Making the greening greener to the benefit of nature and farmers

Photo: Sebastian Lakner

Executive Summary

Ecological Focus Areas (EFAs) are one of three new greening measures introduced to the Common Agricultural Policy (CAP). A new interdisciplinary, European-scale study has now evaluated the ecological effectiveness and actual implementation of EFAs.

A survey among 88 ecologists from 17 European countries revealed buffer strips, fallow land, and landscape features as most beneficial for biodiversity. In contrast, data on EFA uptake by farmers, at the EU level and in eight EU Member States, showed that farmers mostly implemented 'catch crops and green cover', nitrogen-fixing crops, and fallow land. These results indicate a mismatch between what ecologists consider beneficial for biodiversity, and what farmers actually do.

Considering the factors influencing farmers' decisions, we suggest that EFA implementation could be improved not only by expanding EFA areas but also by a) prioritising EFA options that promote biodiversity (e.g. reducing the weighting factors or even excluding less effective options); b) setting stricter management requirements (e.g. banning agrochemical use); c) reducing technical constraints (e.g. buffer strip widths); and d) increasing administrative support and advice for farmers.

Recommendations for the next CAP reform are to revise exemptions, reduce 'windfall gains', regionalize EFA design and implementation, and enhance policy integration especially by taking lessons from Agri-Environment Measures in Pillar 2. We also recommend shifting budgets to Pillar 2 to support such schemes more efficiently.

Thereby, the CAP's greening measures can be more effective and efficient, and benefit both nature and farmers alike.

HELMHOLTZ CENTRE FOR ENVIRONMENTAL RESEARCH – UFZ

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

INRA SCIENCE & IMPACT

iDiv

ALPEN-ADRIA UNIVERSITÄT KLAGENFURT | WIEN GRAZ

Dynafor

ifab

Introduction

The new greening measures have been criticised by ecologists and environmental organisations for setting requirements that are too low to halt the loss of farmland biodiversity. At the same time, they led to increased administrative burdens and risk of sanctions for farmers and authorities. Simplification of CAP implementation is therefore a key element in the upcoming mid-term review.

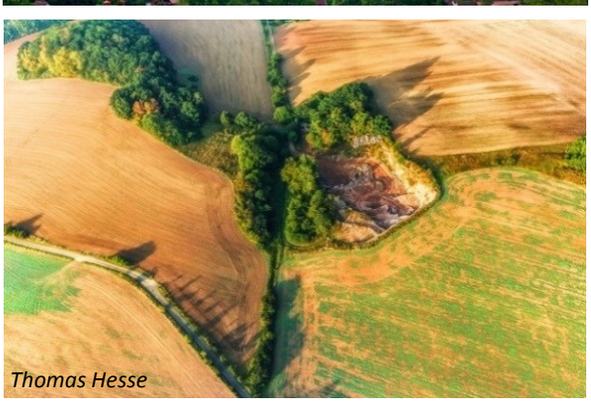
An interdisciplinary team of scientists, with expertise in ecology, farm management, agricultural economics and agricultural policy, examined the current design and implementation of the greening measures. We focussed on Ecological Focus Areas (EFAs), the flagship measure of the greening, whose potential for biodiversity protection has not yet been evaluated. We evaluated the various EFA options, combining assessment of their potential effects on biodiversity with evaluation of the factors influencing farmers' implementation decisions. Thereby, we derive recommendations to improve the effectiveness of EFAs and the CAP in general for biodiversity conservation, while overcoming implementation barriers for farmers.


Rainer Oppermann


Sebastian Lakner

Approach

We 1) conducted a European-scale survey among ecologists to assess potential biodiversity effects of EFA options; 2) collected data on farmers' EFA uptake; 3) synthesised expert opinions and a review of the determinants of farmers' decisions; and 4) identified improvement options for EFA design and implementation. Through this interdisciplinary and Europe-wide approach we developed recommendations aiming to increase the uptake and to ensure best management of biodiversity-friendly options by farmers; reduce administrative burdens; and promote coherence between the CAP and the EU's nature conservation goals.


Thomas Hesse

Main Results

1. EFA effects on biodiversity: 88 experts from 16 MSs and Switzerland responded to our survey. Overall, **buffer strips, fallow land, and landscape features received mostly positive scores,** while agroforestry, afforestation, and short-rotation coppice received neutral, variable, or even negative scores in terms of their perceived impact on biodiversity (**Figure 1**). Among the landscape features, hedges, field margins, and traditional stone walls received the highest scores.

