



# Rural Evaluation **NEWS**

THE NEWSLETTER OF THE EUROPEAN EVALUATION HELPDESK FOR RURAL DEVELOPMENT

## Towards improved **reporting of environmental effects of RDPs in the ex post**

Agricultural land covers more than half of Europe's landscape and therefore has a dynamic role in preserving natural resources and plays a major role in land management. The EU has established that the desired relationship between agriculture and the environment can be captured by the term 'sustainable agriculture'.

**T**his means the management of natural resources in a way which ensures that their benefits are available for many future generations to come. Given the important interactions between agricultural land use and the rural ecosystems, and the environment the EU Common Agricultural Policy (CAP) has been increasingly adapted for integrating environmental concerns and to serve sustainability purposes better. To this extent it is therefore vital that these policies be monitored and evaluated in order to ensure that sustainable agriculture is being achieved.



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## Helping Member States to assess their environmental effects

The second working package of the Evaluation Helpdesk's Thematic Working Group 'Ex post evaluation of RDPs 2014-2020: Learning from practice' focuses on the calculation of five environment-related complementary result indicators. These complementary result indicators (CRI) are:

- R13: Increase in efficiency of water use in agriculture in RDP supported projects
- R14: Increase in efficiency of energy use in agriculture and food-processing in RDP supported projects
- R15: Renewable energy produced from supported projects
- R18: Reduced emissions of methane and NO<sub>2</sub>
- R19: Reduced ammonia emissions

**55 RDPs have reported values on selected environment-related CRIs in their AIR in 2019**

Within this working package, experts have analysed the emerging evaluation issues identified in relation to the assessment of RDP's effects on ensuring the sustainable management of natural resources and climate action through the use of complementary result indicators and based on this analysis various suggestions have been developed to support Member States in preparing for the ex post evaluation of RDPs 2014-2020.

The issues have been collected during the analysis of the evaluation sections of the Annual Implementation Reports (AIRs) submitted in 2019, the feedback from evaluation stakeholders in the EvaluationWORKS! events and complementary interviews with evaluation stakeholders in the Member States.

To improve the data collection, calculation and reporting on the environment-related complementary result indicators experts have developed proposals for clarifying and updating the fiches for the Complementary Result Indicators 13, 14, 15, 18 and 19 and the fiches for answering Common Evaluation Questions 11–14 for RDPs 2014-2020 in Annex 11 of the *Guidelines 'Assessment of RDP results: How to prepare for reporting on evaluation in 2017'*. Experts





have also proposed improvements to the SFC template, which will be used for reporting CRIs in the ex post evaluation.

### Reporting on complementary result indicators in 2019

Member States have calculated these indicators and reported their values in the AIRs submitted in 2019. Overall, 55 RDPs have reported values on selected environment-related CRIs in their AIR in 2019. The indicators were calculated based on operations, which were programmed contributing primarily to the respective Focus Areas (FA) 5A, 5B, 5C and 5D as well as including operations which were programmed under other focus areas and could show secondary contributions. LEADER contributions to the FAs 5A, 5B, 5C and 5D were also assessed.

In several RDPs there were no measures programmed with primary contributions to the above-mentioned focus areas, but evaluators still carried out assessments of the results, which are entirely based on secondary contributions. As an example, almost half of the RDPs reporting values on emissions based their assessments on operations, which had secondary contributions to the Focus Area 5D.

While several RDPs made the effort to calculate the net values of complementary result indicators and to report them in their AIRs in 2019, others have not been able to. Therefore, to support evaluators in the calculation of both gross and net values, the methodology proposed has been carefully reviewed, updated and simplified. It is presented in the revised Annex 11 of the guidelines



### Why is netting out the estimates of R13 'Increase in efficiency of water use in agriculture in RDP supported projects' highly advisable?

R13 is about water use and standard output. When calculating the indicator it is advisable to use standard output coefficients from one year and apply them to the before and after estimates for beneficiaries and non-beneficiaries. As such, all farms in all years face the same product prices. This is not true for the volume of irrigation water, which depends on uncontrolled weather conditions.

#### Example case:

The baseline year was a very wet year and the first year after the completion of the project was a very dry year. As a result, for the same standard output, it is possible that the farm used more water after the completion of the project, because it had to overcome very dry conditions. Therefore, the apparent situation is that the farm's water efficiency deteriorated instead of being improved (i.e. the gross RDP's effect is negative).

However, in comparison to a twin farm which was not supported by the RDP to perform any water efficiency activity the supported farm's water efficiency may show an improvement (i.e. the RDP's net effect will be positive). Even if the non-beneficiary had carried out some other water saving investment, the difference with the beneficiary would be small, but likely not negative. This is why it is vital that the evaluator try to always estimate the net effect.

The following steps can therefore be broadly used in the calculation of the complementary result indicators:

- Step 1:** Establish the samples (treatment group of beneficiaries, control group of non-beneficiaries);
- Step 2:** Implement a survey (for the beneficiaries and non-beneficiaries);
- Step 3:** Estimate the gross value of the result indicator (by extrapolating (upscaling) the sample results);
- Step 4:** Estimate the net value of the result indicator.





for assessing RDP results together with some new examples of approaches to the calculation of the above indicators.

Additional recommendations in respect to the calculation of secondary contributions and netting out other result indicators can be found in the revised Annex 11.

### Comparability of data at the EU-level

Comparability at the EU level requires the same unit of measurement to be used by all RDPs. For example, some of the RDPs in 2019 reported efficiency changes in absolute values (e.g. m3 in case of R13 or energy use in Tonnes of Oil Equivalent (T.O.E) in case of R14) without dividing it by the standard output. In several RDPs, the value for renewable energy production (R15) was reported in Watts and not converted into T.O.E. Some RDPs even report gigagrams, kilotons, tonnes or kilograms for the same indicator, which makes it difficult to compare and can cause confusion. Therefore, it is important that the same unit of measurement is used for reporting and this is correctly communicated to the evaluators.

Experts of the thematic working group have developed detailed clarifications on the definitions of the environment-related CRIs and with the update of the indicator fiches the unit of measurement, which is expected to be reported in the ex post is emphasised. In line with the clarified definitions these changes have also been proposed in the SFC template which will be used for reporting on the ex post evaluations to ensure that the same unit of measurement is used in all RDPs. ■



Send your questions to:

[info@ruralevaluation.eu](mailto:info@ruralevaluation.eu)



### Updates to the guidance on reporting on environment-related results

The Working Package 2: Ensuring the sustainable management of natural resources and climate action includes updates on the following areas:

