



**SAFEGUARD**

Safeguarding European  
wild pollinators



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Safeguard Project

# Pollinator conservation does not always promote environmental co-benefits

Globally, numerous initiatives addressing the decline of pollinators have been implemented. However, these interventions aimed at safeguarding pollinators can have ripple effects on multiple ecosystem services equally important for human well-being.

In our study, we aimed to **1)** understand how wild pollinator diversity and ecosystem multi-functionality varied among different habitat types, and **2)** test whether improving local conditions for pollinators would also boost ecosystem multi-functionality.

We selected 96 sites in Northeastern Italy belonging to three habitat types with different roles in supporting pollinators, i.e., **crop field margins, semi-natural patches, and urban green areas**. We sampled wild pollinators and seven ecosystem services, which included **provisioning, cultural, and regulatory services**, using which we calculated two ecosystem multi-functionality metrics.

## In summary, we found that:

- 1** Interventions supporting pollinators can affect multiple ecosystem services;
- 2** Semi-natural patches and field margins enhanced pollinators and multi-functionality;
- 3** Increasing flower cover benefitted pollinators, but not multi-functionality;
- 4** Promoting pollinators does not always produce environmental co-benefits.

Future investigations are needed to understand how pollinator interventions could affect ecosystem services and ecosystem multi-functionality in different habitat types, and how landscape composition and structure could modulate these relationships.

## Source

Cappellari, A., Ortis, G., Mei, M., Paniccia, D., Carrossa, E., Eccheli, C., Facchetti, S., Lorenzon, G., Marini, L. (2023). Does pollinator conservation promote environmental co-benefits? *Agriculture, Ecosystems & Environment*, 356: 108615. <https://doi.org/10.1016/j.agee.2023.108615>

