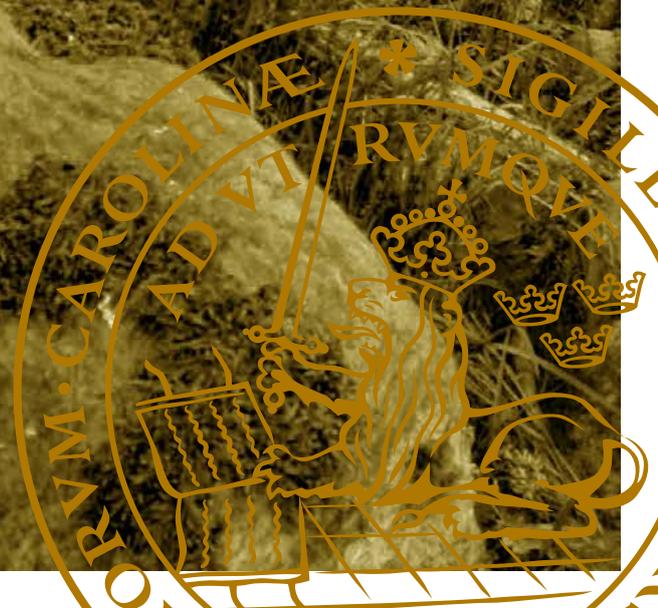




Impacts of the CAP's environmental policy instruments on farm structures, agricultural incomes and public goods

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We examined farmers' costs of providing public goods under the Common Agricultural Policy (CAP) and the expected impacts of the 2015 CAP "greening" reform on regional development and provisioning of public goods. Less than half of CAP spending before the reform was justifiable in terms of the delivery of specific public goods; and predicted benefits from greening are low. We recommend re-allocating support to targeted and landscape-scale payments, better matching the financing of public goods with the beneficiaries and re-considering greening.

CAP and environmental policy instruments

How could environmental policy instruments be improved or complemented to optimally benefit EU citizens, and the ecosystem services supporting production (farmers)? Current direct support (Pillar I) under the CAP has the potential to positively influence much of the European Union's (EU) agricultural area through cross-compliance and greening obligations. On the other hand, there are substantive criticisms that the objectives of Pillar 1 are unclear and the payments insufficiently targeted to achieve environmental goals. Moreover, it is argued that financing through Pillar I (i.e., common payments and regulations) is inappropriate for financing environmental public goods from agricultural landscapes, because of the varying scales at which they are generated and consumed. The Rural Development Programs (Pillar 2) are better targeted and widely regarded as a relatively effective approach for managing public goods.

MULTAGRI addressed these issues from several angles and provides assessments of the:

- 1) amount of funding potentially available for environmental targeting including incentives for promoting coordinated landscape management;
- 2) impacts of current greening obligations on the development of land use, farm structures and incomes, in collaboration with local stakeholders (administrators, farmers, NGOs).

Obstacles to decisive environmental public-good impacts

While the latest reform was heralded as "greening" the CAP, the actual expenditures targeting environmental objectives are modest. Both the general design of stipulated greening measures, as well as their watering down during the reform process, has fuelled concerns that greening will be a failure. For instance the obligation of having Ecological Focus Areas (EFA) does not apply to 88 percent of farms and 48 percent of farmland in the EU, due to the many exemptions.

Moreover, there are obvious mismatches between the spatial scale of agricultural management (the field or farm), public support provided by the CAP (the farmer) and the scale of ecological processes (the landscape). For instance the value

or benefit of an ecological intervention depends on where in the landscape it is implemented, e.g., connecting habitat is needed to support wide-ranging species. Coordinating ecological interventions among farmers would also provide higher recreational and cultural services values provided by agricultural landscapes.

Direct payments not effective in delivering public goods

Providing public goods is one of the key justifications of the CAP. However the payments for specific public goods greatly exceed farmers' costs of delivering them. According to our survey of regional/national experts from research, government and NGOs, less than 20 percent of Pillar 1 payments were justified in 2012 by proven costs of providing public goods beyond statutory management requirements, compared to 60 percent of Pillar 2 and 70 percent of agri-environment payments (within Pillar 2).

The estimates suggest a large potential for redistributing funds among existing schemes or developing new schemes at the landscape scale that compensate farmers for proven costs. The links between expenditures in the member states and the demand for public goods was also found to be weak. These links could be strengthened by applying proven principles of public finance; by linking more of the payments to public goods, by financing public goods at a lower level when this is sufficient and by matching those who pay with those who benefit from the public goods.



Photo: Juliana Dänhardt

Ecological Focus Areas fail on delivering environmental benefits

The potential impacts of greening on land use, farm incomes and structural change were evaluated with model simulations conducted in collaboration with local stakeholders in Sweden (Scania) and Germany (Saxony). The measures adopted by farmers in our simulations (i.e., the least costly) were also the least effective for promoting biodiversity. The costs of introducing the 5 percent EFA obligation were also relatively low (1.9% of farm profits in Saxony) due to the flexibility available for choosing among measures, and with modelled farms using mainly their least intensively farmed land for EFA.

