# Eco-schemes in EU member states could benefit from more agroecology (Policy brief)

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# ECO-SCHEMES IN EU MEMBER STATES COULD BENEFIT FROM MORE AGROECOLOGY

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# Forward

The new Common Agricultural Policy (CAP) entered into force at the beginning of 2023, which includes the new form of direct payment schemes for environmental, climate and animal welfare. While it is mandatory for all Member States to create these eco-schemes in their CAP strategic plans, it remains a voluntary measure for farmers. The EU has recommended that 25% of each member state's direct payment budget be spent on such schemes, which will be completely financed by EU funding under the 1st pillar and will not require co-financing from member states (Lampkin et al., 2020).

Direct payments have the potential to indicate a genuine way of implementing the principle 'public money for public goods', and since they represent a considerable part of a farmer's income, this could motivate them to adopt more sustainable practices. Further, this intervention could contribute significantly to EU Green Deal targets, and be a key step to transitioning to sustainable food systems.

This policy brief will analyse each member state's strategic plan to determine which eco-schemes they have adopted and then identify which practices are truly agroecological and represent real progress to reach EU Green Deal targets.

# The policy context

In order to design their eco-schemes, each EU member state can choose from the agricultural practices defined by the European Commission (Directorate-General for Agriculture and Rural Development, 2021). There are no restrictions in the selection of agricultural practices but they need to meet the following conditions:

1. They should cover activities related to climate, environment, animal welfare and antimicrobial resistance;
2. They shall be defined on the basis of the needs and priorities identified at national/regional levels;
3. Their level of ambition has to go beyond the requirements and obligations established under the baseline (including conditionality);
4. They shall contribute to reaching the EU Green Deal targets.

Agroecology, which is recommended among other production systems and practices, is a holistic approach to food production that combines ecological principles with social and economic considerations in order to improve the sustainability and resilience of agricultural systems (Gliessman, 2007; Wezel 2009). There are nine specific practices proposed by European Commission (EC) which are considered to be following agroecological principles (HLPE 2019):

- Crop rotation with leguminous crops
- Mixed cropping - multi cropping
- Cover crop between tree rows on permanent crops - orchards, vineyards, olive trees - above conditionality
- Winter soil cover and catch crops above conditionality
- Low intensity grass-based livestock system
- Use of crops/plant varieties more resilient to climate change
- Mixed species/diverse sward of permanent grassland for biodiversity purpose (pollination, birds, game feedstocks)
- Improved rice cultivation to decrease methane emissions (e.g. alternate wet and dry techniques)
- Practices and standards as set under organic farming rules

An agricultural practice from the above list is henceforth referred as agroecological practice (AEP). If an eco-scheme adopts one of the AEPs mentioned in the EC list, it is grouped under AEP. Eco-schemes, that are not clearly associated with a specific AEP, are categorised into either of following two types:

- **Other AEP group:** If an eco-scheme adopts more than one proposed AEP, where it cannot be decided which AEP is the prevailing one, or adopts an agroecological practice that is not listed as agroecological in the EC's list (Wezel et al. 2014).
- **Non-AEP group:** If an eco-scheme does not include any agroecological practice or if the eco-scheme cannot be attributed clearly.

# Diversity of eco-schemes in EU member states

After months of discussions and significant processes of restructuring, the 161 eco-schemes designed and submitted by the 27 member states were approved by the EC. No restrictions were placed on member states on the number of eco-schemes that they had to design, hence the range adopted is diverse. For example, while Lithuania created 16 eco-schemes, countries such as Hungary, Ireland and The Netherlands have only one eco-scheme.

Nevertheless, the countries that designed only one scheme made it multi-dimensional and dynamic, including many sets of practices with unique payment models. Further, its important to note that the number of eco-schemes is not the most important determinant, as scale, funding and effective implementation can be much more relevant.

