Implementing the EU eco-scheme in the Netherlands: A results-based points system approach

Mise en œuvre de l'éco-régime européen aux Pays-Bas : une approche par système de points fondé sur les résultats

Umsetzung der EU-Öko-Regelungen in den Niederlanden : Ein ergebnisorientierter Ansatz mit einem Punktesystem

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The EU eco-schemes: A new tool to improve sustainability in agriculture

Direct payments represent around 70 per cent of the Common Agricultural Policy (CAP) budget and are therefore a key item within the overall budget. A significant portion of these payments are not targeted towards current objectives, in particular those related to environmental sustainability (OECD, 2022). Within the previous CAP, an attempt was made to make direct payments more targeted by imposing a set of practice-based requirements on their receipt (cross compliance). This approach has partly been successful and effective in targeting CAP funds towards sustainability and biodiversity, but its efficiency is in doubt when aiming for greening (ECA, 2017).

The new CAP, in place from 1 January 2023, claims to be more results-based than ever, as has been emphasised by the reform proposals already published by the European Commission on 1 June 2018. The new policy framework gives Member States more flexibility when defining the objectives to be pursued and the implementation of the relevant policies to achieve them. Nevertheless, the National Strategic Plans (NSPs) had to be ultimately approved by the European Commission. The new policy also has a stronger focus on environmental sustainability reflecting the EU Green Deal and Farm-to-Fork Strategy. Keeping in mind this objective, the European Commission has introduced a new tool to replace greening – eco-schemes (European Commission, 2021). Each Member State is obliged to implement this tool and offer it to its farmers.

Organic farming is of particular interest since it also benefits from additional policy support.

At the EU level, 25 per cent of the budget allocated to direct payments has to be spent on eco-schemes. The degree of heterogeneity across the different proposals designed at country level is very high, reflecting the discretionality of the new CAP. The complexity (and the stage of development) of the proposed eco-schemes also differs by Member State. Based on an assessment of the eco-scheme proposals of fifteen EU Member States (as per February 2022), Runge *et al.* (2022) conclude that the number of measures farmers can choose from varies between 3 and 21, while the schemes differ with respect to their fundamentals (e.g. offering menu options, and making use of results-based criteria).

The Netherlands has a tradition of reforming the CAP and its greening policy, as evidenced by its choice for

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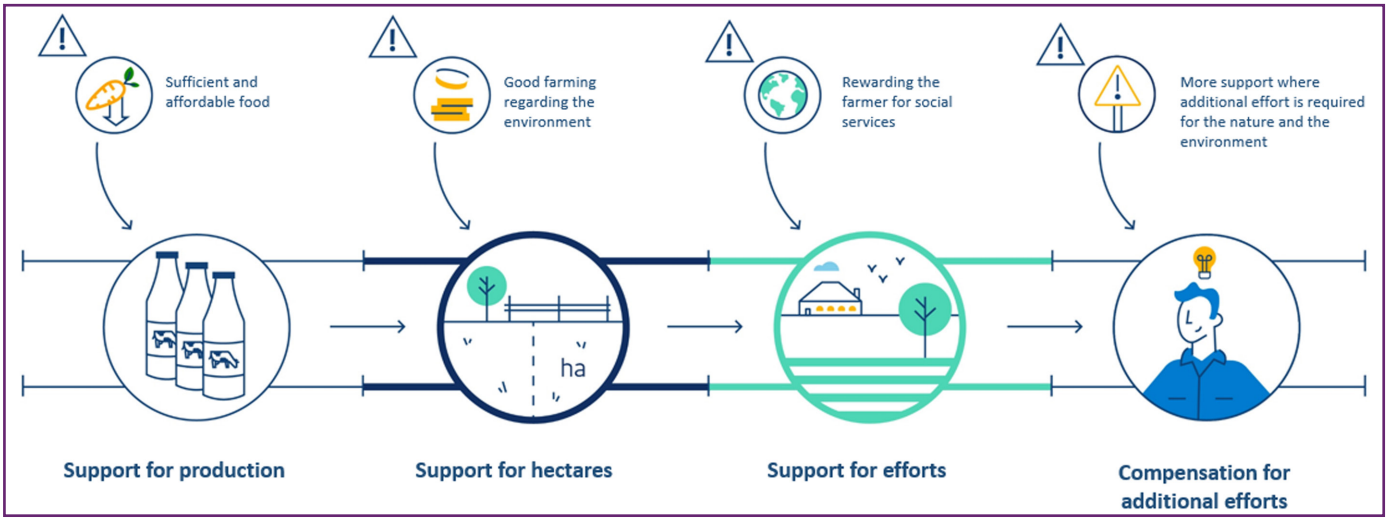
Figure 1: New approach for implementing the CAP in the Netherlands



