



Synergies between agriculture, biodiversity and ecosystem services



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

Background



Biodiversity underpins many aspects of agricultural production. **Farmland biodiversity is steeply declining** throughout Europe.



To achieve sustainable agricultural production and positive biodiversity trends, **there need to be agricultural incentives for biodiversity management on farms.**

Approach

SHOWCASE is delivering **NEW INSIGHT AND INNOVATIVE TOOLS** to facilitate the agricultural sector's transition towards more sustainable farming.



Pan-European network of Experimental Biodiversity Areas (EBAs)



Analyses of frameworks, incentives, farmers' motivations and models of implementation



Evidence of the interactions between biodiversity and agriculture



Motives for stakeholders to embrace the reciprocal benefits of agriculture and biodiversity

Experimental Biodiversity Areas (EBAs)

SHOWCASE developed a pan-European network of **11 Experimental Biodiversity Areas (EBAs)**, across **10 countries** with contrasting farming systems.



Each of them serves as a knowledge exchange hub, where **multi-actor communities co-develop biodiversity innovations.**



Expected results



Business models for
biodiversity management



Handbook on how to integrate
biodiversity in farm management



Open access
datasets



Sets of
tested
biodiversity indicators



Citizen science
platform and
application



Framework of the current
**evidence on agriculture and
biodiversity across Europe**

SHOWCASE insights



[Publications](#)



[Practice abstracts](#)



[Policy brief](#)



[Open access collection](#)
in  **RIO** journal



SHOWCASE
The European Union's largest research and innovation initiative to support sustainable agriculture and rural development

BENDING THE CURVE OF BIODIVERSITY LOSS REQUIRES REWARDING FARMERS ECONOMICALLY FOR CONSERVATION MANAGEMENT

AUTHORS: David Flynn, Ignasi Batlle, Vincent Bragagnolo, Kati Hofer, Felix Herzog, Andrew Kerton, Erik Orlinger, Simon Potts, Gidon Sella, Arno Spangher, Lars Lasse Schäfer, Nikil Yashin

KEY MESSAGES

- Effective biodiversity conservation requires action on farmland.
- Agricultural management efforts to a wide range of biodiversity-based ecosystem services that sustain human life.
- Currently, the costs of managing for more biodiversity on farms are generally higher than the ecosystem service benefits this provides to farmers.
- Policy interventions are needed that make biodiversity-enhancing management on farms economically rewarding.

INTRODUCTION

Agricultural expansion and intensification are key drivers of biodiversity decline. There is mounting evidence that modern farming impacts the effectiveness of protected areas as one of the key instruments of biodiversity conservation. Through, for example, eutrophication, pesticide emissions or changing access to remote areas [1]. This is increasingly acknowledged and in many countries some nature efforts now include farmland lands and urge farmers to enhance biodiversity on their lands. It benefits farmland biodiversity which, especially in Europe, supports some highly threatened species groups [2]. However, farmland biodiversity is often

functionally important as it provides a wide range of ecosystem services. Examples are natural pest regulation, pollination, carbon sequestration, human well-being, water purification and cultural services. Agricultural management influences the provision of a wide range of ecosystem services and therefore, contributes to food security and mankind's ability to sustain itself in the mid to long term. There is clear evidence that enhancing farmland biodiversity promotes the delivery of specific ecosystem services [3]. For example, enhancing wild pollinators and natural enemies through the provision of semi-natural habitat increases productivity of many crops [4, 5]. However, only a few ecosystem services, such as pollination, pest control and nutrient cycling, may provide private benefits to farmers. Other services, such as carbon sequestration, biodiversity conservation, health benefits and water purification, are public goods which are poorly captured by markets [6].

EVIDENCE AND ANALYSIS

Recent studies done by participants of the international EU funded SHOWCASE project indicate that, under the current EU agri-environment, managing biodiversity on farms generally does not pay for itself [7-9].

POLICY RELEVANCE

Across the globe, human societies have acknowledged the multiple values of biodiversity and committed themselves to protect biodiversity through international treaties such as the Convention of Biological Diversity. An increasing number of policy instruments target farm management. For example, in the EU biodiversity on farmland is now not only targeted by the Common Agricultural Policy, but also by the 'Farm to Fork' strategy [10] and the proposed new Nature Restoration Law [11]. Although promoting such policy instruments have been unsuccessful in the past in halting biodiversity decline mostly because of lack of interest from mainstream farming. This is largely caused by current trade regulations requiring that biodiversity-friendly farmers can only be compensated for income foregone, transaction costs and any direct costs incurred. This, in turn, results in commitment to biodiversity management varying widely with fluctuations in crop prices, such as that due to the recent war in Ukraine, and usually only the most intrinsically motivated farmers participate consistently.

Global trade rules reward the farms that produce at the lowest economic costs despite the negative impacts on biodiversity, the environment and even the wellbeing of the producers [12]. This race to the bottom drives the continued expansion of unsustainable farming systems, both in area and intensity. **Bending the curve of biodiversity loss is only possible when biodiversity-enhancing management on farms becomes economically rewarding.** Since global markets are unlikely to provide these rewards at a sufficiently large scale, governments have to step in with policy tools that make nature-positive farming systems financially attractive to farmers.

POLICY RECOMMENDATIONS

Counteracting the negative side-effects of farming on biodiversity conservation requires:

- Policy regulations that provide financial incentives for farming systems that contribute to the ongoing biodiversity loss should be phased out.
- Agricultural products sourced from biodiversity-enhancing farming systems should be supported with subsidies going beyond compensating loss of income.
- Food processors and retailers should be obliged to raise the proportion of products sourced from nature-positive producers.
- Funds for the promotion of agricultural products should be redirected to support farming systems that enhance biodiversity.
- Policy interventions should have a food systems approach targeting all the actors across the food supply chain, in order to trigger the necessary changes at the farm level.

SUSTAINABILITY AND LEGACY

SHOWCASE's Deliverable D2.1 gives an overview of regulatory and incentive instruments for biodiversity management on farms. It provides a common knowledge basis on regulation and incentive schemes for other projects building the integration of biodiversity-friendly practices into farm management.



This project receives funding from the European Union under grant agreement 101019718.



Scan the QR code to access all the materials on SHOWCASE's website





 showcase-project.eu

 [showcase_h2020](#)

 [Showcase Project](#)

 [Showcase Project](#)

 [showcase.project.h2020](#)