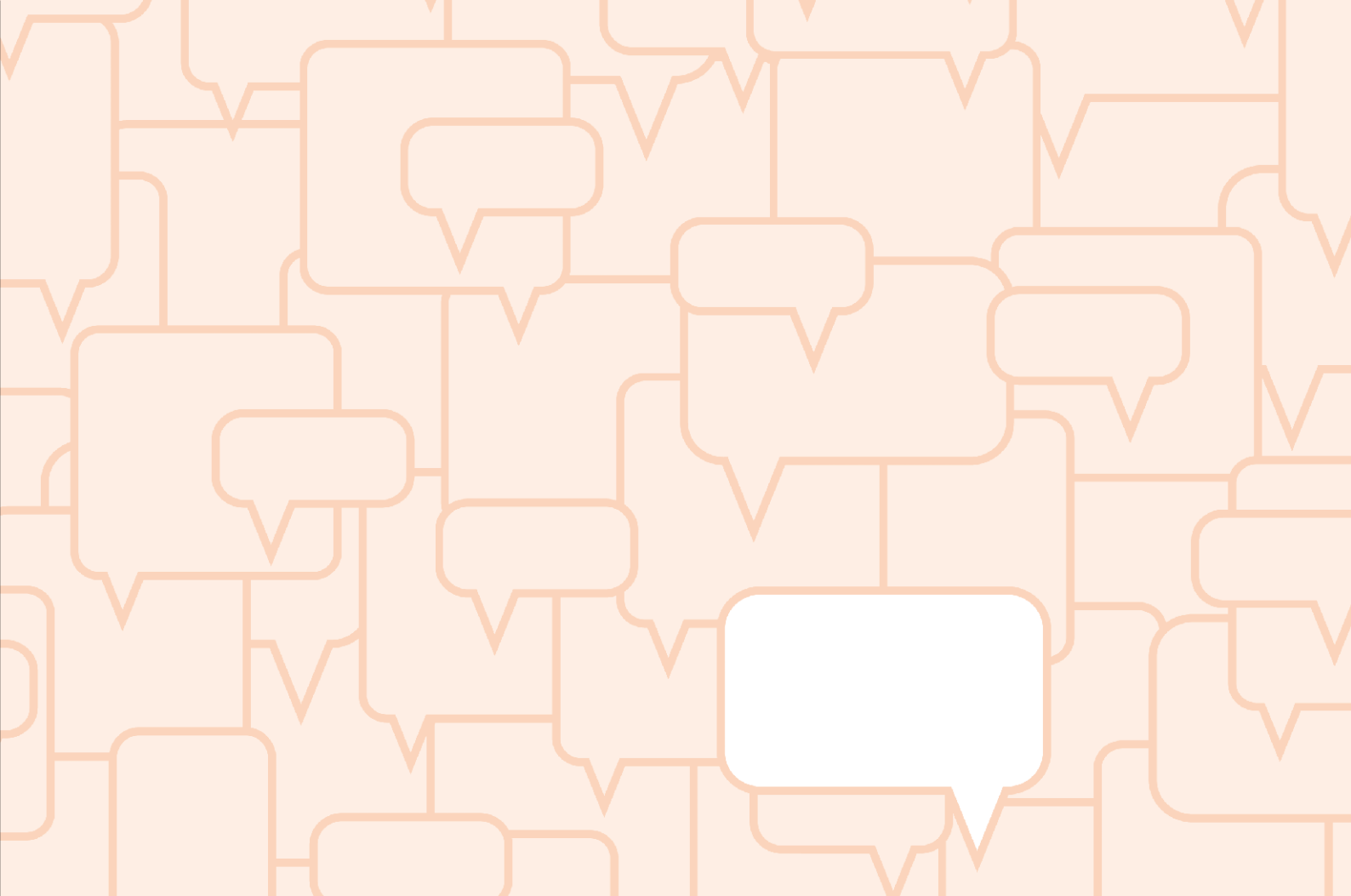
- Clarifications on definitions of indicators, their units of measurement and methodology to calculate gross and net values.
- Clarifying and updating data sources.
- Adding examples and further information.
- Proposing recommendations how to use indicators in situations where there is a lack of data.

Further information can be found on this topic in the updated versions of the following documents:

- [Fiches for the Complementary Result Indicators no 13, 14, 15, 18 and 19:](#)
- [Fiches for answering Common Evaluation Questions 11 – 14 for RDPs 2014-2020](#)

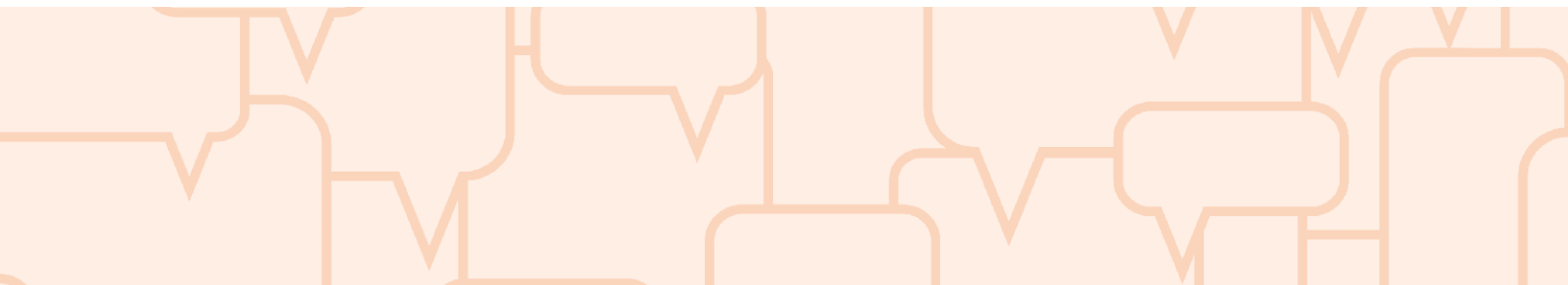






# **Eurobarometer:** Public opinion survey on EU food and farming

Since 1973, the European institutions commission regular public opinion surveys in all EU Member States, which have become known as the Eurobarometer. The Eurobarometer surveys not only cover broad policy changes, but also, try to assess public opinion on specific topics, either focussing on specific socio-demographic groups or related to specific activities of the institutions (e.g. agriculture and rural development).



**P**ublic consultations are an important tool to gather the opinions of the general public on the policies being implemented and to help to assess if the policies are meeting the needs and expectations of its citizens. The latest Eurobarometer survey was published in November 2020. The survey was conducted from August to September 2020 and included more than 27,200 respondents from 27 Member States. Due to the ongoing COVID-19 pandemic, the methodology was adapted, with some interviews conducted online.

### The Common Agricultural Policy as a vital instrument for Europe's future

According to the latest survey nearly all respondents (95%) believe that agriculture and rural areas are important for 'our future' in the European Union. Additionally, the survey indicates that more EU citizens are aware of the CAP (73% today, 6 percentage points (p.p.) more than in 2017) and believe that the CAP benefits all citizens, not only farmers (76% today, 15 p.p. more than in 2017).

**The majority of citizens believe that agriculture has already made a major contribution in fighting climate change**

Citizens' views on what the main objectives of the CAP should be are similar to the findings of the 2017 survey. Most believe that providing safe, healthy food of high quality should be the main objective, representing the view of 62% of respondents, which is roughly the same as in 2017. This view has also been echoed at the national level, where citizens believe that it should be the CAP's top priority.

### An emphasis on the environment and climate

This year's survey found an increase of citizens (52%, 2 p.p. more than previously) think that one of the main objectives should be protecting the environment and tackling climate change. Despite a growing share of citizens belief that agriculture is one of the foremost causes of climate change (from 29% in 2010 to 42% in 2020), the majority of citizens believe that agriculture has already made a major contribution in fighting climate change, with 55% holding this view, up from 46% in 2010.



Citizens believe that the most important benefits provided by forests include providing animals with natural habitats, preserving biodiversity and conserving nature (69%), absorbing carbon dioxide as well as contributing to fight climate change and its detrimental effects (65%).

### Better broadband in rural areas and more support to farmers

In terms of rural areas, citizens most believe that the environment and landscape (82%) access to leisure and cultural activities (56%) and educational facilities (54%) can be qualified as good. However, when asked how rural areas have evolved in the last 10 years, access to high speed internet is highlighted as that area which has improved the most (55% agree), while job opportunities is the area that has become worse (42% agree). In terms of financial support, the survey found that an increased number of citizens think that the support provided to farmers is too low, increasing by 13% points, from 26% of respondents in 2017 to 39% in 2020. ■

### Read the Full Report

The full report of the EU-survey and country factsheets

[Summary of the report](#)







# Q&A with the Managing Authority of Croatia



## 1. How have evaluations been used in your Member State to improve the RDP and better programme future interventions?

The policy makers are informed about results and achievements of the policy, and these findings are contributing to the recommendations for improving implementation (PA) and management of the RDP (MA).