In Scania, the EFA obligation was also watered down by generous scaling factors for some measures (e.g., 900 m² uncultivated field margin is equivalent to 1 ha fallow land), as well crops usually grown by farmers, such as peas, also counting as EFA. Furthermore, the potential of EFA to reduce intensity were counteracted overtime in our simulations, by farmers renting low productive land to implement EFA measures (e.g., fallow).

Consequently, and in consensus with our local stakeholders, it is unlikely that current EFA obligations will generate environmental benefits commensurate with greening payments. Further, since the EFA obligation targets individual farms, it is not likely to promote efficient management of biodiversity and intermediate ecosystem services (pollination and biocontrol), because these depend on landscape-scale processes. Rather efficient landscape management requires incentives that encourage collaboration among farmers to optimize the placement of ecological interventions in the landscape.



Two different ways of implementing uncultivated field margins, the EFA with the most generous scaling factor in Sweden: regularly tilled bare soil with doubtful environmental effect (top), or sown with flower seeds (here phacelia) to benefit pollinators. Photos: Juliana Dänhardt

IMPLICATIONS AND RECOMMENDATIONS

A large potential to increase the delivery of public goods – or reduce spending

Less than half of the overall public spending for agriculture is currently justifiable through the proven delivery of public goods. Regular assessment and reporting of the actual costs of ecological interventions is necessary for steering agricultural support for the efficient provisioning of public goods.

Harness proven financing principles for preference-based financing of public goods

Proven principles of public finance could be more extensively used for a preference-based (spatial) distribution of payments and financial responsibilities for public goods across the EU and within member states. For instance, some public goods supported through Pillar 1 have only local or national-level benefits and should therefore be provided at the member state level (principle of subsidiarity).

Set a target for the funding of ecological interventions at the landscape level

Given the large share of ineffective spending in terms of the provisioning of public goods, a significant amount should be re-allocated to instruments that support needed collaborative or participatory ecological interventions at the landscape scale. One possibility would be to set a target for the share of payments allocated to such instruments.

Introduce more ambitious greening or replace it by agri-environment schemes

EFA, particularly in their current form, are doomed to fail with respect to the environmental ambitions. First, the flexibility of choosing among measures does not motivate farmers to fundamentally change their practices and hence reduce intensity, and second, the greening payment does not consider the spatial scale relevant for ecosystems, the landscape. Agri-environment schemes as implemented in Pillar 2, allow member states to better tailor measures to local conditions. This is a prerequisite for cost-effective environmental policy and hence Pillar 2 is better suited for achieving environmental goals.

Read more

Cong R-G, Ekroos J, Smith HG, Brady MV (2016) Optimizing intermediate ecosystem services in agriculture using rules based on landscape composition and configuration indices, *Ecological Economics* 128, 214-223 [Link](#)

Sahrbacher A, Sahrbacher C, Hristov J, Brady, MV (2016) Deliverable no. 4.1: Stakeholders' positions and identified policy measures. Report of the MULTAGRI project. [Link](#)

Sahrbacher A, Hristov J, Brady MV, Sahrbacher C, Günther J (2016) A combined approach to assess the impact of Ecological Focus Areas on regional structural development. Conference paper (149th EAAE Seminar, Rennes, France, October 27-28, 2016) [Link](#)

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About the project

This policy brief is a result of the work done within the ERA-NET project [MULTAGRI](#), a collaboration between Lund University (coordinator), Animal Ecology Team Alterra, Kalaidos University, Leibniz Institute of Agricultural Development in Transition Economies (IAMO), Leuphana University Lüneburg, Institut National de la Recherche Agronomique (UMR SAVE, UMR IGEP) and the Swedish University of Agricultural Sciences (SLU).

MULTAGRI investigates how governance of agricultural landscapes can promote rural development by harnessing landscape and biological diversity as assets that synergistically promote the production of public goods and sustained intensive agricultural production. MULTAGRI uses a strong interdisciplinary approach combining empirical field work, synthesis studies, and ecological-economic modelling and governance analysis at the regional level. Involved scientists come from a variety of fields including ecology, economics, agronomy and social sciences. MULTAGRI aims to contribute to the development of European policies to promote multifunctional agricultural landscapes and rural development. www.cec.lu.se/research/multagri

Results from our work are summarized in the following three independent policy briefs covering ecological, economical and governance aspects of the project, respectively:

"Ecological interventions in agricultural landscapes – scale matters!"

"Impacts of the CAP's environmental policy instruments on farm structures, agricultural incomes and public goods"

"Governance approaches to address scale issues in biodiversity management – current situation and ways forward"

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