Although the EC did not explicitly mention the need for member states to adopt agroecological practices (AEP), all the member states except Cyprus have included at least one AEP in one or more of their eco-schemes, accounting for more than 68% of the total eco-schemes (111). Among this total, 53 eco-schemes have been clearly associated with one of the AEP listed by EC, while the others have been categorised by the authors as represented within Other-AEP group (58) and Non-AEP group (50). Figure 1 shows the number of eco-schemes per member state. Further, although many eco-scheme names provide clear intentions as to which set of practices are considered, only three member states (HU, LV, ES) have mentioned the term agroecology or agro-ecology directly in their eco-scheme names.

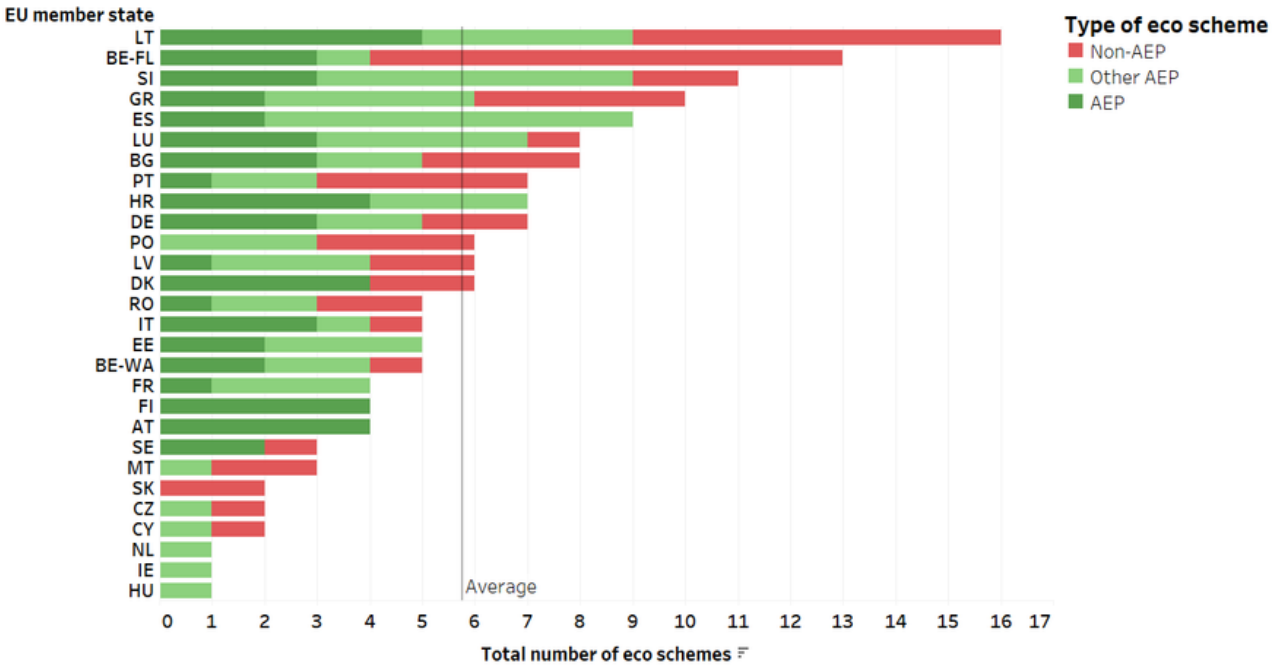



Figure 1: Number of eco-schemes adopted by the EU member states, categorized under type of eco-scheme.

## Agroecological practices in eco-schemes

Among the EU member states, 19 countries (including both regions of Belgium) have adopted at least one eco-scheme that is associated with an AEP. The list of EU countries and the AEP adopted by them are shown in Figure 2. The most favoured AEPs by member states (AT, BE-FL, BE-WA, BG, DE, ES, HR, IE, LU and SI) are *Low intensity grass-based livestock system* and *Practices and standards as set under organic farming rules*, whereas eco-schemes that incentivise farmers to practice climate-resilient crops or plant varieties was explicitly adopted by Greece alone. Further, *Improved rice cultivation to decrease methane emissions* was not implemented by any country.

