European Commission

Evaluating the CAP Greening crop diversification measure with counterfactual methods

HIGHLIGHTS

- The JRC has developed analyses on the environmental performance of the 2014-2022 CAP cycle, applying counterfactual methods to rich data sources.
- Around 1 in 5 EU holdings above 10 hectares of arable land were required to change their cropping choices due to the crop diversification (CD) measure, according to estimates based on the Farm Accountancy Data Network (FADN).
- The CD measure increased crop diversity and reduced the share of arable land dedicated to the main crop in affected farms. No tangible negative impacts on other drivers of environmental outcomes or on farm profitability were detected.
- GeoSpatial Aid Applications (GSAA) data is a powerful policy evaluation tool, which enables high-precision spatial analyses on the universe of CAP beneficiaries, to complement studies based on farm surveys such as FADN.

The European Union's common agricultural policy (CAP) has undergone significant transformations in recent years, with a growing emphasis on environmental sustainability. Evaluating the effectiveness of CAP interventions is a way to learn from the past and support future policy planning.

1 BACKGROUND

This document summarises two novel analyses studying the impact of a policy component from the 2014-2022 CAP programming cycle on environmental outcomes. Specifically, the focus lies on the crop diversification (CD) requirement, which was part of the 'green direct payments' measures (art. 43 to 47 of Regulation (EU) No 1307/2013).

The unifying theme consists in uncovering causal relationships using counterfactual impact evaluation methodologies and applying these to comprehensive datasets, such as the Farm Accountancy Data Network (FADN) and the GeoSpatial Aid Application (GSAA) system.

This approach investigates the causal chain linking past CAP interventions to the adoption of farming practices that benefit the climate and the environment. As illustrated in Figure 1, these changes are in turn expected to reduce environmental pressures and hence have a positive impact on environmental outcomes, over time (European Commission DG AGRI, 2017).

By drawing lessons from past experience, this research aims to support policymakers and stakeholders in designing and implementing effective policies that balance agricultural productivity with environmental sustainability. Additionally, it may contribute to the ongoing refinement and enhancement of the EU's agricultural policy framework.

Figure 1. Diagram of the expected causal chain from CAP interventions to impacts on the environment

Source: Authors' elaboration

Box 1. Environmental measures included in the CAP considered in this Brief.

The greening component of direct payments, introduced in the framework of the CAP 2014-2022 (Regulation (EU) No 1307/2013), required CAP beneficiaries cultivating above specific size thresholds of arable land to comply with three farming practices, to reduce environmental pressures, as a mandatory prerequisite for receiving 30% of direct payments.

The three farm-level practices are Crop Diversification (CD), allocation of land to Ecological Focus Areas (EFA), and Maintenance of Permanent Grassland (MPG). Concisely, **CD imposes minimum numbers of arable land crops, and maximum land shares occupied by main crops, with the main purpose of improving soil quality.** The EFA requirement mandates the allocation of 5% of arable land to semi-natural habitat zones, mainly to safeguard and improve biodiversity. The MPG requirement imposes to maintain the ratio of permanent grassland to agricultural area at the national or regional level, and to protect environmentally sensitive permanent grassland.

Causal evaluation of the MPG requirement in relation to the 2014-2022 CAP cycle is hindered by the fact that this policy element has been in place already since 2004, and by data limitations. Evaluation of the EFA component using FADN has been attempted, however findings are not sufficiently robust to warrant presentation at the time of writing. Results illustrated in this Brief focus on the CD requirement.

Box 2. Counterfactual policy evaluation as a way for Learning from the past.

Counterfactual Impact Evaluation (CIE) methods seek to determine the effect of an intervention on an outcome, taking into account other influencing factors, to identify a causal relationship between the intervention and the outcome.

These methods are widely regarded as **the most effective tools for policy evaluation**. By exploiting information about treated and untreated units, CIE methods allow to estimate "what would have happened without the policy," which is known as the counterfactual outcome. Then, the effectiveness of the policy is assessed by comparing actual outcomes with the estimated counterfactual.

Conducting policy evaluation is crucial towards **informing future policy decisions**, as insights gained from evaluating past policies can help to better identify "what works", to avoid repeating ineffective interventions and to support the enhancement of elements that are likely to produce desirable outcomes.

