European Commission

Agriculture and rural development

Best practices for **agri-environmental** and **climate actions** within the **CAP post-2027**

Lessons learnt from current CAP strategic plans

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Introduction

This report provides a set of **best practices** to Member States to help them design agri-environmental and climate actions under the agricultural chapter of the future national and regional partnership plans for the period 2028-2034. With this report, we aim: (i) for better outcomes in improving farming practices and production systems; and (ii) to foster greater farmer' engagement into agri-environmental and climate actions across the EU. The 2028-2034 CAP programming period will be influenced by both expected budget pressures and recent legislative changes. This will make it all the more necessary to develop **effective and more targeted agri-environmental and climate actions** to make the most of the financial resources available. It is also important that Member States achieve a **balance between environmental effectiveness, simplification and ease of monitoring**.

This report summarises the main lessons learnt on area-based support under current the common agricultural policy (CAP) programming period 2023-2027 including its conception, implementation, monitorability and controllability. It also outlines challenges, good practices and relevant examples of current interventions within CAP strategic plans addressing the environmental and priority areas set out in the proposal for a CAP regulation for the period 2028-2034. These best practices complement the **CAP national recommendations** that the Commission will prepare to provide guidance to Member States on achieving the CAP specific objectives set out in the Commission proposals for the 2028-2034 CAP and NRP legal framework.

Environmentally sustainable farming remains a key objective for the CAP post-2027, since the agricultural sector needs to become more resilient and better adapted to climate, environmental and social challenges, while remaining competitive in a global context. Sustainable farming practices are also crucial for ensuring productivity potential and capacity across the EU while achieving many of the EU's environmental and climate objectives. There is a critical need to provide incentives for farmers to support them to carry out sustainable practices and production systems. Strengthening actions on the environment and climate will benefit EU citizens in general and farmers in particular in view of the challenges ahead. Environmentally friendly practices and farming systems are the best defence against climatic changes and rising shortages of resources (such as water, fertile soils and pollinators).

The CAP plays a crucial role in both: (i) driving resilient and sustainable farming practices and farming systems; and (ii) improving animal health and animal welfare. With its CAP and National and Regional Partnership (NRP) legislative proposals[1], the Commission aims to improve policy on environmental and climate action in an integrated way also and in line with specificities on the ground. The Commission has proposed a **simplified and more flexible framework** for the CAP (Figure 2), relying on: (i) a new **farm stewardship** system (including a common set of protective practices and existing statutory management requirements, SMRs); (ii) a new measure known as **agri-environmental and climate actions** (AECAs) that merge the current eco-schemes and agri-environmental and climate commitments (AECCs); (iii) support for **green investments** (that can be productive and non-productive) that play a key role in making the use of natural resources more efficient while making farms more competitive; and (iv) a **set of complementary tools** to support farmers in the green transition and help them move towards higher-welfare livestock

[1] COM(560)2025 Final of 16.7.2025 - Proposal for a Regulation of the European Parliament and of the Council establishing the conditions for the implementation of the Union support to the Common Agriculture Policy for the period from 2028 to 2034 and COM(565)2025 Final of 16.7.2025 - Proposal for a Regulation of the European Parliament and of the Council establishing the European Fund for economic, social and territorial cohesion, agriculture and rural, fisheries and maritime, prosperity and security for the period 2028-2034 and amending Regulation (EU) 2023/955 and Regulation (EU, Euratom) 2024/2509.

systems by improving farmers' knowledge, providing qualified advisory services, encouraging innovation and digitalisation, and launching cooperation projects[2].

The AECAs involve incentive support to farmers who wish to both: (i) maintain and adopt practices beneficial for the environment and the climate; and (ii) shift towards more environmentally friendly and resilient production systems. The payments by the AECAs don't need any more to be correlated with the additional costs and income foregone of the commitments, thus paving the way for rewarding the environmental services, provided that these payments are compliant with the World Trade Organization 'Green Box' rules[3]. Providing **incentive payments** could make AECAs more attractive and increase farmers' participation. Moving from compensation to incentives is an important shift in policy that makes it possible to grant income support for environmental action. The AECAs should also include support for **transition of farming systems** to encourage farmers to engage in transformative changes at farm level towards **more resilient and sustainable production systems**. The proposed legal framework for AECAs leaves significant leeway to Member States to decide on: (i) the farming systems to support; (ii) the overall design, content and duration of these actions; and (iii) the budget allocation and the payments themselves. AECAs will be co-financed by Member States with a minimum national contribution of at least 30%. Examples of farming systems that can be promoted by the AECAs are: organic farming, agroecology, low-input farming (e.g. zero-pesticides), agro-forestry, regenerative agriculture, extensive livestock grazing systems, or other farming systems that receive national certifications.

Although the Commission has not proposed a minimum budget allocation for environmental, climate and animal welfare objectives (ring-fencing), the CAP will significantly contribute to the target that **43% of the spending in the NRP plans should be on environment and climate objectives**. Since the beginning of the programming period until financial year 2025, payments for both eco-schemes and AECCs accounted on average for nearly 28% of total EU public funding under the CAP strategic plans (CSPs). In terms of area coverage, in claim year 2024 eco-schemes and AECCs were implemented on nearly 61% (98,3 million ha) and 12% of EU agricultural area (19.6 million ha) respectively (Figure 1). This is a significant outcome and means that many farmers are willing to engage in more sustainable practices and systems provided they are rewarded for the efforts made and the risks taken.

The **availability of CAP budget and the governance of the NRP plans** will determine how much funding there will be for AECAs in the forthcoming programming period 2028-2034. The amount of funding will in turn affect the type of measures chosen by Member States and the balance between the two alternative land-use strategies of 'land sparing' (farming intensively on smaller areas of land and leaving the rest of the land for nature purposes) and 'land sharing' (integrating conservation and production purposes within the same landscape by using environmental-friendly practices over a wider area). The amount of funding will also affect the broader balance between food production, on the one hand, and environment and biodiversity protection by more environmentally friendly practices and systems, on the other.

Although this paper focuses on area and animal-based support, other CAP interventions are also important to help the sector to **adapt to emerging challenges and produce more sustainably**. These other interventions include: (i) support for investments; (ii) knowledge sharing; (iii) qualified advisory services; (iv) innovation; and (v) cooperation projects.

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[2] Fact sheet EUROPE'S BUDGET: CAP post-2027: fostering farm sustainability, October 2025. See https://agriculture.ec.europa.eu/common-agricultural-policy/cap-post-2027-next-eu-budget_en).

[3] Annex 2 to the WTO Agreement on agriculture refers to domestic support measures (exempted from reduction commitments) that meet the requirement of having no, or at most minimal, trade-distorting effects or production effects. These non-distorting support measures are usually called 'green box', although there is no link between these 'green box' measures and broader 'green' or environmental objectives.

Figure 1 - Share of agricultural area covered by eco-schemes and AECCs in Member States (%) **-** claim year 2024

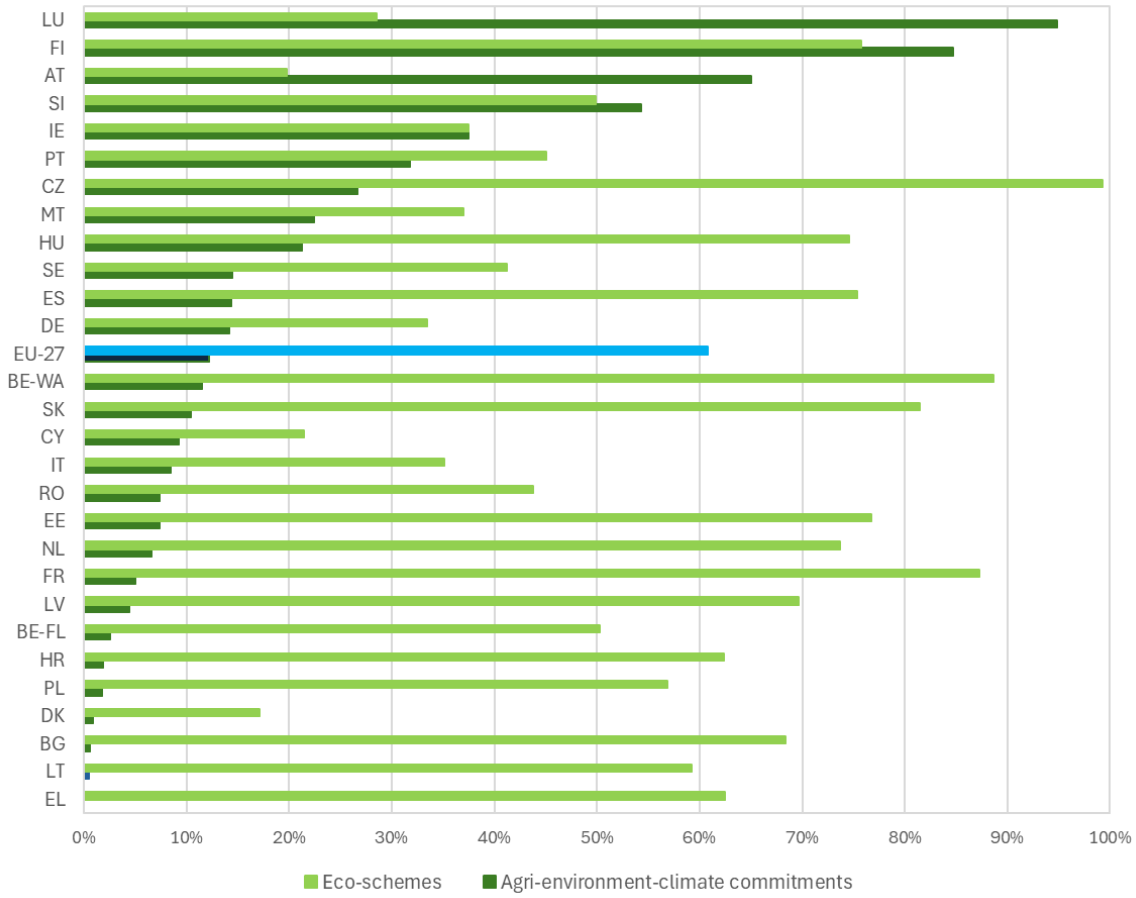
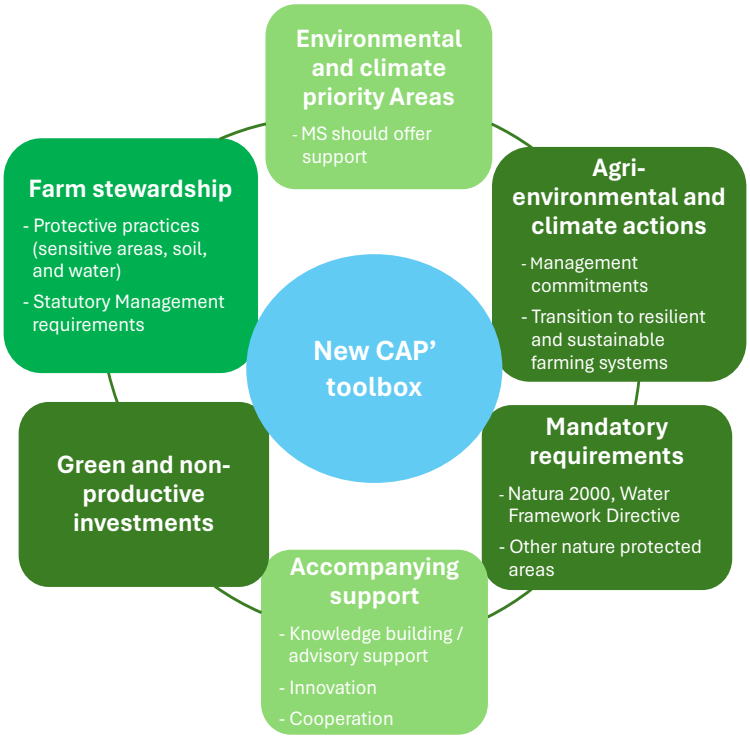


Figure 2 – The common CAP toolbox for supporting sustainable agriculture in CAP 2028-2034



Highlights: Best practices for designing effective agri-environmental and climate actions in the CAP post-2027

On design and implementation

1. Promote actions to **adopt beneficial farming practices** for all types of land use (arable, grasslands, permanent crops) maximising environmental and climate outcomes to allow all farmers who wish to introduce new farming practices and evolve towards more sustainable models. The actions should strive for **additionality** so there is a transition of a significant number of farmers towards more future-proof practices.

