This is part of a series of Briefs summarising the facts and addressing the policy relevance around the objectives of the future Common Agricultural Policy (CAP).

**KEY MESSAGES**

- Administrative costs are, to a certain extent, the result of oversight to ensure taxpayers’ money is used for what it is intended for (accountability). However, there is always a need to assess and improve the proportionality in terms of the resulting bureaucracy.

- Administrative burden largely reflects the diversity of CAP instruments, themselves the result of the diversity of EU agriculture.

- Many initiatives during the past years aimed at simplifying the CAP and reducing bureaucracy for beneficiaries and administrations, with mixed results. For the post-2020 period, the CAP proposes a new partnership between the EU and the Member States. It intends to put more emphasis on delivering results and less on ensuring compliance with detailed rules set at EU level. The main challenge lies in how Member States will grasp the opportunities for simplification while addressing the real national and local concerns.

- Modernisation, with the use of technology for management and administrative purposes, is a key driver for simplification. This should result in rules at beneficiaries’ level better adapted to their needs and easier to manage. Nevertheless, many obstacles still limit the uptake and use of digital solutions for administrative purposes.

This brief is based on contributions from Sylvie Barel, Florence Buchholzer, Kathrin Rudolf, Mariusz Legowski, Carlo Pagliacci, Juan Alvarez de la Puente and Ana Brncic.

Disclaimer: The contents of the publication do not necessarily reflect the position or opinion of the European Commission.
1. The facts about administrative burden

a. The CAP: a composite machinery

Since its introduction, the CAP has evolved significantly. Developments were brought to provide solutions to new needs emerging over time, with an eye always on a pertinent use of taxpayers’ money (accountability). For example, greening was added to the support schemes in the form of direct payments to farmers to address rising environmental and climate concerns. The diversity of European agriculture has however rendered it challenging to have an administration system of the CAP which is both common and simple. The resulting architecture includes basic mandatory tools complemented by a number of voluntary ones, where details are largely set at EU level. However, a range of exceptions and derogations exists. Reforms have attempted to reduce this complexity; nevertheless, there is still significant room for improving the CAP’s coherence and increasing its understanding.

The current CAP is based on an implementation concept focusing on Member States' compliance with these detailed EU rules. This leads to the perception that the CAP is essentially a policy that, instead of being driven mainly by objectives, relies strongly on the enforcement of rules through controls of eligibility conditions and compliance, penalties and audit. As a consequence, whether in the form of the potential loss of funds for farmers and Member States or in the form of pressure on the European Commission to keep a low error rate and thus get assurance and discharge of the European Parliament, the present system leads at all levels to a strong focus on ensuring and enforcing compliance.

This has a number of tangible effects: on the administrative burden, on very tight controls and on requests at all levels for more and more precise rules and interpretative assistance from the European Commission (e.g. through interpretation notes and guidelines).

Nevertheless, overall administrative costs are still kept at reasonable levels for both beneficiaries and national administrations. Administrative costs for national/local administrations are estimated at 3.5 % for 2018¹ (down from 3.9 % in 2017). For payments covered by the Integrated Administration and Control System (IACS), costs are lower between 3 % and 3.3 %.²

IACS is a European administrative system used by the national paying agencies to manage and control CAP payments under the European Agricultural Guarantee Fund (EAGF) as well as area based or animal-based aid under the European Agricultural Fund for Rural Development (EAFRD). It covers 94 % of expenditure under the EAGF and 40 % of expenditure under the EARDF. It

---
¹ European Commission (2019) Annual activity report 2018
² Ecorys et al. (2019)
consists of different databases and so allows farmers to enter an online aid application and administrations to manage the applications and claims. The higher costs related to non-IACS payments is related to the requirements for project-based measures under Rural Development.