2 THE IMPACT OF CROP DIVERSIFICATION USING FADN

The CD requirement, set out by Art. 44 of the EU Regulation 1307/2013, required CAP beneficiaries cultivating 10 to 30 hectares (ha) of arable land (AL) to grow at least two crops of diverse species, and the proportion of AL covered by the main crop could not exceed 75%. Farmers cultivating over 30 ha of AL were required to grow at least three crops from diverse species, with the main crop not exceeding 75% and the two main crops not exceeding 95% of AL[1]. Exemptions were granted to farms specialised in grasses or other herbaceous forage, or leaving large fractions of land lying fallow.

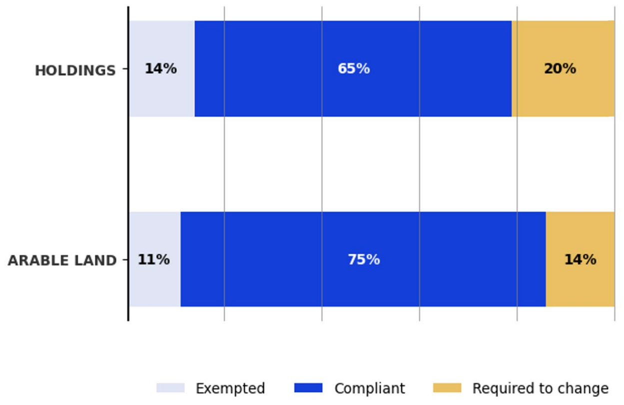
The analysis presented in this section is based on the European Farm Accountancy Data Network (FADN), an EU-level harmonized survey carried out yearly, with a sample of 80,000 farms across Member States, representing the population of commercial farms exceeding a minimum economic size, about 4.8 million in 2018. The FADN is the richest dataset on farm activities at EU level: it collects data about types of farming, economic activity, land use, crop and livestock products, inputs, CAP subsidies, and much more. It is therefore a key data source for the analysis of the CAP. Despite the richness of FADN, some caveats remain when it comes to evaluate the CD requirement. One significant drawback is that the crop types reported by FADN are fewer than the species counting towards the diversification requirement of the policy: this is likely to generate an underestimation of actual AL crop types on EU farms, as well as of their policy-induced changes. **The policy effect estimates presented in this section may thus represent a conservative estimate of the true impacts[2].**

The CD requirement has been the subject of evaluation studies since its earliest years of implementation (e.g. European Commission DG AGRI, 2017); it was also criticised for its low expected impact, based on the argument that a large majority of farms targeted by the new obligation already complied with it beforehand (e.g. European Court of Auditors, 2017).

[1] Farms with fewer than 10 ha of arable land, those under the CAP's Small Farmer Scheme, and Organic farms are exempted from these requirement.

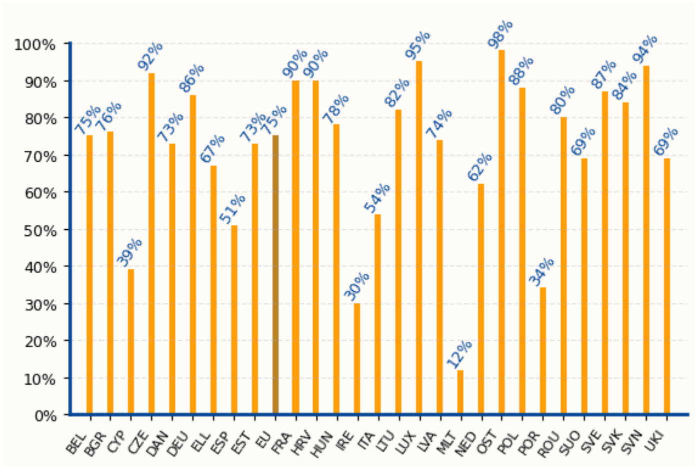
[2] Extended versions of this Section, with supplementary material, can be retrieved in Brutti et al. (2025b).

Figure 2. Estimated % of farms requested to change practices because of CD, and % of EU AL farmed by these. Farms with AL>10ha = 100% in 2014.



Source: Authors' elaboration

Figure 3. Shares of farms under the scope of CD already complying with requirements, by Member States in 2014.