As the implementation of the measures contributes to the objectives, the implementation of the measures have been analysed in the context of their contributions to the targets and what has been achieved in terms of the impacts. Since at the moment of evaluation, the uptake of the measures (finalised

projects) has been relatively low, recommendations have primarily focused on how to foster greater implementation and uptake by increasing the visibility and promotion of the measures. For example, Measure 10 (Agri-environment-climate) has been implemented in Croatia for the first time in the period 2014-2020. The uptake was very low at the beginning, but has been improved in later years after assessments revealed that uptake was low. As this was the first time that such assessments have been carried out, on the level of management, recommendations have also been made to improve the data collection for the monitoring and evaluation system in the future.

The information from the analyses conducted for the answering of common evaluation questions in the period 2014-2020 has been used in the SWOT analysis for the future programming period. The ex ante evaluation has further been used for the







appraisal of the SWOT and intervention logic for the new programming period.

## **2. What can rural development stakeholders and citizens do to contribute to evaluations to make them better?**

Stakeholders can provide additional information in the form of additional data or in the form of the qualitative information on their contributions to the policy.

## **3. How are the results of evaluations in your Member State communicated to citizens and how can they serve as an important format to inform stakeholders and citizens how the policy has worked out?**

Evaluation reports are published on the RDP web page along with the summaries. The evaluators have been invited to present their findings to the stakeholders for example in the Monitoring Committee meetings in order to keep them informed of the findings of evaluations and how the policy is having an impact. In general, other stakeholders and the general public are informed through the above-mentioned channels. Members of the Monitoring Committee have the opportunity to discuss findings when they are presented and through the approval of the AIRs.

## **4. If you could tell all citizens in your Member State one piece of information gained from an evaluation what would it be?**

The RDP contributed to the reduction of Nitrogen and Phosphorus and pesticide intake.

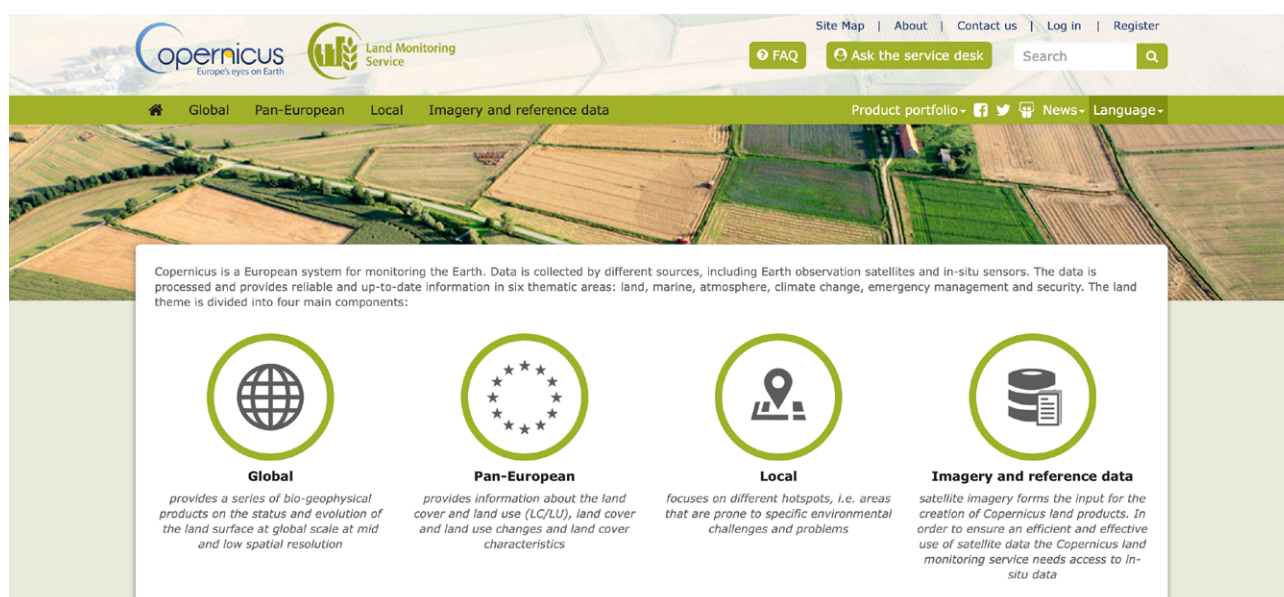
## **5. Would you have any recommendations how to make evaluations even more useful?**

Focus the evaluation activities to assess the contribution of the policy to the objectives. In this sense support for setting up the common monitoring and evaluation system is needed on the level of all RDPs (in the future Strategic Plans) in order to have the same level of information and reliable results that are useful and comparable across the EU. These activities could be accompanied by a more in-depth assessment of additional aspects of the programmes such as the assessment of the programme's implementation, delivery mechanisms and management. ■





# How to monitor Small Landscape Features (SLF) using Copernicus land monitoring products?



The Copernicus Land Monitoring Service (CLMS) has been implemented by the European Environment Agency (EEA) and the Joint Research Centre (JRC). The CLMS provides operational products and services, derived from satellite imagery and produced by industry.

**T**he CLMS has recently released The Small Woody Features (SWF) product published now in 2019, derived from the Very High-Resolution satellite image coverage over Europe from 2015. Additionally, the VHR 2018 coverage has been improved compared to the 2015 data, thus facilitating a better detection of Small Landscape Features (SLF). This is particularly relevant as new targets have been established as part of the Biodiversity Strategy on landscape elements and the crucial first step to setting these targets at the Member State level is to measure landscape features themselves.

Mr Hans Dufourmont (European Environment Agency) presented at the 20th Group of Experts for Monitoring and Evaluating the CAP, which took place on 2 September 2020 a presentation titled 'How to monitor Small Landscape Features (SLF) using Copernicus

land monitoring products.' This presentation laid out the state of affairs with the High Resolution Layer (HRL) Small Woody Features (SWF), the progress in the use of AI in the detection of SLF using eXtreme High Resolution (XHR) data for training and then deploying the algorithm on VHR image data.

## What is HRL Small Woody Features?

### What it is:

- Continental scale detailed vector and raster mapping of small woody landscape elements,
- Maps linear elements and patches of woody vegetation (e.g. hedgerows and patches of trees) as a vector and raster (5m/100m) product,
- A fully automated product.

**What it is not:**

- Distinction of trees from shrubs and other woody vegetation
- Mapping of height or length of woody features
- Mapping of plant species or plant functional types
- Mapping of other small landscape features (stonewalls, etc.)
- Detailed manual delineation of woody features