Source: Dutch Ministry of Agriculture, Nature and Food Quality.

a farmer collectives-approach to the implementation of the agri-environmental measure (Figure 1). The country worked on an eco-scheme design, which is an example of a rather unique results-based solution to the eco-scheme policy implementation. This article describes the design of the eco-scheme and examines which incentive mechanisms are incorporated and how they are likely to operate, concluding with a preliminary assessment of the system and some observations.

The economics of the EU eco-schemes system

The essence of the new eco-schemes system is to create an 'artificial' market for ecosystem services or ecosystem performance. Figure 2 provides a schematic representation of this potential market, measuring the demand and supply of ecosystem services in quantities of 'eco-points'. The demand for such services comes from the policy side, while the supply comes from those farmers participating in these schemes. Transactions in this market occur when a farmer receives money for delivering a certain ecosystem or 'green' service. Overall, activity/measure-based approaches compensate farmers for the adoption/implementation of measures, while results-based payment systems reward farmers for the outcomes achieved. In the case of results-oriented payments, a key question is what constitutes an adequate payment. The size of the payment has to do with the desired supply or ecosystem performance to be delivered. The 'actual' demand curve, as happens with most public goods, is not really known, but it is 'brokered' by the government as a 'preference' broker, which sets the eco-payments, i.e. the market prices.

> "Der Kern der neuen Öko-Regelungen ist es einen 'künstlichen' Markt für Ökosystemleistungen zu schaffen."