Source: Authors' elaboration

Figure 2 presents an estimate of the proportion of farms with AL larger than 10 ha that were affected by the introduction of the CD requirement, and of the proportion of total AL these farms managed. These proportions are calculated on FADN data of the year 2014, i.e. the year prior to the obligation entering into force[3]. According to the elaboration of FADN records, among holdings with at least 10 ha of AL, 14% were exempted from the CD obligation; these account for 11% of AL in the EU. An additional 65% of holdings (representing 75% of AL), were already fulfilling diversification requirements in line with the CD regulation by 2014. **Finally, an estimated 20% of farms with AL over 10 ha, managing 14% of AL in the EU, were required to modify their**

[3] These figures should be interpreted with caution, as they are estimated by projecting the FADN sample on the whole set of EU holdings using design weights, whose representativeness is not ensured for the adherence to CD requirements.

cropping choices to comply with CD. However, it is important to note that, according to FADN records, **pre-policy compliance rates varied significantly across Member States.** Figure 3 confirms that the average compliance with CD requirements was overall high already in the pre-policy year 2014, but also reveals significant heterogeneity among Member States. Prior to the implementation of the new obligation, ten Member States had average compliance rates with CD requirements lower than 70% among targeted farms.

The causal impact of the CD requirement across the EU is evaluated using the **difference-in-differences method combined with propensity score matching** (Smith and Todd, 2005), applied to the FADN dataset. This integrated method allows to estimate the policy impact on farms under the scope of the policy intervention (*average treatment effect on the treated*), by comparing over-time changes in outcomes of *treated* farms (i.e. those holdings 'pushed' to compliance by the new policy) to a no-policy scenario. This counterfactual scenario is mimicked by a *control group* of *untreated* farms (i.e. farms already complying with diversification in 2014). Treated farms differ from untreated ones in several observable aspects, notably being smaller in terms of AL (49 vs. 79 ha on average) and output (113 vs. 155 thousand Euro). Thus, the propensity score matching procedure selects a control group of untreated farms that closely resemble treated farms, based on observable characteristics.

The sample for this analysis is limited to FADN farms under the scope of the CD obligation from 2014 to 2017; within this panel, the proportion of holdings which were not yet compliant with CD requirements in 2014 ('treated' farms) was 16.5%.

Impacts on crop diversity

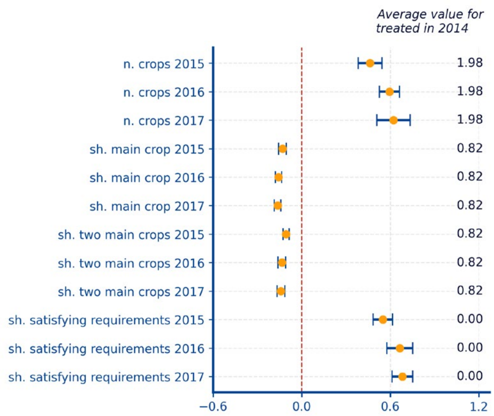
Figure 4 displays cumulative impacts –average treatment effect on the treated– realised over the three years following the introduction of the policy, on a range of outcomes directly related to policy requirements. In particular, the outcomes analysed are: number of AL crops; share of AL dedicated to both the first and the first two crops; and shares of holdings compliant with the CD requirement.

Each estimated treatment effect quantifies the average change in the outcome of treated farms that is attributable to, i.e. caused by, the introduction of the CD obligation, after "netting out" other external influences**.**

The impacts estimated on regulation-related outcomes are all statistically significant and their magnitude increases over the period of analysis, which suggests that treated farms were gradually adapting to the new policy requirements by changing their cropping choices. On average, **the number of AL crops in non-already-compliant farms grew by 0.46 after one year and by 0.62 after three years**, compared to what would have happened in absence of the CD regulation. Further, results indicate reductions in the proportions of the area dedicated to main crops. **The share of AL dedicated to both the first and the first two main crops significantly decreased by 16.3 and 14.0 percentage points respectively,** by 2017. Overall, 68% of the farms that were not satisfying CD requirements before these were introduced became compliant within three years after their introduction. Results do not capture a full shift to compliance for at least two reasons: Member States were free to introduce equivalent practices as alternatives to Greening requirements, so that farm holdings could choose to comply with either. Moreover, some farms may have reacted to the policy by introducing new crops belonging to different species, but pertaining to the same crop group among the 46 available in FADN, as discussed previously. In this case, the true increase in crop diversity may not be precisely detected using FADN records.

