EU CAP NETWORK

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# Measuring the climate impact of the CAP: evaluations, lessons and future directions



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NEWSROOM

# Discover the latest publications and activities from the European Evaluation Helpdesk for the CAP

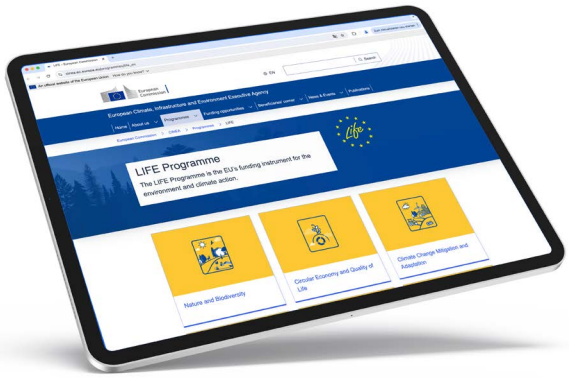
## Assessing result-based interventions

What constitutes a result-based intervention and what does not? What insights can we learn from examples in CAP Strategic Plans and beyond? What role does evaluation play in assessing these interventions? These key questions were addressed by experts participating in the Thematic Working Group 'Assessment of results based interventions' from March to October 2024.

Experts acknowledged that result-based CAP interventions could provide beneficiaries with a payment that is, at least partly, dependent on achieving defined and verifiable outcomes that can be measured in the field or estimated by scientific models.

Participants analysed examples of result-based interventions in Austria, Finland, France, Germany, Ireland, Portugal, Poland, Spain, Slovenia, LIFE projects and payment schemes in the USA, Australia and Switzerland as well as an extended literature review. They identified the main lessons learnt, both horizontal ones and specific to biodiversity, soil and water quality, climate change mitigation and animal welfare.

Evaluation can provide valuable input for the design of result-based interventions. It can examine farmers' preferences and risk perceptions, define indicators, and help assess the additionality and permanence of the results to ensure the long-term impact of interventions. The report will be published on the EU CAP Network website.




## Incoming thematic report on assessing sectoral support within the CAP

To create a shared understanding of how to evaluate the impact of CAP sectoral support, the EU CAP Network, supported by the European Evaluation Helpdesk for the CAP, organised a Thematic Working Group to offer insights on when and how to incorporate sectoral support into evaluation scopes and its relevance for the CAP Specific Objectives.

A subsequent thematic report will soon be published, which can inspire Managing Authorities and evaluators to create an evaluation framework that emphasises sectoral support.

The report examines on CAP Specific Objectives and the evaluation elements for which sectoral support has mostly been designed for, such as risk management, competitiveness, farmers' position in the food chain, environmental and climate objectives, and farmers' knowledge.

For each of these elements, the report contains proposed evaluation questions, factors of success that may be used to provide a judgement, inspiration for indicators and data sources for these indicators, which could be used to answer the questions.

Readers can use the report to select approaches that align with the specific needs of a Managing Authority or evaluator and the purpose of the evaluation. Thus, the thematic report offers inspiration for creating an evaluation framework tailored to the reader's unique circumstances.

## New guidelines on assessing sustainable productivity

The Thematic Working Group 'Assessment of CAP contributions to sustainable productivity' developed guidance for Member States to measure productivity growth and assess the CAP contribution, notably on total factor productivity. The experts also explored how to incorporate social and environmental impacts into productivity measurement, acknowledging the capacity of farmers to deliver social and environmental goods alongside agricultural production.

The guidelines, developed between April and November 2024, guide the reader through the different evaluation approaches and quantitative evaluation methods. They provide practical information on data sources for analysing sustainable productivity, counterfactual impact and correlation models to determine the role of the CAP on changes in observed productivity.

The document, which will be published next year, should contribute to increasing technical knowledge and encouraging Member States to implement robust methods to evaluate the CAP's impact on sustainable productivity.