Eleven eco-schemes, from 10 countries (BE-FL, BG, DK, EE, FR, GR, LV, LT, PT, SE), with 2 eco-schemes from Lithuania, have been identified under the category of AEP - *Practices and standards as set under organic farming rules*. Organic farming is mentioned directly in the eco-scheme name by all of these countries except for France, who mention environmental certification in their scheme name. Five member states (BE-FL, HR, EE, IT, LT) have introduced temporal diversification of crops through AEP - *Crop rotation with leguminous crops* in their eco-schemes. All of these member states, except for Latvia, have made it mandatory to include leguminous crops within their crop rotation. Whereas, spatial diversification of crops through AEP- *Mixed cropping - multi cropping* is encouraged by 6 member states (BG, HR, DK, FI, DE, LU). The main drivers that led these states to adopt the temporal or spatial diversity related AEPs re climate change (adaptation and mitigation) and the need to improve biodiversity (particularly for pollinators). On the

other hand, the adoption of AEP - *Cover crop between tree rows on permanent crops - orchards, vineyards, olive trees - above conditionality* (AT, IT, LT, RO) seems to have been motivated by the protection of ecosystem services such as controlling soil erosion and encouraging pollinator species. Italy, for example, has created two such schemes under this category ('Pollinator-specific measures' and 'Weeding of tree crops'). Another AEP that focuses on covering soil with vegetation is *Winter soil cover and catch crops above conditionality*, which will be put into action in 7 countries (AT, BE-WA, DK, FI, LT, SI, SE). However, Austria has taken this a step further by dedicating two schemes to this purpose - "Greening of arable land - intercropping/catch crops" and "Greening of arable land - evergreen system".

Eco-schemes related to permanent grassland, with a hope to enhance biodiversity, are designed by 4 member states (DK, FI, DE, LU). Among these countries, only Finland has adopted two schemes for this AEP - *Mixed species/diverse sward of permanent grassland for biodiversity purpose*. Regarding reduction of livestock density in grazing areas, eight countries (AT, BE-WA, BE-FL, BG, HR, DE, LU, SI, ES) will be encouraging farmers to execute AEP- *Low intensity grass-based livestock system*. Croatia, Slovenia and Spain each have two schemes under this category. These eco-schemes are usually promoted in terms of "extensive management" of grassland and often limit stocking rates. Stocking rates relate to livestock density and the percentage of time spent on pastures. Finally, while some member states have mentioned having climate-resilient crops or practices that are climate-friendly as an option within an eco-scheme with another stated scope, Greece is the sole country to introduce a scheme specific to AEP- *Use of crops/plant varieties more resilient to climate change*.

