



# Use of Factors of Success in Evaluation

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Thematic Working Group 3

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# List of acronyms

AKIS	Agricultural Knowledge and Information System
AMR	Antimicrobial resistance
ANC	Areas with natural or other specific constraints
APO	Association of Producer Organisations
AROPE	At risk of poverty or social exclusion
AWU	Annual Work Unit
CAP	Common Agricultural Policy
CCO	Cross-cutting Objective
CLLD	Community-led local development
CMEF	Common Monitoring and Evaluation Framework
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
EH	European Evaluation Helpdesk for the CAP
EIP	European Innovation Partnership
ESF	European Social Fund
ESPON	European Spatial Planning Observation Network
ESVAC	European Surveillance of Veterinary Antimicrobial Consumption
EU	European Union
GAEC	Good Agricultural and Environmental Condition
GDP	Gross Domestic Product
GHG	greenhouse gas
ICT	Information and Communication Technology
IFS	Integrated Farm Statistics
JRC	Joint Research Centre
LAG	Local Action Group
LAU	Local Administrative Unit
LEADER/CLLD	Liaison Entre Actions de Développement de l'Économie Rurale which means, Links between activities for the development of rural economy/ Community-Led Local Development
MAPP	Method for Impact Assessment of Programmes and Projects
NUTS	nomenclature of territorial units for statistic
OG	Operational Group
PCU	Population Correction Unit
PDO	Protected Designation of Origin
PGI	Protected Geographical Indication
PMEF	Performance Monitoring and Evaluation Framework
PO	Producer Organisation
PPS	Purchasing Power Standard
RDP	Rural Development Programme
SCAR	Standing Committee on Agricultural Research
SILC	EU Statistics on Income and Living Conditions
SME	Small and medium-sized enterprise



SO	Specific Objective
SOC	soil organic carbon
TBE	Theory-based Evaluation
TSG	Traditional Specialty Guaranteed
TWG	Thematic Working Group
UAA	Utilised Agricultural Area
WFD	Water Framework Directive

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# Introduction

According to Article 1 of the European Commission Implementing Regulation (EU) 2022/1475<sup>1</sup>:

1. When evaluating their CAP Strategic Plans, Member States shall define evaluation questions and factors of success to assess the evaluation criteria of effectiveness, efficiency, relevance, coherence and Union added value referred to in Article 140(1) of Regulation (EU) 2021/2115.
2. When assessing the effectiveness of their CAP Strategic Plans, Member States shall use the key evaluation elements set out in Annex I to this Regulation in accordance with the CAP Strategic Plans' intervention logic and, where relevant for their CAP Strategic Plans, the recommended factors of success set out in that Annex.

Factors of success are not a novel term in the evaluation of the CAP Strategic Plans. Denoted as 'judgment criteria' in 2014-2020<sup>2</sup>, they are key components of the design of every evaluation. They explain how the evaluation questions and related key evaluation elements will be answered, by specifying what must be assessed and by setting the rationale for the use of specific metrics (financial allocations, output, result and impact indicators). The factors of success establish the benchmark for assessing whether CAP interventions are effective, efficient, relevant or coherent. They can be used as the core component around which evaluation findings can be structured. Promoting their use can further develop the capacity of Member States to formulate complete and consistent evaluation frameworks, demonstrate the full path from objectives to evaluation questions to measurement and attribution of the change observed due to CAP Strategic Plans.

Member States have expressed the need for further explanations of how the recommended factors of success could be used in practice. They raised questions about their relationship to key evaluation elements or evaluation questions and how they could be assessed. They have also requested the European Evaluation Helpdesk for the CAP to propose, to the extent possible, additional factors of success covering the evaluation criteria for which there is no provision in Regulation (EU) 2022/1475.

As a response to the above, the Evaluation Helpdesk organised a Thematic Working Group (TWG03) with the overall objective of promoting common approaches regarding the use of factors of success, by showing Member States how to operationalise them in the CAP Strategic Plans evaluations, and a specific focus on their use for the assessment of the key evaluation elements listed in Annex I of Regulation (EU) 2022/1475.

The specific objectives of the activity are to:

- > show how factors of success can be determined;
- > show the role of the factors of success in designing evaluations;

- > showcase how factors of success can be used in practice for answering evaluation questions and for structuring evaluation findings.

The structuring of the evaluations of CAP Strategic Plans will be supported by an interactive tool. This tool will provide detailed information for each factor of success, with multi-directional links between factors of success and General Objectives (GOs), Specific Objectives (SOs) and key elements, as well as information on how to assess them. Moreover, the interactive tool will also provide a prefilled template, structured around the factors of success that can be used to report evaluation findings. The interactive tool will serve the following objectives:

- > building capacity for Member States and the Commission on how to formulate and use the factors of success;
- > presenting common approaches to the design of evaluations;
- > promoting the use of a common reporting of findings, structured around the factors of success, that may facilitate aggregation at the level of Specific and General Objectives as well as around specific evaluation topics.

To collect the information that will serve as input for the interactive tool, factsheets have been prepared for each Factor of Success, which can be used by Member States as a basis for tendering and conducting their evaluations under CAP Strategic Plans. This document summarises the methodology for the assessment of the factors of success and the key considerations for developing the content of the factsheets. The detailed factsheets for each factor of success are annexed to this working document, with the following structure:

## Effectiveness:

- > Each annex corresponds to one General Objective, as they are defined in Article 5 of the Regulation (EU) 2021/2115<sup>3</sup>. In addition, a specific annex is dedicated to the Cross-cutting Objective (Article 6.2 of this Regulation).
- > Within each annex, factors of success are grouped by SO (Article 6.1 of the above Regulation).

## Efficiency, relevance, coherence, Union added value:

- > These evaluation criteria are presented in a horizontal way, to avoid repetitions. Nevertheless, it is stressed that **Member States, in cooperation with evaluators, should choose the level that certain factors of success will be assessed, which may even go to the level of individual interventions.**

<sup>1</sup> Commission Implementing Regulation (EU) 2022/1475 of 6 September 2022 laying down detailed rules for implementation of Regulation (EU) 2021/2115 of the European Parliament and of the Council as regards the evaluation of the CAP Strategic Plans and the provision of information for monitoring and evaluation, [OJ L 232, 7.9.2022, p. 8-36](#)

<sup>2</sup> Commission Implementing Regulation (EU) No 808/2014 of 17 July 2014 laying down rules for the application of Regulation (EU) No 1305/2013 of the European Parliament and of the Council on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) [OJ L 227, 31.7.2014, p. 18-68, ANNEX VI](#).

<sup>3</sup> Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013, [OJ L 435, 6.12.2021, p. 1-186](#).



# Methodology and information sources for developing the factors of success factsheets

## 1. Methodology

### 1.1 Overall structure of the evaluation framework

The factors of success are not a stand-alone component but, instead, they are embedded in an integrated evaluation framework, which brings together the information on data requirements and the analytical approach. The structure of such a framework builds on the necessity to evaluate the implementation of the CAP Strategic Plans against the corresponding SO and starts with identifying the key elements that must be assessed for each SO. These key elements can then be used to formulate evaluation questions. Factors of success come into play to further develop and specify

certain aspects of these key evaluation elements and questions and allow capturing the change brought about by the evaluated intervention(s).

The relationship between SO, key evaluation elements and corresponding evaluation questions, as well as factors of success for effectiveness, is presented in Table 1, while Table 2 shows the corresponding structures for the other evaluation criteria (efficiency, relevance, coherence and Union added value).

#### Box 1. Attribution of the observed effects to the CAP support

In every factor of success there is an explicit reference to the effect of the CAP support, deviating from the formulation included in Annex I of Regulation (EU) 2022/1475. This is to underline that, although the quantification of the CAP contribution is not mandatory for all impact indicators, the purpose of the evaluation is to assess the performance of the CAP. Therefore, it is recommended to try to assess the net contribution of the CAP support, as this will be important not only for effectiveness but also for the other evaluation criteria.

It must be stressed though, that this recommendation cannot and does not attempt to alter, in any case, the provisions of the regulatory framework.

Generally, there is a close correspondence between the proposed evaluation framework and the list of key elements to assess and recommended factors of success included in Annex I of Regulation (EU) 2022/1475, with the following exceptions:

- The factor of success 'Agricultural income level in farms supported is increasing or, at least, is stable and disparities between farms and to other economic sectors are decreasing, taking into account general economy trends', under SO1 (Article 6.1(a) of Regulation (EU) 2021/2115), has been split into three factors of success, to differentiate between trends in agricultural income and income disparities both between farms and between the farming sector and other economic sectors. This split also ensures clarity in measuring the effects as different indicators are used for the assessment.
- The factor of success 'Ammonia emissions in agriculture, nutrient leakage and soil erosion are decreasing', under SO5 (Article 6.1(e) of Regulation (EU) 2021/2115), has been split into three factors of success, to differentiate between air quality (e.g. ammonia emissions), water quality/quantity (e.g. nutrient leakage) and soil quality (e.g. soil erosion). This split is also justified by the fact that these aspects are assessed using different impact indicators.
- The factor of success 'Animal welfare is improving, and antimicrobial use is decreasing', under SO9 (Article 6.1(i) of Regulation (EU) 2021/2115), has been split into two factors of success, to differentiate between animal welfare improvements and combatting antimicrobial use in livestock production. This split is also justified by the fact that these two aspects are assessed using two different indicators.



**Table 1. Key elements, evaluation questions and factors of success for effectiveness.**

(Text with italics indicates factors of success that are modified compared to Annex 1 of Regulation (EU) 2022/1475)

SO	Key elements to assess		Proposed evaluation questions	Recommended factors of success (TWG)	
1	1.1	<b>Viable farm income:</b> Viable farm income means not only stable income but also fairly distributed income	To what extent have CAP Strategic Plan interventions ensured viable farm income?	1.1.1	<i>Agricultural income level in farms supported is increasing or, at least, stable due to CAP support.</i>
				1.1.2	<i>Income disparities between supported farms are decreasing due to CAP support.</i>
				1.1.3	<i>Disparities between the agricultural income level in farms supported and the income level in the other economic sectors are decreasing due to CAP support.</i>
	1.2	<b>Resilience:</b> Resilience encompasses supporting farmers facing potential risks and specific limitations which can force them to stop agricultural activity	To what extent have CAP Strategic Plan interventions supported the resilience of the agricultural sector and ensured the economic sustainability of agricultural production?	1.2.1	<i>Income support is distributed to the farmers most in need.</i>
2	2.1	<b>Enhanced market orientation:</b> Based on agri-food trade balance (import-export)	To what extent have CAP Strategic Plan interventions contributed to enhancing market orientation?	2.1.1	<i>Agri-food trade is increasing due to CAP support.</i>
	2.2	<b>Farm competitiveness:</b> Based on increased capital, labour and land productivity through innovation	To what extent have CAP Strategic Plan interventions contributed to improving the competitiveness of the farm sector?	2.2.1	<i>Productivity in farms supported is increasing.</i>
3	3.1	<b>Farmer's position in the food chain:</b> Integration of farmers within the food chain and participation in quality schemes and organic production to increase added value	To what extent have CAP Strategic Plan interventions contributed to improving farmers' position in the value chain and farmers' response to market driven opportunities stemming from new consumer preferences?	3.1.1	<i>Share of marketed production by quality schemes and organic production is increasing due to CAP support.</i>
				3.1.2	<i>Share of marketed production by Producer Organisations (POs) and other forms of farmers organisations supported is increasing due to CAP support.</i>
				3.1.3	<i>Gross added value for farmers in POs and other forms of farmer organisations or participating in quality schemes and organic production is increasing due to CAP support.</i>



SO	Key elements to assess		Proposed evaluation questions	Recommended factors of success (TWG)	
4	4.1	<b>Climate change mitigation:</b> Based on greenhouse gas emissions (GHG) and carbon sequestration	To what extent have CAP Strategic Plan interventions contributed to achieving the 2050 objective of climate neutrality in the EU, primarily by reducing GHG emissions, increasing carbon sequestration and promoting production and use of sustainable energy?	4.1.1	<i>Greenhouse Gas (GHG) emissions in agriculture are decreasing, due to CAP support.</i>
				4.1.2	<i>Soil organic carbon (SOC) sequestration is increasing or maintained due to CAP support.</i>
				4.1.3	<i>Renewable energy production capacity is increasing due to CAP support.</i>
	4.2	<b>Climate change adaptation:</b> Based on the resilience of agriculture to climate change	To what extent have CAP Strategic Plan interventions supported the EU's agriculture, forestry and rural areas to reduce vulnerability, strengthen resilience and enhance adaptive capacity to climate change?	4.2.1	<i>The resilience of agriculture to climate change is increasing due to CAP support.</i>
5	5.1	<b>Efficient management of natural resources:</b> Based on preserving or enhancing natural resources quality and quantity by reducing pollutants and exploitation	To what extent have CAP Strategic Plan interventions advanced air quality, including a reduction in chemical substances?	5.1.1	<i>Ammonia emissions in agriculture are decreasing due to CAP support.</i>
			To what extent have CAP Strategic Plan interventions fostered sustainable development and effective management of water resources, including a reduction in the dependency on chemical pesticides?	5.2.1	<i>Nutrient balance on agricultural land is improving due to CAP support.</i>
				5.2.2	<i>Nutrient leakage is decreasing due to CAP support.</i>
				5.2.3	<i>Pressure on natural water reservoirs is decreasing due to CAP support.</i>
				5.2.4	<i>The use and risk of chemical pesticides and the use of more hazardous pesticides are decreasing due to CAP support.</i>
			To what extent have CAP Strategic Plan interventions supported sustainable development and effective management of soil resources?	5.3.1	<i>Soil erosion is decreasing due to CAP support.</i>
6	6.1	<b>Reversing biodiversity loss:</b> Based on biodiversity and habitats in agricultural land or other areas affected by agricultural or forestry practices	To what extent have CAP Strategic Plan interventions contributed to halting and reversing biodiversity loss on agricultural and forest land?	6.1.1	<i>Biodiversity related to agricultural land is improving or, at least, biodiversity loss is halted due to CAP support.</i>
				6.1.2	<i>Biodiversity in Natura 2000 areas affected by agriculture or forestry is improving or, at least, biodiversity loss is halted due to CAP support.</i>
				6.1.3	<i>Agro-biodiversity is increasing due to CAP support.</i>



SO	Key elements to assess		Proposed evaluation questions	Recommended factors of success (TWG)	
6	6.2	<b>Ecosystem services:</b> Based on landscape features that contribute to ecosystem services by hosting relevant species (e.g. through pollination, pest control), bio-physical processes (e.g. through erosion control, water quality maintenance), or cultural values (e.g. aesthetic value)	To what extent have CAP Strategic Plan interventions contributed to enhancing ecosystem services?	6.2.1	<i>Trends of pollinators are improving or, at least, stable due to CAP support.</i>
				6.2.2	<i>The area covered by landscape features in agricultural land is increasing or maintained due to CAP support.</i>
7	7.1	<b>Farmers renewal:</b> Based on supporting young farmers and new farmers setting up and continuity	To what extent have CAP Strategic Plan interventions contributed to the setting up of young farmers and new farmers and the continuity of their activities?	7.1.1	<i>Number of young and new farmers is increasing due to CAP support.</i>
	7.2	<b>Business development:</b> Based on supporting rural business start-ups and farm diversification	To what extent have CAP Strategic Plan interventions contributed to facilitating non-agricultural business development (including start-ups) in rural areas?	7.2.1	<i>Number of rural businesses is increasing due to CAP support.</i>
8	8.1	<b>Rural sustainable economy:</b> Based on economic growth and promoting employment	To what extent have CAP Strategic Plan interventions contributed to a sustainable rural economy by enhancing economic growth and promoting employment or by weakening economic decline and loss of employment, and by promoting the bioeconomy and sustainable forestry?	8.1.1	<i>Rural areas' economy is growing or, at least, is stable and the urban-rural gap is decreasing due to CAP support.</i>
				8.1.2	<i>Employment rate in rural areas is improving due to CAP support.</i>
				8.1.3	<i>Bioeconomy related businesses are increasing or modernised due to CAP support.</i>
				8.1.4	<i>Sustainable forestry is increasing due to CAP support.</i>
	8.2	<b>Local development:</b> Provision of local services and infrastructure	To what extent have CAP Strategic Plan interventions contributed to local development and the provision of local services and infrastructure?	8.2.1	<i>Local services and infrastructures are improving due to CAP support.</i>
	8.3	<b>Gender equality and social inclusion:</b> Promotion of participation of women in farming and the economy, income equity and poverty reduction	To what extent have CAP Strategic Plan interventions contributed to the promotion of participation of women in farming and the economy, income equity and poverty reduction?	8.3.1	<i>Women employment and participation in farming and the economy are improving due to CAP support.</i>
				8.3.2	<i>CAP support is more fairly distributed.</i>
8.3.3				<i>Rural poverty is decreasing due to CAP support.</i>	



SO	Key elements to assess		Proposed evaluation questions	Recommended factors of success (TWG)	
9	9.1	<b>Quality and safety food:</b> Based on fostering quality schemes, promoting animal welfare and combatting antimicrobial resistance	To what extent have CAP Strategic Plan interventions contributed to fostering quality schemes, promoting animal welfare and combatting antimicrobial resistance?	9.1.1	<i>Value of production marketed under quality schemes and of organic production is increasing due to CAP support.</i>
				9.1.2	<i>The conditions of animal welfare are improving due to CAP support.</i>
				9.1.3	<i>The sales and use of antimicrobials for food-producing animals are decreasing due to CAP support.</i>
10	10.1	<b>Agricultural Knowledge and Innovation system (AKIS) and digital strategy:</b> Based on the support of AKIS strategic actions, the AKIS related interventions, and the digital strategy and their impact on innovation uptake by farmers	To what extent have CAP Strategic Plan interventions supported AKIS strategic actions and related AKIS interventions that contribute to strengthening interactions within the AKIS and the uptake of knowledge and innovation by farmers?  To what extent have CAP Strategic Plan interventions supported the digital strategy that contributes to fostering digitalisation in agriculture and rural areas and the uptake of digital solutions by farmers?	10.1.1	<i>An increasing number of farmers participated in training programmes and/or made use of farm advice due to CAP support.</i>
				10.1.2	<i>Farmers are changing farming practices after participating in training programmes and/or after making use of farm advice due to CAP support.</i>
				10.1.3	<i>An increasing number of farmers are introducing digital farming tools due to CAP support.</i>
				10.1.4	<i>CAP Strategic Plan's expenditure supporting the creation of innovation and knowledge sharing is increasing.</i>

**Table 2. Key elements, evaluation questions and factors of success for other evaluation criteria**

Evaluation criteria	SO	Key elements to assess		Evaluation questions	Recommended factors of success (TWG)	
Efficiency	All	Eff.1	<b>Cost effectiveness</b>	To what extent are the costs of the CAP Strategic Plan's implementation justified and proportionate given the effects it has achieved?	Eff.1.1	<i>Implementation of the CAP Strategic Plan is cost effective.</i>
	All	Eff.2	<b>Simplification</b>	To what extent has the delivery of the CAP Strategic Plan been simplified in terms of reduced costs for beneficiaries and administrations?	Eff.2.1	<i>The costs of the delivery of the CAP Strategic Plan, both for beneficiaries and administrations, that are not strictly necessary to reach policy objectives are minimised.</i>
					Eff.2.2	<i>The adoption of simplification measures, including digitalisation, is increasing.</i>



Evaluation criteria	SO	Key elements to assess		Evaluation questions	Recommended factors of success (TWG)	
Relevance	All	Rel.1	<b>Relationship between initial and current needs</b>	To what extent do the CAP Strategic Plan's objectives, interventions and design remain relevant to the current and expected future and changing needs and to the EU's overarching policy priorities?	Rel.1.1	<i>The general context of the agri-food sector and rural areas evolved according to the initial assumptions and projections.</i>
	All	Rel.2	<b>Relevance to the current needs</b>		Rel.2.1	<i>The CAP Strategic Plan's objectives and interventions remain relevant in addressing the current needs.</i>
					Rel.2.2	<i>The design of the CAP Strategic Plan's interventions is relevant to the current needs.</i>
	All	Rel.3	<b>Relevance to the EU's overarching policy priorities</b>		Rel.3.1	<i>CAP Strategic Plan objectives and interventions remain relevant in addressing the EU's overarching policy priorities.</i>
All	Rel.4	<b>Relevance to future and changing needs</b>	Rel.4.1	<i>CAP Strategic Plan objectives and interventions remain relevant in addressing the future and changing needs.</i>		
Coherence	All	Coh.1	<b>Internal coherence</b>	To what extent are CAP Strategic Plan interventions complement each other and contribute to achieving synergies under various Specific Objectives?	Coh.1.1	<i>The integration of EAGF and EAFRD interventions under a single Strategic Plan improved the internal coherence of the CAP.</i>
	S01 S02 S03 S04 S05 S06 S09				Coh.1.2	<i>The CAP Strategic Plan instruments and interventions that aim to improve economic performance of the agricultural sector work synergistically and/ or complementarily with the ones aiming to improve environmental-climate performance.</i>
	All				Coh.1.3	<i>The CAP Strategic Plan instruments and interventions that aim to improve productivity and growth are coherent with the ones aiming at increasing employment.</i>
	S04 S05 S06				Coh.1.4	<i>CAP interventions for S04, S05 and S06 show a high degree of spatial complementarity and coexistence.</i>



Evaluation criteria	SO	Key elements to assess		Evaluation questions	Recommended factors of success (TWG)	
Coherence	All	Coh.2	<b>External coherence</b>	To what extent did CAP Strategic Plan interventions complement other EU instruments/funds, outside the CAP, to achieve synergies?	Coh.2.1	<i>The CAP Strategic Plan assures external coherence with other national policies as well as European instruments/funds and with international obligations, including the Sustainable Development Goals (SDGs).</i>
Union added value	All	Uav.1	<b>Improved governance and cooperation</b>	To what extent have CAP Strategic Plan standards, procedures and interventions produced results in agriculture and rural areas beyond what would have been achieved by Member States acting alone?	Uav.1.1	<i>EU action promotes better governance and coordination in the delivery of CAP support.</i>
	S01 S02 S03 CCO	Uav.2	<b>Responding to economic challenges and the pressures due to the single market</b>		Uav.2.1	<i>EU action ensures a system of support that avoids potential distortions of competition and improves the competitiveness and position of farmers in the value chain.</i>
	S04 S05 S06	Uav.3	<b>Responding to environment-climate challenges</b>		Uav.3.1	<i>EU action incentivised Member States to enhance their environment-climate ambition and performance.</i>
	S07 S08 S09 CCO	Uav.4	<b>Responding to socioeconomic challenges faced by the rural areas</b>		Uav.4.1	<i>EU action supports Member States in tailoring their response to socioeconomic challenges in rural areas while supporting solidarity and limiting gaps between the regions.</i>

## 1.2 Assessment of factors of success and structure of the factsheets

The assessment of the factors of success starts by clarifying its purpose and scope and selecting the main indicator(s) that will be used. For **effectiveness**, the following steps can be taken:

1. Calculation of the value of the selected indicator(s)
2. Estimation of the net effect.
3. Selection of other indicators that may help set the context or highlight specific aspects.
4. Assessment of the factor of success.

For **efficiency, relevance, coherence and Union added value**, the assessment includes only two steps:

5. Calculation of the value(s) of the main indicator(s).
6. Assessment of the factor of success.

This process is reflected in the factsheets for each factor of success, which contain the following sections:

- > The identity of the factor of success, which comprises:
  - > the Specific Objective(s);
  - > the evaluation criterion;

- > the key evaluation element;
- > a proposed example of an evaluation question;
- > the code and title of the factor of success.
- > The rationale for the use of the factor of success.
- > An indicative list of types of interventions relevant to the factor of success.
- > The main indicator(s) that can be used to assess the factor of success.
- > The steps to assess the factor of success, described above.
- > Extending the recommended factor of success.

The different sections of these factsheets are explained below.



## Identity of the factor of success

Each factor of success under effectiveness corresponds to one SO and one key evaluation element.

Factors of success under efficiency, relevance, coherence and Union added value may be relevant to more than one or even all SOs. That said, it is not implied that they should be only applied at the level of the CAP Strategic Plan during the ex post evaluation, but Member States **and evaluators may apply them when assessing a single SO or a group of objectives, during the implementation.**

For each evaluation element, an evaluation question is proposed to further clarify the key evaluation element and guide the formulation of the corresponding factors of success. It must be stressed that **one evaluation question can be addressed by more than one factor of success.**

The code of each factor of success, under effectiveness, is based on the SO and the key evaluation element. For other evaluation criteria, the code is based on the criterion and the proposed key evaluation element.

## Rationale for the use of the factor of success

In this section, the concept of the factor of success is described along with information about the logic behind its selection and how it can be used to answer the proposed evaluation question and address the key evaluation element.

## Indicative list of types of interventions

Key evaluation elements and corresponding factors of success might not be relevant to all the types of interventions that can be programmed under an SO. Therefore, the most relevant ones are identified and included in the information accompanying each factor of success.

The role of this indicative list is to show that a clear intervention logic must be established for each factor of success. Moreover, beyond the types of interventions that can have a direct contribution to the factor of success, additional types of interventions, even those not programmed under the SO, but with possible positive or negative side effects on the factor of success should be considered too.

This indicative list might not reflect fully the intervention logic chosen by each Member State. For an overview of the interventions planned by each Member State in their adopted CAP Strategic Plans, their financial allocations and their links to output and result indicators, you may explore the ['Catalogue of CAP interventions'](#).

## Main indicator(s)

For each factor of success, one or more main indicators are proposed. For effectiveness, these are, in most cases, **Performance Monitoring and Evaluation Framework (PMEF) impact indicators** that are most relevant to the factor of success. Where it was not possible to identify a relevant PMEF indicator, additional indicators are proposed.

## Steps to assess the factor of success

**Step 1 - Calculation of the main indicator(s):** Each main indicator is accompanied by information about how it can be measured, including corresponding data sources and potential challenges.

**Step 2 - Estimation of the net effect:** Indicative methods are provided that can be used to estimate the net effect of the CAP support on the development of each main indicator under effectiveness, complemented with practical and applied examples. Even if the indicators are not included in Annex III of Regulation (EU) 2022/1475, it is considered a good practice for Member States to try to net out the effect of CAP support, since this can make the findings of the evaluation more reliable and can be used to make a more concrete efficiency analysis or assess other evaluation criteria.

**Step 3 - Use of other indicators that may help set the context or highlight specific aspects:** Beyond the main indicator, context indicators and other additional indicators are proposed, where relevant, which can be used to better clarify the context or highlight specific aspects relevant to the factor of success.

**Step 4 - Assessment of the factor of success:** Finally, information is provided on how the factor of success can be assessed. This assessment may have two dimensions: a quantitative dimension assessing the magnitude of the observed effect and a qualitative one assessing the direction (positive or negative) of the effect.

A quantitative assessment is only possible when there are **specific targets** set at the national or sub-national level, which are **relevant to the factor of success and the main indicator(s) selected**. In that case, the change in the value(s) of the main indicator(s) is compared to the set targets and the magnitude of the (net) effectiveness of CAP support is estimated.

If such targets for the main indicator(s) do not exist, a qualitative assessment must be carried out to check whether the direction of the change in the value(s) of the main indicator(s) is in line with the direction implied in the formulation of the factor of success.

Both the quantitative and qualitative assessments can be complemented by the progress made towards the targets set in the CAP Strategic Plan for financial allocations, output and result indicators.



## Box 2. Interpretation and reporting of findings

Interpretation of findings is crucial at this step. A thorough **triangulation** of the findings must be always carried out. Triangulation is the cross-verification of evaluation findings using various sources of information. Typically, triangulation involves a quantitative assessment of the (net) effects of the policy, a literature review to collect results from similar studies or research projects and discussion with the relevant stakeholders in carefully planned focus groups or interviews. When relevant, a practical solution to a lack of data can be to conduct case studies, that is in-depth research on 'typical' target groups or territories.

A specific, **non-mandatory** approach is proposed under these guidelines for structuring the reporting of the findings around the factors of success. For more information see [Annex VI](#).

### Extending the recommended factor of success

Building on the preparatory work for closing data and attribution gaps, carried out by the Evaluation Helpdesk in 2022, additional factors of success are proposed, in specific cases, which bring more clarity to what must be assessed. For example, the factor of success '1.1.1 Agricultural income level in farms supported is increasing or, at least, is stable' could be complemented with an additional factor of success 'Variability of agricultural income level is decreasing'. The logic behind this is to equally assess both the increase in the trend of agricultural income and the variability around the trend, which corresponds better to the aspect of the stability of income. It assumes that, although the overall trend might be increasing,

high variability of the income around this trend might have a detrimental effect on the viability of some farms, reducing objective and subjective well-being, especially in the case of risk-averse farmers, and decreasing incentives to produce, invest and innovate. Similarly, the factor of success 'Income support is distributed to farmers most in need' may not adequately specify all aspects of the resilience of farms. It could be complemented with an additional factor of success that is better fit to assess resilience, looking at aspects such as employment in agriculture or the ability of the farms to pay short-term obligations. It follows that such additional factors of success might require additional indicators, beyond the ones defined under the PMEF.

## Box 3. The importance of data on financial allocations, output and result indicators and data for monitoring and evaluation

The assessment of the factors of success depends very much on what was the situation at the start of the implementation period, what were the expected achievements and how the situation evolved due to the implementation of CAP Strategic Plans. In this context, initial financial allocations, output and results indicators as well as data for monitoring and evaluation are crucial in illustrating the rationale and transmission of effect within the CAP Strategic Plan, including insights about the drivers that may affect the change in the value of the main indicator(s). They can provide valuable information on the uptake of the support and the specific characteristics of beneficiaries, sectoral interventions, EIP Operational Groups as well as Local Action Groups and LEADER projects, as well as immediate results of the implementation of the CAP Strategic Plan. Moreover, they play a central role in assessing efficiency, relevance, coherence and Union added value.

On the other hand, one of the main characteristics of the 'New Delivery Model' is the enhanced flexibility, provided to the Member States, to establish their intervention logic and define how each intervention is going to contribute to the different SOs. This means that the links between interventions - and corresponding output indicators - result indicators and SOs may differ among Member States. Providing an indicative list of output and result indicators for each factor of success, as part of this guidance, might end up being either very broad or very prescriptive, undermining the logic of the New Delivery Model. For this reason, although the importance of this information for the transparency and quality of the assessment of the factors of success is fully recognised, it is left up to Managing Authorities and evaluators to define the financial allocations, output and result indicators, as well as data for monitoring and evaluation that are relevant for each factor of success, according to the CAP Strategic Plan's intervention logic.



## 2. Information sources

The development of every evaluation framework presupposes a clear set of definitions of the evaluation criteria that will be applied. For this guidance, these definitions come from Tool #47 of the Better Regulation Toolbox and are summarised in box 4.

### Box 4. Definitions of the evaluation criteria

#### Effectiveness

Effectiveness analysis considers how successful EU action has been in achieving or progressing towards its objectives. The evaluation should form (a) an opinion on the progress made to date and (b) the role of the EU action in delivering the observed changes. The effectiveness analysis should also look closely at the benefits of the EU intervention as they accrue to different stakeholders ([Better Regulation, Tool #47, p.403](#))

#### Efficiency

Efficiency considers the resources used by an intervention for the given changes generated by the intervention. Efficiency analysis should look closely at the costs of the EU intervention as they accrue to different stakeholders. The efficiency analysis should also compare the identified costs with the benefits that were identified under the effectiveness criterion as well as explore the potential for simplification and burden reduction. ([Better Regulation, Tool #47, pp. 404-405](#))

#### Relevance

Relevance looks at the relationship between the needs and problems at the time of introducing the intervention and during its implementation. Relevance should also look at the relationship between the current and future needs and problems in the EU and the objectives of the intervention. ([Better Regulation, Tool #47, p. 407](#)).

#### Coherence

The evaluation of coherence involves looking at how well (or not) different interventions, EU/international policies or national/regional/local policy elements work together. Checking 'internal' coherence means looking at how the various components of the same EU intervention operate together to achieve its objectives. Checking 'external' coherence means that similar checks can be conducted in relation to other ('external') interventions, at different levels. Where relevant, analysis of coherence may involve checking whether interventions are in line with the objectives of the European Green Deal, or whether the intervention is consistent with the overarching environmental goals (such as the Climate Law) or other policies targeting the environment. ([Better Regulation, Tool #47, p. 408](#)).

#### Union added value

Union added value looks for changes that are due to the EU intervention, over and above what could reasonably have been expected from national actions by the Member States. Under the principle of subsidiarity (Article 5 Treaty on European Union), and in areas of nonexclusive competence, the EU should only act when the objectives can be better achieved by Union action rather than action by the Member States. ([Better Regulation, Tool #47, p. 409](#)).

The information sources used for defining the key elements and factors of success per evaluation criterion are listed below.

#### Effectiveness

Regarding the key evaluation elements and factors of success for effectiveness, the main source of information is the Regulation (EU) 2022/1475.

Other sources include:

- > OECD, Applying evaluation criteria thoughtfully.
- > Impact assessment accompanying the legislative proposals of the 2023-2027 period.

For the other evaluation criteria, the key elements and factors of success have been developed based on the following sources of information:

#### Efficiency

- > Better Regulation Toolbox – Tool #56 Typology of Costs and Benefits and Tool #57 Methods to assess Costs and Benefits.
- > CAP Cross-cutting Objectives: Driving simplification.
- > OECD, Applying evaluation criteria thoughtfully.
- > Impact assessment accompanying the legislative proposals of the 2023-2027 period.

#### Relevance and Coherence

- > OECD, Applying evaluation criteria thoughtfully.
- > Impact assessment accompanying the legislative proposals of the 2023-2027 period.

#### Union added value

- > Impact assessment accompanying the legislative proposals of the 2023-2027 period.





# Factors of Success for General Objective 1

**Annex I to the guidelines developed under  
Thematic Working Group 3**



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# Annex I: Factors of Success for General Objective 1

## Introduction

### Overall structure

The factors of success relevant to General Objective (GO) 1: “to foster a smart, competitive, resilient and diversified agricultural sector to ensuring long-term food security” are presented in this Annex, grouped by specific objective.

The overall structure of the Specific Objectives (SO), key evaluation elements and factors of success are illustrated in the following table.

SO	Key evaluation element	Suggested example of evaluation question	Recommended factor of success
1	<b>1.1 Viable farm income:</b> Viable farm income means not only stable income but also fairly distributed income	To what extent have CAP Strategic Plan interventions ensured viable farm income?	<i>1.1.1 Agricultural income level in farms supported is increasing or, at least, stable due to CAP support.</i>
			<i>1.1.2 Income disparities between supported farms are decreasing due to CAP support.</i>
			<i>1.1.3 Disparities between the agricultural income level in farms supported and the income level in the other economic sectors are decreasing due to CAP support.</i>
	<b>1.2 Resilience:</b> Resilience encompasses supporting farmers facing potential risks and specific limitations which can force them to stop agricultural activity	To what extent have CAP Strategic Plan interventions supported the resilience of the agricultural sector and ensured the economic sustainability of agricultural production?	<i>1.2.1 Income support is distributed to the farmers most in need.</i>
2	<b>2.1 Enhanced market orientation:</b> Based on agri-food trade balance (import-export)	To what extent have CAP Strategic Plan interventions contributed to enhancing market orientation?	<i>2.1.1 Agri-food trade is increasing, due to CAP support.</i>
	<b>2.2 Farm competitiveness:</b> Based on increased capital, labour and land productivity through innovation	To what extent have CAP Strategic Plan interventions contributed to improving the competitiveness of the farm sector?	<i>2.2.1 Productivity in farms supported is increasing.</i>
3	<b>3.1 Farmer's position in the food chain:</b> Integration of farmers within the food chain and participation in quality schemes and organic production to increase added value	To what extent have CAP Strategic Plan interventions contributed to improving farmers' position in the food chain and farmers' response to market driven opportunities stemming from new consumer preferences?	<i>3.1.1 Share of marketed production by quality schemes and organic production is increasing due to CAP support.</i>
			<i>3.1.2 Share of marketed production by Producer Organisations (POs) and other forms of farmer organisations supported is increasing due to CAP support.</i>
			<i>3.1.3 Gross added value for farmers in POs and other forms of farmer organisations or participating in quality schemes and organic production is increasing due to CAP support.</i>



Please note that the key evaluation elements 1.1 and 3.1 and the corresponding examples of evaluation questions are assessed by more than one factor of success.

In every factor of success there is an explicit reference to the effect of the CAP support. This is to underline that although the quantification of the CAP contribution is not mandatory for all impact indicators, the purpose of the evaluation is to assess the

## Indicative types of interventions

In each factsheet, **an indicative intervention logic is presented by listing the types of interventions that affect each factor of success.** The identification of the corresponding types of interventions was based on the following assumptions:

- > The types of interventions programmed under the corresponding SO and relevant to the factor of success must be considered.
- > Additional types of interventions, even if not programmed under the SO, but with possible positive or negative side effects on the factor of success should be considered too.

## Assessment of the factors of success

Effectiveness is determined by assessing the analysed impact of the CAP Strategic Plan against defined targets and/or points of comparison. That said, a quantitative assessment is possible only if targets corresponding to impact indicators are set at the national or, where relevant, regional level.

Regarding General Objective 1, there is no obligation for Member States to set such targets, and therefore only a qualitative

## Impact indicators and data sources

The calculation of the impact indicators is based on the methodologies and data sources provided in the corresponding [indicator fiches](#). Although, in most cases, EU level data sources are provided, the primary data for these data sources are collected at the national level. For example, many data, compiled by EUROSTAT and presented at the Member State level, come from the Farm Structure Survey, conducted in each Member State, or the national economic accounts. Using these national data may allow better disaggregation and, thus, more robust and data-demanding evaluation methods. Similarly, EU level farm accountancy data network (FADN) data are compiled based on the national FADN samples. The farm level data included in these samples can be much more useful when analysing the effect of the CAP on specific sectors or territories. Therefore, Managing Authorities and evaluators are strongly encouraged to use these more detailed and better disaggregated data.

In addition, for some national datasets there is no obligation for Member States to share them with the European Commission. A typical example of such a dataset is the Integrated Administration and Control System (IACS) (see Title IV, Chapter II, Regulation (EU) 2021/2116).

performance of the CAP. Therefore, it is recommended to try to assess the net contribution of the CAP support, as this will be important not only for effectiveness but also for the other evaluation criteria. It must be stressed though, that this recommendation cannot and does not attempt to alter, in any case, the provisions of the regulatory framework.

These lists may differ from the actual interventions that may be relevant to each factor of success under a certain CAP Strategic Plan, due to the enhanced flexibility provided to the Member States under the 'New Delivery Model'.

For an overview of the actual interventions planned by each Member State in their adopted CAP Strategic Plans, their financial allocations and their links to output and result indicators, you may explore the '[Catalogue of CAP interventions](#)'.

assessment would be possible, analysing whether the direction of the observed effect, as measured by the change in the main indicator, is in line with the direction implied in the formulation of the factor of success.

In any case, the assessment should be complemented with an analysis of the progress made towards the targets set in the CAP Strategic Plan for financial allocations, output and result indicators.

This dataset includes:

- > an identification system for agricultural parcels;
- > a geo-spatial application system and, where applicable, an animal-based application system;
- > an area monitoring system;
- > a system for the identification of beneficiaries of the interventions and measures;
- > a control and penalty system;
- > where applicable, a system for the identification and registration of payment entitlements;
- > where applicable, a system for the identification and registration of animals.

Combining the information of IACS with other datasets, such as the national FADN sample, in a way that ensures anonymisation, may strongly improve the analytical toolbox for the estimation of the effects of CAP support.



# 1. Specific Objective 1

## 1.1.1 Agricultural income level in farms supported is increasing or, at least, is stable due to the CAP support

<b>Specific objective</b>	SO1 - To support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union.
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Viable farm income
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions ensured viable farm income? (this question is addressed by three factors of success: 1.1.1, 1.1.2 and 1.1.3)
<b>Rationale for the use of this factor of success</b>	<p>Since the very beginning, ensuring viable farm incomes has been a central objective of the CAP. Without CAP support, agricultural incomes of many farms would likely be too low to maintain agricultural activity, threatening the economic viability and attractiveness of rural areas, leading to a sizeable decline in production affecting food security and inducing land abandonment, a decline in permanent grassland and a stronger production intensification, which can lead to more pressure on the environment.</p> <p>Viability of income is a key element of the SO1. It encompasses:</p> <ol style="list-style-type: none"> <li>1. a stable or increasing general trend of the farm income,</li> <li>2. which follows or converges with the income trend in other economic sectors,</li> <li>3. while ensuring that no one is left behind through the reduction in disparities between farms<sup>1</sup>.</li> </ol> <p>The current factor of success is used to define the desired direction of the evolution of agricultural income, that is whether it is stable or increasing.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of instruments and types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 - Good agricultural and environmental conditions (GAEC) standards</li> <li>&gt; Title III, Chapter II, Section 2, Subsection 2 - BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 - CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 - CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, environment and animal welfare</li> <li>&gt; Article 32 - CIS, coupled income support interventions</li> <li>&gt; Article 36 - CSPC, crop-specific payment for cotton</li> <li>&gt; Article 71 - ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 72 - ASD, payment for area-specific disadvantages resulting from certain mandatory requirements: only for agricultural areas</li> <li>&gt; Sectoral interventions</li> </ul> <p>An indicative list of relevant types of interventions often not programmed under viable farm income:</p> <ul style="list-style-type: none"> <li>&gt; Article 70 - ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 76 - RISK, risk management tools</li> </ul>
<b>Main impact indicator(s) that can be used to assess the factor of success</b>	I.3 Reducing farm income variability: Evolution of agricultural income

<sup>1</sup> According to the Better Regulation Toolbox, Tool #47: "The effectiveness analysis should look closely at the benefits of the EU intervention as they accrue to different stakeholders."



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Indicator I.3 is based on C.25 - Agricultural factor income, which measures the remuneration of all factors of production (land, capital, labour), regardless of whether they are owned or borrowed/rented, and represents all the value generated by a unit engaged in an agricultural production activity. Find the indicator fiche <a href="#">here</a>.</p> <p>C.25 consists of three specific indicators:</p> <ol style="list-style-type: none"> <li>1. Agricultural factor income per annual work unit (AWU) (C.25.1).</li> <li>2. The index of agricultural factor income per AWU (C.25.2).</li> <li>3. Indicator I.3: % variation of the Index compared to the last 3-year average.</li> </ol> <p>Indicator I.3 measures both the trend of agricultural factor income per Annual Work Unit (AWU) and its fluctuations over time. For an overview of the values of indicator C.25, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p> <p>It must be noted that for the calculation of net value added at factor costs, only the output of agricultural activities and output of inseparable non-agricultural activities 2 is taken into account. Therefore, this indicator does not represent the total income of agricultural households. More details on the Eurostat's Economic Accounts for Agriculture (EAA) can be found <a href="#">here</a>.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.3 is included in Annex III of Regulation (EU) 2022/1475 and is one of the impact indicators that should be netted out.</p> <p><b>Assessment of the net effects</b></p> <p>I.3 is calculated at the sector level from the economic accounts for agriculture and cannot be completely associated with the interventions of the CAP Strategic Plans, analysed in the short time of the EU programming period. Calculations of this indicator are currently available only at the macro-level for each Member State and for several calendar years. Clearly, a change in this indicator in time (e.g. starting from 2023) represents a gross effect caused by several factors, including the influence of other exogenous factors. Given the above, this aggregated data has only limited utility for the analysis of the net impact of the CAP Strategic Plans on agricultural income. In the best case, it can show the economic context before and during the implementation period of the CAP Strategic Plan.</p> <p>That said, approaches to net out the effect of CAP support on the income must use:</p> <ul style="list-style-type: none"> <li>&gt; data from national statistics for I.3, which can allow disaggregation of the indicator by NUTS 2 or NUTS 3 level and/or</li> <li>&gt; micro-level data, such as the national sample of the FADN.</li> </ul> <p>In the first case, where data on agricultural income, disaggregated at the NUTS 2 or 3 level, are available, an approach based on the JRC publication '<a href="#">An evaluation of the CAP impact: a discrete policy mix analysis</a>' can be used.</p> <p>On the other hand, when using FADN data, particular attention must be paid to the differences between agricultural income (EUROSTAT - EAA) and farm income (FADN). Both agricultural and farm incomes refer to remunerations from agricultural production. While agricultural income is the result of aggregate accounting for the whole EU agricultural sector, farm income originates from microeconomic accounting in selected EU farms that, by definition, do not include very small production units (numerically important, but with very little agricultural activity). This can explain average values per labour unit are higher for farm incomes than for agricultural incomes.</p> <p>The selection of the method to net out the effect of the CAP on income depends on the availability of data. You may consult the <a href="#">guidelines for 'Assessing RDP Achievements and Impacts in 2019'</a> and the <a href="#">tool created by the Evaluation Helpdesk</a> for the assessment of indicator I.1 of the Common Monitoring and Evaluation Framework (CMEF), which, currently, corresponds to I.3.</p>

<sup>2</sup> Activities closely linked to agricultural production for which information on any of production, intermediate consumption, compensation of employees, labour input or gross fixed capital formation cannot be separated from information on the main agricultural activity.



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>In addition, several practical examples have been presented in the <a href="#">Good Practice Workshop on 'How to assess direct payment interventions in the new CAP'</a>, organised by the Evaluation Helpdesk. One of the examples presented was the <a href="#">evaluation study of the impact of the CAP measures towards the general objective of 'viable food production'</a>. In this study the estimation of the net effects of CAP decoupled direct payments, coupled direct payments and European Agricultural Fund for Rural Development (EAFRD) annual payments on farm income was based on econometric models developed at the <b>macro level</b>, using regional data (NUTS 1, Eurostat) <b>and micro level</b> on individual farm data (FADN).</p> <p>Another approach, which <b>combines macro and micro level data</b>, has been developed by <a href="#">Biagini et al.</a> The main idea behind this method is that only part of the support provided translates to actual gains in farm income. Therefore, as a first step, the income transfer efficiency of each CAP income support intervention is estimated. In the second step, the estimated income transfer efficiency coefficients are used to calculate the I.3 indicator without the CAP income support effect. Finally, the estimated I.3 without income support is subtracted from the value of the I.3 provided by Eurostat to estimate the net effect of CAP income support interventions.</p> <p><b>Main challenges in calculating and netting out the effects.</b></p> <p>Time lag of data reporting might impose serious challenges on the measuring of the effects for the period under evaluation. For example, in the <a href="#">evaluation study of the impact of the CAP measures towards the general objective of 'viable food production'</a> the authors could rely only on two years from Eurostat data (2015 and 2016), and only on one year from FADN (i.e. 2015 last available year). To overcome this challenge, they used prospective analysis, simulating the full implementation of the new direct payments system in 2019 based on FADN individual farm data from 2015 combined with econometric modelling and case studies to gain further insights.</p> <p>Another major challenge is that CAP income support is provided to almost all farms, and it is impossible to apply a suitable counterfactual, that is to compare a group of beneficiaries with a similar group of non-beneficiaries. A solution to this problem for the micro level could be the application of the Dose Response Function (DRF) method based on the Generalized Propensity Score Matching (GPSM) using FADN data. An overview of this method is presented <a href="#">here</a>, while more details can be found in Part IV of the <a href="#">guidelines for 'Assessing RDP Achievements and Impacts in 2019'</a>. At the macro level an approach such as the one in the JRC publication '<a href="#">An evaluation of the CAP impact: a discrete policy mix analysis</a>' might be suitable.</p> <p>Finally, farm income for a certain year may correlate significantly with corresponding income in the previous years, a situation known as autocorrelation. To account for this and other characteristics of the farms that remain constant over the years (fixed effects) <a href="#">Biagini et al.</a> applied a specific method, called System Generalised Method of Moments (SYS-GMM) when calculating the income transfer efficiency of the various CAP income support interventions.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Context Indicators:</b></p> <ul style="list-style-type: none"> <li>&gt; GDP per capita (Performance Monitoring and Evaluation Framework (PMEF), C.09)</li> <li>&gt; Agricultural holdings (PMEF, C.12)</li> <li>&gt; Farm labour force (PMEF, C.13)</li> <li>&gt; Utilised agricultural area (PMEF, C.17)</li> </ul> <p><b>Additional Result Indicators:</b></p> <ul style="list-style-type: none"> <li>&gt; % share of CAP support in Farm Net Value Added (FNVA) per AWU (FADN, SE425)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>The assessment of this factor of success is hampered by the fact, that a definition for the level of farm income that can be considered viable is usually missing. Therefore, a qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if the agricultural income remains stable or increases in real terms, thus ensuring that, due to CAP support, farmers are getting at least the same remuneration for their activities as they used to get in the past.</p> <p>As a point of comparison, the value of the main indicator at the start of the implementation period might be used.</p>



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>As all households, agricultural farm households generate their income from various sources, e.g. from agricultural activities (agricultural income), from dependent work, from capital (capital income) or other sources (e.g. retirement pensions). To assure their standard of living, the entire household income and not only the agricultural income is used. Thus, household income might be also considered when assessing this factor of success.</p> <p>Moreover, when making conclusions about the factor of success, evaluators are invited to also discuss the effect of external factors, such as the evolution of commodity world prices or geopolitical developments that affect the trade of agricultural products.</p> <p>Evaluators are also invited to assess this factor of success in combination with C.1.2 under internal coherence to check whether other instruments and interventions of the CAP Strategic Plan, which aim to improve the environmental dimension of agriculture, are fostering or hindering the increase of agricultural income.</p>
<p><b>Extending the recommended factor of success</b></p>	<p>High variability of agricultural income affects farmers' well-being and decisions, and their ability to expand operations and repay debt and, in turn, this can also have secondary effects on agribusiness firms and creditors.</p> <p>Although I.3 provides some insights into the variability, it is a macro level indicator calculated at the Member State level, which may mask considerable differences in the variability at the micro level.</p> <p>That said, this factor of success can be extended with a complementary one formulated as 'Variability of agricultural income in supported farms is decreasing due to the CAP support'.</p> <p>The main indicator for this complementary factor of success could be the farm income fluctuations over the period of analysis (magnitude of fluctuations around the trend), calculated as variance and Coefficient of Variation (CV) over the period of analysis in each farm. An example of using such an approach can be found in <a href="#">Severini, Tantari and Di Tommaso (2016)</a>.</p>

### 1.1.2 Income disparities between supported farms are decreasing due to the CAP support

<p><b>Specific objective</b></p>	<p>SO1 - To support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Viable farm income</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have the CAP Strategic Plan interventions ensured viable farm income? (this question is addressed by three factors of success: 1.1.1, 1.1.2 and 1.1.3)</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>Since the very beginning, ensuring viable farm incomes has been a central objective of the CAP. However, an average trend in the agricultural income may hide substantial inequalities among farm types, regions, farm sizes and between areas with and without natural and specific constraints. The effectiveness analysis should look closely at the benefits of the EU intervention as they accrue to different stakeholders. To ensure that no one is left behind, disparities between farms should be decreasing.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>The identification of the types of interventions that affect each factor of success consists of two steps:</p> <ul style="list-style-type: none"> <li>➢ Types of interventions programmed under the corresponding SO and relevant to the factor of success must be considered.</li> <li>➢ Additional types of interventions, even if not programmed under the SO, but with possible positive or negative side effects on the factor of success should be considered too.</li> </ul>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>This approach is illustrated below as an example, with indicative lists of directly and indirectly relevant types of interventions. These lists may differ from the actual interventions that may be relevant to this factor of success under a specific CAP Strategic Plan, due to the enhanced flexibility provided to the Member States under the New Delivery Model. For an overview of the actual interventions planned by each Member State in their adopted CAP Strategic Plans, their financial allocations and their links to output and result indicators, you may explore the <a href="#">Catalogue of CAP interventions</a>.</p> <p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12, GAEC Standards</li> <li>&gt; Article 17, capping and degressivity of payments</li> <li>&gt; Title III, Chapter II, Section 2, Subsection 2 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – CSPC, crop-specific payment for cotton</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 72 – ASD, payment for area-specific disadvantages resulting from certain mandatory requirements: only for agricultural areas</li> <li>&gt; Sectoral interventions</li> </ul> <p>An indicative list of relevant types of interventions often not programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 76 – RISK, risk management tools</li> </ul>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<ul style="list-style-type: none"> <li>&gt; I.4 Supporting viable farm income: Evolution of agricultural income level by type of farming (compared to the average in agriculture)</li> <li>&gt; I.5 Contributing to territorial balance: Evolution of agricultural income in areas with natural constraints (compared to the average)</li> </ul> <p>Although each factor of success should be linked to a single main indicator, here two complementary indicators are proposed to highlight the importance of analysing disparities both sectorally and territorially. The final assessment of the factor of success must distinguish between the sectoral and territorial effects.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Indicators I.4 and I.5 allow for the estimation of agricultural income by type of farming, region, economic farm size, physical farm size and in areas facing natural and other specific constraints. As such, they enable an overview of the extent of the evenness and equity of agricultural income distribution.</p> <p>Their calculation is based on the Farm Net Value Added, which is the portion of agricultural output value that can be used to remunerate the fixed factors of production (labour, land and capital), whether external or family owned.</p> <p>The indicator consists of five specific indicators:</p> <ol style="list-style-type: none"> <li>1. Farm net value added by type of farming</li> <li>2. Farm net value added by region</li> <li>3. Farm net value added by economic farm size</li> <li>4. Farm net value added by physical farm size</li> <li>5. Farm net value added in areas facing natural and other specific constraints</li> </ol> <p>See the indicators fiche <a href="#">here</a>. For an overview of the values of these indicators, you may explore the <a href="#">FADN database page at the agri-food data portal</a>.</p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.4 and I.5 are included in Annex III of Regulation (EU) 2022/1475 and should be netted out.</p> <p><b>Assessment of the net effects</b> The assessment of the net effect can be based on the approaches already described in <a href="#">Factor of Success 1.1.1</a></p> <p><b>Main challenges in calculating and netting out the effects</b> Besides the challenges described in <a href="#">Factor of Success 1.1.1</a>, Member States should also think about other dimensions that must be considered to identify farmers that are most in need according to their national context.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Context Indicators</b></p> <ul style="list-style-type: none"> <li>&gt; Farming in Natura 2000 areas (PMEF, C.19)</li> <li>&gt; Areas facing natural and other specific constraints (PMEF, C.20)</li> <li>&gt; Farm income by type of farming, region, and farm size, in areas facing natural or specific constraints (PMEF, C.27)</li> </ul> <p><b>Additional Impact indicators</b></p> <ul style="list-style-type: none"> <li>&gt; Farm net value added (FNVA) by region, territory (ANC, Natura 2000, WFD) and by type of farming, farm size (economic and/or physical), extensive/intensive farming (national FADN database)</li> <li>&gt; Comparison of FNVA/AWU with and without CAP support, across sectors and the FNVA quantiles (national FADN database)</li> <li>&gt; Evolution of the standard deviation of the relative income level by region, territory (ANC, Natura 2000, WFD) and by type of farming, farm size (economic and/or physical), extensive/intensive farming, with and without CAP support (national FADN database)</li> <li>&gt; Share of FNVA in areas with natural and other specific constraints (national FADN database)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>A qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if income disparities between supported farms are decreasing, due to the CAP support, that is if the differences in the levels of farm net value added among farming sectors, regions, territories and economic and physical size of farms are decreasing.</p> <p>As a point of comparison, the values of the main indicators I.4 and I.5 at the start of the implementation period might be used.</p> <p>The effects must be reported separately for I.4 and I.5 to ensure clarity.</p> <p>As all households, agricultural farm households generate their income from various sources, e.g. from agricultural activities (agricultural income), from dependent work, from capital (capital income) or other sources (e.g. retirement pensions). To assure their standard of living, the entire household income and not only the agricultural income is used. Thus, household income should be also considered when assessing this factor of success.</p>

