

FARMLAND BIODIVERSITY MONITORING THROUGH CITIZEN SCIENCE

Insights from a global review of 106 programmes

Why does farmland biodiversity matter?

- 🌱 Agriculture covers over one third of global land.
- 🌱 Biodiversity supports pollination, pest control, soil health & resilience.
- 🌱 Loss of biodiversity threatens farm productivity & ecosystem services.

What is citizen science?

Citizen science involves farmers, volunteers and the public in biodiversity monitoring alongside scientists.

It can:

- 🌱 Generate large volumes of data.
- 🌱 Be cost-effective with modern apps.
- 🌱 Boost awareness and engagement in biodiversity.

Eight citizen science approaches

- 1 **General programmes:** large-scale biodiversity trends, but farmland often underrepresented.
- 2 **Farmland-specific:** farm-focused monitoring, linking biodiversity to practices.
- 3 **Farmer-centred:** co-created projects empower farmers, but smaller in scale.

Benefits for farmers

- 1 **General programmes:** large-scale biodiversity trends, but farmland often underrepresented.
- 2 **Farmland-specific:** farm-focused monitoring, linking biodiversity to practices.
- 3 **Farmer-centred:** co-created projects empower farmers, but smaller in scale.

Challenges

- 🌱 Spatial and species biases in data.
- 🌱 Many records from few skilled volunteers.
- 🌱 Farmer involvement often limited to data collection.
- 🌱 Farmer-led projects may lack policy uptake.

Recommendations for Policymakers & Developers

- 🌱 Co-create programmes with farmers.
- 🌱 Provide timely feedback to participants.
- 🌱 Invest in simple tools and apps.
- 🌱 Scale successful models regionally.

Take-home message

Citizen science empowers farmers and communities to safeguard biodiversity while producing food sustainably.



This project receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862480.