2. The **maintenance** of beneficial practices already performed by the farmers that provide environmental services (e.g., organic farming, extensive grassland management) should also be rewarded where there is a significant risk of being abandoned in the absence of policy support.

3. Offer dedicated **animal health and welfare** support schemes to help farmers meet new requirements stemming from the animal welfare legislation review, particularly the transition away from confined housing systems.

4. Support the **transition towards environmentally sustainable and climate resilient farming systems**, such as national certified schemes, organic farming, regenerative agriculture and other holistic farm approaches.

5. Set out **attractive payments** aligned with efforts and risks requested to farmers and tailored to territorial context to enable farmers' engagement and to contribute to farm's income.

6. Design **"package" actions** encompassing several practices to reduce the footprint on all natural resources and biodiversity. This holistic approach enables synergies between practices providing more environmental benefits than the support to specific (and isolated) practices.

7. Designing **"whole-farm" point-based schemes** is an option. This type of schemes allows covering all the holding' area, provides for a range of farming practices with different demanding level and environmental objectives, and offers flexibility and incentives to farmers to do more.

8. Strengthen the **capacity of advisory services** for guiding the transition of farming towards more innovative, resilient and sustainable pathways.

9. Develop **comprehensive strategies using the CAP toolbox**, such as combining payments for Natura 2000 and Water Framework Directive (where applicable), green and non-productive investments, capacity building actions, and cooperation projects.

10. Ensure active **farmers' involvement** throughout the planning process of the future agri-environmental and climate actions to ensure effective and accepted actions.

11. Continue **planning multiannual commitments** that ensure environmental impact and gives certainty to farmers, though annual commitments could fit for certain objectives and can encourage farmers' uptake.

12. Target and tailor actions to **specific territorial conditions**, needs, and farm characteristics with more targeted incentives to foster the enrolment of farmers. Digital tools can help to implement more spatially targeted actions.

13. Tackle in a meaningful way key **environmental hotspots** the needs identified in Member States.

14. Develop **result-based schemes** as these make it possible to ensure and measure environmental outcomes and leave more leeway to farmers to decide how best to achieve the outcomes. These approaches increase the sense of ownership by farmers on actions and results that can help in improving their uptake.

15. Develop **collective actions to promote landscape approaches** for environmental management, particularly biodiversity conservation, climate adaptation and water management. The cooperation intervention can be used to support pilot projects.

On monitorability and controllability

16. Define **clear, measurable and monitorable** commitments ensuring that their verification is feasible.

17. Use **innovative technologies** for efficient monitoring and control to streamline processes and reduce administrative burden (use of geotag photos, digital farm books or other digital tools).

18. Combine **preventive and detective controls**. Use satellite monitoring where possible, supported by administrative cross-checks and risk-based on-site inspections. In parallel, provide timely feedback and guidance to farmers — for example through AMS alerts or advisory follow-up — so that potential issues can be corrected early, reducing errors and any penalties.

19. Integrate **administrative datasets** (input purchase records, certification schemes, livestock databases, and payment systems) to identify potential inconsistencies automatically.

20. **Involve the authorities responsible for the control of area-based support** (Paying Agencies) in the design of actions to ensure compliance and reliable delivery of objectives.

Lessons learnt under the CAP strategic plans

This section provides insights into obstacles experienced – and opportunities discovered – in the implementation of the current eco-schemes and AECCs within the current CSPs. This section also draws on: both (i) the work carried out by the EU CAP network on green architecture[4]; and (ii) relevant literature and research on environmental mainstreaming under the CAP.

The analysis is structured around **key factors** that can make future AECAs more likely to succeed in achieving environmental, climate, animal-health and animal-welfare outcomes. The topics addressed in this section are:

1. effectiveness, including in practices, uptake by farmers, synergies between practices, and incentive payments;
2. duration of commitments: annual versus multi-annual;
3. tailoring and targeting actions to specific contexts and needs;
4. result-based schemes;
5. collective actions and landscape-level approaches;
6. monitorability and controllability.

For each topic, we: (i) outline an assessment of the issues at stake; (ii) provide relevant examples of current eco-schemes and AECCs; and (iii) identify best practices. Data on implementation reported in the text boxes refers to financial year 2024 (equivalent to claim year 2023 for area and animal-based support).

The best practices are design approaches that can make future AECAs more effective, adopted by more farms, and more conducive to achieving sustainable agricultural growth and increased resilience. The examples are chosen to illustrate well-designed interventions across all Member States for each topic, although the list is not exhaustive.

Figure 3 – Factors for effective agri-environmental and climate actions

[4] EU CAP network thematic groups on "Designing and implementing effective eco-schemes in the new CSP" and "Green Architecture – designing green strategies". See Thematic Group on the Design and Implementation of Eco-schemes in the new CAP Strategic Plans | EU CAP Network.

Effectiveness of area-based actions for environment and climate

The effectiveness of area-based support for environment and climate objectives mainly depends on three criteria[5]:

- whether the measures are **effective** on a unit base (per hectare, per animal);
- whether the overall **implementation level** of the measure is sufficient to change the practices in a certain area and eventually lead to changes in the state of natural resources and biodiversity;
- whether the **payments** are sufficiently related to the environmental output provided to encourage significant farmers' engagement.

Effective implementation requires a **link between: (i) the objectives pursued; (ii) the actions supported and the place where these actions are located; (iii) the duration of these actions; and (iv) the funding offered**. To improve effectiveness, it is often necessary to strike a balance between the environmental ambition of an action and the likelihood that the action will be adopted by farmers. In general, a high level of participation in area-based schemes is key to achieving a widespread effect and improving the environment in a certain area. However, although the participation level is important and the practices promoted by an action need to be practicable and feasible for farmers, some interventions that reach high levels of uptake might also be ineffective due to insufficient additionality (i.e. the measures supported are already widely adopted or would have been undertaken by farmers anyway, even in the absence of public support). The same can be true for the opposite situation, where actions that are not widespread are nevertheless very effective. For example, two recent assessments by the EU evaluation network of the contribution of the CSPs 2023-2027[6] to climate-change mitigation and soil protection show how certain farming practices, although not widely implemented, significantly influence the overall contribution estimate because of their high impact per hectare. In addition, some widely adopted practices with lower impact per hectare have a relatively significant estimated potential contribution (see sections on climate change and soil health).

Most of the current CSPs contain a combination of 'light green' and 'dark green' interventions. The difference between these two categories lies in: (i) how demanding it is to implement the practices; and (ii) the degree of impact of the practices on the overall farm management. 'Dark green' interventions encompass – for instance – changes in grass-mowing dates to protect nesting birds, long crop rotations, significant reductions in inputs use (such as pesticides and crop nutrients), a significant decrease of livestock densities, and leaving non-productive areas. 'Dark green' interventions are usually more costly. 'Light green' interventions are mostly low-cost practices to decrease the environmental footprint of agriculture without challenging the overall farm model and its status quo. However, there is no EU common system for classifying practices as 'light green' or 'dark green' and whether a practice is light or dark green depends on the context.

Implementation of CAP area-based measures over the years shows that there are trade-offs between 'high ambition' and 'high uptake'. For this reason, a combination of actions with different levels of environmentally friendly practices is needed to reach a significant share of both farmer uptake and farmland coverage. What matters is that the **actions trigger a change of practices for a significant number of holdings** targeted by the measure. The focus should be on **ensuring additionality**, both to strive for a performance-based approach and to appropriately respond to the environmental and climate pressures facing the sector.

Although the main goal of agri-environmental and climate measures is to increase uptake of the supported practices, it is also very important to **preserve any existing beneficial practices** (e.g. maintenance of organic farming, low stocking densities, grazing practices, no-tillage etc.) **and land uses that provide environmental services** (e.g. agroforestry, permanent grasslands). In a changing environment (ecological, economic, social) that induces changes in practices, the additionality principle is not opposite to the funding of maintaining practices when these are threatened by trends towards less favourable practices[7]. Preserving these existing beneficial practices and

[5] Röder, N. and Matthews, A. – Post Eco-schemes a work in progress, January 2021, Norbert Röder and Alan Matthews – CAP Reform.

[6] https://eu-cap-network.ec.europa.eu/publications/rough-estimates-climate-change-mitigation-potential-cap-strategic-plans-eu-27-over_en and https://eu-cap-network.ec.europa.eu/publications/rough-estimate-soil-protection-potential-cap-strategic-plans-over-2023-2027-period_en

[7] CGAAER, Des outils financiers pour la transition agroécologique https://agriculture.gouv.fr/quels-outils-financiers-pour-la-transition-agroecologique-et-la-remuneration-des-services

land uses prevents farmers from switching to more intensive methods and models, which is an on-going trend in many parts of the EU. Understandably, farmers try to increase revenue by continuing the intensive management of their land or further intensifying their production. This is a situation typical in many arable farming regions and high-intensity dairy regions in western and central Europe. There is also a key risk in certain areas that farmers could try to reduce their costs and use of labour by abandoning hard-to-manage or low-productive areas. This threat of land abandonment is widespread in many mountainous and remote grassland areas. Hence, **sustainable grassland management and grazing systems** should receive high priority for support.

Granting **attractive payments** can help farmers to participate in demanding actions with high environmental impact, which could otherwise be sidelined by easier options. Rewarding farmers for beneficial practices and ensuring that **payments are tailored to regional conditions and farm types** – in particular the opportunity costs in the most productive areas – are key to fostering engagement. This is because the farm features tend to play a major role in adoption decisions. Future uptake of AECAs hinges on granting payments that both appropriately match the efforts and risks taken and contribute to farmers' income.

The current CSPs make available eco-schemes and AECCs with a **wide range of overall designs and content**. Some of these interventions focus on one/several practices related to one/several land uses. Equally, other eco-schemes and AECCs include a **bundle of commitments** made up of a mix of practices of various degrees of ambition, usually covering all land uses. In such cases, farmers are often asked to select or perform practices covering their whole agricultural area and/or achieving a minimum number of points under a specific scoring system. Some Member States have developed scoring systems according to which individual practices are weighted based on their environmental value or according to the effort required by the farmers involved.

The design of **'package' actions encompassing a menu of practices** addressing several environmental objectives can both: (i) make it possible to improve synergies between practices; and (ii) reduce the number of schemes offered. One option is the design of **whole-farm schemes** covering all the holding' area with a flexible menu of practices and a scoring system. This type of scheme: (i) makes it possible to cater for practices with different levels of additionality; (ii) provides synergies; and (iii) offers flexibility and incentives to farmers to choose various practices (where they can get more by doing more). This model has proven to be a successful approach in some current eco-schemes – though some running difficulties in the initial phase – and **is a way of delivering fewer actions in the future.** However, the inherent complexity of whole-farm schemes is among others linked to the proper monitoring of the results achieved.

In the future, **support for transformational changes of farms towards more environmentally friendly, resilient and innovative systems** should be more widely supported by the CAP. To this end, the Commission has put forward a proposal for a **lump-sum transition support** that can cover all capital and management costs involved during the transition period.

It is necessary **to support farmers with skilled farm advisers** to foster sustainable practices and farming systems, particularly so that farmers can benefit from the transition support payment that is proposed to be offered in the next CAP period. Advisory services can also help farmers to avoid unintentional errors in the implementation of schemes. Some Member States have developed innovative ways to encourage the use of qualified advisers (e.g. the voucher scheme introduced by the Netherlands or the online platform for agro-food advisers announced by Spain).

Farmers' involvement in the design and implementation of actions is also crucial to improve their acceptance and uptake. Greater engagement of farmers in actions and encouraging farmers to play a role in co-designing these actions can help to promote: (i) the exchange of experience; (ii), learning; and (iii) a sense of ownership that can help in scaling up best practices.

Developing **coherent strategies combining the different CAP tools** could be helpful for achieving environmental and climate objectives, such as: (i) payments for Natura 2000 and compliance with the Water Framework Directive (where applicable); (ii) green and non-productive investments; (iii) capacity building actions; and (iv) cooperation actions. Combining these tools in will help to promote synergies to achieve the long-term environmental and climate related objectives.