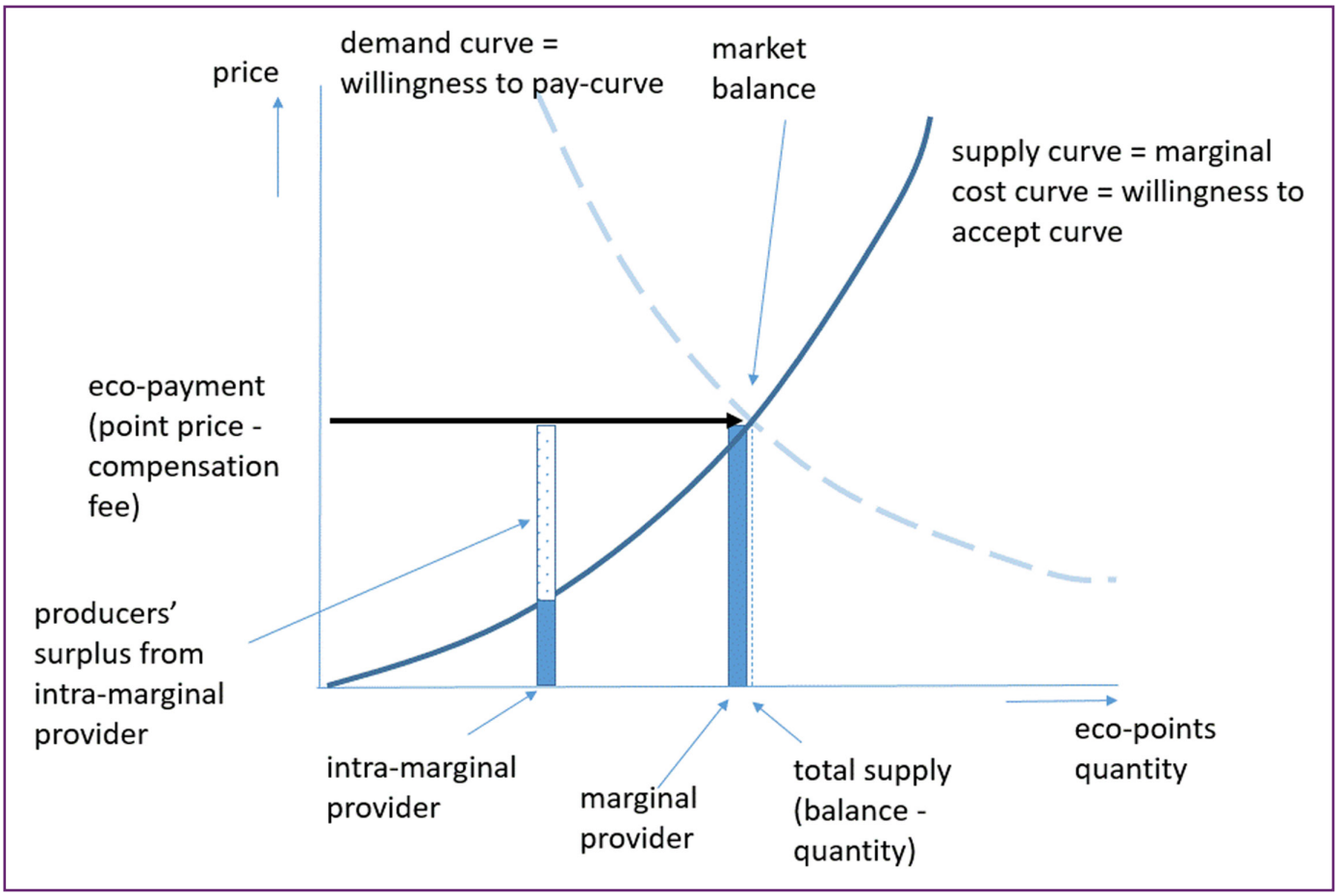
When the price or compensation is settled, some farmers will react, i.e. they will decide to participate in an eco-scheme and deliver the associated services. The total supply will be determined by the point at which the marginal provider just receives a cost-covering compensation, while all 'intra-marginal' farmers will also supply eco-services. The farmer's willingness to accept (WTA), i.e. the reservation price, plays a role in the participation decision. A farmer will consider whether the expected compensation sufficiently compensates for the expected costs incurred when delivering the ecosystem service. It is important to realise that the WTA is based on an estimate of the costs/compensation required by the producer.

In practice, the so-called 'cost-effective payments' (based on additional costs incurred and/or income forgone) are used, but these amounts mainly have a political and/or administrative background. An issue when awarding the payments, as emphasised by the European Commission, is that 'overcompensation' must be prevented.

Moreover, overcompensation is not allowed from the perspective of the World Trade Organisation (WTO) as it would create distortionary 'hidden support'. The idea is that such overcompensation can be effectively prevented by applying the 'income forgone' rule. However, basing the compensation on an average (rather than marginal) cost of provisioning indicator is no guarantee that overcompensation is 'solved for', since the intra-marginal farmers also under this design always get a compensation which is higher than their costs of service provisioning.

From an economic point of view, this overcompensation-prevention logic is thus a (persistent) fallacy. Moreover, such thinking does not fit in with the notion of 'market orientation' which has gained importance since the 1992 MacSharry CAP reform. In a market-oriented approach (see Figure 1), the marginal provider is the (only) one for whom the costs are exactly equal to the benefits (or the financial compensation). All intra-marginal

Figure 2: A schematic representation of the eco-scheme market



Source: Authors' own.

providers of eco-services gain a producer surplus or (quasi-) rent (their WTA<compensation fee) but there is no reason to worry about this unavoidable aspect of market provisioning. In practice, setting payment rates at the local or regional level (viz. price discrimination by the government) will reduce 'overcompensation' to some extent.

> "L'essence des nouveaux éco-régimes est de créer un marché 'artificiel' pour les services écosystémiques ou la performance des écosystèmes."

