

# The New Eco-Schemes: Navigating a Narrow Fairway

Les nouveaux écorégimes : naviguer sur un chenal étroit

Die neuen Eco-Schemes: Navigieren im schmalen Fahrwasser

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## Introduction

With eco-schemes, the European Commission has created a new policy instrument that is conceptually similar to the agri-environmental and climate schemes (AECS) of CAP Pillar 2, but can also be designed as a form of conditionality for receipt of part of the direct payments to farmers. Measures supported under eco-schemes must not overlap with the conditionality standards of Good Agricultural and Ecological Condition (GAEC) or the AECSs.<sup>1</sup> This results in a narrow design corridor for eco-schemes, implying that specifications of one of the three instruments of agro-environmental policy have repercussions on design options for the other two. The narrow scope for eco-schemes is further constrained by a large number of requirements and specifications that have been formulated by the main actors in the political decision-making process, and by the annuality of the schemes. Furthermore, requirements under the WTO Agreement on Agriculture must be observed in order to qualify eco-schemes as Green Box-compatible measures. This article reviews the requirements that have been formulated in the policy arena, discusses alternative implementation models for eco-schemes and makes recommendations for their design. We focus on key design variables,

particularly the design of the reward system.

## Political demands on the design of eco-schemes

Requirements for the design of eco-schemes have been formulated by politicians, administrators, farmers and environmental NGOs. These differ among Member States. Some common requirements are listed in Table 1.

A key design issue arises from the fact that farmers are legally entitled to eco-scheme payments, implying that they cannot be denied access to eco-schemes when these are over-subscribed. This is a key difference from Pillar 2 AECS where a granting procedure is used to manage demand by farmers. At the same time, Member States must earmark a budget (at least 25 per cent of Pillar I funds) for eco-schemes. National policy designers may therefore be caught between a binding budget constraint and the requirement to admit all farmers who have filed an application to the eco-schemes. Thus, a key challenge for policy designers is to design a reward system which allows the demand for participation by farmers to be aligned with the available budget. Ideally, the reward system should enable demand to be steered in such a way that the budget is exactly spent. This is not only important for predicting the outflow

of funds (Table 1), but also for ensuring that the overall uptake of eco-schemes is in line with the quantitative target set in the national strategic plans.<sup>2</sup> Missing the target implies difficult discussions with the EU Commission and demands for rectification.

“ Un modèle par éco-points est probablement le plus approprié pour la mise en œuvre des nouveaux écorégimes au niveau national. ”

## Policy design variables and implementation models for eco-schemes

In principle, policy designers have two levers at their disposal: the selection of measures to be supported and the design of the reward system. The European Commission has issued broad guidelines for agricultural practices that can be supported under eco-schemes: they should cover activities related to climate, environment, animal welfare and antimicrobial resistance; they shall be defined on the basis of the needs and priorities identified at national/regional levels; their level of ambition has to go beyond the requirements

**Table 1: Typical requirements for the design of eco-schemes at the Member State level**

Criteria	From the perspective of:			
	National CAP policymakers	National CAP administrators	Environmentalists	Farmers
Uptake and spatial coverage	Area-wide availability and good spatial penetration of uptake		Should reach into regions with high land use intensity and stocking rates	Sufficient incentive to participate for all farmers
	Minimum possible redistribution of funds between regions within a country			
Administrative feasibility; practicality	Ensure volume of uptake in line with quantitative target of national strategic plan	Predictability of the outflow of funds: align aggregate uptake with available budget		Measures easy to handle, low susceptibility to error
		Verifiable via remote sensing/satellite		Compliance monitoring without on-site inspections if possible
		IACS* compatibility		
		Control dates within commitment period		
		Simple reporting of output and result indicators		
Environmental effectiveness	Avoidance of competition with the AECS of Pillar 2**		Effect on environmental and climate protection within a one-year implementation period and largely independent of natural site conditions	Reasonable justification for payment
			High effectiveness across multiple environmental goals	
			Contribution to the achievement of Green Deal goals	
			Good marginal incentive effect	
			Spatial targetability	
Legal requirements	Exclusion of double funding			
	WTO Green Box compatibility			