SPOTLIGHT

# Assessing the climate mitigation potential of CAP Strategic Plans: insights on a new quantitative methodology

**As part of ongoing efforts to align European agricultural practices with EU climate goals, a new study has been published offering a crucial first quantified estimation of how CAP interventions can help reduce greenhouse gas (GHG) emissions, enhance carbon removals and protect existing carbon stocks across the EU.**

In 2022, the agricultural sector was estimated to have emitted 366 million tonnes of $CO_2$ equivalent, representing 11% of the EU's total GHG emissions, according to data reported under the EU Governance Regulation. However, uncertainties remain regarding several emissions and removal sources, as highlighted by the Annual European Union greenhouse gas inventory 1990-2021 and inventory report 2023, and it is not clear how far the implementation of agricultural practices are considered in national inventories.

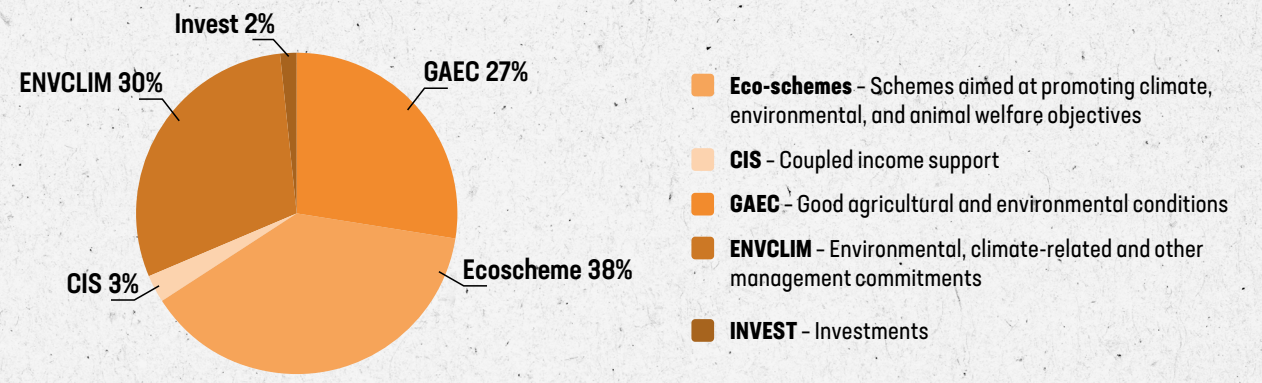
To further analyse and better quantify the contribution of certain agricultural practices on climate mitigation, the European Evaluation Helpdesk for the CAP conducted the first part of the study 'Rough estimate of the climate change mitigation potential of the CAP Strategic Plans (CSPs) over the 2023-2027 period' from April 2023 to June 2024.

The study analysed 19 CSPs from 18 Member States and provided an initial methodology for assessing their potential contribution to EU climate objectives. The 18 Member States represent 92% of the EU utilised agricultural area and 95% of EU GHG emissions from agriculture.

"This study represents a first step towards a more refined methodology to estimate the CAP contribution to GHG emission reduction and removals in agriculture. In addition, with this study, the European Commission wants to support Member States' efforts to improve the reporting in their national inventories of GHG emissions and removals," explained Sophie Helaine, Head of Unit for Policy Performance (A.3) at the Commission's Directorate General for Agriculture and Rural Development (DG AGRI).

The team established a link between CSP planned instruments, such as good agricultural and environmental conditions (GAECs) and CAP interventions, and their mitigation potential at EU level.

**Graph 1: Estimated mitigation potential per GAEC and type of intervention (%)**




*Source: EU CAP Network supported by the European Evaluation Helpdesk for the CAP (2024)*

The study provides quantitative estimations of the climate change mitigation potential of the CSPs at the EU level using programming data, rough estimates of expected implementation levels, and average emission and removal coefficients of farm practices derived from meta-reviews of scientific papers.

**Key methodological steps included:**

1. Identification of the interventions and GAECs with climate mitigation or carbon sink protection potential.
2. Association of each intervention and GAEC with farm practices (based on the 'Labelling of interventions in CAP Strategic Plans by farm practices').
3. Estimation of the land area covered by these farm practices, based on programming data indicated in the CSPs.
4. Calculation of the mitigation or protection potential by applying average emission/removal coefficients to the estimated areas.
5. Aggregate the results per farm practice at the intervention/GAEC, CSP and EU levels.