In practice, a Member State may design one or more eco-schemes and an eco-scheme may comprise a menu of activities from which farmers can choose and receive economic compensation after implementation. In the Dutch system, each activity converts to eco-points which eventually are translated into hectare payments. Ideally, in that case, optimisation and substitution will take place at the farmers-side in such a way that a farmer can provide the supply (measured in eco-points) with the least effort or at the lowest possible opportunity cost. This is a well-known property of markets, i.e. in a market context the supply tends to take place in an effective and efficient manner (at the lowest cost).

The Dutch proposal: a points system

Implemented in 2023, the Dutch eco-scheme offers farmers a menu of 22 activities listed in Table 1, from which they can choose every year (including the choice-option for organic farming which is chosen for the duration of the CAP programming period). In practice, not all options are applicable to every farm (some activities are sector-specific) and the actual choice will therefore be more limited. All the measures contribute to five objectives set by the government on the basis of the EU Regulation, i.e. the 'tranche of five': (i) climate; (ii) soil and air; (iii) water; (iv) landscape; and (v) biodiversity (European Parliament (2021). The measures are scored by the government according to their contribution to each of these objectives (Table 1). For example, the activity 'grass/clover' contributes 4 (score out of 5) to both the climate target and the soil target, but scores 0 on the water target. The activity 'buffer strips' in arable farming and livestock farming scores high on landscape and biodiversity.

A farmer can choose more than one activity at the same time and will often have to do so because a minimum number of points must be achieved before a payment can be received (entry requirement). The

Table 1: Contribution (number of ecopoints) of the 22 activities proposed in Dutch eco-schemes to EU objectives

		Objective				
		Climate	Soil & Air	Water	Landscape	Biodiversity
	Main crop					
1	Grass/clover	4	4	0	1	1
2	Grassland with herbs	2	4	1	3	1
3	Permanent pasture	4	4	3	1	1
4	Perennial cultivation	4	4	4	1	1
5	Wet cultivation	3	0	0	1	2
6	Crop rotation	4	4	4	2	2
7	Nitrogen-fixing crop/protein crop	3	2	0	1	1
8	Strip cultivation	0	2	2	2	2
9	Early harvesting of root crops (no later than August 31)	2	2	4	1	1
10	Early harvesting of root crop (no later than October 31)	0	3	0	0	0
	Bottom crops					
11	Green cover	2	3	3	1	1
12	Undersow catch crop	2	1	1	1	1
	Cultivation measures					
13	Organic farming	0	4	2	1	2
14	Livestock measures					
15	Extended grazing during day	2	3	0	2	1
16	Extended grazing during day and night	3	4	0	2	2
	Non-productive agricultural land					
17	Buffer strips with herbs (by arable land)	2	4	4	30	60
18	Buffer strips with herbs (by grassland)	0	0	3	30	60
19	Green fallows	2	4	0	10	40
20	Wooded banks (hedge, hedges and trees)	4	2	0	40	60
21	Wooded banks (others)	4	2	0	40	60
	Sustainable farming					
22	Organic farming	4	4	2	1	2

Source: Based on Dutch Ministry of Agriculture, Nature and Food Quality Punten en waarde eco-activiteiten 2023 (rvo.nl).

threshold levels are 1.50, 0.75, 0.75, 0.50 and 1.50 points per hectare for the climate, soil and air, water, landscape, and biodiversity objectives, respectively. More specifically, a dairy farmer who chooses 'permanent pasture' obtains enough points with this single measure as all target-specific minimum thresholds are achieved at once. Then the farmer must for example apply this to at least 83 per cent of the total acreage. Moreover, an arable farmer who chooses only the activity 'buffer zones' would immediately meet the entry requirements, as do all organic farmers. However, in all other cases and when one aims at achieving higher payment levels, several activities will need to be chosen simultaneously (Box 1).

The calculation for the compensation to be received from the 'eco-activities' is not straightforward. For each activity adopted, a number of associated points are scored with respect to the intended objectives. The activities have defined monetary values. Depending on the total number of points and the calculated aggregated financial value, the farmer will be placed in the bronze, silver or gold class. A different hectare payment is applicable in each class: bronze is 60 euros/ha, silver is 100 euros/ha and gold is 200 euros/ha. Prior to the implementation of the points system in 2023, the minimum requirements have been published so that farmers know in advance what to count with.

