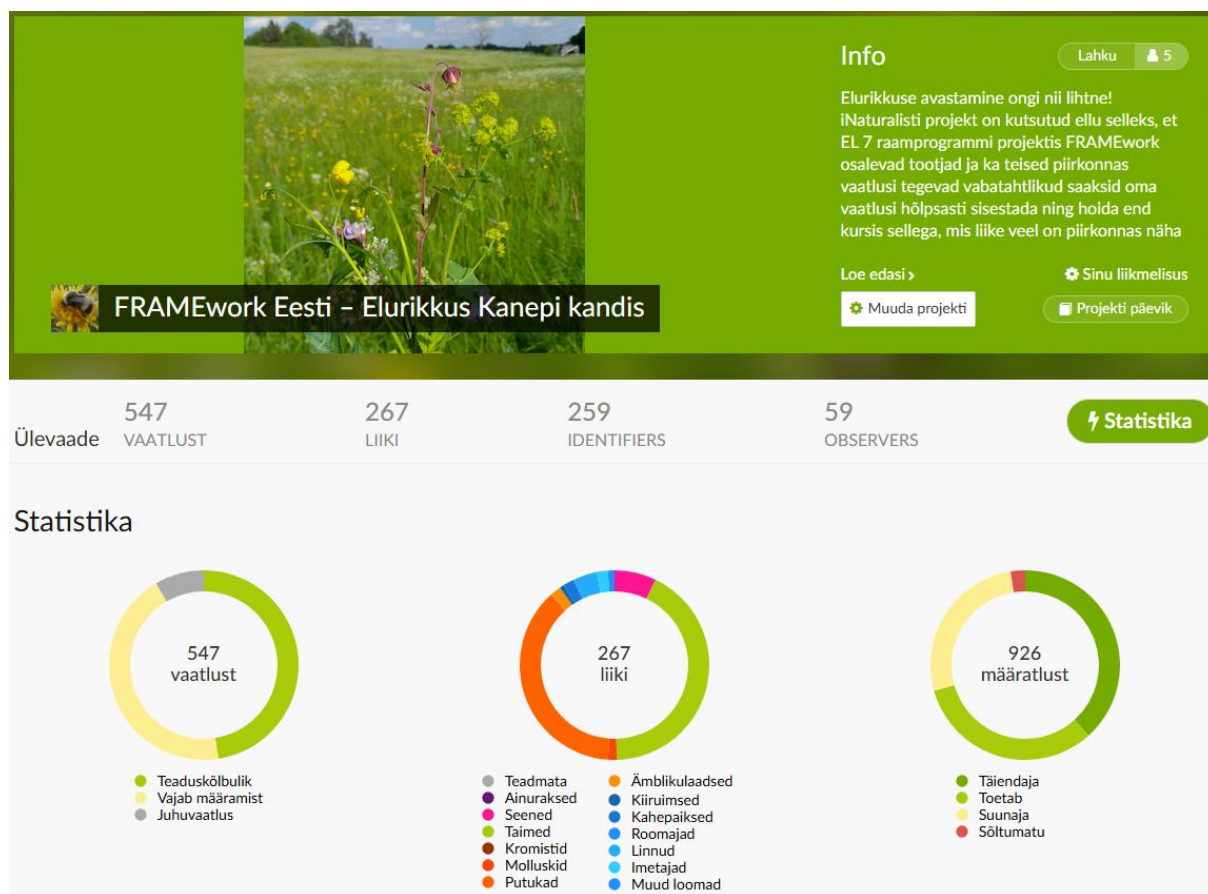
**Figure 6.** Harvest mice training and survey, December 2024.

#### 5.1.7 Kanepi kihlkund, Estonia

Bioblitzes were organized in the farmlands in Southern Estonia in 2023, 2024 and 2025. In addition, a visiting school and a kindergarten made observations of insects, birds and plants in the farmlands (Figure 7). During the walks, students explored the mud-frog pond, inspected pitfall traps, marveled together at the number of caddisfly larvae and added 100+ new observations to the area. The Farmer Cluster iNaturalist project ([www.inaturalist.org/projects/framework-eesti-elurikkus-kanepi-kandis](https://www.inaturalist.org/projects/framework-eesti-elurikkus-kanepi-kandis)) is open to public participation, and now has nearly 550 observations in this Farmer Cluster area (Figure 8).