- Promote actions to **adopt beneficial farming** practices for all types of land use (arable, grasslands, permanent crops) maximising environmental and climate outcomes to allow all farmers who wish to introduce new farming practices and evolve towards more sustainable models. The actions should strive for **additionality** so there is a transition of a significant number of farmers towards more future-proof practices.
- Support the **maintenance** of beneficial practices already performed by the farmers that provide environmental services (e.g. organic farming, extensive grassland management) where there is a significant risk of being abandoned in the absence of policy support.
- Offer dedicated **animal health and welfare** support schemes to help farmers meet new requirements stemming from the animal welfare legislation review, particularly the transition away from confined housing systems.
- Support the **transition towards environmentally sustainable and climate resilient farming systems**, such as organic farming and other holistic farm approaches.
- Provide **attractive payments** that appropriately match the efforts and risks taken by farmers and contribute to farm's income.
- Design **"package" actions encompassing several practices** that improve natural resources and biodiversity. This holistic approach enables synergies between practices providing more environmental benefits than the support to specific (and isolated) practices.
- The design of **whole-farm point-based schemes** is an option. This type of schemes allows covering all the holding' area, provides for a range of farming practices with different demanding level and environmental objectives, and offers flexibility and incentives to farmers to do more.
- Strengthen the **capacity of advisory services** for guiding the transition of farming towards more innovative, resilient and sustainable pathways.
- Develop **comprehensive strategies** by using the CAP toolbox, such as combining payments for Natura 2000 and Water Framework Directive (where applicable), green and non-productive investments, capacity building actions, and cooperation projects.
- Ensure the **involvement of farmers** throughout the planning process of the future agri-environmental and climate actions to improve their acceptance and uptake.

The Netherlands: eco-scheme "Land-based eco-scheme for climate and a living environment"

This Dutch whole-farm scheme reflects an integrated approach to sustainability. Farmers must contribute to five sustainability objectives on farm level before becoming eligible for support. It consists of a menu of practices (eco-activities) with an associated scoring according to their environmental benefit. The goal is to strengthen the sustainability performance of farmers at national level with regional differentiation. The beneficiary receives a payment per hectare based on the level he/she achieves (gold, silver, bronze) summing up the scores of the practices chosen. A simulation tool supports the farmers' decision-making. In 2024, the scheme reached nearly 35 000 farmers and 1,4 million ha, which is a success despite its inherent complexity. The strengths are its flexibility, the synergies between practices, and the high farmer's engagement.

Czechia: Whole farm eco-scheme

Czechia has included in its CSP an eco-scheme designed at the whole-farm level, which means that the support applies to most or all of the farm's eligible agricultural area. The scheme covers all major land types: arable land, grassland, permanent crops. Farmers must meet all requirements, such as conditions for sustainable grassland management, and arable area including soil practices, crop diversity rules, and a minimum share of 5% for non-productive areas. A premium level requires a 7% of non-productive elements, including a minimum of 2% of linear features, and some other additional requirements.

Denmark and Ireland: Comprehensive strategies for reducing agricultural GHG emissions supported by several CAP interventions

Denmark and Ireland have estimated the load reduction of agricultural GHGs necessary to reach their national targets (in line with the Effort Sharing Regulation) and have quantified the CSP contribution to the national goal. Denmark has laid down in its CSP a comprehensive strategy including reducing N2O from nutrients and proposes a wide range of actions such as: innovative land-based measures (creation and restoration of wetlands), investments on equipment for precision fertilisation, support plant-based food, and promote circular economy of nutrients, and a range of area-based interventions (AECC, eco-schemes and WFD payments) supporting catch crops, energy crops, fallow areas, reduction of nitrogen fertilisers application, taken out of production arable land in wetlands or conversion to unfertilised grasslands.

Ireland has also planned several CAP interventions that aim at reducing GHG such as couple income support to protein crops, eco-schemes to limit synthetic nitrogen use and reducing stocking rates, AECC (suckler cow efficiency program, low-emissions spreading slurry, low-input grasslands), investments (precision farming, manure storage, machinery for fertilizer application) and cooperation support to collective implementation of several AECCs.

France: AECC "Transition of practices"

This intervention supports farms to move towards more sustainable systems and paves the way for future transition support. The key features of this AECC are: (i) result-oriented approach based on target values, (ii) a five-year transition period, and (iii) progressive approach based on an action plan that includes an initial assessment of the farm and a final assessment of the achievement of results. The three transition pathways proposed (the regions decide which pathways they wish to implement) are: 1) Phytosanitary strategy to reduce the farm's phytosanitary treatment frequency index (IFT) by 30%; 2) Carbon farming to improve the farm's carbon balance by at least 15%; 3) Protein autonomy of livestock farms to reduce the farm's reliance on purchased protein products and enhance mixed crops-livestock farms. The payment is a lump sum for all pathways of €18 000 per farm for the overall five-year.

Annual versus multiannual commitments

Current eco-schemes (mostly annual) and AECCs (multiannual) offer scope for different commitment periods. An annual commitment can be an advantage in encouraging take up as it allows farmers to enrol and gain experience in implementation without committing to a multiannual contract. In certain cases, requirements for a multiannual engagement can be a barrier for farmers' participation (e.g. when seeking to promote non-chemical weed control). A one-year engagement may also increase the likelihood that farmers later enrol in a longer contract[8].

However, although annual commitments can be sufficient to bring benefits to the environment through certain sustainable farming practices, other types of farming practices need a longer time span before they take effect. This is the case, for instance for: (i) the recovery of biodiversity; (ii) the establishment of specific flora and fauna; (iii) nutrient management (long-term removal of nutrient surpluses in water catchment areas); (iv) crop rotation; or (iv) carbon farming. For such objectives, **multiannual commitments provide a greater assurance of lasting impact** as the actions will be performed continuously over several years. Experience so far shows that beneficiaries often acknowledge the financial certainty of longer durations of AECC contracts (e.g. payments are secured for five-to-seven years) and their environmental benefits, while other beneficiaries would favour increased flexibility in changing or ending annual commitments[9].

Annual support could be appropriate for instance for: (i) crop diversification; (ii) catch crops; (iii) bans on pesticides; and (iv) setting and managing landscape features and non-productive areas (e.g. field margins, flower strips, grass strips, flooded farmland areas). For these practices, the schemes would have an environmental effect starting in the first year of implementation. Fallows and landscape elements on arable land provide a positive environmental impact in the first year, but their impact increases the longer they remain in the area.

Ultimately, effective AECA planning implies **assessing where annual or multiannual commitments are needed for the different environmental objectives** pursued while making it possible to reach the level of uptake needed to achieve an outcome.

Tailoring and targeting actions to specific contexts

Although it is important to incentivise the uptake of sustainable practices across wider agricultural areas and different land uses, **tailoring and targeting actions** to specific areas is essential for their uptake and delivery. Spatial targeting means focusing support on specific areas and tailoring means adapting the measures to different agronomic/pedoclimatic contexts and farm characteristics. Recent assessments show that current eco-schemes are insufficiently targeted to regional needs[10]. However, effective targeting and tailoring is a complex and resource-intensive process for the managing authorities and requires institutional capacity. Likewise, in the Member States with more diversified agricultural conditions, it might be difficult to reconcile the tailoring of actions with CAP procedures for management and control of area-based measures requesting to manage a high number of applications in a short time. It is also important to identify and address **key environmental hotspots** (e.g. areas with high nitrate loads and other pollutants, biodiversity-rich farmed areas, and areas prone to soil erosion) in line with the needs identified in each Member State or territory.

Spatial and digital data can help in the design and implementation of innovative AECAs. For instance, data layers from LPIS and other spatial data (e.g. on soil types, slopes, and landscape features) can assist in the targeting of actions.

Ex-ante assessments of territorial agro-environmental conditions can help to identify an area's main issues and the actions that are most necessary among the overall catalogue of actions proposed. Conducting this sort of assessment before the farmers enrol in the different agro-environmental actions helps to improve coherence, territorial tailoring and additionality (rewarding changes that go beyond the mainstream practices in the territory). Assessments of this sort can also be used to set a benchmark against which progress can be measured.

[8] OECD (2023), Policies for the Future of Farming and Food in the EU, OECD Agriculture and Food policy reviews, Paris https://www.oecd.org/en/publications/policies-for-the-future-of-farming-and-food-in-the-european-union_32810cf6-en.html.

[9] Röder, N. and Matthews, A. – Post Eco-schemes a work in progress, January 2021, Norbert Röder and Alan Matthews – CAP Reform.

[10] The-untapped-potential-of-eco-schemes-BirdLife_Nabu.pdf.

- Continue planning **multiannual commitments** that ensures environmental impact and gives certainty to farmers, though annual commitments could also fit for certain practices and can encourage farmers' uptake.
- **Target and tailor actions to specific territorial conditions, needs, and farm characteristics** with more targeted incentives to foster farmers' enrolment. Ex-ante assessment of the territorial agro-environmental conditions can help identifying the main issues and the most relevant actions. **Digital tools** can help to implement more spatially targeted actions.
- Tackle in a meaningful way **key environmental hotspots** identified in each Member State.

Spain, Lithuania and Belgium (Wallonia): examples of tailoring and targeting of actions

In Spain, three different eco-schemes promoting green cover on permanent crops have been developed to adapt the commitments and payments to slope gradient taking into account the different agronomic difficulties and efforts requested to farmers. In Lithuania, the eco-scheme on conversion of arable land to grasslands is targeted to areas prone to erosion. In the Wallonia's region of Belgium, the eco-scheme "ecological connectivity" supports natural spaces in farmland and grants a top-up support to set and maintain landscape features in areas where these are particularly needed to enhance the ecological connectivity between biodiversity rich areas.

France: AECCs implemented under "Territorial agri-environmental and climate projects"

In France, the AECC are implemented within a territorial approach called "Projets agro-environmentaux et climatiques" (PAEC). Each PAEC is applied within a specific territory with consistent environmental and agricultural characteristics defined by an operator designated by the regional agricultural authorities. The operators carry out a territorial assessment, select the relevant AECC to be implemented in the territory and adapt their implementation to the local needs (the AECC include parameters that are defined at territorial level). Farmers can only apply to the measures selected by the PAEC of the territory where they are located. Each PAEC combines agricultural and environmental goals, is built through partnerships with local stakeholders (farmers, environmental groups, local authorities, etc.) and can involve several funders. The PAEC carries out awareness raising activities to promote farmers' engagement and deploy a collective action. It can also integrate other tools, such as training and investments, to support long-term adoption of sustainable practices.

Result-based schemes

Result-based schemes (RBS) refer to **schemes in which the commitment consists of reaching a certain result** instead of carrying out a specific farming practice (management-based schemes)[11]. Several authors consider that RBS are more effective in addressing environmental objectives because they make it possible to: (i) ensure and measure an environmental outcome, hence ensuring the added value of support (additionality); (ii) align payments with environmental outcomes; and (iii) provide leeway to farmers to decide how best to achieve the desired outcome. RBS can also help improve monitoring and auditing. Typical indicators used to assess these results are the presence of certain plant species or structural features in the vegetation of the habitat (e.g. grassland diversity). Selecting result-based indicators requires both ecological and agricultural expertise so the indicators are understandable, sensitive to changes in agricultural management and not likely to be influenced by factors beyond the control of the farmers. There are different types of RBS. For example, they can vary in relation to the type of indicators used (indicators based only on results or 'hybrid' indicators that mix results and practice-based commitments) or the way that they are monitored (results measured on the field or modelled results). Within RBS, **performance-based schemes** draw on performance indicators (e.g. nitrogen balance, pesticides index) that measure the effective change of practices albeit without measuring the impact on the environment.

Despite being a promising innovative policy approach, **RBS are challenging to implement** for many reasons such as: (i) the complexity of design, particularly the need to find

[11] EU CAP network Thematic report on "Assessment of result-based interventions", 2024. https://eu-cap-network.ec.europa.eu/publications/assessment-results-based-interventions_en

relevant and measurable objectives and indicators; and (ii) the costs of set up and implementation. More specifically, the way in which the results are **verified, and the design of payments are key factors** for the acceptability and uptake of such interventions by farmers and other land managers. This is because the ultimate issue for farmers is the perceived risks related to the non-achievement of the result (compared with management-based schemes where the farmer will be paid regardless of the result) and, consequently the risk that they will not be paid for their efforts. The modulation of the payment can reduce the risk for farmers, who can still receive part of the payment if the achieved result is lower than the target but greater than a certain minimum level set by the scheme. The current approach of setting the payments as compensation for costs incurred and income foregone does not fit well with the RBS approach, even if it is applied based on the most likely costings calculation linked to the desired outcome. **The incentives proposal for AECAs enable all different forms of RBS** as it opens the way to rewarding environmental outcomes.