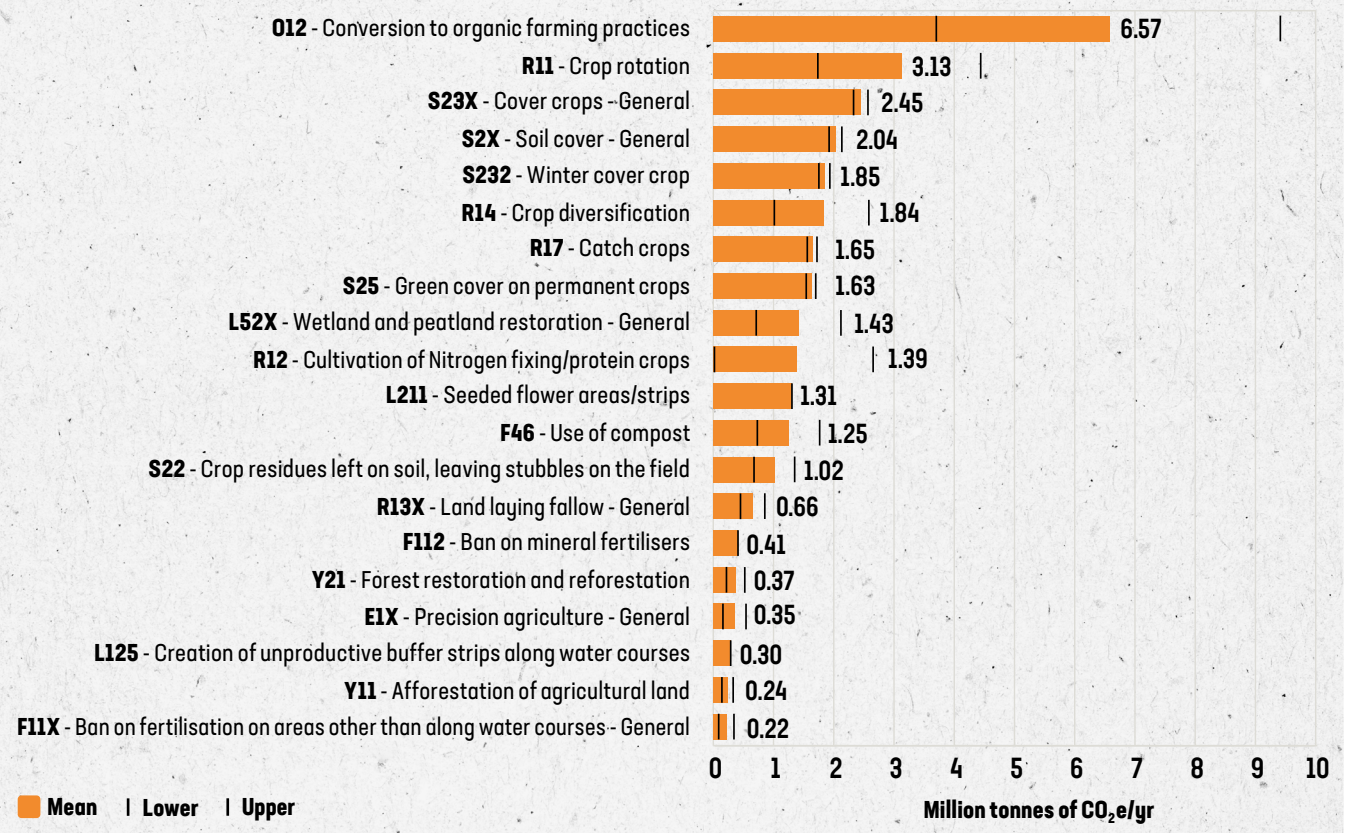
Laura Nocentini and Adrien de Pierrepont, from the European Evaluation Helpdesk for the CAP, co-authored the study. "One of the key challenges was determining accurate coefficient values for each farm practice. The work of the Joint Research Centre (JRC) through the Integrated Modelling platform for Agro-economic and resource Policy analysis project (iMAP project) played a crucial role in this effort. As a result, we successfully developed a database with 69 coefficients, which serve as the cornerstone of the mitigation potential estimates," explained Adrien de Pierrepont.