**Figure 7.** Left: Field observation day for high school students and kindergarten children, May 2023 and Right: Field observation day for high school students and kindergarten children, May 2024.



**Figure 8.** The FC iNaturalist project collating biodiversity observation in the Farmer Cluster area.

To promote farmland biodiversity and raise awareness of its importance, information booths were set up at the 69<sup>th</sup> World Ploughing contest in August 2024 (Figure 9), and 31<sup>st</sup> international agriculture, forestry, gardening and food expo Maamess in May 2025. At Maamess, the pitfall trapping guide along with the most common carabid and staphylinid beetles found in Estonian agricultural fields was presented highlighting their diversity and ecological roles (Figure 9). The display also included an



introduction to Estonia's wild pollinators emphasizing their importance for sustainable crop production and ecosystem resilience. Following the idea that it is easier to care for and protect what we know, the main aim of all events was to raise awareness through familiarity with these often-overlooked species.



**Figure 9. Top:** Information stand and biodiversity game start at 69<sup>th</sup> World Ploughing contest 2024, August 2024 and **Bottom:** Introducing pitfall trapping guide and biocontrol agents and wild pollinators at the gardening and food expo Maamess, May 2025.

### 5.1.8 Mostviertel, Austria

The Farmer Cluster organised a bioblitz in the farmlands at Mostviertel with farmers and citizens, where the discovered plant and animal species were identified using iNaturalist (Figure 10).



**Figure 10.** Left: Bioblitz at the farm festival with Mostviertel Farmer Cluster and citizens, May 2023 and Right: Identification of bumble bees during the bioblitz at the “Aubauernhof” farm festival, May 2023.

Moreover, a workshop was held for conservation practitioners. The workshop focused on identifying grassland plant species and insects including wild bees in the meadows of Mostviertel. The Farmer Cluster attended the event “Cultural Landscape Then and Now” in November 2023 and participated in the bioblitz, which focused on collecting and identifying insects and plants. Local habitats were also discovered and discussed (Figure 11).



**Figure 11.** Left: Bioblitz and guided farm tour with the Mostviertel Farmer Cluster, November 2023 and Right: The collection and identification of insects and grassland species was a crucial part of the guided farm tour at the “Cultural Landscape Then and Now” event, November 2023.



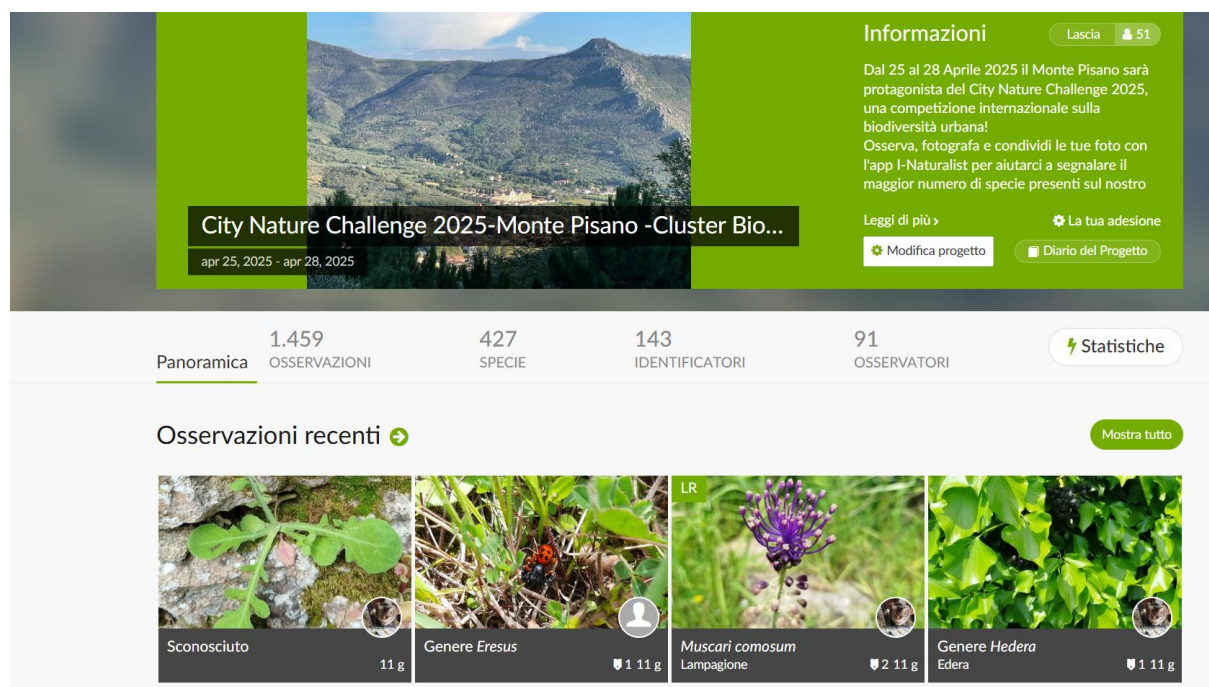
In addition, school pupils visited one of the farms in 2024. The platform iNaturalist was used to identify and subsequently encourage discussions with the school pupils about the benefits and challenges of wild plants and animals in the farmlands and how in practice to sustainably use and conserve farmland biodiversity (Figure 12).