\*IACS = Integrated Administration and Control System (different names in different Member States)

\*\*AECS = Agri-environmental and climate schemes (CAP Pillar 2)

Colour coding:

Requirements to be addressed mainly through the selection of measures to be promoted

Requirements to be addressed mainly through the design of the reward system

and obligations established under the baseline (including conditionality); they shall contribute to reaching the EU Green Deal targets (EU COM, 2021). Member States therefore have considerable leeway to decide which measures or practices to support, what payment rates to offer and what payment mode to choose. It remains to be seen, however, what specific criteria the EU Commission will apply in approving the national strategic plans submitted by the Member States.

According to Article 28(6) of the CAP Reform Regulation, financial support through specific eco-schemes is provided either as an annual lump sum payment for all eligible hectares on a farm or as an annual payment for the area included in the eco-scheme. The payment is made either as a supplement to basic income support (premium with incentive component - Article 26(6)(a)) or as compensation for all or part of the additional costs incurred or income

foregone by farmers due to adoption of a measure (compensatory approach - Article 26(6)(b)). Meanwhile, it has become apparent that for WTO reasons possibilities for granting premiums with an incentive component are very limited: in particular, eco-schemes with an incentive component may not contain any conditions obliging farmers to undertake a certain type of production (e.g. animal stocking requirements, restrictions on

applicability to certain types of land use, such as permanent pasture).

The WBAE Final Report ‘Designing an Effective Agri-environment Climate Policy as Part of the Post-2020 EU Common Agricultural Policy’ suggests four basic implementation models for eco-schemes (WBAE, 2019):

**‘Greening model’.** Probably the administratively simplest implementation option is that all participating farms have to comply with a predefined, nationwide uniform set of requirements and in return receive a uniform premium per hectare of eligible land on the farm. This model essentially corresponds to the current greening model. A farmer’s decision is limited to a simple yes/no regarding participation. The specific conditions and level of payment will determine how many farmers will choose to participate in an eco-scheme designed in this way. Spatial targeting is not possible in the greening model, as conditions and premium levels are set at a uniform national level. Utilisation on individual farms can be influenced by stipulating minimum and maximum shares of land on individual farms managed under specific conditions, as

is already the case with greening, i.e. at least 5 per cent of the arable land qualifying as an Ecological Focus Area (EFA), no crop to occupy more than 70 per cent of arable land.

“ Ein Ökopunkte-Modell ist am ehesten das am besten geeignete Umsetzungsmodell für die neuen Eco-Schemes auf nationaler Ebene. ”

**Modified greening model.** This implementation variant differs from the pure greening model only in that several fixed condition packages are offered and farmers can choose one (or none) of these. One advantage of this model compared to the pure greening model is that some spatial targeting of the implementation of measures is possible. Basically, conditionality and these implementation variants (greening and modified greening model) of the

eco-schemes represent the same policy model: namely flat-rate payment per hectare for flat-rate requirements. The only difference is the different level of ambition of the requirements: conditionality and eco-schemes must not promote the same practices, i.e. the requirements of the eco-schemes must go beyond the requirements of conditionality.

**Eco-points model.** In this implementation variant, eco-schemes are organised through a points system, as is currently the case for the EFA. To determine the share of EFA, individual practices are weighted through points in rough reference to their nature conservation value. For instance, one hectare of set-aside counts as one hectare of EFA, one hectare of catch crops counts as 0.3 hectares of EFA. This principle could be applied to eco-schemes: farmers apply a range of different environmental measures on their land, thereby filling their points account. This type of implementation would lead to farmers being rewarded for measures they already implement on their farms. Therefore, it would initially secure the status quo of a farm’s environmental situation by economically safeguarding underlying beneficial practices. In determining



The eco-points model reduces the risk of over-or under-subscription while maintaining flexibility to cater for heterogeneity in site conditions. © Ralph Behrens



whether to adopt additional conservation practices, farmers would compare the marginal revenue from 'selling' further eco-points and the marginal costs of generating them, giving the system a good marginal incentive effect as per [Table 1](#).