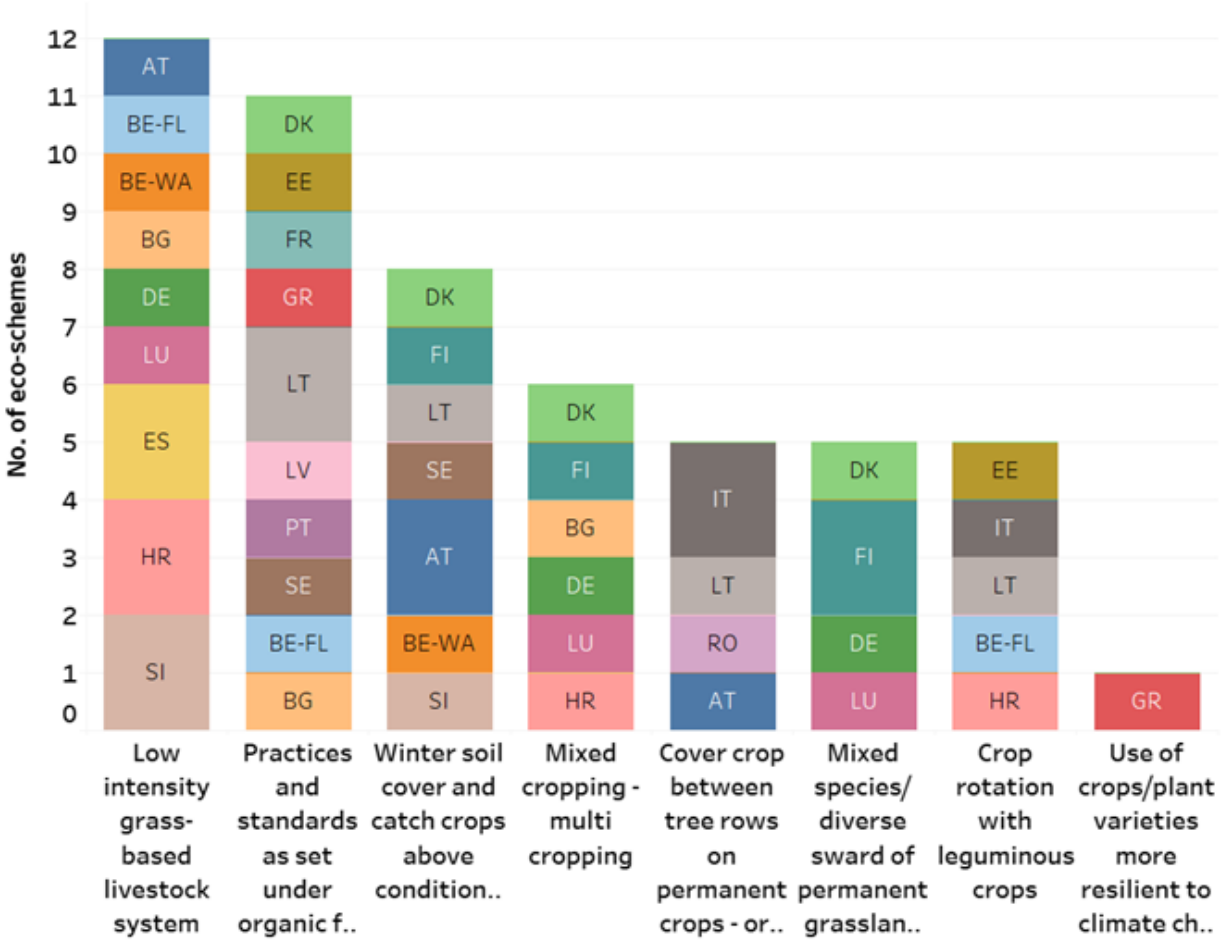



Figure 2: AEP adopted in eco-schemes by EU member states.

# Other AEP in eco-schemes

Some eco-schemes do not focus directly on a specific AEP, however they appear to include practices that are closely related to them. For example, a member state may include an eco-scheme on crop rotations but they do not mention the necessity of 'leguminous plants' and thus cannot be categorised as an EC listed AEP - *crop rotation with leguminous plants*. Another example, is when countries support the use of mixed plant species for diversity purpose on arable land rather than grassland, making them unable to be grouped under AEP: *Mixed species/diverse sward of permanent grassland for biodiversity purpose*. Such eco-schemes are classified under 'Other AEP'.

Additionally, many eco-schemes mention more than one AEP, without a single AEP standing out as the prevailing one and therefore also classified under 'Other AEP'. For instance, CZ, HU, IE, and NL designed an eco-scheme with a set of practices, which include more than one AEP. Another example is Spain, who mentions two systems in one scheme 'Carbon farming and agroecology: rotations and no-tillage on irrigated cropland'. This eco-scheme is therefore associated both with AEP - *crop rotation with leguminous plants* and another non-AEP EC listed eco-scheme conservation agriculture (under carbon farming). The Latvian eco-scheme 'Support for environmentally and climate-friendly agricultural practices' provides support for adopting either 'crop diversification' or 'soil cover during the winter period'. These practices are directly associated with the AEP - *Mixed cropping - multi cropping or Winter soil cover and catch crops above conditionality*.

The final category is for the schemes that were chosen by member states that are not suggested by the EC as relating to agroecology, that actually are (Wezel et al. 2014), such as the management of landscape features, agroforestry or biological pest control.