**Figure 12.** Pupils at Framework cluster farm, with biodiversity scavenger hunt and bioblitz, July 2024.

### 5.1.9 Val Graziosa, Italy

In the Val Graziosa Farmer Cluster in Calci, Italy, bioblitzes were organised on the farmlands in 2023, 2024, and 2025. In 2025, the event was part of the City Nature Challenge (Figure 13). Moreover, some of the schools in the region continued making observations of biodiversity in the farmlands after these events, for instance during a ‘Bright Night’ event in 2023.


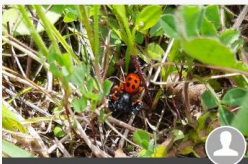
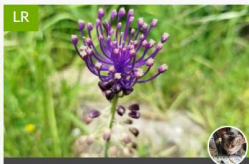
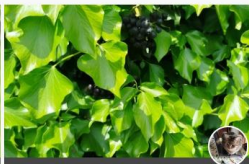


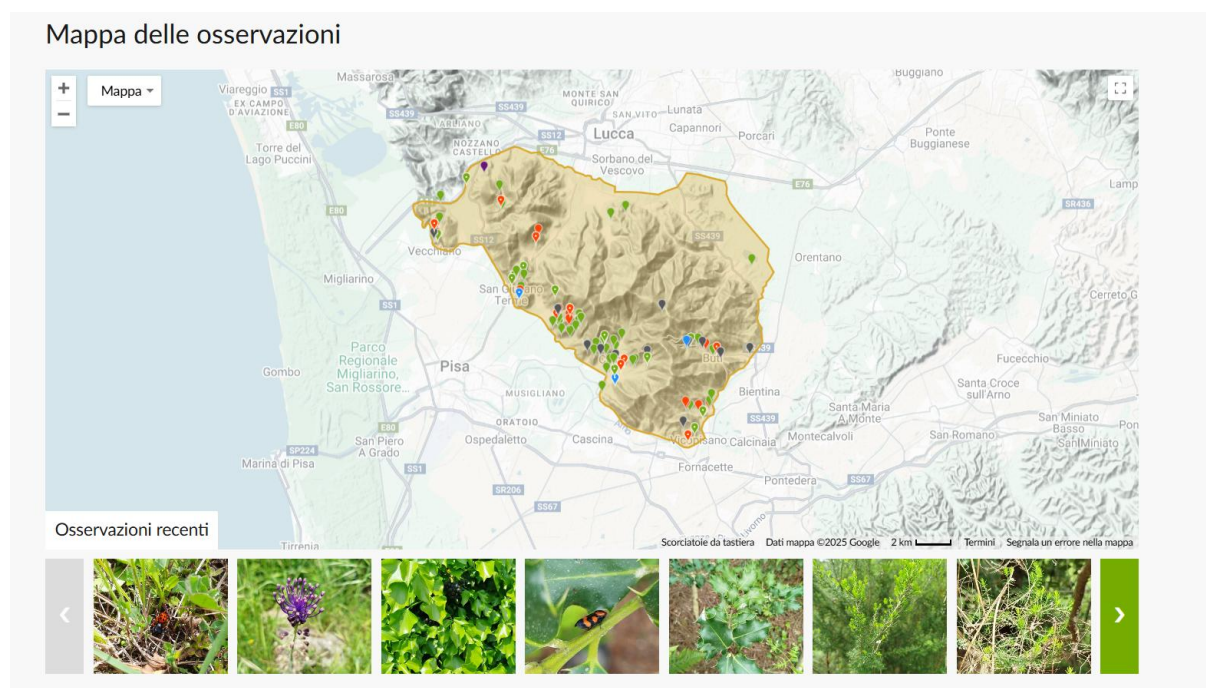
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apr 25, 2025 - apr 28, 2025