Figure 1: **SWF 2015 Availability**

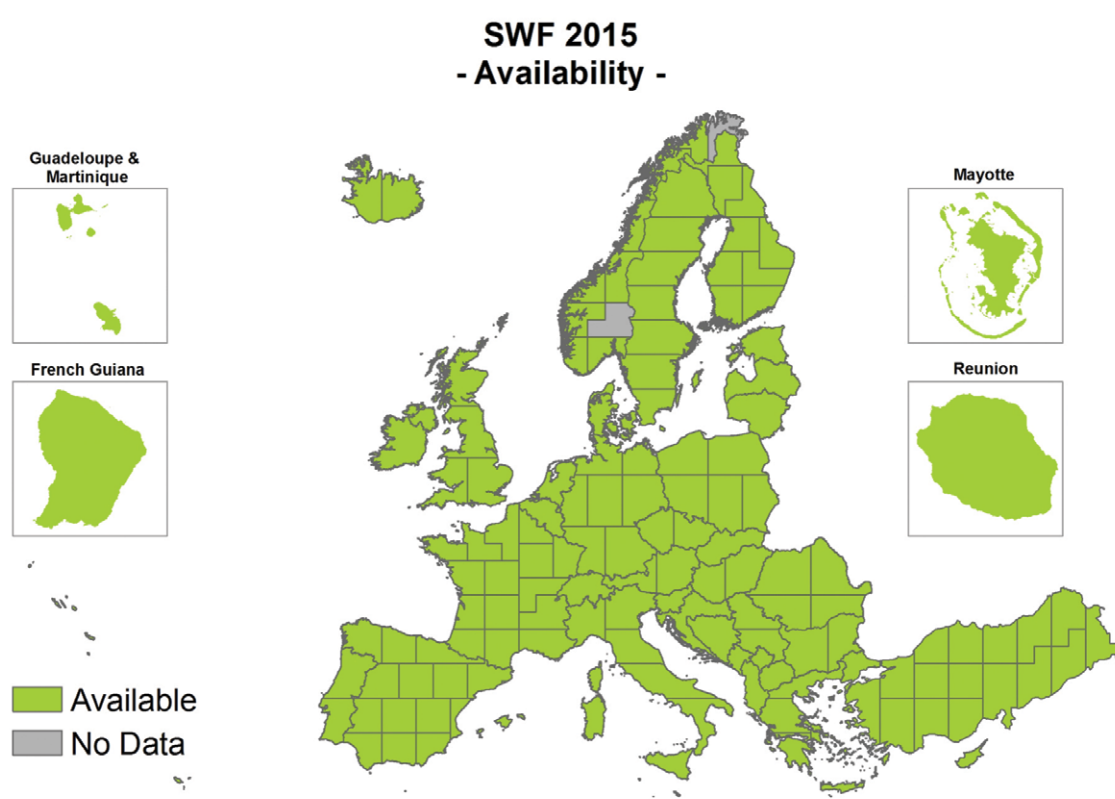


Table 1: **Geometric specifications of SWF 2015 (to be modified for the 2018 SWF)**

	Linear Structures	Patchy Structures
Width	$\leq 30\text{m}$	n/a
Length	$\geq 30\text{m}$ (was 50m for 2015)	n/a
Compactness	$\leq 0.75$	$> 0.75$
Area	n/a	$200\text{m}^2 \leq \text{area} \leq 5000\text{m}^2$

(Fine tuning of threshold values to be expected for SWF 2018)



Figure 2: LU/LC Mapping: SWF



Figure 3: SWF in Coolham England



The SWF product provides the most useful results for landscapes with a clear spatial separation of distinct linear and patchy woody vegetation from open areas with agricultural (or other) use. Figure 3 provides an example of a landscape dominated by small parcels of

crop grassland, and large number of linear woody elements in the south of England in the village of Coolham and its surrounding areas. It should be noted that the background imagery is not the same as what is used in production (and likely of higher spatial resolution).

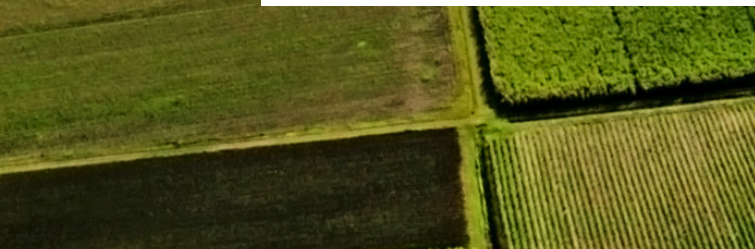
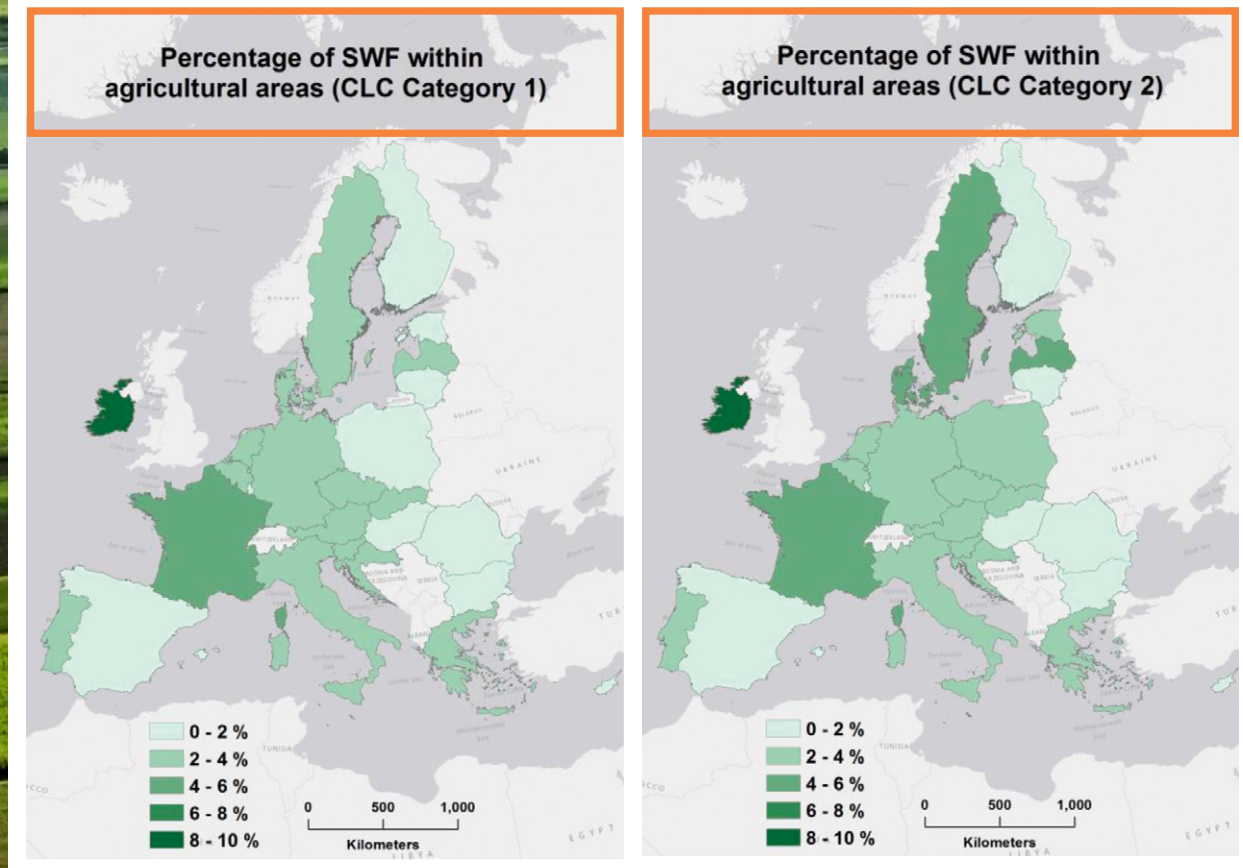




Figure 4 provides an example of the indicator: % of SWF within Corine Land Cover (CLC) agricultural classes:

- CLC Category 1 grouping:  
211, 212, 213, 221, 222, 223, 231, 241
- CLC Category 2 grouping:  
211, 212, 213, 221, 222, 223, 231, 241, 242, 243, 244

Figure 4: % of SWF within CLC agricultural classes



There is a continued interest in additional small landscape features in the context of the GAECs under the new CAP, however, Small Landscape Features are still a heterogeneous mapping target and have not been fully realised yet. In the EEA Copernicus exploratory use case, SLFs are understood as:

- Most of these small landscape features cannot be mapped operationally as part of the HRL SWF 2018 product, using the current data available (VHR 2018 with 2-4 m spatial resolution)

Additional assessments of possibilities for using submeter data as training data for coarser models is being looked into. The first results of these assessments are promising; however, the feasibilities still need to be further tested and data availability continues to be a limiting factor. To this extent 10 test sites (1km<sup>2</sup> each) have been established throughout Europe and all sites have been mapped<sup>1</sup>.