**The analysis of the CSPs from 18 Member States indicates a potential positive contribution to GHG emission reduction and enhanced removal of 31 million tonnes of $CO_2$ equivalent per year**, distributed between nine million tonnes of GHG emission reduction and 22 million tonnes of enhanced carbon sequestration. The estimated contribution represents a potential effect on climate change mitigation. However, it is currently associated with a range of uncertainties due to the numerous assumptions made at each step of the calculations (e.g. establishing coefficient values per farm practice, estimating an area for each farm practice, etc.).

The main mitigation potential contribution is associated with carbon sequestration in cropland soil and emission reduction from agricultural soils and peatlands.

**In terms of farm practices**, the analysis indicates that conversion to organic farming, expansion of cover crops, and practices related to crop rotation and diversification represent most of the estimated potential contribution.

**Graph 2: 20 most impacting practices**




*Source: EU CAP Network supported by the European Evaluation Helpdesk for the CAP (2024)*

**To contextualise the contribution of the CSPs**, estimates were aggregated according to the categories of the United Nations Framework Convention on Climate Change (UNFCCC) Common Reporting Format (CRF), developed for national inventories of GHG emissions and removals. When considering the 18 Member States, two-thirds of the estimated mitigation potential is associated with increasing carbon storage in cropland soils (CRF category 4.B). One-third is linked to a reduction of non-$CO_2$ emissions from agricultural soils and wetlands (CRF categories 3.D – Agricultural Soils and 4.D – Wetlands). Contribution from livestock emissions (CRF categories 3.A – Enteric Fermentation and 3.B – Manure Management) are expected to be minimal, despite these sectors representing a significant share of agricultural non-$CO_2$ emissions. It should be noted that this study does not assess additional national policies addressing livestock emissions.

**In addition to mitigation, the study highlights the role of the CSPs in protecting carbon stocks in soil** (e.g. grassland, peatlands and land under organic farming) and woody features (e.g. forests and hedgerows) by maintaining these areas and encouraging their sustainable management. The analysis of the 19 CSPs indicates a potential positive contribution to protecting existing carbon sinks of 29 million tonnes of $CO_2$ equivalent yearly across the 18 Member States. Organic farming maintenance contributes significantly to this estimated protection potential, followed by sustainable forest management and grassland protection.

Additionally, **the report provides recommendations for improving accuracy in future estimates**. The recommendations are mainly directed at national authorities. Their goal is to enhance the measurement of how CSP instruments interact with other climate policies and measures. These recommendations also aim to improve Member States' reporting on land-sector emissions and removals to the UNFCCC. To support Member States in benefitting from the study's outcomes, the Evaluation Helpdesk hosted capacity-building sessions to train Member States on the methodology.

The final study will incorporate the remaining 9 CSPs to cover the entire EU.

A similar approach will be developed to provide rough estimates of the potential effect of the CSPs on the quality of agricultural soils. This study started in September 2024 and will continue until mid-2025.

SHOWCASE

# Evaluations show the lasting support of Rural Development Programmes for climate change mitigation and adaptation activities

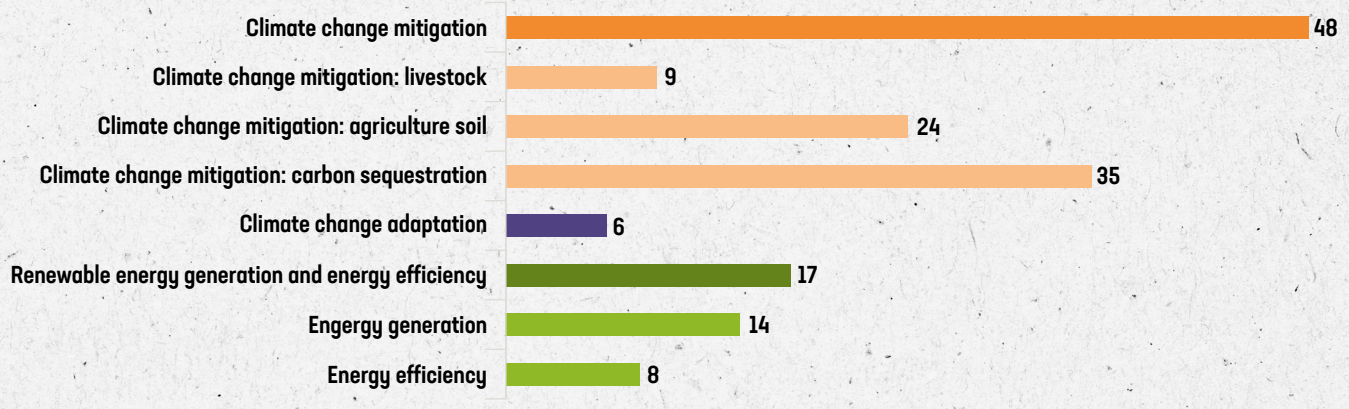
**In the latest CAP Evaluation Insights, Dimitris Skuras, professor at the University of Patras and member of the Evaluation Helpdesk, examined 55 Member State evaluations from the 2014-2022 programming period, allowing for an overview of the CAP's contribution to fighting climate change. Among these evaluations, 11 underwent a so-called 'in-depth appraisal', which means they were scrutinised for their methodological approach and good practices in assessing CAP impacts.**