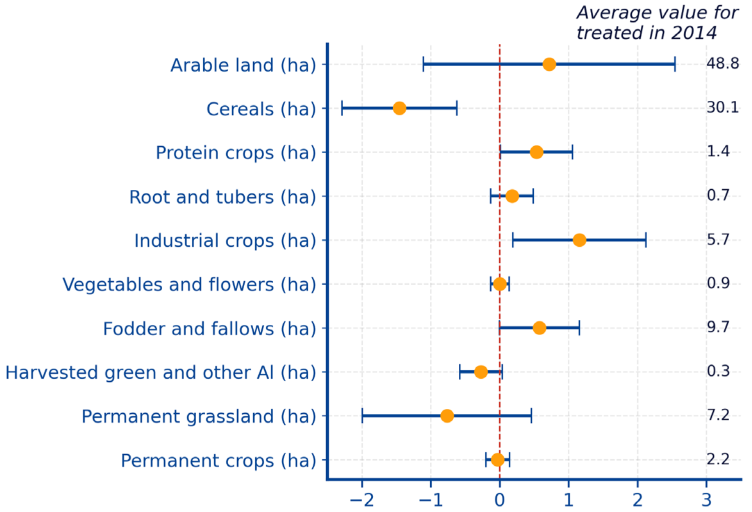
In conclusion, this set of **results suggests a statistically significant impact of the CD requirement on the previously non-adherent farming population**; further, the quantification obtained may represent a conservative estimate of the true policy-induced changes.

Figure 4. Average effect of the CD requirement on selected variables — years 2015, 2016, 2017



Note: Estimates (golden markers) and 95% confidence intervals (blue lines); n=number; sh=share.
Source: Authors' elaboration.

Figure 5. Average effect of the CD requirement on selected land allocation variables — year 2017



Note: Impact estimates (golden markers) and 95% confidence intervals (blue lines).
Source: Authors' elaboration.

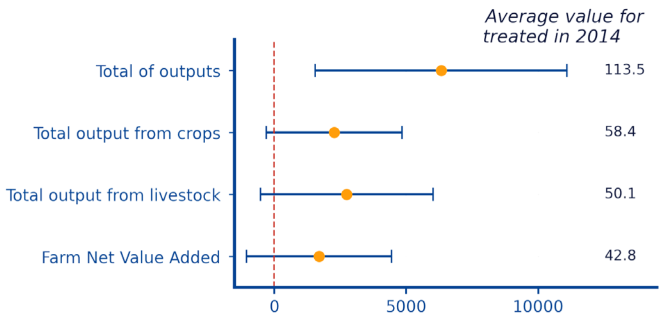
Impacts on land allocation

The second set of findings, illustrated in Figure 5, quantifies the impact of the CD requirement on the allocation of agricultural land in 2017, at the farm level and on average. The size of AL, after an initial increase, remains stable over time. Regarding land allocation, the new requirement induced a decrease in land dedicated to cereals, by an amount that is statistically significant but small in magnitude (-1.5 ha on the average 30.1 total AL ha in 2014).

At the same time, the analysis detects a statistically significant increase in land dedicated to industrial crops, quantified at almost 20% on average, in 2017 (+1.2 ha on the initial average of 5.7 ha).

Finally, there are noteworthy albeit not always statistically significant increases in land allocated to crops belonging to the categories of protein crops, and of fodder and fallows[4].

Figure 6. Average effect of the CD requirement on selected economic outcome variables — year 2017



Note: Impact estimates (golden markers) and 95% confidence intervals (blue lines).
Source: Authors' elaboration.

Impacts on economic performance

When examining economic outcomes (Figure 6), results suggest positive and statistically significant changes in economic output after three years from the introduction of CD. The average magnitude of such increases was of 5.5% on 2014 levels. Average farm value added, however, appears unaffected.

Taken together, these findings suggest that **the CD regulation did not have, on average, a tangible effect on farm profitability**.

[4] Crops are grouped according to the FADN crop groups, see Brutti et al. (2025b).

Impacts on drivers of environmental outcomes

Figure 7 displays impacts realised in 2017, three years following the introduction of the CD policy, on selected outcomes related to the environment.

The FADN survey, as a large-scale survey, does not record direct environmental outcomes such as GHG emissions, soil and water quality, or biodiversity, at the individual farm level.[5]

However, the data includes variables relating to the farms' activity, such as the quantity of fertilizers and plant protection products purchased.

These items are commonly recognised as *drivers* of the direct environmental outcomes exemplified above. For instance, using large quantities of fertilisers may lead to a large nitrogen surplus, and correspondingly large flows of nitrogen emissions; similar transmission mechanisms apply to the use of plant protection products and energy[6].