Figure 5: Workflow of test sites





Preliminary results from these test sites indicate significant potential of improved SLF mapping potential using submeter XHR data. Table 2 provides an overview of the SLFs and the potential for mapping

Table 2: **SLF feasibility with submeter VHR**

Feature	Feasibility with VHR2018	Feasibility with submeter VHR
Stone walls	Doable 😊	Doable 😊
Small ditches	Partly feasible 😐	Doable 😊
Small streams	Partly feasible 😐	Doable 😊
Hedgerows	Doable 😊	Doable 😊
Small tree groves	Partly feasible 😐	Doable 😊
Individual trees	Challenging 😞	Doable 😊
Small ponds	Partly feasible 😐	Doable 😊
Small tracks	Challenging 😞	Challenging 😞
Strips and patches of grass and flowers in fields	Challenging 😞	Challenging 😞

## Main Challenges

Many SLFs are too small to be reliably identified in the coarser ranges of VHR 2018. Furthermore, consistency in identification in SLFs will need to be further improved. Nevertheless, clearer definitions and delineations of SLF features will be included in the SLF product in the future, which will make it more robust for potential use in evaluations. ■



Products and services are made available, free and open through [the Copernicus land portal](#) (both as view service, web map services and for download).



Send your questions to:

[info@ruralevaluation.eu](mailto:info@ruralevaluation.eu)





# Measuring how the CAP impacts water quality in Europe

Improving the quantity and quality of water is a central objective to rural development in Europe, not only do agricultural activities directly depend on this resource, but it also constitutes an essential ecological element from which the environment is nurtured. It is in this context that sustainable water resource management has become one of the objectives of the overall CAP objective of sustainable management of natural resources and climate action. In order to assess to what extent, the CAP instruments and measures have contributed to this objective during the programming period 2014-2020, an independent evaluation study was contracted by the European Commission and conducted by Alliance Environnement EEIG.

**T**he comprehensive evaluation study covers all CAP instruments and measures that could be directly affecting the quality and quantity of water and hence contributing to the objective of sustainable management of natural resources and climate action. These include cross-compliance, greening measures and rural development measures from Pillar II of the CAP. The report further examines other CAP measures that could indirectly have an impact, such as, direct payments or sector-specific market support measures (from the so-called 'CMO regulation'). This study uses extensive case study analysis combined with quantitative and qualitative methods to facilitate a detailed account of the ways

in which the CAP is achieving the objective of sustainable water resource management.

## Approach for assessing the impact of the CAP on water

This study develops an evaluation approach that is built from the basis of the intervention logics of the corresponding CAP instruments and measures. Analysing the tools that address water quantity and quality helped establish the point of departure of the developed evaluation framework, the theoretical links between CAP measures and expected results. This allowed the further development of related

judgement criteria and indicators that constituted the background of the whole study. The evaluation approach combined quantitative and qualitative methods, which included documentary research and literature review, statistical data entry, and a comprehensive

use of case studies. Additionally, several stakeholder interviews and a broad qualitative survey among farm advisers provided further understanding of how and why the CAP instruments and measures were having the impacts identified.

Table 1: **Data collection tools used for the evaluation study**

Tool	Brief description or remarks on the tool	Type of tool	Relevant ESQ*
<b>Documentary research Literature review</b>	In addition to the documentary research used to answer the ESQs, specific literature reviews have been performed on key subjects: (a) the role played by agricultural practices on water-related pressures; (b) the theoretical effects of changes in pressures on water quantity and quality.	Qualitative	All
<b>Statistical data entry</b>	The statistical data used as part of this evaluation are presented in Table 2.	Quantitative	Effectiveness Efficiency Relevance
<b>Interviews</b>	Used to gather in-depth qualitative information and the opinions of key stakeholders relative to context, implementation and results. These interviews have been conducted as part of the case studies.	Qualitative	All
<b>Case studies</b>	Case studies are used as an evaluation tool when 'how' and 'why' questions are being posed. They allow a detailed examination of specific issues to be carried out in line with the evaluation goals. The content and methodology of case studies is detailed in Section 4.4 of the report	Qualitative and Quantitative	All
<b>Survey</b>	A survey has been carried out in case-study Member States, in order to collect qualitative information on the drivers and choices made by the farmers regarding their practices and their uptake of innovations, in a standardised way. The survey made it possible to collect the views of 120 farm advisers in the 10 case study Member States.	Qualitative and Quantitative	Causal analysis Effectiveness

\* ESQ: Evaluation Study Question  
Source: EEIG Alliance Environnement, 2019.



## Using case studies to provide deeper understanding

This evaluation considered case studies from ten rural development programmes belonging to ten different River Basin Districts, which were carefully selected<sup>2</sup> with the aim to investigate how different contexts can shape the effects that the different CAP instruments and measures can bring to a territory in terms of water quality. This was possible thanks to the rich heterogeneity of the case studies in terms of geography, agricultural practices, hydrological features, CAP policy instruments uptake and level of implementation of other water policies. The selection was made following these criteria and based on EEA indicators of agricultural pressures on surface and groundwater bodies.

Structured and rich qualitative information from ten different locations was complemented with data analysis from different databases at European and Member State level. The following table summarises the data sources of this study.

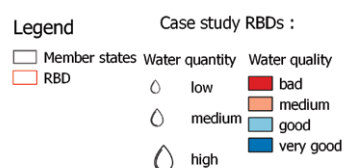


Figure 1: River Basin Districts selected to serve as the basis for rural development programmes' case studies showing a diversity of water quantity and quality.

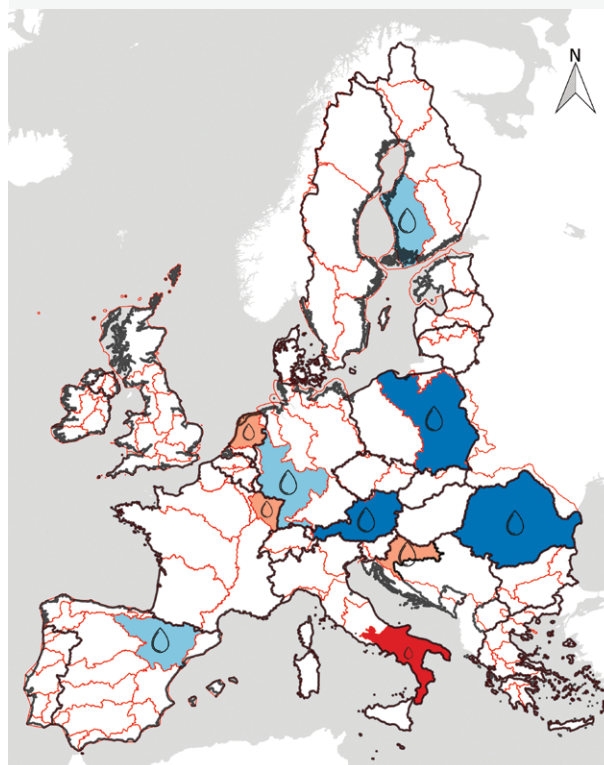


Table 2: Summary of statistical data entries used in the evaluation study

Data source	What type of data can be found here?
<b>EU thematic databases</b> <b>WISE (Water Information System for Europe)</b>	Water status and pressures (data and maps) at different levels <ul style="list-style-type: none"> <li>• EU-level</li> <li>• Member State level</li> <li>• River Basin District level</li> <li>• Sub-unit level</li> </ul>
<b>Eurostat</b>	<ul style="list-style-type: none"> <li>• Agri-environmental indicators</li> </ul>
<b>Farm Structure Survey</b>	<ul style="list-style-type: none"> <li>• Livestock numbers and land use</li> <li>• Share of irrigable and irrigated area</li> <li>• Share of arable land</li> </ul>
<b>Land Use/Cover Area frame Survey (LUCAS)</b>	<ul style="list-style-type: none"> <li>• Land cover and land use</li> <li>• Soil samples</li> </ul>
<b>FADN</b>	<ul style="list-style-type: none"> <li>• Accounting data at farm level</li> </ul>

2. The cases were selected based on geography, hydrological features, agricultural practices, and CAP budget allocated to Measure 4 Investment; Measure 10 AECM; irrigated land switching to efficient irrigation system and planned budget to Focus Area 5A; % of land under management contracts to improve water and planned budget to Priority 4.