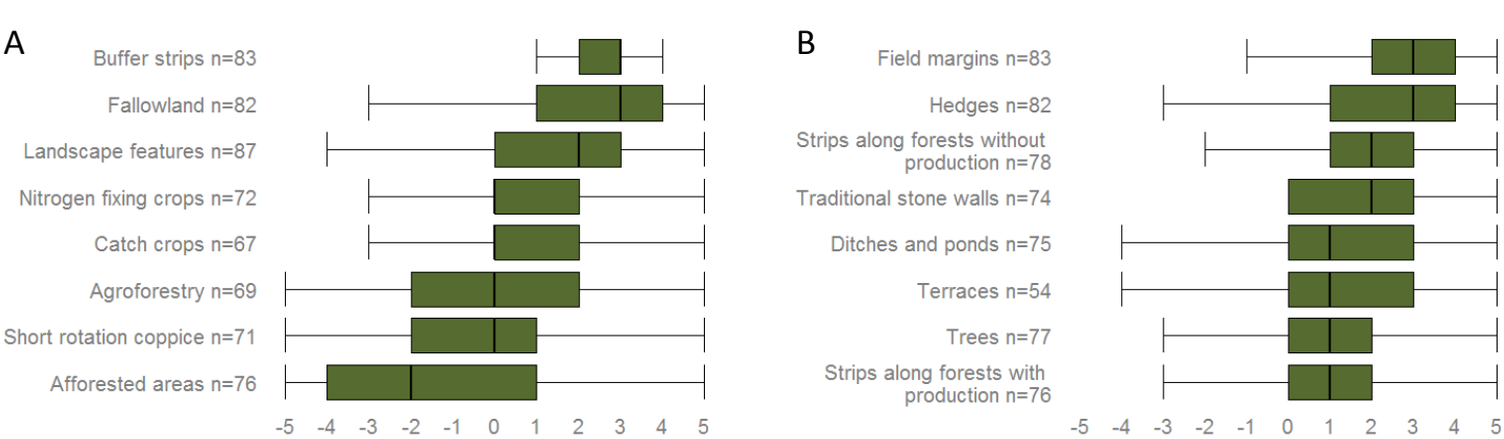


Figure 1: EFA scoring by ecologists *for each of the EFA options (A) and, specifically, for landscape features' types (B). Values range from +5 (strongly positive) to -5 (strongly negative). n = number of replies*

2. EFA implementation in 2015: Overall in the EU, farmers registered 16% of the arable land as EFAs, or 10% after applying weighting factors. Three EFA options accounted most EFA area: nitrogen-fixing crops (46%), 'catch crops and green cover' (27%), and fallow land (21%). In most of the eight MSs assessed, landscape features and buffer strips had a very low uptake (**Table 1**).

Table 1: *Share of the different Ecological Focus Area (EFA) options taken up at the EU level and in eight Member States. Data for the MSs were kindly provided by national Ministries for Agriculture. n.a. = not applicable*

	Fallow land	Buffer strips	Landscape features	Catch crops & green cover	Nitrogen-fixing crops	Short rotation coppice	Afforested areas
Germany	16.2	1.2	2.4	68.0	11.8	0.2	0.1
Austria	19.1	n. a.	0.03	32.3	47.9	0.7	0.06
Czech Republic	5.4	0.5	0.08	33.4	60.5	0.03	n. a.
Denmark	7.6	6.0	0.3	84.6	n. a.	1.5	n. a.
England	33.1	1.0	4.7	5.5	55.8	n. a.	n. a.
Estonia	25.5	n. a.	2.0	n. a.	72.5	n. a.	n. a.
The Netherlands	n. a.	1.8	n. a.	95.1	3.1	0.01	n. a.
Poland	4.7	0.0	0.4	57.4	36.6	0.2	0.8
EU	**21.2**	**0.7**	**4.3**	**27.7**	**45.4**	**0.2**	**0.6**

3. Determinants of farmers' choices: A) ***Economic determinants:*** farmers perceive greening restrictions as costly and tend to choose the most productive and cheapest options (73% of EFA-area in the EU). B) ***Administrative restrictions:*** legal restrictions and demands translate into risk-related costs or transaction costs. For example, the strict width limits allowed for buffer strips can lead to sanctions and hence avoidance; and property rights may complicate and limit the uptake of landscape features. C) ***Farmers' perceptions and knowledge:*** farmers' choices are influenced by traditional land-use, established farming practices, and limitations due to farm structure, available technologies, and former experience. Farmers' decisions are also affected by self-perception as 'producers', their sense of ownership, personal attitudes, subjective norms, and social interaction and control. These factors need to be considered in EFA design, implementation and support.

4. Comparison of EFA options: Only fallow land can be defined as a 'win-win' for farmland biodiversity and farmers. Buffer-strips and landscape features are beneficial for biodiversity but unattractive for farmers. Nitrogen-fixing crops and 'catch crops and green cover' offer limited or unclear benefits for biodiversity, but are favoured by farmers. Agroforestry, short-rotation coppice, and afforested areas seem to provide benefits neither for farmland biodiversity nor for farmers (**Table 2**).