**Informazioni** Lascia 51  
Dal 25 al 28 Aprile 2025 il Monte Pisano sarà protagonista del City Nature Challenge 2025, una competizione internazionale sulla biodiversità urbana! Osserva, fotografa e condividi le tue foto con l'app i-Naturalist per aiutarci a segnalare il maggior numero di specie presenti sul nostro territorio.  
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 Sconosciuto 11 g	 Genere Eresus 1 11 g	 Muscari comosum Lampagione 2 11 g	 Genere Hedera Edera 1 11 g
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**Figure 13.** Bioblitz at Monte Pisano as part of City Nature Challenge, 2025; figures showing the CNC Monte Pisano page, mapped area and some recorded observations.

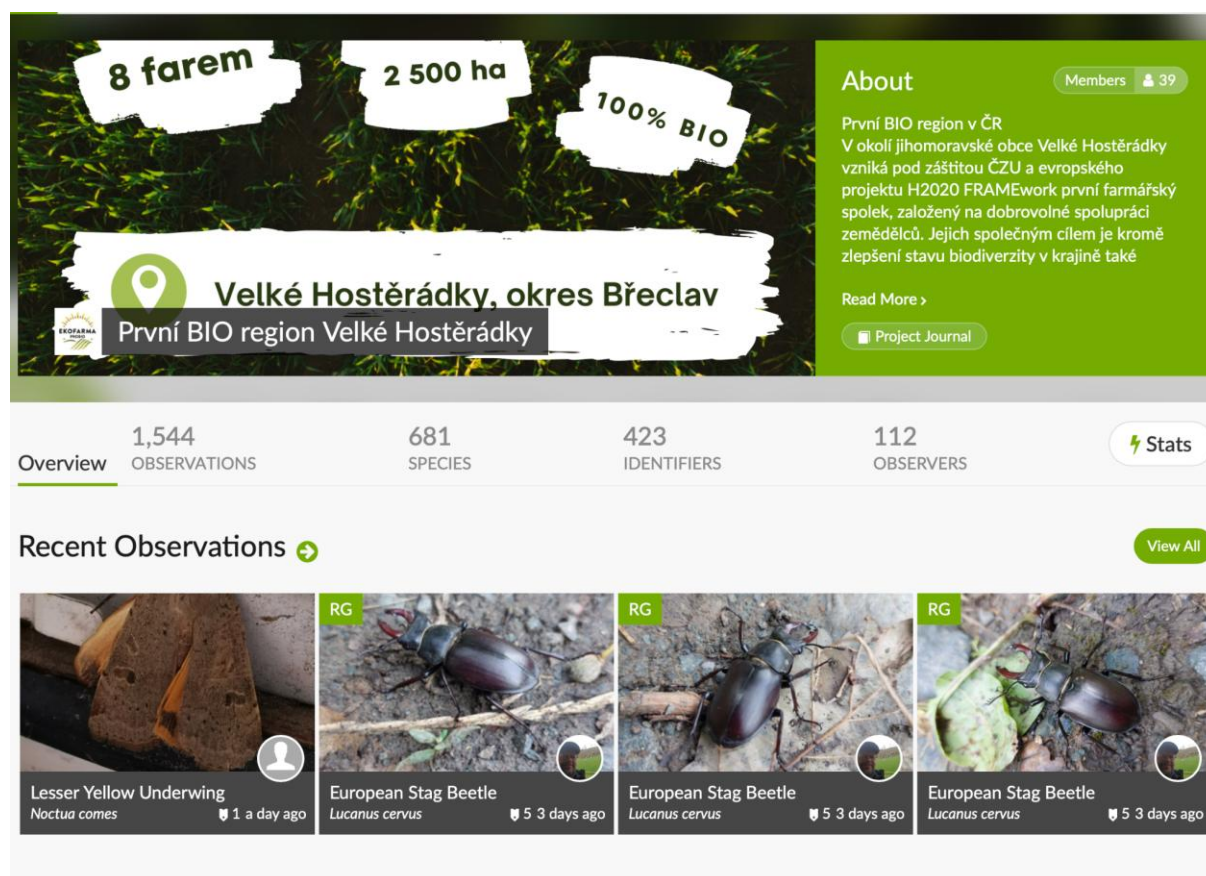
#### 5.1.10 Velké Hostěrádky, Czech Republic