**What is the general trend observed in the selected Member State evaluations?**

From 2014 to 2020, European agriculture responded to climate change challenges with a significant uptake of greenhouse gas (GHG) mitigation and carbon sequestration activities, actions promoting renewable energy generation, improving energy efficiency and allowing adaption to the impacts of climate change, all supported by Rural Development Programmes (RDPs).

The general trend observed in the evaluations of Member States available in the CAP Evaluation database, which have been reviewed for 'CAP Evaluation insights: climate change', shows that the RDPs had a greater focus on climate change mitigation rather than on adaptation. In relation to mitigation, the supported farming practices concentrated more on reducing nitrogen fertilisation and encouraging carbon sequestration and less on manure management or extensive land use changes. Fewer evaluations explicitly addressed adaptation, but the ones that did recommend innovative strategies to increase resilience and build strength. Additionally, while there are success stories, many evaluations point to the challenges of reaching the European Climate Law target of cutting 55% GHG by 2030.

**Graph 3: Classification of 55 evaluations grouped according to the types of climate change findings identified in the report 'CAP Evaluation Insights: climate change'**




*Source: EU CAP Network supported by the European Evaluation Helpdesk for the CAP (2024)*

**Looking at the 11 evaluations appraised in-depth, what are the most relevant challenges of designing and implementing an evaluation of the CAP impact in relation to climate change?**

The most important step in an evaluation is creating a permanent evaluation data framework. This was also widely discussed at the Good Practice Workshop organised by the Evaluation Helpdesk on 'Assessing the contribution of carbon farming to CAP climate objectives'.

In the evaluations appraised, Managing Authorities put in as much effort as possible to support evaluations with reliable data. In this respect, the main challenge is establishing connections and synchronisation between various databases and consistently maintaining the database by filling gaps, cleaning data and updating sources.

The second significant challenge is engaging stakeholders and experts from the beginning of the evaluation process. Stakeholders provide valuable information sources in the early stages and throughout the evaluation. Their experience can be used to interpret the findings and develop recommendations later.

Identifying suitable and appropriate counterfactuals is also a major step in the methodological arena. However, many evaluations have shown that counterfactual analysis does not always ensure unbiased results. Testing for bias and ensuring the robustness of results is also a critical challenge. Some evaluations took an additional step forward by examining the effects of climate change interventions on innovation and human capital development and the impacts of mitigation and adaptation measures on the rural economy and society.

**How can the evaluation process help the future CAP fight climate change?**

In general, the quality level of evaluations is high and, in some cases, groundbreaking. I believe evaluations are an excellent policy planning tool and indispensable to the CAP. Evaluation not only identifies the impact but also provides plausible explanations that highlight the issue, point out the challenges and recommend changes to the design and implementation of individual measures and policies.