The reasons above explain why RBS are not yet widely diffused, though environmental NGOs and scientists have been pushing for their further development for many years[12]. However, **progress in planning RBS has been made in the current programming period**: 14 RBS interventions have been programmed in 9 CSPs for 2022-2027 (Austria, Finland, France, Germany, Ireland, Poland, Portugal, Slovenia and Spain). Most of these interventions are AECCs (11), but there are also two eco-schemes and one cooperation intervention. These RBS aim to contribute to a variety of environmental objectives and include result-based indicators and hybrid models that combine action-based and result-based payments.

Develop **result-based schemes** as these make it possible to ensure and measure environmental outcomes and leave more leeway to farmers to decide how best to achieve the outcomes. These approaches increase the sense of ownership by farmers on actions and results that can help in improving their uptake.

Germany: Eco-scheme on "Results-oriented extensive management of permanent grasslands"

This RBS aims at the conservation and promotion of biodiversity by preserving habitats and species in permanent grasslands; it consists of proof of at least four plant species out of a list of characteristic species or groups of species-rich permanent grassland typical for the region and set up at local level. In 2024, the output (1 075 706 ha) exceeded the target by more than 50%. The reason for this success is the result-oriented reward, leaving farmers more room for manoeuvre than measures with detailed requirements. In addition, 6 German Länder have programmed a similar AECC intervention to support the occurrence of more than 4 characteristic species on top of the eco-scheme (see section on biodiversity).

France: AECC including performance-based indicators on pesticides and nutrients

France has programmed several AECC with performance-based commitments to encourage farmers to reduce their use of plant protection products and fertilizers. Two indicators are mainly used: pesticide index ("treatment frequency index", IFT) and residual nitrogen at the start/end of winter. Most of the AECC set regional-adapted targets for lowering the IFT, which is an annual calculation of the number of pesticides treatments done for each crop. The farm-level IFT is calculated summing up all the treatments applied to each agricultural plot on the farm. An IFT of reference is calculated for each local territory to which the farm-level IFT is compared to measure performance. Some AECC use an indicator that measures the residual nitrogen at the start/end of winter. Farmers must stay below a defined threshold in their soils to limit winter leaching and prevent nutrients from reaching water catchment areas.

Ireland: ACRES (Agri-Climate Rural Environmental Scheme) and ACRES Cooperation

The AECC 'ACRES General' contributes to climate change mitigation and adaptation, and sustainable management of natural resources and biodiversity. However, the results for which a payment is provided focuses on biodiversity (e.g. number and cover of

[12] Home / Result Based Payments Network.

species and vegetation structure). The 'ACRES Cooperation' foresees a collective implementation and is delivered through a mechanism that offers both fixed payment rates and result-based payments to participating farmers. The result-based component reflects different qualities (levels) of the results, which are assessed using a scoring system that consists of indicators grouped in ten possible scorecards. Both, the ACRES General and ACRES Cooperation have a significant uptake of 46 000 participants (higher than the 30 000 participants planned initially).

Collective actions for a landscape-level approach

Collective agri-environmental schemes seek to improve the **spatial coordination and targeting of actions**, and in so doing **improve biodiversity and ecosystem services in agricultural landscapes**. The underlying principle of these collective agri-environmental schemes is that groups of collaborating farmers jointly implement actions beneficial for the environment in a pre-determined territory and hence achieve results at the landscape scale on which ecological processes operate (e.g. improving habitats for species, water management). Collective schemes have the potential to overcome one of the major criticisms and challenges of many individual measures: that farm-level schemes are too small and too scattered to achieve an overall positive landscape-level impact.

Collective actions have the potential to maximise environmental outcomes. A collective approach is particularly important for actions to promote biodiversity, climate adaptation, water quality and water resilience. Collective approaches also provide benefits for farmers, for instance the exchange of knowledge and experience and swapping obligations according to the capacities of each individual farmer. However, collective approaches are also challenging to design, implement and control, leading to still-limited coverage in the CSPs. The right contractual solutions and the right actions must be found to provide incentives to farmers and land managers to produce more environmental public goods while reconciling farm profitability with environmental objectives.

The Netherlands, Germany, Ireland, and Slovenia have programmed collective AECC support. In France, collective entities managing pastures in mountain areas ('groupements pastoraux') are eligible for the AECC supporting agro-pastoral management. The cooperation intervention can also be used to fund pilot projects (e.g. the testing of nature conservation measures in protected areas in Slovenia). The Brittany region in northwest France supports the Breizh bocage programme that aims to plant and improve the ecological value of hedgerows to enhance traditional pasture landscape. Collectives of farmers can participate into this non-productive investment intervention to better coordinate the planting of hedges across the territory, to tackle water challenges and biodiversity objectives, such as ensuring ecological connectivity.

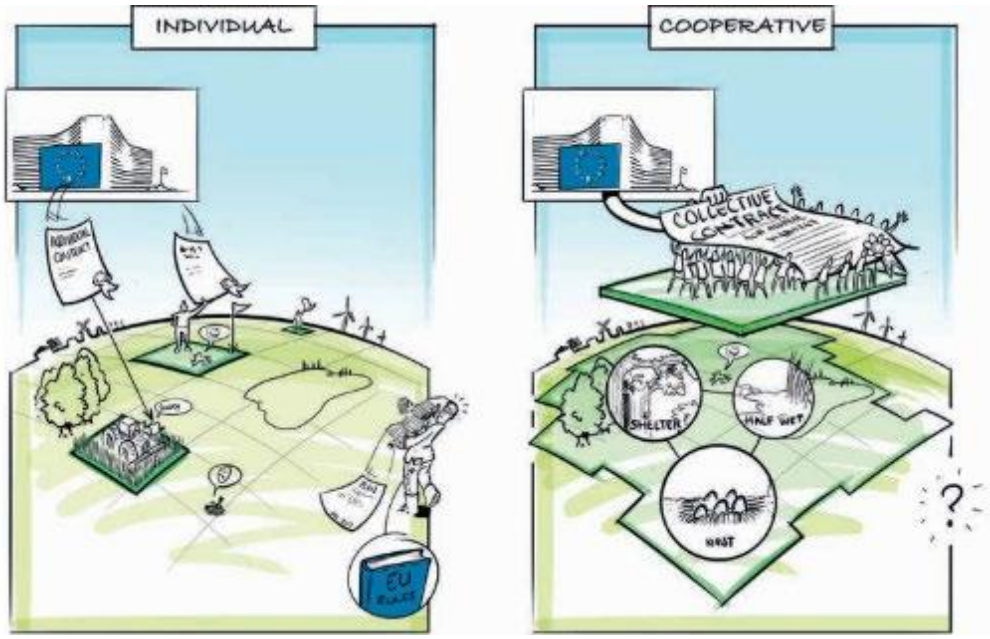
Develop collective actions to promote landscape approaches for environmental management, particularly biodiversity conservation, climate adaptation and water management. The cooperation intervention can be used to fund pilot projects.

The Netherlands: A collective approach at landscape level for the AECC "Agricultural Nature and Landscape Management"

The Netherlands carries out a multiannual collective approach for this intervention since 2016. 40 certified collectives that group farmers to implement environment-friendly practices at territorial level are supported. The scheme focuses on specific targeted habitats (grassland and arable land), with focus on biodiversity conservation and ecosystem services. Since 2023 there is also a climate component. The collectives work closely with the provinces to identify the habitats to prioritize. In claim year 2023, the AECC has been implemented on 102 154 ha.

Germany: Collective implementation of the AECC on biodiversity and climate

Three German Länder (Berlin/Brandenburg, Rheinland-Pfalz, Sachsen-Anhalt) offer the implementation of "Management obligations for the improvement of biodiversity" as a collective approach, and Berlin/Brandenburg and Rheinland-Pfalz also offer the implementation of "Management obligations to improve climate protection" collectively. Practices encompass delayed mowing with different dates, no fertilisation except grazing with goats and sheep, ban on mineral nitrogen fertiliser, management of dry grassland (Trockenrasen) with grazing animals, farmland bird "islands" in arable land etc. Overall, the biodiversity actions cover nearly 5 300 ha (4 collectives) and climate actions cover around 2 000 ha (3 collectives).



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Monitoring and controllability

It is challenging to plan area-based environmental and climate interventions in a cost-efficient manner. These interventions have a **higher degree of inherent complexity** than area-based income support with all the monitoring challenges this complexity entails. Future AECAs must be designed and implemented in a way that optimises compliance and ensures reliable delivery.

Ultimately, Member States should achieve a **balance between environmental effectiveness, simplification and ease of monitoring**. However, there is certainly scope for making use of innovative technologies to: (i) ensure efficient monitoring; (ii) streamline processes; (iii) reduce bureaucracy; and (iv) enable innovative approaches such as result-based payments. Recent conformity audits and evaluations highlight recurring issues affecting controllability and potentially increasing the risk of errors in both eco-schemes and AECCs. The main underlying causes are set out in the three bullet points below.

- **Complexity of interventions**: Complex, unclear and multi-layered commitments increase the number of control points and the risk of errors due to misunderstanding or implementation difficulties. Complexity stems also from the need to adapt interventions to diverse regional conditions, which in turn influences the effectiveness of these interventions.
- **Management and monitoring systems**. While preventive and detective mechanisms mitigate implementation risks, weak management and monitoring systems amplify errors. One example of weak systems is when verification relies too heavily on self-declarations or *ex post* documentary checks that replace timely in-situ verification or digital evidence. When the complexity of the intervention is not well-balanced with the monitoring system, the risk of errors increases.
- **Limited monitorability with the Area Monitoring System** (AMS). A high share of commitments cannot yet be reliably monitored by satellite data, obliging Member States to rely on traditional on-farm checks. This increases administrative burden and delays error detection. The primary results of the Member States' quality assessments of AMS after the first two years of implementation suggest a correlation between the non-monitorability of the eligibility conditions and commitments with satellite images, on the one hand, and the higher error rate found in both the eligible area and the implementation of practices, on the other. AMS offers possibilities for more **cost-effective monitoring**, although both the degree of resolution in current satellite imagery and the sophistication of photo-interpretation software is not yet fit for all criteria and further improvement is needed. Member States should aim to **make interventions easier to monitor by using satellite data** to both reach a better level of implementation and reduce the number of on-farm and other checks where possible. This would also enable farmers to benefit from the preventive approach AMS offers them and reduce any penalties. The Commission will continue providing support and exchange of best practices in this area.

- Define **clear, measurable and monitorable commitments** ensuring that their verification is feasible.
- Use **innovative technologies** for efficient monitoring and control to streamline processes and reduce administrative burden.
- Combine **preventive and detective controls**. Use satellite monitoring where possible, supported by administrative cross-checks and risk-based on-site inspections. In parallel, provide timely feedback and guidance to farmers —for example through AMS alerts or advisory follow-up — so that potential issues can be corrected early, reducing errors and any penalties.
- Integrate **administrative datasets** (input purchase records, certification schemes, livestock databases, and payment systems) to identify potential inconsistencies automatically.
- Involve the **authorities responsible for the control of area-based support** (Paying Agencies) in the design of actions to ensure compliance and reliable delivery of objectives.

Poland: Eco-scheme for "Water retention on grassland" checked with Sentinel satellite data

This result-based scheme aims at increasing water retention and reducing CO_2 emissions by limiting the decomposition of organic matter on wet and peat soils. Support is granted for permanent grassland that is engaged into the AECC on "extensive use of permanent grassland with livestock", organic farming or located in areas covered by GAEC 2 (protection of peatlands and wetlands). Payments are granted to grassland areas that are effectively flooded or submerged and meet specific conditions, such as the required duration and timing of flooding. Farmers declare their interest in the scheme, while the flooded areas are identified ex post using Sentinel satellite data making it cost-effective and simple for farmers.

France: Several AECC commitments checked with Sentinel satellite data

Within the AECC "Water quality and quantitative management of arable crops" and "Setting of biodiversity-beneficial coverage, in particular for pollinators", several commitments are checked with Sentinel satellite data. One is the rotation of at least 90% of arable land (no return of the same crop two consecutive years) and having at least a certain share of temporary grassland in total arable land each year. Under the AECC supporting favourable cover for biodiversity, especially pollinators at essential periods, farmers commit to set the specific cover and not to perform mechanical intervention at specific time frames. This commitment is monitorable through satellite data detecting potential agricultural activities in the fields during specific periods.