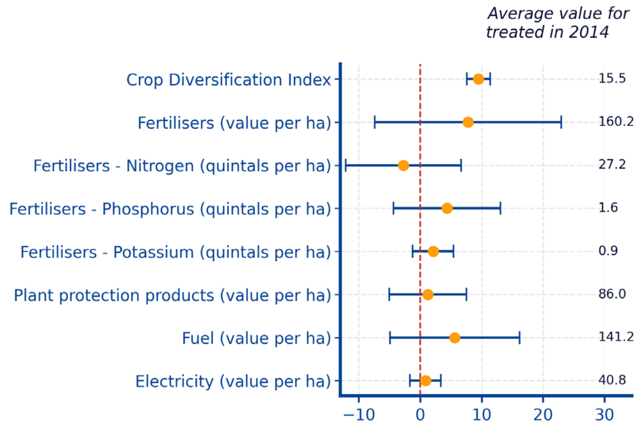
In summary, higher expenditures on environmentally-sensitive inputs are expected to result in higher pollution and environmental pressures.

The CD regulation contributed to enhance the Normalized Crop Diversity index at the farm level, measured using a normalized Shannon index.

In this index, a score of 0 indicates a fully monocultural farm, while a score of 100 represents a perfectly equal distribution of the farm's AL among the considered crops[7]. The CD requirement led to a rise of the normalized Shannon index by 7.7 percentage points in 2015 and 9.4 percentage points in 2017. This improvement shifted crop diversification from 15.5% to 25% of its potential maximum of 100%.

Although there were increases, on average, in most other drivers of environmental outcomes, suggesting a positive effect of the CD requirement, these changes were not statistically significant.

Figure 7. Average effect of the CD requirement on selected drivers of environmental outcomes — year 2017



Note: Estimates (golden markers) and 95% confidence intervals (blue lines).
Source: Authors' elaboration.

In summary, results indicate that the CD component of Greening **has significantly enhanced farm-level crop diversification practices on treated farms, while not having any tangible negative impact on other drivers of environmental outcomes**.

This conclusion sets a promising benchmark for sustainable agriculture in the EU. Over the period analysed, policy impacts on regulatory outcomes have increased in magnitude, suggesting that treated farms have been progressively adapting to the new obligations.

Finally, it is important to recall once more that estimates on AL crop varieties may be underestimated because of the lack of precise information about crops species in FADN records.

Further, this analysis presents solely the impact of CD requirements on farms that were *not-already compliant* with the requirements in 2014. That is, results do not capture **the potential benefits that CD obligations may have had on farms that were *already compliant*,** such as **preventing 'backsliding' in crop diversification practices** over time on these farms.

[5] To bridge this gap, a transformation of the FADN (Farm Accountancy Data Network) into the FSDN (Farm Sustainability Data Network) has taken place. Starting in 2025, the expanded FSDN survey will stepwise include additional variables that can be used to estimate GHG or better approximate the environmental pressure of farming on water and biodiversity. (see https://agriculture.ec.europa.eu/data-and-analysis/farm-structures-and-economics/fsdn_en).

[6] Approximating direct environmental outcomes by farms' input usage has already been exploited by some empirical research and is supported theoretically by the agricultural literature, as recently summarised in Rega et al. 2021.

[7] The index computation is based on crop grouping provided by Machefer et al. 2024. Details in can be retrieved in Brutti et al. (2025b).

3 THE IMPACT OF CROP DIVERSIFICATION USING ADMINISTRATIVE GEOSPATIAL DATA – A CASE STUDY ON SPAIN

This section illustrates **the potential of administrative data generated by the GeoSpatial Aid Application (GSAA) system**, and in particular of the information on farm holdings it contains, **for the construction of counterfactual exercises.**

The application illustrated in this section provides a causal evaluation of the impact of the Greening crop diversification (CD) requirement. This analysis complements the previous one based the FADN, by leveraging an alternative combination of data, estimation methodology and time period.

The GSAA is a component of the Integrated Administration and Control System (IACS), a set of computerised databases defined by Art. 68 of EU Regulation 1306/2013; the system is functional towards the management and distribution of common agricultural policy subsidies, and its structure is similar in all EU Member States. A GSAA dataset delineates agricultural polygons and their use, as submitted by EU farmers in the process of applying for CAP subsidies. Farmers' declaration procedures are supported by graphic interfaces, which are based on a mosaic of digital orthophotos that cover the entire national territory.