### 1.1.3 Disparities between agricultural income level in farms supported and the income level in the other economic sectors are decreasing due to the CAP support

<p><b>Specific objective</b></p>	<p>SO1 - To support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Viable farm income</p>



<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have the CAP Strategic Plan interventions ensured viable farm income? (this question is addressed by three factors of success: <a href="#">1.1.1</a>, <a href="#">1.1.2</a> and <a href="#">1.1.3</a>)</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>On average, farm incomes are lower than incomes in the rest of the economy. This trend must, in any case, be seen in relationship with the income trend in the rest of the economy. If the income in other economic sectors increases at a higher rate than the income in the farming sector, then this cannot be considered a success as it would compromise a fair standard of living for the farmers.</p> <p>The current factor of success is used to define the desired direction of the effect of CAP support, that is whether income disparities between agricultural incomes and incomes in the rest of the economy are reducing.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12, GAEC standards</li> <li>&gt; Article 17, capping and degressivity of payments</li> <li>&gt; Title III, Chapter II, Section 2, Subsection 2 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – CSPC, crop-specific payment for cotton</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 72 – ASD, payment for area-specific disadvantages resulting from certain mandatory requirements: only for agricultural areas</li> <li>&gt; Sectoral interventions</li> </ul> <p>An indicative list of relevant types of interventions often not programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 76 – RISK, risk management tools</li> </ul>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.2 Reducing income disparities: Evolution of agricultural income compared to the general economy</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Indicator I.2 (context indicator C.26) compares three specific indicators for agricultural income per AWU with labour costs in industry, construction and services, thus providing a measure of the relative income of the agricultural sector over a given period.</p> <p>Labour costs (wages and salaries plus non-wage costs such as employers' social contributions) in industry, construction and services are compared to three specific indicators for agricultural income:</p> <ol style="list-style-type: none"> <li>1. Agricultural entrepreneurial income plus compensation of employees per annual work unit (<b>macro-level</b> analysis, based on Eurostat's Integrated Farm Statistics)</li> <li>2. Farm net income plus wages and social security charges by total AWU (<b>micro-level</b> analysis based on FADN)</li> <li>3. Farm net income minus opportunity costs for own production factors (land and capital) by total family work units (<b>micro-level</b> analysis based on FADN)</li> </ol> <p>See relevant indicator fiche <a href="#">here</a>. For an overview of the values of the indicator, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal. For specific indicators 2 and 3, you may explore the <a href="#">FADN database page at the agri-food data portal</a></p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.2 is included in Annex III of Regulation (EU) 2022/1475 and is one of the impact indicators that should be netted out.</p> <p><b>Assessment of the net effects</b></p> <p>The assessment of the net effect can be based on the approaches already described in the <a href="#">factor of success 1.1.1</a></p> <p><b>Main challenges in calculating and netting out the effects.</b></p> <p>Besides the challenges described in the <a href="#">factor of success 1.1.1</a>, the evolution of farm income when compared to the rest of the economy must be seen in a medium to long term trend, since agricultural activity is very prone to relevant interannual changes due to several variables affecting both the production and the input and output markets, which may be less relevant in other sectors.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Context indicators:</b></p> <ul style="list-style-type: none"> <li>&gt; Agricultural holdings (PMEF, C.12)</li> <li>&gt; Utilised agricultural area (PMEF, C.17)</li> <li>&gt; Comparison of agricultural income with non-agricultural labour costs (PMEF, C.26)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>A qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if disparities between the agricultural income level in farms supported and the income level in the other economic sectors are decreasing, due to the CAP support, as measured by the impact indicator I.2.</p> <p>As a point of comparison, the value of the main indicator I.2 at the start of the implementation period might be used.</p> <p>As all households, agricultural farm households generate their income from various sources, e.g. from agricultural activities (agricultural income), from dependent work, from capital (capital income) or other sources (e.g. retirement pensions). To assure their standard of living, the entire household income and not only the agricultural income is used. Thus, household income should be also considered when assessing this factor of success.</p> <p>Moreover, when making conclusions about the estimated net effect, evaluators should also discuss the effect of external factors, such as the evolution of commodity world prices or geopolitical developments that affect the trade of agricultural products.</p>

### 1.2.1 Income support is distributed to the farmers most in need

<p><b>Specific objective</b></p>	<p>SO1 - To support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Resilience</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions supported the resilience of the agricultural sector and ensured the economic sustainability of agricultural production?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>Resilience in the agricultural sector may be seen as the ability of farms and farmers to adapt to changing productive, climatic and economic circumstances that impact their activity, to maintain their productive capacity.</p> <p>To ensure the economic sustainability of agricultural production, it is fundamental to create resilience in EU farms, by distributing income support to farmers facing potential risks and specific limitations which can force them to stop agricultural activity thus helping them to withstand adversity and maintain the capacity to produce agricultural products while achieving a viable farm income.</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>The current factor of success is used to assess whether farm income support has been distributed to farms most in need. The different groups of farmers and their needs for income support are to be specified by Member States.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12, GAEC standards</li> <li>&gt; Article 17, capping and degressivity of payments</li> <li>&gt; Title III, Chapter II, Section 2, Subsection 2 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, Complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – CSPC, crop-specific payment for cotton</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 72 – ASD, payment for area-specific disadvantages resulting from certain mandatory requirements: only for agricultural areas</li> <li>&gt; Sectoral interventions</li> </ul> <p>An indicative list of relevant types of interventions often not programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 76 – RISK, risk management tools</li> </ul>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.26 A fairer CAP: Distribution of CAP support</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Indicator I.26 shows to what extent the CAP support is evenly distributed between its beneficiaries, allowing to check the fairness of support distribution through a distribution analysis based on the ranked level of income support per beneficiary.</p> <p>The indicator can be calculated using the realised European Agricultural Guarantee Fund (EAGF) and EAFRD expenditures per type of intervention.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.26 is included in Annex III of Regulation (EU) 2022/1475 and is one of the impact indicators that should be netted out.</p> <p><b>Assessment of the net effects</b></p> <p>I.26 is calculated specifically for the beneficiaries of the CAP and it is affected by the choices MS are making, in their CAP Strategic Plans, regarding the delivery of the support (capping, degressivity, implementation of CRISS etc). Therefore, any change in the indicator can be attributed only to the implementation of these specific CAP income instruments and interventions, meaning that no further netting-out is necessary.</p> <p>Although I.26 provides information on the distribution of the CAP support among beneficiaries, it does not give much information regarding the effect of the support on the distribution of income. A method to address this issue is the decomposition of the Gini coefficient by type of interventions, using FADN data followed by a comparison of the results before and after the implementation of the relevant CAP Strategic Plan interventions. An example of the application of this method in Germany has been presented in the <a href="#">Good Practice Workshop on 'How to assess direct payment interventions in the new CAP'</a>, organised by the Evaluation Helpdesk. Another example from Italy can be found in <a href="#">Ciliberti and Frascarelli (2018)</a>.</p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p><b>Main challenges in calculating and netting out the effects.</b></p> <p>When using FADN data, there might be observations with negative income, which creates problems in the calculation of Gini coefficients. To overcome this challenge, a three-year average of income can be used. If there are still observations with negative income, they could be excluded from the analysis.</p> <p>In addition, the magnitude of the change in the distribution of income, before and after the implementation of the CAP income support interventions, may be affected by two types of adjustments: (1) adjustments of farms to changed incentives (prices and support) in terms of, for example, their modification of production intensity or production activity levels and (2) adjustments of market prices to changes in supply and demand. <a href="#">Depperman et al.</a> provide a solution that accounts for these adjustments by using modelling techniques.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Context Indicators</b></p> <ul style="list-style-type: none"> <li>&gt; Farming in Natura 2000 areas (PMEF, C.19)</li> <li>&gt; Areas facing natural and other specific constraints (PMEF, C.20)</li> <li>&gt; Farm income by type of farming, region, and farm size, in areas facing natural or specific constraints (PMEF, C.27)</li> </ul> <p><b>Additional Impact Indicators</b></p> <ul style="list-style-type: none"> <li>&gt; Concentration of income (Gini coefficient) with and without CAP support (national FADN database)</li> <li>&gt; Distribution of income (median, IQ range) with and without CAP support (national FADN database)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>A qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if income support is distributed to farmers most in need, as measured by the impact indicator I.26.</p> <p>The point of comparison for assessing the direction of the effect of this factor of success could be the value of the main indicator at the start of the implementation period.</p> <p>This analysis can be complemented by either the estimation of the decomposed Gini coefficient before the implementation of the CAP income support instruments and interventions or the estimation without considering the CAP income support in the calculation of the farm income.</p>
<p><b>Extending the recommended factor of success</b></p>	<p>The distribution of income support to farmers most in need may not be sufficient to illustrate the full effect of the CAP on the economic resilience of farms. An additional factor of success can be devised, indicatively formulated as 'The resilience of the farming sector is improving' and focusing on aspects such as the ability of the farms to maintain or increase their labour or to cover their liabilities.</p> <p>Apart from the share of farms with supported CAP risk management tools (R.5), Result indicators for this additional factor of success include:</p> <ul style="list-style-type: none"> <li>&gt; Average level of income without CAP support by region, territories (ANC, Natura 2000, WFD) and by type of farming, farm size (economic and/or physical), extensive/intensive farming (national FADN database)</li> <li>&gt; Share of farms with negative factor income without CAP support by region, territories (ANC, Natura 2000, WFD) and by type of farming, farm size (economic and/or physical), and extensive/intensive farming (national FADN database).</li> <li>&gt; Hectares covered with insurance by sector and/or</li> <li>&gt; Capital insured (non-existing indicators which Member States might want to explore)</li> </ul> <p>Impact indicators may include:</p> <ul style="list-style-type: none"> <li>&gt; Employment in agriculture (Eurostat, nama_10_a64_e)</li> <li>&gt; Share of farms with current ratio (current assets/current liabilities) &lt;1 by region, territories (ANC, Natura 2000, WFD) and by type of farming, farm size (economic and/or physical), extensive/intensive farming (national FADN database)</li> </ul>



## 2. Specific Objective 2

### 2.1.1 Agri-food trade is increasing due to the CAP support

<b>Specific objective</b>	SO2 - To enhance market orientation and increase farm competitiveness both in the short and long term, including greater focus on research, technology and digitalisation
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Enhanced market orientation
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to enhancing market orientation?
<b>Rationale for the use of this factor of success</b>	<p>The EU is both the world's largest exporter and importer of agri-food products. EU products are in strong demand and the previous CAP reforms have allowed for an increased market-orientation and competitiveness of EU agri-food products. At the same time, the competitive position of the EU in the international agricultural and food market has remained high over the years. SO2 deals exactly with the enhancement of market orientation and the increase in competitiveness.</p> <p>This factor of success can be used to assess the achievement of this objective, by enabling the quantification of the extent to which the farming sector becomes inserted in the intra and extra EU markets.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 32 - CIS, coupled income support interventions</li> <li>&gt; Article 36 - CSPC, crop-specific payment for cotton</li> <li>&gt; Sectoral interventions</li> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 75 - INSTAL, setting up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> </ul> <p>The following types of interventions may reduce production and therefore have an impact on the traded volumes:</p> <ul style="list-style-type: none"> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 70 - ENVCLIM, environmental, climate-related and other management commitments</li> </ul> <p>Other income support types of interventions may provide a 'safety net' to farms, allowing for greater competitiveness:</p> <ul style="list-style-type: none"> <li>&gt; Title III, Chapter II, Section 2, Subsection 2 - BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 - CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 - CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 71 - ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 72 - ASD, payment for area-specific disadvantages resulting from certain mandatory requirements: only for agricultural areas</li> </ul>
<b>Main impact indicator(s) that can be used to assess the factor of success</b>	I.7 Harnessing agri-food trade: Agri-food imports and exports



<b>Step 1: Calculation of the value of the main indicator</b>	<p>Indicator I.7 shows the level of integration of agri-food products in the markets, by presenting the evolution of intra and extra EU trade (imports, exports, trade balance) by type of product. See the corresponding indicator fiche <a href="#">here</a>.</p>
<b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b>	<p>I.7 is not included in Annex III of the Implementing Regulation. Therefore, there is no obligation to estimate the net effect of the CAP support on the change in the value of the indicator. That said, it is considered a good practice for the Member States to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>In case Member States wish to net out the effect of the CAP support on agri-food trade, this can only be done using modelling approaches. Examples of how to use economic models for agri-food trade analysis can be found in the JRC publication '<a href="#">Cumulative economic impact of trade agreements on EU agriculture</a>' and the <a href="#">guidelines for 'Assessing RDP Achievements and Impacts in 2019'</a>.</p> <p>In addition, the commissioned paper prepared by <a href="#">Matthews, Salvatici and Scoppola (2017)</a> for the International Agricultural Trade Research Consortium, contains a thorough review of the theoretical literature and the empirical tools and evidence on the production and trade impacts of direct payments, market management measures and rural development policies.</p>
<b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b>	<p>Additional result indicators:</p> <ul style="list-style-type: none"> <li>Evolution of the degree of self-sufficiency given by the ratio between the value of production and the value of consumption<sup>3</sup> of agri-food products. (Eurostat, calculation based on AACT_EAA01 and EXT_ST_EU27_2020SITC)*</li> </ul>
<b>Step 4: Assessment of the factor of success</b>	<p>A qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if agrifood trading is increasing due to CAP support, as measured by the impact indicator I.7.</p> <p>A point of comparison for this factor of success can be established based on the value of I.7 before the start of the 2023-2027 programming period.</p>

## 2.2.1 Productivity in farms supported is increasing due to the CAP support

<b>Specific objective</b>	<p>S02 - To enhance market orientation and increase farm competitiveness both in the short and long term, including greater focus on research, technology and digitalisation</p>
<b>Evaluation criterion</b>	<p>Effectiveness</p>
<b>Key evaluation element</b>	<p>Farm competitiveness</p>
<b>Suggested example of evaluation question</b>	<p>To what extent have CAP Strategic Plan interventions contributed to improving the competitiveness of the farm sector?</p>
<b>Rationale for the use of this factor of success</b>	<p>Productivity growth is key to maintaining competitiveness and increasing farm income, while due regard must be paid to environmental and climate impact. It is, therefore, paramount to ensure that the conditions to encourage innovation and a high level of training and investment in agriculture are maintained and improved, especially in view of socio-economic and environmental challenges.</p> <p>Meanwhile, digital technologies will furthermore help agriculture and rural areas to strengthen their competitiveness and at the same time contribute significantly to meeting environmental and socio-economic sustainability objectives. For more details, please see the recent publication by the OECD '<a href="#">The digitalisation of agriculture</a>'.</p> <p>This factor of success can be used to assess the achievement of this objective, by enabling the quantification of the extent of the changes to capital, labour and land productivity.</p>

<sup>3</sup> Consumption can be calculated as value of production + value of imports - value of exports, assuming no changes in stock (i.e. assumption very common when data on stocks are not available).



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Sectoral Interventions</li> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 75 - INSTAL, setting up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> </ul> <p>Income payments may also have an impact on productivity (see for example <a href="#">Rizov, Pokrivcak and Ciaian (2013)</a>, <a href="#">Biagini, Antoniolli and Severini (2022)</a>):</p> <ul style="list-style-type: none"> <li>&gt; Article 21 - BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 - CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 - CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 32 - CIS, coupled income support interventions</li> <li>&gt; Article 36 - CSPC, crop-specific payment for cotton</li> <li>&gt; Article 71 - ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 72 - ASD, payment for area-specific disadvantages resulting from certain mandatory requirements: only for agricultural areas</li> </ul>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.6 Increasing farm productivity: Total factor productivity in agriculture</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Indicator I.6 allows for the calculation of the total factor productivity in agriculture, by comparing agricultural output to the total inputs used. As such it can be used to observe the changes in the productivity of agricultural production factors. See the corresponding indicator fiche <a href="#">here</a>.</p> <p>For an overview of the values of the indicator, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.6 is not included in Annex III of the Implementing Regulation. Therefore, there is no obligation to estimate the net effect of the CAP support on the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>In case Member States wish to net out the effect of the CAP support on farm productivity, the report '<a href="#">Investment Support under Rural Development Policy</a>' provides a valuable methodological guide where all probable and useful methods are listed, presented and assessed. Finally, live examples are given by applying the method or combination of methods in EU countries according to main objectives and data availability. Additional examples may be found in the <a href="#">guidelines for Assessing RDP Achievements and Impacts in 2019</a>.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Context indicators</p> <ul style="list-style-type: none"> <li>&gt; Evolution of land productivity (part of the calculation of I.6)</li> <li>&gt; Farm labour force (PMEF, C.13)</li> <li>&gt; Evolution of labour productivity (PMEF, C.30)</li> <li>&gt; Evolution of capital productivity (part of the calculation of I.6)</li> <li>&gt; Gross fixed capital formation in agriculture (PMEF, C.28)</li> </ul>



<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Additional result indicators</p> <ul style="list-style-type: none"> <li>&gt; Evolution of costs of inputs by type of farm (TF) (national FADN database)</li> <li>&gt; Evolution of farms total output/total input ratio (national FADN database)</li> <li>&gt; Evolution of yields for selected crops (Eurostat, APRO_CPSH1)</li> <li>&gt; Evolution of gross investments in fixed assets of agricultural holdings (national FADN database)</li> <li>&gt; Average total asset value per farm by TF (national FADN database)</li> <li>&gt; Farm net worth (assets - liabilities) by TF (national FADN database)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>A qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if the productivity of farms supported is increasing due to CAP support, as measured by the impact indicator I.6.</p> <p>A point of comparison for this factor of success can be established based on the value of I.6 before the start of the 2023-2027 programming period.</p>
<p><b>Extending the recommended factor of success</b></p>	<p>The assessment of the CAP effect on farm productivity can be complemented by additional factors of success that explore specific components of productivity such as 'Agricultural output in supported farms is increasing due to CAP support' or specific drivers of increased productivity such as 'Farm modernisation is fostered due to CAP support'.</p> <p>The first can be assessed based on the evolution of agricultural output value by sector, UAA and livestock, while the second assessment may involve additional result indicators that explore the digitalisation or adoption of innovation:</p> <ul style="list-style-type: none"> <li>&gt; Share of the farm investments in digital technologies by type of farming (non-existing indicator which Member State might want to explore)</li> <li>&gt; Share of farms adopting innovative solutions (non-existing indicator which Member State might want to explore)</li> </ul> <p>As access to capital is key to promoting farm productivity, another factor of success could be formulated as 'Access to capital for farmers has been increased through the use of financial instruments'. This factor of success could be assessed based on the following result indicators:</p> <ul style="list-style-type: none"> <li>&gt; Share of farms using financial instruments (existing in the Managing Authority in case financial instruments are implemented)</li> <li>&gt; Maximum portfolio volume of financial instruments supported by EAFRD (existing in the Managing Authority in case financial instruments are implemented)</li> </ul>



## 3. Specific Objective 3

### 3.1.1 Share of marketed production by quality schemes and organic production is increasing due to the CAP support

<b>Specific objective</b>	S03 - To improve the farmers' position in the value chain
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Farmer's position in the food chain
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to improving farmer's position in the value chain and farmers' response to market driven opportunities stemming from new consumer preferences?
<b>Rationale for the use of this factor of success</b>	S03 pursues the improvement of the farmers' position in the value chain, which depends on the agricultural sector's ability to increase its added value. <b>As recent research has shown</b> , one way that may contribute to achieving this goal is by enhancing the share of agricultural production marketed under quality schemes or in organic production, which this factor of success permits capturing.
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 32 - CIS, coupled income support interventions</li> <li>&gt; Article 36 - CSPC, crop-specific payment for cotton</li> <li>&gt; Article 70 - ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 75 - INSTAL, setting up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> <li>&gt; Sectoral interventions</li> </ul>
<b>Main impact indicator(s) that can be used to assess the factor of success</b>	I.29 Responding to consumer demand for quality food: Value of production under Union quality schemes and of organic production
<b>Step 1: Calculation of the value of the main indicator</b>	<p>I.29 shows the value of production under EU quality schemes and of organic production compared to total value of agricultural and food</p> <p>It consists of three specific indicators:</p> <ol style="list-style-type: none"> <li>1. total value of production under EU quality schemes and organics as well as the share of the total agricultural and food production value</li> <li>2. value of production by EU quality schemes - protected designation of origin (PDO), protected geographical indication (PGI), and traditional specialties guaranteed (TSG) (Regulation (EC) 510/2006) and share of total agricultural and food production value</li> <li>3. value of certified organic production and share of total agricultural and food production value</li> </ol> <p>It covers the four EU quality schemes: agricultural products and foodstuffs (Regulation (EU) 1151/2012), wines (Regulation (EU) 1308/2013), spirit drinks (Regulation (EC) No 110/2008), and aromatised wine products (Regulation (EU) 251/2014), as well as certified organic production (Regulation (EC) 834/2007). See the corresponding indicator fiche <a href="#">here</a>.</p>



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>There is no systematic data collection established at the EU level for this indicator. The Commission is regularly conducting a specific study on the economic value of EU quality schemes, geographical indications (GIs) and TSGs. The <a href="#">latest study has been finalised in 2019 and published in 2021</a>.</p> <p>Member States are encouraged, where relevant to their CAP Strategic Plan intervention logic and evaluation needs, to set up specific data arrangements for the calculation and the netting out of the indicator. The data collection could cover, on an annual basis at least:</p> <ul style="list-style-type: none"> <li>&gt; sales volume and/or sales value,</li> <li>&gt; prices at the wholesale stage (e.g. dairy stage for cheese, slaughterhouse or cutting plant stage for meat, cooperative or regional wholesaler stage for fruits and vegetables, winery or distillery stage for wines or spirits)</li> </ul> <p>The first two categories of data can be used to calculate the value of each specific indicator of I.29. The collection could be performed by public authorities or collective organisations such as producers' groups or, interbranch organisations. Data could be gathered once a year or once every two years.</p> <p>For this factor of success, the share of the total agricultural and food production value shall be used, while the evolution of the value of production shall be used for the factor of success 9.1.1</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.29 is not included in Annex III of the Implementing Regulation. Therefore, there is no obligation to estimate the net effect of the CAP support on the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>FADN data <sup>4</sup> can be used to estimate the effect of CAP payments on the value of production of organic or other quality products. This approach can be used as a proxy as it can capture only the effect on the value at the producer level and not the value of the marketed production. <a href="#">Offermann, Nieberg and Zander (2009)</a> have proposed this approach as a proxy for assessing policy dependency on organic farming, by analysing the value of agricultural production, including all subsidies received, in relation to the CAP support for organic farming.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Additional result indicator:</b> Increase in the production of organic food.</p> <p>Based on the datasets ORG_CROPPRO and ORG_LSTSPEC by Eurostat, the increase in the production of organic food can be calculated</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>A qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if the share of the marketed production by quality schemes and organic production is increasing due to CAP support, as measured by the impact indicator I.29.</p> <p>A point of comparison for this factor of success could be established based on national data regarding the value of production under Union quality schemes and of organic production before the implementation of the CAP Strategic Plan or based on the EU level <a href="#">study on economic value of EU quality schemes, GIs and traditional TSGs</a> published by the Commission.</p>

### 3.1.2 Share of production marketed by Producer Organisations (POs) and other forms of farmer organisations supported is increasing due to the CAP support

<p><b>Specific objective</b></p>	<p>S03 - To improve the farmers' position in the value chain</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>

<sup>4</sup> Organic farms can be identified in the FADN sample through the variables: A\_CL\_140\_C, A\_CL\_141\_C. Farms producing quality products can be identified in the FADN sample through the variables: A\_CL\_150\_C, A\_CL\_151\_C



<b>Key evaluation element</b>	Farmer's position in the food chain
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to improving farmer's position in the value chain and farmers' response to market driven opportunities stemming from new consumer preferences?
<b>Rationale for the use of this factor of success</b>	S03 pursues the improvement of the farmers' position in the value chain, which depends on the agricultural sector's ability to increase its added value. One way that may contribute to achieving this goal is by enhancing the share of agricultural production marketed through producer organisations and other forms of farmer organisations, which can enhance the bargaining power of the sector relative to other players in the value chain.
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	An indicative list of types of interventions relevant to this factor of success may include: <ul style="list-style-type: none"> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 75 - INSTAL, setting up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> <li>&gt; Sectoral interventions</li> </ul>
<b>Main indicator(s) that can be used to assess the factor of success</b>	Share of production marketed by recognised producer organisations and associations of producer organisations, by sector
<b>Step 1: Calculation of the value of the main indicator</b>	No PMEF impact indicator could be used specifically for the assessment of this factor of success. An additional indicator is proposed, that can be measured at the MS level, based on the data that POs and EPOs must provide for their initial recognition or during the checks to verify compliance of these organisations with the requirements set out in Chapter III of Title II of Regulation 1308/2013. For an overview of this indicator for milk and fruits and vegetables, you may explore the <a href="#">data explorer</a> at the agri-food data portal.
<b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b>	The data collection for the share of production marketed by recognised producer organisations and associations of producer organisations, by sector may be planned in such a way that allows the differentiation between POs and EPOs that receive support from the CAP Strategic Plan and the ones that are not supported, to accommodate the netting out of the effect of CAP support.
<b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b>	Additional output indicators <ul style="list-style-type: none"> <li>&gt; Number of recognised POs (OIM_05_2 - CAP indicators and data explorer).</li> </ul> Additional impact indicators <ul style="list-style-type: none"> <li>&gt; Share of marketed production by recognised POs (Fruits and Vegetables: OIM_05_1a, Milk: OIM_05_1b - CAP indicators and data explorer)</li> <li>&gt; Difference in price level obtained when selling in cooperatives compared to selling on the market by sector (non-existing indicators which Member States might want to explore)</li> </ul> Additional context indicators <ul style="list-style-type: none"> <li>&gt; Share of farms participating in recognised POs (national data)</li> <li>&gt; Degree of use of EU market observatories and interactive data portal by farmers (non-existing indicators which Member States might want to explore)</li> <li>&gt; Number of cases for unfair trading practices submitted and judged after Directive (EU) 2019/633 and corresponding market share (national data)</li> <li>&gt; Share of production traded on futures market (non-existing indicators which Member States might want to explore)</li> </ul>



<b>Step 4: Assessment of the factor of success</b>	<p>A qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if the share of the marketed production by POs and other forms of farmer organisations is increasing due to CAP support, as measured by the main indicators proposed under this factor of success.</p> <p>A point of comparison for this factor of success can be established based on data on the share of production marketed by recognised POs and associations of POs, by sector before the start of the 2023-2027 programming period.</p>
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### 3.1.3 Gross value added for farmers in POs and other forms of farmer organisations or participating in quality schemes and organic production is increasing due to the CAP support

<b>Specific objective</b>	S03 - To improve the farmers' position in the value chain
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Farmer's position in the food chain
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to improving farmer's position in the value chain and farmers' response to market driven opportunities stemming from new consumer preferences?
<b>Rationale for the use of this factor of success</b>	S03 pursues the improvement of the farmers' position in the value chain, which depends on the agricultural sector's ability to increase its added value. One way of achieving this goal is by promoting POs and other forms of farmer organisations, as well as quality and organic production, all of which may lead to a higher added value in the agriculture sector, which this factor of success permits capturing.
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 75 - INSTAL, setting up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> <li>&gt; Sectoral interventions</li> </ul>
<b>Main impact indicator(s) that can be used to assess the factor of success</b>	I.8 Improving farmers' position in the food chain: Value added for primary producers in the food chain
<b>Step 1: Calculation of the value of the main indicator</b>	<p>I.8 allows for the calculation of the gross value added by sector, by type of region, in agriculture and for primary producers.</p> <p>For the calculation of the indicator, the gross value added of each sector in the value chain must be calculated separately, as described in the corresponding indicator fiche <a href="#">here</a>.</p> <p>The indicator can be calculated at the Member State level using the following Eurostat datasets:</p> <ul style="list-style-type: none"> <li>&gt; Primary production: aact_eaa01</li> <li>&gt; Food manufacturing: sbs_na_sca_r2</li> <li>&gt; Food distribution: sbs_na_dt_r2</li> <li>&gt; Food service activities: sbs_na_la_se_r2</li> </ul>



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Calculation at the regional level is possible using the following Eurostat datasets:</p> <ul style="list-style-type: none"> <li>&gt; Primary production: agr_r_aacts</li> <li>&gt; Food manufacturing: sbs_r_nuts06_r2</li> <li>&gt; Food distribution: sbs_r_nuts06_r2</li> <li>&gt; Food service activities: sbs_r_nuts06_r2</li> </ul> <p>For an overview of the values of the indicator, both at the EU level and per Member State, you may explore the <a href="#">data explorer</a> at the agri-food data portal (indicator RPI_03).</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.8 is not included in Annex III of the Implementing Regulation. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>The calculation of the indicator is done at the <b>macro-level</b> for each Member State and several calendar years. This aggregated data has only limited utility for the analysis of the net impact of the CAP Strategic Plans on agricultural income.</p> <p>The approaches presented for netting out the CAP effect on income support, under <a href="#">factor of success 1.1.1</a>, may apply also for this indicator.</p> <p>I.8 does not account specifically for quality schemes and organic farming, so complementary approaches must be used in order to try to capture changes in added value in these products, namely through the use of national statistics, if available, and of I.29.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Impact indicators:</b></p> <ul style="list-style-type: none"> <li>&gt; I.29 - Value of production under Union quality schemes and of organic production</li> <li>&gt; Difference in price level obtained when selling in cooperatives compared to selling on the market (non-existing indicators which Member States might want to explore)</li> </ul> <p><b>Context indicators:</b></p> <ul style="list-style-type: none"> <li>&gt; Share of farms participating in recognised POs (national data)</li> <li>&gt; Degree of use of EU market observatories and interactive data portal by farmers (non-existing indicators which Member State might want to explore)</li> <li>&gt; Number of cases for unfair trading practices submitted and judged after Directive (EU) 2019/633 and corresponding market share (national data)</li> <li>&gt; Share of production traded on futures market (non-existing indicators which Member States might want to explore)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>A qualitative assessment of the factor of success is suggested by checking whether the direction of the net effect matches the desired direction reflected in the factor of success.</p> <p>According to the definition of the factor of success, effectiveness is achieved if the gross value added, for farmers in producer organisations or other forms of organisation, or participating in quality schemes or producing organically is increasing due to CAP support, as measured by the impact indicator I.8.</p> <p>As a point of comparison, the value of I.8, at the start of the implementation period might be used.</p>





# Factors of Success for General Objective 2

**Annex II to the guidelines developed under  
Thematic Working Group 3**



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# Annex II: Factors of Success for General Objective 2

## Introduction

### Overall structure

The factors of success relevant to General Objective (GO) 2: “to support and strengthen environmental protection, including biodiversity, and climate action and to contribute to achieving the environmental and climate-related objectives of the Union, including its commitments under the Paris Agreement” are presented in this Annex, grouped by specific objective.

The overall structure of the Specific Objectives (SO), key evaluation elements and factors of success are illustrated in the following table.

SO	Key evaluation element	Suggested example of evaluation question	Recommended factor of success
4	<b>4.1 Climate change mitigation:</b> Based on greenhouse gas emissions (GHG) and carbon sequestration	To what extent have CAP Strategic Plan interventions contributed to achieving the 2050 objective of climate neutrality in the EU, primarily by reducing GHG emissions, increasing carbon sequestration and promoting production and use of sustainable energy?	4.1.1 Greenhouse Gas (GHG) emissions in agriculture are decreasing due to CAP support.  4.1.2 Soil organic carbon (SOC) sequestration is increasing or maintained due to CAP support.  4.1.3 Renewable energy production capacity is increasing due to CAP support.
	<b>4.2 Climate change adaptation:</b> Based on the resilience of agriculture to climate change	To what extent have CAP Strategic Plan interventions supported the EU's agriculture, forestry and rural areas to reduce vulnerability, strengthen resilience and enhance adaptive capacity to climate change?	4.2.1 The resilience of agriculture to climate change is increasing, due to CAP support.
5	<b>5.1 Efficient management of natural resources:</b> Based on preserving or enhancing natural resources quality and quantity by reducing pollutants and exploitation	To what extent have CAP Strategic Plan interventions advanced air quality, including a reduction in harmful chemical substances?	5.1.1 Ammonia emissions in agriculture are decreasing due to CAP support.
		To what extent have CAP Strategic Plan interventions supported sustainable development and effective management of water resources including a reduction in the dependency on chemical pesticides?	5.2.1 Nutrient balance on agricultural land is improving, thus reducing nutrient losses due to CAP support.
			5.2.2 Nutrient leakage is decreasing due to CAP support.
			5.2.3 Pressure on natural water reservoirs is decreasing due to CAP support.
To what extent have CAP Strategic Plan interventions supported sustainable development and effective management of soil resources?	5.2.4 The use and risk of chemical pesticides and the use of more hazardous pesticides are decreasing due to CAP support.		
			5.3.1 Soil erosion is decreasing, due to CAP support.



SO	Key evaluation element	Suggested example of evaluation question	Recommended factor of success
6	<b>6.1 Reversing biodiversity loss:</b> Based on biodiversity and habitats in agricultural land or other areas affected by agricultural or forestry practices	To what extent have CAP Strategic Plan interventions contributed to halting and reversing biodiversity loss on agricultural and forest land?	6.1.1 Biodiversity related to agricultural land is improving or, at least, biodiversity loss is halted due to CAP support.
			6.1.2 Biodiversity in Natura 2000 areas affected by agriculture or forestry is improving or, at least, biodiversity loss is halted due to CAP support.
			6.1.3 Agro-biodiversity is increasing due to CAP support.
	<b>6.2 Ecosystem services:</b> Based on landscape features that contribute to ecosystem services by hosting relevant species (e.g. through pollination, pest control), biophysical processes (e.g. through erosion control, water quality maintenance), or cultural values (e.g. aesthetic value)	To what extent have CAP Strategic Plan interventions contributed to enhancing ecosystem services from agricultural and forest land?	6.2.1 Trends of pollinators are improving or, at least, stable due to CAP support.
6.2.2 The area covered by landscape features in agricultural land is increasing or maintained due to CAP support.			

Please note that the key evaluation elements 4.1, 6.1 and 6.2 and the correed by more than one factor of success.

The factor of success 'Ammonia emissions in agriculture, nutrient leakage and soil erosion are decreasing', of Annex I of Regulation (EU) 2022/1475, has split into three different factors of success to ensure clarity of the observed effect. Moreover, key evaluation element 5.1 is approached by three evaluation questions corresponding to air, water and soil, of which the evaluation question related to water quality is addressed by more than one factor of success.

## Indicative types of interventions

In each factsheet, **an indicative intervention logic is presented by listing the types of interventions that affect each factor of success.** The identification of the corresponding types of interventions was based on the following assumptions:

- The types of interventions programmed under the corresponding SO and relevant to the factor of success must be considered.
- Additional types of interventions, even if not programmed under the SO, but with possible positive or negative side effects on the factor of success should be considered too.

In every factor of success there is an explicit reference to the effect of the CAP support. This is to underline that, although the quantification of the CAP contribution is not mandatory for all impact indicators, the purpose of the evaluation is to assess the performance of the CAP. Therefore, it is recommended to try to assess the net contribution of the CAP support, as this will be important not only for effectiveness but also for the other evaluation criteria. It must be stressed though, that this recommendation cannot and does not attempt to alter, in any case, the provisions Regulation (EU) 2022/1475.

These lists may differ from the actual interventions that may be relevant to each factor of success under a certain CAP Strategic Plan, due to the enhanced flexibility provided to the Member States under the 'New Delivery Model'.

For an overview of the actual interventions planned by each Member State in their adopted CAP Strategic Plans, their financial allocations and their links to output and result indicators, you may explore the '[Catalogue of CAP interventions](#)'.



## Assessment of the factors of success

Effectiveness is determined by assessing the analysed impact of the CAP Strategic Plan against defined targets and/or points of comparison. That said, a quantitative assessment is possible only if targets corresponding to impact indicators are set at the national or, where relevant, regional level. Regarding G02, such targets may have been set, in some cases following targets that were already set at the EU level. In the following factsheets, the information about such targets is presented along with additional information on where those targets can be found either in national documents (e.g. national energy and climate plans) or, where relevant, in the CAP Strategic Plan.

A qualitative assessment can be also possible, analysing whether the direction of the observed effect, as measured by the change in the main indicator, is in line with the direction implied in the formulation of the factor of success.

In any case, the assessment should be complemented with an analysis of the progress made towards the targets set in the CAP Strategic Plan for financial allocations, output and result indicators.

## 1. Specific Objective 4

### 4.1.1 Greenhouse gas (GHG) emissions in agriculture are decreasing due to CAP support

<b>Specific objective</b>	SO4 - To contribute to climate change mitigation and adaptation, including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as to promote sustainable energy.
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Climate change mitigation
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to achieving the 2050 objective of climate neutrality in the EU, primarily by reducing GHG emissions, increasing carbon sequestration, and promoting production and use of sustainable energy?
<b>Rationale for the use of this factor of success</b>	<p>Emissions are the critical indicators of GHG concentration and, consequently, of the rising global temperature. Mitigation refers to efforts to reduce or prevent the emission of GHGs and remove them from the atmosphere to limit the extent and impact of global warming. Agriculture mitigation strategies typically involve farming practices to reduce emissions from agricultural land and animal husbandry. Mitigation efforts also aim to increase energy efficiency, promote renewable energy sources, improve land-use practices, and enhance carbon sequestration in forests and other ecosystems.</p> <p>This factor of success can be used to assess whether GHG emissions in agriculture are decreasing. Together with the factors of success 4.1.2 'Soil organic carbon sequestration is increasing or maintained' and 4.1.3 'Renewal energy production capacity is increasing' can assess the contribution of the CAP Strategic Plan to climate change mitigation under SO4.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 - relevant GAEC standards</li> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 47 - Sector interventions</li> <li>&gt; Article 70 - ENVCLIM, environmental, climate-related, and other management commitments</li> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 77 - COOP, cooperation</li> </ul>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – Crop-specific payment for cotton</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 78 – KNOW, Knowledge exchange and dissemination of information</li> </ul>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.10 Greenhouse gas emissions from agriculture</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Greenhouse gas emissions from agriculture (I.10) are the first specific indicator of C.44, which includes seven specific indicators:</p> <ol style="list-style-type: none"> <li>1. GHG emissions from agriculture;</li> <li>2. Share of GHG emissions from agriculture in total GHG emissions;</li> <li>3. GHG emissions and removals from LULUCF;</li> <li>4. GHG emissions from agriculture, including cropland and grassland;</li> <li>5. Share of GHG emissions from agriculture, including cropland and grassland in total GHG emissions;</li> <li>6. GHG emissions from livestock, i.e. the sum of enteric fermentation and manure management/ hectares of Utilised Agricultural Area (UAA);</li> <li>7. GHG emissions from ruminants, i.e. enteric fermentation per livestock unit (LSU) of ruminants.</li> </ol> <p><b>Issues concerning the indicator's calculation:</b></p> <p>The definition is based on IPCC's definitions and methods of measurement (see the indicator's fiche <a href="#">here</a>). For an overview of the values of indicator C.44, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p> <p>GHG emissions from agriculture as measured for the IPCC DO NOT include the energy use of agricultural machinery, buildings, and farm operations, which are included in the 'energy' inventory under UNFCCC, or emissions from production of inputs, such as inorganic fertilisers. This is an important point because certain modelling approaches and especially some simulation models require GHG emissions coming from the energy consumption of the sector to be considered as well.</p> <p>The indicator's fiche contains an exhaustive list of data sources. In addition to them, and depending on the methods to be used for netting out the indicator, the following databases may be useful:</p> <p>Member States' <a href="#">GHG emission projections</a> which provide a 20-year projection to 2040 of aggregate emissions from agriculture and disaggregated for the LULUCF categories, With Existing Measures (WEM) and With Additional Measures (WAM). In other words, it also provides an estimate of the additional measures' effectiveness.</p> <p>The <a href="#">approximated EU GHG inventory</a> is an early estimate of EU GHG emissions for the year preceding the current year and is made available around September at the sector (CRF Table) level for each Member State. This may be helpful to those working with time-series data since it adds one more observation.</p> <p>The <a href="#">EDGAR - Emissions Database for Global Atmospheric Research</a> maintained by JRC and provides, among others, both emissions as national totals and grid maps at 0.1 x 0.1 degree resolution at the global level, with yearly, monthly and up to hourly data. For the EU, EDGAR also provides a time series (1990-2021) of GHG emissions at the NUTS2 (regional) level and by sector. This may be a good source of information for portraying the indicators and, thus, the factor of success' regional and sub-regional dimensions.</p>



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>A database of <a href="#">National Greenhouse Gas (GHG) Policies and Measures (PaM)</a> maintains a collection of all policies and measures by Member State, gas, sector (including agriculture), type of policy instrument, status of implementation and type of impact of policy or measure. The database helps set the baseline of policies and measures a Member State implemented or designed and related to the factor of success.</p> <p>Some research projects offer access to databases which can be used for GHG data retrieval. The <a href="#">Evaluation Helpdesk Knowledge Bank</a> reviews many projects which may be used in various stages of an evaluation. For example, the project <a href="#">VERIFY</a> funded by the HORIZON programme offers access to a database of GHG emissions and GHG inventories as well as grided data at a very high resolution. Other projects also offer data access, the application of novel methodologies or even inspiration for using additional or regionalised data.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.10 is one of the indicators listed in Annex III of Regulation (EU) 2022/1475 and therefore the contribution of the CAP Strategic Plans to its development must be quantified.</p> <p><b>Assessment of net effects</b></p> <p>Various methods can be used to net out the effect observed through this indicator. The selection of the method depends on the availability of data. You may consult <a href="#">the tool</a> created by the Evaluation Helpdesk to assess indicator I.07 of the CMEF, which currently corresponds to I.10 of the PME. Further support for choosing and applying evaluation methodology for I.07 in the previous programming period is provided by the <a href="#">Evaluation Helpdesk guidelines</a>, the updated <a href="#">fiche for calculating CMEF Complementary Result Indicator 18 (CRI 18)</a> 'Reduced emissions of methane and nitrous oxide' and the updated <a href="#">fiche for answering CMEF Common Evaluation Question 14 (CEQ 14)</a> 'To what extent have RDP interventions contributed to reducing GHG and ammonia emissions from agriculture?'.</p> <p>Netting out I.10 can be done with several approaches at the macro (Member State or region) or micro (farm) levels.</p> <p>At the <b>macro level</b>, the net effect of CAP support is approached using a policy on/policy off comparison. The counterfactual is usually constructed at the start of the period or another year without the influence of any measures. Some applied examples are provided below to show how the estimation of the net effects of CAP support on GHG emissions has been carried out in practice. Managing Authorities and evaluators may explore these possibilities and choose the one(s) that fit the data and expertise available in their context.</p> <p>The <a href="#">evaluation study of the impact of the CAP on climate change and greenhouse gas emissions</a> (European Commission, 2019) used the <a href="#">GAINS</a> software. The analysis simulates the effect of the Pillar I greening measures (Environmentally Sensitive Permanent Grassland (ESPG), Environmental Focus Areas (EFAs)) and various RDP measures including agri-environmental and climate commitments. The study did not simulate the effects of direct payments or Voluntary Coupled Support (VCS). The GAINS simulation model is ideal for application even in the middle of the programming period with few adopters because it can simulate the effects with the expected adoption rate at the end of the programming period.</p> <p>Various evaluations have used general or partial equilibrium models, including the <a href="#">MAGNET</a> and <a href="#">CAPRI</a>. CAPRI is a comparative static Partial Equilibrium (PE) model for the agricultural sector developed for policy and market impact assessments, and MAGNET is a neoclassical Computable General Equilibrium (CGE) model based on GTAP. The approach of these models is based on the effects of policies on land use and livestock changes and thus, on the consequent emissions. <a href="#">Jansson et al. (2020)</a> simulated through the CAPRI model the effect of removing the VCS, presently permitted under the CAP, and found that this reduces GHG emissions in the EU. However, this effect that is diminished by emission leakages to the rest of the world, which offset about 3/4 of the reduction in the EU. <a href="#">Gocht et al. (2017)</a> and <a href="#">(2016)</a> used the CAPRI to analyse the economic and environmental impacts of CAP greening. They found that impacts of CAP greening on GHG emissions were small, although some regions saw greater effects than others. The environmental effects at the EU level were found positive on a per hectare basis, however, this result may be reversed by an increase in UAA. The <a href="#">EcAMPA 2</a> study utilised the CAPRI model to assess production effects, the importance of technological mitigation options, and the need to consider emission leakage to reduce global agricultural GHG emissions effectively.</p> <p>Similarly, the <a href="#">SCENAR 2030</a> (M'barek et al., 2017) considered three scenarios, designed at the beginning of 2016, that take polar paths against a reference scenario to characterise different visions for the CAP. GHG emissions impacts are the results of agricultural production developments. The study used CAPRI and MAGNET. A scenario without CAP forecasts GHG decreases by almost 6%. MAGNET can provide insight into GHG leakages due to its ability to estimate changes in production worldwide. The scenario without CAP illustrates the leakage effect, mainly due to the reduction of support and, to a lesser extent, market opening.</p>



## Step 2: Estimation of the net effect of the CAP support on the value of the main indicators

Netting out compares (among) beneficiaries and non-beneficiaries at the **micro level**. If all farms are beneficiaries, or the non-beneficiaries are very rare, netting out compares beneficiaries before and after the application of the policy (e.g. a specific CAP reform) or the introduction of the measures (e.g. greening).

[Coderoni and Esposti \(2018\)](#) evaluated the impact of the Fischler Reform on GHG emissions of a balanced panel of 6 542 Italian farms in the Farm Accountancy Data Network (FADN) observed over 2003–2007. [Solazzo et al. \(2016\)](#) estimated the potential environmental benefits of greening in terms of GHG emissions in four regions of Northern Italy, one of the significant European agricultural areas in terms of emissions. The study used a Positive Mathematical Programming (PMP) farm-based model on more than 3 000 farms to estimate the effects of greening on regional land use and its contribution to reducing total emissions. The model estimated a reduction in CO<sub>2</sub> emissions of about 2% resulting from a 2.1% decrease in nitrous oxide and a 0.4% decrease in methane compared to the baseline scenario. The 2019 evaluation of the [Green Low carbon Agri environment Scheme \(GLAS\)](#) was implemented at the farm level with computer models quantifying the proportion of the baseline total pollutant load that is managed by farms in the scheme, that part which is potentially controllable by the selected management interventions, and the likely reduction in load on the assumption of best practice. Preliminary results of the impacts of GLAS on emissions are shown by [Goody \(2019\)](#). One issue related to the use of micro studies, i.e. evaluation approaches at the farm level, is the lack of data for the estimation of emissions and more precisely the lack of activity and farm management data. [Skuras \(2020\)](#) presented many case studies at the micro level and discussed the issues related to the use of FADN and other survey data as a source of activity data for estimating farm emissions. The Good Practice Workshop '[Data management for the assessment of RDP effects](#)' presents several case studies especially involving FADN data.

### Use of emission factors/coefficients

The effect of a farm management practice is 'transcribed' into emissions by multiplying the output of the practice with what is called an emission factor or coefficient. The coefficient describes the rate at which a given activity releases certain GHGs into the atmosphere. The most important source for knowing and understanding the emission factors which are used in the estimation of agricultural emissions in a Member State is the [National Inventory Report \(NIR\)](#). The NIR provides for each agricultural activity, the method of estimating the emission, the emission factor, the activity data, which constitute a valuable source of data, and the total calculated emissions per gas and activity.

The change observed in the evolution of I.10 and its seven sub-indicators can be justified by the values of the output indicators, indicating higher participation of land and livestock units in GHG mitigation activities and investments in mitigation infrastructure. Based on these outputs and the emission factors included in the NIR, the estimated change in the GHG emission can be estimated.

However, the NIR does not provide data on emissions broken down by specific farm practices, especially those exercised within a 'carbon farming' framework. For example, although the NIR includes information on agricultural area by tillage intensity it does not apply different emission factors to the different intensities. There, a combination with data from the iMAP project might be beneficial. The [iMAP project](#) summarises these effects and provides different coefficients for calculating the potential effects on GHG emissions from various farm practices. For example, the iMAP analyses various meta-analyses that compare controlled-release fertilisers (CRF), fertilisation (urea) with urease inhibitors (UI) and fertilisation (synthetic) with double inhibitors (DI), to conventional fertilisation in various geographical scales and zones and found N<sub>2</sub>O emissions reductions ranging from insignificant for UI to 49% for DI.

In addition to iMAP, several other sources provide broad guidance on approximating GHG reduction coefficients from management practices:

The [Emission Factor Database \(EFDB\)](#) of the IPCC is the major source for emissions factors around the world, including Europe. Emissions factors are reported at the country level or agglomerations of countries to wider regions or continents, following the spatial boundaries of the 2006 IPCC Report.

The study on '[Effective performance of tools for climate action policy - meta-review of Common Agricultural Policy \(CAP\) mainstreaming](#)' for DG CLIMA provides information for almost twenty widely used farm practices. It is important that the study also provides a rough account of possible costs and benefits associated with the practice, which may be a good source of information for the respective efficiency estimates.

Previous evaluation studies contain and suggest the use of appropriate emission factors linked to specific farm practices and even to specific measures. For example, the [evaluation study of the impact of the CAP on climate change and greenhouse gas emissions includes a table that lists all mitigation actions and their potential effects for CAP measures supporting this action](#) (Table 21, page 71 of the study).



## Step 2: Estimation of the net effect of the CAP support on the value of the main indicators

The **Ex-Ante Carbon-balance Tool (EX-ACT)** is a 2022 appraisal system that provides estimates of the impact of agriculture and forestry development projects, programmes and policies on the carbon balance. The carbon balance is defined as the net balance from all greenhouse gases (GHGs) expressed in CO<sub>2</sub> equivalent that were emitted or sequestered due to project implementation as compared with a business-as-usual scenario. EX-ACT is a land-based accounting system, estimating emissions or sinks of CO<sub>2</sub>, as well as GHG emissions per unit of land.

Integrated assessment tools that contain generic emission coefficients for European countries such as the **GAINS** or dedicated carbon farm tools such as the **Farm Carbon Calculator**.

### Main challenges in calculating and netting out the indicator.

By and large, the fluctuation in livestock units, especially cattle, determines total GHG emissions. Thus, despite CAP Strategic Plan efforts to reduce GHG emissions, an increasing trend may be due to increasing livestock. For this reason, it is essential to analyse (even without netting-out) GHG emissions in relation to specific indicators 6 (GHG emissions from livestock, i.e. the sum of enteric fermentation and manure management/hectares of UAA) and 7 (GHG emissions from ruminants, i.e. enteric fermentation LSU of ruminants).

When estimating the effectiveness of CAP Strategic Plans on GHG emission reductions, a risk is to ignore or undermine the possible offshoring of emissions, a process known as carbon leakage. Carbon leakage may have the form of 'trade embodied emissions' due to international differences in carbon pricing or of 'Indirect Land Use Changes (ILUC)' in a country as a consequence of a measure that decreases the production of a crop in the Member State where this measure is implemented. The former case refers mostly to sectors in the Emissions Trading System (ETS). The latter case refers to agricultural production where reductions in production that may occur due to policy measures to mitigate emissions may result in land use change (LUC) in another place. Other cases of carbon leakage include the GHG emissions and removals associated with displaced agricultural production (i.e. the net emissions associated with the production process), and changes in emissions from production of inputs (e.g. fertilisers). Carbon leakages have been modelled by several studies using Computable General Equilibrium (CGE) models<sup>1</sup> or partial equilibrium models<sup>2</sup> or trade models<sup>3</sup>. These models are not generally easy to set up and estimate and evaluators may choose to calculate leakages by directly using published leakage factors in order to flag the likely importance of leakages in their evaluation.

Frequently, the NIR may not reflect the efforts of the CAP Strategic Plan to reduce GHG emissions. For example, if the NIR calculates enteric fermentation using a tier 1<sup>4</sup> method for certain livestock, applying a measure that will reduce GHG emissions through an innovative feeding plan will not reflect in the NIR, unless the Member State adopt a 'tier 2' method of calculating the specific emissions and calculate the percentage of livestock subject to the innovative feeding method.

The duration of impacts on GHG emissions differs considerably among CAP interventions. Mainly permanent, non-reversible emission reductions arise from support for emission-reduced slurry systems (investments, land-based), and investments into forests and peatland restoration. Mainly non-permanent and easy to reverse emission reductions stem from input reducing measures as organic farming and other ENVCLIM, since they are only ensured for a (often renewed) 5-year period. The assessment of the total impact of GHG should take account of the share of long-lasting/short-term impacts.

Specific attention should be paid to previous commitments that were undertaken in the previous programming period and are carried over in the period 2023-2027 on the same UAA. The impact of previous commitments is already incorporated in the baseline of GHG, as accounted in the NIR, and the impact generated on this same UAA should not be taken into account, to avoid overestimation of the net effect of the CAP Strategic Plan.

<sup>1</sup> Such as MAGNET (OECD, 2019) or GTAP (Irfanoglu et al., 2012).

<sup>2</sup> Such as CAPRI (Van Doorslaer et al., 2015) for the EU.

<sup>3</sup> Such as structural gravity models (Larch and Wanner, 2017) based on the GTAP's database.

<sup>4</sup> A tier represents a level of methodological complexity. Tier 1 are simple methods using default values. Tier 2 are similar but with country specific emission factors and other data. Tier 3 are more complex approaches, possibly models (IPCC, 2019).



**Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant**

Many of the farm practices targeting emissions also increase soil organic carbon (e.g. low or no tillage, use of nitrogen-fixing plants, use of cover plants, etc. or reduce ammonia emissions, especially from reduced use of chemical fertilisers, e.g. organic farming or on farm management of manure and careful application).

**Impact**

- > Soil organic carbon in agricultural land (PMEF, I.11)
- > Ammonia emissions from agriculture (PMEF, I.14)

**Context**

- > Utilised Agricultural Area (PMEF, C.17)
- > Livestock units (PMEF, C.23)
- > Livestock density: the number of livestock units (LSU) per hectare of utilised agricultural area (PMEF, C.24)

**Emission intensities**

The FAOSTAT domain 'Emissions intensities' contains analytical data on greenhouse gas (GHG) emissions intensity by agricultural commodity. This indicator is defined as greenhouse gas emissions per kg of product. Data are available for a set of agricultural commodities (e.g. rice and other cereals, meat, milk, eggs), by Member State, with global coverage and relative to the period 1961–2020.

**Other indicators**

GHG emissions from energy use are not readily available. However, for most crops, studies indicate the energy embedded in fertilisers, pesticides, diesel use and other activities (e.g. irrigation) which, depending on the mix of sources producing energy, can be transformed into GHGs. A recent review by [Paris et al. \(2022\)](#) provides estimates from the academic literature for the primary cultivations (e.g. wheat cultivation) in Member States and the various energy consumption activities (e.g. diesel use).

**Step 4: Assessment of the factor of success**

According to the definition of the factor of success, effectiveness is achieved if the GHG emissions in agriculture are decreasing, due to CAP support, as measured by the indicator I.10.

As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.

Listed below is information about relevant targets set at the European level as well as the main sources where evaluators may look for targets set at the national level. Such targets can be used as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.