How does the Dutch point system work in practice?

The Dutch approach proposes a market for green eco-services based on results-based remuneration. Following the 'Tinbergen' logic (at least as many measures in the eco-schemes are needed as there are objectives), the system is also well-designed: the number of possible eco-measures (22) exceeds the number of objectives (5). Moreover, the points system is attractive because it focuses on the achievement of objectives, providing flexibility to farmers with respect to the choice of activities, rather than prescribing to farmers which specific means they have to use to achieve the objectives. Farmers' freedom is preserved as much as possible, while they are challenged with respect to their entrepreneurship. Note that farmers can choose from a menu of measures, carry out their own assessments and form decisions on how they choose to contribute to the five objectives and earn eco-points.

An element to further discuss is 'compensation'. In this system, it depends on the payment per unit of the activity (see Box 1), which is still granted based on the efforts that the farmer has to make. An alternative system would have been to directly link the reward for each activity to the points actually earned with it,

Box 1: An illustration of the Dutch points system

Let us assume that a farmer has 50 hectares of land, of which 30 hectares are permanent pasture, 10 hectares are temporary grassland, 5 hectares are cultivated with maize, 2 hectares are wooded banks, and 2 hectares are cultivated with alfalfa. Moreover, there is a general requirement from agricultural policy to use 4 per cent of the agricultural land as non-productive, i.e. 2 ha. The farmer chooses to designate the wooded land as such, and also decides to choose 3 measures (out of 22), namely 'Permanent pasture' (30 ha), 'Extended grazing' (40 ha) and 'Nitrogen-fixing crops' (2 ha). With these measures, the farmer contributes to all 5 goals and collects points (Table 2). In this example the number of points per objective exceeds the entry requirements (the entry requirements for the climate, soil and air, water, landscape and biodiversity goals are 75 (=50 x 1.50), 37.5 (=50 x 0.75), 37.5 (=50 x 0.75), 25 (=50 x 0.50) and 75 (=50 x 1.50), respectively). An important aspect of the scheme is that the requirements and eco-point values differ by region since agricultural activities (and challenges) in the Netherlands are not heterogeneously distributed across the territory.

Table 2: Example of the calculation for the points system

Eco-scheme activity	Acreage (ha)	Climate	Soil/Air	Water	Landscape	Biodiversity	Payment (euros)	Amount (euros)
Landscape elements	2	8	4	0	80	120	0	0
Permanent pasture	30	120	120	90	30	30	91	2730
Extended grazing	40	80	120	0	80	40	43	1720
Nitrogen-fixing crops	2	6	4	0	2	2	1995	3990
Total number of points per objective	74	214	248	90	192	192		8440
Minimum threshold		75	37.5	37.5	25	75		
Is the minimum threshold achieved (yes or no)?		yes	yes	yes	yes	yes		

Source: Authors (based on information provided by the Dutch Ministry of Agriculture, Nature and Food Quality).

Using the amount for each measure, the farmer can now calculate how much 'value' he/she has collected (see the 'value' column in Table 2). By multiplying the number of hectares by the corresponding value, a total value of €8,440 is calculated. The threshold values for bronze, silver and gold for a 50-hectare farm are €3,000 (=60x50), €5,000 (=100x50) and €10,000 (=200x50), respectively. Given the previous amount, the mentioned farmer is in the range of 5,000–10,000, falling into the 'silver' class. Therefore, he/she is entitled to receive €5,000. Since the efforts can differ per region, this is also taken into account in the value score, which for similar eco-services may differ for different regions.

without taking into account the effort made to implement the activity (i.e. not linking the payment to the farm-type). This would imply a deviation from the EU's compensation-formula system. However, such a point value-based system would be discouraging the adoption of those measures that have a high cost compared with their delivery scores (encouraging cost-effective ecoservice provisioning).