A graphical layer of cadastral parcel plans is overlaid to the orthophotos, so that the system automatically provides the image of parcels on screen; farmers can draw additional subdivisions of parcels, depending on the specific use of each land portion, and modify them year after year, as needed. In Panel A of Figure 8, cadastral parcels are drawn in red and subdivisions based on specific land use are drawn in light green.

In terms of employability towards the evaluation of Greening and of similar policies, the most valuable features of GSAA data are:

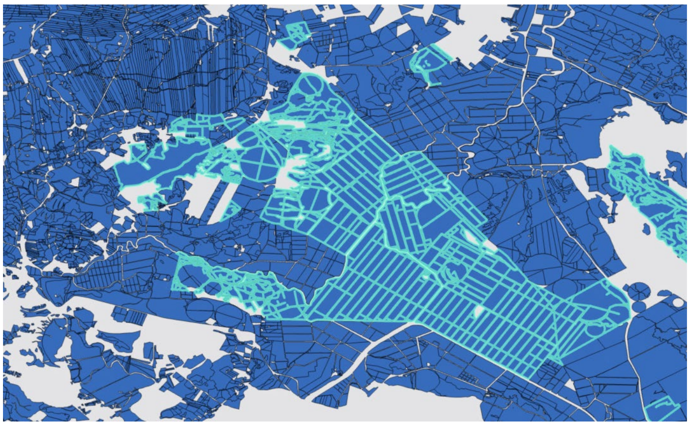
- the universal coverage of CAP applicants (a major difference vis-à-vis the FADN, which constitutes a sample of farms) and the precision with which land plot sizes are declared;
- the high level of detail with which crop types and other land uses are recorded;
- the linkage of each land polygon to the (anonymous) farm holding farming it, enabling the possibility of computing holding-level values such as total utilised agricultural area (UAA), total arable land (AL), total share of land dedicated to a specific crop, and subsequent linkage to policies targeted at the holding-level.

As an example, in Panel B of Figure 8 cadastral parcels cultivated by the same holding are marked in light blue. The analysis summarised below is based on Spanish GSAA data from the 2022 CAP campaign[8].

Figure 8. Illustration of GSAA data
Panel A Graphic declaration interface.

Source: Visor SigPac V4.16

Panel B GSAA data visualized on GIS software. Parcels farmed by a single anonymous CAP applicant are marked in light blue



Source: Fondo Español de Garantía Agraria (FEGA)

[8] Extended versions of this Section, with supplementary material, can be retrieved in Brutti et al. (2025a).

Strategic avoidance

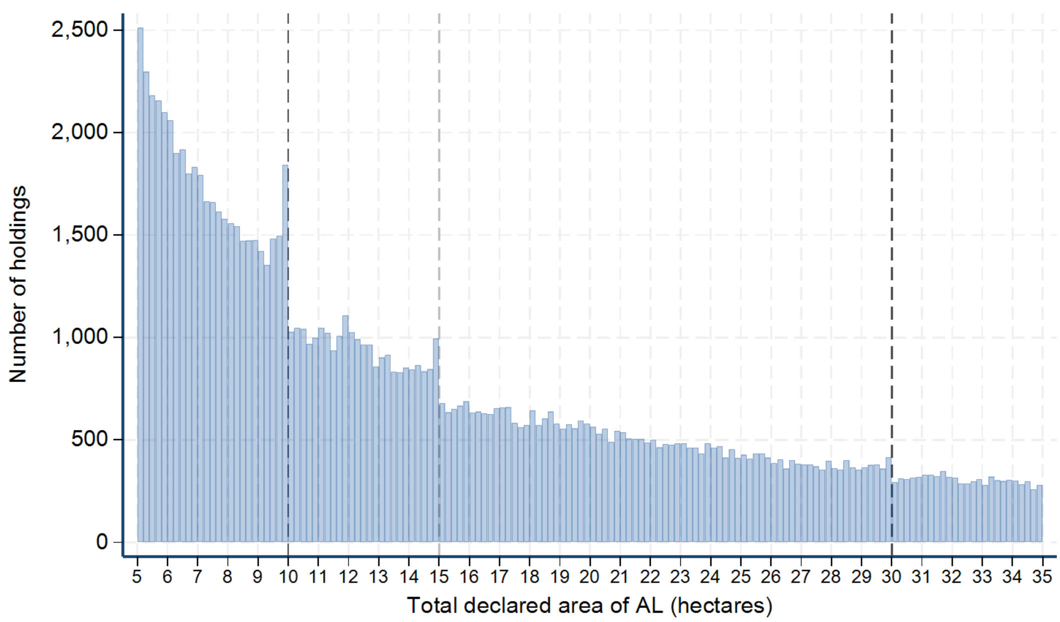
The first finding from this study is that **a small group of farmers engaged in strategic behaviour in reaction to the Greening requirements**, by reducing the size of their AL (see Figure 9), so to remain below the size thresholds triggering crop diversification obligations. This kind of reaction is common in response to size-contingent policies (Kleven, 2016), but no previous evaluation of Greening had highlighted it before.