I would like to highlight three good evaluation practices that resulted in excellent policy recommendations to adjust carbon farming policy measures. A Swedish study, 'Evaluation of the effect on carbon storage in arable land', did not confine the assessment to the measures implemented through the RDP but also examined the likely impact of other measures not implemented. So, the evaluation recommended the future inclusion of measures that would increase the effectiveness of carbon sequestration in future policy reform. The 'Study on soil erosion impacts and soil management, carbon conservation and carbon sequestration in agriculture and forestry', a Polish evaluation, made very detailed recommendations on how to reformulate the afforestation measures to increase uptake of the measure and effectiveness. An Austrian ex ante evaluation, 'Reduction of greenhouse gases in agriculture to achieve the goals of the Climate Protection Act', analysed various measures that could be implemented through the CAP Strategic Plan and, on this basis, showed which measures were more adequate to support the country's emissions targets and recommended a combination of additional measures to achieve the climate objectives.

Readers can find out more in the full publication CAP Evaluation Insights.

NETWORKING

# How to tender out evaluations Lesson learned from a capacity building event

Managing Authorities (MAs) from Czechia, Ireland, Luxembourg and Romania requested the Evaluation Helpdesk to organise a peer learning seminar this past summer. The aim was to exchange lessons learned regarding the selection of evaluators, development of terms of reference (ToR) and procurement procedures.

Representatives from these four countries shared their current practices, challenges and insights from previous tendering processes. The discussions revealed differences between the Member States, such as Ireland's use of an open tender process compared to Czechia's targeted approach. However, a common challenge emerged: a limited pool exists of qualified evaluators capable of conducting highly technical evaluations, which require an in-depth understanding of both the CAP and evaluation methodologies. To address this, Member States have taken proactive steps like publicising their evaluation plans early to inform the market about upcoming evaluations and pre-drafting key elements of the ToR, where feasible.

*"The main challenges in developing clear terms of reference revolve around defining the scope of evaluations, setting appropriate budgets and establishing selection criteria for evaluating tenders".*

**SARI RANNANPÄÄ**
Coordinator of the seminar

Regarding the scope of evaluations, some Member States debated whether to tender for an ongoing evaluation covering the entire programming period or to commission single evaluations. Ongoing evaluations can reduce the frequency of procurements and provide evaluators with a deeper, more consistent understanding of the context and measures. In contrast, single evaluations offer more flexibility in adapting to changing circumstances, diverse methodologies and emerging needs.

The Irish MA noted that evaluation budgets often influence tenderers' decisions on participating. Therefore, it is essential to critically assess the evaluation's scope and requirements (including methodologies and deliverables) before launching the tender, ensuring that the budget aligns with these expectations. Luxembourg's MA added that when budgets are limited, it is crucial to maximise value by precisely defining the evaluation's scope and focus.

The Romanian MA emphasised the importance of setting appropriate selection criteria in the tendering process. Given the specialised nature of these evaluations, it is essential to prioritise the skills and experience of the evaluation team over the lowest price. Furthermore, selection criteria can be designed to support new entrants into the market by being flexible with exclusion or experience requirements, promoting a more inclusive and competitive environment.

**Evaluation reading corner**

- EU CAP Network (2024) – Assessing the contribution of carbon farming to CAP climate objectives
- FAO (2024) – The State of the World's Forests 2024
- Joint Research Centre (2024) – The state of soils in Europe
- EU CAP Network (2024) – Overview of Member States' evaluation plans for CAP Strategic Plans (2023-2027)
- OECD (2024) – Biodiversity and Development Finance 2015-2022: Contributing to Target 19 of the Kunming-Montreal Global Biodiversity Framework
- ScienceDirect (2024) – Natural language processing of social network data for the evaluation of agricultural and rural policies

GET INVOLVED

## Know any interesting evaluation projects, events, publications or other initiatives?

CAP Evaluation News welcomes any contribution from its readers – get in touch by emailing evaluation@eucapnetwork.eu

# Events calendar

Below is a pick of the latest and upcoming events that can help evaluation stakeholders improve the quality and effectiveness of CAP assessments across the EU.

- 10-12 December 2024 – Brussels – European Commission – EU Agri-Food Days
- 4-5 February 2025 – Boulogne-Billancourt – OECD – Mobilising Private Finance Towards 2030 and Beyond
- 12 February 2024 – Brussels – EU CAP Network – Farm Sustainability Data Network workshop
- 10-14 February 2025 – Garmisch-Partenkirchen – EAAE – System Dynamics and Innovation in Food Networks
- 21-22 May 2025 – Glasgow – UK Evaluation society – Data in focus - Driving evaluation excellence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