At the Velké Hostěrádky Farmer Cluster, a bioblitz was organized in 2024. In addition, a permanent biodiversity path through the farmlands was established with signboards (Figure 14). The signboards explain the biodiversity in the various parts of the farmlands and provide a barcode for the iNaturalist app to help citizens identify and monitor the wildlife and plants that can be observed along the path (Figure 15). The biodiversity path was established by the project in close cooperation with the local municipality of Velké Hostěrádky. It opened on “Clover Day” in 2024 coinciding with the bioblitz in the farmlands on the same day.





**Figure 14.** Left: Children participating in the bioblitz were also interested in the latest monitoring tools such as drones, 2024 and Right: One of the boards of the biodiversity path established across the Czech Farmer Cluster.



**Figure 15.** Screenshot of the Czech FC project on iNaturalist (taken 15 July 2025, Iris Bohnet).

### 5.1.11 Zeeasterweg, Lelystad, Netherlands

The Zeeasterweg Farmer Cluster in Lelystad, The Netherlands, organized identification and counting of bees in the farmlands during the ‘National Bee Counting’ day in The Netherlands in 2022 (Figure 16). A summer evening monitoring of moths was organized and run in July 2024 with participation from farmers as well as members of the local community. About 60 different species were identified during the evening (Figure 16).



**Figure 16.**Left: National Bee Counting Day 2022 and **Right:** Moth monitoring, July 2024.

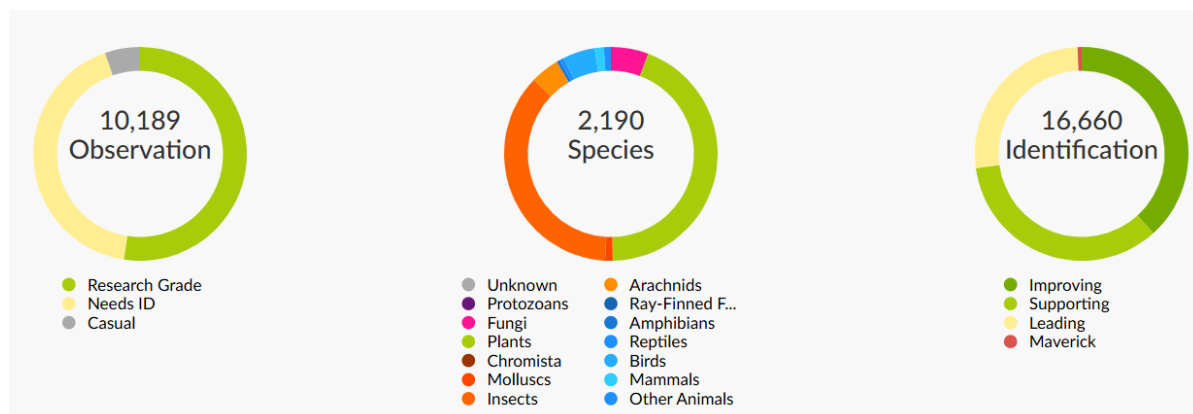
## 6. iNaturalist as engagement and biodiversity observation recording platform

The iNaturalist platform was used by eight Farmer Clusters for citizen science observations (Figure 17). This has led to a total of 10,189 observations submitted by 8 July 2025, leading to 2,190 species identified (Figure 18).