**AECS model.** Farmers choose which eco-scheme measures to implement and to what extent, and receive an area-based payment for each individual measure. This essentially corresponds to the model of the agri-environmental and climate protection schemes of CAP Pillar 2, hence AECS model. In both eco-schemes and Pillar 2, farmers choose conservation practices from a predefined list. The main difference is that the payment level in the eco-points model can also be set freely (Art. 28 (6) a) as long as WTO conditions are met, whereas in Pillar 2, payment must be based on the costs and income losses associated with the implementation of the measure.<sup>3</sup> In practice, however, both models can provide high incentives for adoption by a large proportion of farms (WBAE, [2019](#)). One implementation option for the AECS model could be to offer regionally differentiated measures and payment levels to cater for the heterogeneity in site conditions.

## The pros and cons of the alternative implementation models

The different implementation models discussed above each have advantages and disadvantages with regard to the requirements shown in [Table 1](#). The eco-points and AECS models offer payments which are proportional to the volume of uptake of conservation practices at the farm level, thereby providing farmers with an incentive to implement additional practices. This incentive is lacking in the two greening models because a farmer's decision is limited to a simple yes/no regarding participation. However, when in the eco-points or AECS model farmers are allowed to choose freely from a list of conservation practices, this is likely to lead to a concentration of eco-scheme uptake on marginal land, whereas intensive arable areas and strongholds of livestock production are likely to be left out. This would conflict with the requirements of 'good spatial penetration of uptake' and 'minimum possible redistribution of funds between regions within a country'. More important, however, the uptake of the eco-schemes under the AECS and eco-points

model by farmers, and thus the outflow of funds, would be very difficult to predict, potentially resulting in over- or under-subscription. In contrast, the two greening models are likely to perform better on this criterion. If an attractive payment is offered for a given set of relatively mild conservation practices, one can assume that many farmers will participate, leading to a good spatial penetration of the eco-schemes, minimal regional redistribution of Pillar 1 funds and good predictability for the outflow of funds. However, relatively mild and blanket conservation practices have little effect on environmental and climate protection as we have learnt from the current greening provisions (Nitsch *et al.*, [2017](#)).

## A potential way forward

The German Land Care Association (Deutscher Verband für Landschaftspflege e.V. or DVL) has proposed a variant of the eco-points model in which farmers can freely choose from a list of nineteen conservation practices: nine on arable land, seven on pasture, and three for permanent crops (Neumann *et al.*, [2017](#)). Eligible



**In devising national eco-schemes for agriculture policy designers operate in a narrow design space which is constrained by various political and legal requirements.** © Pixabay, 86431



practices range from simple production-integrated measures, like support for pasture grazing, through to more demanding requirements such as not applying mineral fertilisers and synthetic pesticides to green fallows, flower strips or old grass strips, where farmland is taken out of production. Individual practices are weighted by points with reference to their nature conservation value. For example, pasture grazing is allocated one eco-point per hectare, provision of flower strips is rewarded with ten eco-points per hectare. Each eco-point is worth €50. The list of practices has been composed with the orange shaded requirements of Table 1 in mind, although not all of the practices meet all the requirements. When farmers can freely choose from the list, as is foreseen in the model proposed by the German Land Care Association, this is likely to result in uneven spatial distribution of uptake, a considerable redistribution of Pillar 1 funds between regions, and an insecure total volume of overall uptake and thus over- or under-subscription.

One way to overcome these problems could be to extend the proposed eco-points model by a requirement that individual farmers must reach a certain minimum number of points per hectare (an eligibility threshold), but are not entitled to payments for points that exceed a certain upper limit per hectare (a cut-off level). Eco-scheme payments to an individual farmer are based on the number of points earned between the eligibility threshold and the cut-off. It is conceivable that some farmers may go beyond the cut-off level through their practices; however, there would be no payment for extra eco-points. Alternatively, to maintain an incentive for higher levels of effort farmers could be told that payments for eco-points above the cut-off level will be made if the eco-schemes are under-subscribed at the aggregate level. The ability to vary the cut-off would allow policy administrators to manage uptake at the individual farm level such that significant over-subscription of the eco-schemes is



**A key challenge for policy designers is to design a reward system which allows the demand for participation by farmers to be aligned with the available budget**  
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avoided. To take account of spatial differences in expected environmental benefits, the eco-points allocated to each measure could be varied across regions.