The [European Climate Law](#) sets a climate neutrality objective to be reached by 2050 and defines a binding EU 2030 climate target of a domestic reduction of net greenhouse gas emissions by at least 55% compared to 1990 levels (Fit for 55). The two most important EU policies regulating GHG emissions in the land sector are the [LULUCF Regulation](#) (amended in 2023) and the 'Effort Sharing Regulation' (ESR) (amended in 2023). The revised LULUCF Regulation has a separate land-based net carbon removals target of 310 million tonnes of CO<sub>2</sub> equivalent by 2030 that will be implemented through binding net removal national targets. The emissions covered by the ESR account for almost 60% of total domestic EU emissions. The ESR also defines annual emission limits for the years 2021 to 2030. Member States are provided with a number of emission allocations (each corresponding to a tonne of CO<sub>2</sub> equivalent) for each year in the period, and the number of allowances decreases yearly. Although targets are not broken down by sector, evaluators can examine the temporal contribution of agriculture in relation to the other sectors of the ESR and estimate how much of the progress is due to reductions achieved by the agricultural sector. Evaluators should search whether Member States reflect on the LULUCF's role and the agricultural sector's expectations among the ESR sectors in their [National Energy and Climate Plans \(NECPs\)](#).

GHG mitigation ambitions are contained in the CAP Strategic Plans section 3.1.3 on 'Explanation on how to achieve the greater overall contribution set out in Article 105'. Also, many Member States provide national targets, if they exist, in section 3.1.4 'Explanation of how the environmental and climate architecture of the CAP Strategic Plan is meant to contribute to already established long-term national targets set out in or deriving from the legislative instruments referred to in Annex XI'.



## 4.1.2 Soil organic carbon (SOC) sequestration is increasing or maintained due to CAP support

<b>Specific objective</b>	S04 - To contribute to climate change mitigation and adaptation, including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as to promote sustainable energy.
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Climate change mitigation
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plans interventions contributed to achieving the 2050 objective of climate neutrality in the EU, primarily by reducing GHG emissions, increasing carbon sequestration, and promoting production and use of sustainable energy?
<b>Rationale for the use of this factor of success</b>	<p>The European Climate Law requires that GHG emissions and removals are balanced within the EU by 2050 at the latest to achieve negative emissions thereafter. Thus, developing and deploying scale-based carbon removal solutions is indispensable to climate neutrality and will require significant targeted support in the next decade. Agriculture and forestry should upscale carbon removal solutions that capture CO<sub>2</sub> from the atmosphere and store it long-term in ecosystems through nature protection and carbon farming solutions.</p> <p>As a result, the land sector is critical for reaching a climate-neutral economy because it can capture CO<sub>2</sub> from the atmosphere and sequester carbon. 'Sustainable Carbon Cycles' set out, among others, short- to medium-term actions aiming to address current challenges and reward land managers for taking up practices leading to carbon sequestration, combined with strong benefits on biodiversity. Effectiveness implies additional, actual and permanent sequestration of carbon. For example, this includes:</p> <ul style="list-style-type: none"> <li>➤ projects on peatland restoration and rewetting;</li> <li>➤ agroforestry;</li> <li>➤ management practices that benefit SOC levels;</li> <li>➤ cover cropping;</li> <li>➤ improved crop rotations;</li> <li>➤ preventing conversion to arable land and conversion to grassland, including conversion of fallow/set-aside areas to grasslands;</li> <li>➤ replacement of annual cropland with grassland, including economically marginal arable land, such as sloping land or shallow soils, which are especially suitable for grassland management; and</li> <li>➤ avoided emissions from averted conversion of grasslands to arable land on soils that are suitable for cultivation.</li> </ul> <p>Forestry is an essential contributor to carbon sequestration. A recent staff Commission working paper (<a href="#">SWD(2021) 116 final</a>) states that grassland and forest soils are, on average, a carbon sink estimated to grow by 80 million tonnes annually, and around 90% of this carbon sequestration takes place in forests. Thus, CAP Strategic Plan interventions supporting agroforestry or protecting forests and forested areas and promoting the sustainable management of forests are very beneficial for carbon sequestration. When examining the effects of the CAP Strategic Plan on SOC and carbon sequestration practices, non-agricultural land covers such as forests, heathlands, wetlands and peatlands cannot be left out.</p> <p>This factor of success can be used to assess the effect of CAP support on whether SOC sequestration is increasing or maintained. Together with the factors of success 4.1.1 'GHG emissions in agriculture are decreasing' and 4.1.3 'Renewal energy production capacity is increasing' can assess the contribution of the CAP Strategic Plan to climate change mitigation under S04.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>➤ Article 12 – Relevant GAEC standards</li> <li>➤ Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>➤ Article 70 – ENVCLIM, Environmental, climate-related, and other management commitments</li> <li>➤ Article 72 – Payment for area-specific disadvantages resulting from certain mandatory requirements</li> <li>➤ Article 73 – INVEST, investments</li> <li>➤ Article 77 – COOP, cooperation</li> <li>➤ Article 78 – Knowledge exchange and dissemination of information</li> </ul>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 32 – Coupled income support interventions</li> <li>&gt; Article 36 – Crop-specific payment for cotton</li> <li>&gt; Article 47 – Sector interventions</li> <li>&gt; Article 71 – Payment for natural or other area-specific constraints</li> </ul>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.11 Soil organic carbon in agricultural land</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.11 Soil organic carbon in agricultural land is the first specific indicator of C.40, which includes three specific indicators:</p> <ol style="list-style-type: none"> <li>1. Estimate of the total organic carbon content in soils on agricultural land of EU Member States (with a breakdown by arable land, grassland and permanent crops).</li> <li>2. The mean organic carbon content in agricultural land.</li> <li>3. Estimate of SOC changes over time.</li> </ol> <p><b>Issues concerning the indicator's calculation:</b></p> <p>The indicator's fiche can be accessed <a href="#">here</a>. For an overview of the values of indicator C.40, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p> <p>The indicator's fiche contains an exhaustive list of data sources. The primary EU database to support the indicator's baseline estimation is the LUCAS soil survey observations for 2018 and 2009 and the estimated SOC measurements produced by JRC (<a href="#">Panagos and Rosa, 2023</a>). In addition to them, the following databases may be helpful:</p> <ul style="list-style-type: none"> <li>&gt; National soil surveys also keep records of SOC. For example, published SOC maps are available through the respective soil institutes and agencies (e.g. <a href="#">Belgium</a>) or in academic and professional outlets (e.g. <a href="#">Austria</a>).</li> <li>&gt; The FAO provides the <a href="#">Global Soil Organic Carbon Map v1.5 (GSOC)</a>, which, besides calculations of SOC stock and uncertainties, also provides estimates of the relative SOC sequestration rates. The latter is the annual average sequestration rates under three alternative soil sustainable management scenarios compared to business as usual (BAU) management (relative sequestration rates RSR). In other words, this indicator portrays soil carbon sequestration potentials and is helpful in planning.</li> </ul> <p>National soil surveys contain more detailed data, compared to LUCAS or GSOC, which can be better spatially correlated with the implementation of farm practices. Thus, it can be useful to assess the net effects of the CAP support during the implementation or ex post.</p> <p>The FAO dataset might be more useful when assessing the potential of carbon sequestration in different scenarios and might be more helpful for ex ante evaluations.</p> <p>The effects of the supported farm practices are not automatically 'translated' into tonnes of sequestered carbon. For example, the output indicator in hectares of a 'no-tillage' farm practice depends on the soil type and various climate parameters such as aridity. The <a href="#">iMAP project</a> summarises this effect and the corresponding coefficients that can be used. The iMAP also provides coefficients related to the effect of farm practices or enhanced conditionality such as the GAECs concerning wetland protection, fallow land, etc.</p> <p>In addition to iMAP, several other sources provide broad guidance on approximating carbon sequestration coefficients from management practices:</p> <ul style="list-style-type: none"> <li>&gt; The study on '<a href="#">Effective performance of tools for climate action policy - meta-review of Common Agricultural Policy (CAP) mainstreaming</a>' for DG CLIMA. For example, this source provides values for the carbon sequestration potential of zero-tillage (page 84) or leaving crop residues on soil (page 92), etc.</li> </ul>



**Step 1: Calculation of the value of the main indicator**

- > The [Emission Factor Database \(EFDB\)](#) of the IPCC, among others, is very informative on the base factor used in default calculation procedures for estimating carbon stocks in mineral soils under various farm practices, conditions and regions of the world.
- > The [Ex-Ante Carbon-balance Tool \(EX-ACT\)](#) is a 2022 appraisal system that estimates the impact of agriculture and forestry development projects, programmes and policies on the carbon balance. The carbon balance is the net balance from all GHGs expressed in CO<sub>2</sub> equivalent emitted or sequestered due to project implementation compared to a business-as-usual scenario. EX-ACT is a land-based accounting system estimating emissions or sinks of CO<sub>2</sub> and GHG emissions per unit of land.
- > Integrated assessment tools that contain generic emission coefficients for European countries such as the [GAINS](#) or dedicated carbon farm tools such as the [Farm Carbon Calculator](#).

Of course, many of the coefficients in the various databases can be contradicting. The evaluator should provide sound reasoning for the choice and be coherent with the coefficients chosen in the NIR or other national and EU evaluations. In case of difficulty, many evaluators choose to adopt average coefficients from a set of plausible sources.

**Step 2: Estimation of the net effect of the CAP support on the value of the main indicators**

I.11 is not included in Annex III of the Implementing Regulation. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.

**Assessment of net effects**

Various methods can be used to net out the effect observed through this indicator. The selection of the method depends on the availability of data. You may consult [the tool created by the Evaluation Helpdesk](#) to assess indicator I.12 of the CMEF, which partly corresponds to I.11 of the PMEF.

The [Evaluation Helpdesk guidelines provide further support for choosing and applying evaluation methodology for I.12 in the previous programming period](#).

Netting out I.11 can be done with several approaches at the macro (Member State or region) or micro (farm) levels.

Netting out is a policy on/policy off comparison at the macro level. The counterfactual is usually constructed at the start of the period or another year without the influence of any measures.

The evaluation study of the impact of the CAP on climate change and greenhouse gas emissions ([European Commission, 2019](#)) used the [GAINS](#) software. This evaluation study contains an evaluation question addressing specifically the issue of carbon sequestration. Evaluation Question 8 (ESQ8) states: "To what extent have the CAP measures delivered a coherent contribution to achieving the general objective of climate action and the related specific objectives of climate mitigation (reduction of greenhouse gas emissions and increase in the carbon stock) and climate change adaptation? a) to what extent did the envisaged synergies among the measures occur? b) to what extent have the carbon stocks in agricultural soils been protected and increased in carbon-poor soils?"

The [evaluation study of the payment for agricultural practices beneficial for the climate and the environment \(European Commission, 2017\)](#) also considered carbon sequestration resultant from greening obligations. Evaluation Question 9 (ESQ9) asked: "To what extent has the permanent grassland measure impacted on the environment and climate in terms of: climate (carbon sequestration), biodiversity especially where permanent grassland benefits from additional protection as ESPG, other environmental issues such as biodiversity, soil quality and erosion, water?" (page 132).

Various evaluations have used general or partial equilibrium models, including the [MAGNET](#) and [CAPRI](#) and addressed, among others, the impacts of policy on carbon sequestration. For example, Barreiro et al. (2021) present a modelled scenario of an ambitious implementation of the CAP reform proposals to measure the effects on EU agriculture, including quantitative targets put forward in the Farm to Fork and Biodiversity strategies which contribute, among others, to carbon sequestration.

At the **micro level**, netting out concerns with the adoption of certain farm practices that have an impact on carbon sequestration, including land use change. The comparison is among beneficiaries and non-beneficiaries. If all farms are beneficiaries, or the non-beneficiaries are rare, netting out compares beneficiaries before and after applying the policy.



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p><b>Main challenges in calculating and netting out the indicator.</b></p> <p>There are two serious challenges related to calculating and netting out the carbon sequestration impact indicator (I.11). First, changes in the soil organic matter are very slow, and it is doubtful whether changes can appear and be measured in a programming period. Second, carbon sequestration rates are affected by many environmental factors, including soil's physical, chemical and biological properties, geology and the weather. Thus, estimating the impacts in a short period is even more difficult. It is safer to estimate the change in farm practices that were targeted by the policy interventions and the land use changes caused by the policy.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Many of the farm practices targeting emissions also increase SOC (e.g. low or no tillage, use of nitrogen-fixing plants, use of cover plants, etc. or reduce ammonia emissions, especially from reduced use of chemical fertilisers, e.g. organic farming or on farm management of manure and careful application).</p> <p>Additional impact indicator:</p> <p>SOC in forest land estimated by ESDAC based on LUCAS topsoil surveys and consisting of:</p> <ol style="list-style-type: none"> <li>1. estimate of the total organic carbon content in soils on forest land (broadleaved and coniferous);</li> <li>2. the mean organic carbon content in forest land.</li> </ol> <p><b>Context</b></p> <ul style="list-style-type: none"> <li>&gt; Land cover (permanent grasslands and forests) (PMEF, C.05)</li> <li>&gt; Greenhouse gas emissions from agriculture (GHG emissions and removals from LULUCF) (PMEF, C.44)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if the SOC sequestration is increasing or maintained due to CAP support, as measured by indicator I.11.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>Listed below is information about relevant targets set at the EU level as well as the main sources where evaluators may look for targets set at the national level. Such targets can be used as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p> <p>The <a href="#">European Climate Law</a> sets a climate neutrality objective to be reached by 2050 and defines a binding Union 2030 climate target to be a domestic reduction of net greenhouse gas emissions by at least 55% compared to 1990 levels (Fit for 55). The two most important EU policies regulating GHG emissions in the land sector are the <a href="#">LULUCF regulation</a> (amended in <a href="#">2023</a>). The revised LULUCF regulation has a separate land-based net carbon removals target of 310 million tonnes of CO<sub>2</sub> equivalent by 2030 that will be implemented through binding net removal national targets.</p> <p>Member States should reflect on the LULUCF's role and the agricultural sector's expectations in their <a href="#">National Energy and Climate Plans (NECPs)</a>.</p> <p>GHG mitigation ambitions are contained in the CAP Strategic Plans section 3.1.3 on 'Explanation on how to achieve the greater overall contribution set out in Article 105'. Also, many Member States provide national targets, if they exist, in section 3.1.4 'Explanation of how the environmental and climate architecture of the CAP Strategic Plan is meant to contribute to already established long-term national targets set out in or deriving from the legislative instruments referred to in Annex XI'.</p>

### 4.1.3 Renewable energy production capacity is increasing due to CAP support

<p><b>Specific objective</b></p>	<p>SO4 - To contribute to climate change mitigation and adaptation, including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as to promote sustainable energy.</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Climate change mitigation</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have the CAP Strategic Plans interventions contributed to achieving the 2050 objective of climate neutrality in the EU, primarily by reducing GHG emissions, increasing carbon sequestration, and promoting production and use of sustainable energy?</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>Renewable energy production capacity refers to two distinct activities:</p> <ol style="list-style-type: none"> <li>1. The production of renewable energy from agricultural and forestry biomass. <p>The energy from agricultural biomass is in the form of:</p> <ul style="list-style-type: none"> <li>&gt; biodiesel from oilseeds crops;</li> <li>&gt; bioethanol from starch/sugar crops, second generation biofuels from non-food cellulosic materials;</li> <li>&gt; agricultural biogas from livestock manure and energy crops, waste and residues, and where available; and</li> <li>&gt; energy crops for electricity or heat (including short rotation coppice).</li> </ul> <p>The energy from forest biomass is in the form of :</p> <ul style="list-style-type: none"> <li>&gt; wood provided directly from forestry (fuel wood, wood chips, bark, shavings, forest residues etc.) or transformed from any of the above (pellets, briquettes etc.); and</li> <li>&gt; forest-based industry by- and co-products in EU used for energy production (e.g. sawdust, black liquor etc.).</li> </ul> </li> <li>2. Energy production from the CAP Strategic Plan supported investments in renewable energy production capacity, including bio-based (in MW), hydropower, wind, solar PV, solar thermal, geothermal and heat pumps, which do not use agriculture or forestry products.</li> </ol> <p>The increased production and use of sustainable energy will play a crucial role in decarbonising the EU and meeting the climate targets undertaken in the framework of the Paris Agreement. Together with increased energy efficiency<sup>5</sup>, this constitutes an essential part of the measures needed to reduce GHG emissions. That is why increasing renewable energy production is considered a factor of success for a CAP Strategic Plan and a key indicator in SO4 relating to GHG mitigation.</p> <p>Specific policy context for renewable energy from agricultural and forestry biomass:</p> <p>Biofuels – The revised <a href="#">Renewable Energy Directive (EU) 2018/2001 (RED II)</a> expresses the EU's policy for energy from renewable sources. It reinforces the sustainability criteria of bioenergy and especially the possible negative direct impact that the production of biofuels may have due to indirect land use change (ILUC). The <a href="#">Delegated Regulation on Indirect Land Use Change (EU) 2019/807</a> sets the framework to determine the high ILUC-risk feedstock for which a significant expansion of the production area into land with high carbon stock is observed. It also sets out criteria to certify low ILUC-risk biofuels, bioliquids and biomass fuels.</p> <p>Biomethane – This renewable source is necessary for achieving the <a href="#">REPowerEU</a> plan's objectives of diversified gas supplies and reducing the EU's dependence on Russian fossil fuels while reducing exposure to volatile natural gas prices. Biomethane production must reach 35 billion cubic metres (bcm) annually by 2030, and one of the key proposed actions is creating a <a href="#">biogas and biomethane industrial partnership</a>.</p> <p>Biomass – Biomass continues to be the primary source of energy production (bioenergy), with a share of almost 60% of renewable energy produced (<a href="#">JRC's Brief on biomass</a>). The heating and cooling sector is the largest end-user, using about 75% of all bioenergy. The sustainable way of production is the central issue in using biomass to reduce greenhouse gas emissions. This is due to the fact that the production of biomass also may be based on the utilisation and management of straw and residues in arable agriculture, of pruning products in tree cultivation and tree felling by-products in forestry. These practices in pursuit of short term renewable energy production may weaken soil's carbon enrichment and affect its fertility in the long-term.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of interventions relevant to this success factor may include interventions likely to affect the production of oilseeds and starch/sugar crops as well as non-food crops. These interventions include income support, market mechanisms, and GAECs that affect land use and eco-schemes. The installation of renewable energy generators refers to investments.</p> <ul style="list-style-type: none"> <li>&gt; Article 32 – Coupled income support interventions</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – Knowledge exchange and dissemination of information</li> </ul>

<sup>5</sup> Although energy efficiency is not addressed by any of the factors of success under Annex I of Regulation (EU) 2022/1475, a proposal is made to complemented this factor of success by looking at the energy consumption in the agri-food sector (see final section of this factor of success).



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions often not programmed under this SO but with potential positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 – Relevant GAEC standards</li> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> </ul>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.12 Increasing sustainable energy in agriculture: Sustainable production of renewable energy from agriculture and forestry</p> <p>R.15 Renewable energy from agriculture, forestry and other renewable sources: Supported investments in renewable energy production capacity, including bio-based (in MW). Although R.15 is a result indicator, it can be treated as an impact indicator since it records the installed energy capacity in megawatt of investments or parts of investments carried out for the production of renewable energy or for other aims which, however, include a renewable energy production part.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.12 a composite indicator of renewable energy from agriculture and forestry. It is part of indicator C.42 which consists of four specific indicators:</p> <ol style="list-style-type: none"> <li>1. Production of renewable energy from agricultural biomass.</li> <li>2. Production of renewable energy from forestry biomass.</li> <li>3. Production of renewable energy from agriculture and forestry.</li> <li>4. Share of the combined production of renewable energy from agricultural and forestry biomass over the total primary energy production of renewable energy.</li> </ol> <p>R.15 quantifies the installed capacity of renewable energy developed with CAP support by investments (Article 73) or sectoral types of interventions with an investment component. It does not measure the actual energy generated but the potential to generate energy from all installed investments in renewable energy.</p> <p><a href="#">Indicator fiche for I.12</a> and <a href="#">Indicator fiche for R.15</a></p> <p>For an overview of the values of indicator C.42, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p> <p><b>Issues concerning the indicator's calculation:</b></p> <p>I.12 is reported in the framework of Member States reporting obligations under the <a href="#">Governance of the Energy Union Regulation</a> and the progress reports under the <a href="#">Renewable Energy Directive</a>.</p> <p>The major issue in calculating (and interpreting) the progress of the value of R.15 (i.e. the time series of R.15 values) is related to the extended sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels introduced and reinforced by RED II. The extended and new sustainability criteria apply to:</p> <ul style="list-style-type: none"> <li>&gt; biofuels and bioliquids for transport;</li> <li>&gt; large-scale biomass for heat and power;</li> <li>&gt; agriculture waste and residues, requiring evidence of the protection of soil quality and soil carbon, and for agriculture biomass, requiring evidence that the raw material is not sourced from highly biodiverse forests;</li> <li>&gt; new biofuel plants need to deliver at least 65% fewer direct GHG emissions than the fossil fuel alternative. New biomass-based heat and power plants need to deliver at least 70% (80% in 2026) fewer GHG emissions than the fossil fuel alternative;</li> <li>&gt; bioelectricity, requiring that large scale plants (above 50 MW) apply highly efficient cogeneration technology, or apply Best Available Techniques (BAT) or achieve 36% efficiency (for plants above 100 MW), or use carbon capture and storage technology.</li> </ul> <p>These criteria may have short-term impacts on production or at least on the expansion of production.</p>



**Step 2: Estimation of the net effect of the CAP support on the value of the main indicators**

Indicator I.12 is one of the indicators listed in Annex III of Regulation (EU) 2022/1475 and therefore the contribution of the CAP Strategic Plans to its development must be quantified.

**Assessment of net effects**

The evaluator should be very clear about the evaluation mandate and the purpose of the netting-out exercise. Since energy production from renewable sources is part of climate change mitigation and GHG emission reductions, one aim of the netting-out exercise may be to examine the policy's net effects on GHGs, especially under the sustainability criteria of REDII. Another objective of the exercise may be to estimate the net impact of investments in renewable energy production as a 'treatment'. This may be a very involved exercise, especially if several measures or initiatives support renewable energy production in rural areas with financial sources outside agriculture.

Various methods can be used to net out the effect observed through this indicator. You may consult the updated [fiche for calculating CMEF complementary result indicator 15 \(CRI 15\) 'Renewable energy production from supported projects'](#) and the updated [fiche for answering CMEF Common Evaluation Question 13 \(CEQ 13\) 'To what extent have RDP interventions contributed to the supply and use of renewable sources of energy, of by-products, wastes, residues and other non-food raw material for purposes of the bioeconomy?'](#)

The presentation of the [CRI15 assessment in Estonia](#) is very informative about the range of challenges, proposed solutions, lessons learned and recommendations made in estimating the 'renewable energy production' complementary indicator.

Netting out is a policy on/policy off comparison at the macro level. The counterfactual is usually constructed at the start of the period or another year without the influence of any measures.

The [evaluation study of the impact of the CAP on climate change and greenhouse gas emissions \(European Commission, 2019\)](#) also examined, in Evaluation Question 14, the likely effect of a change in EU food, feed and biofuel production and the development of bio-economy on greenhouse gas emissions. Figure 47 (page 225) of the report is very illuminating as it portrays the trajectories of scenarios involving changes in food, feed and biofuel production and impacting EU GHG emissions reduction potential.

The 2010 evaluation study '[Impacts of the EU Biofuel Target on Agricultural Markets and Land Use - A Comparative Modelling Assessment](#)' used three different agricultural sector models to analyse the impacts of EU biofuel policies up to 2020. The study examined the impact of biofuel policies on commodity production, trade flows (biofuels, biofuel feedstocks and non-energy commodities) and prices with particular attention to the land use implications of these policies. The evaluation used the [AGLINK-COSIMO](#) (AGricultural LINKAge - COmmodity Simulation Model) the [ESIM](#) (European Simulation Model) and [CAPRI](#) (Common Agricultural Policy Regional Impact) models. Counterfactual scenarios assumed the absence of all internal EU biofuel policies supporting the production or consumption of biofuels, and thus ethanol and biodiesel are treated as competing unaided with petrol and diesel. Among others, results showed significant changes in cropping patterns within the EU at NUTS2 level. All three models agreed that the EU's production of biofuels would be much higher in 2020 than it would be without the policies. However, the models were not unanimous regarding which crop(s) will serve as the major source of EU-produced ethanol feedstock.

The use of the CAPRI model to evaluate the impacts of biofuel policy on various Socioeconomic land use and environmental indicators is very well presented in '[Methodology to assess EU Biofuel Policies: The CAPRI Approach](#)'.

A study on the '[Sustainable and optimal use of biomass for energy in the EU beyond 2020](#)' identified possible policy options and evaluated their socioeconomic and environmental impacts regarding a policy baseline. The evaluation used the [Green-X](#) and the [MULTIREG](#) models. The approach assumed achieving the EU 2030 climate and energy framework (40% GHG savings, at least 27% RES share and at least 27% energy efficiency). For all alternative policy options, a decline in biomass production is forecasted and a slight increase in GHG emission savings.

There are no evaluation studies at the micro level. Micro studies may miss the effect that the policies supporting biomass production have on land use in other parts of the world or, the leakage of GHG through land use change caused elsewhere.



<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Energy use in agriculture, forestry and food industry (PMEF, C.43)</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if the renewable energy production capacity is increasing due to CAP support, as measured by indicator I.12.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used. Member States may have relevant information in the progress reports under the Renewable Energy Directive. In addition, some proxies like the area and yield under energy crops, might be also useful.</p> <p>The energy sector is responsible for more than 75% of the EU's greenhouse gas emissions. Increasing the share of renewable energy across the different sectors of the economy is, therefore, an essential building block to reaching the EU's energy and climate objectives; cutting greenhouse gas emissions by at least 55% (compared to 1990) by 2030; and becoming a climate-neutral continent by 2050.</p> <p>Evaluators should check the National Climate and Energy Plans for specific targets set at the Member State level. Such targets, if exist, can be used as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>
<p><b>Extending the recommended factor of success</b></p>	<p>The assessment of the renewable energy production capacity can be complemented by looking at the energy consumption in the agri-food sector. Such a factor of success could be formulated as 'Energy consumption in the agri-food sector is decreasing' and could be assessed based on output and result indicators that follow the intervention logic of the CAP Strategic Plan and the following additional impact indicators (non-existing indicators which Member State might want to explore):</p> <ul style="list-style-type: none"> <li>➤ Energy savings per year due to CAP supported projects.</li> <li>➤ Energy savings as a percentage of the total energy requirements in the agri-food sector.</li> <li>➤ Percentage of renewables in the energy consumed in the agri-food sector.</li> </ul>

#### 4.2.1 The resilience of agriculture to climate change is increasing, due to CAP support

<p><b>Specific objective</b></p>	<p>S04 - To contribute to climate change mitigation and adaptation, including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as to promote sustainable energy.</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Climate change adaptation</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have the CAP Strategic Plan interventions supported the Union's agriculture, forestry and rural areas to reduce vulnerability, strengthen resilience, and enhance adaptive capacity to climate change?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The policy context for supporting, monitoring and assessing climate change adaptation in agriculture is very strong. The 2021 EU Climate Adaptation Strategy (<a href="#">'Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change'</a>) aims to contribute to a more climate-resilient Europe and enhance its preparedness and capacity to respond to the impacts of climate change at the local, regional, national and EU levels. The <a href="#">Paris Agreement</a> has reinforced the goal of 'enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change'.</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>Adaptation includes any action aiming to anticipate the adverse effects of climate change and prevent or minimise the damage they can cause or take advantage of opportunities that may arise. Thus adaptation accepts that climate change is here and already shows impacts on agriculture and forestry. Impacts concern increased and prolonged temperatures, the presence, more frequently than usual, of extreme weather phenomena such as droughts, floods and hailstorms, the spread of invasive species, including invasive pathogens, and many others. Of course, these subtle changes also offer opportunities to develop new activities such as new cultivations, the diversification of existing markets by, for example, introducing early or late sown cultivars, improving cost efficiency in greenhouses, supporting nature based solutions, and many other opportunities. However, the particular factor of success targets only resilience and thus, adaptation takes on two distinct meanings: First, to build short-term resilience, i.e. to build mechanisms which reduce the risk of damage from climate change and support ecological systems to show a rapid recovery. Short- and long-term strategies for resilience may comprise significantly different actions. For example, short-term strategies may include activities like diversification, improved Irrigation and water management, pest and disease management, weather forecasting and early warning systems as well as emergency response to disasters like floods, ensuring minimal damage and quick recovery.</p> <p>The long-term resilience strategy includes soil conservation and enhancement, agroforestry and biodiversity conservation, climate-adaptive crop varieties and long-term infrastructure. Education and capacity building is always a long-term strategy.</p> <p>FAO provides an excellent exposition of the practice of climate resilience in cropping, livestock and forestry systems and along the food value chain and biodiversity activities.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 – GAEC 1, 2 and 3</li> <li>&gt; Article 31 – Eco-scheme, Schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 70 – ENVCLIM, Environmental, climate-related and other management commitments</li> <li>&gt; Article 73, 74 – INVEST, Investments</li> <li>&gt; Article 76 – RISK, Risk management tools</li> <li>&gt; Article 47 – Sector interventions</li> <li>&gt; Article 77 – COOP, Cooperation</li> <li>&gt; Article 78 – KNOW, Knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potential positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, Basic income support for sustainability including round sum payment for small farmers</li> </ul> <p>Articles 31 and 70 interventions are more relevant to developing resilience through farm management practices, preserving genetic resources, and diversifying land use and agricultural production.</p> <p>Articles 73 and 74 interventions are more relevant to risk reduction activities such as early warning systems, protection systems such as anti-hail nets, irrigation water storage and efficiency investments, and other related infrastructure.</p> <p>Article 76 interventions contribute to emergency response to disasters and quick recovery.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.9: Improving the resilience of agriculture to climate change: Agricultural sector resilience progress indicator.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.9 (C.45) is a composite indicator of:</p> <ul style="list-style-type: none"> <li>&gt; the 'Agricultural factor income stability' from Context Indicator C.25 (I.3);</li> <li>&gt; the 'Crop production stability' using annual cereals production resilience from Eurostat;</li> <li>&gt; the 'Water exploitation index plus (WEI+)' with regional and monthly estimates for the agricultural sector from Context Indicator C.38 (I.17) supplemented with model results; and</li> <li>&gt; the 'Soil organic carbon in agricultural land' from Context Indicator C.40 (I.11), including regional change of modelled carbon stocks.</li> </ul> <p>See the <a href="#">fiche for Impact Indicator I.9</a>.</p>



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p><b>Issues concerning the indicator's calculation:</b></p> <p>The impact indicator is new, which is a caveat since there are no historical values and no experience in estimating or netting out the indicator. The composite indicator will be able to take a maximum value of 100%, indicating a good status of all evaluated components. Threshold values and related methodology will be defined by JRC component by component, based on the nature and values of the component.</p> <p>National Adaptation Plans (NAPs) identify medium- and long-term adaptation needs, informed by the latest climate science. In the EU, very detailed information on how to locate the latest NAP is provided by <a href="#">Reportnet</a> and submitted reports by <a href="#">Eionet</a>. Policies and measures for agriculture, soils, water and biodiversity are part of the NAPs.</p> <p>The evaluator may find very useful information in <a href="#">Climate ADAPT</a> which is 'The European Climate Adaptation Platform Climate-ADAPT', a partnership between the European Commission and the European Environment Agency (EEA). Climate-ADAPT aims to support Europe in adapting to climate change helping users to access and share data and information on:</p> <ul style="list-style-type: none"> <li>&gt; Expected climate change in Europe;</li> <li>&gt; Current and future vulnerability of regions and sectors;</li> <li>&gt; EU, national and transnational adaptation strategies and actions;</li> <li>&gt; Adaptation case studies and potential adaptation options;</li> <li>&gt; Tools that support adaptation planning.</li> </ul>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Indicator I.9 is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>For I.9, one approach may examine the effects and contribution of each one of its four components separately. Especially since three out of the four components of the indicator are themselves impact indicators (I.3, I.11, I.17). Thus, an evaluation could be based on the evaluation of the components and estimate their contribution to I.9.</p> <p>Very few works have attempted to evaluate the effects of agricultural policy on agriculture's adaptation building resilience. The counterfactual is usually constructed at the start of the period or another year without the influence of any measures to represent a policy-off situation. In certain circumstances, this is not possible and some evaluators simulate the baseline using appropriate models. If the use of specific models is not possible, evaluators may use information from research projects, such as the Climate-ADAPT, literature review and focus groups or interviews with key stakeholders.</p> <p>The <a href="#">evaluation study of the impact of the CAP on climate change and greenhouse gas emissions</a> (European Commission, 2019) used the <a href="#">GAINS</a> software. The analysis simulates the effect of the Pillar I greening measures (Environmentally Sensitive Permanent Grassland (ESPG), Environmental Focus Areas (EFAs)) and various RDP measures including agri-environmental and climate commitments. Evaluation Question 5 (ESQ5) asks "To what extent have CAP measures addressing climate action contributed to climate adaptation and/or climate resilience of the agricultural sector and society more in general? [e.g. ecosystem-based adaptation for flood control etc.]?". The study found that the First Pillar and Horizontal Regulations have some positive effects on the adaptation of EU holdings while outcomes in terms of the integration of adaptation are quite diverse for Pillar II.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Three impact indicators are already part of the estimation of I.9. In addition, and depending on the NAPs and the CAP Strategic Plan, the evaluation can examine the use of the following indicators:</p> <p><b>Impact and context</b></p> <ul style="list-style-type: none"> <li>&gt; Direct agricultural loss attributed to disasters (PMEF, C.45); and</li> <li>&gt; Water use in agriculture (PMEF, I.17 / C.37).</li> </ul> <p><b>Climate-ADAPT indicators</b></p> <p>EEA indicators relevant to agriculture, for example: Drought impact on ecosystems in Europe, economic losses from climate-related extremes, fatalities associated with floods, fatalities associated with wildfires, forest fires in Europe, soil moisture deficit, and use of freshwater resources in Europe.</p>



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if the resilience of agriculture to climate change is increasing, due to CAP support, as measured by the indicator I.9.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The EU has not endorsed any quantified targets for increasing adaptation and resilience in agriculture.</p> <p>Member States may express targets for building resilience and increasing adaption in their NAPs or NASs. Member States also may refer to adaptation in their CAP Strategic Plans. Interventions related to adaptation and resilience may be explained in the CAP Strategic Plans section 3.1.3 on 'Explanation on how to achieve the greater overall contribution set out in Article 105". Also, many Member States may provide national targets, if they exist, in section 3.1.4 'Explanation of how the environmental and climate architecture of the CAP Strategic Plan is meant to contribute to already established long-term national targets set out in or deriving from the legislative instruments referred to in Annex XI'.</p> <p>Such targets, if they exist, can be used as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>
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## 2. Specific Objective 5

### 5.1.1 Ammonia emissions in agriculture are decreasing due to CAP support

<p><b>Specific objective</b></p>	<p>S05 - To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Efficient management of natural resources</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions advanced air quality, including a reduction in chemical substances?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The policy context for air pollution includes the 2008 <a href="#">Ambient Air Quality (AAQ) Directive (2008/50/EC)</a>, which is considered the cornerstone of the EU's clean air policy as this sets concentration limits for pollutants in the air we breathe and the <a href="#">National Emission reduction Commitments Directive (NECD 2016/2284/EU)</a> which sets national emission reduction commitments for the Member States and the EU for five crucial air pollutants: nitrogen oxides (NOx), non-methane volatile organic compounds (NMVOCs), sulphur dioxide (SO2), ammonia (NH3) and fine particulate matter (PM2.5). These pollutants contribute to poor air quality, significantly negatively impacting human health and the environment. Member States draw specific Action Plans in relation to the NEC Directive '<a href="#">National Air Pollution Control Programmes</a>' and the AAQ Directive '<a href="#">Air Quality Plans and Short-Term Action Plans</a>'.</p> <p>A 2018 <a href="#">European Court of Auditors Report</a> pointed out that "Climate and energy, transport, industry, and agriculture are EU policies with a direct impact on air quality, and choices made to implement them can be detrimental to clean air" (IV[d], page 7). The same report concluded, "that EU action to protect human health from air pollution had not delivered the expected impact" (IV[d], page 7). Indeed, in 2020 European agriculture was responsible for 94% of all ammonia emissions, 26% of NMVOC (Non-Methane Volatile Organic Compounds) emissions, 27% of TSP (Total Suspended Particulates), 16% of PM10 (particulate matter containing particles of less than 10 µm in diameter), and 12% of nitrogen oxides (NOx) as NO2. In addition, the Royal Society documented <a href="#">the impacts of ammonia emissions from agriculture on biodiversity</a>.</p> <p>This factor of success can be used to assess the effectiveness of CAP support in reducing ammonia emissions and improving air quality.</p>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 47 – Sector interventions</li> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including lump sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – Crop-specific payment for cotton</li> <li>&gt; Article 72 – ASD, payment for area-specific disadvantages resulting from certain mandatory requirements</li> </ul> <p>Articles 31 and 70 interventions are more relevant to developing farm management practices for applying and using organic and inorganic fertilisers.</p> <p>Article 73 interventions are more relevant to installations for managing manure on the farm and purchasing machinery for spreading fertilisers, manure and slurry on the field in a way that reduces ammonia emissions.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.14 Improving air quality: Ammonia emissions from agriculture</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.14 (Context Indicator C.47): Improving air quality: Ammonia emissions from agriculture, includes two specific indicators:</p> <ol style="list-style-type: none"> <li>1. Total ammonia emissions</li> <li>2. Change in ammonia emissions compared to 2005</li> </ol> <p>See <a href="#">fiche for Impact Indicator I.14</a>. For an overview of the values of indicator C.47, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p> <p>The Member States report their total national emissions of ammonia every year to the European Commission via the Member States' national scale emission data reported under the existing requirements from the directive on the reduction of national emissions of certain atmospheric pollutants (<a href="#">2016/2284/EU</a>) and collected at the European Environment Agency.</p> <p>In the same submission, the Member States also report on:</p> <ul style="list-style-type: none"> <li>&gt; NO<sub>x</sub> (as NO<sub>2</sub>)</li> <li>&gt; NMVOC</li> <li>&gt; SO<sub>x</sub> (as SO<sub>2</sub>)</li> <li>&gt; PM<sub>2.5</sub></li> <li>&gt; PM<sub>10</sub>, and</li> <li>&gt; TSP</li> </ul> <p>These indicators also indicate agriculture's impact on air quality and help place the factor of success in the general context of air pollution and not only ammonia emissions.</p> <p>The majority of policy measures target:</p> <ol style="list-style-type: none"> <li>a. the management of land cover and residues, including tillage and mulching;</li> <li>b. fertilisation and application of fertilisers and manure;</li> <li>c. manure storage and processing; and</li> <li>d. interventions in livestock diets and housing.</li> </ol>



## Step 1: Calculation of the value of the main indicator

One way to calculate the indicator's value is to start by estimating the effect of policy on practices linked to air pollutant emissions. For example, the manure of how many animals is subject to composting due to new installations supported by Article 73. In the second stage, the quantified effect of farm practices may be translated into emissions using emission coefficients, scientific evidence or simulation models.

Several Member States implemented measures to reduce ammonia emissions and calculated indicator 'CRI 19' - reduced ammonia emissions, corresponding to indicator I.14 of the PMEF. The RDP in Flanders implemented several [technical measures to abate agricultural ammonia emissions](#). The steps taken to calculate indicator CRI 19 of the CMEF, including emission coefficients, were [presented in Good Practice Workshop 14](#) (GPW 14). In Austria, measures for the 'surface-near application of liquid farm manure', the 'animal welfare - grazing of livestock (cattle, sheep, goats)', 'investment support for animal welfare and improving the housing in littered, soft and dry areas with a continuous solid surface for lying down', and 'solid covering of slurry tanks' contributed to the reduction in ammonia emissions. A detailed presentation of the calculation of the indicator, including emission coefficients, challenges and solutions, is in [the GPW 14 report](#).

Emission factors (EF) are coefficients that quantify the emissions or removals per unit activity. The most common estimation approach combines information on the extent to which a management practice occurs (called activity data or AD) with EFs as emissions = AD x EF. Member States follow a tiered methodology for estimating emissions for national air pollutant emission inventories. Tier 1 methods are simple and are provided for all the sources and substances that Member States need to report. Tier 2 methods are more advanced and are only for key emission categories. Tier 3 approaches are the most elaborate and provide emission factors for key categories for which suitable techniques are available. The EMEP/EEA air pollutant emission inventory guidebook recommends using a Total Ammoniacal Nitrogen (TAN)-based approach (Tier 2 method) for the calculation of ammonia emission. To estimate the indicator, the evaluator should ensure that calculations are aligned with the methodology and EFs used by the Member State's [National Emission Reductions Commitments \(NEC\) Directive emission inventory data](#) and [the emissions database](#). Since 2017, the European Monitoring and Evaluation Programme (EMEP) also offers [gridded emissions data](#) at the resolution 0.1°x0.1° long-lat. As concerns EFs for agriculture, EMEP provides 2019 [updated guidelines](#) for 'Manure management', 'Crop production and agricultural soils', 'Use of pesticides and limestone' and 'Field burning of agricultural residues'. EMEP provides a [Manure Management N-flow tool](#) for the calculation of a Tier 2 approach for N compound emissions from 'Manure Management', 'Manure Applied to Soils', 'Urine and Dung Deposited by Grazing Animals' and 'Biological Treatment of Waste (anaerobic digestion at biogas facilities)'. Although designed for inventory compilers, the tool can be useful for evaluators when calculating the indicator and understanding the difference between Tier 1 and Tier 2 methodologies for EFs. Finally, EEA provides an [EF viewer](#) for selected EFs and abatement efficiencies ordered by the respective Nomenclature For Reporting (NFR) source category code.

The [Emissions Database for Global Atmospheric Research \(EDGAR\)](#) from the JRC offers (i) country/region- and sector-specific yearly profiles for all sources, (ii) time-dependent yearly profiles for sources with inter-annual variability of their seasonal pattern, (iii) country-specific weekly and daily profiles to represent hourly emissions, (iv) a flexible system to compute hourly emissions including input from different users. Activity data are sourced from FAOSTAT and Tier 1 and Tier 2 EFs from EMEPs guidelines.

When the emission factor of a specific farm practice is not included in the national inventory report, the guidelines or the EF viewer, the evaluator may utilise the [iMAP project](#). iMAP contains summaries of the impacts of various farm practices or agricultural technologies on ammonia emissions. For example, pig manure composting technologies reduced losses of total N and ammonia-N by 27.5% and 32.7%, respectively.

The [GAINS](#) model simulates GHGs and pollutants from their sources to their multiple effects and estimates the costs and impacts of policy interventions. GAINS Basics provide a rapid exploration of the critical features of pre-defined policy intervention scenarios, including:

- > macro-economic assumptions;
- > projected future energy use, agricultural activities, transport volumes and industrial production;
- > assumed emission controls;
- > costs of these measures;
- > resulting in air pollutant and greenhouse gas emissions;
- > ambient air quality; and
- > health and ecosystem impact indicators.

For alternative policy intervention scenarios, the evaluator can assess assumptions, measures, costs and benefits for different regions and economic sectors and compare them with policy targets.



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Impact Indicator I.14 is an indicator listed in Annex III of the Implementing Regulation.</p> <p>The <a href="#">fiche</a> for Impact Indicator I.14 refers to Member States' national submissions under the NEC Directive. The annual time series is complete from 1990 to 2020 for the Member States that reported to the Directive.</p> <p>The <a href="#">evaluation study of the impact of the CAP on climate change and greenhouse gas emissions</a> for the European Commission included an evaluation of ammonia reduction measures in the frame of GHG emissions reductions under Focus Area 5D.</p> <p>To the best of our knowledge, no evaluation attempted to net out the effects of CAP measures on air quality or ammonia concentrations. Various methods can be used to net out the effect observed through this indicator. The selection of the method depends on the availability of data. The interested reader may consult the <a href="#">tool created by the Evaluation Helpdesk</a> to assess indicator I.7 of the CMEF, which currently corresponds to I.10 (Greenhouse gas emissions from agriculture) of the PMEF and its second sub-indicator concerned with 'ammonia emissions from agriculture'.</p> <p>Also, the updated <a href="#">fiche for calculating CMEF Complementary Result Indicator 19</a> (CRI 19) 'Reduced ammonia emissions' and the updated <a href="#">fiche for answering CMEF Common Evaluation Question 14</a> (CEQ 14) 'To what extent have RDP interventions contributed to reducing GHG and ammonia emissions from agriculture?' may be consulted.</p> <p><a href="#">Adalibieke et al. (2021)</a> estimate NH<sub>3</sub> emissions as volatilisation rate (VR) multiplied by the quantity of N-fertilisers applied, whereas environmental conditions and fertilisation schemes are correction terms for VRs. Policy was reflected in four scenarios and a business-as-usual baseline and its effects were detected by piecewise linear regression that detected the breakpoints of NH<sub>3</sub> emission intensity. The models also were used to forecast the impact of future scenarios. The study found that optimisation of fertiliser management and food consumption in China could mitigate three-quarters of NH<sub>3</sub> emissions in 2050 and lower NH<sub>3</sub> emission intensity (emission divided by crop production) close to the EU and the United States. For Europe, <a href="#">Backes et al. (2016)</a> used the emission model SMOKE for Europe and the EDGAR database. The study compares ammonia concentrations for a political-, technical- and behavioural scenario to find that a reduction of ammonia emissions by 50% leads to a 24% reduction of the total PM<sub>2.5</sub> concentrations in northwest Europe.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Impact Indicator I.14 is related to the GHG emissions indicator I.10. Many of the farm practices targeting ammonia emissions also increase soil organic carbon (e.g. low or no tillage, use of nitrogen-fixing plants, use of cover plants, etc. or reduce ammonia emissions, especially from reduced use of chemical fertilisers, e.g. organic farming or on farm management of manure and careful application) or control the release of nitrous oxides.</p> <p>Context indicators are related to land use and land cover, livestock units and density and the use of fertilisers.</p> <ul style="list-style-type: none"> <li>&gt; Utilised Agricultural Area (PMEF, C.17)</li> <li>&gt; Livestock units (PMEF, C.23)</li> <li>&gt; Livestock density: the number of livestock units (LSU) per hectare of utilised agricultural area (PMEF, C.24)</li> <li>&gt; Farming intensity (PMEF, C.34)</li> <li>&gt; Gross nutrient balance on agricultural land (PMEF, C.39)</li> <li>&gt; Eurostat: Consumption of inorganic fertilisers (AEI_FM_USEFERT). Warning: This is the quantity consumed (purchased), not applied.</li> <li>&gt; The National and EU Implementation Reports (NIR)<sup>6</sup> and the CRF<sup>7</sup> (Tables 3.D and 3.G-1) are good sources reporting quantities of nitrogen within categories of inorganic and organic N fertilisers and other activities and amounts of carbon-containing fertilisers.</li> <li>&gt; Farm Accountancy Data Network (FADN): Variable SE295 records expenditure for Fertilisers but not quantities, except in some Member States.</li> </ul>

<sup>6</sup> National Inventory Report – a report containing transparent and detailed information on the annual GHG emissions inventory.

<sup>7</sup> Common reporting format (CRF) tables – a series of standardized data tables containing mainly quantitative information about the annual GHG emissions inventory.



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if ammonia emissions in agriculture are decreasing, due to CAP support, as measured by the indicator I.14.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The main international legal framework for limiting, progressively reducing and preventing air pollution is the Convention on Long-Range Transboundary Air Pollution (LRTAP). LRTAP was agreed in Geneva in 1979 and was the first international legally binding instrument to deal with air pollution problems on a broad regional basis. Compliance is monitored by the UN Economic Commission for Europe (UNECE). It has been extended by eight specific protocols, one of them being the Gothenburg Protocol (Multicomponent Protocol) on the prevention of acidification, eutrophication and ground-level ozone, revised in 2012. The Gothenburg Protocol concerns the effects of sulphur dioxide, nitrogen oxides, ammonia and volatile organic compounds (VOCs) and ozone and thus has a cross-cutting approach. The 2012 revision included national emission reduction commitments to be achieved by 2020 and beyond. These emission reduction targets are in Table B of the new <a href="#">NEC Directive</a> (EU 2016/2284) for ammonia and PM2.5 and 2020-2029 and 2030 and beyond. Of course, agriculture is not the sole contributor to ammonia emissions, but it is the largest. <a href="#">EEA</a> reports and analyses the state of play of achievement of the 2020-2029 emission reduction commitments by pollutant each year.</p> <p>If such targets exist at the national level, they can be used as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p> <p>Interpretation of results must take into account one significant caveat related to the effectiveness of ammonia emission reduction measures. Most measures that reduce ammonia emissions also affect other impact indicators, positively or negatively. For example, plastic film and biodegradable mulching reduce ammonia emissions while decreasing soil erosion, increasing water retention, declining water use and increasing crop yields but may increase nitrous oxide and GHG aggregate emissions. The same holds for measures not primarily intended to affect ammonia emissions. For example, nitrification inhibitors aim to reduce nutrient leaching and increase crop yields. However, they are documented to increase ammonia emissions and decrease GHG emissions, at least concerning nitrous oxides. As such, the evaluator must be aware that the calculation of effectiveness does not consider unintended or knock-on effects. This may bias any efficiency estimates or cost-benefit analysis of measures since the results address only ammonia reduction and not other environmental parameters. These effects should be judged on a case-by-case basis and if it is likely to be significant they should be highlighted and described in qualitative terms.</p>
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### 5.2.1 Nutrient balance on agricultural land is improving due to CAP support

<p><b>Specific objective</b></p>	<p>S05 - To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Efficient management of natural resources</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions fostered sustainable development and effective management of water resources, including a reduction in chemical dependency?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>Soil and water are the two necessary resources for agriculture. Agriculture impacts water resources, mainly due to nutrients applied in the fields, through fertilisation, and chemical substances used for plant protection. Excess nutrients can leak into water courses and aquifers, resulting in eutrophication and affecting aquatic biodiversity.</p> <p>This factor of success deals with the major cause of nutrient pollution, which is the presence of excess nutrients, nutrients available to leak, in the fields. Factor of success 5.2.2 deals with nutrients, especially nitrogen, once transported (migrated) to water environments. Thus, the two factors of success (5.2.1 and 5.2.2) examine different parts of the water quality nexus, i.e. terrestrial and water, together provide an integrated perspective of nutrient deposition on land and water by agriculture.</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>The major policies regulating water quality and related to pollution from agricultural nutrients are:</p> <ul style="list-style-type: none"> <li>› the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (often referred to as the Water Framework Directive); and the</li> <li>› Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (often referred to as the Nitrates Directive).</li> </ul> <p>They are both essential in policy evaluation because they set up management tools (Management Plans in the case of the Water Framework Directive and Action Plans for Nitrate Vulnerable Zones), which may include measures and prohibitions or constraints.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>› Article 12 – Relevant GAEC standards (especially GAEC 4 ‘Establishment of buffer strips along water courses’, GAEC 5 ‘Tillage management, reducing the risk of soil degradation and erosion, including consideration of the slope gradient’, GAEC 6 ‘Minimum soil cover to avoid bare soil in periods that are most sensitive’, and GAEC 7 ‘Crop rotation in arable land, except for crops growing underwater’)</li> <li>› Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>› Article 47 – Sector interventions</li> <li>› Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>› Article 72 – ASD, area-specific disadvantages resulting from certain mandatory requirements</li> <li>› Article 73, 74 – INVEST, investments</li> <li>› Article 77 – COOP, cooperation</li> <li>› Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>› Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>› Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>› Article 30 – CIS-YF, complementary income support for young farmers</li> <li>› Article 32 – coupled income support interventions</li> <li>› Article 36 – crop-specific payment for cotton</li> </ul> <p>Articles 31 and 70 interventions are more relevant to support farm management practices for low fertiliser use, the use of slow-release fertilisers that prohibit immediate leakage, intercropping or rotating with leguminous plants, and many other farm practices aiming to reduce the amount of fertiliser, the distribution and temporal disposal of fertilisers, or substitute chemical fertilisers with more efficient green fertilisation approaches.</p> <p>Article 72 for area payments to offset compliance costs with River Basin Management Plans. Articles 73 and 74 interventions are more relevant to investments for the more efficient application of fertilisers and irrigation to control fertilization and leakage of nutrients.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.15: Improving water quality: Gross nutrient balance on agricultural land.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.15 represents two of the three specific indicators of Context Indicator C.39. This indicator is composed of three specific indicators:</p> <ul style="list-style-type: none"> <li>› Gross nutrient balance – nitrogen</li> <li>› Gross nutrient balance – phosphorus</li> <li>› Nitrates in groundwater</li> </ul> <p>I.15 consists of the first two: gross nutrient balance – nitrogen, and gross nutrient balance – phosphorus.</p> <p>See <a href="#">fiche for Impact Indicator I.15</a>. For an overview of the values of indicator C.39, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p>



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Eurostat constructs the indicators based on data voluntarily reported by the Member States. Thus, several time series have significant data gaps or delays. The estimation of each nutrient indicator follows a nutrient input-output approach.</p> <p>The majority of policy measures aim to:</p> <ol style="list-style-type: none"> <li>increase the efficiency of applied nutrients or reduce the overall use of inputs, i.e. the better utilisation of nutrients by plants and reduction in nutrients available to leach, filtrate or remain on land;</li> <li>substitute inorganic fertilisers with nitrogen fertilisation provided by crop rotation with nitrogen-fixing crops, mulching, etc.</li> </ol> <p>One way to calculate the indicator's value is to estimate the effect of policy on practices linked to nutrient inputs or outputs and then estimate the impact on nutrient balance.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Impact Indicator I.15 is an indicator listed in Annex III of the Implementing Regulation.</p> <p>The '<a href="#">Evaluation of the impact of the CAP on water</a>' includes the criterion of effectiveness in the Evaluation Question: "Quality of water - to what extent and in what way have the cap instruments and measures addressing sustainable management of natural resources and climate action affected water management, protection and use by agriculture a) by agricultural practices and farm types and b) by regions or river basins?".</p> <p>Various methods can be used to net out the effect observed through this indicator. The selection of the method depends on the availability of data. Interested readers may consult the '<a href="#">Guidelines for Assessing RDP Achievements and Impacts in 2019</a>' and the <a href="#">tool</a> created by the Evaluation Helpdesk to assess indicator <a href="#">I.11 - Water Quality</a> of the CMEF, which partly corresponds to I.15 of the PMEF.</p> <p>The <a href="#">iMAP project</a> contains a wide range of farm practices related to 'nutrient leaching and runoff' with a range of corresponding impact coefficients. Thus various supported farm practices can be converted into the potential reduction of impacts. For example, one meta-analysis included in iMAP has shown that cover cropping (either legumes or non-legumes) showed significant efficiency in reducing nutrient (total nitrogen, inorganic nitrogen, total phosphorous and dissolved phosphorous) losses from tree-crops fields to a degree between 55-65%.</p> <p>The most significant caveat associated with this indicator is related to the time lag between cause and effect in nutrient management. Scientists argue that in certain environments and for nutrients like phosphorous, the current observations may result from activities implemented eight years ago and thus unrelated to contemporary policy measures.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Impact Indicator I.15 is related to Impact Indicator I.16 (Reducing nutrient leakage: Nitrates in groundwater - percentage of groundwater stations with nitrates concentration over 50 mg/l as per the Directive 91/676/EEC) since excess balance is the pre-requisite to surface leakage or filtration. In addition, one may consider the following:</p> <ul style="list-style-type: none"> <li>&gt; Farming intensity, where the inputs considered for intensity classification include fertilisers, pesticides, other crop protection products and purchased feed (PMEF, C.34);</li> <li>&gt; Water use in agriculture (PMEF, I.17/C.37).</li> </ul> <p>The use of fertilisers is a good indicator of the trends in excess nutrients, given UAA. Data sources for fertilisers include:</p> <ul style="list-style-type: none"> <li>&gt; Eurostat - Consumption of inorganic fertilisers (AEI_FM_USEFERT). Warning: This is the quantity consumed (purchased), not applied.</li> <li>&gt; The National and EU Implementation Reports (NIR)<sup>8</sup> and the CRF<sup>9</sup> (Tables 3.D and 3.G-1) are good sources reporting quantities of nitrogen within categories of inorganic and organic nitrogen fertilisers and other activities and amounts of carbon-containing fertilisers.</li> <li>&gt; Farm Accountancy Data Network (FADN) - Variable SE295 records expenditure for fertilisers but not quantities, except in some Member States.</li> <li>&gt; Irrigable area is related to the use of fertilisers (PMEF, C.18).</li> <li>&gt; Agricultural area under organic farming (PMEF, C.33).</li> </ul> <p>Pesticide residues in soils to account for dependency on chemical pesticides and substances are provided by a relatively recent study on '<a href="#">Pesticide residues in European agricultural soils</a>'.</p>

<sup>8</sup> National Inventory Report - a report containing transparent and detailed information on the annual GHG emissions inventory.