## Challenges and solutions to the approach

Evaluating the effects of CAP instruments and measures on water quality involved facing a diverse array of methodological challenges. For instance, the relationship between the actions undertaken by farmers directly or indirectly influenced by the CAP and the final environmental output is subject to many external factors and may suffer time delays associated to the natural cycle of water. Also, the required data for a finest analysis was not always available. When drawing conclusions from data analysis, the study took into account its limitations: potential data gaps in the information on the implementation of different measures, lack of data at the appropriate point in time or geographical level, or the complexities of using the FADN database for environmental evaluations.

## Results

In general, the study showed that the water challenges and the implementation choices vary highly amongst the different case studies, making it difficult to reach a conclusion on how the CAP is influencing the quality and quantity of water at the EU level. However, it was possible to observe that the CAP is contributing positively to maintain and foster certain agricultural practices that do have an impact on water quality and quantity (i.e. by reducing the use of fertilisers and pesticides, limiting pollutants transfer by runoff and leakage, reducing water abstraction and increasing water retention capacity of soils through buffer strips, implementing the Nitrates Directive, and extensive grass-fed livestock). These effects were mostly achieved by the cross-compliance and greening measures because they concern a significant share of the UAA/farmers. Some RDP measures were also assessed as very effective (i.e. M10, M11, M4, M12) but their uptake varies significantly between the Member States, hindering their potential effects. The study also highlighted the limited budget allocated to FA 5A on water quantitative management. As a whole, the CAP should grant greater attention to quantitative water issues, and notably to water savings. The creation of new irrigation systems should not be supported unless the global project involves less water-dependent farming systems with the implementation of alternatives (e.g. agroforestry, drought-resistant crops, shade nets, etc.)

The results of this extensive evaluation study shed light on how instruments and measures can be better targeted in future RDP programming for the future CAP to further support the implementation of sustainable water management throughout Europe. ■



**Learn More!**

[Read the complete study](#)





# The 14<sup>th</sup> Good Practice Workshop: 'Assessment of resource efficiency and climate'

The 14<sup>th</sup> Good Practice Workshop took place on 28-29 September 2020, with the overarching objective to reflect on experiences in relation to the assessment of resource efficiency and climate action, with a view to preparing the ex post evaluation of RDPs 2014-2020 and to identify lessons learned related to the future CAP indicators.



The workshop brought together 75 participants from 23 different EU Member States and focused specifically on how to facilitate and improve the assessment of resource efficiency and climate, notably efficiency in energy use, the supply and use of renewable energy sources and GHG and ammonia emissions with the use of the complementary result indicators. The workshop offered valuable insights on how to resolve specific issues identified for the calculation of these indicators and the evaluation of resource efficiency and climate as well as on how and what to improve when preparing the ex post evaluation and the future CAP evaluations.

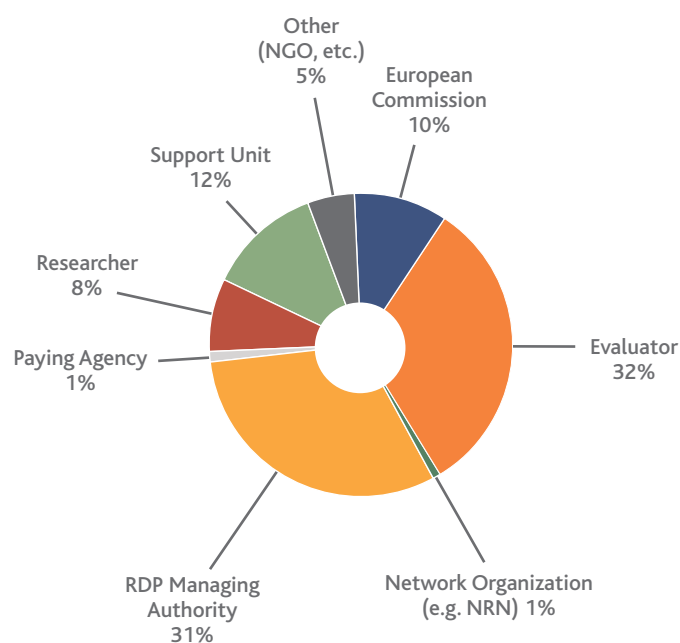
Five case studies were presented. Two were related to energy efficiency and renewable energies. One from Sweden on assessing the efficiency in energy use for agriculture and food processing (linked to the complementary result indicator R.14) and one from Estonia focusing on renewable energy production (linked to

complementary result indicator R.15). Three other presentations were focused more prominently on emissions, including a case from Slovakia on assessing reduced emissions of nitrous oxide (linked to complementary result indicator R.18), assessing reduced ammonia emissions from Belgium-Flanders (linked to complementary result indicator R.19) and Austria who presented on both indicators.

The Helpdesk's thematic expert on climate, Dimitris Skuras, further discussed and compared these five case studies, while making recommendations and suggestions for future assessments. Furthermore, the research experience of the Joint Research Centre (JRC) further broadened the perspective by presenting a meta-analysis as a method for assessing the effects of agricultural practices on the environment. These additional presentations further complemented the case studies and facilitated a fruitful discussion with participants.

*'Evaluators could cooperate more with researchers and academia to develop more methodologies'*

*Good Practice Workshop Participant*



## Lessons learned related to the assessment of resource efficiency (energy)

**Both primary and secondary contributions contribute to resource efficiency and should therefore be assessed**

To address the issue of limited data availability for secondary contributions, suggestions include to validate the operations database for secondary contributions or to look at certified energy audits.

In the case where the investment produces renewable fuels such as pellets (but not energy) then additional indicators can be used to help answer the CEQ. Such renewable fuels will produce renewable energy as a secondary effect. Additional indicators will support evaluators to address the CEQ when investments target renewable fuels, circular economy, which are not addressed by R.15.

**Common units of measurement are important for comparisons, but the data and time required for conversion should not be underestimated**

Energy data from applicants, as well as, different measures and types of energy may be provided in different units. This requires the conversion into T.O.E per thousand euros, which is best done using certified national conversion tables where they exist. When data on standard output and conversion coefficients are missing one can use industry standards or similar investments or consult IACS/LPIS.