Spain and Estonia: biodiversity-related commitments checked with Sentinel satellite data

In Spain, several regions implement the AECC "Protection of farmland birds" to protect the birds that nest and feed in rainfed arable areas. Farmers commit to no harvesting during the birds breeding season (from March 30 to July 1), and to maintain stubble in the fields until 20 January to protect the soil and feed the birds. These two commitments are checked with Sentinel satellite data.

In the Estonian "Aid for the maintenance of yachts", the commitment of not allowing mowing grasslands before 15 July to protect bird species is also monitored through Sentinel satellite data.

Figure 4 - Environmental, climate and animal health and welfare priorities for 2028-2034

Environmental, climate and animal welfare objectives: challenges, good practices and relevant interventions

The environmental and climate sustainability of EU agriculture has improved in recent years, thanks to efficiency gains and change of practices (e.g. a decrease in the intensity of GHG emissions, ammonia emissions and nitrogen surpluses even as agricultural output has risen). However, not all expectations for improvements in this area have been met, and the sector still faces significant challenges in: (i) decreasing its environmental footprint on natural resources and biodiversity; (ii) becoming more resilient to climatic and economic risks; (iii) contributing to EU climate action; and (iv) improving animal welfare and animal health (for example by combating anti-microbial resistance).

This section is structured around the six **environmental priority areas** (EPAs) laid down in Article 4 of the proposal on the CAP Regulation. An additional priority area has been included relating to water pollution from surpluses of nitrates, for which the CAP proposal is to provide specific support for livestock extensification and/or diversification. Nevertheless, the challenge in this additional priority area is not only to improve the situation of the areas most affected by nitrate surpluses but also to **increase water quality by improving nutrient and manure management** of crops and livestock across the EU.

For each priority area, the following sections give information on the following three issues.

- The **challenges at EU level** - The scale and the specific environmental and climate challenges vary both between and within Member States. The national CAP recommendations will specify these EU-level challenges to identify what are the most critical issues in the different countries.
- The most **effective practices** – A list of these have been compiled drawing on the recent reports from the EU evaluation helpdesk, Commission documents, and expert knowledge.
- Relevant **examples of eco-schemes and AECCs** - These examples **illustrate effective interventions** although these examples should not necessarily be interpreted as best practices for the overall EU. This is because the most effective actions are those adapted to and targeted at the national/regional context in which they will be implemented. This regional context includes agronomic and pedoclimatic conditions, as well as farm structures and the overall social context of farming.

Climate adaptation and water resilience

Climatic changes are already disrupting agricultural production, and the impacts of these changes are expected to become more significant in the coming years. The recent **European Climate Risk Assessment** (EUCRA) report[13] identifies the food chain - particularly agriculture and ecosystems - as priority sectors where climate risk is significant and where adaptation actions are necessary. The threats facing agriculture and ecosystems include risks for: (i) crop production (adverse weather, increasing temperatures, and high variability in temperatures and rainfall); (ii) livestock production (pests and diseases, heat stress), (iii) food processing and supply chains with increasing supply disruptions both within and outside the EU; and (iv) rising food prices in the EU. The EUCRA calls for **increasing support for adaptation and transformative practices**. A territorial approach and coordination among different governance levels are necessary for more transformational changes and more sustainable land-use planning.

Water is an essential resource for agriculture, both for crop and livestock production (including the production of feed) and plays a significant role in food security worldwide. Agriculture is the EU's largest water user. It accounts for 28% of water abstraction, and for 51% of water consumption in the EU, reaching up to 80% in some southern European regions[14]. **Water scarcity and droughts are significant challenges for EU farmers**, and these challenges are further exacerbated by climate change. Climate change leads to changes in precipitation patterns, which are becoming more variable across the EU. This can lead to extreme precipitation and floods, or to the absence of rainfall for extended periods, particularly in the Mediterranean area. The frequency, intensity and length of droughts in the EU is increasing. The cost of droughts has been estimated at EUR 9 billion per year (1981-2010), and agriculture has been the most affected sector (53% of overall losses from droughts), with farmers particularly badly hit in southern and western Europe[15]. The specific regional impacts depend on the frequency of droughts, hydrological conditions and the status of irrigation infrastructure where available.

Under the CSPs, **Member States often give priority to investments in irrigation** to respond to water challenges. These investments include: (i) support for upgrading existing irrigation installations on farms; (ii) help to build infrastructure to increase efficiency and reduce losses; and (iii) investments in new irrigation and water storage, rainwater harvesting, and the use of recycled water for irrigation. However, strategies for water harvesting, storage, and irrigation, need to be critically assessed considering several parameters, such as: (i) the role of a stable water supply for making the agricultural sector resilient to climate change shocks and extremes; and (ii) the role of the water cycle in delivering ecosystem services and the supply of clean water for human consumption. Several Member States grant CAP support (area-based payment and/or non-productive investments) to **nature restoration actions** that can increase resilience against floods and droughts, for example by restoring wetlands and peatlands, managing aquatic ecosystems and reconnecting floodplains. The EU CAP network has gathered examples of good practices examples for improved water resilience in rural areas[16].

To improve resilience against climatic changes including increasing pressures on water resources it is necessary to **strengthen the response** by taking the actions set out in the following seven bullet points.

- To invest in building **resilient water infrastructure**.
- To significantly **reduce pressure on water resources**. This can be done by: (i) favouring less water-intensive, drought-resilient crops and varieties; (ii) diversifying agricultural production; and (iii) promoting resilient agricultural models, such as organic farming and agroecology[17].
- To strengthen **soil health and carbon sequestration**, to improve water-storage capacity, infiltration and nutrient retention.
- To develop **agroforestry and establish and maintain green infrastructure**, such as (i) creation or restoration of wetlands, (ii) buffer strips and temporary flooded zones, (iii) ponds and natural

[13] EEA, European Climate Risk Assessment (2024). See https://www.eea.europa.eu/en/analysis/publications/european-climate-risk-assessment.

[14] European Environment Agency (2021). Water Resources Across Europe–Confronting Water Stress: An Updated Assessment.

[15] JRC PESETA IV project: https://ec.europa.eu/jrc/en/peseta-iv

[16] Compendium of good practice examples for improved water resilience in rural areas. Thematic Group on Improving Water Resilience in Rural Areas through the CAP | EU CAP Network

[17] Principles of agroecology • Agroecology Europe

retention basins, and (iv) grassed ditches and swales to retain water.

- To promote more **systemic and transformative change** in production systems including structural adjustments to both: (i) adapt the agricultural sector to a future where water may be less available and which is characterised by more severe and widespread droughts; and (ii) ensure long-term resilience.
- To promote **cooperative nature-restoration actions** at catchment basin level or specific agricultural areas to reach the appropriate scale in order to strengthen landscape resilience.
- To improve the **targeting of the most concerned regions**, particularly those at significant risk of water scarcity. Support can be given for the transition to less water-intensive production systems that might be less profitable and need investments, for instance through the new proposed support for transition towards more resilient farming systems.

Hungary: support to natural water retention and other water-resilient practices

With climate change expected to reduce flow levels in the country's rivers and increase droughts' incidence, the Hungarian CSP acknowledges the need for natural water retention and sustainable management. Besides supporting investments to more efficient irrigation and water infrastructure, the CSP includes various interventions to promote natural water retention and more resource efficient use. The AECC "New agri-environmental payments' made the ban on drainage of excess water mandatory for all areas in addition to optional commitments beneficial for water and drought sensitive areas. Other rural development interventions (organic farming, non-productive investments, agro-ecological land use change payments, afforestation) provide support for natural water retention, land-use change and relevant investments. Cooperation support is available to nationally recognised sustainable water management communities to plan joint investments and to apply the best agricultural practices. Moreover, the eco-scheme "Basic agro-ecological program" rewards the use of micro-irrigation technologies.

Bulgaria and Greece: promote climate-resilient crops

In Bulgaria, the AECC "Promote climate-resistant crops" encourages farmers to use high-quality seeds and seed material of many regional varieties that have the potential to adapt to climatic changes. The intervention foresees two operations: cultivation of resistant varieties with plant protection products authorised for use in organic production, and promoting cultivation of resistant varieties.

In Greece, the eco-scheme "Use of resilient and adapted species and varieties" promotes a shift towards crops that are better suited to hot and dry Mediterranean conditions, with the aim of reducing irrigation demand, and increasing climate resilience. Two actions are planned: winter cereals and legumes replacing summer crops and innovative crops, such as aromatic and medicinal plants.

Portugal: AECC promoting water use efficiency

This intervention covering 130 000 ha (nearly 4% of the agricultural area) includes sustainable irrigation practices and fertilisation and irrigation plans, thereby contributing to both improving water quality and resilience.

Climate change mitigation (including carbon removals)

Greenhouse gas (GHG) emissions from agriculture, primarily methane (CH_4) and nitrous oxide (N_2O), were equivalent to nearly 12% of total GHG emissions of the EU-27 in 2023. The greatest contributor is methane, mainly from enteric fermentation in livestock (nearly half of total agricultural emissions). Nitrous oxide from soils also represents a substantial share (nearly a third of total agricultural emissions), largely due to the application of fertilisers. The management of livestock manure is the third-largest source, producing both methane and nitrous oxide. Agriculture also emits carbon dioxide (CO_2) from energy use in vehicles, farm buildings and processing activities, although these emissions account for a smaller share of total GHG emissions from the sector. Agriculture is a unique sector because it acts **not only as a source of GHG emissions but also as a carbon sink**, by removing atmospheric carbon and store it in plants and the soil.

GHG emissions in the EU fell by 15% between 1990 and 2000, largely driven by a decline in animal numbers, greater productivity, efficiency gains and policies. However, this trend of falling emissions has slowed down since 2005. **Policies and efficiency gains reduced the GHG intensity per unit of agricultural output** by 13% from 2005 to 2021, but agricultural output itself increased by 12% in the same period, leading to stagnant overall emission levels. From 2020 to 2023, GHG emissions (including agricultural activities and carbon fluxes in cropland and grassland) decreased by 3%. The EEA published its proxy GHG emission estimates for 2024 in October 2025, estimating that a further 1.2% reduction in agricultural emissions can be expected from 2023 to 2024[18].

The share of the overall GHG emissions that come from agriculture, and the relative weight of other emission sources is different among the Member States. The size of the agricultural sector as a share of GDP, the number of hectares dedicated to agriculture, and the type of production (type of crop, types of livestock) are the main factors that explain these differences. Moreover, it is also important to look at GHG intensity related to: (i) the size of overall farmland; (ii) the number of animals; and (iii) the value of agricultural output. These other ways of looking at GHG emissions can produce a very different picture than one focused solely on the agricultural share.

Agricultural emissions are generally hard to abate. There are many possible actions that can be taken to reduce GHG in livestock farming. These include: (i) changing feed diets; (ii) reducing the length of life cycles (to produce the same quantities of meat/milk in less time with fewer emissions); (iii) faster injection of manure in soils; and (iv) the upgrading of farm buildings. However, these actions can be very challenging, costly, and progress is slow for some farmers. Better soil management and a reduction in fertiliser use can also help to reduce N_2O emissions and help sequester more carbon. However, these processes take time to be reflected in the GHG accounting or are not reflected in the accounting at all because the emissions inventories are not granular enough to capture all driving factors.

The practices that have the most potential to **reduce GHG emissions and increase carbon sequestration in soils** and biomass are:

- herd management (including reducing livestock density) and innovative techniques (such as adapted animal feed to reduce emissions from enteric fermentation);
- crop rotation and the diversification of crops, in particular the integration of nitrogen-fixing crops in the rotation;
- reducing the use of synthetic fertilisers, and replacing them with organic fertilisers (e.g. compost) while promoting the shift to organic farming;
- the use of catch crops and intermediate crops, some of which can be used for renewable energies, such as biogas;
- maintain green cover on permanent crops;
- the conversion of arable land to grasslands.

The **practices that contribute most to protect the existing carbon sinks** in agricultural soils, mainly grasslands, peatlands and areas under organic farming, are:

- the maintenance of organic farming practices;
- agroforestry and increasing landscape features;

[18] EEA, ETC Climate mitigation - Approximated EU greenhouse gas inventory Proxy GHG emission estimates for 2024. https://www.eionet.europa.eu/etcs/etc-cm/products/etc-cm-report-2025-03

- the protection of grasslands - no ploughing and no conversion into other land uses;
- no tillage (reduced tillage) of arable land;
- restoration/rewetting of peatlands and wetlands.