<sup>9</sup> Common reporting format (CRF) tables - a series of standardized data tables containing mainly quantitative information about the annual GHG emissions inventory.



<b>Step 4: Assessment of the factor of success</b>	<p>According to the definition of the factor of success, effectiveness is achieved if the nutrient balance on agricultural land is improving due to CAP support, as measured by indicator I.15.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>As part of the Farm to Fork strategy – one of the central pillars of the European Green Deal – the European Commission aims to see a reduction in nutrient losses of at least 50% by 2030 while ensuring no deterioration in soil fertility. This is expected to lead to a reduction in fertiliser use of at least 20%. The common agricultural policy (CAP) is the key tool in supporting the sustainable use of fertilisers in agriculture, ensuring that farmers can maintain productivity while also reducing the harmful effects of pollution.</p> <p>Evaluators may use these targets as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>
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## 5.2.2 Nutrient leakage is decreasing due to CAP support.

<b>Specific objective</b>	S05 – To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Efficient management of natural resources
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions fostered sustainable development and effective management of water resources, including a reduction in chemical dependency?
<b>Rationale for the use of this factor of success</b>	<p>Soil and water are the two necessary resources for agriculture. Agriculture impacts water resources, which result mainly from nutrients deposited in the fields through fertilisation. As a result, the fields' excess nutrients can leak and transport through water and sediments to water courses and aquifers.</p> <p>The major policies regulating water quality and are related to pollution from agricultural nutrients and chemical plant protection substances are:</p> <ul style="list-style-type: none"> <li>&gt; the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (often referred to as the Water Framework Directive (WFD)); and the</li> <li>&gt; Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (often referred to as the Nitrates Directive).</li> </ul> <p>They are both essential in terms of policy evaluation because they set up management tools (management plans in the case of the WFD and action plans for Nitrate Vulnerable Zones (NVZs)), which may include measures and prohibitions or constraints.</p> <p>The CAP interventions target</p> <ul style="list-style-type: none"> <li>&gt; nutrient balance on the field (see Impact Indicator I.15) to avoid excess nutrients; and</li> <li>&gt; to restrict and cut off the way nutrients travel from the field to water courses and filtrate to aquifers with water or sediments.</li> </ul> <p>In addition, water quality is affected by conditionalities that are presented below.</p> <p>This factor of success deals with nitrates (NO<sub>3</sub>) or nitrogen (N) in groundwaters and rivers. Agriculture is not the only source of nitrogen pollution. It may be also due to wastewater, landfills, animal feedlots, septic systems, or urban drainage. Therefore, the following aspects should be examined before attributing nitrogen pollution to agriculture:</p> <ul style="list-style-type: none"> <li>&gt; the land is used mostly for agriculture; and</li> <li>&gt; adequate measures have been taken to prevent leaks from landfills, septic systems or urban drainage.</li> </ul>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>› Article 12 – Relevant GAEC standards (especially GAEC 4 ‘Establishment of buffer strips along water courses’, GAEC 5 ‘Tillage management, reducing the risk of soil degradation and erosion, including consideration of the slope gradient’, GAEC 6 ‘Minimum soil cover to avoid bare soil in periods that are most sensitive’, and GAEC 7 ‘Crop rotation in arable land, except for crops growing underwater’)</li> <li>› Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>› Article 47 – Sector interventions</li> <li>› Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>› Article 72 – ASD, area-specific disadvantages resulting from certain mandatory requirements</li> <li>› Article 73, 74 – INVEST, investments</li> <li>› Article 77 – COOP, Cooperation</li> <li>› Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>› Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>› Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>› Article 30 – CIS-YF, complementary income support for young farmers</li> <li>› Article 32 – CIS, coupled income support interventions</li> <li>› Article 36 – CAP Strategic Plans, crop-specific payment for cotton</li> <li>› Article 71 – ANC, payment for natural or other area-specific constraints</li> </ul> <p>Articles 31 and 70 interventions are more relevant to support farm management practices for low fertiliser use, the use of slow-release fertilisers that prohibit immediate leakage, intercropping or rotating with leguminous plants, and many other farm practices aiming to reduce the amount of fertiliser, the distribution and temporal disposal of fertilisers, or substitute chemical fertilisers with more efficient green fertilisation approaches.</p> <p>Article 72 for area payments to offset compliance costs with River Basin Management Plans.</p> <p>Articles 73 and 74 interventions are more relevant to investments for the proper application of fertilisers and the proper irrigation measures to control fertilisation and leakage of nutrients.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.16: Reducing nutrient leakage: Nitrates in groundwater – percentage of groundwater stations with nitrates concentration over 50 mg/l as per Directive 91/676/EEC.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.16 is the third specific indicator of Context Indicator C.39. C.39 is composed of three specific indicators:</p> <ul style="list-style-type: none"> <li>› Gross nutrient balance – nitrogen</li> <li>› Gross nutrient balance – phosphorus</li> <li>› Nitrates in groundwater</li> </ul> <p>Data for the indicator come from the Nitrates Directive reporting system (DG Environment): national and river basin level. Also, the European Environment Agency (EEA) – ‘<a href="#">Waterbase</a>’ is a downloadable database on the status and quality of Europe’s rivers, lakes, groundwater bodies and transitional, coastal and marine waters, on the quantity of Europe’s water resources, and on the emissions to surface waters from point and diffuse sources of pollution.</p> <p>The calculation of the indicator is straightforward if the appropriate measures for nitrates exist at a relatively stable number of sampling stations. See the <a href="#">Fiche for Impact Indicator I.16</a>.</p> <p>For an overview of the values of the indicator C.39, both at the EU level and per Member States see the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p>



**Step 2: Estimation of the net effect of the CAP support on the value of the main indicators**

Impact Indicator I.16 is not listed in Annex III of the Implementing Regulation. Therefore, there is no obligation to quantify the net contribution of CAP support to the change in the value of the indicator. Attributing policy measures to observed nitrate concentrations or netting out the indicator would be very difficult due to diffused pollution from various sources, including household and industrial waste. That said, it is considered a good practice for the Member States to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.

The impact assessment '[Evaluation of the impact of the CAP on water](#)' includes the criterion of effectiveness in the Evaluation Question: "To what extent have the combined cap instruments and measures overall contributed to the improvement/deterioration of performance of farming practices in respect of water in achieving eu water-related policy objectives, in particular the good status of water bodies?" (page 97).

The interested reader may consult the [tool created by the Evaluation Helpdesk](#) to assess indicator [I.11 - Water Quality](#) of the CMEF, which partly corresponds to I.16 of the PMEF.

An approach to net out the concentration of nitrates in sampling stations has been attempted at spatial levels higher than the farm. An example has been presented in the [Good Practice Workshop "Approaches to assess environmental RDP impacts in 2019"](#). The corresponding academic publication (J. Michalek, 2022) can be found [here](#).

There are two critical issues associated with this indicator. First is attributing the effects to farm and livestock activities, not other pollution sources contributing nitrates to groundwater. These additional activities may include household wastes from non-septic tanks or sewage leaks, industrial wastes, etc.

Second, is attributing the effects of farm practices to the observed situation because of the time lag between cause and effect in nutrient management. Scientists argue that, in particular soil and geological environments, the observations may result from activities unrelated to the spatial unit of observation, especially when the groundwater bodies are complex or may be due to measures implemented in the past and thus may be, partially or totally, unrelated to contemporary farm practices.

**Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant**

Impact Indicator I.16 is related to Impact Indicator I.15 (Improving water quality: Gross nutrient balance on agricultural land) since excess balance is the prerequisite to leakage. In addition, we propose the following indicators:

- > Percentage of water bodies with detected priority substances from agriculture per type of water body: Data from EEA and the Water Quality ICM.
- > Percentage of water bodies in good chemical status by surface and groundwater: Data from EEA WISE Water Framework Directive Database.
- > Percentage of water bodies in good and above ecological status for surface water: Data from EEA WISE Water Framework Directive Database.
- > Biochemical oxygen demand in rivers: data from Eurostat: SDG\_06\_3.0
- > The Nitrate Vulnerable Zones: data from Eionet, Central Data Repository (CDR) - Nitrates Directive Report (91/676/EEC) and EEA: WISE WFD protected area spatial data sets.
- > Farming intensity, where the inputs considered for intensity classification include fertilisers, pesticides, other crop protection products and purchased feed (PMEF, C.34).

The use of fertilisers is a good indicator of the trends in excess nutrients, given the agricultural area in which they are applied. Data sources for fertilisers include:

- > Eurostat - Consumption of inorganic fertilisers (AEI\_FM\_USEFERT). Warning: This is the quantity consumed (purchased), not applied.
- > The National and EU Implementation Reports (NIR) and the CRFs (Tables 3.D and 3.G-1) are good sources reporting quantities of nitrogen within categories of inorganic and organic nitrogen fertilisers and other activities and amounts of carbon-containing fertilisers.
- > Farm Accountancy Data Network (FADN): Variable SE295 records expenditure for Fertilisers but not quantities, except in some Member States.
- > Irrigable area is related to the use of fertilisers (PMEF, C.18).
- > Agricultural area under organic farming (PMEF, C.33).



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if nutrient leakage is decreasing due to CAP support, as measured by indicator I.16.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The Nitrates Directive aims to protect water quality across Europe by preventing nitrates from agricultural sources that pollute ground and surface waters and by promoting good farming practices without adopting a quantitative target other than the threshold limits of nitrogen concentration for characterising groundwater at risk. Although the WFD aims to achieve good ecological and chemical status for all surface and groundwater bodies, it does not set any specific targets for bodies failing to achieve that due to high nitrate concentrations. Of course, nitrate is the most common pollutant causing failure to achieve good groundwater chemical status <a href="#">affecting 18% of the groundwater area</a>.</p> <p>If any targets regarding the levels of nitrates in groundwaters exist at the national level, can be used as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>
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### 5.2.3 Pressure on natural water reservoirs is decreasing, due to CAP support.

<p><b>Specific objective</b></p>	<p>S05 - To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Efficient management of natural resources</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have the CAP Strategic Plan interventions fostered sustainable development and effective management of water resources, including a reduction in chemical dependency?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>Agriculture is the largest water consumer in most areas and is responsible for putting pressure on water resources. Especially in arid and semi-arid regions, irrigation competes with other water uses such as urban and tourism and is the most strong constraint for developing agriculture. On the other hand, some traditional irrigation systems create and sustain diverse landscapes and essential habitats.</p> <p>The primary policy regulating water abstraction and use is the Water Framework Directive (the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy and its transposition into national laws).</p> <p>Managing water abstraction and regulating the pressure on natural water reservoirs also is an effective climate change adaptation strategy. Agriculture should take measures and adapt to a more intelligent use of resources without increasing pressure on surface waters and aquifers in areas with forecasted severe impacts of climate change on the availability of water resources.</p> <p>This factor of success deals with the pressure exercised by all agricultural-related activities, including the complete irrigation water abstraction, storage, transportation and on-farm water consumption network, as well as consumption for any other agricultural use such as livestock, cleaning, on-farm value-adding activities and the water consumed by the food and wood manufacturing industries. Of course, CAP support is also directed to non-agricultural activities that may consume water, for example, the various types of agro-tourism, small power generation plants, etc. However, water consumption by projects outside agriculture is small compared to the consumption by agricultural activity. Thus, this FoS will deal exclusively with water consumption pressures originating only from agricultural activity.</p>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 47 – Sector interventions</li> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 72 – ASD, area-specific disadvantages resulting from certain mandatory requirements</li> <li>&gt; Article 73, 74 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – CAP Strategic Plan, crop-specific payment for cotton</li> </ul> <p>Articles 31 and 70 interventions are more relevant to support farm management practices for decreasing water demand by increasing the capacity of the soil to retain water, reducing evaporation, using tensiometers for precise irrigation, making better use of rain-fed cultivars, and many other farm practices aiming to reduce water use.</p> <p>Article 72 for area payments to offset compliance costs with River Basin Management Plans.</p> <p>Articles 73 and 74 interventions are more relevant to investments for reducing water leakages in the whole water network, making more efficient use of water on the farm, including irrigation, and increasing on-farm water storage and re-use or the use of reclaimed water.</p>
<p><b>Evaluation topic</b></p>	<p>Environmental and climate architecture:</p> <p>How are interventions, conditionalities (GAECs), definitions and eligibility criteria coordinated to reduce emissions?</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.17: Reducing pressure on water resource: Water Exploitation Index Plus (WEI+).</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.17 is the Water Exploitation Index (WEI+), which, as an impact indicator for the CAP, can support the derivation of two specific indicators:</p> <ol style="list-style-type: none"> <li>1. A specific indicator expressing the relative pressure of agriculture compared to other economic sectors, at the national level and on an annual basis.</li> <li>2. A specific indicator expressing the change over time in the volume of water used by agriculture, at the national level and on an annual basis.</li> </ol> <p>The WEI+ provides an estimated measure of the total water use as a percentage of the renewable freshwater resources (groundwater and surface water) for a given territory and period. <a href="#">EEA</a> provides access to an active temporal and spatial database of the WEI+ indicator. EEA provides the indicator's <a href="#">latest assessment</a>, especially a detailed methodological section. See <a href="#">Fiche for Impact Indicator I.17</a>.</p> <p>This indicator constitutes an important and distinct focus shift from the previous programming period, where indicator I.10 “Water abstraction in agriculture” referred to “the volume of water which is applied to soils for irrigation purposes”.</p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Impact Indicator I.17 is not listed in Annex III of the Implementing Regulation. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the MS to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>Agricultural policy measures target the nominator of the WEI+ indicator, i.e. (abstractions – returns). Interventions in the extraction and reuse, storage, and distribution network or on-farm collection, utilization, and storage affect water abstraction and increase water efficiency. Farm practices can improve the soil's water retention capacity or reorient the production towards less demanding cultivars.</p> <p>The <a href="#">iMAP project</a> contains a wide range of farm practices related to 'water use' with a range of corresponding impact coefficients. Thus various supported farm practices can be converted into the potential reduction of impacts. For example, a cover crop significantly increased the Water Use Efficiency (WUE) of the succeeding crop by 5.0% compared to no cover crop. The increase was contributed primarily by a legume cover crop, with limited effect of non-legume and mixture of legume and nonlegume cover crops. Cover crops decreased evapotranspiration of the succeeding cash crop by 6.2%.</p> <p>Netting out the indicator may be performed at the farm or higher spatial levels. An example of farm-level evaluation of the CMEF I.10 indicator can be found in the <a href="#">Rural Evaluation Factsheet</a> prepared by the Evaluation Helpdesk, which has been presented in the <a href="#">Good Practice Workshop "Approaches to assess environmental RDP impacts in 2019"</a> and its analytical presentation.</p> <p>Another approach for the evaluation of the net contribution of RDP to the reduction of water abstractions (<a href="#">Soulis et al., 2020</a>) is based on a spatially distributed, continuous hydrological model supplemented with IACS and remote sensing data. This approach is most relevant for countries characterised by relatively small farms, vast spatial and temporal variability and severe data scarcity.</p> <p>The impact assessment '<a href="#">Evaluation of the impact of the CAP on water</a>' includes the criterion of effectiveness in the Evaluation Question: "Quantity of water - to what extent and in what way have the CAP instruments and measures addressing sustainable management of natural resources and climate action affected water management, protection and use by agriculture a) by agricultural practices and farm types and b) by regions or river basins?" (page 83).</p> <p>The interested reader may consult the <a href="#">tool created by the Evaluation Helpdesk</a> to assess indicator I.10 of the CMEF, which partly corresponds to I.17 of the PMEF. I.10 of the CMEF focused on water use in irrigation and did not usually consider water use in other agricultural activities or the food and wood manufacturing industries.</p> <p>Netting out may be very involved, at least at the level of assessing the effects of the interventions on the individual farm or evaluating the impacts on broader spatial scales.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>In addition to I.17, Common Context Indicator C.18 – Irrigable area may be of use as it provides, together with cultivations, an indication of demand for irrigation water.</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if pressure in natural water reservoirs is decreasing, due to CAP support, as measured by the indicator I.17.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>Assessing water scarcity conditions across Europe is of utmost importance. This assessment should be at the lowest and finest spatial scale available, preferably that of the river basin. Higher spatial scales mask the extent or intensity of the problem for specific areas or seasons. WEI+ can assess the sustainability of water use and consumption because it measures the percentage of the renewable freshwater resources available at the river sub-basin level, and by each of the four year's four quarters, WEI+ values above 20% indicate that water resources are under stress and, therefore water scarcity conditions prevail; values above 40% suggest that stress is severe and freshwater use is unsustainable. Thus, a policy target for agriculture may contribute towards not having a river basin with above 40% WEI+ for a prolonged period.</p> <p>Evaluators may use such targets as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>



## 5.2.4 The use and risk of chemical pesticides and the use of more hazardous pesticides is decreasing due to CAP support

<b>Specific objective</b>	S05 - To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Efficient management of natural resources
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions fostered sustainable development and effective management of water resources, including a reduction in the dependency on chemical pesticides?
<b>Rationale for the use of this factor of success</b>	<p>The policy context for the sustainable use of pesticides is Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009, establishing a framework for community action to achieve the sustainable use of pesticides (often referred to as the SUD Directive). The SUD application is encapsulated in the <a href="#">National Action Plans</a> of the Member States, which include the specific activities to be undertaken in each Member State. A cornerstone of the directive is the promotion of Integrated Pest Management (IPM), as in Annex III to the SUD.</p> <p>Waters are regularly tested for pesticides, many on the list of priority substances. Of course, detecting pesticides in water implies that pesticides were also present in soils and transported through water or sediments. There are regular tests for both domestically produced and imported food. Detecting pesticides above threshold levels in soils, waters and ultimately in food or feedstuff is most frequently due to wrong application, old and poorly calibrated machinery and inaccurate information. One should differentiate between activities and farm practices aiming to decrease pests and diseases and activities that reduce pesticide use. Both end up reducing the need for pesticides. The former includes cover and catch crops, crop rotation, green manure, field margins and many others. The latter refers to adopting low-input agricultural systems, including organic agriculture.</p> <p>This factor of success can be used to assess the effectiveness of CAP support in the reduction of pollutants, caused by chemical pesticides, and the improvement of water quality</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 47 - Sector interventions</li> <li>&gt; Article 70 - ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73, 74 - INVEST, investments</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 - BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 - CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 - CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 32 - CIS, coupled income support interventions</li> <li>&gt; Article 36 - CSPP, crop-specific payment for cotton</li> <li>&gt; Article 71 - ANC, payment for natural or other area-specific constraints</li> </ul> <p>Articles 31 and 70 interventions are more relevant to adopting farm practices that decrease pesticide use or adopt low intensity agricultural systems or introduce biocontrol.</p> <p>Article 73 interventions are more relevant to investments in machinery and devices needed to apply IPM or organic agriculture or purchasing safer spraying machinery, etc.</p>



<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.18: Sustainable and reduced use of pesticides: Risks, use and impacts of pesticides.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Impact Indicator I.18 consists of three specific indicators:</p> <ol style="list-style-type: none"> <li>1. Sales of pesticides</li> <li>2. The Harmonised Risk Indicator 1</li> <li>3. Sales of more hazardous pesticides</li> </ol> <p>Sales of pesticides for each of the categories, 'fungicides and bactericides', 'herbicides, haulm destructors and moss killers', 'insecticides and acaricides', 'molluscicides', 'plant growth regulators', and 'other plant protection products'. Harmonised Risk Indicator 1 refers to the risk associated with pesticides based on the placing on the market of pesticides. Sales of more hazardous pesticides refer to active substances that meet the cut-off criteria (points 3.6.2. to 3.6.5 and 3.8.2 of Annex II to Regulation (EC) 1107/2009) or active substances approved as candidates for substitution in accordance with the criteria in point 4 of that Annex.</p> <p><a href="#">Fiche for Impact Indicator I.18</a></p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Impact Indicator I.18 is not listed in Annex III of the Implementing Regulation. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>The three specific indicators do not provide adequate data for a statistical time-series analysis of the net effects. Interventions in decreasing pests and diseases, which, in turn, reduce the need to use pesticides, seem to be the most fruitful agronomic approach. For many farm management practices, agronomic evidence exists of how farm management supports reducing pests and diseases. The <a href="#">iMAP project</a> contains a wide range of farm practices related to the impact of 'decreasing pests and diseases' and 'decreasing pesticide use'. Thus, various supported farm practices can be converted into the potential reduction of effects. However, this is difficult and risky since the use of pesticides is related to the seriousness of the problem, the weather conditions and many other factors. For example, cover and catch crops decrease pests and weeds but there is no evidence that they increase natural enemies of pests.</p> <p>The impact assessment '<a href="#">Evaluation of the impact of the CAP on water</a>' includes the criterion of effectiveness in the Evaluation Question: "To what extent and in what way have the CAP instruments and measures addressing sustainable management of natural resources and climate action affected water management, protection and use by agriculture a) by agricultural practices and farm types and b) by regions or river basins?" (page 72). Different approaches are used depending on the pressure analysed and the spatial level of available data. However, most approaches depend on case studies and mixed quantitative-qualitative approaches in the river basin district.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>The following indicators can be examined, which set the context for Impact Indicator I.18:</p> <ul style="list-style-type: none"> <li>&gt; Percentage of water bodies with detected priority substances from agriculture per type of water body: Data from EEA and the Water Quality ICM.</li> <li>&gt; Percentage of water bodies in good chemical status by surface and groundwater: Data from EEA WISE Water Framework Directive Database.</li> <li>&gt; Farming intensity, where the inputs considered for intensity classification include fertilisers, pesticides, other crop protection products and purchased feed, (PMEF, C.34).</li> <li>&gt; Agricultural area under organic farming (PMEF, C.33)</li> <li>&gt; National information about the adoption of IPM or other low intensity agricultural systems.</li> </ul>



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if the use and risk of chemical pesticides and the use of more hazardous pesticides decrease due to CAP support, as measured by indicator I.18.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The Farm to Fork strategy includes two targets related to pesticide use:</p> <ol style="list-style-type: none"> <li>1. Target 1: to reduce by 50% the use and risk of chemical pesticides by 2030.</li> <li>2. Target 2: to reduce by 50% the use of more hazardous pesticides by 2030.</li> </ol> <p>The targets can benchmark the success of the CAP Strategic Plan for reducing chemical and hazardous pesticides and be used as a point of comparison for estimating the magnitude of the effect.</p>
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### 5.3.1 Soil erosion is decreasing due to CAP support

<p><b>Specific objective</b></p>	<p>S05 - To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Efficient management of natural resources</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have the CAP Strategic Plans fostered sustainable development and effective management of soil resources?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>Soil management has important direct links with S04 (carbon sequestration), S05 (water purification and infiltration, nutrient regulation and pest control) and S06 with soil biodiversity and the provision of, mainly, regulating ecosystem services. The major threats to European soils from agriculture and forestry include a decline in organic matter content, erosion (by wind and water), compaction, soil sealing, salinisation, acidification, declines in soil biodiversity, desertification, landslides and contamination. Soil erosion is a grave threat since every year about one billion tonnes of soil are washed away by erosion (<a href="#">COM(2021), 699 final, page 1</a>).</p> <p>There is no EU legislation dedicated to the soil. However, the Commission has announced a new Directive on <a href="#">Soil Monitoring and Resilience</a> which takes the approach of giving guidelines on how to determine and monitor healthy soils aligned to the 'EU Soil Strategy for 2030'. The latter promotes the application of Sustainable Soil Management (SSM), a set of practices that can maintain the soil in, or restore it to, a healthy condition yielding multiple benefits, including for water and air. These practices increase soil biodiversity, fertility and resilience, which are needed for the vitality of rural areas. Although there is no agreed common definition at the EU level of SSM that is concrete and complete to be enforceable, soil erosion decreases with several farm management practices, including no or low tillage agriculture, the maintenance of cover and catch crops, buffer strips, field margins, hedgerows, etc. Vulnerability to soil erosion also is related to soil physical and chemical characteristics including Soil Organic matter (SOM) discussed under the factor of success on 'Soil organic carbon (SOC) sequestration', texture, compaction, etc.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 - GAEC 3, 5, 6 and 7</li> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 47 - Sector interventions</li> <li>&gt; Article 70 - ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 72 - ASD, area-specific disadvantages resulting from certain mandatory requirements</li> <li>&gt; Article 73, 74 - INVEST, investments</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> </ul>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions often not programmed under this SO but with potential positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> </ul> <p>Articles 31 and 70 interventions are more relevant to developing farm management or agroforestry practices for improving and protecting soils and supporting landscape features.</p> <p>Articles 73 and 74 interventions are more relevant to investments for making more efficient use of water on the farm which are related to less water runoff and lower soil erosion risk.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.13: Reducing soil erosion: Percentage of agricultural land in moderate and severe soil erosion.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.13 corresponds to the second specific indicator of the Context Indicator C.41. C.41 includes two specific indicators:</p> <ol style="list-style-type: none"> <li>1. The estimated rate of soil loss by water erosion.</li> <li>2. Percentage of agricultural land at risk of moderate and severe soil erosion.</li> </ol> <p>The JRC estimates the specific indicators. Eurostat provides them at the NUTS 3 level for agricultural land, grassland, pastures and particular categories of wilderness areas as tonnes of soil eroded, hectares of land affected by moderate or severe erosion and tonnes per hectare of land. The release of data follows the availability of LUCAS Soil survey data, the latest being 2016. The JRC also provides the data in raster format.</p> <p>See <a href="#">fiche for Impact Indicator I.13</a>. For an overview of the values of indicator C.41, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Impact Indicator I.13 is not listed in Annex III of the Implementing Regulation. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>The interested reader may consult the <a href="#">tool created by the Evaluation Helpdesk</a> to assess indicator I.13 of the CMEF, which currently corresponds to I.13 of the PMEF.</p> <p>Netting out the indicator is not straightforward. The <a href="#">evaluation support study on the impact of the CAP on sustainable management of the soil</a> has attempted to estimate the net effect of the CAP support by including an <a href="#">evaluation question</a> (EQ4, page 50-59) asking “To what extent have the relevant CAP instruments and measures contributed or not to sustainable soil management with an impact on soil quality and soil productivity?”. The study distinguishes between the very subtle difference of measures affecting the practice of Sustainable Soil Management (SSM) on the one side and the soil properties and quality on the other. This is because many soil properties change slowly, taking more than a programming period to be evident and measurable. Therefore, an evaluation target may be to net out the practice, not the impact. For erosion, the effect can be estimated from the practice using either a modelling approach (e.g. the RUSLE equation) or generic coefficients translating the practice into impact. The above evaluation study presents a typology of farming activities which affect soil quality and ranks their effects (page 30).</p> <p>This typology includes three broad classes of activities: (1) activities related to land use and land-use change (the establishment or maintenance of arable land, grassland, wetland, forest and other wooded land, and changes from one type of land use to another, choices to establish, maintain or destroy landscape elements such as landscape features and short rotation coppice, as well as operations that induce great changes to soils and landscapes, above or below ground such as drainage installations such as pipes, terracing); (2) management practices including tillage and traffic management, soil cover and crop management, pest, diseases and fertilisation management, water management, forest management practices and grassland management should be considered; (3) farming systems (conservation agriculture, organic farming, agroforestry and integrated pest management).</p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>The iMAP project contains various farm practices related to 'soil erosion' with corresponding impact coefficients. Farm practices related to landscape features, such as buffer strips, field margins, hedgerows, terraces and other farm practices, such as cover crops, buffer strips, ditches and ponds, all have positive effects and reduce potential soil erosion. In this exercise, the <a href="#">iMAP project</a> is beneficial because it includes an initial list of 11 practices that may decrease the soil erosion risk. For example, results from a meta-analysis demonstrated that no-tillage with direct seeding resulted in lower soil losses than conventional tillage. For reduced tillage, there were no positive impacts recorded.</p> <p>The Evaluation Helpdesk publication '<a href="#">Using SEN4CAP Earth Observation Markers for Evaluating Soil Erosion</a>', utilised Earth Observations (FCover, LAI and NDVI) to demonstrate how to estimate counterfactual impacts on soil erosion from the implementation of ecological focus areas (EFAs)<sup>10</sup> in the Netherlands.</p> <p>Evaluators should be aware of the all impacts of a farm management practice, as many management practices target multiple objectives. For example, actions related to catch and cover crops may target protection from soil erosion but also increase soil organic matter. The same applies to GAECs, which may serve many objectives. For example, banning the burning of residues decreases the risk of soil erosion but also supports SOC, reduces emission of CO<sub>2</sub> and particulate matter and increases water retention. Thus, the evaluator should be aware of the impacts of a farm management practice that will allow the correct attribution.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Impact Indicators I.11 on SOC and I.21 on 'Enhancing provision of ecosystem services: Share of agricultural land covered with landscape features' are directly related to I.13.</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if soil erosion is decreasing, due to CAP support, as measured by the indicator I.13.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The Commission's communication for an '<a href="#">EU Soil Strategy for 2030</a>' sets the objectives to "Restoring degraded soils and remediating contaminated sites", including eroded areas. No quantitative targets are contained. However, reducing the percentage of areas at "severe risk" could be used as a point of comparison for estimating the magnitude of the effect. In addition, the general objective of the proposals for a directive on soil monitoring and resilience is to achieve healthy soils across the EU by 2050, ensuring that EU soils can supply multiple ecosystem services at a scale sufficient to meet environmental, societal and economic needs, and reducing soil pollution to levels no longer considered harmful to human health and the environment.</p>

## 3. Specific Objective 6

### 6.1.1 Biodiversity related to agricultural land is improving or, at least, biodiversity loss is halted due to CAP support.

<p><b>Specific objective</b></p>	<p>S06 - To contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes.</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Reversing biodiversity loss</p>

<sup>10</sup> Article 46, Regulation (EU) No 1307/2013 of the European Parliament and of the Council of 17 December 2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy and repealing Council Regulation (EC) No 637/2008 and Council Regulation (EC) No 73/2009, [OJ L 347, 20.12.2013, p. 608-670](#)



<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions contributed to halting and reversing biodiversity loss on agricultural and forest land?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The main EU biodiversity policy instruments are the Birds and <b>Habitats</b> Directives. Both Directives target the conservation not just of species but also their habitats through a combination of site and species protection and management measures supported by monitoring and research. The Habitats Directive supports the ‘maintenance or restoration, at favourable conservation status, of the natural habitats and species of wild fauna and flora of Community Interest’. Both directives follow two approaches: first, the protection of ‘Special Protection Areas’ (SPAs) designated under the Birds Directive and ‘Special Areas of Conservation’ (SACs) established under the Habitats Directive; second, protection measures that apply to all birds and selected non-bird species (listed in Annexes IV or V of the Habitats Directive) wherever they occur. In addition, the Habitats Directive calls the Member States, where they consider it necessary, in their land-use planning and development policies to take action to ensure the coherence of Natura 2000 areas.</p> <p>The EU’s central policy and orientation for biodiversity is the ‘Biodiversity Strategy for 2030: Bringing nature back into our lives’. The EU Biodiversity Strategy for 2030 advocates that “farmland birds and insects, particularly pollinators, are key indicators of the health of agroecosystems and are vital for agricultural production and food security. Their alarming decline must be reversed”. Thus, agriculture and forestry are of interest to biodiversity as activities within the spatial limits of protected areas (SPA or SAC), as areas where protection measures can apply for birds and selected non-birds species wherever they occur and in ensuring coherence of Natura 2000 areas, where necessary.</p> <p>In a nutshell, the Birds and Habitats Directives and the EU Biodiversity Strategy for 2030 recommend that agriculture should target to:</p> <ol style="list-style-type: none"> <li>1. Protect birds and selected non-bird species, e.g. pollinators, wherever they occur.</li> <li>2. Protect habitats (SPA or SAC) within defined Natura 2000 areas.</li> <li>3. Support diversity in cultivation and genetic resources.</li> <li>4. Protect and increase high-diversity landscape features as defined in the EU Biodiversity Strategy and Article 10 of the Habitats Directive.</li> </ol> <p>The factor of success under discussion, ‘Biodiversity related to agricultural land is improving or, at least, biodiversity loss is halted due to CAP support’, is reflected by the first target, which is to protect birds and selected non-bird species. However, in this factor of success, pollinators are excluded because they are examined individually in factor of success 6.2.1 below.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of relevant types of interventions programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>➤ Article 12 – Relevant GAEC standards, especially: <ul style="list-style-type: none"> <li>➤ GAEC 1 – Maintenance of permanent grassland based on a ratio of permanent grassland in relation to agricultural area</li> <li>➤ GAEC 2 – Protection of wetland and peatland</li> <li>➤ GAEC 8 – Minimum share of agricultural area devoted to non-productive areas or features</li> <li>➤ GAEC 9 – Ban on converting or ploughing permanent grassland designated as environmentally-sensitive permanent grasslands in Natura 2000 sites</li> </ul> </li> <li>➤ Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>➤ Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>➤ Article 72 – Area-specific disadvantages resulting from certain mandatory requirements</li> <li>➤ Article 47 – Types of intervention in the fruit and vegetables sector, the hops sector, the olive oil and table olives sector and in the other sectors referred to in Article 42, point (f)</li> <li>➤ Article 73 – INVEST, investments</li> <li>➤ Article 77 – COOP, cooperation</li> <li>➤ Article 78 – Knowledge exchange and dissemination of information</li> </ul>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions often not programmed under this SO but with potential positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> </ul> <p>Articles 31 and 70 interventions are more relevant to support farm management practices that benefit biodiversity reflected in the abundance and variability of farm birds or other species of interest. Indicatively, these farm practices may include maintenance or establishment of overwinter stubbles, flower strips, hedgerows, grassland conservation, restoration and management, organic systems and low input systems, natural fallow land, wetlands and peatlands and others.</p> <p>Article 72 may be relevant as concerns payments to both WFD and Natura 2000 areas because the preservation of landscape features sometimes is included in River Basin Management Plans as a water quantity and quality regulation action and in the Prioritised Action Frameworks (PAFs) of the Member States which, among others, set out specific objectives, key measures and quantified targets in relation to the conservation of habitats and species of EU importance.</p> <p>Article 73 refers to ‘non-productive’ investments in creating/restoring landscape features beneficial to biodiversity, preparing for habitat restoration, and to ‘productive investments’ that can significantly benefit biodiversity, e.g. a piece of equipment for mechanical weeding to replace the use of chemicals.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.19 – Increasing farmland bird populations: Farmland Bird Index.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.19 (C.36) is a composite index measuring the rate of change in the relative abundance of common bird species dependent on farmland. Member States select their own species set, following guidelines from the European Bird Census Council (EBCC). Population trends are derived from the counts of individual bird species at census sites and modelled as such through time.</p> <p>See <a href="#">fiche for Impact Indicator I.19</a>. For an overview of the values of indicator C.36, both at the EU level and per Member State, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p> <p>Evaluators and interested readers are strongly recommended to consult the <a href="#">Pan European Common Bird Monitoring Scheme (PECBMS)</a> website for detailed information on sampling and index estimation methodology.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Indicator I.19 is not included in the list of indicators of Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>Several evaluation studies have attempted to estimate the effect of RDP policies on this indicator, and some even tried to net out these effects. The selection of the method depends on the availability of data. The interested reader may consult <a href="#">the tool</a> created by the Evaluation Helpdesk to assess indicator I.08 of the CMEF, which currently corresponds to I.19 of the PMEF. The <a href="#">Evaluation Helpdesk guidelines provide further support for choosing and applying evaluation methodology for CMEF’s I.08, and PMEF’s I.19</a>.</p> <p>Estimating the effects of policies and netting out I.19 can be done with several approaches summarised below.</p> <p>The impact assessment ‘<a href="#">Evaluation of the impact of the CAP on habitats, landscapes, biodiversity</a>’ includes the criterion of effectiveness in the Evaluation Question: “ESQ 4: To what extent have CAP instruments and measures individually and taken together contributed to achieving the objective of sustainable management of natural resources and climate action with a focus on restoration, preservation and enhancement of biodiversity and landscapes (heterogeneity, features, corridor effects)?” (page 76). The study inferred the likely impacts of CAP measures on biodiversity and landscapes, using evidence gathered on the key factors that influence biodiversity and landscapes within agriculture and forestry and the influence of the CAP instruments and measures on these factors. This methodology was adopted “because direct evidence of the impacts of the measures is generally lacking, incomplete or out of date”.</p>



**Step 2: Estimation of the net effect of the CAP support on the value of the main indicators**

Franks et al. (2018) conducted a meta-analysis to evaluate the effectiveness of conservation measures for European grassland-breeding waders. They focused on abundance, occupancy, changes in these metrics, survival, or reproductive success and, collected data from 58 published studies and 16 grey literature studies and used the probability of intervention success or failure as the primary metric to assess the effectiveness of interventions.

Franks, S.E., Roodbergen, M., Teunissen, W., Carrington Cotton, A, and Pearce-Higgins, J.W. (2018). [Evaluating the effectiveness of conservation measures for European grassland-breeding waders](#). Ecology and Evolution, 8, 10555–10568. DOI: 10.1002/ece3.4532

Other approaches adopt the counterfactual framework:

Jellesmark, S., Ausden, M., Blackburn, T., Gregory, R.D., Hoffmann, M., Massimino, D., McRae, L. and Visconti, P. 2021. [A counterfactual approach to measure the impact of wet grassland conservation on U.K. breeding bird populations](#). Conservation Biology, 35(5), 1575–1585.

Netting out the indicator per se may be performed at the sampling site or at higher spatial levels. An example from the European Helpdesk’s Good Practice Workshops presents an [assessment](#) of RDP impacts on Farmland Bird populations in England and the corresponding analytical [academic paper](#).

[Šumrada et al. \(2021\)](#) assessed the effects of CAP funds on Slovenia’s diversity of farmland birds. Data from the ‘Farmland Bird Monitoring Scheme’ in Slovenia and high spatial resolution data from the national agricultural databases in 2008–2019 were analysed using Boosted Regression Trees (BRT). Agri-environmental and greening measures had a negligible relative influence on bird diversity, possibly due to ineffective implementation and low uptake by beneficiaries.

[Josefsson et al. \(2017\)](#) examined the effects of CAP’s crop diversification on the farmland bird community in Sweden. The study suggests that increased on-farm crop structural diversity from greening measures benefits local richness and abundance of farmland bird species that rely on non-crop nesting habitats, especially on farms situated in landscapes dominated by arable land.

The [iMAP project](#) contains a wide range of farm practices related to ‘Increased Biodiversity’, which do not directly refer to birds. Nevertheless, various farm practices impact invertebrate, stream macroinvertebrate and vertebrate biodiversity, which affects birds’ habitat quality and function regarding food and nesting conditions.

Attributing the changes observed in this indicator to agricultural policy measures is always a challenge since many environmental and population dynamics factors affect the indicator and are difficult to control. Netting out the effects is even more complex and depends on the quality and quantity of existing data (observations). However, the evaluator should keep in mind that quantitatively netting out the indicator is just one of the purposes of effectiveness evaluation. For example, effectiveness may be searched by overlaying the coverage and scale of CAP Strategic Plan-relevant activity to well-known, important bird sites in and around SPAs or other sites that are still not designated but known to the bird conservation community. Also, effectiveness may address the question of connectivity among fragmented areas to conserve the flow of animals and genes across changing landscapes and create corridors for resting and food for migratory bird species. Such evaluation would require georeferenced coverage and scale CAP Strategic Plan output indicators.

**Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant**

Impact Indicator I.19 is related to many farm practices that support and enhance nesting, food and protection. Thus, all biodiversity indicators are relevant to I.19. Indicator I.21 on landscape features because it affects bird nesting and food conditions, I.20 on habitats and I.20 on wild pollinators because pollinators are a food source for birds. And, of course, I.22, which mirrors the change in the diversity of cultivations and the mosaic of agricultural land use.

Besides these, all context or impact indicators that reflect variables connected directly or indirectly to the farm bird population include:

C.34 on farming intensity and High Nature Value land ([Doxa, A., et al. 2010](#); [Donald, P., et al. 2006](#)). Also, ‘Agricultural area under organic farming’ (C.33) has been found to have positive effects on farmland birds (see, for example, [Moreau, J. et al. 2022](#) for organic plant production and [Santangeli, A. et al. 2019](#) for organic livestock farming).

When evaluating the effectiveness of biodiversity-related measures on farmland bird populations, the evaluators must be aware that many factors related to the design of the intervention can affect the outcome. Two of the most important factors are the size of the intervention of individual farms and collectively in the same area and the designed connectivity among areas or between agricultural areas and protected sites.



<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Especially connectivity was one of the evaluation issues discussed under the criterion of effectiveness in ESQ 5 of the <a href="#">Commission Evaluation Study</a> (ESQ 5: “To what extent have cap instruments and measures contributed to maintain and improve the conservation status of species and habitats of the community interest, landscape diversity and connectivity of natural areas, and to increase, contain or alleviate the identified pressures from agriculture and forestry on biodiversity?”).</p> <p>Finally, the OECD discusses proposals concerning a <a href="#">Farmland Habitat Biodiversity Indicator</a> which addresses the so-called Essential Biodiversity Variables (EBVs), a set of monitoring variables intended to be the minimum number of essential measurements that capture the major dimensions of biodiversity change and are complementary to one another and other environmental change observation initiatives. The OECD considers the proposed Farmland Biodiversity Indicator “a complement to the only other measure of biodiversity available within the set of current OECD agri-environmental indicators, the farmland bird index” (OECD, 2023, page 26).</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if biodiversity related to agricultural land is improving or, at least, biodiversity loss is halted, due to CAP support, as measured by the indicator I.19.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The EU Biodiversity Strategy to 2030 recommends providing space for wild animals, plants, pollinators and natural pest regulators, as an urgent need to bring back at least 10% of agricultural area under high-diversity landscape features, i.e. buffer strips, rotational or non-rotational fallow land, hedges, non-productive trees, terrace walls, and ponds. Article 10 of the Habitats Directive advocates the same particularly relevant to CAP measures that apply outside Natura 2000 sites. Under this Article, “Member States shall endeavour, where they consider it necessary, in their land-use planning and development policies and, in particular, to improve the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora”. Article 10 provisions are not mandatory and remain at the discretion of Member States. In addition, the EU Biodiversity Strategy for 2030 suggests that “the decline of genetic diversity must also be reversed, including by facilitating the use of traditional varieties of crops and breeds”.</p> <p>Evaluators may use such targets as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>
<p><b>Extending the factor of success</b></p>	<p>Since the CAP Strategic Plans include in many case interventions for forestry, the assessment under this factor of success can be complemented by an analysis of biodiversity on forest land though the factor of success ‘Biodiversity on forest land is improving or at least biodiversity loss is being halted’. It could be assessed based on output and result indicators that follow the intervention logic of the CAP Strategic Plan and the following additional impact indicators:</p> <ul style="list-style-type: none"> <li>&gt; Diversity of tree species (<a href="#">Forest Europe</a>, C.4.1)</li> <li>&gt; Forest Regeneration (Forest Europe, C.4.2)</li> <li>&gt; Forest Bird Index (Eurostat, env_bio3)</li> <li>&gt; Forest: growing stock, increment and fellings (SEBI<sup>11</sup>, SEBI_017)</li> <li>&gt; Deadwood Volume (SEBI, SEBI_018)</li> </ul>

### 6.1.2 Biodiversity in Natura 2000 areas affected by agriculture or forestry is improving or, at least, biodiversity loss is halted due to CAP support.

<p><b>Specific objective</b></p>	<p>SO6 - To contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes;</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Reversing biodiversity loss</p>

<sup>11</sup> [Streamlining European Biodiversity Indicators](#)



<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions contributed to halting and reversing biodiversity loss on agricultural and forest land?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The EU's central policy and orientation for biodiversity is the 'Biodiversity Strategy for 2030: Bringing nature back into our lives'. The main EU biodiversity policy instruments are the Birds and Habitats Directives. Both Directives target the conservation not just of species but also their habitats through a combination of site and species protection and management measures supported by monitoring and research. The Habitats Directive supports the 'maintenance or restoration, at favourable conservation status, of the natural habitats and species of wild fauna and flora of Community Interest'. Both directives follow two approaches: first, the protection of 'Special Protection Areas (SPAs)' designated under the Birds Directive and 'Special Areas of Conservation (SACs)' established under the Habitats Directive; second, protection measures that apply to all birds and selected non-bird species (listed in Annexes IV or V of the Habitats Directive) wherever they occur. In addition, the Habitats Directive calls Member States, where they consider it necessary, in their land-use planning and development policies to take action to ensure the coherence of Natura 2000 areas.</p> <p>This factor of success focuses on biodiversity in Natura 2000 areas. Thus, agriculture and forestry are of interest to biodiversity as activities within the spatial limits of protected areas (SPA or SAC). Species and habitats of community interest, are those in danger of disappearance in their natural range, rare or endemic, or characteristic of one or more of the EU biogeographical regions. Member States assess the conservation status of habitats and species of Community interest based on separate evaluations of four parameters which reflect the definition of 'Favourable Conservation Status' given in the Habitats Directive. A very important issue is the delineation of habitats and species considered to be strongly linked to agro-ecosystems. <a href="#">Farming for Natura 2000</a> identified the 'key farmland habitats' and 'key farmland species' as those habitats and species strongly linked to agro-ecosystems, also including bird species. It identified also the 'Main Species of community interest dependent on agriculture in each Member state'.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of relevant types of interventions programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 – Relevant GAEC standards, especially <ul style="list-style-type: none"> <li>&gt; GAEC 1 – Maintenance of permanent grassland based on a ratio of permanent grassland in relation to agricultural area</li> <li>&gt; GAEC 2 – Protection of wetland and peatland</li> <li>&gt; GAEC 8 – Minimum share of agricultural area devoted to non-productive areas or features</li> <li>&gt; GAEC 9 – Ban on converting or ploughing permanent grassland designated as environmentally-sensitive permanent grasslands in Natura 2000 sites</li> </ul> </li> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 72 – Area-specific disadvantages resulting from certain mandatory requirements</li> <li>&gt; Article 47 – Sectoral interventions</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – Knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potential positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> </ul> <p>Articles 31 and 70 interventions are more relevant to support farm management practices that benefit biodiversity reflected in the abundance and variability of farm birds or other species of interest. Indicatively, these farm practices may include maintenance or establishment of overwinter stubbles, flower strips, hedgerows, grassland conservation, restoration and management, organic systems and low input systems, natural fallow land, wetlands and peatlands, and others.</p>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>Article 72 may be relevant as concerns payments to both WFD and Natura 2000 areas because the preservation of landscape features sometimes is included in 'River Basin Management Plans' as a water quantity and quality regulation action and in the Prioritised Action Frameworks (PAFs) of the Member States which, among others, set out specific objectives, key measures and quantified targets in relation to the conservation of habitats and species of EU importance.</p> <p>Article 73 refers to 'non-productive' investments in creating/restoring landscape features beneficial to biodiversity and to 'productive investments' that can significantly benefit biodiversity, e.g. a piece of equipment for mechanical weeding to replace the use of chemicals.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.20: Enhancing biodiversity protection: Percentage of species and habitats of Community interest related to agriculture with stable or increasing trends, with a breakdown of the percentage for wild pollinator species.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.20 is composed of two specific indicators:</p> <ol style="list-style-type: none"> <li>1. Percentage of species and habitats of Community interest related to agriculture with stable or increasing trends.</li> <li>2. Percentage of pollinators species of Community interest related to agriculture with stable or increasing trends.</li> </ol> <p>For this factor of success, the focus is on specific indicator 1, but only for species and habitats related to agriculture. Thus, many forest habitats are not addressed by the impact indicator although the Strategic Plans may contain measures for forests.</p> <p>Species and habitats of Community interest are those in danger of disappearance in their natural range, rare or endemic, or characteristic of one or more of the EU biogeographical regions; these species and habitats are listed in the annexes of the Habitats Directive. As cited in the indicator's fiche, the Habitats Directive does not explicitly identify species and habitats dependent on agroecosystems. The lists of species and habitats per Member State with an indication of the relevant biogeographical regions are elaborated considering academic work and the guidance provided in '<a href="#">Farming for Natura 2000</a>'.</p> <p><b>Fiche for Impact Indicator I.20</b> Impact indicator I.20 is a new indicator added in this programming period. Thus, there is no experience in its estimation or a time series of past values. However, analysis is straightforward, i.e. the ratio of assessments that indicate an improving or stable trend in a habitat or species by the corresponding total number of assessments. Indicator I.20 is an extension of the CMEF context indicator C.36 on 'Conservation Status of agricultural habitats (Grassland)' with the difference that the context indicator reflects on the status of habitats, while I.20 reflects on trends of habitats and species. In addition, while the context indicator C.36 only considers habitats related to grassland, I.20 considers all species and habitats of Community interest related to agricultural land.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Indicator I.20 is not included in the list of indicators of Annex III of Regulation (EU) 2022/1475. There is uncertainty about whether netting out this indicator would be meaningful. The number of habitats or species impacted or not impacted by CAP Strategic Plan measures (or the CAP Strategic Plan in general) at the national level may not allow for statistical analysis. More meaningful and interesting would be the establishment of the attribution pathway, i.e. how the adoption of certain farm practices promoted by agricultural policy measures affect (positively or negatively) certain species and habitats of Community interest.</p> <p>The <a href="#">iMAP project</a>, although it does not refer to impacts of agriculture and forestry, especially in Natura 2000 areas, or link impacts with habitats and species of Community interest, can serve as a valuable source of evidence when attributing species and habitat changes to policy measures.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Impact Indicator I.20 is related to many farm practices that support and enhance nesting, food and protection. Thus, all biodiversity indicators are relevant to I.20. Indicator I.21 on landscape features because they directly affect biodiversity conditions as these are captured by the status of habitats. I.19, and especially the species that make up I.19, are also an indicator of healthy habitats and protected species. And, of course, I.22, which mirrors the change in the diversity of cultivations and the mosaic of agricultural land use.</p>



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if biodiversity in NATURA 2000 areas affected by agriculture or forestry is improving or, at least, biodiversity loss is halted, due to CAP support, as measured by the indicator I.20.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The EU Biodiversity Strategy to 2030 recommends providing space for wild animals, plants, pollinators and natural pest regulators, as an urgent need to bring back at least 10% of agricultural area under high-diversity landscape features, i.e. buffer strips, rotational or non-rotational fallow land, hedges, non-productive trees, terrace walls, and ponds. Article 10 of the Habitats Directive advocates the same concept (but not the 10% target) which is particularly relevant to CAP measures that apply outside Natura 2000 sites. Under this article “Member States shall endeavour, where they consider it necessary, in their land-use planning and development policies and, in particular, to improve the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora”. Article 10 provisions are not mandatory and remain at the discretion of Member States. Thus, for this factor of success, it is important that evaluators highlight any activities undertaken to combat habitat fragmentation and improve connectivity among Natura 2000 sites, as a factor supporting richer and robust biodiversity status. In addition, the EU Biodiversity Strategy for 2030 suggests that “the decline of genetic diversity must also be reversed, including by facilitating the use of traditional varieties of crops and breeds”.</p> <p>Evaluators may use such targets as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>
<p><b>Extending the factor of success</b></p>	<p>Since the CAP Strategic Plans include interventions for forestry, and because the factor of success and Impact Indicator I.20 do not include forest habitats, the assessment under this factor of success can be complemented by a separate analysis of biodiversity on forest land. It could be assessed based on output and result indicators that follow the intervention logic of the CAP Strategic Plan and the following additional impact indicators:</p> <ul style="list-style-type: none"> <li>&gt; Diversity of tree species (Forest Europe, C.4.1)</li> <li>&gt; Forest regeneration (Forest Europe, C.4.2)</li> <li>&gt; Forest Bird Index (Eurostat, env_bio3)</li> <li>&gt; Forest: growing stock, increment and fellings (SEBI<sup>12</sup>, SEBI_017)</li> <li>&gt; Deadwood volume (SEBI, SEBI_018)</li> </ul>

### 6.1.3 Agro-biodiversity is increasing due to CAP support.

<p><b>Specific objective</b></p>	<p>S06 - To contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes;</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Reversing biodiversity loss</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions contributed to halting and reversing biodiversity loss on agricultural and forest land?</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>Agro-biodiversity refers to the variety and variability of plants, animals, and microorganisms that are used directly or indirectly for agriculture and food production. In the EU, agrobiodiversity is significant as it supports agricultural resilience, food security and sustainable farming practices. Agro-biodiversity encompasses all wild and domesticated forms of life found on farms, from plant varieties and breeds of animals to soil organisms, pests and pollinators. It also involves preserving traditional and local varieties of crops and animals, which may possess unique traits such as resistance to diseases, adaptability to specific environments, or nutritional value. CAP Strategic Plans support initiatives, policies and efforts involving the maintenance of diverse crops, encouraging the use of diverse agricultural practices to enhance ecosystem health and supporting activities like seed banks, conservation programs for endangered species or varieties and supporting small-scale farmers who maintain diverse crops.</p> <p>Agro-biodiversity, in many European agricultural landscapes, is reflected by species richness and abundance of vascular plants, mammals, insects, etc., showing a healthy and vibrant community and by variability in cultivations as a response to extensive monoculture. Various measures support crop diversity which can be measured at the farm and regional levels. In this factor of success, we focus on agro-biodiversity revealed through crop diversity.</p> <p>Crop diversity is a long-standing objective of the CAP's Pillar I. In the 1990s and up to 2010, agri-environmental schemes encouraged farmers to diversify their crop production, adopt sustainable practices and protect the environment. In the previous programming period crop diversification was pursued under one of the three mandatory 'greening' practices. In that, farms with more than 10 hectares (ha) of arable land had to grow at least two crops, while at least three crops were required on farms with more than 30 ha. The main crop could not cover more than 75% of the land. There were exemptions to the rules, depending on the individual situation. For instance, farmers with a large proportion of grassland were excluded since grassland is environmentally beneficial. In the CAP Strategic Plans, greening measures are largely substituted by conditionalities and eco-schemes. GAEC 7 'Crop rotation in arable land, except for crops growing under water' supports crop diversification through rotation, especially with leguminous.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of relevant types of interventions programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 - Relevant GAEC standards, especially GAEC 1, 2 and 9 on grasslands and peatlands which are important biodiversity resources, 7 on crop rotation which is a type of dynamic diversification (diversification in time) and 8 on landscape features supporting biodiversity</li> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, environment and animal welfare</li> <li>&gt; Article 70 - ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 72 - Area-specific disadvantages resulting from certain mandatory requirements</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 - BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 - CRISS, complementary redistributive income support for sustainability</li> </ul> <p>Articles 31 and 70 interventions are more relevant to support crop diversification on the farm and, if targeting specific regions, to sustain crop diversification in the broader area.</p> <p>Article 72 may be relevant as concerns payments to both WFD and Natura 2000 areas because the preservation of landscape features sometimes is included in 'River Basin Management Plans' as a water quantity and quality regulation action and in the Prioritised Action Frameworks (PAFs) of Member States which, among others, set out specific objectives, key measures and quantified targets in relation to the conservation of habitats and species of EU importance.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>I.22: Increasing agro-biodiversity in farming system: Crop diversity.</p>