Assuming that each point weighs equally, for example, it can be calculated that the government currently pays (implicit) monetary amounts per eco-point that, depending on the selected measure, vary between €2.80 and €307 per point. A more market-driven solution would be to associate each of the objectives with its own point price and use that for total value and class determination. However, this would require that the target contribution can be determined clearly and unambiguously, which is not the case with the current model (Scout and Polman, 2022).

> "The essence of the new eco-schemes is to create an 'artificial' market for ecosystem services or ecosystem performance."

Early assessments of the system have revealed that some activities are so specialised that only few farms will implement them (Fikken *et al.*, 2022). Moreover, obtaining points regarding landscape and biodiversity was considered to be difficult by those farmers participating in the pilot case. The difficulty of achieving the threshold can ultimately mean that fewer farms participate, even if they do score well on other aspects, e.g. climate. This is particularly relevant for open-landscape areas: the activities that score high on landscape, such as hedges, hedges and trees, are in conflict with this landscape type (Fikken *et al.*, 2022). Nevertheless, according to our assessment it is possible to meet both landscape and biodiversity requirements, although only those farmers who make a serious effort are rewarded for this.

The first evaluation also showed that it is easy to score in the case of the climate, soil and water targets. Participants sometimes achieved four or five times the target value for those components (Fikken *et al.*, 2022). Hence, important questions are whether the

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government is getting enough value for money and whether the system stimulates farms enough to take measures. Another disadvantage is that only annual contracts are offered, while for some eco-activities, integration into business operations is more attractive (cheaper) when long-term contracts are offered. The realisation of the target contribution can also take longer than a year, as in the case of biodiversity for example.

The farmer's views

From the farmer's perspective, the points system is less attractive than the previous 'greening', which involved light (mandatory) requirements in exchange for income support (the green payment). With the points system, farmers will have to make more effort to get 'greening' payments than in the past. As a result, the policy may become more effective, but the farmer will need to face additional costs.

The Dutch points system, consisting of 22 different measures, with minimum thresholds and regional reference values, is a complicated eco-scheme compared to those offered by other EU Member States. Nevertheless, the per hectare payments that can be obtained are in many cases higher than those that could be achieved in other Member States.

Farmers also have a self-interest in some of the eco-measures. For example, they see the benefits of adopting measures to improve the quality of the soil (Van der Struik, 2022). When arable farmers were assessing the eco-measures for their own activity, a small sample showed that none of the menu options was perceived as very negative. With regard to the applicability of the eco-activities, many of them seem to be possible for arable farmers, although 'strip cultivation', 'mixed cultivation' and 'organic farming' were assessed negatively (Van der Struik, 2022). Organic farming is of particular interest since it also benefits from additional policy support.

Final considerations

Compared to the previous CAP, the Dutch new 'eco-scheme' is expected to contribute to a more efficient, effective and targeted 'greening' policy in The Netherlands. Moreover, it fits in well with the national policy approach aiming at a more sustainable and nature-inclusive agriculture. The level of complexity and ambition of the Dutch eco-points system may be a drawback.

By opting for a multiple points system, the Dutch government has introduced a results-based reward system for ecosystem services in

agriculture. From an economic point of view, this pricing approach is a suitable one. However, partly due to EU legislation on reimbursement rules, the system is now set up in a hybrid form, in which the maximum possible cost-efficiency that markets can offer will not yet be achieved. To achieve that, a 'pure' point-reward (instead of an effort-reward) would have to be implemented.

The Dutch point system is quite complicated, and therefore, it requires good communication and implementation. In order to facilitate this, a simulation tool has been developed with which farmers (and their advisors) can make simulations before making their final choices.

The system is expected to be 'fine-tuned' based on the learning experience of the first few implementation years. An important and valuable aspect of the scheme is activities that are chosen (too) often during the first year can be awarded fewer points in the second and third year, while activities that are chosen (too) infrequently can be given more points or policymakers can demand that more points are scored in that theme.

