

Farmland biodiversity: the new EU Common Agricultural Policy still falling short on landscape-scale conservation

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Spatial scale mismatches and landscape-scale conservation

Agriculture is a major driver of biodiversity decline, demanding an urgent transition towards a system that reconciles productivity and profitability with nature conservation. However, the effectiveness of agri-environmental policies is often impaired by a poor fit with the ecosystem processes they aim to enhance (Young, 2002; Cumming et al., 2006). Spatial scale mismatches (SSMs) are prominent examples of misfit, which occur when the spatial grid of the environmental governance structure is either too fine or too broad to effectively manage the targeted natural phenomena.

Ecological research showed that farmland species involved in the provision of essential ecosystem services to agriculture, along with most farmland birds, benefit from resource patches integrated across landscapes spanning a few kilometers (Ekroos et al., 2016; Thies and Tscharntke, 1999). In order to avoid SSMs and maximise effectiveness, farmland biodiversity conservation should thus match such landscape-scale.

The EU agri-biodiversity conservation policy in the new CAP

Since the 1990s, the European Union Common Agricultural Policy (CAP) includes measures for farmland biodiversity conservation. Assessments of the previous CAP periods found poor ecological outcomes and identified the lack of spatial coordination as a source of ineffectiveness as all measures target the single farms rather than the wider landscape-scale (ECA, 2020; Leventon et al., 2017; Pe'er et al., 2017). It is thus important to assess if and to what extent the recently reformed CAP legislation (EU Regulation 2021/2115) adopts any of the two main strategies for landscape-scale conservation in farmland: collective action and spatial planning.

Collective action

This approach aims at coordinating the otherwise scattered interventions on farmland (Prager, 2015; Vanni, 2014) but it has been only insufficiently incorporated in the new CAP. Collective action is not set as the standard or priority implementation method for any of the biodiversity-related measures. The only novelty is the broadening of

the scope of a cooperation measure which can promote agglomerations of farmers involved in conservation. Although potentially a very useful tool, its introduction in the national Strategic Plans is not mandatory and its actual scope and design are entirely devolved to Member States, paving the way to a differentiated panorama across the EU. Also, a similar provision in the previous CAP period did not spur a significant uptake of the collective approach by Member States. Besides some spatially limited projects, only the Netherlands provided the standard collective implementation of agri-environmental commitments. This suggests that additional efforts would have been needed to effectively promote collective action for landscape-scale targeting.

Spatial planning

This strategy focuses on space partitioning, where policy measures apply to entire landscapes of farmland delimited according to ecological considerations rather than property boundaries. The new CAP only indirectly adopts such strategy by relying on the Natura 2000 network of protected areas to set the scope of some

agri-environmental measures. However, the network covers only 10.6% of EU farmland and does not specifically target farmland biodiversity. In order to actually create the conditions for coordinated landscape-scale action, site-specific management plans should be enacted. This is however not a mandatory requirement under the current EU legislation, which highly limits the potential for local adaptation.

No other arrangements of spatial partition has been included in the new CAP Regulation. Biodiversity measures

could, for instance, have been linked to delimited "priority" areas such as those under High Nature Value farming—about 41% of the total agricultural land (Paracchini et al., 2008) — or to organic districts and similar clusters present in many Member States, in order to facilitate some extent of coordination.

Conclusion

The shift to a landscape-scale perspective for farmland biodiversity conservation would require a significant change of mindset and innovative administrative arrangement. These are

lacking in the new CAP which largely maintains a farm-scale approach of measures' design, suggesting that a powerful tool to overcome the policy's underperformance on biodiversity is being overlooked. The national level, enjoying a wider flexibility of implementation compared to the previous CAP periods, is thus the last chance of introducing corrective measures to limit the negative effects of SSMs.

References

Young, O.R. (2002). *The Institutional Dimensions of Environmental Change: Fit, Interplay, and Scale.* The MIT Press: Cambridge, MA, USA. Cumming, G.S., Cumming, D.H.M., Redman, C. (2006). «Scale mismatches in social-ecological systems: Causes, consequences, and solutions.» *Ecology and Society* 11(1): 14.

Ekroos, J., Ödman, A.M., Andersson, G.K.S., Birkhofer, K., Herbertsson, L., Klatt, B.K., Olsson, O., Olsson, P.A., Persson, A.S., Prentice, H.C., et al. (2016). «Sparing Land for Biodiversity at Multiple Spatial Scales.» Front. Ecol. Evol. 3: 145. doi: 10.3389/fevo.2015.00145.

Thies, C. & Tscharntke, T. (1999). «Landscape Structure and Biological Control in Agroecosystems.» Science 285: 893-895.

Prager, K. (2015). «Agri-Environmental Collaboratives for Landscape Management in Europe.» *Curr. Opin. Environ. Sustain* 12: 59-66. Vanni, F. «The Role of Collective Action.» In Vanni, F. (Ed.), *Agriculture and Public Goods: The Role of Collective Action.* Springer: Dordrecht, The Netherlands, 21–37.

European Court of Auditors. (2020). *Biodiversity on Farmland: CAP Contribution Has Not Halted the Decline*. Technical Report, Publications Office: Luxembourg.

Leventon, J., Schaal, T., Velten, S., Dänhardt, J., Fischer, J., Abson, D. J., Newig, J. (2017). «Collaboration or Fragmentation? Biodiversity Management through the Common Agricultural Policy.» *Land Use Policy* 64: 1-12.

Pe'er, G., Zinngrebe, Y., Hauck, J., Schindler, S., Dittrich, A., Zingg, S., Tscharntke, T., Oppermann, R., Sutcliffe, L.M.E., Hoyer, C., et al. (2017). «Adding Some Green to the Greening: Improving the EU's Ecological Focus Areas for Biodiversity and Farmers.» *Conserv. Lett* 10: 517-530. Paracchini, M.L., Petersen, J.E., Hoogeveen, Y., European Environment Agency, European Commission, Joint Research Centre, Institute for Environment and Sustainability. (2008). *High Nature Value Farmland in Europe an Estimate of the Distribution Patterns on the Basis of Land Cover and Biodiversity Data*. Publications Office: Luxembourg.

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