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.22 is composed of two specific indicators:</p> <ol style="list-style-type: none"> <li>5. Crop diversity on farm (number of farms by number of crops and size): Number and % of farms by number of crops (1, 2, 3, and &gt;3) and by size of arable land (arable land &lt; 10ha; 10ha&lt; arable land &lt; 30 ha; 30 ha &lt; 100 ha; arable land&gt;100 ha), at NUTS 2 level.</li> <li>6. Crop diversity in a region: Average number of crops grown on a holding at NUTS 2 level as one, and broken down by arable land size classes (arable land &lt; 10ha; 10ha&lt; arable land &lt; 30 ha; arable land &gt; 30 ha).</li> </ol> <p>This indicator is a continuation of R.11_PI of CMEF.</p> <p>See <a href="#">fiche for Impact Indicator I.22</a>. For an overview of the values of indicator C.36, both at the EU level and per Member State, you may explore the <a href="#">data explorer</a> at the agri-food data portal.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Indicator I.22 is not included in the list of indicators of Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>Various methods can be used to examine whether observed changes can be attributed to policy measures and to net out the effects. The selection of the method depends on the availability of data.</p> <p>The <a href="#">evaluation study of the payment for agricultural practices beneficial for the climate and the environment</a> includes the criterion of effectiveness in two Evaluation Questions:</p> <ol style="list-style-type: none"> <li>a. ESQ2: “To what extent has the crop diversification measure resulted in more diversified cropping patterns and rotations?” (page 36).</li> <li>b. ESQ 8: “To what extent has the crop diversification measure impacted on the environment in terms of: Soil quality and erosion; other environmental issues, such as water, biodiversity, climate?” (page 126).</li> </ol> <p>The analysis in ESQ2 set out the differences between the changes made to cropping patterns between 2014 and 2015 of two groups of farmers - those who had to diversify as a result of the measure and did so, and those who were already sufficiently diversified. This second group of farmers is a counterfactual - particularly as it is much larger than the group required to diversify and thus representative of changes in cropping patterns by farmers as a whole.</p> <p><a href="#">Capitano et al. (2016)</a> captured crop diversity at the farm level in Italy with a modified version of the Simpson index, which is more sensitive to species modification in relative abundance and evenness and increases with diversity levels. They used a panel dataset from the Italian FADN from 2004-2010 and applied pooled ordinary least squares (pooled-OLS) and dynamic panel generalized method of moments (GMM) estimators. Their results show a positive relationship between CAP payments and diversity and that decoupling subsidies from production seems to have a positive effect on biodiversity.</p> <p><a href="#">Cortignani and Dono (2020)</a> evaluate the effectiveness of greening, with a baseline in 2014 and two alternative post-reform scenarios, greening 2017 and greening omnibus. The evaluators use a mathematical programming model on 2800 farms of the Italian FADN, considering geographical area and altimetric level to capture distinct specificities of Italian farms. The work estimates the land use in the simulated scenarios (percentage changes over baseline) and thus estimates the net effect of greening on crop diversification. Results show that legume-supported crop rotations will reduce the general environmental pressure of agricultural activities and affect a large part of the arable land, against reduced economic impacts. The lost income per hectare is lower than the national average value of the decoupled payments. The evaluators point out that the legume-supported crop rotations determine a reduction in the production of main crops and, especially in some areas, adverse economic and social impacts. Thus, they propose that the measure should be planned very carefully.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Impact Indicator I.22 is unique as it relates to the composition of cultivations at the farm and landscape levels. Conventionally, crop diversification within the greening measures targeted soil biodiversity and fertility, including soil organic matter.</p> <ul style="list-style-type: none"> <li>&gt; C.34 - Farming intensity, where the inputs considered for intensity classification include fertilisers, pesticides, other crop protection products and purchased feed (PMEF, C.34)</li> <li>&gt; C.33 - Agricultural area under organic farming (PMEF, C.33)</li> <li>&gt; Number of hectares under GAEC 7 - Crop rotation in arable land, except for crops growing underwater</li> </ul>



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if agro-biodiversity is increasing due to CAP support, as measured by indicator I.22.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>Quantitative assessment of the factor of success might not be possible, as no related targets are set at the EU or national level.</p>
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## 6.2.1 Trends of pollinators are improving or, at least, stable due to CAP support

<p><b>Specific objective</b></p>	<p>S06 - To contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes;</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Ecosystem services</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have the CAP Strategic Plan interventions contributed to enhancing ecosystem services?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>This factor of success is related to the impact of the CAP on the trends of pollinators, which directly affect the services provided by wild and managed pollinators. The <a href="#">FAO</a> considers pollination as one of the eight essential regulating ecosystem services that influence agriculture, forestry and fisheries. Of course, pollinators are insects and, thus, are also part of the biodiversity stock of an area.</p> <p>The <a href="#">EU Pollinators Initiative</a>, introduced by the Commission in 2018, was the first-ever EU framework to address the decline of wild pollinators and included a list of actions to tackle the main threats to wild pollinators. These actions comprised three priority areas: improving knowledge of pollinator decline, its causes and consequences; tackling the causes of pollinator decline; and raising awareness, engaging society at large and promoting collaboration.</p> <p>The 2023 revised Pollinators Initiative includes, under 'Priority II -Improving pollinator conservation and tackling the causes of their decline' and Action 5, 'Restore Pollinator Habitats in Agricultural Landscapes', several activities:</p> <p>5.1. The Commission will continue to work with Member States to increase support for pollinator-friendly farming under the CAP. Member States should develop and implement targeted and strategically planned interventions to reverse the decline of pollinators in agricultural landscapes by 2030, as part of the CAP and other relevant instruments (e.g. national or regional nature conservation measures). They should also ensure consistency and synergies between these different instruments and measures. Given this need, the Commission will explore options on how best to address pollinator conservation and restoration in the future reform of the CAP.</p> <p>5.2. The Commission will continue to encourage Member States and stakeholders to share best practices and organise coordination activities under the current CAP to facilitate the design and uptake of effective instruments that benefit pollinators, such as results-based payment schemes and collective measures by farmers, including through the EU CAP Network and other stakeholder platforms.</p> <p>5.3. Member States should enhance the capacity of farm advisory services for pollinator conservation and restoration. Member States should also implement communication and demonstration activities for pollinator-friendly schemes.</p> <p>5.4. The Commission will continue developing a pollinator indicator to integrate it into the CAP's performance monitoring and evaluation framework once the EU Pollinator Monitoring Scheme (EUPoMS) is sufficiently implemented.</p>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of relevant types of interventions programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 – Relevant GAEC standards, especially GAEC 1, 4, 6, 7, 8 and 9</li> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 72 – ASD, area-specific disadvantages resulting from certain mandatory requirements</li> <li>&gt; Article 73 – INVEST, investments (particularly non-productive investments in relation to creation of landscape features)</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> </ul> <p>Articles 31 and 70 interventions are more relevant to support farm management practices for increased pollination, such as the maintenance of cover and catch crops, field margins, flower strips, hedgerows and grassland management activities and all the practices related to landscape features. All activities and techniques promoting low-intensity agricultural systems and reducing the use of chemical pesticides, such as organic agriculture, IPM and precision agriculture are very beneficial. <a href="#">Cole et al (2019)</a> present a thorough and critical analysis of the potential for CAP measures to support wild pollinators on farmlands and consider a rather exhaustive list of measures.</p> <p>Article 72 may be relevant as concerns payments to both WFD and Natura 2000 areas because the preservation of landscape features sometimes is included in 'River Basin Management Plans' as a water quantity and quality regulation action and in the Prioritised Action Frameworks (PAFs) of Member States which, among others, set out specific objectives, key measures and quantified targets in relation to the conservation of habitats and species of EU importance.</p> <p>Article 73 refers to 'non-productive' investments in creating/restoring landscape features beneficial to biodiversity.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>Indicator I.20: Enhancing biodiversity protection: Percentage of species and habitats of Community interest related to agriculture with stable or increasing trends, with a breakdown of the percentage for wild pollinator species.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.20 is composed of two specific indicators:</p> <ol style="list-style-type: none"> <li>1. Percentage of species and habitats of Community interest related to agriculture with stable or increasing trends.</li> <li>2. Percentage of pollinators species of Community interest related to agriculture with stable or increasing trends.</li> </ol> <p>For this factor of success, the focus is on specific indicator 2. See <a href="#">fiche for Impact Indicator I.20</a></p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Indicator I.20 is not included in the list of indicators of Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>Various methods can be used to examine whether observed changes in pollinators species of Community interest related to agriculture with stable or increasing trends can be attributed to policy measures and to net out the effects. The selection of the method depends on the availability of data.</p> <p>The <a href="#">evaluation of the impact of the CAP on habitats, landscapes, biodiversity</a> addresses the criterion of effectiveness, among others, to pollinators in Evaluation Question 6: “To what extent have CAP instruments and measures addressed the impact of biodiversity on agriculture and forestry (e.g. measures supporting coexistence between sheep grazing and wolves, crop cultivation and geese, pollinators and fruit/vegetable production practices)?” (page 103).</p> <p>The <a href="#">iMAP project</a> includes effects on pollination as a specific impact of several farm practices, for example, those related to enhancing <a href="#">landscape features</a>. The impact of various landscape features, e.g. flower strips or hedgerows, is challenging to quantify. For instance, <a href="#">Coutinho et al. (2018)</a>, in a meta-analysis of 43 papers globally, found a wide variety of responses regarding the richness and abundance of bees in agroecosystems. The authors attributed this variation to the different response traits used in the empirical studies and to the other ecological processes acting at multiple spatial scales. In another example, a meta-analysis by <a href="#">Smith et al (2020)</a>, found that, compared to conventional sites, organic sites had greater mean biotic abundance and richness.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Impact Indicator I.20 is related to various farm practices and enhanced habitat conservation and species protection within Natura 2000 areas supported under the CAP. When assessing the factor of success 6.2.1, the trend/CAP impact on related impact indicators needs to be taken into account: I.21 on landscape features because it affects directly biodiversity conditions as these are captured by the status of habitats. I.19, especially the species that comprise I.19, are an indicator of healthy habitats and protected species. Also, I.22 which increases the diversity of cultivations and creates the agricultural mosaic is related to Impact Indicator I.20. Also, taking into account that pesticides are the major threat to pollinators, evaluation should also examine the trends of pesticides and the trend of agrosystems which reduce the use of chemical pesticides:</p> <ul style="list-style-type: none"> <li>&gt; I.18 (C.49) – Risk, use and impacts of pesticides (PMEF, I.18/C.49)</li> <li>&gt; C.33 – Agricultural area under organic farming (PMEF, C.33)</li> <li>&gt; C.34 – Farming intensity, where the inputs considered for intensity classification include fertilisers, pesticides, other crop protection products and purchased feed (PMEF, C.34)</li> <li>&gt; C.05 – Permanent grassland (PMEF, C.05)</li> </ul> <p>From non-PMEF indicators, an evaluator may want to examine the following indicators related to the pollinators and monitor for other biodiversity-related issues:</p> <ul style="list-style-type: none"> <li>&gt; Grassland butterfly index (SDG 15 indicator and Eurostat variable <a href="#">SDG_15_61</a>)</li> <li>&gt; Pesticide residues in soils to account for dependency on chemical pesticides and substances are provided by a relatively recent study on ‘Pesticide residues in European agricultural soils’</li> <li>&gt; Interesting indicators related to forest diversity are provided by <a href="#">Forest Europe</a> as follows: <ul style="list-style-type: none"> <li>&gt; Diversity of tree species – Indicator C.4.1</li> <li>&gt; Forest regeneration – Indicator C.4.2</li> <li>&gt; Deadwood volume – (SEBI 018) and Indicator C.4.5</li> </ul> </li> </ul> <p>Finally, an important source of information and data for evaluators is JRC’s 2018 publication ‘<a href="#">Ecosystem services accounting: Part I - Outdoor recreation and crop pollination</a>’.</p>



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if trends of pollinators are improving due to CAP support, as measured by indicator I.20.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The <a href="#">EU Biodiversity Strategy for 2030</a> considers pollinators as “key indicators of the health of agroecosystems which are vital for agricultural production and food security and whose alarming decline must be reversed”. The EU Biodiversity Strategy for 2030 highlights the importance of the Farm to Fork Strategy for reducing by 50% the overall use of – and risk from – chemical pesticides by 2030, reducing by 50% the use of more hazardous pesticides by 2030 and achieving 25% of total farmland under organic farming by 2030. Thus, all these targets are essential for pollinator conservation.</p> <p>Furthermore, the provisionally agreed <a href="#">Nature Restoration Law</a> (from November 2023) between the European Parliament and the Council addresses pollination conservation and states that “by timely putting in place appropriate and effective measures, improve pollinator diversity and reverse the decline of pollinator populations at the latest by 2030 and achieve thereafter an increasing trend of pollinator populations” (Article 8). It also calls for measures at least every six years after 2030, until satisfactory levels are achieved. Trend monitoring will be based on a method for monitoring pollinators that will be established. The JRC has produced a report that presents the proposal for an <a href="#">EU Pollinator Monitoring Scheme (EU-PoMS)</a>, which comprises a ‘Core Scheme’ that includes the taxa that are essential to monitoring across the EU: wild bees, butterflies, hoverflies, moths, including rare and threatened pollinator species. For the CAP it proposes the adoption of a framework of pollinator indicators reflecting the abundance, species diversity and occupancy.</p> <p>Evaluators may use such targets as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>
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## 6.2.2 The area covered by landscape features in agricultural land is increasing or maintained due to CAP support.

<p><b>Specific objective</b></p>	<p>S06 - To contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes.</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Ecosystem services</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions contributed to enhancing ecosystem services?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>This factor of success is related to the ecosystem services provided by maintaining certain landscape features. Landscape features provide habitats for relevant species for pollination and pest control and enable the repopulation of grassland and arable land after harvesting, cutting or pesticide spraying. Although the maintenance of landscape features has always been part of agri-environment schemes, it has been reinforced as one of the components of Ecological Focus Areas established to safeguard and improve farm biodiversity (Recitals 44 and 45 and Article 46 of <a href="#">Regulation (EU) 1307/2013</a>). Conservation, preservation and enhancement of landscape features was a conditionality in the previous programming period under GAEC 7 on ‘Retention of landscape features, including where appropriate, hedges, ponds, ditches, trees in line, in group or isolated, field margins and terraces, and including a ban on cutting hedges and trees during the bird breeding and rearing season and, as an option, measures for avoiding invasive plant species’ (Annex II of <a href="#">Regulation (EU) 1306/2013</a>). The same holds for Article 10 of the <a href="#">Habitats Directive</a> which urges Member States to “endeavour, where they consider it necessary, in their land-use planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora”.</p> <p>Furthermore, the provisionally agreed <a href="#">Nature Restoration Law</a> (from November 2023) between the European Parliament and the Council addresses “Restoration of agricultural ecosystems” and calls Member States to “put in place measures which shall aim to achieve an increasing trend at national level of at least two out of the three indicators in agricultural ecosystems including (a) grassland butterfly index; (b) stock of organic carbon in cropland mineral soils; (c) share of agricultural land with high-diversity landscape features” (Article 9).</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>The <a href="#">EIP-AGRI Focus Group</a> 'Benefits of landscape features for arable crop production' documents the importance of landscape features, provides suggestions for the design and management of landscape features, recommendations for training and educational programmes, national and EU research programmes on landscape features and ecosystem services of agroecosystems and good practice examples. The <a href="#">iMAP project</a> identifies the following <a href="#">landscape features</a>: buffer strips, ditches and ponds, field margins, flower strips, hedgerows, isolated trees, small wetlands, terraces and trees in groups and provides a fiche which presents their impacts on biodiversity as identified through meta-analysis studies.</p> <p>For evaluators, the JRC provides a comprehensive '<a href="#">Classification and quantification of landscape features in agricultural land across the EU</a>' and a thorough '<a href="#">review of existing data and approaches</a>'.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 – Relevant GAEC standards, especially GAEC 8</li> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 72 – ASD, area-specific disadvantages resulting from certain mandatory requirements</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of types of interventions often not programmed under this SO but with potentially positive or negative effects on GHG emissions may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> </ul> <p>In the CAP Strategic Plans, landscape features comprise GAEC 8 'Minimum share of agricultural area devoted to non-productive areas or features', aiming to the maintenance of non-productive features and areas to improve on-farm biodiversity with the following requirements and standards (<a href="#">Annex III of Regulation (EU) 2021/2115</a>):</p> <ul style="list-style-type: none"> <li>&gt; Minimum share of at least 4% of arable land at farm level devoted to non-productive areas and features, including land lying fallow.</li> <li>&gt; Where a farmer commits to devote at least 7% of their arable land to non-productive areas or features, including land lying fallow, under an enhanced eco-scheme in accordance with Article 31(6), the share to be attributed to compliance with this GAEC standard shall be limited to 3%.</li> <li>&gt; Minimum share of at least 7% of arable land at farm level if this includes also catch crops or nitrogen-fixing crops, cultivated without the use of plant protection products, of which 3% shall be land lying fallow or non-productive features. Member States should use the weighting factor of 0.3 for catch crops.</li> <li>&gt; Retention of landscape features.</li> <li>&gt; Ban on cutting hedges and trees during the bird breeding and rearing season.</li> <li>&gt; As an option, measures for avoiding invasive plant species.</li> </ul> <p>Articles 31 and 70 interventions are more relevant to support farm management practices for establishing and maintaining landscape features. The <a href="#">EIP-AGRI Focus Group</a> on landscape features presents a thorough and critical analysis of many farm practices and best examples.</p> <p>Article 72 may be relevant as concerns payments to both WFD and Natura 2000 areas because the preservation of landscape features sometimes is included in 'River Basin Management Plans' as a water quantity and quality regulation action and in the Prioritised Action Frameworks (PAFs) of the Member States which, among others, set out specific objectives, key measures and quantified targets in relation to the conservation of habitats and species of EU importance.</p>



<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>Article 73 supports on and off-farm investments related to landscape features which may, for example, include the creation and/or restoration of wetlands, hedges, dry-stone walls and traditional field margins and field boundaries, or the creation and/or restoration of landscape element habitats, such as heathland, species-rich grassland or floristically enhanced grass margins.</p> <p>Articles 77 and 78 are essential, given the recommendations for training and education, and improving habitat connectivity at a landscape scale via the cooperation intervention included in the <a href="#">EIP-AGRI Focus Group</a> on landscape features.</p>
<p><b>Main impact indicator(s) that can be used to assess the factor of success</b></p>	<p>Indicator I.21: Enhancing provision of ecosystem services: Share of agricultural land covered with landscape features.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.21 is the first specific indicator of the Context Indicator C.21, which consists of two specific indicators:</p> <ol style="list-style-type: none"> <li>3. The share of agricultural land covered with landscape features (I.21).</li> <li>4. An elaborated index of landscape elements structure (under development).</li> </ol> <p>The indicator is new. In the past, there have been various attempts to measure the area under different landscape features. One such EU-wide assessment based on LUCAS data was included in Annex 5.4 'Non-productive elements in the EU' of the <a href="#">Impact Assessment</a> of the CAP Strategic Plan Regulation. More recent attempts by JRC include a typology of features in '<a href="#">Classification and quantification of landscape features in agricultural land across the EU</a>' and a review of data sources in '<a href="#">Review of existing data and approaches</a>'. See <a href="#">fiche for Impact Indicator I.21</a></p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Indicator I.21 is not included in the list of indicators of Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>The '<a href="#">Evaluation of the impact of the CAP on habitats, landscapes, biodiversity</a>' addresses the criterion of effectiveness, among others, for landscape features in Evaluation Question 4: "To what extent have CAP instruments and measures individually and taken together contributed to achieving the objective of sustainable management of natural resources and climate action with a focus on restoration, preservation and enhancement of biodiversity and landscapes (heterogeneity, features, corridor effects)?" (page 76). This particular evaluation question assessed:</p> <ul style="list-style-type: none"> <li>&gt; The effect of GAEC 7 in the previous programming period to protect landscape features of importance to biodiversity. Due to the lack of data on the effects of cross-compliance, evaluators found little evidence of the influence of cross-compliance requirements on farmers' behaviour and practices, while their actual impacts on biodiversity were not possible to be evidenced.</li> <li>&gt; The effects of EFA elements to provide biodiversity benefits within arable landscapes. Evaluators found that the potential benefits of the EFA measure are not fully realised due to the fact that the majority of land in EFAs was under catch and cover crops that do not provide as many benefits to biodiversity as landscape features.</li> </ul> <p>The <a href="#">iMAP project</a> identifies the following landscape features: buffer strips, ditches and ponds, field margins, flower strips, hedgerows, isolated trees, small wetlands, terraces and trees in groups and provides a fiche that presents their impacts on biodiversity as identified through meta-analysis studies. For example, Batáry et al., (2015) assembled a data set with 284 observations from 103 studies to conclude that schemes aimed at areas out of production (such as field margins and hedgerows) are more effective at enhancing species richness than those aimed at productive areas (such as arable crops or grasslands). As a result, for the case of the present factor of success, this means that field margins and hedgerows, which are important landscape features, effectively enhance species richness.</p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p><a href="#">Pardo et al., (2020)</a> assessed the occurrence of landscape features, semi-natural habitats and extensive land uses across a variety of European agricultural systems covering a gradient of farming intensity, and analysed to what extent the CAP is supporting their presence by enhancing farmer’s awareness and the uptake of measures that foster them. The researchers carried out habitat surveys in 115 Landscape Test Squares of 500m × 500m in six case study areas, including arable land, pastures and mixed farming systems in Spain, Germany and Bulgaria. They also mapped small landscape elements, in-field elements (both semi-natural and productive) and connectivity features. They used historical imagery to map changes in the occurrence of these features, habitats and land uses from 2012 to 2018. They also used questionnaires with farmers and stakeholders on their awareness and compared their answers to elements mapped.</p> <p>Their work highlights the need for spatial data for landscape features and the importance of establishing a baseline for these spatial data, by mapping the occurrence of landscape features before the implementation of the relevant CAP Strategic Plan interventions.</p> <p><a href="#">Viaggi et al. (2015)</a> developed an indicator for biodiversity friendly farming practices, as a proxy of HNV farmland. Then, they analysed the relationship between this indicator and participation in rural development measures between 2000 and 2010 in the Italian region of Emilia-Romagna by way of spatial econometric techniques.</p> <p>A combination of these two approaches, that is mapping the changes in the occurrence of landscape features in certain spatial units and analysing their relationship with the intensity of CAP support in the same spatial units, may help evaluators to estimate the net effects of CAP support on the development of landscape features.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Impact Indicator I.21 is unique, but the various landscape features are related to water management (e.g. buffer strips) or soil protection (e.g. stone walls and terraces) or are important elements supporting biodiversity through the provision of nest, shelter and food (e.g. trees, hedgerows, etc.).</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if the area covered by landscape features in agricultural land is increasing or maintained due to CAP support, as measured by indicator I.21.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The provisionally agreed <a href="#">Nature Restoration Law</a> (from November 2023) between the European Parliament and the Council urges Member States to “put in place measures which shall aim to achieve an increasing trend at the national level of at least two out of the three indicators in agricultural ecosystems including (a) grassland butterfly index; (b) stock of organic carbon in cropland mineral soils; (c) share of agricultural land with high-diversity landscape features” (Article 9). Annex IV of the law provides definitions and guidance on how to measure landscape features in accordance with the impact indicator. It is envisaged that landscape features will be measured in the period from the date of entry into force of the regulation until 31 December 2030, and every six years thereafter, until the satisfactory levels, identified in accordance with Article 11(3), are reached.</p>





# Factors of Success for General Objective 3

**Annex III to the guidelines developed under  
Thematic Working Group 3**



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# Annex III: Factors of success for General Objective 3

## Introduction

### Overall structure

The factors of success relevant to General Objective (GO) 3: “to strengthen the socio-economic fabric of rural areas.” are presented in this Annex, grouped by specific objective.

The overall structure of the Specific Objectives (SO), key evaluation elements and factors of success are illustrated in the following table.

SO	Key evaluation element	Suggested example of evaluation question	Recommended factor of success
7	<b>7.1 Farmers renewal:</b> Based on supporting young farmers and new farmers setting up and continuity	To what extent have CAP Strategic Plan interventions contributed to the setting up of young farmers and new farmers and the continuity of their activities?	<i>7.1.1 Number of young and new farmers is increasing due to CAP support.</i>
	<b>7.2 Business development:</b> Based on supporting rural business start-ups and farm diversification	To what extent have the CAP Strategic Plan interventions contributed to facilitate facilitating non-agricultural business development (including start-ups) in rural areas?	<i>7.2.1 Number of rural businesses is increasing due to CAP support.</i>
8	<b>8.1 Rural sustainable economy:</b> Based on economic growth and promoting employment	To what extent have CAP Strategic Plan interventions contributed to a sustainable rural economy by enhancing economic growth and promoting employment or by weakening economic decline and loss of employment, and by promoting bioeconomy and sustainable forestry?	<i>8.1.1 Rural areas' economy is growing or, at least, is stable and the urban-rural gap is decreasing due to CAP support.</i>
			<i>8.1.2 Employment rate in rural areas is improving due to CAP support.</i>
			<i>8.1.3 Bioeconomy related businesses are increasing or modernised due to CAP support.</i>
			<i>8.1.4 Sustainable forestry is increasing due to CAP support.</i>
	<b>8.2 Local development:</b> Provision of local services and infrastructure	To what extent have CAP Strategic Plan interventions contributed to local development and the provision of local services and infrastructure?	<i>8.2.1 Local services and infrastructures are improving due to CAP support.</i>
	<b>8.3 Gender equality and social inclusion:</b> Promotion of participation of women in farming and the economy, income equity and poverty reduction	To what extent have CAP Strategic Plan interventions contributed to the promotion of participation of women in farming and the economy, income equity and poverty reduction?	<i>8.3.1 Women employment and participation in farming and the economy is improving due to CAP support.</i>
			<i>8.3.2 CAP support is more fairly distributed.</i>
<i>8.3.3 Rural poverty is decreasing due to CAP support.</i>			



SO	Key evaluation element	Suggested example of evaluation question	Recommended factor of success
9	<b>9.1 Quality and safety food:</b> Based on fostering quality schemes, promoting animal welfare and combatting antimicrobial resistance	To what extent have CAP Strategic Plan interventions contributed to fostering quality schemes, promoting animal welfare and combatting antimicrobial resistance?	<i>9.1.1 Value of production marketed under quality schemes and of organic production is increasing due to CAP support.</i>
			<i>9.1.2 The conditions of animal welfare are improving, due to CAP support.</i>
			<i>9.1.3 The sales and use of antimicrobials for food-producing animals are decreasing due to CAP support.</i>

Please note that the key evaluation elements 8.1, 8.3 and 9.1 and the corresponding examples of evaluation questions are assessed by more than one factor of success.

In every factor of success there is an explicit reference to the effect of the CAP support. This is to underline that, although the quantification of the CAP contribution is not mandatory for

all impact indicators, the purpose of the evaluation is to assess the performance of the CAP. Therefore, it is recommended to try to assess the net contribution of the CAP support, as this will be important not only for effectiveness but also for the other evaluation criteria. However, it must be stressed that this recommendation cannot and does not attempt to alter, in any case, the provisions of the regulatory framework.

## Indicative types of interventions

In each factsheet, **an indicative intervention logic is presented by listing the types of interventions that affect each factor of success.** The identification of the corresponding types of interventions was based on the following assumptions:

- > The types of interventions programmed under the corresponding SO and relevant to the factor of success must be considered.
- > Additional types of interventions, even if not programmed under the SO, but with possible positive or negative side effects on the factor of success should be considered too.

These lists may differ from the actual interventions that may be relevant to each factor of success under a certain CAP Strategic Plan, due to the enhanced flexibility provided to the Member States under the 'New Delivery Model'.

For an overview of the actual interventions planned by each Member State in their adopted CAP Strategic Plans, their financial allocations and their links to output and result indicators, see the '[Catalogue of CAP interventions](#)'.

## Assessment of the factors of success

Effectiveness is determined by assessing the analysed impact of the CAP Strategic Plan against defined targets and/or points of comparison. That said, a quantitative assessment is possible only if targets corresponding to impact indicators are set at the national or, where relevant, regional level.

Regarding GO3, there is no obligation for Member States to set such targets, and therefore only a qualitative assessment would be possible, analysing whether the direction of the observed effect, as measured by the change in the main indicator, is in line with the direction implied in the formulation of the factor of success.

An exception may be given to the targets set in the Farm to Fork Strategy for reaching 25% of agricultural land under organic farming and reducing the overall EU sales of antimicrobials for farmed animals and aquaculture by 50% by 2030.

In any case, the assessment should be complemented with an analysis of the progress made towards the targets set in the CAP Strategic Plan for financial allocations, output and result indicators.



# 1. Specific Objective 7

## 7.1.1 Number of young and new farmers is increasing due to CAP support

<b>Specific objective</b>	SO7 - To attract and sustain young farmers and other new farmers and facilitate sustainable business development in rural areas
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Farmers renewal
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to the setting up of young farmers and new farmers and the continuity of their activities?
<b>Rationale for the use of this factor of success</b>	<p>Europe's farmers are ageing. In 2020, almost one in three farm managers across the EU was 65 years of age or older. Thus, as a large share of managers are set to retire soon, the need for generational renewal in the agricultural sector is high and rising. The <a href="#">communication</a> of the European Commission on the long-term vision for the EU's rural areas stresses the need to support young people in rural areas. Generational renewal and young people in rural areas have been also topics under discussion for the <a href="#">Rural Pact</a>.</p> <p>Generational renewal and the attraction of young farmers remains one of the key priorities under the new CAP. SO7 aims to attract and sustain young farmers and new farmers, while Member States are required to dedicate at least an amount equivalent to 3% of their direct payment envelopes to supporting young farmers.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 30 - CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 75 - INSTAL, setting-up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 - COOP, cooperation Article 78 - KNOW, Knowledge exchange and dissemination of information</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> </ul>
<b>Main indicator(s) that can be used to assess the factor of success</b>	I.23 Attracting young farmers: Evolution of number of new farm managers and the number of new young farm managers, including a gender breakdown
<b>Step 1: Calculation of the value of the main indicator</b>	<p>I.23 is a new indicator, introduced under the PMEF (see the indicator fiche <a href="#">here</a>), and shows the evolution of a number of new farm managers including new young farm managers. The data source for the calculation of the indicator's value is the Integrated Farm Statistics (IFS), which will provide the following specific indicators:</p> <ol style="list-style-type: none"> <li>1. number of new farm managers by sex</li> <li>2. number of new young farm managers by sex</li> </ol> <p>According to Article 5 of Regulation (EU) 2018/1091, data will be available for the reference years 2020, 2023 and 2026, while a reporting lag of 2-3 years should be expected. The financial support referred to in the last specific indicator can include direct payments under Articles 50 and 51 of Regulation (EU) No 1307/2013 or support provided by rural development programs under Article 19(1)(a) - business start-up aid for young farmers of Regulation (EU) 1305/2013 or support provided under Articles 30 and 75 of Regulation (EU) 2021/2115.</p> <p>Evaluators shall calculate the change in the value of the two specific indicators over time.</p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.23 is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>A starting point for estimating the net impact can be the ratio 0.25/I.23 specific indicator 2, i.e. the percentage of all young farmers who received support for young farmers during the period. In the same way, the number of new farmers under IFS can be related to the number of new farmers supported under Article 75, through the ratio 0.26 / I.23 specific indicator 1 - specific indicator 2</p> <p>The value of any support for farmers renewal should not be assessed in isolation from wider socioeconomic conditions in rural areas. <a href="#">Micha, E., Mantino, F., Dwyer, J., et al.</a>, in an EU level evaluation study, used a multi-step methodological approach that identifies key indicators that can be used to cluster rural areas according to their socio-economic conditions. Then, they assessed the impact of these indicators, including CAP payments, on the number of farmers/farm managers under 35 years old in each cluster.</p> <p>The evaluation '<a href="#">The dynamics of generational renewal in rural families in Campania</a>' carried out for the Managing Authority of Campania region, Italy, for the RDP 2014 - 2020, uses a combination of methods. In particular, the evaluation combines the analysis of secondary data (regional/national monitoring system; databases, official statistics) with the development of two surveys and a focus group. In both surveys, the evaluation compares beneficiaries of both sub-measures 6.1 (Business start-up aid for young farmers) and 4.1 (Support for investments in agricultural holdings) with young farmers who are only beneficiaries of 6.1 (not 4.1). This methodological combination provides some quantitative analysis, but above all, it increases the understanding of how the policy is being implemented and what actions can be taken to strengthen it. Through the two different surveys, a counterfactual analysis is attempted: the evaluation compares beneficiaries of measures 6.1 and 4.1 with young farmers who are only beneficiaries of 6.1 (not 4.1).</p> <p><b>Main challenges in calculating and netting out the indicator.</b></p> <p>A challenge could be the setting of the baseline for the main indicator, as the IFS is carried out as a census every 10 years and as intermediate, sample-based surveys two times in between. A careful selection of the timing of the evaluation, so that both baseline and sufficient implementation data are available, can address this challenge.</p>
<p><b>Step 3: Use other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<ul style="list-style-type: none"> <li>&gt; The Member State's definition of the young farmer, according to Article 4(6).</li> <li>&gt; C.4 - Total area</li> <li>&gt; C.10 - Agricultural training of farm managers (C10.2 - Number and share of farm managers by age group and by level of agricultural training).</li> <li>&gt; C.14 - Age structure of farm managers</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if the number of young and new farmers is increasing, due to CAP support, as measured by the indicator I.23.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>Member States may have set national targets for the number of young farmers, or the proportion of young and new farm managers in relation to the total number of farmers, in Chapter 3.2 of their CAP Strategic Plans. These targets, if any, should reflect the overall effort of the Member State towards generational renewal and not only the number of young farmers setting up with CAP support, which are captured by the Result Indicator R.36.</p> <p>Evaluators may use such targets as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p> <p>During the interpretation of the findings, it is suggested to specifically identify differences in implementation and criteria compared to the previous programme. This may be helpful when matching methods combined with difference-in-differences are applied to measure net effectiveness.</p>



## 7.2.1 Number of rural businesses is increasing due to the CAP support

<b>Specific objective</b>	S07 - To attract and sustain young farmers and other new farmers and facilitate sustainable business development in rural areas
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Business development
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to facilitating non-agricultural business development (including start-ups) in rural areas?
<b>Rationale for the use of this factor of success</b>	<p>Economic activity is needed to make rural areas vibrant. Rural businesses outside the agricultural sector face particular challenges in rural areas, such as the difficulty in ensuring economic sustainability because of smaller local markets, cost of remoteness to reach other markets, limited availability of qualified human resources, lack of infrastructure and difficulty in accessing to financial instruments. Launching an economically sustainable activity in rural areas requires often innovative solutions which need time to be set up.</p> <p>Unemployment in rural areas remains an issue, especially for young people. <a href="#">The study on the role of the CAP in creating rural jobs (2016)</a>, showed evidence that rural development interventions can be successful in creating new jobs in areas such as tourism, food processing and associated sectors but effectiveness is highly dependent on Member State and regional implementation approaches.</p> <p>Interventions planned under S07 aim to facilitate sustainable business development in rural areas, by providing start-up support at the beginning of each project.</p> <p>This factor of success may assess progress towards setting up new businesses in rural areas, to ensure generational renewal and halt depopulation.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 75 – INSTAL, setting-up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul>
<b>Main indicator(s) that can be used to assess the factor of success</b>	BD_ENACE2_R3 - Employer business demography by NACE Rev. 2 and NUTS 3 regions: Population of active enterprises
<b>Step 1: Calculation of the value of the main indicator</b>	<p>There is no PMEF impact indicator to measure the evolution of businesses in rural areas. This indicator by Eurostat is part of the business demographics dataset and, being disaggregated at the NUTS 3 level allows the differentiation between urban, intermediate and rural areas.</p> <p>In any case, national statistics must be screened and used, as it is more likely to include more details and have more disaggregated data.</p> <p>Besides the population of active enterprises, the dataset provides different breakdowns that can be used to highlight specific aspects of the trend in rural business development, such as:</p> <ol style="list-style-type: none"> <li>1. Number of enterprise births</li> <li>2. Number of enterprise survivals up to five years</li> <li>3. Number of enterprise deaths</li> <li>4. Related variables on employment</li> <li>5. Derived indicators such as enterprises' birth rates, death rates, survival rates and employment shares</li> </ol> <p>More information on this indicator can be found <a href="#">here</a>.</p>



<b>Step 1: Calculation of the value of the main indicator</b>	<p>It must be stressed that this indicator is suitable only for Member States where rurality is defined at the NUTS 3 level. In any case, similar indicators from national statistics may be more suitable for the assessment of this factor of success as they can provide more detailed data.</p>
<b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b>	<p>The main indicator is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>A similar approach to the one proposed for the factor of success 7.1.1, based on the EU level evaluation study carried out by <a href="#">Micha, E., Mantino, F., Dwyer, J., et al.</a>, can be applied to assess the impact of key socioeconomic indicators, including CAP payments, on the number of new rural businesses.</p> <p>In another example, <a href="#">Mack, Fintineru and Kohler (2020)</a> estimated the causal effects of the Romanian 2007-2013 RDP for micro-enterprises and tourism activities on the number of newly established enterprises. The analysis was conducted at the level of LAU 2, based on data from national statistics, and included an estimation of the average effect of relevant RDP payments, by comparing 'LAU 2' that received or not such payments using 'Propensity Score Matching', as well as the effect of the intensity of payments using a 'Dose Response Treatment Model'.</p>
<b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b>	<ul style="list-style-type: none"> <li>&gt; I.24 Employment rate in rural areas</li> <li>&gt; C.07 Unemployment rate in rural areas</li> <li>&gt; C.08 Employment</li> <li>&gt; C.32 Tourism Infrastructure</li> <li>&gt; IFS Topics: other gainful activities directly related to the agricultural holding and other gainful activities not directly related to the agricultural holding and corresponding indicators (Regulation (EU) 2021/2286)</li> </ul>
<b>Step 4: Assessment of the factor of success</b>	<p>According to the definition of the factor of success, effectiveness is achieved if the number of rural businesses is increasing due to CAP support, as measured by the indicator BD_ENACE2_R3.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p>

## 2. Specific Objective 8

### 8.1.1 Rural areas' economy is growing or, at least, is stable and the urban-rural gap is decreasing, or at least its rate of change is slowing down due to CAP support.

<b>Specific objective</b>	<p>S08 - To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including circular bioeconomy and sustainable forestry</p>
<b>Evaluation criterion</b>	<p>Effectiveness</p>
<b>Key evaluation element</b>	<p>Rural sustainable economy</p>
<b>Suggested example of evaluation question</b>	<p>To what extent have CAP Strategic Plan interventions contributed to a sustainable rural economy by enhancing economic growth and promoting employment, or by weakening economic decline and loss of employment, and by promoting bioeconomy and sustainable forestry?</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>When CAP Strategic Plans were designed, the analysis of the context showed there are still large regional disparities between Member States in terms of GDP, especially as a result of successive enlargements of the EU. In the countries joining the EU after 2004 (EU-N13), the GDP per capita in rural areas in 2017 was 48% of the EU-28 average and 87% of the EU-15 average. Furthermore, the declining population trend in rural areas, caused by the lack of attractive employment opportunities, and unemployment affecting in particular young people, leads to depopulation or what is known as 'shrinking rural areas', which is a challenge for growth.</p> <p>The CAP, in particular through SO8, aims to bring the Commission's growth and jobs agenda to rural areas by promoting employment, local development, the development of smart villages and by contributing to fighting depopulation. There are opportunities for growth in rural areas from <a href="#">tourism and social economy</a>, the bioeconomy, <a href="#">the silver economy</a>, the service sector, the Information, Communication and Technology (ICT) and the <a href="#">renewable energy</a> sectors, as well as <a href="#">the agri-food sector</a>.</p> <p>Regarding the urban-rural gap, <a href="#">the demographic projections are not the same for all EU regions</a>. While the total population of 'European Functional Urban Areas' is projected to increase on average by 6.8% by 2050, half of them will lose population, with 12% of cities losing more than a quarter of their population between 2015 and 2050. This means that a decrease in the urban-rural gap might be feasible for some regions, but for others, a slowdown in the rate of change of this gap might be more realistic. This is why a different formulation of the factor of success is introduced to cover the different trends that can be observed across the EU.</p> <p>This factor of success can therefore assess the extent to which the CAP, through SO8 related interventions, can contribute to mitigate these challenges and contribute to growth in rural areas. It can do so in combination with the other factors of success linked to the 'rural sustainable economy' element, notably, 8.1.2 employment rate, 8.1.3 bioeconomy related businesses and 8.1.4 sustainable forestry.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>For the factor of success 8.1.1, all types of interventions should be considered, since any additional spending induces demand-side effects. Types of interventions programmed under SO8 and possibly other interventions may also generate supply-side effects. Both types of effects, supply and demand-side effects may result in additional growth and employment in rural areas.</p> <p>An indicative list of relevant types of interventions programmed under the SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 73, 74 - INVEST, investments</li> <li>&gt; Article 75 - INSTALL, setting up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> </ul> <p>Other relevant types of interventions often not programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 - BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 - CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 - CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 31 - Eco-scheme, schemes for the climate, environment and animal welfare</li> <li>&gt; Article 32 - CIS, coupled income support interventions</li> <li>&gt; Article 36 - CSPP, crop-specific payment for cotton</li> <li>&gt; Article 47 - Sector Interventions</li> <li>&gt; Article 70 - ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 71 - ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 72 - ASD, payment for area-specific disadvantages resulting from certain mandatory requirements: only for agricultural areas</li> <li>&gt; Article 76 - RISK, risk management tools</li> </ul>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<p>I.25 Contributing to growth in rural areas: Evolution of gross domestic product (GDP) per capita in rural areas</p>



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Indicator I.25 (C.09) shows the evolution of the GDP per capita in rural regions in purchasing power standard (PPS). It consists of two specific indicators:</p> <ol style="list-style-type: none"> <li>1. Index of GDP expressed in PPS per inhabitant at national level</li> <li>2. Index of GDP expressed in PPS per inhabitant in percentage of the EU average for rural areas.</li> </ol> <p>The index of GDP per capita in Purchasing Power Standards (PPS) is expressed in relation to the EU average set to equal 100.</p> <p>See the <a href="#">impact and context indicator fiches</a> for this indicator, which include the data sources and the location of the data in Eurostat databases. For an overview of the values of the indicator, both at the EU level and per Member State, explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.25 is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>The <a href="#">interactive tool developed by the Evaluation Helpdesk</a> and the <a href="#">guidelines for 'Assessing RDP Achievements and Impacts in 2019'</a> can give a detailed overview of the methods that can be used to net out this indicator.</p> <p>The evaluation study on the <a href="#">impact of the CAP on the territorial development of rural areas</a> used a combination of case studies, input-output analysis, correlation analysis, cluster analysis and regression analysis to estimate the effect of CAP support in the rural economy.</p> <p>A systematic literature review of the socioeconomic impacts of the CAP and the methods that have been used can be found in <a href="#">Lillemets, Fertö and Viira, 2022</a>.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<ul style="list-style-type: none"> <li>&gt; Total population (PMEF, C.01)</li> <li>&gt; Employment rate in rural areas (PMEF, C.06)</li> <li>&gt; Employment by sector, by type of region and by economic activity (PMEF, C.08)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if rural areas' economy is growing or, at least, is stable and urban-rural gap is decreasing, or at least, its pace is slowing down due to CAP support, as measured by the indicator I.25.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p>

## 8.1.2 Employment rate in rural areas is improving due to CAP support

<p><b>Specific objective</b></p>	<p>SO8 - To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including circular bioeconomy and sustainable forestry</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Rural sustainable economy</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have the CAP Strategic Plan interventions contributed to a sustainable rural economy by enhancing economic growth and promoting employment, or by weakening economic decline and loss of employment, and by promoting bioeconomy and sustainable forestry?</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>The sustainability of the rural economy requires the improvement of employment rates through more and better-quality jobs<sup>1</sup>. According to <a href="#">a World Bank study</a>, both the agriculture and the agri-food sectors are experiencing an outflow of labour towards other sectors. <a href="#">Data on employment rates</a> shows that the share of employed persons in rural areas is below the EU rural employment average in 14 Member States, especially in Southern Europe (Greece, Spain, Portugal) and in the Member States that joined most recently (Croatia, Romania, Bulgaria).</p> <p>At the same time, unemployment rates in rural areas are an issue. Despite a reverse of the negative trend after the economic crisis of 2008, the reverse is much slower than in urban areas. Young people, especially NEETs<sup>2</sup>, are particularly affected by unemployment, especially in Southern and Eastern Member States. <a href="#">Data on unemployment</a> shows that although it is lower in rural areas than in urban areas, it is higher than the EU average in 13 Member States, especially in Southern and Eastern Europe. Furthermore, unemployment has risen almost everywhere (rural areas, cities, towns and suburbs) between 2019 and 2020. The rise in unemployment, combined with scarcity of skilled labour leads to the abandonment of rural areas and what <a href="#">ESPON</a> calls 'shrinking rural regions'.</p> <p>Maintaining employment is critical to address in shrinking rural areas. More recently, <a href="#">the EU's Long-term Vision for Rural Areas</a>, under the action of prosperous rural areas, envisages prosperity by diversifying economic activities to new sectors with positive effects on employment. The EU Rural Action Plan to deliver the long-term vision aims, amongst others, at the provision of access to quality jobs and the creation of opportunities for entrepreneurship, especially innovative businesses as a source of employment.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>For this factor of success, all types of interventions should be considered, since all additional spendings induce demand-side effects. Types of interventions programmed under SO8, and possibly other interventions, may also generate supply-side effects. Both types of effects, supply- and demand-side effects, may result in additional growth and employment in rural areas.</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 31 – Eco-scheme - Schemes for the climate, the environment and animal welfare</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – CSPC, crop-specific payment for cotton</li> <li>&gt; Article 47 – Sectoral Interventions</li> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> <li>&gt; Article 72 – ASD, payment for area-specific disadvantages resulting from certain mandatory requirements: only for agricultural areas</li> <li>&gt; Article 73, 74 – INVEST, investments</li> <li>&gt; Article 75 – INSTALL, setting up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 76 – RISK, risk management tools</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<p>I.24 Contributing to jobs in rural areas: Evolution of the employment rate in rural areas, including a gender breakdown</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.24 shows employed persons aged 15-64 years and 20-64 years as a share of the total population of the same age group in rural areas.</p> <p>It is composed of three specific indicators:</p> <ol style="list-style-type: none"> <li>1. Total employment rate and by age groups</li> <li>2. Total employment rate by sex and by age groups</li> <li>3. Total employment rate by age groups in rural areas</li> </ol>

<sup>1</sup> For a definition of better-quality jobs see <https://www.oecd.org/sdd/labour-stats/Job-quality-OECD.pdf>.

<sup>2</sup> Refers to the rate of young people who are not in education, employment or training.