Key findings of the study "Rough estimate of the climate change mitigation potential of the CAP Strategic Plans over the 2023-2027 period"

The study provides a rough estimate of the climate change mitigation potential of the 28 CSPs. It covers GAECs and several interventions, including eco-schemes and AECCs. The methodology involved identifying CAP interventions that reduce GHG emissions or enhance carbon sinks based on the farming practices included in the interventions using JRC classification of farming practices, estimating the area covered, assigning mitigation coefficients and calculating and aggregating estimates across 28 CSPs. The following practices are the ones contributing most to the estimated potential climate change mitigation:

- Conversion to organic farming accounting for 20% of the total estimated mitigation potential.
- Practices related to crop rotation and diversification, accounting 30% of the total estimated mitigation potential with crop rotation being the most impactful.
- Practices related to soil management, contributing to 27% of the estimated potential especially catch crops (soil cover or winter cover).
- Fertilisation and soil amendments practices contribute 12% to the total estimated potential contribution (e.g. use of compost).
- Practices related to the protection of landscape features and wetland and peatland restoration contribute 10% to the total estimated potential.

Belgium (Flanders), Portugal and Slovenia: adapted animal feed to reduce methane emissions

In Portugal, the eco-scheme "Improve animal feed efficiency" promotes feed efficiency and animal health on beef and/or milk farms to reduce methane emissions; the scheme has raised farmers' interest and has supported nearly 260 000 livestock units (12% of all); it requests to maintain a feeding plan (beef cattle) and the assessment of the performance of specific indicators (dairy cattle).

The Belgian region of Flanders has an eco-scheme to reduce cattle methane emissions by changes in feeding strategies covering 7% of all livestock units. During the commitment period the farmer can choose from a list of feed measures, which can be extended and adapted. Results (including nitrogen efficiency) are validated by the Enteric Emissions Agreement.

Slovenia has an AECC on improved feed quality and feeding plans (reduced nitrogen in pigs for fattening, improvements in the quality of feed and feed rations for cattle, ovine and caprine) and an eco-scheme promoting feed additives to reduce methane' enteric fermentation covering nearly 4% of all livestock units.

Germany: AECC "Management commitments to improve climate change mitigation"

This intervention aims at improving carbon storage in farmland through several practices, such as conversion of arable land into grassland, extensification of grassland, peatland management as well as collective implementation of those practices (limited to only a few Lander), considering the regional specificities. This intervention exceeded the planned output for financial year 2024 (110 176 ha). It can be combined with an eco-scheme for extensification of permanent grassland on the whole holding with maximum 1.4 LU/ha that was implemented on around 1 million hectares.

Luxembourg: AECC to reduce cattle stocking density

This AECC aims at reducing GHG emissions (methane) and ammonia and improve farm' fodder autonomy, by reducing livestock numbers (by at least 15 % compared to a reference period), with a maximum of 50 LU to qualify for suport, stocking density limits between 0,5 and 1,8 LU/ha. The intervention reached 7 200 ha which is a significant uptake.

Belgium (Flanders): Eco-scheme for increasing the soil carbon content

The scheme offers three options to increase the carbon content in soils: management plan, using carbon-rich materials (compost, solid manure) and a result-based action that rewards farmers for parcels with good results in terms of organic carbon content and soil ph. The scheme also aims at strengthening the soil's natural sponge function and reduce vulnerability to drought. In 2024, the scheme reached nearly 400 ha and nearly 6 800 beneficiaries (for the overall intervention). To support long term soil improvement and help farmers taking informed decisions, Flanders as set out a soil passport tool (https://ilvo.vlaanderen.be/en/news/bodempaspoort-als-nieuwe-tool-om-landbouwpercelen-duurzamer-te-managen) that centrally stores soil data and allows farmers to simulate how different management practices influence soil carbon accumulation over a 30-year horizon.

Denmark: Support to enhance carbon sequestration on grasslands and peatland restoration

Denmark aims to reduce its GHG emissions substantially over the coming years partly using CAP support. Nearly 183 000 ha of grassland have been supported by eco-schemes, in addition to AECC interventions supporting 5-year commitments for maintenance of grassland and nature areas to ensure carbon sequestration. Moreover, there is an AECC intervention on permanent extensification that grants a lump sum payment for cessation of agricultural activity of the land with high carbon content (peatland) or where stopping farming is needed to reduce nitrogen loads on waters. Aid rates are differentiated according to the level of environmental benefit of cessation on a specific area and based on the land use (during reference period) before cessation.

France: AECC for the climate, feed autonomy and animal welfare

This AECC aims at improving climate performance, livestock farm' resilience by rising feed autonomy, and animal welfare by: increase grass areas for animal feeding (ruminants), reduce use of feed concentrates, reduce the stocking density, improve soil fertilisation and reduce pesticides. While commitments are defined at national level (three levels), several parameters and criteria are set locally (by the operator of the territorial agri-environmental project). This measure had a good uptake in 2024 covering 253 000 ha.

Soil health

Soil health plays a vital role in the long-term viability of agricultural systems. Healthy soils sustain: (i) agricultural productivity; (ii) carbon sequestration and mitigation; (iii) water regulation; and (iv) biodiversity. **Healthy soils are essential for sustainable agricultural production**. They promote optimal plant growth by increasing nutrient availability, improving water retention and protecting against pathogens. However, **soil health is facing several challenges across the EU**, including: (i) erosion; (ii) compaction; (iii) contamination; (iv) a decline in organic matter; and (v) a loss of biodiversity. Many of these issues are directly related to agriculture and the pressure to meet the world's growing need for food. According to the EU Soil Observatory[19], 60% of overall EU soils is not in a healthy condition, and the situation is even worse for agricultural soils.

The current CSPs include many actions to protect and improve soils. For example, nearly a third of eco-schemes focus on soil objectives. A recent report conducted on 13 out of the 28 CSPs provides a rough quantitative estimate of the potential contribution of good agricultural and environmental conditions (GAECs) and CSPs interventions to soil health. The results show an overall positive impact of the CSPs on all the parameters assessed (see text box). **This effort to preserve and enhance should continue and be strengthened** in the next programming period.

The practices implemented to improve soil health generally act on one or several of the following soil characteristics: (i) physical structure (practices that preserve and improve soil structure for aeration and that promote water infiltration while preventing compaction); (ii) biological activity (practices that improve microbiological life in the soil and increase organic matter which are key factors for improving soil structure, soil mineralisation and the ability of soil to store carbon); and (iii) chemical composition (practices that increase plant nutrition and affect the mineralisation conditions of the soil). **The most beneficial farming practices for soil health** are set out in the five bullet points below.

- **All-year soil coverage**: green covers on permanent crops, catch crops, summer cover crops, crop residues and stubble retention on fields are key practices. Supported by CAP interventions over large areas, these practices show strong results, particularly for: (i) maintaining nitrogen in the soil; (ii) retaining water; (iii) avoiding compaction; and (iv) reducing erosion.
- **Cultivation of nitrogen-fixing crops** (proteins, leguminous crops) significantly improves soil organic carbon, nitrogen content and water retention capacity.
- **Crop diversification and rotation** also play a major role in increasing soil organic carbon, especially when implemented widely and with appropriate requirements (such as requirements for long and diversified rotations including with leguminous crops). Rotation at parcel level also leads to a reduction of weeds and pest pressure, thus reducing the need for pesticide use and benefiting living organisms in the soil.
- **Reduced or no-tillage** benefits soil microbiological life, thus facilitating water retention, increasing organic matter and limiting carbon releases (carbon farming).
- **Developing and maintaining organic farming** benefits soils especially regarding nitrogen leaching and runoff.

[19] EU Soil Observatory (EUSO) https://joint-research-centre.ec.europa.eu/eu-soil-observatory-euso_en.

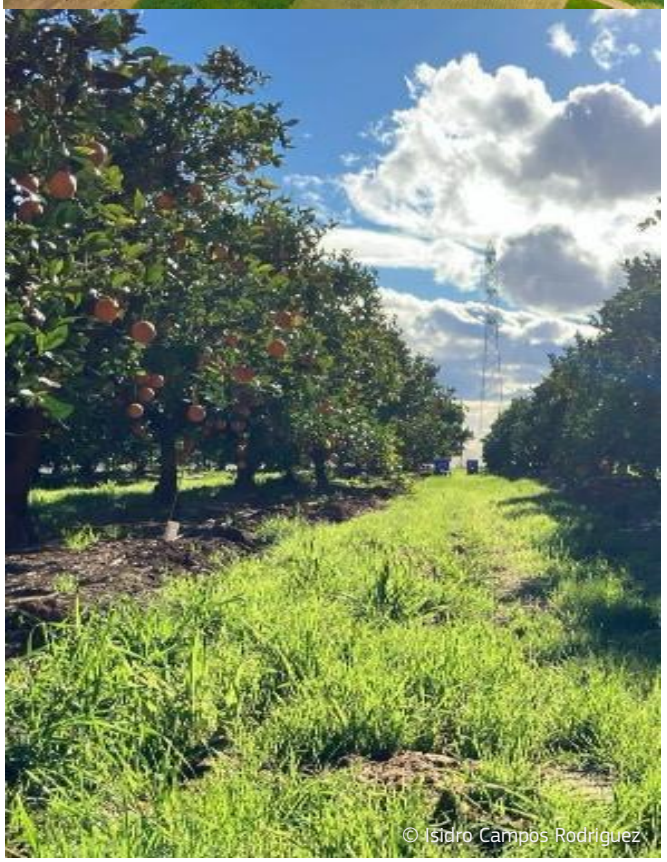
Key findings of the study "Rough estimate of the soil protection potential of the CAP Strategic Plans over the 2023-2027 period"

The study quantified the soil protection potential of several interventions, mainly eco-schemes and AECC, of 13 CSP by assessing their impact on six soil properties: organic carbon, nitrogen content, water retention, compaction, nitrogen (N) leaching and runoff, and erosion by water. Findings are based on farming practices' coefficients assessing their potential effect per hectare and the area coverage. The **farming practices** that contribute most to the estimated result are:

- Crop residues left on soil, improving erosion control, N, soil density, and water retention over 5 million ha.
- Cultivation of nitrogen-fixing crops, enhancing water retention, N, and organic carbon, covering 5 million ha.
- Green cover on permanent crops, reducing soil erosion carried out on 1.5 million ha.
- Crop diversification carried out over 7 million ha.
- Maintenance of organic farming practices, reducing nitrogen leaching/runoff, spanning 7 million ha.

Examples of contributing interventions are presented below.

- Romania leads in improving soil organic content (1.6% annual increase) and soil nitrogen (4.8% annual increase). The key intervention is the eco-scheme on "environmentally beneficial practices for arable land", including: tree planting, nitrogen-fixing crops, crop diversification, and low/no tillage, planned to reach 29 million ha.
- Finland shows good results in boosting soil water retention (by 3%) and reducing soil compaction (1.6%). Eco-schemes, mainly the "winter-time vegetation cover," involving crop residues and winter cover crops, and the scheme on "natural grasslands" banning ploughing, significantly enhance these results.



Spain: eco-schemes focusing on soil protection on arable and permanent crop

In Spain, where soils have naturally a low organic content and are prone to erosion, the eco-schemes "Carbon farming and agroecology" supporting (alternatively) crop rotation with leguminous or other diversification crops, and conservation agriculture (no-tillage, direct seeding, crop rotation and all year soil cover), "Green covers in permanent crops" and "Extensive grazing and mowing" have contributed to reaching nearly 40 % of agricultural area. The schemes have been adapted to different agro-climatic conditions, and the country has carried out a broad communication campaign to inform farmers and stakeholders, which has contributed to a greater farmer's participation than expected. The checking of crop rotation and the no-tillage is done with Sentinel satellite data that allows to detect and classify the change of crops and ploughing.

Belgium (Wallonia): a combination of schemes to improve soil structure and reduce erosion risk

The eco-schemes "environmentally friendly corps" and "long soil cover" improve soil structural stability and increase the resistance to erosion. The eco-scheme "long soil cover" aims at improving the management of intercropping on arable land, diversifying crop rotations, integrating temporary grassland into rotations, and maintaining permanent grassland. It promotes soil cover from January to mid-February through catch crops or mulching and is tiered according to the soil cover level achieved (70%, 80% or 90%). It has been implemented on 600 000 ha, more than 80% of total farmland. The different thresholds linked to different level of payments allow each farmer to adapt their implementation according to climatic conditions, rotations and production. A more targeted AECC "Developed Parcels", focus on reducing run-off erosion with a good level of uptake.