We estimate that approximately 11% of holdings farming between 7.5 and 10 ha of AL have adapted their land use choices so to stay below the 10-ha threshold. Similarly, among farms declaring between 27.5 and 30 ha of AL, approximately 4% are estimated to have engaged in strategic behaviour to avoid exceeding the 30-ha cut-off.
In relation to the total population of Spanish CAP applicants, we estimate that in 2022 this 'bunching' phenomenon **affects less than 0.2% of holdings and is thus very local in its nature.** However, it is crucial to account for bunching and strategic sorting across thresholds whenever employing evaluation methods that leverage discontinuities generated by threshold-based policy designs.

To estimate the effects of CD obligations around the implementation thresholds, we apply statistical methods that are appropriate to treat cases in which there is strategic sorting around policy thresholds (Kleven, 2016[9]). We estimate policy effects on the share of monoculture (10 ha) or mono- and bi-culture (30 ha) farms[10]; on the average crop counts per farm (10 ha and 30 ha); and on the share of AL devoted to the first (10 ha) or first two (30 ha) crops.

Figure 10 illustrates the case in which the AL threshold of interest is 10 ha and the outcome is the share of AL devoted to the first crop. Panel A shows the original data and the fitted relationship between first crop share and AL size.
At 10 ha there is a visible discontinuity, but to be also noted is an inversion of the relationship just before 10 ha, which is due to strategic sorting mentioned earlier. Panel B shows the result of fitting the same relationship but excluding the 'problematic' area around the 10-ha threshold, where sorting occurs. The discontinuity at 10-ha resulting from the 'safely' fitted relationship provides the adjusted policy effect estimates.

Figure 9. The distribution of Spanish CAP applicants by AL size (2022)



Note: Farms are grouped by their AL size (0.2ha bins). Dashed lines indicate the CD diversification thresholds (darker) and the EFA threshold (lighter).
Source: Authors' elaboration.

[9] The intuition behind these methods is that the data observed in the area just around thresholds is excluded from estimation, due to it being 'polluted' by strategic behaviour that confounds true policy effects. Instead, statistical relationships between key variables are estimated using the data in the 'safe' areas, further away from sensitive thresholds, and then extrapolated into the threshold area of interest.

[10] Note that in this Brief, the terms "monoculture" and "biculture" refer to the practice of growing the vast majority of a farm's arable land with one (or two) specific crop(s) at any point in time. The terms do not give any indication of the land use over consecutive years.

Impacts on crop diversity

The main results of this analysis are summarised in Table 1. When crossing the 10-ha threshold, the share of monoculture farms drops by 8.3 percentage points, average crop counts per farm increase by 0.08 crops and the share of AL dedicated to the first crop decreases by 6.7 percentage points.

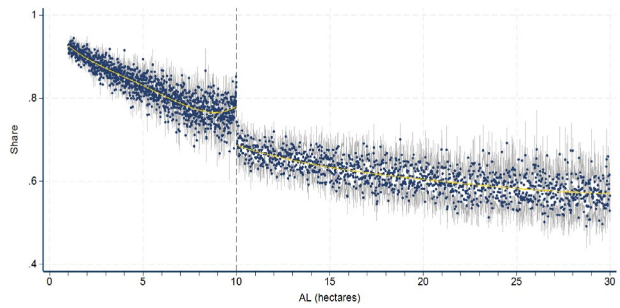
When crossing the 30-ha threshold, the share of mono- or biculture farms drops by 5 percentage points, average crop counts per farm increase by 0.15 crops and the share of AL dedicated to the first crop decreases by 1.5 percentage points.

The results are sensitive to changes in the sample of farms included, and to changes in the flexibility allowed for when fitting relationships; the estimates presented in Table 1 are conservative versions.