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>See <a href="#">impact and context indicator fiches for this indicator</a>. For an overview of the values of the indicator, both at the EU level and per MS, you may explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.24 is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>The assessment of the employment rate should take into account the socio-economic context and the contribution of other policies and programmes, in order to provide more robust conclusions on the CAP impact on jobs.</p> <p>For this reason, it is recommended to assess the jobs created that can be attributed to the CAP interventions. This can be obtained through a counterfactual assessment through the comparison of jobs created by CAP beneficiaries and non-beneficiaries (ideally using a quasi-experimental evaluation design). Also, indirect positive and negative displacement effects affect the net figures.</p> <p>For the methods to construct counterfactuals and carry out quasi-experimental evaluations, see previous Evaluation Helpdesk guidelines on '<a href="#">Assessing of RDP achievements and impacts in 2019</a>'.</p> <p>A simpler approach can be to screen relevant interventions with the potential to contribute to employment and conduct a survey of a sample of beneficiaries and non-beneficiaries to identify the CAP contribution. For more details on how to calculate the employment rate in rural areas, see the outcomes of thematic working group 8 of the 2014-2020 Evaluation Helpdesk on '<a href="#">Topic 2: Jobs creation in rural areas (2014-2020)</a>'.</p> <p>Another approach has been used by the JRC to assess the causal impact of different CAP mixes on economic outcomes using counterfactual impact evaluation methods at the NUTS3 level. The approach considers the CAP as a policy mix of market measures, direct payments and rural development, taking into account the intensities of these instruments in a group of NUTS3 regions. The analysis can be extended at the Member State level under certain assumptions.</p> <p>The causal method applied is the 'Generalised Propensity Score Matching', aiming to isolate the effect of the CAP from the regions' characteristics. This approach simplifies the representation of the CAP mix allowing causal inference in a multi-treatment context. The results showed that CAP funds and in particular direct payments contribute to attenuating the job losses in the agri-sector. For a description of the method used and the underlying assumptions see the JRC technical report '<a href="#">An evaluation of the CAP impact: A Discrete Policy Mix Analysis</a>'.</p> <p>A systematic literature review of the socio-economic impacts of the CAP and the methods that have been used can be found in <a href="#">Lillemets, Fertö and Viira, 2022</a>.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<ul style="list-style-type: none"> <li>&gt; Unemployment rate in rural areas (PMEF, C.07)</li> <li>&gt; Employment by sector, by type of region and by economic activity (PMEF, C.08)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if the employment rate in rural areas is improving due to CAP support, as measured by the indicator I.24.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p>



### 8.1.3 Bioeconomy related businesses are increasing or modernised due to CAP support

<b>Specific objective</b>	S08 - To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including circular bioeconomy and sustainable forestry
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Rural sustainable economy
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to a sustainable rural economy by enhancing economic growth and promoting employment, or by weakening economic decline and loss of employment, and by promoting bioeconomy and sustainable forestry?
<b>Rationale for the use of this factor of success</b>	<p>When CAP Strategic Plans were designed, the analysis of the context showed that the bioeconomy is a key element of the food system and using non-food agricultural products. It is a key part of the circular economy where new businesses are created. More specifically, the circular economy in the EU has the potential to increase GDP by an additional 0.5% by 2030 and to create around 700 000 jobs while decreasing environmental footprints and GHG emissions<sup>3</sup>. According to <a href="#">the policy brief for S08</a>, the bioeconomy in the context of S08 is one of the key sectors in terms of potential growth for rural areas, the others being tourism and the renewable energy sector.</p> <p>One of the main goals of the EU <a href="#">Bioeconomy Strategy</a> in 2018 was to strengthen European competitiveness and create jobs. The new Bioeconomy Strategy aims to address the twin challenges of a climate neutral economy by 2050 and to protect Europe's natural environment, echoing those of the Green Deal. As part of the strategy, the EU aims to create a further 400 000 new green jobs by 2030 as part of the bioeconomy, for example in expanding and further developing biodegradable packaging materials.</p> <p>The new CAP has the potential to contribute to this through CAP Strategic Plan interventions. LAGs, for instance, can be instrumental in integrating climate targets into local development strategies and projects. By involving local communities in initiatives, their input could be used to define how the bioeconomy can help face local challenges and create solutions that promote improved climate mitigation. At the same time, smart village strategies can be useful tools for promoting local, circular and climate smart solutions. Their implementation can be supported by several CAP Strategic Plan interventions including investments, start-up support to rural businesses, and cooperation.</p> <p>This factor of success can therefore assess the extent to which the CAP, through S08 related interventions, can contribute to the creation or improvement of bioeconomy businesses. The formulation of the factor of success has been modified compared to Annex I of Regulation (EU) 2022/1475 to show that not only new businesses should be considered, but also the modernisation of existing ones.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 47 – Sectoral interventions (especially, fruit and vegetables, wine, apiculture)</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 75 – INSTAL, setting-up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>Note that only certain operations within these interventions may be relevant, for instance infrastructure investments from the Investment type interventions.</p>
<b>Main indicator(s) that can be used to assess the factor of success</b>	<p>There is no specific impact indicator for the bioeconomy in the context of S08. The JRC data for '<a href="#">Jobs and Wealth in the EU Bioeconomy</a>' can be a useful source. There are two indicators from this data source that can be used to assess progress in the bioeconomy:</p> <ul style="list-style-type: none"> <li>&gt; Value added of biomass producing and converting sectors</li> <li>&gt; Number of people employed in biomass producing and converting sectors</li> </ul>

<sup>3</sup> <https://eurocities.eu/goals/circular-economy/#:~:text=The%20circular%20economy%20in%20Europe,environmental%20footprint%20and%20GHG%20emissions>



<b>Step 1: Calculation of the value of the main indicator</b>	<p>Data for both indicators are calculated based on various data sources and presented at Member State level for the period 2008-2020.</p> <p>For more information on the methodology of the calculation of the indicators see <a href="#">Ronzon et al., 2020</a></p>
<b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b>	<p>The main indicators are not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in their values. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>For the assessment of employment created in bioeconomy businesses, a further breakdown of the main indicators would be needed i.e. a breakdown of the indicators at NUTS 2 or 3 level. If these data are available, then the methods described in '<a href="#">Assessing RDP achievements and impacts in 2019</a>' can be used. The examples presented under the factor of success 8.1.2 might be also useful.</p>
<b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b>	<ul style="list-style-type: none"> <li>&gt; Employment rate in rural areas (PMEF, C.06)</li> <li>&gt; Unemployment rate in rural areas (PMEF, C.07)</li> <li>&gt; Employment by sector, by type of region and by economic activity (PMEF, C.08)</li> </ul>
<b>Step 4: Assessment of the factor of success</b>	<p>According to the definition of the factor of success, effectiveness is achieved if bioeconomy related businesses are increasing or modernised due to CAP support, as measured by the main indicators.</p> <p>As a point of comparison for the direction of the effect, the values of the main indicators at the start of the implementation period might be used.</p>

#### 8.1.4 Sustainable forestry is increasing due to CAP support

<b>Specific objective</b>	<p>S08 - To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including circular bioeconomy and sustainable forestry</p>
<b>Evaluation criterion</b>	<p>Effectiveness</p>
<b>Key evaluation element</b>	<p>Rural sustainable economy</p>
<b>Suggested example of evaluation question</b>	<p>To what extent have CAP Strategic Plan interventions contributed to a sustainable rural economy by enhancing economic growth and promoting employment, or by weakening economic decline and loss of employment, and by promoting bioeconomy and sustainable forestry?</p>
<b>Rationale for the use of this factor of success</b>	<p>Sustainable forestry is important for maintaining biodiversity, productivity, vitality and potential, according to the 2013 Forest Strategy. In 2020, forests in the EU covered 38% of total EU land area, representing approximately 5% of the world's forests. However, European forests are coming under increasing pressure from natural processes and increased human activity. The <a href="#">2020 State of Europe's Forests report</a> concluded that, on average, the condition of European forests is deteriorating. Only 49% of the protected forest area in Europe (27% of EU forest area) is considered in good condition.</p> <p>As part of the Green Deal and the Biodiversity strategy for 2030, the EU's new forest strategy for 2030 was published in 2021. Its objectives include supporting the achievement of the EU's greenhouse gas emissions reduction target of at least 55% by 2030 and climate neutrality by 2050 while supporting the EU's biodiversity objectives. These high-level aims are underpinned by the development of a rural, vibrant rural economy that is integrated with resilient, protected and productive multifunctional forest ecosystems. Sustainable forestry serves therefore the achievement of socio-economic and environmental goals and contributes directly to climate change adaptation and vice versa.</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>The new CAP has the potential to contribute to sustainable forestry and the achievement of socio-economic objectives in the context of SO8 (the achievement of environmental objectives is sought with the support provided under SO4 - Contribute to climate change mitigation and adaptation, including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as promote sustainable energy). For instance, non-productive investments to rehabilitate or restore agroecosystems present new economic opportunities e.g. new recreational activities in rural areas. Another example is the LEADER/CLLD approach which has the potential to support the uptake of practices at the appropriate scale by using local development strategies to complement the adoption of locally adapted approaches to land management e.g. new territorial facilities or markets. Also, advisory services can assist farmers (as well as forest holders and small and medium enterprises in rural areas) to improve the economic and environmental performance of their holdings. The knowledge generated by advisory services can be incorporated into business models and consequently improve business development in the field of sustainable forestry.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 70 - ENVCLIM, environment, climate-related and other management commitments</li> <li>&gt; Article 73 - INVEST, investments</li> <li>&gt; Article 77 - COOP, cooperation</li> <li>&gt; Article 78 - KNOW, knowledge exchange and dissemination of information</li> </ul>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<p>There is no specific impact indicator for forestry in the context of SO8.</p> <p>Relevant indicators can be those developed by Forest Europe, in its report on the <a href="#">State of Europe's Forests</a>, which provides comprehensive information on the status and trends in forests and forestry in the pan-European region, based on the criteria for sustainable forest management. They include:</p> <p>Net revenue of forest enterprises (Indicator 6.3): it is an important indicator of the economic performance and viability of forest management. From the national perspective, the increasing net revenue of forest enterprises reflects the contribution to a country's economic growth.</p> <p>Number of persons employed and labour input in the forest sector, classified by gender and age group, education and job characteristics (Indicator 6.5): it is of relevance to SO8 as it looks at the employment in forestry, wood manufacturing and paper industry. The forest sector workforce plays an important role, especially in rural areas.</p> <p>The use of forests and other wooded land for recreation in terms of right of access, provision of facilities and intensity of use (Indicator 6.10): specific characteristics contribute to the attractiveness of forest recreation, such as varying vegetation structures, good air quality, quietness and aesthetical aspects, as well as the availability of wild fruits and mushrooms, and the presence of animal wildlife (e.g. birdwatching). As a result, forests contribute to a good quality of life. It is relevant for SO8 since the use of forests for recreational purposes contributes to their sustainability.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>The indicator 'Net revenue of forest enterprises' is presented using the factor income and the net operating surplus. Factor income of forest enterprises measures the remuneration of all factors of production (land, capital, labour) generated by forestry activities. It represents the value generated by an economic unit engaged in forest production activities. The factor income represents the net value added less any taxes on production and adding any subsidies on the production. Data sources include the Eurostat database 'Economic aggregates of forestry' for the factor income and the net operating surplus.</p> <p>For the indicator 'Number of persons employed and labour input in the forest sector, classified by gender and age group, education and job characteristics', the main data source is the labour force survey conducted by the countries, which covers all sectors of the economy. This rich dataset contains information about the gender, age and education level of the respondents. The results of the Forest Europe study were based on the number of persons whose main activity (as employed, self-employed or unpaid family worker) falls into one of these sub-sectors.</p> <p>The indicator 'The use of forests and other wooded land for recreation in terms of right of access, provision of facilities and intensity of use' can be measured, e.g. in million visits per year, and provides an indication of how important forests are for recreational purposes.</p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>The proposed main indicators are not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in their values. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>In the <a href="#">evaluation study of the forestry measures under rural development</a>, a mix of qualitative and quantitative methods has been applied, including case studies, surveys, statistical analyses and modelling. Moreover, an approach is proposed for identifying the counterfactual.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<ul style="list-style-type: none"> <li>➤ Employment rate in rural areas (PMEF, C.06)</li> <li>➤ Unemployment rate in rural areas (PMEF, C.07)</li> <li>➤ Employment by sector, by type of region and by economic activity (PMEF, C.08)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if sustainable forestry is increasing due to CAP support, as measured by the proposed main indicators.</p> <p>As a point of comparison for the direction of the effect, the values of the main indicators at the start of the implementation period might be used.</p>

## 8.2.1 Local services and infrastructures are improving due to CAP support

<p><b>Specific objective</b></p>	<p>S08: To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including circular bioeconomy and sustainable forestry</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Local development</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions contributed to improving local services and infrastructure?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>When CAP Strategic Plans were designed, the analysis of the context stressed the accessibility to rural services as one of the key factors to help rural areas become attractive and viable and retain their population. To achieve this, the CAP 2014-2020 provided support for the provision of basic infrastructure and the improvement of and access to rural services. By the end of 2020, most of the 20 Member States that implemented the relevant measure under Focus Area 6B, had made substantial progress in meeting their targets in terms of the percentage of the rural population benefiting from rural services, with 13 Member States exceeding their target and another four being on track for achieving it by the end of the implementation period. However, in the field of Information, Communication and Technology (ICT) services and infrastructures, there was less progress by the end of 2020, with only two Member States being on target, while 10 Member States were far below target and another 15 Member States did not even implement the relevant measure under Focus Area 6C. More specifically, in relation to broadband, the <a href="#">Commission</a> showed that there is a lack of infrastructure, as many rural areas lag in broadband availability, while 76% of the EU population has access to fast broadband (&gt;30Mbps), only 40% of homes in rural areas have such access.</p> <p>The new CAP aims to further support the development of rural services and infrastructure as together with business development (see relevant factor of success under S07), they contribute to increasing the attractiveness of rural areas, reversing depopulation trends as well as closing the gap between rural and urban areas.</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>This factor of success can therefore assess the extent to which the CAP, through SO8 related interventions, can contribute to improving local services and infrastructure in rural areas, both in terms of access and quality. It can do so in combination with the other factors of success linked to the ‘business development’ element, notably, 7.2.1 Number of rural businesses is increasing.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation</li> </ul> <p>Note that only certain operations within these interventions may be relevant, for instance infrastructure investments from the investment type interventions.</p>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<p>There is no PMEF impact indicator that can be linked to this factor of success.</p> <p>It is proposed to use the Result Indicator R.41 ‘Connecting rural Europe: Share of rural population benefitting from improved access to services and infrastructure through CAP support’.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>R.41 measures the share of the rural population benefitting from improved access to services and infrastructure through CAP support. It aims to quantify the share of the rural population covered by interventions aimed at improving access to services and infrastructure, including broadband.</p> <p>See the <a href="#">result indicator fiche</a>. For an overview of the values of the indicator, both at the EU level and per Member State, explore the <a href="#">result indicators dashboard</a> at the agri-food data portal.</p> <p>A similar indicator (CMEF Output Indicator 15) has also been used in the evaluation study on the <a href="#">impact of the CAP on the territorial development of rural areas</a>. For an overview of the values of this indicator, both at the EU level and per Member State, explore the <a href="#">data explorer</a> at the agri-food data portal where there are also data for Result Indicator 25 of the CMEF ‘Percentage of rural population benefitting from new or improved services/infrastructures (Information and Communication Technology)’.</p> <p>It is a simple calculation, consisting of a numerator, which is the rural population as indicated in the first application for the selected operations (i.e. the intended outcome) and a denominator, which is the total population in the Member State targeted with rural development interventions. To avoid double counting, if different operations are supported in the same area, the population should be counted only once. Caution is required as the indicator refers to the potential beneficiaries in municipalities or in a given area (e.g. covered by the LAG) and not the municipal or regional population.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>This indicator is not an impact indicator and therefore not included in Annex III of the Implementing Regulation and there is no obligation to quantify the contribution of the CAP Strategic Plan to its development.</p> <p>The evaluation study on the <a href="#">impact of the CAP on the territorial development of rural areas</a> has tried to assess the effect of the CAP support on local services and infrastructure using a mix of case studies and analysis of quantitative data, based mostly on Output indicator 15 of the CMEF, which is similar to R.41.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Context indicators:</b></p> <ul style="list-style-type: none"> <li>&gt; C.01 Total population (PMEF, C.01)</li> <li>&gt; C.02 Population density (PMEF, C.02)</li> <li>&gt; C.04 Total area (PMEF, C.04)</li> <li>&gt; C.32 Tourism infrastructure (PMEF, C.32)</li> </ul> <p><b>Additional impact indicators</b></p> <p>The following indicators can complement the analysis of R.41 highlighting different aspects, such as job opportunities and access to leisure and cultural activities as well as broadband infrastructure.</p> <ul style="list-style-type: none"> <li>&gt; Improvement of job opportunities in rural areas (Eurobarometer)</li> <li>&gt; Access to high-speed broadband (Rural Observatory)</li> <li>&gt; Increased number of households that are connected to broadband in rural areas (Eurostat, <a href="#">isoc_ci_it_h</a>)</li> <li>&gt; Better access to leisure and cultural activities in rural areas (Eurobarometer)</li> </ul>



<b>Step 4: Assessment of the factor of success</b>	<p>According to the definition of the factor of success, effectiveness is achieved if local services and infrastructures are improving due to CAP support, as measured by the indicator R.41.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>Evaluators may use the annual and overall targets set in the CAP Strategic Plans for R.41 as point of comparison for estimating the magnitude of the effect.</p>
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### 8.3.1 Women employment and participation in farming and the economy is improving due to CAP support.

<b>Specific objective</b>	S08: To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including circular bioeconomy and sustainable forestry
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Gender equality and social inclusion
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to the promotion of participation of women in farming and the economy, income equity and poverty reduction?
<b>Rationale for the use of this factor of success</b>	<p>Equality between women and men is a core principle of the EU and gender mainstreaming is an important tool in the integration of that principle into the CAP. Women have a key role to play in farming and the development of rural areas and this is highlighted in the CAP regulation. It stipulates that in the needs assessment during the preparation of CAP Strategic Plans, Member States should use, where available, data disaggregated by gender<sup>4</sup>. It also highlights that gender equality should be an integral part of the preparation, implementation and evaluation of CAP interventions.</p> <p>Gender equality is high on the policy agenda, reflected in the Sustainable Development Goals<sup>5</sup> and the <a href="#">EU Gender Equality Strategy</a> which seeks to advance gender equality as a driver for development given that women suffer more than men from lack of access to decent work and face occupational segregation and gender wage gaps. <a href="#">Data reveals</a> that the gender employment gap remains high at 13% in 2019 (the general employment rate for women is 67% compared with 80% for men), while it was lower in cities (10%).</p> <p>Recently, DG Regio has produced a <a href="#">regional gender equality monitor</a> which reveals details in terms of differences between regions and Member States regarding gender equality. Moreover, DG Regio, based on data from the monitor, has mapped <a href="#">the state of women's equality region by region</a>. Furthermore, an <a href="#">EU CAP Network workshop</a> (November 2022) focused on 'Advancing gender equality in rural areas in the EU', stressing the need for collaborative work and integration of all available and relevant EU and national funding tools and policies.</p> <p>To address the gender employment gap and generally promote gender equality in rural areas, the Rural Action Plan supports the uptake of female entrepreneurship, women's participation in decision-making and the provision of adequate services in rural areas. The actions to accelerate gender equality in rural areas and agriculture funded by the CAP will support, as stated by the <a href="#">EU Gender Equality Strategy</a>, the Commission's commitment to continue supporting Member States' work on improving the situation of rural women through investments from the EAFRD.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 75 – INSTAL, setting-up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 – COOP, cooperation</li> </ul>

<sup>4</sup> Article 108 of Regulation (EU) 2021/215.

<sup>5</sup> SDG 5: Achieve gender equality and empower all women and girls.



<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<p>I.24 Contributing to jobs in rural areas: Evolution of the employment rate in rural areas, including a gender breakdown</p> <p>I.23 Attracting young farmers: Evolution of number of new farm managers and the number of new young farm managers, including a gender breakdown</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.24 shows employed persons aged 15-64 years and 20-64 years as a share of the total population of the same age group in rural areas <a href="#">[see impact indicator fiche]</a>. It is composed of three specific indicators:</p> <ol style="list-style-type: none"> <li>1. Total employment rate and by age groups</li> <li>2. Total employment rate by sex and by age groups</li> <li>3. Total employment rate by age groups in rural areas</li> </ol> <p>I.23 shows the evolution of a number of new farm managers including new young farm managers. It measures:</p> <ol style="list-style-type: none"> <li>1. The number of new farm managers by sex</li> <li>2. The number of new young farm managers by sex</li> </ol>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>The main indicators are not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in their values. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>Concerning the employment rate, although there is no requirement to net out, its assessment should take into account the socio-economic context and the contribution of other policies and programmes, in order to provide more robust conclusions on the CAP impact on jobs, particularly jobs for women. For this reason, it is recommended to assess the jobs created by gender that can be attributed to the CAP interventions. This can be obtained through a counterfactual assessment through the comparison of jobs created for CAP beneficiaries and non-beneficiaries (ideally using a quasi-experimental evaluation design). Also, indirect positive and negative displacement effects affect the net figures. See below for methodologies.</p> <p>For Impact Indicator I.24 'evolution of employment in rural areas', the main source of data is the labour force survey of Eurostat. Based on this, the total employment rate of each Member State can be disaggregated by degree of urbanisation. This degree of urbanisation classifies the territory (Local Administrative Units (LAU)) into rural areas, towns, suburbs and cities. The rural employment rate of each Member State could then be compared with the employment rates in the other two types of areas or with the employment rate for the whole country. Additionally, employment rates could also be calculated for men and women and even for other age groups.</p> <p>For Impact Indicator I.23 'evolution of number of new farm managers and the number of new young farm managers', the main source of data is the Eurostat integrated farm statistics. It provides data on the number of new entrants (including young) farmers in the previous three years, the year in which the manager of the agricultural holding took up this role and the year of birth of the manager of the agricultural holding.</p> <p>For the methods to construct counterfactuals and carry out quasi-experimental evaluations, see previous Evaluation Helpdesk guidelines on '<a href="#">Assessing of RDP achievements and impacts in 2019</a>'.</p> <p>A simpler approach can be to screen relevant interventions with the potential to contribute to employment and conduct a survey of a sample of beneficiaries and non-beneficiaries (by gender) to identify the CAP contribution. For more details on how to calculate the employment rate in rural areas, see the outcomes of Thematic Working Group 8 of the 2014-2020 Evaluation Helpdesk: <a href="#">Topic 2: Jobs creation in rural areas (2014-2020)</a>.</p> <p>Another approach has been used by the JRC to assess the effect of different CAP mixes on economic outcomes using counterfactual impact evaluation methods at the NUTS3 level. The approach considers the CAP as a policy mix of market measures, direct payments and rural development, taking into account the intensities of these instruments in a group of NUTS3 regions. The analysis can be extended at the Member State level under certain assumptions.</p>



<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>The causal method applied is the 'Generalised Propensity Score' method, aiming to isolate the effect of the CAP from the regions' characteristics. This approach simplifies the representation of the CAP mix allowing causal inference in a multi-treatment context. The results showed that CAP funds and in particular direct payments contribute to attenuating the job losses in the agri-sector. For a description of the method used and the underlying assumptions see the JRC technical report '<a href="#">An evaluation of the CAP impact: A Discrete Policy Mix Analysis</a>'.</p> <p>The effect of the CAP on gender equality in Austria has been researched by <a href="#">Oedl-Wieser, 2015</a>, using mostly a qualitative approach based on interviews.</p> <p>In Slovenia (<a href="#">Černic Istenic, 2015</a>) a more quantitative approach was used to assess gender equality in farms. The analysis compares beneficiaries, coming from a specific survey<sup>6</sup>, with non-beneficiaries from the agricultural census.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Context indicators:</b></p> <ul style="list-style-type: none"> <li>&gt; Employment rate in rural areas (PMEF, C.06)</li> <li>&gt; Unemployment rate in rural areas (PMEF, C.07)</li> <li>&gt; Employment by sector, by type of region and by economic activity (PMEF, C.08)</li> <li>&gt; IFS Topics: other gainful activities directly related to the agricultural holding and other gainful activities not directly related to the agricultural holding and corresponding indicators (Regulation (EU) 2021/2286)</li> </ul> <p><b>Additional impact indicators</b></p> <ul style="list-style-type: none"> <li>&gt; Women employment in the agriculture sector, the proportion of farm managers who are women (related to C.14 and C.08)</li> <li>&gt; Population by educational attainment level, sex, age and degree of urbanisation (%) (Eurostat, EDAT_LFS_9913)</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if women's employment and participation in farming are increasing due to CAP support, as measured by the main indicators.</p> <p>As a point of comparison for the direction of the effect, the values of the main indicators at the start of the implementation period might be used.</p>

### 8.3.2 CAP Strategic Plan support is more fairly distributed

<p><b>Specific objective</b></p>	<p>S08 - To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including circular bioeconomy and sustainable forestry</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Gender equality and social inclusion</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions contributed to the promotion of participation of women in farming and the economy, income equity and poverty reduction?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The new CAP 2023-2027 brings fairness in the distribution of support to the forefront by promoting more effective and efficient targeting of income support to farms and a result-oriented intervention strategy structured around the SOs of the CAP, including quantified targets about those objectives. Member States are allowed to cap or reduce the amounts of direct payments above a certain ceiling in order to ensure a fairer distribution of income support, while they are also allowed to take into account labour when applying this mechanism.</p> <p>This factor of success assesses the effectiveness of the CAP instruments and interventions to ameliorate the differences in the income support distribution.</p>

<sup>6</sup> 'Generations and Gender Relations on Slovenian Farms 2007', sponsored by the Ministry of Agriculture, Forestry and Food.



<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – CSPP, crop-specific payment for cotton</li> <li>&gt; Article 71 – ANC, natural or other area-specific constraints</li> <li>&gt; Article 72 – ASD, area-specific disadvantages resulting from certain mandatory requirements</li> <li>&gt; Article 75 – INSTAL, setting-up of young farmers and new farmers and rural business start-ups</li> </ul>
<b>Main indicator(s) that can be used to assess the factor of success</b>	<p>I.26 A fairer CAP: Distribution of CAP support</p>
<b>Step 1: Calculation of the value of the main indicator</b>	<p>Indicator I.26 shows to what extent the CAP income support to is evenly distributed between its beneficiaries, allowing to check the fairness of support distribution through a distribution analysis based on the ranked level of income support per beneficiary. Note that I.26 only counts income support to farms. I.26 is composed of two sub-indicators:</p> <ol style="list-style-type: none"> <li>1. Share of support received by 20% of the largest beneficiaries of the CAP</li> <li>2. Interquartile range of CAP support by beneficiary</li> </ol> <p>See <a href="#">Impact Indicator Fiches</a> for more information.</p>
<b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b>	<p>I.26 is one of the impact indicators that should be netted-out as it is included in Annex III of the Implementing Regulation.</p> <p>The indicator is calculated specifically for the beneficiaries of the CAP, and it is affected by the choices Member States are making in their CAP Strategic Plans, regarding the delivery of the support (capping, degressivity, implementation of CRISS etc.). Therefore, any change in the indicator can be attributed only to the implementation of these specific CAP income instruments and interventions.</p> <p>The net effect could be the difference in the distribution of CAP support before and after and with and without the implementation of the corresponding CAP Strategic Plan interventions.</p>
<b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b>	<p>None.</p>
<b>Step 4: Assessment of the factor of success</b>	<p>According to the definition of the factor of success, effectiveness is achieved if CAP Strategic Plan support is more fairly distributed, as measured by indicator I.26.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>Member States may have set national targets for a fairer distribution of CAP support in chapter 3.4 of their CAP Strategic Plans. Evaluators may use such targets as a point of comparison for estimating the magnitude of the effect.</p>



### 8.3.3 Rural poverty is decreasing due to CAP support

<b>Specific objective</b>	S08: To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including circular bioeconomy and sustainable forestry
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Gender equality and social inclusion
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to the promotion of participation of women in farming and the economy, income equity and poverty reduction?
<b>Rationale for the use of this factor of success</b>	<p>The analysis of the context at the time of preparation of CAP Strategic Plans revealed that rural poverty and social exclusion are important challenges in a large part of the EU. Data based on the AROPE indicator which is the one measuring the risk of poverty and social exclusion, showed that although the number of people at risk of poverty and social exclusion was decreasing overall, the share of people in poverty in rural areas had been increasing since 2015. <a href="#">Data from the CMEF Context Indicator C.9 'Poverty rate'</a>, show that poverty risk was higher in rural areas (22.4% in 2019) compared to urban areas (21.3% in cities and 19.2% in towns and suburbs in 2019). This risk is a greater challenge in some Member States than in others. The situation was worse in some countries in Southern and Eastern Europe. In a context where access to essential services (schools, primary health care) was most limited in remote rural areas, their remoteness contributed to social exclusion and poor performing labour markets. These data also show that the risk of poverty and social exclusion in 13 Member States is above the EU average of 22.8% and in four Member States is more than 30%. These figures call for action to address this problem.</p> <p>Against this context, addressing poverty and social exclusion is high on the EU agenda. One of the Commission's recommendations to Member States regarding their CAP Strategic Plans is to strengthen the socio-economic fabric of rural areas by generating perspectives, including for the most vulnerable areas and societal groups. Furthermore, the eradication of poverty is the first goal of the UN's <a href="#">2030 Agenda</a>, which promotes the eradication of all forms of extreme poverty for all people everywhere.</p> <p>The risk of poverty and social exclusion, unfavourable employment and unemployment situations are recurring features of many rural areas in the EU. They affect women, young people and vulnerable groups disproportionately. As described in the <a href="#">Commission's recommendations to Member States</a> as regards their CAP Strategic Plans, it emerges that this situation leads to depopulation and/or ageing dynamics in many Member States, calling for effective solutions to attract and retain the population actively in rural areas.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 75 – INSTAL, setting-up of young farmers and new farmers and rural business start-up</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of relevant types of interventions often not programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 21 – BISS, basic income support for sustainability including round sum payment for small farmers</li> <li>&gt; Article 29 – CRISS, complementary redistributive income support for sustainability</li> <li>&gt; Article 30 – CIS-YF, complementary income support for young farmers</li> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, environment and animal welfare</li> <li>&gt; Article 32 – CIS, coupled income support interventions</li> <li>&gt; Article 36 – CSPC, crop-specific payment for cotton</li> <li>&gt; Article 70 – ENVCLIM, Environmental, climate-related and other management commitments</li> <li>&gt; Article 72 – ASD, payment for area-specific disadvantages resulting from certain mandatory requirements</li> <li>&gt; Article 71 – ANC, payment for natural or other area-specific constraints</li> </ul>



<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<p>I.27 Promoting rural inclusion: Evolution of poverty index in rural areas</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.27 shows the share of population at risk of poverty or social exclusion in rural areas. It is calculated as the percentage of people who are at risk of poverty or severely deprived or living in a household with low work intensity over the total population.</p> <p>See the <a href="#">impact indicator fiches</a>. It consists of three specific indicators, expressed as a share of the total population:</p> <ol style="list-style-type: none"> <li>1. Total poverty rate</li> <li>2. Poverty rate by type of area</li> <li>3. Poverty rate by sex (at national level only)</li> </ol> <p>It is the share of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income after social transfers.</p> <p>For the impact indicator I.27 evolution of poverty index in rural areas, the main source of data is Eurostat, namely the survey on income and living conditions (SILC) and the degree of urbanisation. As it can be compared to the overall EU average, to the respective national average and/or to the average for intermediate and/or urban areas in a Member State or the EU, it serves as an indication of the differences between rural areas with a Member State or between Member States or of the rural-urban gap in this field.</p> <p>For an overview of the values of the indicator, both at the EU level and per Member State, explore the <a href="#">corresponding page</a> or the <a href="#">data explorer</a> at the agri-food data portal.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>Indicator I.27 is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>As there are also other policies with a higher financial weight contributing to the reduction of poverty (especially the European Social Fund), it is recommended that Member States undertake some effort to net out the effects of the CAP on this indicator. This can be done by constructing counterfactuals and carrying out quasi-experimental evaluations, and, in the absence of sufficient data, using the qualitative MAPP method (method for impact assessment of projects and programmes). For both of these approaches, see the previous Evaluation Helpdesk guidelines on '<a href="#">Assessing of RDP achievements and impacts in 2019</a>'.</p> <p>More specifically, the MAPP method is an innovative focus group method that has been used in rural development evaluations. Participants in the focus groups would include representatives of beneficiaries and non-beneficiaries of the interventions that may have an impact on the reduction of poverty (see the above list of relevant interventions).</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<ul style="list-style-type: none"> <li>&gt; Employment rate in rural areas (PMEF, C.06)</li> <li>&gt; Unemployment rate in rural areas (PMEF, C.07)</li> <li>&gt; Employment by sector, by type of region and by economic activity (PMEF, C.08)</li> </ul> <p>In addition to C.10 which is the same as I.27, context indicators in relation to employment can provide some indication of the extent to which poverty and social inclusion are reduced, based on the assumption that labour market inclusion is an important component of social inclusion and, at the same time, employment is a source of income for people at risk of poverty.</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if rural poverty is decreasing due to CAP support, as measured by indicator I.27.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p>



## 3. Specific Objective 9

### 9.1.1 Value of production marketed under quality schemes and of organic production is increasing due to the CAP support

<b>Specific objective</b>	S09 - To improve the response of Union agriculture to societal demands on food and health, including high quality, safe, and nutritious food produced in a sustainable way, the reduction of food waste, as well as improving animal welfare and combatting antimicrobial resistances
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Quality and safety food
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to fostering quality schemes, promoting animal welfare and combatting antimicrobial resistance?
<b>Rationale for the use of this factor of success</b>	<p>Societal demand for quality food is multi-faceted – it concerns the inherent quality of food products, which has to be safe (e.g. no residues of pesticides or antimicrobials) and nutritious (content of nutrients, vitamins and minerals) to be placed on the EU market, while also requiring production processes respect the environment and ensure minimum welfare of farm animals. To guide their purchase decisions, consumers rely on specific labels that guarantee the compliance of food products with stringent requirements ensuring higher quality (e.g. PDO/PGI products reflecting traditional local practices or organic products). Food quality also refers to the capacity for a population to adopt healthy diets, based on safe and nutritious food products, in line with its needs and health.</p> <p>In this context, the European Commission, under the Farm to Fork Strategy, has adopted an <a href="#">action plan</a> to increase organic production and stimulate demand for organic food, in order to achieve the target of at least 25% of the EU's agricultural land under organic farming.</p> <p>This factor of success can assess the progress towards increasing the production of organic food and food under quality schemes.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>➤ Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>➤ Article 73 – INVEST, investments</li> <li>➤ Article 77.1.c – COOP, cooperation to promote and support quality schemes recognised by the Union or by the Member States and their use by farmers</li> <li>➤ Article 78 – KNOW, knowledge exchange and dissemination of information</li> <li>➤ Article 47.1.f and g, Article 57.1.h – Sectoral interventions</li> </ul>
<b>Main indicator(s) that can be used to assess the factor of success</b>	I.29 - Value of production under Union quality schemes and of organic production
<b>Step 1: Calculation of the value of the main indicator</b>	<p>I.29 shows the value of production under EU quality schemes and of organic production compared to total value of agricultural and food</p> <p>It consists of three specific indicators:</p> <ol style="list-style-type: none"> <li>1. Total value of production under EU quality schemes and organics as well as the share of the total agricultural and food production value</li> <li>2. Value of production by EU quality schemes – PDO, PGI and TSG (Council Regulation (EC) No 510/2006) and share of total agricultural and food production value</li> <li>3. Value of certified organic production and share of total agricultural and food production value</li> </ol>



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>It covers the four EU quality schemes: agricultural products and foodstuffs (Regulation (EU) 1151/2012), wines (Regulation (EU) 1308/2013), spirit drinks (Regulation (EC) 110/2008), and aromatised wine products (Regulation (EU) 251/2014), as well as certified organic production (Regulation (EC) 2018/484 repealing Regulation (EU) 834/2007). See the corresponding indicator fiche <a href="#">here</a>.</p> <p>There is no systematic data collection established at the EU level for this indicator. DG AGRI is regularly conducting a specific study on the economic value of EU quality schemes, geographical indications (GIs) and TSGs. The <a href="#">latest study has been finalised in 2019 and published in 2021</a>.</p> <p>Member States are encouraged, where relevant to their CAP Strategic Plan intervention logic and evaluation needs, to set up specific data arrangements for the calculation and the netting out of the indicator. The data collection could cover, on an annual basis, at least:</p> <ul style="list-style-type: none"> <li>&gt; sales volume and/or sales value;</li> <li>&gt; prices at the wholesale stage [e.g. dairy stage for cheese, slaughterhouse or cutting plant stage for meat, cooperative or regional wholesaler stage for fruits and vegetables, winery or distillery stage for wines or spirits].</li> </ul> <p>The first two categories of data can be used to calculate the value of each specific indicator of I.29. The collection could be performed by public authorities or collective organisations such as producers' groups or interbranch organisations. Data could be gathered once a year or once every two years.</p> <p>For this factor of success, the evolution of the value of production shall be used, while its share of the total agricultural and food production value shall be used for the factor of success 3.1.1.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.29 is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>FADN data can be used to estimate the effect of CAP payments on the value of production of organic or other quality products. This approach can be used as a proxy as it can capture only the effect on the value at the producer level and not the value of the marketed production. <a href="#">Offermann, Nieberg and Zander (2009)</a> have proposed this approach as a proxy for assessing policy dependency of organic farming, by analysing the value of gross output, which was calculated as the value of agricultural production including all subsidies received, in relation to the CAP support for organic farming.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p><b>Additional result indicator:</b> Increase in the production of organic food.</p> <ul style="list-style-type: none"> <li>&gt; Based on the datasets ORG_CROPPRO and ORG_LSTSPEC by Eurostat, the increase in the production of organic food can be calculated.</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if soil erosion is decreasing, due to CAP support, as measured by the indicator I.13.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator based on the data included in <a href="#">the latest EU study</a> might be used.</p> <p>The Farm to Fork Strategy has set <a href="#">a target</a> for reaching 25% of agricultural land under organic farming by 2030. Evaluators may use such targets as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>



## 9.1.2 Animal welfare is improving due to the CAP support

<b>Specific objective</b>	S09 - To improve the response of Union agriculture to societal demands on food and health, including high quality, safe, and nutritious food produced in a sustainable way, the reduction of food waste, as well as improving animal welfare and combatting antimicrobial resistances
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Quality and safety food
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to fostering quality schemes, promoting animal welfare and combatting antimicrobial resistance?
<b>Rationale for the use of this factor of success</b>	<p>Societal demand for quality food is multi-faceted – it concerns the inherent quality of food products, which has to be safe (e.g. no residues of pesticides or antimicrobials) and nutritious (content of nutrients, vitamins and minerals) to be placed on the EU market, while also requiring production processes respect the environment and ensure minimum welfare of farm animals.</p> <p>Animal welfare is multidimensional. It is generally accepted that measurements and evaluation systems for animal welfare are based on five domains:</p> <ul style="list-style-type: none"> <li>&gt; nutrition;</li> <li>&gt; physical environment;</li> <li>&gt; health;</li> <li>&gt; behavioural interactions;</li> <li>&gt; mental state.</li> </ul> <p>At farm level, management practices and housing conditions influence animal welfare. These practices encompass nutrition practices, physical environment conditions, practices enhancing the natural behaviour of animals and practices affecting their health.</p> <p>EU citizens consider it important that farming practices enable animals to express their natural behaviour and their suffering or distress is limited. Hence, the main expectations concern better housing conditions for farm animals (e.g. appropriate density, outdoor access and grazing, provision of vegetal litter) and the reduction of animal suffering (e.g. no mutilation or appropriate measures taken to avoid pain). Furthermore, there is today a clear consumer demand for more information, including using labels, on the conditions under which the animals have been kept. The need to change farm animals' living conditions is best demonstrated by the European Citizens' Initiative 'End of the Cage Age' which gathered almost 1.4 million signatures across the EU.</p> <p>This factor of success can assess the progress towards improving the conditions of animal welfare.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 12 – Conditionality, especially SMR 9, 10 and 11</li> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, environment and animal welfare</li> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul>
<b>Main indicator(s) that can be used to assess the factor of success</b>	<p>There is no PMEAF impact indicator to assess improvements in animal welfare. The <a href="#">study of the CAP measures and instruments promoting animal welfare and reduction of antimicrobials use</a> included a list of 15 indicators, identified through different scientific projects and case studies. Based on this list, the Evaluation Helpdesk, under Thematic Working Group 1, identified three indicators which:</p> <ul style="list-style-type: none"> <li>&gt; have the potential to reflect both the major animal welfare issues for each animal type and the improvements supported by the various CAP measures and instruments;</li> <li>&gt; are already collected in most Member States, and cover a significant percentage of the corresponding farms;</li> </ul>



<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ul style="list-style-type: none"> <li>&gt; are collected by qualified or specifically trained personnel; and</li> <li>&gt; are readily available and accessible, and can be attributed to the practices applied in the corresponding farms.</li> </ul> <p>These indicators are:</p> <ul style="list-style-type: none"> <li>&gt; Mortality rate</li> <li>&gt; Absence of disease</li> <li>&gt; Absence of injuries</li> </ul>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>The mortality rate is widely collected among Member States for all animal types and covers a significant percentage of the corresponding farms. It is an animal-based indicator, that can be measured by qualified or trained personnel as well as by the farmer, even without specific training, and can reflect directly most physical environment and health related issues.</p> <p>The absence of disease and absence of injuries have more explanatory power than the mortality rate. They are both animal-based indicators and can be used to detect improvements in welfare issues beyond the ones considered life-threatening. They can be used to measure improvements in many health and physical environment issues. The absence of injuries may also reflect some issues related to behavioural interactions.</p> <p>More information about these indicators can be found in scientific projects such as the <a href="#">Welfare Quality or AssureWell</a>.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>The proposed indicators are not PMEF indicators. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in their values. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>There is no systematic data collection established at the EU level for indicators related to animal welfare. Member States are encouraged, where relevant to their CAP Strategic Plan intervention logic and evaluation needs, to set up specific data arrangements for the calculation and the netting out of the indicators. The <a href="#">study of the CAP measures and instruments promoting animal welfare and reduction of antimicrobial use</a>, published by the DG AGRI, examines the effects of CAP measures and instruments on animal welfare and the reduction of antimicrobial use. It identifies farming practices, their impacts on these two components and how such practices were effectively supported by the CAP, then assesses how the CAP impacted animal welfare and antimicrobial use.</p> <p>A <a href="#">thematic evaluation</a> carried out in five German federal states was based on a specific evaluation framework which entails two separate, but interconnected analyses of:</p> <ol style="list-style-type: none"> <li>1. a 'bottom up' analysis of animal welfare effects of individual measures which looks to identify as many effects as possible of a single measure for a single federal state by using surveys;</li> <li>2. a 'top-down' approach which uses specific indicators (i.e. mortality) to find out the influence of each RDP measure. Secondary data is used to compare federal states for this purpose.</li> </ol> <p><b>Main challenges in calculating and netting out the main indicators</b></p> <p>The mortality rate has considerable shortcomings, the most important being the variability of the causes of mortality, which reduces the explanatory power of the indicator.</p> <p>The absence of disease and absence of injuries must be measured by qualified or trained personnel and their measurement is time consuming.</p> <p>The application of a counterfactual methodology capable of comparing animal welfare between supported and non-supported farms is difficult because the access to data of non-beneficiaries is restricted due to data protection regulations.</p> <p>To address these challenges, animal-based data collected for sanitary controls and slaughtering could be made accessible to evaluators and data related to animal welfare could be collected not only from beneficiaries of M14 (M04.1, M11, M01, M02, M16), but also from those receiving support of other relevant CAP interventions.</p>



<b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b>	None
<b>Step 4: Assessment of the factor of success</b>	<p>According to the definition of the factor of success, effectiveness is achieved if animal welfare is improving due to CAP support, as measured by the indicator proposed main indicators.</p> <p>As a point of comparison for the direction of the effect, the values of the main indicators at the start of the implementation period might be used.</p>

### 9.1.3 Antimicrobial use for food-producing animals is decreasing due to the CAP support

<b>Specific objective</b>	SO9 - To improve the response of Union agriculture to societal demands on food and health, including high quality, safe, and nutritious food produced in a sustainable way, the reduction of food waste, as well as improving animal welfare and combatting antimicrobial resistances
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Quality and safety food
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions contributed to fostering quality schemes, promoting animal welfare and combatting antimicrobial resistance?
<b>Rationale for the use of this factor of success</b>	<p>Societal demand for quality food is multi-faceted – it concerns the inherent quality of food products, which has to be safe (e.g. no residues of pesticides or antimicrobials) and nutritious (content of nutrients, vitamins and minerals) to be placed on the EU market, while also requiring production processes respect the environment and ensure minimum welfare of farm animals.</p> <p>The resistance of microorganisms to antimicrobials (AMR), to which they were previously responsive, complicates the treatment of infectious diseases in humans and animals and may thus pose a threat to human or animal health. Intensive animal production systems are generally the higher users of antimicrobials, especially in the pig and poultry sectors. According to the <a href="#">‘Animal Health Strategy for the EU’</a> where “Prevention is better than cure” solutions exist to increase bio-security and reduce their use. They consist of improved hygiene and husbandry practices applied on farms to “keep diseases out of populations, herds, or groups of animals where they do not currently exist or to limit the spread of disease within the herd”.</p> <p>This factor of success can assess the progress towards reducing the use of antimicrobials for food-producing animals.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 31 – Eco-scheme, schemes for the climate, environment and animal welfare</li> <li>&gt; Article 70 – ENVCLIM, environmental, climate-related and other management commitments</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul>
<b>Main indicator(s) that can be used to assess the factor of success</b>	I.28 - Sales/use of antimicrobials for food-producing animals



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>I.28 measures the sales of veterinary antimicrobial agents, marketed mainly for food-producing animals, in mg/PCU (population correction unit).</p> <p>The European Surveillance of Veterinary Antimicrobial Consumption (ESVAC) project collects information on how antimicrobial medicines are used in animals across the EU. The amounts of veterinary antimicrobial agents sold are linked to the animal demographics in each country. To normalise the sales data for the animal population that can be subjected to treatment with antimicrobial agents, a PCU is used in the ESVAC as a proxy for the size of the animal population. The PCU is the standardised average weight in kilograms of all animals at the time of treatment multiplied by the number of animals, based on national statistics (live and/or slaughtered).</p> <p>Since 1 January 2022, all Member States are obliged to collect data on sales and use of antimicrobials in animals, to enable in particular the direct or indirect evaluation of their use in food-producing animals at farm level, following a stepwise approach for different animal species, within the time limits set. See the indicator fiche <a href="#">here</a>.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.28 is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p><b>Assessment of net effects</b></p> <p>The latest <a href="#">study of the CAP measures and instruments promoting animal welfare and reduction of antimicrobial use</a>, published by the DG AGRI, examines the effects of the CAP measures and instruments on animal welfare and the reduction of antimicrobial use. It identifies farming practices, their impacts on these two components, and how such practices were effectively supported by the CAP, then assesses how the CAP impacted animal welfare and antimicrobial use.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>None</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if soil erosion is decreasing due to CAP support, as measured by indicator I.13.</p> <p>As a point of comparison for the direction of the effect, the value of the main indicator at the start of the implementation period might be used.</p> <p>The Farm to Fork Strategy has set a target for a reduction of overall EU sales of antimicrobials for farmed animals and aquaculture of 50% by 2030. Evaluators may use such targets as a point of comparison for estimating the magnitude of the effect, that is what part of the achievement of the target can be attributed to the CAP support.</p>





# Factors of Success for Cross-Cutting Objective

**Annex IV to the guidelines developed under  
Thematic Working Group 3**



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# Annex IV: Factors of success for Cross-cutting Objective

## Introduction

### Overall structure

The factors of success relevant to Cross-Cutting Objective (CCO): “modernising agriculture and rural areas by fostering and sharing of knowledge, innovation and digitalisation in agriculture and rural areas and by encouraging their uptake by farmers, through improved access to research, innovation, knowledge exchange and training” are presented in this annex.

The overall structure of the specific objectives, key evaluation elements and factors of success is illustrated in the following Table.

SO	Key evaluation element	Suggested example of evaluation question	Recommended factor of success
10	<b>10.1 Agricultural Knowledge and Innovation system (AKIS) and digital strategy:</b> Based on the support of AKIS strategic actions, the AKIS related interventions, and the digital strategy and their impact on innovation uptake by farmers	To what extent have CAP Strategic Plan interventions supported AKIS strategic actions and related AKIS interventions that contribute to strengthening interactions within the AKIS and the uptake of knowledge and innovation by farmers?  To what extent have CAP Strategic Plan interventions supported the digital strategy that contributes to fostering digitalisation in agriculture and the uptake of digital solutions by farmers?	10.1.1 An increasing number of farmers participated in training programmes and/or made use of farm advice due to CAP support.
			10.1.2 Farmers are changing farming practices after participating in training programmes and/or after making use of farm advice due to CAP support.
			10.1.3 An increasing number of farmers are introducing digital farming tools due to CAP support.
			10.1.4 CAP Strategic Plan's expenditure supporting the creation of innovation and knowledge sharing is increasing.

Please note that the key evaluation element and the corresponding examples of evaluation questions are assessed by more than one factor of success.

In every factor of success, there is an explicit reference to the effect of the CAP support. This is to underline that, although the quantification of the CAP contribution is not mandatory for

all impact indicators, the purpose of the evaluation is to assess the performance of the CAP. Therefore, it is recommended to try to assess the net contribution of the CAP support, as this will be important not only for effectiveness but also for the other evaluation criteria. However, it must be stressed that this recommendation cannot and does not attempt to alter, in any case, the provisions of the regulatory framework.

### Indicative types of interventions

In each factsheet, **an indicative intervention logic is presented by listing the types of interventions that affect each factor of success.** The identification of the corresponding types of interventions was based on the following assumptions:

- > The types of interventions programmed under the corresponding SO and relevant to the factor of success must be considered.
- > Additional types of interventions, even if not programmed under the SO, but with possible positive or negative side effects on the factor of success should be considered too.

These lists may differ from the actual interventions that may be relevant to each factor of success under a certain CAP Strategic Plan, due to the enhanced flexibility provided to the Member States under the 'New Delivery Model'.

For an overview of the actual interventions planned by each Member State in their adopted CAP Strategic Plans, their financial allocations and their links to output and result indicators, see the '[Catalogue of CAP interventions](#)'.



## Assessment of the factors of success

Effectiveness is determined by assessing the analysed impact of the CAP Strategic Plan against defined targets and/or points of comparison. That said, a quantitative assessment is possible only if targets corresponding to impact indicators are set at the national or, where relevant, regional level.

Regarding the CCO, there is no obligation for Member States to set such targets, and therefore only a qualitative assessment would be

possible, analysing whether the direction of the observed effect, as measured by the change in the main indicator, is in line with the direction implied in the formulation of the factor of success.

In any case, the assessment should be complemented with an analysis of the progress made towards the targets set in the CAP Strategic Plan for financial allocations, output and result indicators.

# 1. Cross-Cutting Objective

## 10.1.1 An increasing number of farmers participate in training programmes and/or make use of farm advice due to CAP support

<b>Specific objective</b>	CCO: Fostering knowledge, innovation and digitalisation in agriculture
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Agricultural Knowledge and Innovation System (AKIS) and digital strategy
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan interventions supported AKIS strategic actions and related AKIS interventions that contribute to strengthening interactions within the AKIS and the uptake of knowledge and innovation by farmers?
<b>Rationale for the use of this factor of success</b>	<p>The analysis of the CCO in CAP Strategic Plans identified that farmers and other rural actors need training and advice to embrace changes related to the transition to more resilient and sustainable agriculture and rural areas.</p> <p>In relation to the training of farmers, <a href="#">the evaluation of the CAP's impact on knowledge exchange and advisory activities</a> found there were wide variations in the planned target numbers among Member States. Some countries had realised more than what they had planned whereas others were lagging what they had allocated. In addition, the study compared the 2007-2013 and 2014-2020 periods and found there was a clear overall downward trend, in terms of annual averages of participants and training days, at EU level and in a large majority of Member States.</p> <p>About the uptake of advisory services, the same study found that measures related to advisory services under rural development faced difficulties as a result of the rigidity of its design (list of elements to be covered, need to apply public procurement rules, etc.). For decades there has been an ongoing process of enhanced profiling of commercial businesses as 'advisory services' providing advice 'for free' while they are promoting their interests. This is a serious concern because this profiling of non-advisors has led to the detriment of advice related to public goods and environmental or social issues. Data suggested that in 2019, the use of farm advisory services by farmers was EU-funded in only 15 out of 26 Member States, while the setting up of advisory services was EU-funded in six out of 26 Member States.</p> <p>Considering this context, there is a need to reverse the downward trend of farmers' participation in training and increase the use of farm advice. The improvement of knowledge of farmers through training and advice is identified as a key need in CAP Strategic Plans. This includes the improvement of skills, such as securing skilled workers in agriculture, forestry and rural areas, or more concrete skills such as improving the entrepreneurial skills of people working in agriculture and forestry, digital skills and skills related to a variety of fields, such as environment/climate, innovation, biodiversity, nutrition and health and the use of antibiotics/fertilisers. It also includes the improvement of education and training systems and services, both public and private, in terms of equipment and terms of the content of the educational offer, the methodology<sup>1</sup> used and the facilitation of access to training services.</p>

<sup>1</sup> New methodologies and tools need to be used, compared to traditional, ex-cathedra lecturing, with emphasis on systemic thinking and experiential learning.



<p><b>Rationale for the use of this factor of success</b></p>	<p>There is also a range of needs for improving the quality of and access to advisory services. On one hand, quality needs to be improved by raising the professional qualification of consultants/advisors. On the other hand, access needs to be improved through specialised advisory centres and support systems for advisory services. The forms of advisory services need to be diversified and adapted to the needs of farmers and foresters, such as sectoral needs (e.g. wine, fruits and vegetables, etc.), income related needs (e.g. how to improve profitability or protect themselves from price/interest rate fluctuations) and needs to address new challenges and ambitions such as environment and climate.</p> <p>The improvement of knowledge flows through training and advice is a key component of AKIS. In addition, Article 78 (5) of Regulation (EU) 2021/2115 stipulates that actions for knowledge exchange and information (which are mainly training and advisory services) must be based on, and be consistent with, the description of AKIS provided in the CAP Strategic Plan. Therefore, this factor of success enables the measurement of the participation of farmers in training programmes and the extent to which they make use of farm advice.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Sectoral interventions</li> <li>&gt; Article 77 – COOP – cooperation (in particular LEADER, as local development projects of LAGs may include activities related to the provision of training and advice).</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of relevant types of interventions often not programmed under the CCO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 73, 74 – INVEST, investments</li> </ul>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<p>R1 – Enhancing performance through knowledge and innovation: Number of persons benefitting from advice, training, knowledge exchange or participating in European Innovation Partnership (EIP) operational groups supported by the CAP to enhance sustainable economic, social, environmental, climate-related and resource efficiency performance.</p> <p>R.28 – Environmental or climate-related performance through knowledge and innovation: Number of persons benefitting from advice, training, knowledge exchange, or participating in European Innovation Partnership (EIP) operational groups supported by the CAP related to environmental or climate-related performance.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>Result Indicators R.1 and R.28 (see <a href="#">indicator fiches</a>) count the number of people benefitting from the funded measure, regardless of who receives the payments. R.28 is a subset of the indicator R.1 as it zooms into the environment and climate topic. Both indicators encompass a variety of aspects: advice, training, knowledge exchange, and participation in EIP operational groups. For this success factor, the first aspects are relevant, notably participation in advice and training. Therefore, the indicators should be disaggregated to measure the number of persons benefitting from training or advice.</p> <p>For an overview of the values of the indicator, both at the EU level and per Member State, you may explore the <a href="#">result indicators dashboard</a> at the agri-food data portal.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>These indicators are not impact indicators and, therefore, there is no obligation to quantify the contribution of the CAP Strategic Plan to their development.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Additional impact indicators and detailed methodologies regarding the assessment of AKIS are proposed in the guidelines developed by the Evaluation Helpdesk on '<a href="#">Evaluating the AKIS Strategic Approach in CAP Strategic Plans</a>'.</p>



<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if an increasing number of farmers participate in training programmes and/or make use of farm advice due to CAP support, as measured by the proposed main indicators.</p> <p>As a point of comparison for the direction of the effect, the values of the main indicators at the start of the implementation period might be used. This means that evaluators must establish a baseline, by calculating the values of the main indicators using data from the previous programming period(s).</p> <p>Evaluators may use the annual and overall targets set in the CAP Strategic Plans for these result indicators as a point of comparison for estimating the magnitude of the effect.</p>
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### 10.1.2 Farmers change farming practices after participating in training programmes and/or making use of farm advice due to CAP support

<p><b>Specific objective</b></p>	<p>CCO: Fostering knowledge, innovation and digitalisation in agriculture</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Agricultural Knowledge and Innovation system (AKIS) and digital strategy</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions supported AKIS strategic actions and related AKIS interventions that contribute to strengthening interactions within the AKIS and the uptake of knowledge and innovation by farmers?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The analysis of the CCO in CAP Strategic Plans identified that farmers and other rural actors need training and advice that will enable farmers to improve farm practices and hence productivity, address environmental and climate challenges, adapt to the digital transformation and acquire skills for the uptake of innovative solutions.</p> <p>According to the <a href="#">SCAR-AKIS policy brief</a>, advisors play a key role in supporting farmers' decision making and often act as "innovation support services" or as "innovation brokers/facilitators" to help farmers undertake changes in their practices, including the introduction of innovative practices. The <a href="#">evaluation of the CAP's impact on knowledge exchange and advisory activities</a> found that the "linear" knowledge transfer model from research to farmers is failing as challenges have become much more complex and knowledge is less concentrated. There is a need for the co-creation of new and tailor-made solutions which combine different kinds of knowledge, to transform the knowledge that farmers acquire through advice and training into new or improved farming practices.</p> <p>Member States have identified in their CAP Strategic Plans needs related to improving knowledge flows and strengthening the links between research and practice. Training and advice are key enablers for addressing these needs. Improving the quality of and access to advisory services will help advice become adapted to the needs of farmers and foresters, such as sectoral needs (agriculture or forestry, or specific sectors within agriculture such as wine, fruits and vegetables, etc.), income related needs (e.g. how to improve profitability or protect themselves from price/interest rate fluctuations) and needs to address new challenges and ambitions such as environment and climate. As a consequence of accessing good advice, farmers will be able to change and/or improve their farming practices. At the same time, training can contribute to the improvement of skills related to a variety of fields, such as environment/climate, innovation, biodiversity, nutrition and health and the use of antibiotics/fertilisers, which will enable farmers to use these new skills in their farm practices. The interconnection of advisors within the AKIS and their links with farmers within that system is important to this end i.e. for achieving a change in farming practices.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>➤ Sectoral interventions</li> <li>➤ Article 77 – COOP, cooperation (in particular LEADER, as local development projects of LAGs may include activities related to the provision of training and advice).</li> <li>➤ Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul>



**Main indicator(s)  
that can be used to  
assess the factor of  
success**

There is no single PMEF indicator suitable to assess this factor of success. The ideal approach should involve an indicator able to capture the actual new practices and production systems introduced by farmers after their participation in AKIS related activities.

Member States are encouraged to establish a monitoring system to follow-up farmers that have participated in AKIS related activities. This system may include simple feedback forms completed by farmers participating in knowledge exchange or farm advisory activities, to more sophisticated surveys, conducted after a sufficient period, to capture changes in practices and production systems.

In the absence of such data, beneficiary-level variables containing information about the participation in training programmes and/or farm advice (R001, R028) need to be combined with information indicating a change in farming practice, including:

Beneficiary-level result variables containing information about participation in training/advice.

- › R001 - Enhancing performance through knowledge and innovation: Number of persons benefitting from advice, training, knowledge exchange or participating in European Innovation Partnership (EIP) operational groups supported by the CAP in order to enhance sustainable economic, social, environmental, climate-related and resource efficiency performance.
- › R028 - Environmental or climate-related performance through knowledge and innovation: Number of persons benefitting from advice, training, knowledge exchange, or participating in European Innovation Partnership (EIP) operational groups supported by the CAP related to environmental or climate-related performance.

Beneficiary-level result variables containing information about environmental and climate-related farm practices.

- › R012: Adaptation to climate change - Share of utilised agricultural area (UAA) under supported commitments to improve climate adaptation.
- › R013: Reducing emissions in the livestock sector - Share of livestock units (LU) under supported commitments to reduce emission of greenhouse gases and/or ammonia, including manure management.
- › R014: Carbon storage in soils and biomass - Share of utilised agricultural area (UAA) under supported commitments to reduce emissions or to maintain or enhance carbon storage (including permanent grassland, permanent crops with a permanent green cover, agricultural land in wetland and peatland).
- › R019: Improving and protecting soils - Share of utilised agricultural area (UAA) under supported commitments beneficial for soil management to improve soil quality and biota (such as reducing tillage, soil cover with crops, crop rotation included with leguminous crops).
- › R020: Improving air quality Share of utilised agricultural area (UAA) under supported commitments to reduce ammonia emission.
- › R021: Protecting water quality Share of utilised agricultural area (UAA) under supported commitments for the quality of water bodies.
- › R022: Sustainable nutrient management Share of utilised agricultural area (UAA) under supported commitments related to improved nutrient management.
- › R023: Sustainable water use - Share of utilised agricultural area (UAA) under supported commitments to improve water balance.
- › R024: Sustainable and reduced use of pesticides - Share of utilised agricultural area (UAA) under supported specific commitments which lead to sustainable use of pesticides in order to reduce risks and impacts of pesticides such as pesticides leakage.
- › R025: Environmental performance in the livestock sector - Share of livestock units (LU) under supported commitments to improve environmental sustainability.
- › R031: Preserving habitats and species - Share of utilised agricultural area (UAA) under supported commitments supporting biodiversity conservation or restoration including high-nature-value farming practices.
- › R032: Investments related to biodiversity - Share of farms benefitting from CAP investment support contributing to biodiversity.