Table 2: Biodiversity vs. farmers' perspective*: win, lose or mixed?*

Fallow land	**win - win**
Buffer strips	**win - lose**
Landscape features	**win - lose**
Nitrogen-fixing crops	**mixed - win**
Catch crops & green cover	**mixed - win**
Agroforestry	**mixed - lose**
Short-rotation coppice	**mixed - lose**
Afforested areas	**lose - lose**

Conclusions

Currently, the official goal of EFAs does not match with their implementation set-up: those EFA options that were considered beneficial to biodiversity had low uptake among farmers. Increasing the required EFA area from 5 to 7%, as currently discussed as part of the mid-term review, would not be sufficient to yield significant improvements for biodiversity since farmers are already registering large areas as EFAs (>10% at the EU level). It is much more important to improve the selection of EFA options and their implementation rules, to improve both biodiversity protection and the attractiveness for farmers, while reducing administrative obstacles.

Policy Recommendations

For the mid-term review in 2017:

1. Prioritize EFA options with clear benefits for biodiversity

a) Ensure all MSs approve the most effective EFAs *(fallow land, buffer strips, landscape features);* ***b) Remove or limit the eligible area of less effective EFA options*** *(at the regional or national level);* ***c) Expand equivalent measures*** *to adapt greening to specific regional farming systems and environmental priorities;* ***d) Link weighting factors*** *to the ecological value, implementation costs and benefits.*

2. Reduce farmers' administrative burdens

a) Simplify technical requirements; b) Increase capacities for administrative support and advice *e.g. by Farm Advisory Systems;* ***c) Extend the eligible implementation duration of selected EFA options*** *such as fallow land and buffer strips*

3. Set targeted and clear management requirements

For instance ban the use of agro-chemicals and promote high plant diversity

4. Combine policy instruments and implement 'smart regulations '

For instance through top-up payments from AEMs, and synchronising the requirements of EFAs with the requirements of AEMs

5. Improve transparency of the implementation process

To promote learning and innovation, as well as cooperation among stakeholders.

For the CAP beyond 2020:

6. Revise the exemptions for smaller farms and permanent crops

7. Reduce windfall-gains to improve cost-effectiveness

Reduce payments for which no additional effort is needed towards the provision of a related service

8. Regionalise EFA design and enhance collaborative implementation

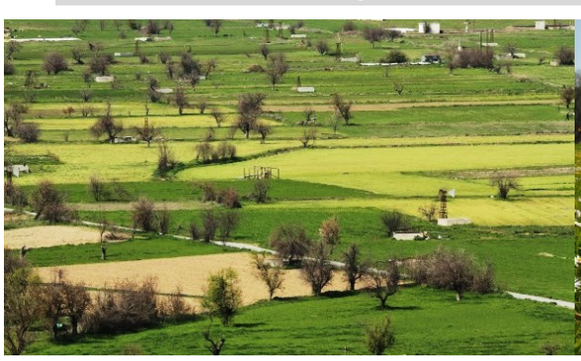
a) Allow for regional adaptation to socio-economic and ecological conditions; b) Adapt administrative structures to enable landscape-scale and collaborative implementation, *which is currently only allowed by two MSs (The Netherlands and Poland), using experiences from AEMs;* ***c) Promote integrative and participatory approaches*** *such as platforms for knowledge exchange and local governance fora and bottom-up initiatives;* ***d) Cancel the existing option to reduce EFA requirement from 5% to 2.5%*** *in regions with high proportion of forests or protected areas.*

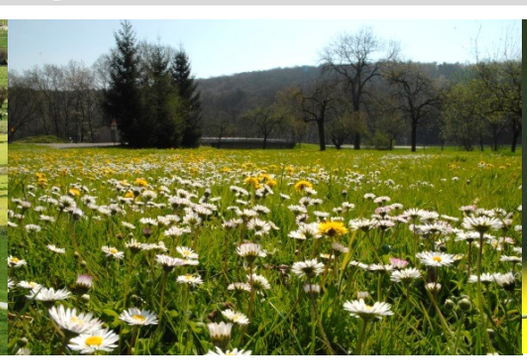
9. Enhance policy integration

Increase the coherence of all three greening measures with the EC's commitment to Policy Coherence for Development (PCD) and CBD's Aichi target 3 ("eliminate incentives harmful to biodiversity").

a) Further Integrate the CAP with existing EU policies for farmland biodiversity conservation *such as the Birds and Habitats Directives and the Green Infrastructure Strategy;* ***b) Ensure and monitor that all greening measures support biodiversity****: The protection of permanent pastures should also focus on quality, and the thresholds set for the crop-diversification should not permit reducing the number of crops per farm;* ***c) Use experiences from AEM implementation*** *especially with respect to the performance of voluntary financial incentives and result-based mechanisms*

10. Restore and expand Pillar 2 budget *and within it the share that is earmarked for AEM.*





Source: Pe'er, Zinngrebe, Hauck, Schindler, Dittrich, Zingg, Tscharntke, Oppermann, Sutcliffe, Sirami, Schmidt, Hoyer, Schleyer, Lakner (2016): „**Adding some green to the greening: improving the EU's Ecological Focus Areas for biodiversity and farmers**". *Conservation Letters,* free access at: http://onlinelibrary.wiley.com/doi/10.1111/conl.12333/full. **Contact: guy.peer@ufz.de**