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Summary

Implementing the EU eco-scheme in the Netherlands: A results-based points system approach

The latest reform of the EU Common Agricultural Policy (CAP) aimed at making it more results-oriented in order to ensure the sustainability of the sector. From 1 January 2023, in the new policy framework, the European Commission introduced a new tool – eco-schemes. This tool presents several advantages compared to the former 'greening' since it includes more ambitious targets than the previous policy framework. Another difference with the previous system is that the eco-schemes focus on results rather than efforts, while creating some room for the EU Member States to design measures which take into account existing local circumstances and needs. For the implementation of the eco-schemes, the Netherlands has developed a menu-points-system. The Dutch system is a good policy improvement compared to the previous 'greening' measures. Nevertheless, due to its hybrid form, it does not yet lead to the best possible cost-efficiency measures. To achieve that, a 'pure' point-reward (instead of an effort-reward) should have been implemented. Another novelty of the Dutch eco-scheme policy is the development of a simulation tool, which can assist farmers to test different choices before they make their final decisions.

Mise en œuvre de l'éco-régime européen aux Pays-Bas : une approche par système de points fondé sur les résultats

La dernière réforme de la politique agricole commune (PAC) de l'Union européenne (UE) visait à la rendre plus axée sur les résultats afin d'assurer la durabilité du secteur. Dans le nouveau cadre de politique, la Commission européenne a introduit un nouvel outil à compter du 1er janvier 2023, à savoir les éco-régimes. Cet outil présente plusieurs avantages par rapport à l'ancien 'verdissement' car il comprend des objectifs plus ambitieux que le cadre de politique précédent. Une autre différence avec le système précédent est que les éco-régimes sont axés sur les résultats plutôt que sur les efforts, tout en laissant aux États membres de l'UE une marge de manœuvre pour concevoir des mesures qui tiennent compte des circonstances et des besoins locaux existants. Pour la mise en œuvre de l'outil d'éco-régime, les Pays-Bas ont développé un système de points au sein de menus. Le système néerlandais est une bonne amélioration de politique par rapport aux mesures de 'verdissement' précédentes. Néanmoins, en raison de sa forme hybride, il ne conduit pas encore aux mesures les plus efficientes par rapport à leur coût. Pour y parvenir, une récompense fondée sur des points 'pure' (au lieu d'une récompense fondée sur des efforts) aurait dû être mise en place. Une autre nouveauté de la politique néerlandaise en matière d'éco-régimes est le développement d'un outil de simulation permettant d'aider les agriculteurs à tester différents choix avant de décider.

Umsetzung der EU-Öko-Regelungen in den Niederlanden : Ein ergebnisorientierter Ansatz mit einem Punktesystem

Die jüngste Reform der Gemeinsamen Agrarpolitik zielt auf eine stärkere Ergebnisorientierung ab, um die Nachhaltigkeit des Sektors zu gewährleisten. In der laufenden Förderperiode hat die Europäische Kommission ab dem 1. Januar 2023 ein neues Instrument eingeführt, die sogenannten Öko-Regelungen. Dieses Instrument bietet mehrere Vorteile gegenüber dem bisherigen 'Greening', da es ehrgeizigere Ziele verfolgt. Ein weiterer Unterschied zum bisherigen System besteht darin, dass sich die Öko-Regelungen auf Ergebnisse und nicht auf die Bemühungen konzentrieren. Zudem haben die EU-Mitgliedstaaten einen gewissen Spielraum für die Ausgestaltung von Maßnahmen, die den örtlichen Gegebenheiten und Bedürfnissen Rechnung tragen. Für die Umsetzung der Öko-Regelungen haben die Niederlande ein Punktesystem entwickelt. Dieses System ist eine politische Verbesserung im Vergleich zu den bisherigen 'Greening'-Maßnahmen. Aufgrund seiner hybriden Form führt es jedoch noch nicht zu den bestmöglichen und kosteneffizientesten Maßnahmen. Um dies zu erreichen, wäre eine 'reine' Punktbelohnung (anstelle einer Aufwandsbelohnung) notwendig. Eine weitere Neuheit der niederländischen Öko-Regelungen ist die Entwicklung eines Simulationstools, mit dessen Hilfe die Landwirtinnen und Landwirte verschiedene Entscheidungen prüfen können, bevor sie diese endgültig umsetzen.