<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ul style="list-style-type: none"> <li>&gt; R033: Improving Natura 2000 management – Share of total Natura 2000 area under supported commitments.</li> <li>&gt; R034: Preserving landscape features – Share of utilised agriculture area (UAA) under supported commitments for managing landscape features, including hedgerows and trees.</li> </ul> <p><b>Note:</b> There might be more relevant farm practices, not covered by the result indicators mentioned.</p>
<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>In case the main indicator is the Number of new practices and new production systems introduced by farmers after participating in AKIS related activities, the calculation shall be made by processing the data collected through the corresponding surveys that follow-up the participating farmers.</p> <p>As an alternative proxy, a rough estimation of the number of farmers that changed farming practices after participating in training programmes and/or making use of farm advice can be obtained by:</p> <ul style="list-style-type: none"> <li>&gt; analysing farmers that participated in training/advice (R001, R028); and</li> <li>&gt; thereafter started participation in environment and climate-related schemes (R012, ...see above).</li> </ul> <p>The estimated numbers of farmers are likely to be biased because the causal link between participation in training/advice and changing farming practices might be random. The rough estimate could be refined in various ways e.g. by considering whether the focus of training/advice (e.g. on biodiversity) matches with the focus of environment- and climate-related schemes (e.g. schemes for biodiversity R031) or by conducting additional surveys and analysis among participants of specific training/advice.</p> <p>This factor of success will be used in combination with factors of success 10.1.1, 10.1.3 and 10.1.4 to answer the evaluation question for the key evaluation element.</p> <p>For an overview of the values of the corresponding result indicators, both at the EU level and per Member State, you may explore the <a href="#">result indicators dashboard</a> at the agri-food data portal.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>These indicators are not impact indicators and therefore not included in Annex III of the Implementing Regulation and there is no obligation to quantify the contribution of the CAP Strategic Plan to its development.</p> <p>For the methods to construct counterfactuals and carry out quasi-experimental evaluations, see the Evaluation Helpdesk guidelines on '<a href="#">Assessing RDP achievements and impacts in 2019</a>'. These Guidelines also include a simpler approach that can be used in the absence of data for counterfactual analysis. It is based on the use of qualitative theory-based evaluation (TBE), which can be used to show how and why the programme will work and is expected to lead to the intended outcomes. TBE follows each step of the programme's intervention logic, identifying causal links and mechanisms of change, leading to results and impacts. The various links in the intervention logic can be analysed using a variety of methods. This can be done with focus groups (notably the MAPP method) or stakeholder/expert interviews.</p> <p>Additional and more detailed methodologies regarding the assessment of AKIS are proposed in the guidelines developed by the Evaluation Helpdesk on '<a href="#">Evaluating the AKIS Strategic Approach in CAP Strategic Plans</a>'.</p> <p>Even using the methodologies listed here, only a very rough estimate can be made of whether the training has had a real impact on the farm i.e. whether there has been a change in the farming activity. If only because change is often realised years/decades later.</p> <p>This is why follow-up studies are needed to identify practice change. According to agricultural extension literature, the evaluation of extension/advisory services/interventions comprises seven levels:</p> <ul style="list-style-type: none"> <li>&gt; inputs/resources;</li> <li>&gt; activities;</li> <li>&gt; (farmers') participation;</li> <li>&gt; reactions (experience);</li> <li>&gt; (changes in farmers') Knowledge, Attitudes, Skills and Aspirations (KASA);</li> <li>&gt; practice change; and</li> <li>&gt; impact.</li> </ul> <p>Given that there is no formal way (such as examinations) to find out about KASA, practice change (which may well happen at a later stage) is the best indicator for measuring the success of an extension/advisory intervention.</p>



<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Additional impact indicators are proposed in the guidelines developed by the Evaluation Helpdesk on <a href="#">‘Evaluating the AKIS Strategic Approach in CAP Strategic Plans’</a>.</p> <p>Another approach could be to have farmers assess the quality of the training and advice, by filling out an evaluation sheet on how the advice/training has contributed to their change of attitude and the extent to which this may affect their intention to adopt innovation in the farming activity. Other indicators may relate to:</p> <ul style="list-style-type: none"> <li>&gt; the number of farmers that found the new knowledge interesting enough to spread it to their peers;</li> <li>&gt; the number of influential peers that have adopted the new knowledge.</li> </ul>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if farmers change farming practices after participating in training programmes and/or making use of farm advice due to CAP support, as measured by the proposed main indicators.</p> <p>As a point of comparison for the direction of the effect, the values of the main indicators at the start of the implementation period might be used. This means that evaluators must establish a baseline, by calculating the values of the main indicators using data from the previous programming period(s).</p> <p>Evaluators may use the annual and overall targets set in the CAP Strategic Plans for these result indicators as a point of comparison for estimating the magnitude of the effect.</p>

### 10.1.3 An increasing number of farmers are introducing digital farming tools due to CAP support

<p><b>Specific objective</b></p>	<p>CCO: Fostering knowledge, innovation and digitalisation in agriculture</p>
<p><b>Evaluation criterion</b></p>	<p>Effectiveness</p>
<p><b>Key evaluation element</b></p>	<p>Agricultural Knowledge and Innovation system (AKIS) and digital strategy</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan interventions supported the digital strategy that contributes to fostering digitalisation in agriculture and the uptake of digital solutions by farmers?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The CCO covers the realised potential for digitalisation to improve the performance of agriculture in economic, social and environmental terms. The analysis of the context in CAP Strategic Plans stressed that modernisation cannot be achieved without the adaptation of farmers to the digital transition. Digitalisation can enable farmers to adapt to the digital transformation and adopt innovative digital solutions that help modernise and improve productivity, reduce their carbon footprint and adapt to climate change, make better use of natural resources and contribute to the improvement of biodiversity.</p> <p>However, the use of digital technology in agriculture in the EU is, on average, low. The low level of information about existing technologies, digital skills and the limited availability of reliable cost/benefit analyses of the new technologies are challenges to increased investments in digital applications. In addition, Horizon 2020 projects (e.g. smartAKIS, INNOSETA) have shown that farmers do not adopt new technologies even when they are aware of them due to very high upfront costs, inappropriate technology (as regards cultivations, farm size, terrain/slopes, etc.), unstable policies, lack of extension/advisory support and training, etc. The lack of AKIS or relevant innovation platforms is also noted. Digitalisation can be boosted by investment support, advisory services and support to different sectors through sectoral interventions e.g. in the field of fruit and vegetables, apiculture and wine. For the development of a strategic approach towards digitalisation, it is essential to take stock of the status quo of digitalisation as well as of uptake barriers and existing enabling factors.</p> <p>It should be noted that the factor of success only covers digitalisation activities of farmers but not of the non-farming community in rural areas.</p>



<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Sectoral interventions</li> <li>&gt; Article 73 – INVEST, investments</li> <li>&gt; Article 77 – COOP, cooperation (in particular LEADER, as local development projects of LAGs may include activities related to the provision of training and advice)</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul>
<b>Main indicator(s) that can be used to assess the factor of success</b>	<p>R.3 – Digitalising agriculture, share of farms benefitting from support for digital farming technology through CAP</p>
<b>Step 1: Calculation of the value of the main indicator</b>	<p>R.3 – Digitalising agriculture, share of farms benefitting from support for digital farming technology through CAP</p> <p>See the <a href="#">result indicator fiche</a>. For an overview of the values of the indicator, both at the EU level and per Member State, you may explore the <a href="#">result indicators dashboard</a> at the agri-food data portal.</p> <p>According to <a href="#">the mapping and analysis of CAP strategic plans</a>, the most frequently planned outputs towards the achievement of the digitalisation target (R.3) are from on-farm productive investments (0.22), followed by knowledge type interventions (0.33) and EIP Operational Group projects (0.1).</p> <p>This factor of success will be used in combination with factors of success 10.1.1, 10.1.2 and 10.1.4 to answer the evaluation question for the key evaluation element.</p>
<b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b>	<p>These indicators are not impact indicators and therefore not included in Annex III of the Implementing Regulation and there is no obligation to quantify the contribution of the CAP Strategic Plan to its development.</p>
<b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b>	<p>Additional impact indicators as well as more detailed methodologies regarding the assessment of AKIS are proposed in the guidelines developed by the Evaluation Helpdesk on '<a href="#">Evaluating the AKIS Strategic Approach in CAP Strategic Plans</a>'.</p>
<b>Step 4: Assessment of the factor of success</b>	<p>According to the definition of the factor of success, effectiveness is achieved if an increasing number of farmers are supported for digital farming technology through the CAP Strategic Plan, as measured by R.3.</p> <p>As a point of comparison for the direction of the effect, the values of the main indicators at the start of the implementation period might be used. This means that evaluators must establish a baseline, by calculating the values of the main indicators using data from the previous programming period(s).</p> <p>Evaluators may use the annual and overall targets set in CAP Strategic Plans for R.3 as a point of comparison for estimating the magnitude of the effect.</p>



## 10.1.4 CAP Strategic Plan's expenditure supporting the creation of innovation and knowledge sharing is increasing

<b>Specific objective</b>	CCO: Fostering knowledge, innovation and digitalisation in agriculture
<b>Evaluation criterion</b>	Effectiveness
<b>Key evaluation element</b>	Agricultural Knowledge and Innovation system (AKIS) and digital strategy
<b>Suggested example of evaluation question</b>	<p>To what extent have CAP Strategic Plan interventions supported AKIS strategic actions and related AKIS interventions that contribute to strengthening interactions within the AKIS and the uptake of knowledge and innovation by farmers?</p> <p>To what extent have CAP Strategic Plan interventions supported the digital strategy that contributes to fostering digitalisation in agriculture and the uptake of digital solutions by farmers?</p>
<b>Rationale for the use of this factor of success</b>	<p>Innovation has acquired increasing importance in the context of the CAP. <a href="#">According to the CAP 2023-2027 impact assessment</a>, a broad range of innovations – along with a well-performing AKIS – are needed (e.g. including nature-based solutions, breeding, vertical farming, zootechnics, biological, technological, digital, developing new chains for food and bio-economy, organisational and product related, social and rural innovation) to serve a multi-functional EU agriculture delivering food and non-food products, public goods as well as contributing to vibrant rural areas. As <a href="#">recommended by the Commission to Member States</a>, more effort is needed for the development of grassroots innovative ideas.</p> <p><a href="#">EIP-AGRI has been positively assessed</a> for its interactive innovation and co-creation via hands-on Operational Groups, complemented by linking research and practice in networks. However, it concluded that knowledge sharing between different parts of AKIS in Member States and regions (advisory services, farmer organisations, research, educational systems, etc.) needs to be improved.</p> <p>Furthermore, the <a href="#">report of the SCAR</a> (Standing Committee on Agricultural Research) Strategic Working Group on AKIS on bridging the gaps between research and practice concluded that for enhancing knowledge flows between all the interested actors, the capacity for the creation of 'spaces for co-creation' through living labs, demonstration activities and enhancing peer-to-peer exchanges should be allowed.</p> <p>The new CAP aims to create value added through AKIS by incentivising interactive innovation projects in the context of EIP Operational Groups, organising and structuring knowledge exchange at all levels (national, regional, EU) and pooling resources to address EU level objectives (e.g. EIP networking activities, research policy and thematic networks). The increased ambition in relation to AKIS is reflected in the <a href="#">obligations</a> of Member States in the 2023-2027 period, which include to strategically organise their AKIS for improving knowledge flows, in particular through researchers, advisors and CAP networks working together, to plan for an AKIS system that provides advisory services for farmers and other beneficiaries of CAP support, to provide advice and innovation support for Operational Groups, to promote better integration of advisors within AKIS and to ensure that operational groups contribute to all nine CAP SOs.</p> <p>For these reasons, this factor of success will enable the assessment of this ambition and contribute to answering the evaluation question related to the key evaluation element in relation to AKIS.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>An indicative list of types of interventions relevant to this factor of success may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 47 – Sector types of interventions</li> <li>&gt; Article 77 – COOP, cooperation (in particular LEADER, as local development projects of LAGs may include activities related to the provision of training and advice)</li> <li>&gt; Article 78 – KNOW, knowledge exchange and dissemination of information</li> </ul> <p>An indicative list of relevant types of interventions often not programmed under this SO may include:</p> <ul style="list-style-type: none"> <li>&gt; Article 73, 74 – INVEST, investments</li> </ul>
<b>Main impact indicator(s) that can be used to assess the factor of success</b>	I.1 Sharing knowledge and innovation: Share of CAP budget for knowledge sharing and innovation



<p><b>Step 1: Calculation of the value of the main indicator</b></p>	<p>This indicator includes two dimensions with various components:</p> <ul style="list-style-type: none"> <li>&gt; One dimension is knowledge creation, achieved through various components, e.g. EIP Operational Group innovation projects and other interactive innovation projects, and/or multi-actor research under sectorial POs and experimental production.</li> <li>&gt; The other dimension is knowledge exchange and sharing, achieved through advice, demonstration activities, actions to enhance the exchange of needs of farmers, and the sharing of existing knowledge.</li> </ul> <p>The calculation of the indicator is based on annual financial transactions of the relevant interventions, which in this case are the interventions listed above.</p> <p>For this success factor, all components are relevant.</p> <p>This factor of success will be used in combination with the factors of success 10.1.1, 10.1.2 and 10.1.3 to answer the evaluation question for the key evaluation element.</p>
<p><b>Step 2: Estimation of the net effect of the CAP support on the value of the main indicators</b></p>	<p>I.1. is not included in the list of indicators in Annex III of Regulation (EU) 2022/1475. Therefore, there is no obligation to quantify the net contribution of the CAP support to the change in the value of the indicator. That said, it is considered a good practice for the Member State to try to estimate the net effect of the CAP support as this will enhance the credibility of the evaluation and will be important not only for effectiveness but also for the other evaluation criteria, such as efficiency.</p> <p>For more information on the assessment of AKIS, see the guidelines developed by the Evaluation Helpdesk on <a href="#">‘Evaluating the AKIS Strategic Approach in CAP Strategic Plans’</a>.</p>
<p><b>Step 3: Use of other indicators to set the context or highlight different aspects of the factor of success, where relevant</b></p>	<p>Additional impact indicators as well as more detailed methodologies regarding the assessment of AKIS are proposed in the guidelines developed by the Evaluation Helpdesk on <a href="#">‘Evaluating the AKIS Strategic Approach in CAP Strategic Plans’</a>.</p>
<p><b>Step 4: Assessment of the factor of success</b></p>	<p>According to the definition of the factor of success, effectiveness is achieved if the CAP Strategic Plan's expenditure supporting the creation of innovation and knowledge sharing is increasing, as measured by I.1.</p> <p>As a point of comparison for the direction of the effect, the values of the main indicators at the start of the implementation period might be used. This means that evaluators must establish a baseline, by calculating the values of the main indicators using data from the previous programming period(s).</p>





# Factors of Success for Efficiency, Relevance, Coherence and Union Added Value

**Annex V to the guidelines developed under  
Thematic Working Group 3**



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# Annex V: Factors of Success for Efficiency, Relevance, Coherence and Union Added Value

## Introduction

Article 1 of Regulation (EU) 2022/1475 sets the basis for the use of the evaluation criteria (effectiveness, efficiency, relevance, coherence and Union added value) in the evaluations of the CAP Strategic Plans. According to paragraph 1, Member States must define evaluation questions and factors of success to assess them.

Especially for efficiency, “Member States shall analyse whether the effects or benefits of the CAP Strategic Plans were achieved at a reasonable cost and shall assess simplification both for beneficiaries and for the administration, with special focus on administrative costs and on the use of digital tools and satellites” (paragraph 3).

Regarding the other evaluation criteria (relevance, coherence and Union added value), there are no specific references in the regulatory framework, but an indicative evaluation framework is provided structured around factors of success for each criterion.

## 1. Efficiency

### Introduction

Efficiency is in general defined as the best relationship between resources employed and results achieved in pursuing a given objective through CAP Strategic Plan interventions.

The evaluation framework for the assessment of efficiency covers two key elements that must be assessed in line with paragraph 3 of Article 1 of Regulation (EU) 2022/1475: 1) cost-effectiveness of the implementation of the CAP Strategic Plan; and 2) simplification for administration and beneficiaries.

Cost-effectiveness is defined as the comparison of the effects, identified under effectiveness analysis, with the corresponding costs for generating these effects.

Although ‘effects’ are considered as the changes in the values of the corresponding impact indicators that can be attributed to the CAP Strategic Plan, the analysis can be complemented by assessing the relationship between input and results, or even outputs.

The costs of an intervention are compared with the non-monetary impact units achieved e.g. reduced kilograms of nitrogen per hectare. The cost component may, at least, comprise public expenditures for respective interventions. Further cost components to be considered may include public administrative costs and administrative costs of beneficiaries. In terms of cost-effectiveness, high costs for highly effective interventions (in terms of achieved outcomes) are justified, whereas high costs for less effective measures do not seem justified. Cost-effectiveness analysis is carried out

For this Thematic Working Group, the evaluation criteria are defined according to Tool #47 of the [Better Regulation Toolbox](#), taking also into account the OECD publication ‘[Applying evaluation criteria thoughtfully](#)’.

In this working document, under each evaluation criterion, an introductory overall evaluation framework is provided, followed by detailed factsheets for each factor of success.

It should be clarified that the proposed factors of success can be applied both during the implementation and ex post to all Specific Objectives (SOs) and the Cross-Cutting Objective (CCO) unless it is otherwise clearly stated.

based on an implementation cost analysis and corresponding impact evaluations and is a method for a relative comparison of interventions with respect to an identical objective. Therefore, the cost-effectiveness should be analysed where a potential for cost optimisation is expected and where several interventions can be compared (e.g. in SO4, SO5 and SO6).

Simplification is defined as the minimisation of costs that are not strictly necessary for the achievement of the objectives of the CAP Strategic Plans and the adoption of measures that reduce the administrative burden for the administration and the beneficiaries. Additional administrative costs without added value for the achievement of objectives should be avoided. Simplification affects all phases of programme design and implementation and thus also different target groups. Accordingly, it is important to distinguish simplification from the perspective of the administration and simplification from the perspective of applicants and beneficiaries/participants. The main changes in the administrative procedure should be assessed e.g. with regard to submission/approval/rejection of project applications, simplifications in accounting (e.g. simplified cost options, SCOs) and payments as well as in control procedures. Digital solutions may be useful to develop more efficient procedures.

The evaluation questions, key evaluation elements and factors of success for efficiency are presented in the following table.



**Table 1. The evaluation questions, key evaluation elements and factors of success for efficiency**

Evaluation Question Eff.1: To what extent was the CAP Strategic Plan implemented efficiently in terms of the level and proportionality of the resources used and effects achieved?			
Key element to be assessed	Factor of success	Legal requirement	Scope
Cost-effectiveness	Eff.1.1 Implementation of the CAP Strategic Plan is cost-effective	Obligatory (Article 1.3, Regulation (EU) 2022/1475)	This factor of success applies to all SOs and can be used to analyse whether the observed effects could have been achieved with less cost (or greater effects with the same cost).
Evaluation Question Eff.2: To what extent has the delivery of the CAP Strategic Plan been simplified in terms of reduced costs for beneficiaries and administrations?			
Key element to be assessed	Factor of Success	Legal requirement	Scope
Simplification	Eff.2.1 The costs of the delivery of the CAP Strategic Plan for beneficiaries and administrations that are not strictly necessary to reach the policy objectives are minimised.	Obligatory (Article 1.3, Regulation (EU) 2022/1475)	This factor of success applies to all SOs and can be used to analyse simplification by looking at the improvements in the cost structure of the delivery of the CAP Strategic Plan.
	Eff.2.2 The adoption of simplification measures is increasing.	Obligatory (Article 1.3, Regulation (EU) 2022/1475)	This factor of success applies to all SOs and can be used to analyse simplification in terms of the adoption of measures that reduce the administrative burden for the administration and the beneficiaries.

### Eff.1.1 Implementation of the CAP Strategic Plan is cost-effective

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Efficiency
<b>Key evaluation element</b>	Cost-effectiveness
<b>Suggested example of evaluation question</b>	To what extent are the costs of the CAP Strategic Plan implementation justified and proportionate given the effects it has achieved?
<b>Rationale for the use of this factor of success</b>	<p>CAP Strategic Plans involve considerable public expenditure. Differences in the way CAP Strategic Plans are implemented can have a significant influence on the effects achieved, making it interesting to consider whether these effects could have been achieved with less cost (or greater effects with the same cost).</p> <p>Under this factor of success, the effects of the CAP interventions and the corresponding costs are analysed by estimating an effect-cost ratio, that is the ratio between:</p> <ul style="list-style-type: none"> <li>&gt; effects, expressed as the change in the value of the corresponding impact or result indicator that can be attributed to the CAP Strategic Plan; and</li> <li>&gt; costs for achieving this change.</li> </ul>



<p><b>Rationale for the use of this factor of success</b></p>	<p>For example, for interventions contributing to the reduction of GHG emissions, the assessment shall estimate a ratio of unit of change in the I.10 indicator per € of corresponding costs, that is a ratio of tCO<sub>2</sub>eq/€.</p> <p>This ratio may be then used to estimate the 'value for money', by comparing the effect-cost ratio of the underlying intervention(s) to a best practice or other similar intervention(s) and the potential for efficiency gains, which is how the budget could have been spent to achieve better outcomes.</p> <p>Although it is suggested that effects are measured by the changes in the values of the corresponding impact indicators that can be attributed to the CAP Strategic Plan, the analysis can be complemented by assessing the relationship between input and results, or even outputs.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>The list of interventions that should be taken into account for the cost-effectiveness analysis depends on the interventions that contribute to the change in the value of the indicator that is used to measure the effects.</p>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ol style="list-style-type: none"> <li>1. Net or estimated potential change in the value of impact indicators or result indicators (in the corresponding unit of measurement).</li> <li>2. An estimate of the cost of each intervention or group of interventions that contribute to the change in the value of the corresponding indicator. These costs may include: <ol style="list-style-type: none"> <li>2.1 Financial support paid to beneficiaries.</li> <li>2.2 Adjustment costs for the administration to comply with the new legal requirements and the New Delivery Model.</li> <li>2.3 Administrative costs for the administration, including technical assistance, regarding the management, monitoring and evaluation of the interventions.</li> <li>2.4 Administrative costs for beneficiaries to submit their applications for support, implement the operations/commitments and claim the support.</li> <li>2.5 Enforcement costs for the administration regarding the control, monitoring and evaluation of the interventions.</li> </ol> </li> </ol>
<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>Cost-effectiveness assessment presupposes a quantification of the (net) effects and an approximation of costs for each intervention or group of interventions.</p> <p>Estimation of effects is based on the (net) change in the values of the corresponding impact indicators or result indicators and is carried out when analysing effectiveness. The estimation must be made at the level of each intervention or group of similar interventions to be comparable with the corresponding costs. See the corresponding factors of success under effectiveness for more details.</p> <p>Estimates of cost refer to the total cost of the intervention or groups of interventions, including the support paid to beneficiaries. All additional costs, other than payments to beneficiaries, could be apportioned to the interventions, usually according to a pre-defined quantity that can reflect administrative burden and effort, such as the amounts paid or the values of output indicators. See <a href="#">factor of success Eff.2.1</a> for more details on the estimation of costs.</p> <p>Helpful insights on the application of a cost-effectiveness approach can be found in <a href="#">Fährmann and Grajewski (2013)</a>.</p> <p><b>Challenges in the calculation of the main indicators</b></p> <p>The challenges are related to quantifying the effects and the cost of interventions i.e. the numerator and denominator of the effects-costs ratio.</p> <p>For challenges about the costs, see <a href="#">factor of success Eff.2.1</a>.</p>



### Step 1 - Calculation of the main indicators

When the effects are measured by an indicator listed in Annex III of Regulation 2022/1475, there will be a quantification of the CAP Strategic Plan's contribution to its development i.e. a net estimate. Thus, the calculation of the cost-effectiveness ratio can use net estimates of the impact indicator in the numerator. Member States are encouraged to try to quantify net effects, even for impact indicators not included in Annex III of the above regulation, in order to ensure a more robust cost-effectiveness analysis.

Depending on the level of analysis, there might be a need to further disaggregate the changes in the value of the impact indicators by intervention or groups of interventions. In some cases, this disaggregation may be possible by estimating impacts based on output indicators. For example, GHG emissions can be estimated using output indicators and assumed emission coefficients. The product of the value of the output indicator multiplied by the emission coefficient is sufficient to estimate the GHG reduction.

If it is not possible to directly calculate the net change in the value of impact indicators, Member States may consider, where relevant, using data from previous programming periods or the work under the [JRC iMAP project](#). In this project, a large amount of data is synthesised to assess the overall effect of certain farming practices on a specific impact. This overall effect may then be disaggregated, based on the values of output indicators, to estimate the impact of the corresponding intervention(s). The latter would, of course, require a careful mapping of the CAP Strategic Plan interventions and commitments to the corresponding farming practices for which the overall effects have been estimated. The Evaluation Helpdesk is already assisting Member States in this direction, by making an initial labelling of each intervention or unit amount with the related farming practice, using the classification of practices developed by the JRC and described in the iMAP project.

Despite the solutions presented above, there might be still interventions whose impacts or costs cannot be quantified with reasonable confidence. In these cases, a more qualitative approach should be taken. Nevertheless, the analysis should flag possible efficiency issues emerging from any intervention, irrespective of the ability to fully quantify effects and costs.

### Step 2 - Assessment of the factor of success

Costs and (net) effects can support the calculation of the effect-cost ratio for different levels of analysis, such as:

- > calculation at the level of individual interventions to compare:
  - > different interventions of the same type, for example, commitments targeting the same green house gas, such as alternative practices for treating manure (targeting methane) or alternative practices for applying fertilisers (targeting nitrous oxide);
  - > identical interventions in the current and previous programming period (interventions continuing across periods).
- > calculation at the level of types of interventions, for example, to compare eco-schemes to environment-climate commitments or sectoral interventions;
- > calculation at the CAP Strategic Plan level to compare different forms of support (financial instruments, repayable grants, non-repayable grants etc.);
- > calculation at the Member State level to compare interventions with similar effects supported by different EU funds, for example, similar interventions with a job creation effect supported by EAFRD and ERDF.

Other points of comparison could be established through a literature review or evidence from previous evaluation studies or studies in other Member States.

Using an appropriate combination of comparisons evaluators can estimate the 'value for money' and the identification of efficiency gains or inefficiencies.



**Eff.2.1 The costs of the delivery of the CAP Strategic Plan, both for beneficiaries and administration, that are not strictly necessary to reach the policy objectives are minimised**

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Efficiency
<b>Key evaluation element</b>	Simplification
<b>Suggested example of evaluation question</b>	To what extent has the delivery of the CAP Strategic Plan been simplified in terms of reduced costs for beneficiaries and administrations?
<b>Rationale for the use of this factor of success</b>	<p>Simplification can be defined as the minimisation of costs that are not strictly necessary to reach the policy objectives. It can be achieved:</p> <ul style="list-style-type: none"> <li>&gt; either by directly eliminating certain costs, as with the application of the single audit approach;</li> <li>&gt; or by adopting measures that indirectly lead to the reduction of costs, as with the implementation of SCO.</li> </ul> <p>Under this factor of success, the overall structure of the costs for the delivery of the CAP Strategic Plan is analysed to identify:</p> <ul style="list-style-type: none"> <li>&gt; changes compared to the previous programming period ;</li> <li>&gt; potential for efficiency gains by further cost reduction;</li> <li>&gt; certain drivers that can promote further improvements.</li> </ul>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	All interventions of the CAP Strategic Plan should be considered for this factor of success. It is a good practice to assess this factor of success considering the cost-effectiveness (see <a href="#">factor of success Eff.1.1</a> ) and analyse the cost structure in a way that can be reused accordingly.
<b>Main indicator(s) that can be used to assess the factor of success</b>	<p>An estimate of the costs of each intervention or groups of interventions, having in mind the level of analysis under cost-effectiveness (see <a href="#">factor of success Eff.1.1</a>). These costs may include:</p> <ul style="list-style-type: none"> <li>&gt; adjustment costs for the administration to comply with the new legal requirements and the New Delivery Model;</li> <li>&gt; administrative costs for the administration regarding the management of the interventions;</li> <li>&gt; administrative costs for beneficiaries to submit their applications for support, implement the commitments and claim the support;</li> <li>&gt; enforcement costs for the administration regarding the control, monitoring and evaluation of the interventions.</li> </ul> <p>This list is provided for the evaluators to have a complete picture of the types of costs that should be taken into account. This does not imply that the cost data should be broken down into these types. They might be accounted for accumulatively, as long as all the relevant types are included in the cumulative figures.</p>



## Step 1 - Calculation of the main indicators

There is no harmonised data collection for the cost of the delivery of interventions, therefore Member States are encouraged to set up specific data arrangements for the calculation of the indicators.

Ideally, costs should be documented per intervention or groups of interventions according to the level of analysis for cost-effectiveness.

The cost of delivering the CAP Strategic Plan shall include, at least:

- > adjustment costs for the administration to comply with the new legal requirements and the New Delivery Model;
- > administrative costs for the administration regarding the management, monitoring and evaluation of the interventions;
- > administrative costs for beneficiaries to submit their applications for support, implement the commitments and claim the support;
- > enforcement costs for the administration regarding the control of the interventions and complaint handling.

Adjustment costs for the administration may include indicatively:

- > the costs for the coordination between administrative units that are managing rural development, direct payments and sectoral interventions for the preparation and implementation of the CAP Strategic Plan;
- > the costs for the adjustment of the IT systems to the new requirements, including the geo-spatial application system and the area monitoring system;
- > the costs for setting up the national legal framework for the implementation of the CAP Strategic Plan, including the new system of administrative penalties;
- > the costs for the adjustment to the new performance reporting;
- > the costs for capacity building at all levels of governance, including LAGs.

Administrative costs for the administration may include indicatively:

- > the costs of the Managing Authority and Implementing Bodies for publishing calls, processing of applications for support, selection of operations, monitoring and evaluation and technical assistance;
- > the costs of the competent authority;
- > the costs of the Paying Agency for processing payments;
- > the costs for continuous support of the IT systems.

Administrative costs for beneficiaries may include:

- > the costs for advice in preparing and submitting applications for support;
- > the costs for monitoring the implementation of the operations/commitments;
- > the costs for preparing and submitting payment claims.

Enforcement costs may include:

- > the cost of the Paying Agency for administrative and on-the-spot controls of interventions;
- > the costs of the certification body.

All costs should be calculated both in absolute terms (absolute costs) and in relation to the total public expenditure of the corresponding intervention(s) (relative costs).

The calculation of costs for the administration should be, ideally, based on data about the actual time spent by the personnel involved in the various tasks of the delivery of each intervention. These data can be expressed in full time equivalents and converted into costs using annual wages.

Data about the actual time spent by the personnel involved in the delivery of the CAP Strategic Plan may not be always available. In that case, a survey can be organised to collect these data, keeping in mind that significant bias may be introduced by the respondents' self-perception of the workload. To minimise such potential biases, the data of the survey can be triangulated with targeted interviews at the different levels of administration and governance and compared with a disaggregation of the total cost based on the organisational chart.



<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>Administrative costs for beneficiaries may be more or less compensated by payments (as is the case for the inclusion of transaction costs in the calculation of some EAFRD payments). In this case, cost data will be available at the Paying Agency, otherwise, a survey can be organised to collect them. Again, to minimise potential biases, the data of the survey can be triangulated with targeted interviews and compared with compensation data, where applicable. In these cases, beneficiaries can be asked about the time spent on administrative procedures, which can then be converted into costs using annual farm labour salaries.</p> <p>An example of the approach taken for the estimation of costs for the administration can be found in <a href="#">Fährmann and Grajewski (2013)</a>. Another example of the estimation of cost both for the administration and for the beneficiaries can be found in the report '<a href="#">Analysis of administrative burden arising from the CAP</a>' published by DG AGRI in 2019.</p> <p><b>Challenges in the calculation of indicators</b></p> <p>Estimating the cost of the actions is challenging because the types of costs that must be accounted as well as the level of disaggregation of these costs are not straightforward. The types of costs to be accounted for must be carefully considered early on, so they are as inclusive as possible and can be collected in time.</p> <p>Another challenge has to do with the disaggregation of costs by intervention or groups of interventions. In many cases, one intervention may affect the values of several impact indicators, and it is not always possible to distinguish what part of the corresponding cost should be linked to each observed effect. A solution to this could be the disaggregation according to a pre-defined quantity that can reflect administrative burden and effort, such as the amounts paid or the values of output indicators.</p> <p>Moreover, apart from the direct cost described here, there might also be indirect costs, such as opportunity costs or negative impacts on market functioning. These costs should be also accounted for, where relevant and to the extent possible.</p> <p>Finally, in some cases, such as the introduction of digital solutions, the reduction in enforcement costs in the long term may be the result of an increase in the adjustment costs in the short term. Therefore, careful planning of the timing of the evaluation is required, so the evaluators can measure the evolution of all the different costs.</p>
<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>Evaluators may find information regarding the approaches to simplify and reduce the administrative burden in section 3.9 of the CAP Strategic Plan.</p> <p>Moreover, the Horizon Europe project <a href="#">Tools4CAP</a> will include a comprehensive inventory of methods and tools used in the Member State for drafting their CAP Strategic Plans, which may contain information on approaches and tools for simplification.</p> <p>Evaluators can assess simplification by:</p> <ul style="list-style-type: none"> <li>&gt; assessing progress towards the approaches to simplify and reduce the administrative burden of the CAP Strategic Plan;</li> <li>&gt; comparing these approaches with similar actions in other Member States, if available and taking into account, where relevant, the results of the <a href="#">Tools4CAP</a>;</li> <li>&gt; comparing the documented cost with the ones of similar interventions from the previous programming period, taking into account the levels of effects generated.</li> </ul> <p>Additionally, they should assess, at least, the extent to which these changes can be attributed to the implementation of the New Delivery Model and the introduction of digitalisation to the delivery of the CAP Strategic Plan.</p> <p>Evaluators should also critically analyse the costs of each intervention or group of interventions in order to assess their necessity for reaching the corresponding objectives and provide recommendations for further simplification, where there is space for improvement of the cost structure.</p> <p>It must be stressed that the analysis under this factor of success aims to highlight improvements in the cost structure of the delivery of interventions with similar effects. Conclusion under this factor of success should always take into account the level of the corresponding effects (see <a href="#">factor of success Eff.1.1</a>) as more targeted planning and implementation of interventions may incur increased costs but, at the same time, generate higher levels of effects.</p>



## Eff.2.2 The adoption of simplification measures, including digitalisation, is increasing

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Efficiency
<b>Key evaluation element</b>	Simplification
<b>Suggested example of evaluation question</b>	To what extent has the delivery of the CAP Strategic Plan been simplified in terms of reduced costs for beneficiaries and administrations?
<b>Rationale for the use of this factor of success</b>	<p>Simplification can be defined as the minimisation of costs that are not strictly necessary to reach policy objectives. It can be achieved:</p> <ul style="list-style-type: none"> <li>&gt; either by directly eliminating certain costs, as with the application of the single audit approach;</li> <li>&gt; or by adopting measures that indirectly lead to the reduction of costs, as with the implementation of Simplified Cost Options (SCO).</li> </ul> <p>Under this factor of success, the level of adoption of simplification measures is assessed. Simplification measures may include:</p> <ul style="list-style-type: none"> <li>&gt; simplified processes for the administration and the beneficiaries due to the introduction of digitalisation;</li> <li>&gt; Use of SCO);</li> <li>&gt; Simplified delivery mechanisms as a response to crisis.</li> </ul>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	All interventions of the CAP Strategic Plan should be considered for this factor of success. It is a good practice to assess this factor of success considering the cost-effectiveness (see <a href="#">factor of success Eff.1.1</a> ) and analyse the potential efficiency gains that can be linked to the adoption of simplification measures.
<b>Main indicator(s) that can be used to assess the factor of success</b>	<ol style="list-style-type: none"> <li>1. Number and type of operations/commitments delivered with reduced costs due to digitalisation.</li> <li>2. Share of payments processed with reduced costs due to digitalization.</li> <li>3. Number and type of operations/commitments delivered using SCO.</li> <li>4. Share of payments processed using SCO.</li> <li>5. Number and type of operations/commitments delivered using simplified mechanisms as a response to crises.</li> <li>6. Share of payments processed using simplified mechanisms as a response to crises.</li> </ol>
<b>Step 1 - Calculation of the main indicators</b>	<p>Ideally, the application of simplification measures should be recorded per operation or commitment. Therefore it is crucial to include appropriate information, and allow the identification of projects that benefit from simplification measures, in the electronic system described under Article 130 of Regulation(EU) 2021/2115. This identification should allow distinguishing between the sources of simplification (digitalisation, type of simplified cost options, simplification measures to respond to crisis, etc.).</p> <p>Based on this information, data about the number of projects and payments can be aggregated per intervention or groups of interventions, taking into account, where relevant, the level of analysis for cost-effectiveness (see <a href="#">factor of success Eff.1.1</a>).</p> <p>The use of digital solutions to simplify the mechanism of implementation of the CAP Strategic Plan can affect the delivery of many interventions in a horizontal way. Evaluators should identify those interventions and include all operations/commitments and corresponding payments in the calculation of the indicators.</p> <p>Similarly, simplification measures as a response to a crisis would typically facilitate the delivery of specific interventions. Therefore, all operations/commitments and corresponding payments under those specific interventions should be considered in the calculation of the indicators.</p>



<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>On the other hand, the application of SCO may affect only certain operations/commitments of an intervention. In those cases, additional data, such as the type of SCO applied, should be collected at the operation/commitment level to ensure the calculation of the indicators.</p> <p>Evaluators may find additional information regarding the approaches to simplify and reduce the administrative burden in section 3.9 of the CAP Strategic Plan.</p> <p>Moreover, the Horizon Europe project <a href="#">Tools4CAP</a> will include a comprehensive inventory of methods and tools used in the Member States for drafting their CAP Strategic Plans, which may contain information on approaches and tools for simplification.</p>
<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>Evaluators may find information regarding the approaches to simplify and reduce the administrative burden in section 3.9 of the CAP Strategic Plan.</p> <p>Moreover, the Horizon Europe project <a href="#">Tools4CAP</a> will include a comprehensive inventory of methods and tools used in the Member State for drafting their CAP Strategic Plans, which may contain information on approaches and tools for simplification.</p> <p>Evaluators can assess simplification by:</p> <ul style="list-style-type: none"> <li>&gt; assessing progress towards the approaches to simplify and reduce the administrative burden of the CAP Strategic Plan;</li> <li>&gt; comparing these approaches with similar actions in other Member States, if available and taking into account, where relevant, the results of <a href="#">Tools4CAP</a>;</li> <li>&gt; comparing the number of operations/commitments and share of payments with the ones of similar interventions from the previous programming period that have been implemented without any use of simplification measures.</li> </ul> <p>Evaluators should also critically analyse every intervention of the CAP Strategic Plan in order to assess the potential for further adoption of simplification measures and provide recommendations accordingly.</p>

## 2. Relevance

### Introduction

Relevance is the extent to which the programme design and the achievements of the programme address the needs and solve a problem. During CAP Strategic Plan implementation, relevance is reviewed to assess whether the mix of interventions is still achieving the expected effects (in a stable or changing context) and therefore remains valid. The evaluation by this criterion should help assess any changes in the relevance of the CAP Strategic Plan and interventions over time (e.g. change of needs during the programme life cycle and how the programme has responded to these changes, whether the uptake affected the quality of the intervention logic, etc.).

The relevance evaluation is strongly linked to the effectiveness evaluation. Effectiveness asks 'what has been achieved by the CAP Strategic Plan interventions?' while relevance asks 'is the achievement relevant to the initial or changing needs of target groups?'

Effectiveness evaluation is strongly focused on the factor of success level. The assessment of relevance allows for the consideration of effectiveness related to the individual factor of success at a higher level, which means the needs formulated in the CAP Strategic Plan or the specific and general CAP objectives and policy priorities.

The basic question is always whether all or only some of the factors of success have contributed to a current or future need or a specific

or general objective or policy priority. This allows the evaluator(s) to develop overarching conclusions from a wide set of individual evaluations of the success factors.

With regard to relevance, it is proposed to assess whether the CAP Strategic Plan interventions (and their design) remain relevant in addressing:

- > the existing needs;
- > the EU's overarching policy priorities; and
- > the changing and future needs.

It should be noted that an intervention can be effective (reaches its operational target values), but in terms of needs, it may be irrelevant since it does not sufficiently contribute to solving a stated problem. If the relevance assessment comes to a critical conclusion in this respect, the design of the corresponding interventions should be further examined to identify potential weaknesses related to the form of support and/or in addressing the target groups. This may lead to a programme revision.

The evaluation questions, key evaluation elements and factors of success for relevance are presented in the following table.



**Table 2. The evaluation questions, key evaluation elements and factors of success for relevance**

Evaluation Question Rel.1: To what extent do the CAP Strategic Plan's objectives, interventions and design remain relevant to the current and expected future and changing needs and the EU's overarching policy priorities?			
Key element to be assessed	Factor of success	Legal requirement	Scope
Relationship between initial and current needs	Rel.1.1 The general context of the agri-food sector and rural areas evolved according to the initial assumptions and projections.	Recommended by Better Regulation Tool #47	As stated in the Better Regulation Toolbox, circumstances may have changed, and the needs and problems may not be the same now as the one looked at when the CAP Strategic Plan was designed.  This factor of success first analyses the change at the context level before assessing the fit of the interventions.
Relevance to the current needs	Rel.2.1 The CAP Strategic Plan's objectives and interventions remain relevant in addressing the current needs.  Rel.2.2 The design of the CAP Strategic Plan and its interventions is relevant to the current needs.	Recommended by Better Regulation Tool #47	A key aspect of continued relevance relates to current needs:  Interventions under implementation should only be continued if they prove to make a relevant contribution to address the needs identified in the CAP Strategic Plan.
Relevance to EU's overarching policy priorities	Rel.3.1 CAP Strategic Plan objectives and interventions remain relevant in addressing the EU's overarching policy priorities.	Recommended by Better Regulation Tool #47	This factor of success builds a bridge to directives and legal frameworks outside the CAP Strategic Plan, which, however, form essential orientations for the CAP Strategic Plan. Policy makers at the EU level are particularly interested in the extent to which the CAP Strategic Plan contributes to wider EU policy priorities stated e.g. in directives and legal frameworks.
Relevance to future and changing needs	Rel.4.1 CAP Strategic Plan objectives and interventions remain relevant in addressing the future and changing needs.	Recommended by Better Regulation Tool #47	As stated in the Better Regulation Toolbox, if an intervention does not help address the changing or likely future needs or problems (based on new objectives) then it may no longer be appropriate.

**Rel.1.1 The general context of the agri-food sector and rural areas evolved according to the initial assumptions and projections**

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Relevance
<b>Key evaluation element</b>	Relationship between initial and current needs
<b>Suggested example of evaluation question</b>	To what extent do the CAP Strategic Plan's objectives, interventions and design remain relevant to the current and expected future and changing needs and to the EU's overarching policy priorities?



<p><b>Rationale for the use of this factor of success</b></p>	<p>CAP Strategic Plans have been based on a thorough needs assessment, given the data available at the time of drafting. At the same time, the assessment of relevance looks at the relationship between current (at the time of evaluation) and future needs of the agri-food sector and rural areas and the objectives of the CAP Strategic Plan. Depending on the timing of the evaluation, there might have been changes leading to the emergence of new needs or making initial needs less important.</p> <p>In this context, checking whether the initial needs, identified at the time of drafting the CAP Strategic Plan, are still valid is of utmost importance. If the situation has not changed drastically and has evolved according to the projections and assumptions made when drafting the CAP Strategic Plan, then the initial needs can be used to check their relevance with the objectives and the design of the CAP Strategic Plan. Otherwise, the assessment should focus on the responsiveness of the CAP Strategic Plan to the evolving context and the changing needs.</p> <p>This factor of success can be used to check to what extent the situation at the time of drafting the CAP Strategic Plan is similar to the one at the time the evaluation is carried out.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>All CAP Strategic Plan types of interventions are relevant to this factor of success</p>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ol style="list-style-type: none"> <li>1. Evolution of context indicators</li> <li>2. Assumptions and projections made during the drafting of the CAP Strategic Plan that proved to be valid/non-valid</li> <li>3. Number and type of interventions that have been modified to adapt to the changing context.</li> </ol>
<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>Context indicators have been extensively used as evidence for the SWOT analysis and the needs assessment that formed the basis for the CAP Strategic Plans. An assessment of the evolution of these indicators may reveal significant departures from this initial situation and help also identify emerging issues.</p> <p>Additionally, in case Member States have used forecasts or other projections or made any assumptions on how the different interventions are expected to respond to the identified needs, an assessment of their continuing validity should complement the analysis of the context indicators and provide further insights on how much the situation has changed.</p> <p>Finally, the number and type of interventions that have been modified to adapt to the changing operating environment, may provide information on how the Managing Authority has already responded to these changes.</p> <p>Although the context might have changed over time, it might be unclear if – and how – the CAP Strategic Plan has been adapted. Detailed documentation of the amendments of the interventions and their relationship to the changing context might be very helpful for assessing the Managing Authority's efforts to keep the CAP Strategic Plan relevant to the changing context. If such documentation is missing, the evaluators should consult intervention documents to reconstruct the changes that were made and identify key decision points and what drove those decisions.</p>
<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>By analysing the indicators listed above, evaluators can establish a basis of needs and problems to which the CAP Strategic Plan's objectives and design must (continue to) respond to.</p>



## Rel.2.1 The CAP Strategic Plan's objectives and interventions remain relevant in addressing the current needs

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Relevance
<b>Key evaluation element</b>	Relevance to the current needs
<b>Suggested example of evaluation question</b>	To what extent do the CAP Strategic Plan's objectives, interventions and design remain relevant to the current and expected future and changing needs and to the EU's overarching policy priorities?
<b>Rationale for the use of this factor of success</b>	<p>The relevance of objectives and interventions to the needs of intended beneficiaries and the problems of the agri-food sector and rural areas may severely affect their uptake and compromise their effectiveness, efficiency or coherence. Moreover, it may augment inequalities by attracting specific groups and leaving others behind.</p> <p>Analysis of relevance to the current needs, through this factor of success, provides insights into which issues are addressed by the CAP Strategic Plan and why.</p> <p>It must be clarified that this assessment involves the needs at the time of the evaluation, which may differ from the needs identified in the programming of the CAP Strategic Plan that has already been assessed by the ex ante evaluation.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	All CAP Strategic Plan types of interventions are relevant to this factor of success
<b>Main indicator(s) that can be used to assess the factor of success</b>	<ol style="list-style-type: none"> <li>1. Evolution of output and result indicators against the targets and milestones set in the CAP Strategic Plan.</li> <li>2. Qualitative analysis of current needs which were not sufficiently addressed by the CAP Strategic Plan objectives and interventions.</li> </ol>
<b>Step 1 - Calculation of the main indicators</b>	<p>The evolution of output and result indicators against the targets and milestones set in the CAP Strategic Plan is routinely carried out by the Managing Authorities. Evaluators must have access to this data, but also to the disaggregated data listed in Annexes IV-VII of Regulation (EU) 2022/1475.</p> <p>This analysis can be complemented by a qualitative assessment of the level at which the current needs have been addressed, which can be based on surveys, interviews or focus groups.</p>
<b>Step 2 - Assessment of the factor of success</b>	<p>The evolution of output and result indicators may show the level of uptake of the CAP Strategic Plan's interventions and if the implementation progresses according to the plan. It may reveal problems with certain interventions (through the output indicators) and their importance for achieving specific targets (result indicators). The disaggregated data on interventions and beneficiaries (DME) may play an important role in further analysing the trends in the indicators and breaking them down by intervention and types of beneficiaries. This may provide additional insights regarding the potential concentration of uptake in specific geographic regions or territories or among groups of beneficiaries with specific characteristics.</p> <p>These data can provide the basis for assessing what kind of current needs are being addressed in which types of territories and for which groups of beneficiaries.</p> <p>In this respect, evaluators should also check the ability of the output and result indicators and the DME to adequately illustrate the actual outcomes of the interventions.</p> <p>For those interventions that lag in terms of outputs and results, a qualitative analysis can be carried out to check the extent to which they remain relevant to the current needs.</p> <p>Finally, by combining the above analyses, evaluators may check whether the differences in how needs are being addressed are related to potential trade-offs between different needs and problems.</p>



## Rel.2.2 The design of the CAP Strategic Plan's interventions is relevant to the current needs

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Relevance
<b>Key evaluation element</b>	Relevance to the current needs
<b>Suggested example of evaluation question</b>	To what extent do the CAP Strategic Plan's objectives, interventions and design remain relevant to the current and expected future and changing needs and to the EU's overarching policy priorities?
<b>Rationale for the use of this factor of success</b>	<p>The relevance of the design of the CAP Strategic Plan's interventions to the needs of intended beneficiaries and the problems of the agri-food sector and rural areas may severely affect their uptake and compromise their effectiveness, efficiency or coherence. Moreover, it may augment inequalities by attracting specific groups and leaving others behind.</p> <p>These design characteristics may include the:</p> <ul style="list-style-type: none"> <li>&gt; level of available financial resources;</li> <li>&gt; decision to use CAP versus national resources for addressing the needs;</li> <li>&gt; EU level rules (e.g. a single Strategic Plan for each Member State and both pillars, enhanced conditionality, capping and degressivity, ring-fencing, links to non-CAP legislation on environment and climate etc);</li> <li>&gt; enhanced flexibility provided to Member States;</li> <li>&gt; time span for the implementation of each type of intervention (annual or multi - annual);</li> <li>&gt; form of support (i.e. additional cost and income forgone, flat rate, hectare reference for the disbursement of funding, other);</li> <li>&gt; targeting (i.e. territorial/spatial variation or according to farm and farmer characteristics).</li> </ul> <p>Analysis of relevance to the current needs, through this factor of success, provides insights into how the design of the interventions affects its ability to address the needs and problems at the time of the evaluation.</p> <p>It must be clarified that this assessment involves the needs at the time of the evaluation, which may differ from the needs identified in the programming of the CAP Strategic Plan that has already been assessed by the ex ante evaluation.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	All CAP Strategic Plan types of interventions are relevant to this factor of success
<b>Main indicator(s) that can be used to assess the factor of success</b>	<ol style="list-style-type: none"> <li>1. Financial allocations per need, where available.</li> <li>2. Evolution of output and result indicators.</li> <li>3. Qualitative analysis of the design features that promote/undermine CAP Strategic Plan responsiveness to current needs.</li> </ol>
<b>Step 1 - Calculation of the main indicators</b>	<p>Financial allocation per need may be extracted from the CAP Strategic Plan interventions, if available.</p> <p>The evolution of output and result indicators against the targets and milestones set in the CAP Strategic Plan is routinely carried out by the Managing Authorities. Evaluators must have access to this data, but also to the disaggregated data listed in Annexes IV-VII of Regulation (EU) 2022/1475.</p> <p>This analysis can be complemented by a qualitative assessment of the level at which the current needs have been addressed, which can be based on surveys, interviews or focus groups.</p>



<b>Step 2 - Assessment of the factor of success</b>	<p>Financial allocations can be a measure of whether the resources allocated are in accord with the importance of the corresponding needs. Moreover, any amendments to the financial allocations per intervention, if they can be associated with changes in the context, may provide information on how the Managing Authority has adapted the CAP Strategic Plan to the evolving needs.</p> <p>The evolution of output and result indicators may show the level of uptake of the CAP Strategic Plan's interventions and if the implementation progresses according to plan. It may reveal problems with certain interventions (through the output indicators) and their importance for achieving specific targets (result indicators). The disaggregated data on interventions and beneficiaries (DME) may play an important role in further analysing the trends in the indicators and breaking them down by intervention and types of beneficiaries. This may provide additional insights regarding the potential concentration of uptake in specific geographic regions or territories or among groups of beneficiaries with specific characteristics.</p> <p>These data can provide the basis for assessing which needs are being addressed and whether there are differences between types of territories and/or groups of beneficiaries.</p> <p>In this respect, evaluators should also check the ability of the output and result indicators and the DME to adequately illustrate the actual outcomes of the interventions.</p> <p>For those interventions that lag in terms of outputs and results, a qualitative analysis can be carried out to check the extent to which they remain relevant to the current needs.</p> <p>Finally, by combining the above analyses, evaluators may check whether the differences in how needs are being addressed are related to potential trade-offs between different needs and problems.</p>
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### Rel.3.1 CAP Strategic Plan objectives and interventions remain relevant in addressing the EU's overarching policy priorities

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Relevance
<b>Key evaluation element</b>	Relevance to EU's overarching policy priorities <sup>4</sup>
<b>Suggested example of evaluation question</b>	To what extent do the CAP Strategic Plan's objectives, interventions and design remain relevant to the current and expected future and changing needs and to the EU's overarching policy priorities?
<b>Rationale for the use of this factor of success</b>	<p>Relevance analysis should also assess the alignment of the CAP Strategic Plan interventions with the overarching policy priorities defined at the EU level. These may include:</p> <ul style="list-style-type: none"> <li>&gt; The European Green Deal and its targets (e.g. GHG emissions targets), including the Farm to Fork and Biodiversity strategies, Organic Action Plan, EU Soil Strategy and other relevant strategies;</li> <li>&gt; The Long-term Vision for Rural Areas and its four pillars (stronger, connected, resilient and prosperous rural areas) (COM(2021) 345 final);</li> <li>&gt; Addressing specific needs of women in agriculture and rural areas and ensuring gender equality (Gender Equality Strategy COM (2020)152 final).</li> </ul> <p>Analysis of relevance to the EU's overarching policy priorities, through this factor of success, may provide insights into the strategic significance of the different types of interventions beyond the national context.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	All CAP Strategic Plan types of interventions are relevant to this factor of success



<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ol style="list-style-type: none"> <li>1. Number and type of interventions which respond to the EU's overarching policy priorities.</li> <li>2. Financial allocations per EU policy priority, where available.</li> <li>3. Evolution of output and result indicators that are relevant to the EU policy priorities.</li> <li>4. (Net) change in the values of impact indicators that are relevant to the EU policy priorities.</li> <li>5. Qualitative analysis of the design features that promote/undermine CAP Strategic Plan responsiveness to EU policy priorities.</li> </ol>
<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>Evaluators should analyse the CAP Strategic Plan interventions and identify the ones that respond to the EU's overarching policy priorities.</p> <p>Financial allocation per need may be extracted from the CAP Strategic Plan interventions, if available.</p> <p>The evolution of output and result indicators against the targets and milestones set in the CAP Strategic Plan is routinely carried out by the Managing Authorities. Evaluators must have access to this data, but also to the disaggregated data listed in Annexes IV-VII of Regulation (EU) 2022/1475.</p> <p>The (net) change in the values of impact indicators that are relevant to the EU policy priorities will be based on the result of the analysis of effectiveness.</p> <p>This analysis can be complemented by a qualitative assessment of the level at which the current needs have been addressed, which can be based on surveys, interviews or focus groups.</p>
<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>Building on the result of the effectiveness analysis, evaluators can assess the alignment of CAP Strategic Plan interventions with the EU policy priorities, in terms of resources allocated, outputs produced and (net) effects observed and compare them, where relevant, to the specific targets set under the corresponding EU strategy.</p> <p>The assessment may also reveal which types of interventions have a bigger potential to contribute to the EU policy priorities, highlighting their strategic significance.</p> <p>In this process, evaluators should also check the adequacy of the indicators to illustrate the actual contribution of the CAP Strategic Plan interventions to the EU policy priorities</p>

**Rel.4.1 CAP Strategic Plan objectives and interventions remain relevant in addressing the future and changing needs.**

<p><b>Specific objective</b></p>	<p>All SOs</p>
<p><b>Evaluation criterion</b></p>	<p>Relevance</p>
<p><b>Key evaluation element</b></p>	<p>Relevance to future and changing needs</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent do the CAP Strategic Plan's objectives, interventions and design remain relevant to the current and expected future and changing needs and to the EU's overarching policy priorities?</p>



<p><b>Rationale for the use of this factor of success</b></p>	<p>Relevance analysis should also assess the potential of CAP Strategic Plan interventions to respond to future and changing needs, as they are described indicatively in:</p> <ul style="list-style-type: none"> <li>&gt; The <a href="#">Megatrend Hub</a></li> <li>&gt; The <a href="#">Sustainable Food Systems Framework</a></li> <li>&gt; The revision of the <a href="#">Sustainable Use of Pesticides Directive</a></li> <li>&gt; The <a href="#">revision of the existing animal welfare legislation</a></li> <li>&gt; The <a href="#">EU Code of Conduct on Responsible Food Business and Marketing Practices</a></li> <li>&gt; The <a href="#">revision of the EU marketing standards</a></li> <li>&gt; <a href="#">EU-level targets for food waste reduction</a></li> <li>&gt; Demographic trends (e.g. depopulation of rural areas which leads to future labour and skills shortages, changing age structures)</li> <li>&gt; Reskilling and upskilling of the workforce (e.g. in the context of AKIS, relevant skills needed for farmers, etc.)</li> <li>&gt; Social challenges and resilience</li> </ul>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>All CAP Strategic Plan types of interventions are relevant to this factor of success</p>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ol style="list-style-type: none"> <li>1. Number and types of interventions with a potential to respond to future and changing needs.</li> <li>2. Financial allocations of interventions that respond to future and changing needs, where available</li> <li>3. Evolution of output and result indicators that are relevant to responding to future and changing needs.</li> </ol>
<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>Evaluators should analyse the CAP Strategic Plan interventions and identify the ones that have a potential to respond to future and changing needs.</p> <p>Financial allocation per need may be extracted from the CAP Strategic Plan interventions, if available.</p> <p>The evolution of output and result indicators against the targets and milestones set in the CAP Strategic Plan is routinely carried out by the Managing Authorities. Evaluators must have access to this data, but also to the disaggregated data listed in Annexes IV-VII of Regulation (EU) 2022/1475.</p> <p><b>Challenges in the calculation of the main indicators</b></p> <p>Identifying the future and changing needs might be a big challenge. A review of the <a href="#">EU work programme</a> as well as national programmes and initiatives for agriculture and rural areas may help explore anticipated changes. Additionally, interviews with key informants may also reveal key issues that should be taken into account.</p>
<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>Evaluators should screen the CAP Strategic Plan interventions, assessing their potential to increase responsiveness to future and changing needs, checking also the resources allocated and the progress of their implementation.</p> <p>The assessment may also reveal which types of interventions have a bigger potential to respond to future changes, highlighting their strategic significance.</p> <p>In this process, evaluators should also check the adequacy of the indicators to illustrate the actual contribution of the CAP Strategic Plan interventions to addressing these needs.</p>



# 3. Coherence

## Introduction

Coherence looks at how well (or not) different CAP Strategic Plan interventions within a programme and with other policy instruments work together. Checking 'internal coherence' means how well (or not) various types of actions within the CAP Strategic Plan operate together to achieve its objectives. External coherence relates to how well CAP Strategic Plan interventions complement or contradict other policy instruments outside the CAP Strategic Plan with similar and/or related objectives (e.g. environmental policy).