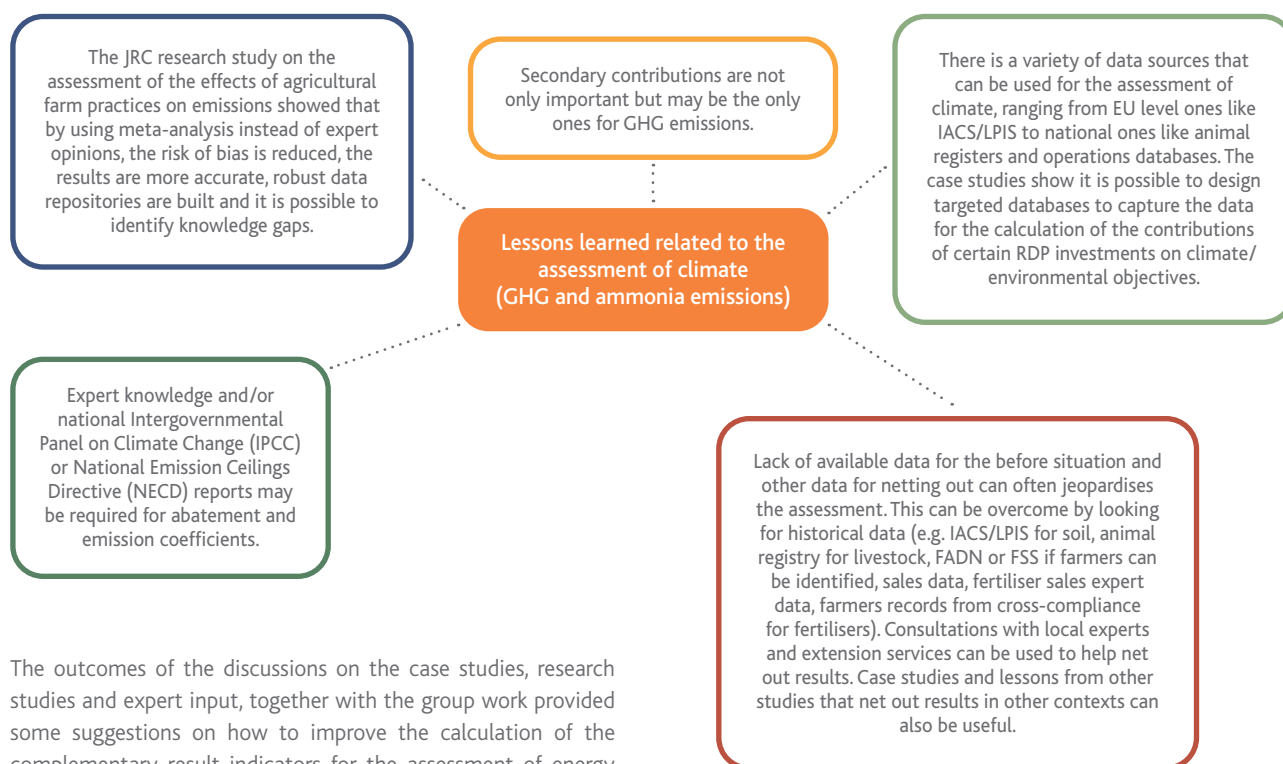
**Netting out is a challenge which can be overcome through alternative approaches**

Netting out can be challenging due to missing data for the control group. A national energy efficiency scheme may be used as a basis for netting out the results for energy efficiency. This may be possible if a similar exercise has been carried out in the context of this scheme and its results can potentially be adapted to the RDP situation. Similarly, netting out renewable energy results may be done through similar studies in the framework of 'national support schemes' or through a qualitative approach.





## Lessons learned related to the assessment of climate (GHG and ammonia emissions)

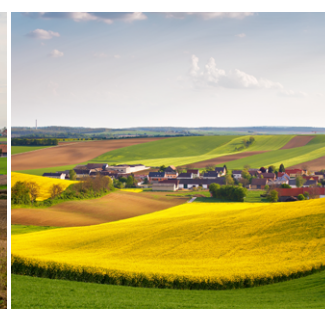
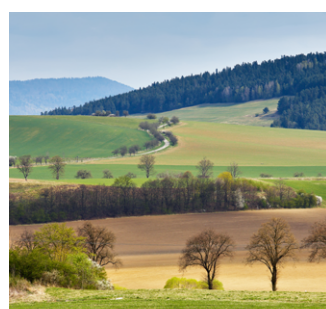


The outcomes of the discussions on the case studies, research studies and expert input, together with the group work provided some suggestions on how to improve the calculation of the complementary result indicators for the assessment of energy efficiency and renewable energy.

## How to improve the assessment of energy efficiency and renewable energy

- Validate data with beneficiaries' energy bills, energy authorities, energy audits, beneficiary surveys or samples.
- Use the potential of application forms to collect the necessary data from early on (e.g. on energy use before and after and other energy efficiency related data) using harmonised units of measurement. To ensure consistent data in application forms, provide farmers with a sound methodology and/or user-friendly tools to calculate energy use/consumption.
- Start data collection on the potential contribution of projects to energy efficiency or renewable energy early enough through surveys, interviews, assessments, calculations, potentially as an ongoing evaluation process.
- Fill data gaps for estimating the energy capacity by looking inter alia for certified energy installed, energy sold to the grid, national inventories and electricity meters (if installed).
- Obtain data on secondary contributions through various EU and national sources, while case studies and beneficiary surveys for similar national programmes as well as project applications are also important sources of information and data for secondary contributions.
- Harmonise measurement units by using coefficients, using checking tools, validating data or consulting the approaches used by international organisations.
- Facilitate the netting out of results with the help of databases, surveys and case studies, while studies elaborated in other frameworks may also provide inspiration and solutions.





	SLOVAKIA	FLANDERS	AUSTRIA
CRI	R.18	R.19	R.18 and R.19
GHGs or Ammonia	CH <sub>4</sub> , N <sub>2</sub> O	NH <sub>3</sub>	N <sub>2</sub> O and NH <sub>3</sub>
Measures	10, 11, 12, 14	4, 10	10, 11, 14
Main focus	Fertilizer reduction	Investments in stables and manure management	Abated N in the form of fertilizers, shallow injection and trailing hose spreading of slurry
Data collection	Ad hoc-survey Farm level	Permanent database Farm level	Ad hoc-aggregate RDP level
Data sources	Operations DB IACS/LPIS Animal registry National Fertilizer DB	Sustainability database	Operations database IACS/LPIS Animal registry
Emission coefficients	IPCC adjusted	Flemish NECD	IPCC, UNECE and EMEP/EEA
Methodology	Samples of control and treatment groups	Gross effect of individual investments and measures in the database	Average N abatement estimated by the LandscapeDNDC model, cross validated by expert judgment
Netting out	PSM on differenced (PSM-DiD)	Not quantitative	Before-after at RDP level
Major challenges	Extend methodology to agricultural soil management	Expand database to agri-environment-climate commitments and more types of investments	Access detailed farm level data from records kept by farmers to construct representative data samples (data protection issues)

The Helpdesk's thematic expert on climate, Dimitris Skuras, offered a comparative analysis of the assessment of climate effects presented in the case studies. All case studies highlighted the challenges for the ex-post and beyond: How to extend the

methodology to soil management in Slovakia, how to expand the database in Austria and how to access more detailed data in Flanders.



The comparative analysis was followed by recommendations on how to improve the assessment of climate, that were further enriched during the discussions and group work.

### How to improve the assessment of climate (GHG and ammonia emissions)

- Facilitate data collection, first by defining well the data to be collected by asking precise questions on all the data items required for the emissions calculation. Second, by ensuring continuous data collection (e.g. on fertilisers and pesticides and other inputs) starting from the application form where data included there can be used for emissions calculations.
- Databases are vital for assessing the effects on emissions. To maximise their usefulness, it is important to:
  - collect data at farm level,
  - request simple data from beneficiaries,
  - use application forms as a key source of data,
  - start early and collect data on a continuous basis,
  - explore links with other databases (e.g. IACS, FADN),
  - ensure consistency with IPCC and regulation authorities.Databases should be 'live' with scope for expanding and with the possibility to be constantly updated with new data.
- Consider investing in meta-analysis as a way to collect information from a long list of farming practices, to complement repositories of farming activities and to inform stakeholders on the role of agriculture in reducing emissions. Meta-analysis combines all the existing information into one overall picture and can be used as a foundation for the evaluation.
- Explore the potential for transferring the modelling approaches from one Member State to another. They offer the potential to use higher tier methods for the calculation of emissions, provided sufficient and detailed data and information are available. ■