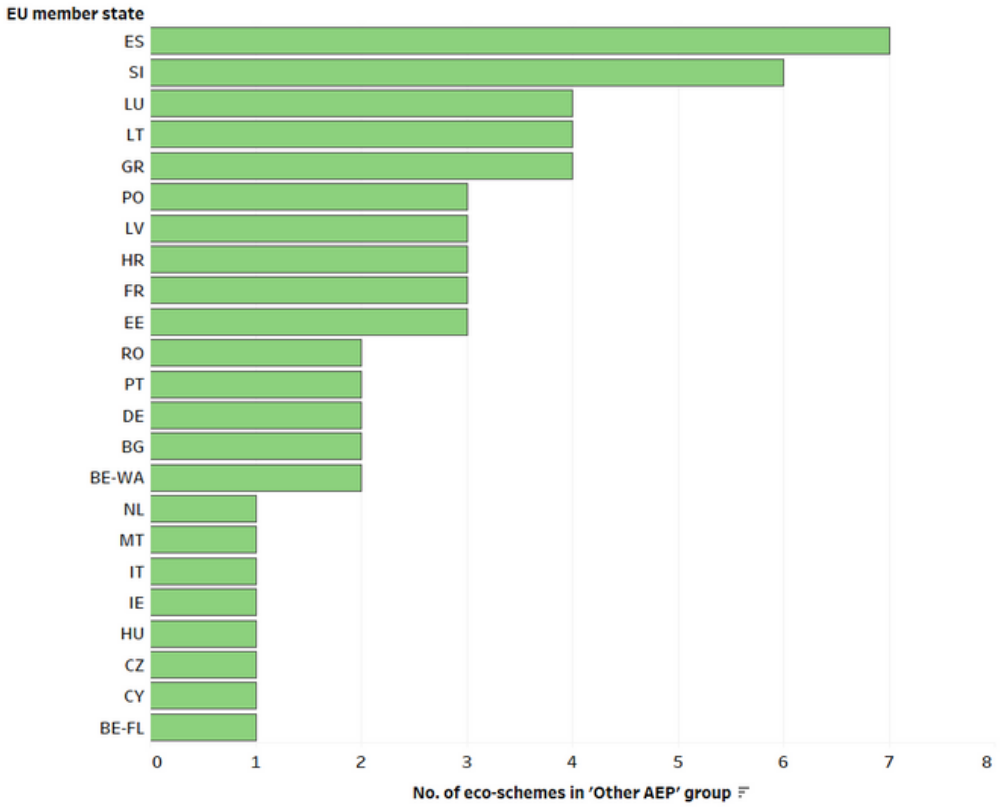



Figure 3: Other AEP adopted in eco-schemes by EU member states.

# Non-AEP in eco-schemes

The eco-schemes which do not fall under AEP or Other AEP, are placed in the Non-AE group. It is important to mention that while these practices were not determined as agroecological, it does not mean that they do not include agroecological elements, but it remains unclear what the true practices and scope of the scheme are. Alternatively, there are practices that are environmentally beneficial but that never the less do not relate to agroecology.

The non-AEP or production systems that were preferred are: Precision farming (BE-FL, CZ, SE), Carbon farming (BE-FL), practices beneficial for soil (BE-FL, BG, GR, MT, PT), practices related to GHG emissions (BE-FL, PT), Integrated Pest Management practices (BE-FL), and Husbandry and animal welfare plans (IT, LU, PO, RO). The practices listed by the EC as 'Other recommended practices' were also adopted by a few countries. Belgium-Flanders, for example, has designed an eco-scheme that adopts practices related to improving nutrient management by creating a 'Soil Passport' for the management of soil at the farm level. Portugal has introduced an eco-scheme for the 'Retention of water on permanent grasslands' that focuses on protecting water resources. While many member states have focused on reducing or banning the use of phyto-pharmaceutical products in their eco-scheme descriptions, some of them (BE-WA, BG, DE, GR, LV, LT, LU) have directly mentioned in the eco-scheme name the focus on reducing chemical pesticides.