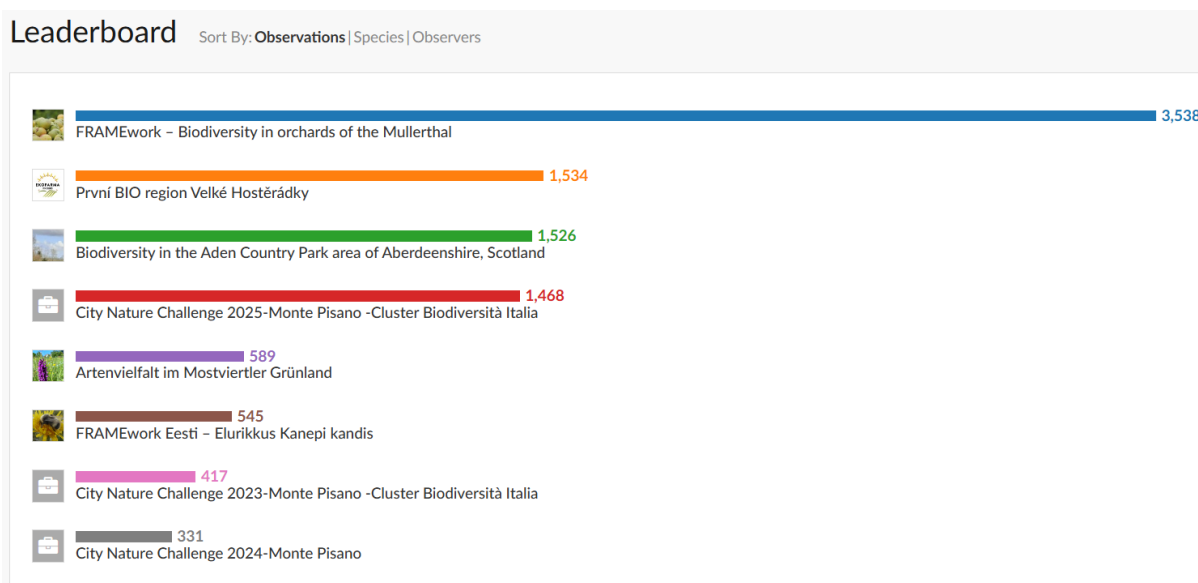
**Figure 17.** The FRAMEwork Citizen Biodiversity Observatory map and recent observations.





**Figure 18.** iNaturalist statistics of the FRAMEwork Citizen Biodiversity Observatory (8 July 2025).

One key advantage of the iNaturalist platform is its support for multiple languages, allowing Farmer Clusters to conduct events in their native language, thus making it easier for members of the local community to report their biodiversity observations. Furthermore, the platform immediately allows users to see their observations on the map, along with observations from other users in their area and anywhere else. The ability to set up our own FRAMEwork Citizen Biodiversity Observatory for the project overall, as well as local FC events separately that fed into the overall Observatory, made it possible for FCs to have a bit of a competition (Figure 19).



**Figure 19.** Leaderboard of the iNaturalist FRAMEwork Citizen Biodiversity Observatory, showing close competition between Farmer Clusters, with the Luxembourg FC in the lead.

The iNaturalist platform worked well as a biodiversity recording tool for the Farmer Clusters in FRAMEwork.

## References

Kragh, G., Poulsen, M. K., & Martin, Y. (2025). Public Engagement in Farmer Clusters: Bioblitz training. Zenodo. <https://doi.org/10.5281/zenodo.16080010>.

## Disclaimer

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