Like the relevance assessment, the assessment of coherence builds on the effectiveness assessment of the CAP Strategic Plan, but must also include other external sources of information e.g. on

interventions in the environment of the CAP Strategic Plan with similar objectives. The assessment of coherence therefore has a strong analytical character and is not only a conclusion from the effectiveness assessment.

The assessment of coherence goes beyond a mere comparison of objectives, whether they are congruent, and aims at the effective interaction of interventions in practical implementation.

The evaluation questions, key evaluation elements and factors of success for relevance are presented in the following Table.

**Table 3. The evaluation questions, key evaluation elements and factors of success for relevance**

Evaluation Question Coh.1: To what extent are CAP Strategic Plan interventions complement each other and contribute to achieving synergies under various Specific Objectives?			
Key Element to be assessed	Factor of Success	Legal requirement	Scope
Internal coherence	Coh.1.1 The integration of EAGF and EAFRD interventions under a single Strategic Plan improved the internal coherence of the CAP.	In general, terms recommended by Better Regulation Tool #47	This issue is of strategic importance to the new design of the CAP Strategic Plan.  This factor of success explores how Pillar I and/or Pillar II interventions jointly contribute to better address SOs.
	Coh.1.2 The CAP Strategic Plan instruments and interventions that aim to improve economic performance of the agricultural sector work synergistically and/or complementarily with the ones aiming to improve environmental-climate performance		Some policies that support farmers, may have negative environmental impacts. The challenge of reconciling conflicting economic and environmental objectives is faced by all Member States that are trying to develop sustainable agricultural policies. There is no easy solution, and the best approach will vary from country to country. However, the CAP strategic plans provide an opportunity for MS to find ways to balance these competing objectives.
	Coh.1.3 The CAP Strategic Plan instruments and interventions that aim to improve productivity and growth are coherent with the ones aiming at increasing employment.		The impact of CAP Strategic Plan interventions on employment can be positive, negative or neutral, depending on the specific intervention and the context in which it is implemented.  Some CAP Strategic Plan interventions, such as those that provide training and skills development, can lead to increased productivity and growth, which can create new jobs.  Other interventions, such as those that automate production processes, can lead to job losses.  The net impact of CAP Strategic Plan interventions on employment will depend on a number of factors, including the type of intervention, the pace of technological change and the policies that are put in place to mitigate the negative effects of job losses.



**Evaluation Question Coh.1: To what extent are CAP Strategic Plan interventions complement each other and contribute to achieving synergies under various Specific Objectives?**

Internal coherence	Coh.1.4 CAP interventions for SO4, SO5 and SO6 show a high degree of spatial complementarity and coexistence.	In general, terms recommended by Better Regulation Tool #47	<p>CAP Strategic Plan interventions for SO4, SO5 and SO6 can be implemented in the same area without competing with each other. They may complement each other and create synergies.</p> <p>First, these interventions are all targeted at the same general area i.e. agricultural land. Second, they all aim to improve the sustainability of agriculture. Third, they can often be implemented using the same resources, such as land, water and labour.</p> <p>It means that these interventions can be implemented together to achieve greater benefits for farmers and the environment.</p>
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**Evaluation Question Coh.2: To what extent did the CAP Strategic Plan interventions complement other EU instruments/ EU funds outside the CAP Strategic Plan to achieve synergies?**

Key element to be assessed	Factor of success	Legal requirement	Scope
External coherence	Coh.2.1 The CAP Strategic Plan assures external coherence with other national policies as well as European instruments/ funds and with international obligations, including the Sustainable Development Goals (SDGs).	In general, terms recommended by Better Regulation Tool #47	<p>The coherence of the CAP Strategic Plan interventions with other European instruments/funds and with international obligations is an important part of the plan's design. This coherence should help to ensure that the plan is effective in achieving its goals and that it contributes to the overall sustainable development of the EU.</p> <p>The CAP Strategic Plan should be coherent with other European instruments/funds, such as the European Structural and Investment Funds (ESIFs) and the European Maritime, Fisheries and Aquaculture Fund (EMFAF). These funds also support sustainable development in the EU and they can be used to complement the CAP Strategic Plan interventions.</p> <p>The CAP Strategic Plan should also be coherent with international obligations, such as the SDGs. The SDGs are a set of 17 goals that have been adopted by the UN to guide global development efforts. The CAP Strategic Plan interventions are designed to contribute to the achievement of several of the SDGs, such as SDG 2 (zero hunger), SDG 12 (responsible consumption and production) and SDG 15 (life on land).</p> <p>In this regard, the assumptions made in the CAP Strategic Plan on external coherence should be reviewed during programme implementation.</p>

**Coh.1.1 The integration of EAGF and EAFRD interventions under a single Strategic Plan improved the internal coherence of the CAP**

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Coherence
<b>Key evaluation element</b>	Internal coherence
<b>Suggested example of evaluation question</b>	To what extent are CAP Strategic Plan interventions complement each other and contribute to achieving synergies under various specific objectives?



<p><b>Rationale for the use of this factor of success</b></p>	<p>The New Delivery Model (NDM) aims to better achieve EU objectives based on strategic planning, broad policy interventions and common performance indicators, thus improving policy coherence across the future CAP and with other EU objectives. One of the key features of the NDM is the integration of the Pillar I and Pillar II interventions in a single Strategic Plan.</p> <p>This factor of success can be used to assess the level of complementarity and synergies achieved through this integration.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>All CAP Strategic Plan interventions are relevant to this factor of success</p>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ol style="list-style-type: none"> <li>1. Number and type of interventions that contribute to more than one specific and general objective.</li> <li>2. Contribution of each type of intervention (Direct Payments, Sectoral Interventions, Rural Development) to the development of each result indicator.</li> <li>3. Level of achievement of the performance milestones set in the CAP Strategic Plans per result indicator, taking into account the diversity of types of interventions that contribute to each result indicator.</li> <li>4. Synergies and complementarities between Direct Payments, Sectoral and Rural Development interventions programmed under the CAP Strategic Plan, compared to the previous programming period: A qualitative assessment.</li> </ol>
<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>The number and type of interventions that contribute to more than one specific and general objective can be extracted by the CAP Strategic Plans.</p> <p>The contribution of each type of intervention (direct payments, sectoral interventions, rural development) to the development of each result indicator can be done using the corresponding result variables described in point 3 of Annex IV, Regulation (EU) 2022/1475.</p> <p>The level of achievement of the performance milestones set in the CAP Strategic Plans per result indicator can be easily calculated based on the values of the result indicators.</p> <p>A qualitative assessment of the synergies and complementarities brought about by the integration of EAGF and EAFRD interventions under a single Strategic Plan can be carried out based on interviews and/or focus groups with informed stakeholders.</p>
<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>The NDM provides many opportunities for MS to use EAGF and EAFRD interventions in innovative combinations that can improve the internal coherence of the CAP. The level of coherence can be demonstrated, in general terms, by the number and type of interventions that are programmed under more than one SO and more specifically by the mix of types of interventions and their relative importance in the development of the result indicators.</p> <p>Although the aim of a diverse mix of interventions is to benefit from complementarities and synergies and reach more ambitious targets, there might be cases where inconsistencies between interventions compromise their coherence. Both situations can be captured by the level of achievement of the performance milestones set in the CAP Strategic Plans and its correlation with the diversity of the mix of types of interventions that contribute to the corresponding result indicators. Such an assessment may be based on the results of the effectiveness analysis, but its results must be analysed in combination with the relevance analysis (see Challenges below).</p> <p>Finally, a qualitative assessment of the changes in the level of synergies and complementarities between Direct Payments, Sectoral and Rural Development interventions under the current and previous programming period(s) may provide additional insights on how the internal coherence of the CAP has improved towards the achievement of similar objectives.</p>
<p><b>Challenges/Risks/ Issues</b></p>	<p>Internal coherence should be assessed in combination with relevance. While relevance assesses the objectives and design of the CAP Strategic Plan interventions at the level of the needs, coherence goes up to the next level and looks at the fit of the interventions within the broader system. Both relevance and coherence consider how the interventions align with the context, but they do so from different perspectives. Therefore, interventions with objectives and/or design characteristics that display limited relevance to the needs of beneficiaries and rural areas may compromise internal coherence. Limited relevance may lead to low adoption of the corresponding interventions and prevent anticipated complementarities and synergies from materialising.</p>



**Coh.1.2 The CAP Strategic Plan instruments and interventions that aim to improve economic performance of the agricultural sector work synergistically and/or complementarily with the ones aiming to improve environmental - climate performance.**

<b>Specific objective</b>	S01, S02, S03, S04, S05, S06, S09
<b>Evaluation criterion</b>	Coherence
<b>Key evaluation element</b>	Internal coherence
<b>Suggested example of evaluation question</b>	To what extent are CAP Strategic Plan interventions complement each other and contribute to achieving synergies under various specific objectives?
<b>Rationale for the use of this factor of success</b>	<p>The internal coherence of the CAP is challenged by the multitude of its objectives and instruments. When the 2023 – 2027 CAP was designed concerns were revealed around significant tensions that characterise modern agriculture in its transformation towards what is often termed as Farming 4.0 (digital farming). These tensions relate to:</p> <ul style="list-style-type: none"> <li>&gt; the need to improve simultaneously the economic, environmental and climate performance;</li> <li>&gt; the risk for employment from efforts to raise productivity and growth, especially in the primary farm sector;</li> <li>&gt; the often-complex trade-off between simplification and targeting, and the appropriate degree of subsidiarity in the context of very different structural characteristics in the farming sector of 28 MS.</li> </ul> <p>Turning such tensions into synergies would be the litmus test for the capacity of the future CAP to deliver in a coherent manner to its objectives, as well as those of related EU policies and priorities.</p> <p>This factor of success can be used to explore the first tension by assessing the level of complementarity and synergies achieved between CAP Strategic Plan instruments and interventions that aim to improve economic performance of the agricultural sector and the ones aiming to improve environmental - climate performance.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	All CAP Strategic Plan interventions that contribute to General Objectives 1 and 2 as well as Specific Objective 9.
<b>Main indicator(s) that can be used to assess the factor of success</b>	<ol style="list-style-type: none"> <li>1. Changes in the net values of impact indicators used for the effectiveness analysis of general objectives 1 and 2.</li> <li>2. Change in the Gross Value Added/ha between similar farms that are more / less intensely regulated by enhanced conditionality (Article 12, Reg (EU) 2021/2115).</li> <li>3. Change in the Gross Value Added/ha between similar farms that received more / fewer payments for commitments that improve the environmental – climate performance.</li> <li>4. Change in the Gross Value Added/ha between similar farms with increased / unchanged / decreased environmental – climate performance, based on selected variables that are part of the FADN/FSDN.</li> </ol>
<b>Step 1 – Calculation of the main indicators</b>	<p>Changes in the net values of impact indicators of general objectives 1 and 2 will be based on the results of the analysis under effectiveness.</p> <p>The other indicators can be calculated based on FADN data. Indicative geographical areas regulated by enhanced conditionality which may affect production costs, may include:</p> <ul style="list-style-type: none"> <li>&gt; Peatlands and wetlands</li> <li>&gt; Mountainous or hilly areas with moderate or high slopes</li> <li>&gt; Areas with a dense surface water network or dense irrigation and drainage network</li> <li>&gt; Areas in NVZs, or under special management plans such as WFD for water management or Natura 2000 for biodiversity management</li> </ul> <p>An example of using several variables of the FADN to assess the trade-off between economic and environmental sustainability has been applied in the Czech Republic and can be found in <a href="#">Špička J., Vintr T., Aulová R., Macháčková J. (2020)</a>.</p>



<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>The CAP Strategic Plans must contribute to the simultaneous achievement of a multitude of objectives. The PMEF provides a range of specific indicators that allow the measurement of the success of the CAP Strategic Plans towards the achievement of different objectives. The (net) change in the values of these indicators will be calculated under the effectiveness criterion and can be also used to provide an overall picture of the effects of the CAP towards the seemingly conflicting objectives of improving economic, environmental and climate performance.</p> <p>Beyond this overview, microeconomic data, coming from the FADN, can be used to compare the economic performance of farms that implement more environment - climate commitments with those that implement fewer or no such commitments. The comparison can be made by using the Gross Value Added as a measure of economic performance and by creating different groups of similar farms that received different levels of environment - climate related payments, both from EAGF and from EAFRD.</p>
<p><b>Challenges/Risks/ Issues</b></p>	<p>Internal coherence should be assessed in combination with relevance. While relevance assesses the objectives and design of the CAP Strategic Plan interventions at the level of the needs, coherence goes up to the next level and looks at the fit of the interventions within the broader system. Both relevance and coherence consider how the interventions align with the context, but they do so from different perspectives. Therefore, interventions with objectives and/or design characteristics that display limited relevance to the needs of beneficiaries and rural areas may compromise internal coherence. Limited relevance may lead to low adoption of the corresponding interventions and prevent anticipated complementarities and synergies from materialising.</p> <p>The microeconomic analysis, described above, could require linking FADN/FSDN data to the DME and, where relevant, IACS, perhaps via the unique beneficiary identifier (variable M030 of the DME)</p>

**Coh.1.3 The CAP Strategic Plan instruments and interventions that aim to improve productivity and growth are coherent with the ones aiming at increasing employment**

<p><b>Specific Objective</b></p>	<p>All SOs</p>
<p><b>Evaluation criterion</b></p>	<p>Coherence</p>
<p><b>Key evaluation element</b></p>	<p>Internal coherence</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent are CAP Strategic Plan interventions complement each other and contribute to achieving synergies under various Specific Objectives?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The internal coherence of the CAP is challenged by the multitude of its objectives and instruments. When the 2023-2027 CAP was designed concerns were revealed around significant tensions that characterise modern agriculture in its transformation towards what is often termed as 'Farming 4.0' (digital farming). These tensions relate to:</p> <ul style="list-style-type: none"> <li>&gt; the need to improve simultaneously the economic, environmental and climate performance;</li> <li>&gt; the risk for employment from efforts to raise productivity and growth, especially in the primary farm sector;</li> <li>&gt; the often-complex trade-off between simplification and targeting, and the appropriate degree of subsidiarity in the context of very different structural characteristics in the farming sector of 27 Member States.</li> </ul> <p>Turning such tensions into synergies would be the litmus test for the capacity of the future CAP to deliver in a coherent manner to its objectives, as well as those of related EU policies and priorities.</p> <p>This factor of success can be used to explore the second tension by assessing the level of trade-off between improved employment and productivity and growth.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>All CAP Strategic Plan interventions.</p>



<b>Main indicator(s) that can be used to assess the factor of success</b>	<ol style="list-style-type: none"> <li>1. Changes in I.24 and I.25 in rural areas.</li> <li>2. Changes in I.6 and C.13.</li> </ol>
<b>Step 1 - Calculation of the main indicators</b>	Both indicators will be calculated under the analysis of effectiveness.
<b>Step 2 - Assessment of the factor of success</b>	<p>The CAP Strategic Plans must contribute to the simultaneous achievement of a multitude of objectives. The PMEF provides a range of specific indicators that allow the measurement of the success of the CAP Strategic Plans towards the achievement of different objectives. The (net) change in the values of these indicators will be calculated under the effectiveness criterion and can be also used to provide an overall picture of the effects of the CAP towards employment, productivity and growth in rural areas.</p> <p>Beyond the changes that are observed at the level of rural areas, more specific indicators, focusing on the agricultural sector, can be used to assess the coherence between improved total factor productivity and farm labour force.</p>
<b>Challenges/Risks/ Issues</b>	Internal coherence should be assessed in combination with relevance. While relevance assesses the objectives and design of the CAP Strategic Plan interventions at the level of the needs, coherence goes up to the next level and looks at the fit of the interventions within the broader system. Both relevance and coherence consider how the interventions align with the context, but they do so from different perspectives. Therefore, interventions with objectives and/or design characteristics that display limited relevance to the needs of beneficiaries and rural areas may compromise internal coherence. Limited relevance may lead to low adoption of the corresponding interventions and prevent anticipated complementarities and synergies from materialising.

#### **Coh.1.4 CAP interventions for SO4, SO5 and SO6 show a high degree of spatial complementarity and coexistence**

<b>Specific Objective</b>	SO4, SO5 and SO6
<b>Evaluation criterion</b>	Coherence
<b>Key evaluation element</b>	Internal coherence
<b>Suggested example of evaluation question</b>	To what extent are CAP Strategic Plan interventions complement each other and contribute to achieving synergies under various Specific Objectives?
<b>Rationale for the use of this factor of success</b>	<p>CAP Strategic Plans include a variety of interventions beneficial for the environment and climate which may belong to different types of interventions (eco-schemes, environment-climate commitments or investments under rural development, environment-climate related actions under the sectoral interventions) and contribute to one or more of the SO4, SO5 and SO6.</p> <p>The coexistence of these interventions in a geographical location may increase their spatial complementarity and promote synergies between them, thus increasing their internal coherence.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	All CAP Strategic Plan interventions contributing to SO4, SO5 and SO6 are relevant to this factor of success
<b>Main indicator(s) that can be used to assess the factor of success</b>	<p>Colocation quotient statistic for:</p> <ul style="list-style-type: none"> <li>&gt; Interventions contributing to the same objective.</li> <li>&gt; Interventions contributing to different objectives.</li> </ul>



<b>Step 1 - Calculation of the main indicators</b>	<p>The geographical location of beneficiaries (variable B040 of Annex IV, Regulation (EU) 2022/1475) of specific interventions (direct payments and rural development) under SO4, SO5 and SO6 can be aggregated to administrative units and used for the estimation of spatial correlation indicators, such as the 'Global Moran I'. An example of such an analysis can be found in <a href="#">Yang, AL, Rounsevell, MDA, Wilson, RM &amp; Haggett, C. (2014)</a> who analysed the agri-environmental policy uptake and expenditure in Scotland, using a spatial econometric model.</p>
<b>Step 2 - Assessment of the factor of success</b>	<p>The 'Colocation Analysis' can be used to measure local patterns of spatial association between two categories of observations (e.g. A and B) using the colocation quotient statistic. Each feature in category A is evaluated individually for colocation with the presence of category B found within its neighbourhood. In general, if the proportion of B points within the neighbourhood of A is more than the global proportion of B, the colocation quotient will be high. If the neighbourhood of A contains many other A points or many other categories other than B, the colocation between the category A and category B will be small.</p> <p>This indicator can measure the probability of colocation between interventions in a given geographical location. By selecting appropriate pairs of interventions to be analysed, specific patterns of potential spatial complementarity can be identified.</p>
<b>Challenges/Risks/ Issues</b>	<p>Colocation analysis should be, ideally, assessed in combination with effectiveness analysis. Therefore, an appropriate geographical scale should be chosen for the analysis, which aligns with the possible level of disaggregation of the effects. This can lead to identifying colocation patterns that show higher/lower effectiveness, implying higher/lower complementarity between the corresponding interventions.</p> <p>Internal coherence should be assessed in combination with relevance. While relevance assesses the objectives and design of the CAP Strategic Plan interventions at the level of the needs, coherence goes up to the next level and looks at the fit of the interventions within the broader system. Both relevance and coherence consider how the interventions align with the context, but they do so from different perspectives. Therefore, interventions with objectives and/or design characteristics that display limited relevance to the needs of beneficiaries and rural areas may compromise internal coherence. Limited relevance may lead to low adoption of the corresponding interventions and prevent anticipated complementarities and synergies from materialising.</p>

### **Coh.2.1 The CAP Strategic Plan assures external coherence with other national policies as well as European instruments/funds and with international obligations, including the Sustainable Development Goals (SDGs)**

<b>Specific Objective</b>	All SOs
<b>Evaluation criterion</b>	Coherence
<b>Key evaluation element</b>	External coherence
<b>Suggested example of evaluation question</b>	To what extent did the CAP Strategic Plan interventions complement other EU instruments/funds, outside the CAP, to achieve synergies?
<b>Rationale for the use of this factor of success</b>	<p>CAP Strategic Plans are implemented in a dense environment of other EU and national policies and international obligations that have a direct link to agriculture and rural areas. The New Delivery Model, putting less focus on compliance and providing broad types of interventions and basic requirements, has allowed Member States to better tailor their interventions to ensure complementarities and achieve synergies with other EU and national policies. Moreover, this flexibility allowed Member States to plan their interventions in a way that is more coherent and conducive to the achievement of the European Green Deal and UN SDGs as well as new EU level strategies, such as the Long-term Vision for Rural Areas.</p> <p>This factor of success assesses the complementarities, synergies or potential gaps between the CAP Strategic Plan interventions and those other EU or national policies and international priorities.</p>



<b>Indicative list of types of interventions that may contribute to the factor of success</b>	<p>All CAP Strategic Plan interventions are relevant to this factor of success.</p>
<b>Main indicator(s) that can be used to assess the factor of success</b>	<p>Number and type of interventions with potential synergies, overlaps or gaps with:</p> <ul style="list-style-type: none"> <li>&gt; ERDF funded programmes related to rural development intervention.</li> <li>&gt; Horizon Europe (Cluster 6 of 'Food, Bioeconomy, Natural Resources, Agriculture and Environment') related to EIP-Agri and AKIS.</li> <li>&gt; Single Market Programme 2021-2027 (particularly under the food chain pillar managed by the European Health and Digital Executive Agency(HaDEA)) related to food safety.</li> <li>&gt; ESF+ (in particular the measures focused on improving employment conditions in rural areas) related to qualification and capacity building in rural areas.</li> <li>&gt; The European Green Deal, including the Farm to Fork and Biodiversity strategies and actions thereof, such as the Organic Action Plan, Contingency Plan, Soil Strategy and other relevant strategies and actions.</li> <li>&gt; The Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources.</li> <li>&gt; The Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.</li> <li>&gt; The Directive 2000/60/EC establishing a framework for community action in the field of water policy.</li> <li>&gt; The Directive 2008/50/EC on ambient air quality and cleaner air for Europe.</li> <li>&gt; The Directive 2009/28/EC on the promotion of the use of energy from renewable sources.</li> <li>&gt; The Directive 2009/128/EC establishing a framework for community action to achieve the sustainable use of pesticides.</li> <li>&gt; The Directive 2009/147/EC on the conservation of wild birds.</li> <li>&gt; The Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants.</li> <li>&gt; The Regulation (EU) 2018/841 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework.</li> <li>&gt; The Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action and the commitments under the Paris Agreement.</li> <li>&gt; The Directive (EU) 2018/2002 on energy efficiency.</li> <li>&gt; The Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.</li> <li>&gt; National Energy and Climate Plans (NECPs).</li> <li>&gt; National Adaptation Plans or Strategies (NAPs).</li> <li>&gt; River Basin Management Plans.</li> <li>&gt; 5th and 6th Flood Risk Management Plans.</li> <li>&gt; Drought Management Plans</li> <li>&gt; Other national policies</li> <li>&gt; The Long-term Vision for Rural Areas and its four pillars (stronger, connected, resilient and prosperous rural areas) (COM(2021) 345 final).</li> <li>&gt; Accelerating the green and digital transition.</li> <li>&gt; Addressing specific needs of women in agriculture and rural areas and ensuring gender equality (Gender Equality Strategy COM (2020)152 final).</li> </ul>
<b>Step 1 - Calculation of the main indicators</b>	<p>Evaluators should analyse the CAP Strategic Plan interventions and identify the ones with potential synergies, overlaps or gaps with the policies and priorities listed above.</p> <p>Information on the coherence of the CAP Strategic Plan can be found in Chapter 3 of the CAP Strategic Plan.</p>
<b>Step 2 - Assessment of the factor of success</b>	<p>A qualitative screening of all CAP Strategic Plan interventions making use, where relevant, of any useful findings of the effectiveness analysis, with the aim of identifying synergies, overlaps or gaps between the interventions and a broad and inclusive list of other EU and national policies.</p>



**Challenges/Risks/ Issues**

External coherence could benefit in many cases from the findings of the effectiveness analysis. A consideration of this linkage when planning the evaluations might ensure that the level of the effectiveness analysis has the potential to support the analysis of the external coherence. For example, an effort to assess the extent to which CAP Strategic Plan interventions have contributed to the European Green Deal targets under efficiency can then be reused for the assessment of external coherence.

External coherence should be assessed in combination with relevance. While relevance assesses the objectives and design of CAP Strategic Plan interventions at the level of the needs, coherence goes up to the next level and looks at the fit of the interventions within the broader system. Both relevance and coherence consider how the interventions align with the context, but they do so from different perspectives. Therefore, interventions with objectives and/or design characteristics that display limited relevance to the needs of beneficiaries and rural areas may compromise the external coherence. Limited relevance may lead to low adoption of the corresponding interventions and prevent anticipated complementarities and synergies from materialising.

## 4. Union added value

### Introduction

Union added value is a concept that seeks to capture the additional value resulting from EU legislation and funding compared to what would have been achieved by Member States acting in isolation.

This may include the added value in improved governance and cooperation in the delivery of the CAP support, ensuring a level playing field for all farmers in Member States, better alignment

of conditions and interventions under the CAP on climate and environmental objectives and more balanced territorial development and internal convergence between Member States and regions in the EU.

The evaluation questions, key evaluation elements and factors of success for Union added value are presented in the following table.

**Table 4. The evaluation questions, key evaluation elements and factors of success for Union added value**

Evaluation Question Uav.1: To what extent have CAP Strategic Plan standards, procedures and interventions produced results in agriculture and rural areas beyond what would have been achieved by Member States acting alone?			
Key element to be assessed	Factor of success	Legal requirement	Scope
Improved governance and cooperation in the delivery of CAP support	Uav.1.1 EU action promotes better governance and coordination in the delivery of CAP support.	In general, terms recommended by Better Regulation Tool #47	<p>The CAP is a complex policy that involves a variety of different actors, including national governments, regional authorities, farmers and other stakeholders. Improving coordination between these actors will help to ensure that CAP support is delivered in a more efficient, effective and transparent manner.</p> <p>Farmers and other stakeholders should be able to easily understand how CAP support is being used and how it is benefiting them. Making CAP support more transparent and accountable will help to build trust and confidence in the policy.</p> <p>Several standards and requirements defined at EU level, such as the Multiannual Financial Framework, the integration of the two Pillars in the CAP Strategic Plan, and the promotion of the use of digital technologies etc., can improve governance and coordination in the delivery of the CAP support, and ensure that the support is more effectively targeted, better aligned with local needs, and more transparent and accountable.</p>



**Evaluation Question Uav.1: To what extent have CAP Strategic Plan standards, procedures and interventions produced results in agriculture and rural areas beyond what would have been achieved by Member States acting alone?**

<p>Ensuring a level playing field for all farmers in the Member State</p>	<p>Uav.2.1 EU action ensures a system of support that avoids potential distortions of competition and improves the competitiveness and position of farmers in the value chain.</p>		<p>Ensuring a level playing field for all farmers in the EU's single market is a complex challenge.</p> <p>This factor of success aims to assess the extent to which CAP Strategic Plans contribute to ensuring that potential distortions of competition are avoided. This can, for example, include farmers having a fair income or the competitiveness of small farms is improved and the increasing concentration of agricultural production is tackled.</p>
<p>Better alignment of conditions and interventions under the CAP on climate- and environmental objectives</p>	<p>Uav.3.1 EU action incentivised Member States to enhance their environment-climate ambition and performance.</p>	<p>In general, terms recommended by Better Regulation Tool #47</p>	<p>The current CAP places a greater emphasis on environmental and climate objectives. Several standards and requirements defined at EU level ensure every supported farmer undertakes a minimum effort to reduce the environmental and climate impact of agriculture, while at the same time incentivises Member States to increase their environment-climate ambition. This factor of success explores how the action at EU level promoted the achievement of climate and environmental objectives.</p>
<p>Balanced territorial development and internal convergence between MS and regions in the EU</p>	<p>Uav.4.1 EU action supports Member States in tailoring their response to socioeconomic challenges in rural areas while supporting solidarity and limiting gaps between the regions.</p>		<p>The CAP Strategic Plan can support the balanced territorial development and internal convergence between Member States and regions in the EU in a number of ways.</p> <p>First, the CAP can provide financial support to farmers in areas with natural or other specific constraints (ANC). This support can help to improve the productivity and profitability of farms in these areas.</p> <p>Second, the CAP can provide financial support for rural development projects. These projects can focus on a variety of areas, such as improving infrastructure, developing tourism or promoting renewable energy. This support can help to create jobs and opportunities in rural areas, and it can also help to reduce regional disparities.</p> <p>This factor of success explores how effective are the EU level standards and requirements in promoting a balanced territorial development.</p>

**Uav.1.1 EU action promotes better governance and coordination in the delivery of CAP support**

<p><b>Specific Objective</b></p>	<p>All SOs</p>
<p><b>Evaluation criterion</b></p>	<p>Union added value</p>
<p><b>Key evaluation element</b></p>	<p>Improved governance and cooperation</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan standards, procedures and interventions produced results in agriculture and rural areas beyond what would have been achieved by Member States acting alone?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>The integration of EAGF and EAFRD interventions under a single, national Strategic Plan, requires new or improved governance and coordination structure to be established at the Member State level. Especially in regionalised Member States, the requirement for a single, national plan calls for improved cooperation between the national Managing Authority and the regional authorities in order to achieve a smooth transition that builds on the extensive experience of the regional authorities in implementing, monitoring and evaluating the CAP. Moreover, there might be a need for additional structures that foster this cooperation.</p>



<b>Rationale for the use of this factor of success</b>	<p>In all Member States, improved cooperation is required between the Managing Authority, Paying Agency and, possibly, Intermediate Bodies to break the walls that existed in the management and implementation of direct payments, sectoral interventions and rural development, and ensure concerted action towards achieving the targets and milestones set in the CAP Strategic Plan.</p> <p>This factor of success can be used to assess the effect of EU level action in promoting better governance and coordination in the delivery of the CAP support.</p>
<b>Indicative list of types of interventions that may contribute to the factor of success</b>	All CAP Strategic Plan interventions.
<b>Main indicator(s) that can be used to assess the factor of success</b>	<ol style="list-style-type: none"> <li>1. Number and type of new members of the Monitoring Committee compared to the previous programming period.</li> <li>2. Number and types of new governance and/or coordination structures established at Member State level.</li> <li>3. Qualitative assessment of the role of new governance and/or coordination structures in improving the implementation, monitoring and evaluation of the CAP Strategic Plan.</li> </ol>
<b>Step 1 - Calculation of the main indicators</b>	<p>The calculation of indicators 1 and 2 is straightforward based on data already available in the Managing Authority.</p> <p>The qualitative assessment can be based on structured interviews or focus groups with key stakeholders. In this process, the results from other evaluation criteria can form the background of the discussion.</p>
<b>Step 2 - Assessment of the factor of success</b>	<p>The composition of the Monitoring Committee of the RDPs used to reflect the specific focus of these programmes on the development of rural areas and less on the agricultural sector. With the integration of the EAGF and EAFRD interventions under the Strategic Plan, there is a need for a broader representation of the sector in the committee. The number and type of these new members may demonstrate the effect of the New Delivery Model on the composition of this permanent governance structure.</p> <p>Beyond the Monitoring Committee, other permanent or non-permanent structures may emerge for the joint governance and coordination of the EAGF and EAFRD interventions.</p> <p>The composition of the Monitoring Committee and the number, type and composition of other structures may provide information on the increased cooperation between stakeholders in the implementation and management of the CAP Strategic Plan, induced by the EU level action.</p> <p>Finally, a qualitative assessment of the role of the new or modified governance and coordination structures in improving the effectiveness, efficiency, relevance and coherence of the CAP Strategic Plan can be carried out based on the results of the analysis of each evaluation criterion.</p>

### **Uav.2.1 EU action ensures a system of support that avoids potential distortions of competition and improves competitiveness and position of farmers in the value chain**

<b>Specific Objective</b>	S01, S02, S03, S09 and CCO
<b>Evaluation criterion</b>	Union added value
<b>Key evaluation element</b>	Responding to economic challenges and the pressures due to the single market
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan standards, procedures and interventions produced results in agriculture and rural areas beyond what would have been achieved by Member States acting alone?



<p><b>Rationale for the use of this factor of success</b></p>	<p>The single market for goods and services offers substantial economic opportunities to farmers as well as important pressures which require a common safety net. Under the New Delivery Model, the CAP focuses more on performance by setting basic requirements at EU level instead of detailed rules. Certain EU level standards respond to the challenges of the single market and aim to develop a system that promotes balanced income support across sectors and territories, the modernisation of farms and a fair position for farmers in the value chain. These include:</p> <ul style="list-style-type: none"> <li>&gt; The types of interventions for direct payments as well as for supporting agriculture in areas with natural constraints and areas with specific disadvantages.</li> <li>&gt; The minimum EU level rules for each one of these types of intervention, especially the capping and degressivity requirements (Article 17 of Regulation (EU) 2021/2115) and the convergence of payment entitlements (Article 24 of Regulation (EU) 2021/2115).</li> <li>&gt; The types of interventions that enhance market orientation and increase farm competitiveness.</li> <li>&gt; The types of interventions that improve the farmers' position in the value chain, including the provisions for the set-up and recognition of Producers Organisations.</li> <li>&gt; The provisions for fostering AKIS.</li> <li>&gt; The performance review which requires Member States to achieve specific targets at certain milestones during implementation.</li> <li>&gt; The opportunities for networking and dissemination of information both at national and EU levels.</li> </ul> <p>This factor of success can be used:</p> <ul style="list-style-type: none"> <li>&gt; to assess the effect of the EU level requirements in fostering a smart, competitive, resilient and diversified agricultural sector;</li> <li>&gt; to assess the situation without the CAP.</li> </ul>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>G01, S09 and CCO interventions are relevant to this factor of success.</p>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ol style="list-style-type: none"> <li>1. Number and type of EU level basic requirements with positive or negative effects on ensuring a common income safety net for all farmers.</li> <li>2. Qualitative assessment of the basic requirements underpinning the CAP income support.</li> <li>3. Change in farm income in the absence of CAP support.</li> <li>4. Change in agricultural production (total output) in the absence of CAP support</li> <li>5. Change in UAA in the absence of CAP support.</li> <li>6. Change in production intensity (total input/ha) in the absence of CAP support.</li> </ol>
<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>Indicator 1 can be calculated based on the intervention logic of the CAP Strategic Plan.</p> <p>The other indicators can be estimated using modelling techniques. The <a href="#">JRC study on Scenar 2030</a> provided evidence on the added value of the CAP. One of the tested scenarios in the JRC study shows notably that removing the CAP would result in an 18% drop in farm income on average in the EU, threatening the economic viability and attractiveness of rural areas, a sizeable decline in production affecting food security, land abandonment, a decline in permanent grassland and a stronger production intensification, which can lead to more pressure on the environment. Estimating these developments at the Member State level can demonstrate the added value of the CAP for each Member State.</p>



<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>Based on the findings of the analysis of the other evaluation criteria, evaluators may carry out a qualitative assessment of the basic requirements underpinning the CAP income support.</p> <p>This assessment can be built around the following points:</p> <ul style="list-style-type: none"> <li>➢ Positive and negative effects of the basic requirements in ensuring a level playing field for all farmers in the Member State.</li> <li>➢ Effect of the basic requirements on the targeting of the support according to the needs identified in the CAP Strategic Plan.</li> <li>➢ Potential of the different types of interventions to allow the development of complementarities and synergies between them.</li> </ul> <p>A quantitative assessment of the role of the CAP can be obtained in case a modelling of the 'no CAP' scenario takes place.</p>
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### Uav.3.1 EU action incentivised Member States to enhance their environment-climate ambition and performance

<p><b>Specific Objective</b></p>	<p>S04, S05 and S06 and CCO</p>
<p><b>Evaluation criterion</b></p>	<p>Union added value</p>
<p><b>Key evaluation element</b></p>	<p>Responding to environment-climate challenges</p>
<p><b>Suggested example of evaluation question</b></p>	<p>To what extent have CAP Strategic Plan standards, procedures and interventions produced results in agriculture and rural areas beyond what would have been achieved by Member States acting alone?</p>
<p><b>Rationale for the use of this factor of success</b></p>	<p>Key sustainability challenges like climate change, water use, air quality and biodiversity are cross-border and also require EU action to meet EU-wide objectives. Under the New Delivery Model, the CAP focuses more on performance by setting basic requirements at EU level instead of detailed rules. The EU level standards for promoting more ambitious environment-climate action, include:</p> <ul style="list-style-type: none"> <li>➢ The enhanced conditionality and the broad types of interventions, supported by both the EAGF and the EAFRD and their interplay to establish the CAP Strategic Plan's green architecture (Article 109.2(a) of Regulation (EU) 2021/2115).</li> <li>➢ The 'no backsliding' principle (Article 105 of Regulation (EU) 2021/2115).</li> <li>➢ The ring-fencing of resources to interventions relating to environment and climate, through: <ul style="list-style-type: none"> <li>➢ the allocation of, at least, 25% of the direct payments to eco-schemes;</li> <li>➢ the allocation of, at least, 15% of funding devoted to sectoral interventions in fruit and vegetables on types of action serving the CAP SOs on the environment and climate;</li> <li>➢ the allocation of, at least, 35% of EAFRD resources to agri-environment management commitments, Natura2000 and Water Framework Directive payments, environmental and climate investments, and animal welfare.</li> </ul> </li> <li>➢ The tracking of climate expenditure (Article 100 of Regulation (EU) 2021/2115).</li> <li>➢ The performance review which requires Member States to achieve specific targets at certain milestones during implementation.</li> <li>➢ The opportunities for networking and dissemination of information both at national and EU level.</li> </ul> <p>This factor of success can be used to assess the effect of the EU level, standards in enhancing environment-climate ambition and performance.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>All CAP Strategic Plan interventions that contribute to S04, S05 and S06 are relevant to this factor of success.</p>



<b>Main indicator(s) that can be used to assess the factor of success</b>	<ol style="list-style-type: none"> <li>1. Number and type of EU level standards with positive or negative effects on enhancing environment-climate ambition.</li> <li>2. Change in the values of result indicators compared to the previous programming period (for similar interventions).</li> <li>3. Change in the (net) values of impact indicators compared to the previous programming period (for similar objectives).</li> </ol>
<b>Step 1 - Calculation of the main indicators</b>	<p>Indicator 1 can be calculated based on the intervention logic of the CAP Strategic Plan.</p> <p>The other indicators can be calculated under effectiveness analysis.</p>
<b>Step 2 - Assessment of the factor of success</b>	<p>Based on the findings of the analysis of the other evaluation criteria, evaluators may carry out a qualitative assessment of the EU level standards underpinning the enhanced environment-climate ambition.</p> <p>This assessment can be built around the following points:</p> <ul style="list-style-type: none"> <li>&gt; Positive and negative effects of the EU level standards in achieving higher environment-climate performance, as reflected on corresponding impact indicators and/or progress towards targets set against result indicators.</li> <li>&gt; Effect of the EU level standards on the targeting of the support according to the needs identified in the CAP Strategic Plan, including the design of interventions.</li> </ul> <p>The analysis of the changes in the values of impact and result indicators, between the current and the previous programming period, may be used to demonstrate the effects of the New Delivery Model and the EU level standards on the environment-climate ambition. Care must be taken so the comparison involves similar interventions and measures, sub-measures or actions.</p>
<b>Challenges/Risks/ Issues</b>	<p>The link to the effectiveness analysis for the assessment of this factor of success is critical. The comparison of the (net) values of impact indicators among programming periods might require specific disaggregation to estimate the contribution of each intervention.</p> <p>This factor of success should be assessed in combination with the factor of success Coh.1.3 to check for the role of the EU level standards in increasing the potential for complementarities and synergies among the different types of interventions related to environment-climate performance.</p>

#### Uav.4.1 EU action supports Member States in tailoring their response to socioeconomic challenges in rural areas while supporting solidarity and limiting gaps between the regions

<b>Specific Objective</b>	S07, S08 and CCO
<b>Evaluation criterion</b>	Union added value
<b>Key evaluation element</b>	Responding to socioeconomic challenges faced by the rural areas
<b>Suggested example of evaluation question</b>	To what extent have CAP Strategic Plan standards, procedures and interventions produced results in agriculture and rural areas beyond what would have been achieved by Member States acting alone?
<b>Rationale for the use of this factor of success</b>	<p>EU faces significant challenges regarding food quality, generational renewal, growth and employment in rural areas, poor rural infrastructure and services, and weaknesses in research and innovation. An appropriate EU level response to these challenges allows more effective and efficient action when combined with more flexibility at Member State level. A common budget enables all Member States and regions to respond to these challenges, including those with limited financial resources. In this respect, it supports solidarity and limits gaps between regions.</p> <p>The standards, established at the EU level include:</p> <ul style="list-style-type: none"> <li>&gt; The corresponding types of interventions.</li> <li>&gt; The minimum financial allocations for LEADER, (Article 92 of Regulation (EU) 2021/2115).</li> <li>&gt; The minimum financial allocations for young farmer support (Article 95 of Regulation (EU) 2021/2115)</li> </ul>



<p><b>Rationale for the use of this factor of success</b></p>	<ul style="list-style-type: none"> <li>&gt; The increased EAFRD contribution for less developed regions, outermost regions, small Aegean islands and transition regions (Article 91 of Regulation (EU) 2021/2115).</li> <li>&gt; The performance review which requires Member States to achieve specific targets at certain milestones during implementation.</li> <li>&gt; The automatic decommitment rule (Article 34 of Regulation (EU) 2021/2116).</li> <li>&gt; The opportunities for networking and dissemination of information both at national and EU level.</li> </ul> <p>This factor of success can be used to assess the effect of EU level action in addressing socioeconomic challenges in rural areas.</p>
<p><b>Indicative list of types of interventions that may contribute to the factor of success</b></p>	<p>All CAP Strategic Plan interventions that contribute to SO7, SO8 and CCO are relevant to this factor of success.</p>
<p><b>Main indicator(s) that can be used to assess the factor of success</b></p>	<ol style="list-style-type: none"> <li>1. Number and type of EU level standards with positive or negative effects on enhancing the ability of Member States to address socioeconomic challenges in rural areas.</li> <li>2. Share of the total CAP support directed to: <ul style="list-style-type: none"> <li>&gt; less developed regions, outermost regions and the small Aegean islands;</li> <li>&gt; transition regions within the meaning of Article 108(2), first subparagraph, point (b), of Regulation (EU) 2021/1060.</li> </ul> </li> <li>3. Percentage of the total public and private expenditure of the CAP Strategic Plan to the corresponding regional GDP for: <ul style="list-style-type: none"> <li>&gt; less developed regions, outermost regions and the small Aegean islands;</li> <li>&gt; transition regions within the meaning of Article 108(2), first subparagraph, point (b), of Regulation (EU) 2021/1060;</li> <li>&gt; other rural regions.</li> </ul> </li> </ol>
<p><b>Step 1 - Calculation of the main indicators</b></p>	<p>Indicator 1 can be calculated based on the intervention logic of the CAP Strategic Plan.</p> <p>Indicator 2 can be calculated based on CAP expenditures.</p> <p>Indicator 3 can be calculated based on CAP expenditures and Eurostat (NAMA_10R_2GVAGR).</p>
<p><b>Step 2 - Assessment of the factor of success</b></p>	<p>Based on the findings of the analysis of the other evaluation criteria, evaluators may carry out a qualitative assessment of the effect of the EU level standards on the ability of Member States to address socioeconomic challenges in rural areas.</p> <p>This assessment can be built around the following points:</p> <ul style="list-style-type: none"> <li>&gt; Positive and negative effects - as reflected on corresponding impact indicators and/or progress towards targets set against result indicators - of the EU level standards in promoting gender equality and non-discrimination, food quality, generational renewal, growth and employment in rural areas as well as improving infrastructure and fostering research and innovation.</li> <li>&gt; Effect of the EU level standards on the targeting of the support according to the needs identified in the CAP Strategic Plan, including on the design of interventions.</li> <li>&gt; Potential of the different types of interventions to allow the development of complementarities and synergies between them.</li> </ul> <p>The share of CAP support directed to less developed regions, outermost regions and small Aegean islands as well as transition regions can be used to show how the CAP promotes solidarity between regions.</p> <p>The total public and private expenditure as a percentage of the GDP of the rural regions can be used to demonstrate the contribution of the CAP to limiting the gap between regions.</p>





# Reporting of findings under Factors of Success

**Annex VI to the guidelines developed under  
Thematic Working Group 3**



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# Annex VI: Reporting of findings under Factors of Success

## Introduction

Evaluation findings are considered as the outcome of an assessment of effectiveness, efficiency, relevance, coherence and Union added value of CAP Strategic Plans (CAP SP) interventions and/or their delivery process.

The evaluation findings can be structured around the factors of success, which are used to further develop and specify the key evaluation elements and allow for capturing and judging the change brought about by the evaluated intervention(s).

These findings should be based on the analysis of quantitative or qualitative evidence, including the PMEF indicators, as well as any other data and information available on policy implementation. They can then be used, in a synthetic manner, to answer evaluation questions and form the basis for conclusions and recommendations.

The following quality standards could be applied when formulating evaluation findings:

- > The findings include a brief description of the **intervention logic** by listing the interventions that are relevant to the factor of success and how they contribute to the achievement of successful outcomes.
- > The findings **clearly demonstrate the outcomes** of the policy (rather than of a contextual trend), focusing on the achievements/impacts of the policy intervention and/or its delivery, **in relation to the corresponding factor of success**.

- > The findings are formulated using a **narrative**, that **references quantitative evidence** at all levels (context, outputs, results, impacts) and/or **qualitative information**, and describes analytically:
  - > what was the situation at (or close to) the beginning of the implementation period (baseline);
  - > how the situation evolved during the implementation period (achievements/impacts); and
  - > how the achievements/impacts compare to the baseline and, where relevant, to what was initially expected or planned to be achieved.
- > The findings clearly indicate the **direction of the effect** (positive, negative, mixed or no effect), based on the comparison between achievements/impacts and baseline.
- > Particularly for effectiveness, the findings clearly indicate, where relevant and possible, the **magnitude of the effect**, by comparing achievements/impacts with specific targets set at the national level.

To streamline the reporting of findings around the factors of success, fostering the application of the quality standards described above, we suggest a concise categorisation, to accompany each finding, as well as a reporting template that can be used by the evaluators.

## Clustering of evaluation findings

To establish a clearer link between evaluation findings and the CAP policy, it is helpful to assign the following categories to each evaluation finding.

- > Evaluation criterion.
- > Factor of success.
- > Key evaluation element.
- > Specific Objective.
- > Evaluation topics.
- > Reference period.
- > Level of evidence.
- > Direction and, where relevant, magnitude of effects.



## 1. Evaluation criterion

The evaluation criteria provide a normative framework used to determine the merit or worth of an intervention, groups of interventions or CAP Strategic Plan. They serve as the basis upon which evaluative judgements can be made. The criteria can be thought of as a set of lenses, providing complementary perspectives that together give a holistic picture of an intervention and its results. The criteria encourage evaluators – as well as those involved in designing or managing interventions – to think more deeply about the nature of an intervention, its implementation process and its results.

- › Effectiveness
- › Efficiency
- › Relevance
- › Coherence
- › Union added value

For more information, including the definitions of these criteria, see Chapter 2. information sources under the methodology section of the guidelines.

## 2. Factor of success

For effectiveness, the factors of success for each key evaluation element are listed in Annex I to Regulation (EU) 2022/1475. Member States may use these recommended factors of success where relevant for their CAP Strategic Plans.

Additional factors of success for efficiency, relevance, coherence and Union added value are proposed in [Annex V](#) of these guidelines.

## 3. Key evaluation element

For effectiveness, the key elements to be assessed for each Specific Objective are listed in Annex I to Regulation (EU) 2022/1475. Member States shall use these key elements in accordance with the CAP Strategic Plans' intervention logic.

Member States shall also use two key evaluation elements when assessing efficiency, namely simplification, both for beneficiaries and for the administration, as well as cost-effectiveness of the CAP Strategic Plan's implementation.

Additional key elements are proposed in [Annex V](#) of these guidelines regarding relevance, coherence and Union added value.

## 4. Specific Objective

The Specific Objectives as defined in Article 6 of Regulation (EU) 2021/2115

## 5. Evaluation topic

The topics listed in point (d) of Article 2 of Regulation (EU) 2022/1475, which Member States shall assess, where relevant, based on Member States' evaluation needs and taking into account the CAP Strategic Plan's intervention logic and implementation. They include:

- › environment and climate architecture;
- › LEADER added value;

- › CAP networks; and
- › AKIS.

Other topics are also proposed in these guidelines, but additional ones can be defined by Managing Authorities or evaluators.

## 6. Reference period

The time frame to which the findings refer to.

## 7. Level of evidence

Findings may be based on different levels of evidence and depth of analysis. The following categories should be used:

Findings based on the analysis of:

- › impacts (net);
- › impacts (gross);
- › contextual trends (no assessment of impacts);
- › results;
- › monitoring information (output, data for monitoring and evaluation); and
- › process and implementation (e.g. intervention design and delivery mechanism assessments, also some aspects of LEADER added value are more linked to process).

The analysis under a certain factor of success, may be based on more than one level of evidence. For example, a description of the uptake, based on output indicators and data for monitoring and evaluation, followed by an analysis of the immediate results, based on result indicators, and an assessment of the impacts and the net effect of the CAP support. In such, cases the **highest level should be used** for the classification of findings.

## 8. Direction of effects

For the assessment of the factors of success, appropriate point(s) of comparison must be established against which the calculated values of the main indicator(s) are weighed up. These points of comparison may be set either based on measurements made at or close to the beginning of the implementation period or on other relevant starting points (e.g. benchmarks). Based on the analysis of the changes in the values of the main indicator(s), the direction of the effect may be:

- › Positive – The observed change is in line with the one implied in the formulation of the factor of success (e.g. an increase of agricultural income, measured by impact indicator I.3, or a decrease in GHG emissions, measured by impact indicator I.10, compared to the corresponding values at the start of the implementation period). All sources of information used during triangulation point in the positive direction.
- › Negative – The observed change is in the opposite direction to the one implied in the formulation of the factor of success (e.g. a decrease in the agricultural income, measured by impact indicator I.3, or an increase in GHG emissions, measured by impact indicator I.10, compared to the corresponding values at the start of the implementation period). All sources of information used during triangulation point in the negative direction.



- > Mixed - The changes observed using different, complementary approaches, or at different geographical areas, sectors, or different sources of information during triangulation point to different directions. For example, effects observed in a particular geographic area may point in the opposite direction compared to other areas. Similarly, the effects observed for some sectors can be positive while for others negative.
- > No effect - The observed change is too small to be relevant or close to zero.

## 9. Magnitude of effects

In certain cases, there might be targets set at the national level which are relevant to the factor of success. For example, National Energy and Climate Plans include specific targets for the reduction of emissions. In such cases, the contribution of the CAP Strategic Plan to the achievement of these targets can be quantified. The magnitude of the effect should be indicated as a percentage of the observed (net) effect to the corresponding target set.

## Template for reporting on evaluation findings

Based on the principles and the classifications described above, the following template is proposed for the reporting of evaluation findings. This template may be used for collecting, synthesising and comparing findings across different evaluations and, optionally, a Managing Authority may also attach it to tendering documents, used for procuring evaluations of the CAP Strategic Plan, so that evaluators can use it for the reporting of findings. Moreover, the template can be used as a data collection tool when synthesising evaluations at the national or EU level.

Evaluation criterion				
Factor of success				
Key evaluation element				
Evaluation question				
Specific Objective(s)				
Evaluation topic (if applicable)				
Reference period		Level of evaluation findings	Direction of effects	Magnitude of effects
From (Year)	To (Year)			
<p><b>Description of the intervention logic:</b> what are the interventions (grouped by type) that are relevant to the factor of success and how do they contribute to the achievement of successful outcomes?</p>				



**Main indicator(s):** What is the main indicator(s) used to measure progress against the factor of success? Particularly for effectiveness, and in order to ensure clarity of the findings, it is suggested to use **only one main indicator per factor of success**. For suggested main indicators for each factor of success, see corresponding factsheets under Annexes I-V.

**Baseline:** What was the situation at (or close to) the beginning of the implementation period? You may base the narrative on the value of the main indicator(s), at that moment, and the values of relevant context indicators (PMEF and additional, if any).

**Expected outcomes:** How the situation was expected or planned to evolve, based on the description of:

- > financial allocations;
- > output indicators;
- > unit amounts;
- > result indicators; and
- > targets set at national level, which are relevant to the factor of success, if any.

**Achievements/Impacts:** how the situation evolved during the implementation period? You may base the narrative on the analysis of how uptake (outputs, payments, unit amounts), result and context indicators (PMEF and additional, if any) evolved but mostly on the change in the value of the main indicator(s) and the net contribution of CAP support to this change.



**Assessment of the effect:** A comparison between the achievements/impacts and the baseline and, where relevant, the expected outcomes. Although this section may include a comparison between the expected outcomes, in terms of uptake, result and context indicators and the corresponding achievements, the assessment of the effect is based on the net change in the value of the main indicator.

Always try to triangulate the findings through cross verification using various sources of information. The narrative should clearly describe how the findings from various sources support, complement or contradict each other.

The narrative should clearly explain the direction of the effect (positive, negative, mixed or no effect) and, where there are national targets set, the magnitude of the effect.





# Further reading

**Annex VII to the guidelines developed under  
Thematic Working Group 3**



## Annex VII: Further reading

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