# Back to BASICS: Integrated Administration and Control System (IACS): Using administrative data for evaluation

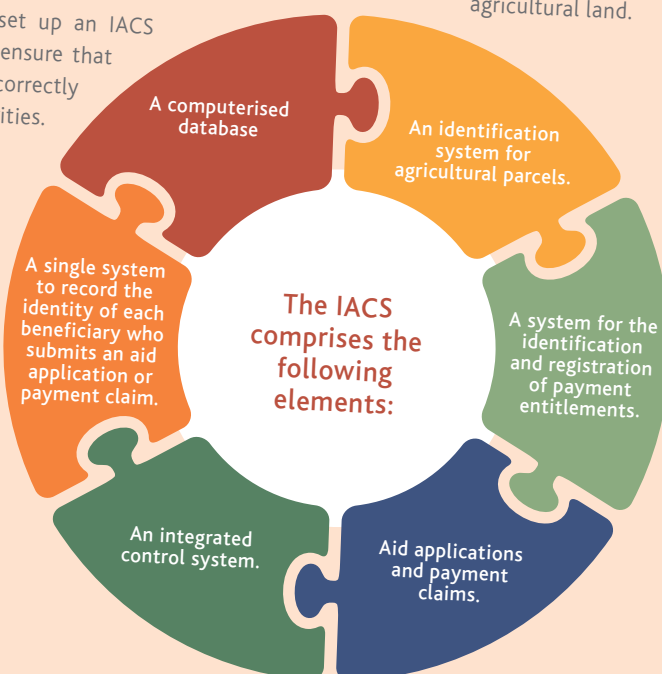
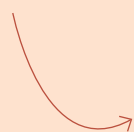
## What is IACS?

The Common Agricultural Policy requires farmers in all Member States who apply for subsidies to provide certain information that is stored in administrative registers.

IACS is the database system set up and operated in each EU Member State based on EU legislation. Its purpose is to administer and control direct payments and some rural development payments.

Member States must set up an IACS in order to be able to ensure that payments are made correctly and to prevent irregularities.

## What are the elements of IACS?



Additionally, IACS may include a single system for the identification and registration of animals, if the Member State receives relevant payments.

The Land Parcel Identification System (LPIS) is a key component of the IACS. It is an IT system based on aerial or satellite photographs which records all agricultural parcels in the Member States to check the eligibility of agricultural land.





## Why is IACS relevant for evaluation?

Advanced evaluation methods require reliable and up-to-date data on farm activities. At the same time, the requirement for beneficiaries to respond to the increasing data demands is perceived as an administrative burden.

In this context, the reuse of data from administrative registers for the purpose of evaluation is gaining in importance. IACS and its geographically enabled subsystems contain very valuable spatial and geographical information potentially useful for the assessment of economic, social and environmental effects of the CAP.

## Key challenges for evaluators in using IACS?

When the IACS database was created, its purpose was not for providing data for monitoring and evaluation, but for management and control. A recent survey conducted by the Evaluation Helpdesk in the Member States has shown that IACS is already well recognised and used as a very valuable data source for RDP evaluations. Some of the challenges noted by the respondents are however the following:

- Original data is deleted by governmental bodies after several years due to data confidentiality issues. It is therefore impossible to build up long time series (applies also to LPIS).
- IACS and LPIS are working systems and sometimes the updates are conducted independently. The data is therefore difficult to link to each other (both data bases are consolidated only once per year for handling the payments).
- Linking IACS to FADN, census and animal inventories is challenging due to differing definitions, actors involved and frequency of updates.
- It is not always possible to identify links between data at the farm level and field level, which makes it difficult to perform some of the area-based calculations at a detailed level.
- There is no online service where evaluators could query the data themselves. It therefore takes time for Paying Agencies to make such queries for evaluators.
- It is always a challenge to receive data of non-supported farms (due to data confidentiality concerns).

## Future developments

The use and integration of a large variety of data sources is the most pressing challenge. The harmonisation of definitions is a pre-requisite for data integration. Various initiatives are under way at the EU and Member State level to overcome these

challenges and to make IACS an even more valuable source of information. This concerns the harmonisation of different implementations across Member States, overcoming the lack of agri-environmental data and improving the accessibility to IACS data for the purpose of monitoring and evaluation.

**Initiatives are under way at the EU and Member State level to overcome these challenges and to make IACS an even more valuable source of information.**

A DG AGRI process for IACS data sharing is ongoing under the legal framework of the INSPIRE directive. It falls under the EU's political ambitions of the Green Deal (Farm to Fork strategy) and 'Europe fit for the digital age' EU priority. Technically, the data-sharing initiative concerns mainly agricultural spatial and non-personal data in IACS/LPIS and in the Geo-Spatial Aid Application (GSAA). Relevant data has been identified in a collaborative effort between European Commission services and the Paying Agencies in the Member States. The ultimate goal is to grant efficient access to data and to ensure effective re-use of data, while at the same time, respecting data privacy, security, safety and ethical standards ■

**Learn more**  
about how IACS is being  
improved and utilised

[INSPIRE](#)

[NIVA project](#)

[FLINT project](#)

[Good Practice Workshop](#)  
['Data management for the assessment](#)  
[of RDP effects'](#)



## HAVE YOUR SAY!

### Evaluation of the impacts of knowledge exchange and advisory activities

The evaluation aims to determine whether the CAP objectives of 'fostering knowledge transfer and innovation in agriculture, forestry and rural areas' are being met, and whether the relevant measures are effective, efficient, coherent, relevant and provide EU added value. This public consultation aims to gather information and feedback from stakeholders and the wider public and thus contribute to the evidence-base for this evaluation.

**You can contribute to this consultation  
by filling in the online [questionnaire](#)  
by 2 February 2021.**







# UPCOMING AND PAST EVENTS CALENDAR

Please note, due to the current COVID-19 situation please be aware that many events are being cancelled or postponed. Therefore, this list is only indicative, and we encourage you to check on the respective websites of the events you are interested in attending to see the current status of the event.

- **Online - 28-29 September 2020 - 14<sup>th</sup> Good Practice Workshop 'Assessment of resource efficiency and climate':** Organised by the Evaluation Helpdesk this Good Practice Workshop has the overall objective to reflect on experiences in relation to the assessment of resource efficiency and climate, with a view to preparing for the ex post evaluation of RDPs 2014-2020 and helping to identify lessons for the related future CAP indicators.  
[Read more >>>](#)
- **Online - 26 May 2020 - 14<sup>th</sup> Rural Networks Steering Group:** The fourteenth meeting of the European Rural Networks' Steering Group (SG) exchanged on the CAP Reform and other relevant EU Policy Initiatives, and provide an update to members. The meeting provided an update on planned and forthcoming rural networks' activities and SG members received an update and had the opportunity to exchange on the Long Term Vision for Rural Areas.  
[Read more >>>](#)
- **Online - 9-10 December 2020 - 15<sup>th</sup> Good Practice Workshop, 'Assessing the contribution of RDPs to a competitive and viable agricultural sector':** Organised by the Evaluation Helpdesk this Good Practice Workshop has the overall objective to reflect on the 2019 experiences in relation to the assessment of fostering the competitiveness of agriculture, with a view to preparing the ex post evaluation of RDPs 2014-2020 and help identifying necessary lessons for the related future CAP indicators.  
[Read more >>>](#)
- **BE - December 202 - 7<sup>th</sup> Rural Networks Assembly.**

## What's Going on in YOUR Member State?

Share evaluation related events by emailing  
[info@ruralevaluation.eu](mailto:info@ruralevaluation.eu)



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The Evaluation Helpdesk works under the supervision of Unit C.4 (Monitoring and Evaluation) of the European Commission's Directorate-General for Agriculture and Rural Development.

*The contents of this newsletter do not necessarily express the official views of the European Commission.*

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