### An illustrative example for Germany

According to calculations by the German Federal Ministry of Food and Agriculture, the average eco-scheme payment will be €66 per hectare of Utilised Agricultural Area (UAA). If eco-points are priced at €50 and the entire farmland of Germany were to be enrolled in the eco-schemes, farms would have to reach 1.32 (=66/50) eco-points per hectare on average. Because some farmers may wish to keep below this level while others may wish to do more for the environment, the eligibility corridor, i.e. the range between the eligibility threshold and the cut-off, could be set at, say, plus/minus 75 per cent of the average eco-point score. This would result in an eligibility threshold for individual farmers of approximately 1 eco-point per hectare and a cut-off of roughly 1.8 eco-points per hectare. If it transpires, when all applications are in, that not all farmers have reached the eligibility

threshold, thus effectively opting out of the eco-schemes, the cut-off for payments could be shifted to a higher level (*ex post*), thereby allowing environmentally-minded farmers to be rewarded for efforts beyond the initial (*ex ante*) cut-off level.

“The eco-points model is likely to be the most suitable implementation model for the new eco-schemes at national level.”

### Eco-points model is preferred

Eco-schemes have been promoted as an integral part of the CAP's Green Architecture. Their role in the green architecture of the new CAP has been widely discussed in the literature (e.g. Birkenstock and Röder, 2019; Lampkin *et al.*, 2020). This article adds value by focusing on key challenges in the design of the new eco-schemes. We have shown that policy designers operate in a narrow design space

constrained by various requirements of different stakeholders. We have concluded that, of the potential implementation models, the eco-points model is likely to be the most suitable to meet those requirements. It is flexible enough to cater for the heterogeneity of site conditions and can be designed to provide farmers with incentives to implement additional conservation measures. More importantly, by stipulating that individual farmers must reach a certain minimum number of points per hectare to be eligible, but are not entitled to payments for points that exceed a certain upper limit per hectare, it allows farmer uptake at the aggregate level to be aligned with a given budget, thus avoiding under- or over-subscription. Besides these benefits, the use of eco-points can be seen as a way of reflecting environmental performance. It takes a middle ground between action-based and results-based approaches and could serve as a stepping stone

towards greater results orientation of CAP payments in the years to come.

## Notes

1 Conditionality will replace Cross Compliance and greening in the new CAP: beneficiaries of the CAP will have their payments linked to a set of mandatory requirements to maintain farmland in Good Agricultural and Ecological Condition (GAEC standards). For example, on every farm at least 3% of arable land must be dedicated to biodiversity and non-productive elements. Wetlands and peatlands will also be protected by a specific GAEC standard.

2 EU countries implement the new CAP with a CAP strategic plan at national level. Each plan will combine a range of targeted interventions addressing the specific needs of that EU country and deliver tangible results in relation to EU-level objectives, while contributing to the ambitions of the European Green

Deal. The national strategic plans must be approved by the EU Commission based on criteria laid down in the new CAP strategic plan regulation.

3 To qualify as Green Box-compatible measures, eco-schemes with an incentive component may not contain any conditions obliging farmers to undertake a certain type of production. This in turn can be interpreted to mean that an incentive component may only be included in eco-schemes that stipulate the setting-aside of farmland.

## Acknowledgements

This research was funded by the European Commission via the EFFECT project (Environmental public goods From Farming through Effective Contract Targeting) under grant agreement No. 817903. We thank the anonymous reviewers and the Editor for their constructive and helpful comments to improve the manuscript.