Bulgaria and Lithuania: eco-schemes promoting crop rotation and diversification

The Bulgarian' scheme "crop diversification" aims at enhancing crop rotation and ensuring a permanent soil cover, which increases the humus and nutrient content of the soil and protects against erosion and soil compaction, and crop diversification to prevent monocultural farming. In 2024, the intervention covered 2.6 million ha of arable land. Lithuania has also an eco-scheme promoting a four-year crop rotation and diversification including at least one crop being a "soil improver" such as protein crops; the scheme has been highly subscribed by farmers reaching around 571 000 ha.

Biodiversity preservation

This objective encompasses the **conservation and improvement of both habitats and species** (birds, butterflies, wild pollinators and other wildlife) that depend on farmland. It includes: (i) ensuring the co-existence of livestock and predators; (ii) the protection of agricultural genetic resources; (iii) the creation and maintenance of non-productive spaces in agricultural landscapes; and (iv) reductions in pesticide use. Despite significant efforts in this area in recent years – and some local successes – the EU has not succeeded in halting the loss of farmland biodiversity.

Farmland is one of the largest types of land cover in the EU, covering nearly 40% of the EU's total territory and hosting significant biodiversity. Agricultural landscapes are also a valued part of Europe's cultural heritage. However, in recent decades, agricultural areas have suffered significant biodiversity loss. Long-term biodiversity decline is generally linked to deteriorating habitat quantity and quality due to agricultural intensification and specialisation. Agricultural habitats with inadequate or unfavourable conservation status have increased in recent decades, leaving less space for biodiversity to thrive. There are many drivers of this, including structural changes (increase in the size of farm parcels, lower crop diversity, and a decline of landscape elements) and excessive use of inputs. Species-rich and diverse grasslands as well as rainfed extensive arable areas are the types of areas that are most important to preserve and manage as they are key for both biodiversity protection and carbon sequestration. At the same time, the abandonment of previously farmed land in certain areas also has negative impacts on the biodiversity associated with that previously farmed areas.

The presence of non-productive areas and landscape features in agricultural areas provides significant environmental and biodiversity benefits. Landscape features play a major role in improving ecosystem services that are beneficial for agricultural production (such as pest control) and the wider environment. Key groups of species that provide ecosystem services to agriculture are dependent on landscape features and include: (i) wild pollinators; (ii) farmland birds; and (iii) invertebrate natural enemies of crop pests and diseases, such as insects, mites and worms. Landscape elements also provide broader connectivity corridors for wildlife within agricultural landscapes.

The **decline of non-productive spaces in agricultural areas** is a pressure for biodiversity and ecosystem services. Semi-natural landscape features are being lost, degraded, or managed intensively due to: (i) the concentration of farmland as a result of increasing parcel sizes; (ii) the simplification of farming systems; and (iii) the conversion of grasslands to cropland in recent decades. The most recent estimate of landscape features coverage is 5.6% of agricultural land at EU level, although this share varies widely among Member States ranging from 3.4% to nearly 9%[20]. The EU biodiversity strategy for 2030 states that high-diversity landscape features should cover at least 10% of farmland to provide space for birds, pollinators, plants and other wildlife.

Current CSPs include a wide range of eco-schemes and AECCs supporting the setting, maintenance and management of landscape features and non-productive areas. However, these interventions give little consideration to either: (i) the distribution of landscape features and landscape elements across all holding parcels; or (ii) the specific location where these areas and elements would provide the most added value in terms of biodiversity, such as ensuring connectivity of biodiversity-rich areas or protected sites.

The use of pesticides is also a significant threat for biodiversity. Climatic conditions, crop types and profitability all have an influence on pesticide use. Despite policy-supported efforts to reduce the use of high-risk substances in recent years, the **presence of chemical pesticides in the environment remains a pressure**[21]. The transition towards more sustainable use of pesticides is being hindered by a number of technical constraints, including both the slow pace of approval of alternative biocontrol options and insufficient advisory support. In December 2025, the Commission tabled a legal proposal to more swiftly approve biocontrol products[22]. Programmes to

[20] Czúcz B, Baruth B, Terres JM, Hagyó A, Gallego J, Angileri V, Nocita M, Perez Soba M, Koeble R, Paracchini ML: Classification and quantification of Landscape Features across the EU: A brief review of existing definitions, typologies, and data sources for quantification. EUR 30997 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-47818-8, doi:10.2760/59418, JRC128297.

[21] More action needed in the EU to reduce the impacts of chemical pesticides | Press releases | European Environment Agency (EEA).

[22] Package of measures to streamline and simplify EU food and feed safety legislation, including accelerating procedures for market access for bio-pesticides, ensuring farmers have a comprehensive toolbox for crop protection. https://ec.europa.eu/commission/presscorner/detail/en/ip_25_3081.

reduce the use of chemical pesticides and support alternative forms of pest and weed control are key to limit the impact of pesticides on biodiversity. To reduce the use of pesticides, all Member States have programmed in their CSPs either eco-schemes, support for organic farming, or AECCs. Farming practices supported by eco-schemes and/or AECCs include: (i) non-chemical weed and pest management (biological, mechanical control); (ii) full or partial limitation of the use of plant-protection products; and (iii) integrated production methods, in particular integrated pest management. Support for crop rotation and landscape features (such as field margins) also contribute to the more sustainable use of pesticides.

Roughly half of Member States report in their CSPs that the presence of predating large carnivores is a significant disincentive to open-air grazing. This has significant implications in terms of grassland management and land abandonment in territories where livestock is the only possible agricultural activity. Support for the **co-existence of livestock and predators** is key to keeping livestock activities present in areas of influence of predators while protecting these species. Non-productive investments (e.g. fencing systems, guard dogs, shelters, audio-visual devices) and AECCs (e.g. the maintenance of fences, remuneration of shepherding labour, training and feeding for guard dogs) are the two main interventions used by Member States, sometimes in combination (such as in the CSPs of Spain, France, Italy, Slovenia, Portugal, Greece, and Bulgaria). The lowering of the protection status of the wolf in the Habitats Directive in 2025 offers Member States more flexibility to manage their wolf populations. Whatever change is made to the legislation, coexistence should remain the aim so that the EU continues to share its multi-functional landscapes with large carnivores.

Identifying best practices for biodiversity is challenging, as habitats and species are typically associated with local environments. **The following seven actions are key to addressing biodiversity objectives**.

- It will be key to promote **habitat diversity and diversification** at both farm and territorial levels to upscale biodiversity conservation.
- It will be key to maintain and **manage high nature value areas** such as semi-natural grasslands and extensive arable areas.
- It will be key to support the **creation and maintenance of spaces for nature in agricultural landscapes**, including the setting and management of non-productive areas and landscape features, as these are crucial for biodiversity while providing a range of environmental services. It is also important to enable the setting and restoration of hedges in arable landscapes with investment support.
- In the future, it will be key to consider both: (i) the distribution of non-productive spaces across all holding parcels; and (ii) the specific location where these areas and elements provide the most added value in terms of biodiversity, such as **ensuring connectivity of biodiversity-rich areas**. Equally, it will be key to better promote and reward the quality of landscape elements in terms of their biological diversity (and not just their quantity). For instance, it is essential to promote field margins/buffer strips with diversified and locally adapted vegetation and melliferous plants, hedges with several lawyers (trees, bushes).
- It is key to strengthen actions to increase the use of alternative pest and weed control methods and **reduce the use of chemical pesticides**.
- It is key to continue using the CAP toolbox to support the **coexistence** of livestock and predators as well as the conservation, sustainable use and development of **genetic resources**.
- It is key to **promote collective** and **result-based approaches** for greater effectiveness.

Slovakia: "Whole-farm eco-scheme" focusing on biodiversity

This eco-scheme includes several practices such as improvement of soil structure, limited size of arable parcels (20 ha in protected areas and 50 ha outside), grassy buffer strips between and or around the arable parcels, landscape features, delayed mowing/grazing, grass strips in permanent crops. It offers many strengths (commitments adapted to Natura 2000 areas, feasible for farmers) leading to a high level of farmers' participation and making the scheme a key tool for reverse the decline of bird's populations and enhance the ecological value of agricultural landscapes.

Luxembourg, Bulgaria, Cyprus and Malta: AECCs promoting the reduction of pesticides' use

Farmers and winegrowers in Luxembourg have engaged into eco-schemes and AECC to abandon synthetic plant protection products, to use pheromones dispensers for orchards or to convert to organic farming. In total, 28% of the country's agricultural area has received support for these interventions.

The eco-scheme “Pesticide use reduction” planned in Bulgaria aims at reducing the use of hazardous pesticides (mainly glyphosate) in all land uses, which has a beneficial effect on all components of the natural environment. In 2024, the area supported amounted to nearly 2.6 million ha (51% of the country’s total agricultural area), mainly arable areas.

In Cyprus, the “ecological programme to reduce the burden on soils and water from chemical” plant protection” was carried out in nearly 8 400 ha thanks to high farmers’ participation, notably into the sub-scheme for ban of herbicides.

In Malta, the “Control of weeds for vineyards and orchards” incentivise farmers to use mechanical weeding instead of chemical herbicides and has raised significant interest.

Belgium (Wallonia): eco-scheme “Ecological connectivity”

This eco-scheme supports the maintenance of non-productive areas and LFs. The previous multiannual AECM in the Rural Development Plan wasn’t very successful. Managing authorities decided to move it to yearly eco-schemes in CSP with higher payment rates and this has resulted in a higher farmers’ uptake. The scheme rewards the location of non-productive areas and LFs in specific areas : ecological corridors, Natura 2000 sites and neighbouring areas. A bonus is granted to areas that are identified in the ecological network of Wallonia (areas located in Natura 2000 sites and network of areas with biological Interest), since these areas are particularly important for many species.

Austria: AECC multi-objective programme ÖPUL

Austria has reached 27% of total farmland covered by biodiversity-beneficial interventions. Eco-schemes and the long-standing AECC ÖPUL (programme for the promotion of agricultural system environmentally sound, extensive and protective of natural habitats) contributed to this outcome. In 2024, there was a significant increase in ÖPUL biodiversity areas with around 150 000 ha covered.

Germany (several länder): results-oriented AECC for improving biodiversity in grasslands

In addition to the national eco-scheme result-oriented intervention requesting evidence of at least four regional characteristic species in grasslands, 6 Länder (Bavaria, Baden-Württemberg, Lower Saxony, Rhineland Palatinate, Saxony, Thuringia) implement an AECC with a top up for the presence of 6 and even 8 species. A recent study has assessed an increase of presence of bird's species over the period 2008-2013 in Lower Saxony ("Biodiversity and the design of result-based payments: Evidence from Germany"

(https://www.sciencedirect.com/science/article/pii/S0095069625001317). It shows that six years after the implementation of the level 2 requesting 6 species, diversity had increased significantly: +35% (or +0.4 species/km^2). However, biodiversity gains only appeared from 2011 onwards, illustrating the time required for achieving results.

Italy: AECCs for "Crops for biodiversity and ecological corridors" and "Active management of ecological infrastructures"

The Italian CSP includes two AECCs that aim at setting natural spaces in agricultural landscapes. The AECC "Active management of ecological infrastructures" supports the maintenance and the ecological management of various landscape elements (such as hedgerows, buffer strips, wetlands, and small water bodies), which play a key role in achieving environmental and climate objectives. The innovative element lies in the grouping of different types of ecological infrastructures into a single intervention that reduces the administrative burden while also ensuring adequate compensation, particularly for farmers operating in areas of intensive agriculture. The AECC "Crops for biodiversity and ecological corridors" promotes the planting and not harvesting of crops favourable for fauna as well as the setting of mixed grass strips (at least two species) in the areas identified in the national network of ecological corridors.

Slovenia: several AECC for preserving biodiversity and traditional farm landscapes

Slovenia has some biodiversity targeted interventions with high uptake, such as the AECC "Special grassland habitats". In 2024 the uptake reached 12 600 hectares. Furthermore, around 1 400 ha were engaged into the operation "Dry karts meadows and pastures" targeted to these specific habitats.

Developing organic farming

Organic agriculture is an overall farm management system that aims to produce food using natural substances and processes. Organic farming has limited environmental and climate impact as it makes responsible use of energy and natural resources: maintains biodiversity and water quality and increases soil fertility.