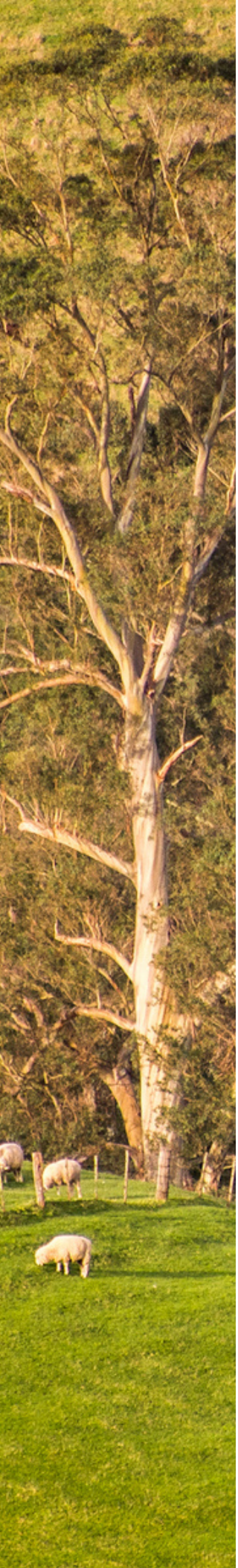
## Recommendations

1. Multi-dimensionality should be added to the design of all eco-schemes in order to encourage the implementation of multiple practices at once. This will create a holistic approach to farm systems rather than focusing on individual components of a system.
2. Since one of the stated goals for the creation of eco-schemes is to implement climate-friendly practices and approaches, a strong emphasis could be given on the use of climate-resilient crop varieties, and more clarity could be created in what practices are specifically defined as climate-friendly.
3. Some eco-schemes should be given a baseline incentive and on top of this, a premium for a more holistic implementation of all measures and practices.
4. Proportionality should be ensured between the level of payment and the expected environmental benefits.
5. More result-oriented measures should be included within eco-schemes to strengthen positive results, while still allowing flexibility to farmers in order for them to manage their own strategies.
6. The amount of subsidy received should be based on the complexity needed to implement certain management practices. Less demanding counterparts should not be more financially attractive than well-designed eco-schemes.
7. Maintain rigorous conditionality by not paying for what should be mandatory.
8. There has been a huge range of interpretations from each member state when deciding how eco-schemes should be created therefore, some basic guidelines for designing eco-schemes would be beneficial in the future.

## The way forward

Overall, due to their design flexibility, the approved eco-schemes are very diverse in terms of farming practices adopted and type of payment mechanisms, such as introducing points-based system to meet climate goals. Nevertheless, it remains clear that many eco-schemes have not been created with robust funding, clear targets or proven benefits, and risk to fall short of further Green Deal goals and not deliver environmental benefits.

When reviewing eco-schemes after the initial phase of implementation, it is vital that countries create clear objectives and roadmaps that are in line with other major EU legislations and agroecology, and to choose to go beyond the vague qualities of some current schemes.



## References


Directorate-General for Agriculture and Rural Development, 2021. Commission publishes list of potential eco-schemes. URL https://agriculture.ec.europa.eu/news/commission-publishes-list-potential-eco-schemes-2021-01-14_en (accessed 1.19.23).

Gliessman, S.R., 2007. Agroecology: The Ecology of Sustainable Food Systems. CRC Press.

HLPE (2019). Agroecological approaches and other innovations for sustainable agriculture and food systems that enhance security and nutrition. Committee on World Food Security, High Level Panel of Experts on Food Security and Nutrition, FAO Rome.

Lampkin, N., Stolze, M., Meredith, S., de Porras, M., Haller, L., Mészáros, D., 2020. Using Eco-schemes in the new CAP: a guide for managing authorities (Report). IFOAM EU, FiBL and IEEP, Brussels.

Wezel, A. et al. 2009. Agroecology as a science, a movement and a practice. A review.Agronomy for Sustainable Development 29: 503–515.

Wezel, A., Casagrande, M., Celette, F., Vian, J.F., Ferrer, A., Peigné, J. (2014). Agroecological practices for sustainable agriculture. A review. Agronomy for Sustainable Development 34 (1): 1-20. DOI 10.1007/s13593-013-0180-7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