In sum, the second finding from this study is **that the new environmental requirements of the CD policy had an impact on the cropping choices and land allocation of Spanish holdings**, identifying discontinuities in average crop varieties grown, share of land dedicated to the main crop and compliance indicators at the AL policy thresholds triggering Greening diversification obligations. **These conclusions are in line with the previous results drawn from FADN data.**

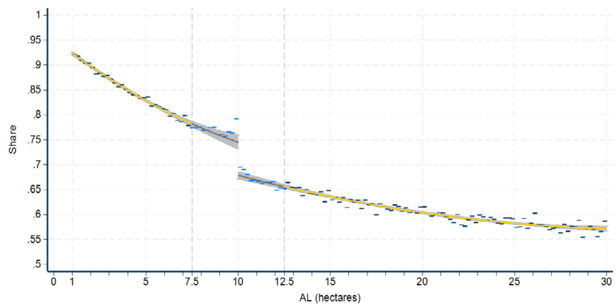
Figure 10. Share of AL devoted to the first crop (10-ha), 2022

Panel A Original data (blue markers), fitted relationship (golden curve) and 95% confidence intervals (grey lines).



Source: Authors' elaboration

Panel B Original data grouped in bins (blue markers), fitted relationship (golden curve), 95% confidence interval (shaded in grey) and the excluded area around 10 ha (dashed).



Source: Authors' elaboration

Table 1. Estimation results for policy effects local to CD thresholds, 2022

	10-ha AL threshold[1]			30-ha AL threshold[1]		
Outcome	Baseline value	Effect estimate	ss[3]	Baseline value	Effect estimate	ss[3]
Mono-/biculture farms (share[2])	0.17	-0.083	***	0.15	-0.050	***
Crop varieties (counts)	2.36	0.084	*	3.72	0.150	*
First/first 2 crops (share[2])	0.74	-0.067	***	0.84	-0.015	**

1 For the 10-ha threshold, relevant outcomes are monoculture farms and share of first crop; for the 30-ha threshold, mono- or bi-culture farms and share of the first two crops.
2 Share ranges between 0 and 1.
3 Statistical significance, indicated at 1% (***), 5% (**) and 10% (*).
Source: Authors' elaboration.

The third finding is that policy impacts, just like avoidance behaviour, are stronger at the 10-ha threshold with respect to the 30-ha threshold, suggesting a stronger policy pressure on smaller-AL holdings and higher levels of pre-policy compliance among larger-AL holdings.

On data

The distinctive characteristics of GSAA data offer a unique opportunity for the application of policy evaluation methodologies that rely on large datasets and on the accurate measurements of land plot sizes.

Also, GSAA data enables the detection of previously undocumented descriptive phenomena, such as strategic adjustments in the size or type of farmed land, in response to policy obligations.

Further, **GSAA data lends itself to matching with georeferenced environmental outcomes**, opening new policy evaluation avenues that are part of the JRC's current work programme.

It is important to note that at the time of writing, not all GSAA datasets that are made available for research or evaluation purposes include the anonymized holding identifiers that are exploited in this analysis.

The omission of this valuable piece of information significantly limits the potential applications of GSAA data in evaluation at the farm (CAP beneficiary) level. This is because the database is reduced to a set of parcel-level or land-plot level information, lacking information on which plots are connected to each other under the same management.

Further, **enhancing GSAA data with a wider set of farm-level characteristics such as financial elements or management practices would be highly desirable**, in order to facilitate the empirical investigation of the causal link between policy interventions, farm behaviour and environmental outcomes.

Box 3. Impact evaluation based on size thresholds in survey data.

Both the crop diversification and the ecological focus area requirements have a size-threshold-based structure that lends itself to the implementation of discontinuity designs, for rigorous policy impact estimation. However, discontinuity designs are demanding and draw on large amounts of data close to the thresholds of interest. Further, it is crucial that data on the variable on which thresholds are based (arable land in the case of CD and EFA), are precisely reported. Even the largest farm surveys such as FADN struggle to comply with such requirements; in particular, the tendency to approximate land sizes to 'round' values are a common phenomenon and an insidious issue for discontinuity studies.

Discontinuity analyses on the 15-ha EFA threshold using FADN has been attempted, but results are deemed less robust than what can be obtained with administrative data such as GSAA and, hence, for the time being, are not presented in this Brief.

Related Work

This Brief has been prepared by the [Competence Centre on Microeconomic Evaluation (CC-ME)](), which provides scientific expertise and methodological support on Counterfactual Impact Evaluation (CIE) to several Directorate-Generals and Member States. Contact information: EC-CC-ME@ec.europa.eu

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