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# Summary


## The New Eco-Schemes: Navigating a Narrow Fairway

 This article highlights some key challenges and trade-offs with which national policy designers have to contend in devising national eco-schemes for agriculture. We show that policy designers operate in a narrow design space which is constrained by various political and legal requirements. One key challenge is to design a reward system that allows the uptake of eco-schemes by farmers to be aligned with a given budget. We present four broad implementation models for eco-schemes and discuss their merits and shortcomings in light of stipulated requirements. These are the 'greening model', the 'modified greening model', the 'eco-points model' and the 'AECS model' in the style of the agri-environmental and climate schemes of CAP Pillar 2. We conclude that the eco-points model is likely to be the most suitable. By stipulating that individual farmers must reach a certain minimum number of points per hectare (eligibility threshold), but are not entitled to payments for points that exceed a certain upper limit per hectare (cut-off), it allows demand from farmers for inclusion in a scheme to be steered such that aggregate uptake coincides with the budget; thereby reducing the risk of over- or under-subscription while maintaining flexibility to cater for heterogeneity in site conditions.

## Les nouveaux écorégimes : naviguer sur un chenal étroit

 Cet article met en évidence certains défis et compromis majeurs auxquels les concepteurs des politiques nationales doivent faire face lors de l'élaboration des écorégimes nationaux pour l'agriculture. Nous montrons que ces concepteurs opèrent dans un espace étroit qui est contraint par diverses exigences politiques et juridiques. L'un des principaux défis consiste à concevoir un système de récompense qui permette d'aligner l'adoption des écorégimes par les agriculteurs sur un budget donné. Nous présentons quatre grands modèles de mise en œuvre pour les écorégimes et examinons leurs mérites et leurs lacunes à la lumière des exigences stipulées. Il s'agit du 'modèle de verdissement', du 'modèle de verdissement modifié', du 'modèle par éco-points' et du 'modèle SAEC' dans le style des schémas agri-environnementaux et climatiques du pilier 2 de la PAC. Nous en tirons la conclusion que le modèle par éco-points est probablement le plus approprié. En stipulant que les agriculteurs individuels doivent atteindre un certain nombre minimum de points par hectare (seuil d'éligibilité), mais qu'ils n'ont pas droit aux paiements pour les points qui dépassent un certain plafond par hectare (seuil), il permet de piloter la demande des agriculteurs d'inclusion dans un écorégime de manière à ce que la participation totale coïncide avec le budget ; réduisant ainsi le risque de sur- ou de sous-subscription tout en conservant la flexibilité nécessaire pour répondre à l'hétérogénéité des conditions locales.

## Die neuen Eco- Schemes: Navigieren im schmalen Fahrwasser

 In diesem Artikel werden einige der größten Herausforderungen und Kompromisse hervorgehoben, mit denen sich Politikgestaltende bei der Ausarbeitung nationaler Eco-Schemes für die Landwirtschaft auseinandersetzen müssen. Wir zeigen, dass der Gestaltungsspielraum durch verschiedene politische und rechtliche Anforderungen begrenzt ist. Eine zentrale Herausforderung besteht darin, ein Belohnungssystem zu entwerfen, das es den landwirtschaftlichen Betrieben ermöglicht, die Inanspruchnahme von Eco-Schemes mit einem bestimmten Budget in Einklang zu bringen. Wir stellen vier Modelle für deren Umsetzung vor und erörtern ihre Vor- und Nachteile im Hinblick auf die festgelegten Anforderungen. Es handelt sich dabei um das "Greening-Modell", das "modifizierte Greening-Modell", das "Ökopunkte-Modell" und das "AECS-Modell", in Anlehnung an die Agrarumwelt- und Klimaregelungen der zweiten Säule der GAP. Wir kommen zu dem Schluss, dass das Ökopunkte-Modell wahrscheinlich am ehesten geeignet ist. Danach wird festgelegt, dass ein landwirtschaftlicher Betrieb eine bestimmte Mindestanzahl von Punkten pro Hektar erreichen muss (Förderfähigkeitsschwelle). Allerdings hat der Betrieb keinen Anspruch auf Zahlungen für Punkte, die eine bestimmte Obergrenze pro Hektar überschreiten (Abschneidegrenze). Auf diese Weise ist es möglich, die Nachfrage nach einzelnen Maßnahmen zu steuern und eine Übereinstimmung mit dem vorhandenen Budget zu erreichen. Dadurch wird das Risiko einer Über- oder Unterzeichnung verringert, während gleichzeitig die Flexibilität erhalten bleibt, um die Heterogenität der Standortbedingungen zu berücksichtigen.