In 2022, 17 million ha were farmed organically in the EU, representing **10.5% of the total utilised agricultural area**, although this share varies significantly among Member States, ranging from 0.6% in Malta to nearly 26% in Austria. Not all the organic area on a farm receives CAP area-based support. However, it remains a challenge to find the markets for organic products, to provide fair prices to producers and hence give farmers the appropriate incentives to undertake the challenging conversion to a demanding and holistic farming system. Furthermore, organic farming is knowledge intensive and requires appropriate advisory services that fit to the specific farm conditions and farmer's needs.

Support for organic farming that complies with Regulation (EU) 2018/848 is programmed in all CSPs, although the interventions and type of support offered differs. Some Member States use eco-schemes to support the maintenance of organic farming (BE-Flanders, Greece, France) or for support organic livestock (Bulgaria, Estonia), while only a few also use eco-schemes to encourage the conversion of conventional farms to organic farms (Denmark, the Netherlands, Sweden). Most Member States support both conversion and maintenance with multiannual AECCs while other Member States only support either conversion or maintenance, but not both, depending on their use of eco-schemes.

In financial year 2024, **support for organic farming was granted to nearly 6% of total EU agricultural area** (9.5 million ha), 0.8% of which was for conversion from conventional to organic farming and 5.2% for maintenance. **All Member States have planned to increase organic farming area,** although there are significant differences in the share of supported areas. In, 2024, Austria, Czechia, Estonia, Greece, Latvia and Portugal gave support for the conversion and maintenance of organic farming to nearly 15% or more of their farmland. However, market difficulties (inflation and economic uncertainty resulting in reduced demand for organic products) have considerably slowed down the path for conversion. Some Member States have reduced budget allocations and targets, particularly for conversion, while others have increased the premiums granted. On the other side, the financial allocation for both conversion and maintenance increased slightly in the latest adopted CSPs compared with the first adopted versions. The schemes for organic farming do not differ much between Member States, except for the level of premiums granted, the list of crops supported, and the combination of area-based support with other instruments. Four examples of best practices for supporting organic farming are set out in the bullet points below.

- It is important to ensure that support for **conversion** to organic farming continues over several years. This is because in the first years of conversion (usually the first two years for arable crops and grasslands, and the first three years for permanent crops), the farm output cannot yet be sold as organic, while both learning costs and the decrease in yields can be significant.
- Support to **maintain organic farming** practices is also important to avoid reconversion to conventional practices. To avoid farmers becoming fully dependent on maintenance premiums, the maximum length of time to provide maintenance support (or the possibility of a farm receiving a new multiannual contract after the first maintenance support has expired) should be carefully assessed considering the positive contribution to the environment. Targeting specific sectors or areas is an option to streamline support.
- It is important to **combine CAP tools**, such as sectoral interventions (e.g. favouring the uptake of organic production methods in vineyard restructuring) and investment support.
- It is important to **strengthen organic farmers' access to knowledge**, and their **position in the value chain** while further developing the organic sector. These objectives need a **comprehensive national strategy** that supports both the market structuring and the demand for organic products (e.g. through communication or other instruments like tax incentives).

Water quality – nutrient management

The quality of water bodies (surface and groundwater) is impacted by the unbalanced use of agricultural inputs, in particular nutrients and pesticides.

Nutrients (mainly nitrogen (N), phosphorus (P) and potassium (K)) are essential elements for plant growth and for securing yields and quality. Some of the nutrients contained in organic and inorganic fertilisers, mainly N and P, are not fully taken up by crops but are lost through ammonia emissions or through leaching and run-off from agricultural soils. The amounts of N not absorbed by plants trigger environmental problems related to: (i) the quality of

water (losses to groundwaters and surface waters, which may lead to eutrophication of surface waters and terrestrial natural habitats); (ii) air pollution (ammonia); and (iii) GHG emissions (N_2O). The low quality of water bodies can in turn impact the quantities of water that can be used for irrigation in certain areas. While inefficiencies and losses are unavoidable when using plant nutrients, the **improvement of nutrient management is key for achieving environmental and climate objectives**. However, this objective must be approached in a different way in different Member States, and the most appropriate type of action will depend on the specific problems at stake. The specific national and regional challenges will be assessed in the CAP national recommendations.

The objective of making nutrient use more efficient and reducing nutrient losses is well reflected in the current CSPs. In addition to stressing that all actions should serve to protect and improve soil health and fertility, Member States have also set out relevant interventions to manage nutrient use. Area-based interventions are complemented by support for investments, training, advice and cooperation activities. The use of the Farm Sustainability tool for nutrients (FaST) set out in the CAP farm advisory services will help farmers to adopt nutrient management plans to optimise their use of fertilisers.

Some key actions and practices to improve nutrient management are set out in the seven bullet points below.

- It is essential to sustain and increase **soil health and fertility** and limit nutrient losses to water. This can be achieved through strategies such as: (i) soil cover; (ii) crop diversification and enhanced rotation with leguminous plans; and (iii) the use of catch crops for increasing green fertilisation and soil organic matter.
- It is important to preserve **diversified farms with crops and livestock** to improve the nutrient cycle.
- It is necessary to reduce **ammonia emissions from manure** (e.g. through rapid incorporation to soils, and appropriate timing and injection methods) and improve the mineralisation of organic nitrogen in soils, thus reducing losses.
- **Livestock extensification is also critical**. Limiting stocking density and improving grassland management are relevant approaches for nutrient management, particularly in areas with significant nutrient loads.
- The use of **organic fertilisers** (manure, compost, biowaste) can play a critical role. The use of manure and processed manure can play a role in helping farmers to close nutrient cycles from livestock manure and to reduce their exposure to volatile prices of mineral fertiliser.
- **The efficiency of nutrient use can be increased** through a variety of methods, such as: (i) precision agriculture; (ii) the inclusion of leguminous crops in the rotation; and (iii) the **wider adoption of nutrient management plans**. The use of inhibitors, low-release fertilisers and plant bio stimulants can also help increase efficiency and therefore reduce nutrient inputs applied for optimised crop yields.
- **Farm buildings and equipment** should also be upgraded. Examples of such upgrades include: (i) improved filter efficiency in animal husbandry; (ii) equipment for the application of fertiliser including precision farming, digital tools and software; and (iii) manure collection systems and the modernisation of livestock housing to reduce ammonia emissions. As is already the case now, these actions can benefit from investment support in the future programming period.

Austria: AECC targeted to groundwater protection

This intervention promotes groundwater-friendly arable land management by reducing plant protection products and nutrients and relies on a high level of advisory and training, which improves the understanding of the practices. Main commitments are: nutrient surpluses from the previous crop must be taken into account in the fertilisation of the succeeding crops on the basis of nutrient balances. Soil sample analyses contribute to optimised fertilisation. Optionally, the set-aside of arable land at risk of leaching is also encouraged.

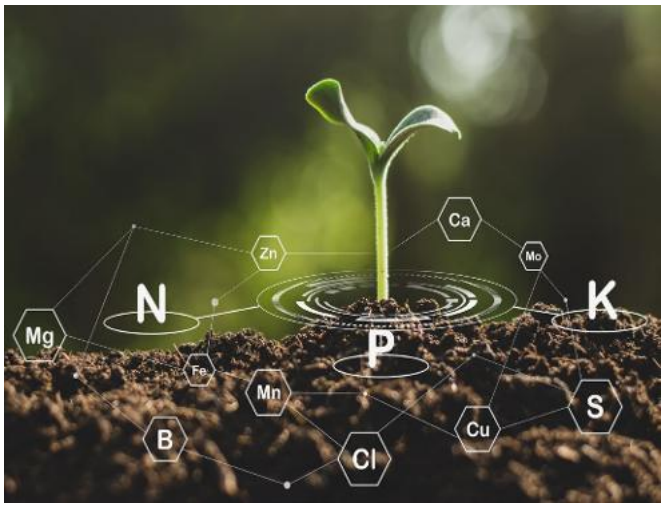
Portugal, Bulgaria, Croatia, Cyprus, Greece and Slovenia: promoting organic fertilisation

Portugal has planned an eco-scheme for replacing synthetic fertilisers by organic fertilisers, using either livestock effluents (manure and slurry), products from forest biomass or other organic fertilisers. It contributes to the transfer of manure from livestock farms to those where there is potential for replacing inorganic fertilisers. Beneficiaries are requested to ensure between 25%-50% of organic fertilisation, considering the specific crop needs for nitrogen and phosphorus through a nutrient management plan. This scheme is complementary to the support for investments to improve environmental performance of holdings, including improvement of housing conditions, storage of effluents and equipment.

Bulgaria, Croatia, Cyprus, Greece and Slovenia also promote organic fertilisers (manure, compost) as an alternative to synthetic ones including the adaptation of fertiliser use to the crops needs (fertilisation plan).

Czechia: AECC on "Sustainable nutrient management"

This intervention involves a set of practices such as crop rotation, organic amendments, and precision farming to reduce nutrient losses and improve soil health; 500 farmers adopted this intervention in claim year 2023, covering 20 000 ha, with an estimated impact on reducing nutrient losses by 15%.



Animal health and welfare

Animal welfare is a core pillar of a modern, socially responsible and sustainable EU food system. The **CAP plays a central role in ensuring that higher-than-baseline welfare standards are both economically viable and widely adopted** across Member States. Antimicrobial resistance (AMR) is identified as a major health threat and is addressed across health, agricultural, environmental and pharmaceutical policies.

Improving animal health and welfare **generates substantial public benefits** – lower antimicrobial use, reduced environmental impacts and increased consumer confidence –that the market alone cannot provide. CAP support is therefore essential to address the **structural, economic and behavioural barriers** that prevent farmers from adopting higher-welfare systems, particularly when these higher-welfare systems require significant capital investment and higher management costs and can lead to reduced income. Investment support is particularly crucial for improving animal welfare, while area or animal-based actions are complementary.

It is very difficult to quantify the positive impact of welfare-friendly measures on the wellbeing of animals. Member States need to ensure that welfare measures proposed align with best practices supported by empirical data. In the future, the ongoing development of animal welfare indicators may help demonstrate the impact of improved welfare measures. By supporting the measures detailed below, **the CAP helps to strengthen the resilience and sustainability of the livestock sector** while fulfilling EU values and legal commitments.

- **Pasture access and grazing**: It is important for ruminants to be able to express their natural behaviour. Measures should also seek to improve the physical fitness of animals and reduce any stress they encounter, while also contributing to environmental benefits such as healthier soils and greater biodiversity in grazed grasslands.
- **Enhanced biosecurity and animal-health** measures: It is important to reduce disease risks and antimicrobial use, supporting EU efforts to combat AMR. Healthier animals suffer less, thus reducing the externalities of sickness, making these measures highly cost-effective.
- **Improved housing and lower stocking densities**: This helps to decrease aggression, respiratory issues and injuries, and give animals space to move, rest and behave naturally. Because such improvements often require significant capital investment, public support is crucial for broad uptake.
- **Environmental enrichment**: Providing manipulable materials for pigs and other species reduces stress and harmful behaviours, lowering the need for painful procedures such as tail-docking or beak-trimming.
- **Better management practices** such as balanced feeding, hygiene, regular monitoring and routine pain relief during necessary procedures improve daily welfare and reduce avoidable suffering. These practices are knowledge intensive and well suited to CAP-funded advisory services and training.
- **Transition away from cages**: It is critical that support is targeted on redesigning housing systems to allow greater freedom of movement and behavioural expression in animals. Without funding, such transitions would be slow, uneven and more economically risky.

Finland: Several actions to support animal welfare and biosecurity

The Finnish CSP gives high priority to animal welfare through 21 targeted actions and investment support for animal-friendly housing and biosecurity. Nearly 94% of livestock units benefit from welfare improvements. This broad approach allows farmers to tailor measures, enhance returns and improve long-term sustainability.

Sweden: Support for animal welfare

Sweden's CSP includes three species-specific welfare interventions (for cows, sows and sheep), alongside support for skills development and cooperation. These measures promote healthier animals, reduce antibiotic use and raise welfare standards. About 18% of livestock units benefit from this support.

Italy: Eco-scheme to reduce antimicrobial use

Italy's CSP features an eco-scheme to reduce antimicrobial use in ruminants and pigs. Approximately 5.6 million livestock units participate, nearly 60% of total. Support is linked to the ClassyFarm system, a tool developed by the Ministry of Health which assesses health, welfare and antibiotic use, and is part of Italy's antimicrobial resistance monitoring programme. The ClassyFarm categorise farms according to the distance of their antimicrobial use (Defined Daily Doses, DDD) relative to the regional median. Support is tiered according to several performance levels of DDD values.

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