IACS running costs are estimated at 12 % of overall IACS administrative costs, while the bulk of costs (74 %) relates to administration of claims and controls. With the 2013 reform, overall burden for national administrations is estimated to have increased by one third. Factors behind this increase include the introduction of greening provisions, the added heterogeneity from increased tailoring of policies and the modernisation of IT systems and digitalisation of controls.³

With regard to beneficiaries, the administrative burden is estimated at around 6 % of public expenditure.⁴ For beneficiaries also, applications and claims under IACS are assessed to be less burdensome, at around 2 %. While the 2013 CAP reform appears to have increased the burden for national administrations, the burden for beneficiaries remained more or less stable.⁵

Figure 1. Estimated share of administrative burden under the 2014-2020 CAP in public expenditure

<table>
<thead>
<tr>
<th>Costs for beneficiaries</th>
<th>~ 6%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for administrations</td>
<td>~ 3.5% to 3.9%</td>
</tr>
<tr>
<td>Public expenditure</td>
<td>EAGF + EAFRD</td>
</tr>
</tbody>
</table>

Note: EAGF = European Agricultural Guarantee Fund, EAFRD = European Agricultural Fund for Rural Development, MS = public expenditure under co-financing by Member States

Unlike recurring administrative burden, investment costs typically occur only once and induce costs regardless of the policy. This includes implementation costs, the set-up or update of IT systems and definition of new procedures. These occur typically within the first two years of implementation under the multi-annual financial framework. For IACS-based measures, set-up costs are estimated at 14 % of overall IACS costs.⁶ Under the 2014-2020 rural development programme, these one-off costs are estimated to represent on average between 15% and 20% of total administrative costs under the programming period.⁷

³ Ecorys et al. (2019)
⁵ Ecorys et al. (2019)
⁶ Ecorys et al. (2019)
⁷ Spatial Foresight & t33 (2018)
For smaller countries, this share may be significantly higher as these costs do not vary significantly in function of scale of applications and claims. Adjustment costs refer to the temporary loss of efficiency due to changes and reorganisations within the administrations and are characterised by high costs in the first years, which then decrease over time. These include costs linked to training and familiarising with the information obligations.

Part of the costs, such as running and investment costs, derive logically from any implementation of funds. Looking at the bigger picture hence requires setting in perspective costs and the structural complexity with the benefits and logic of the CAP.8

### Comparison of EAFRD to other ESI Funds

Administrative burden varies significantly between the European Structural and Investment Funds (ESIF), both in terms of burden expressed in monetary terms and in terms of activities generating the burden. Compared to other funds, the burden under the EAFRD is significantly higher for national administrations due to compliance requirements, the higher number of beneficiaries and the comparatively small size of payments. In consequence, paying agencies bear almost two-third of the burden related to the EAFRD payments, largely from managing applications and performing checks.

Table 1. Average administrative costs for all ESIF and by Fund for administrations and beneficiaries, in EUR per Million EUR eligible budget

<table>
<thead>
<tr>
<th></th>
<th>ESIF</th>
<th>ERDF</th>
<th>CF</th>
<th>ESF</th>
<th>EMFF</th>
<th>ETC</th>
<th>EAFRD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for national administrations</td>
<td>40 300</td>
<td>22 600</td>
<td>18 400</td>
<td>27 600</td>
<td>44 200</td>
<td>66 700</td>
<td>83 100</td>
</tr>
<tr>
<td>Administrative burden</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for beneficiaries for payment applications</td>
<td>19 900</td>
<td>18 700</td>
<td>2 300</td>
<td>24 600</td>
<td>20 800</td>
<td>15 600</td>
<td>18 700</td>
</tr>
</tbody>
</table>

Note: ESIF = European Structural and Investment Funds; ESIF funds include: ERDF = European Regional Development Fund, CF = Cohesion Fund, ESF = European Social Fund, EMFF = European Maritime and Fisheries Fund and EAFRD = European Agricultural Fund for Rural Development; ETC = European Territorial Cooperation (INTERREG).

Source: Spatial Foresight & t33 (2018)

### b. Administrative burden along the CAP cycle

The implementation information submitted by Member States to the European Commission under the current CAP is perceived as burdensome, with information representing thousands of pages to be submitted by national administrations. While the system is heavy and burdensome on national administrations, a large proportion of these tasks only occur in the first year of a new policy cycle.

8 For more information on the benefits, refer to the CAP briefs on the nine CAP specific objectives.
Requirements differ significantly in terms of content, format and procedures. Member States take a number of strategic decisions, adopting national provisions, sending a number of notifications of implementation of various schemes including GAECs, preparing one or more rural development programmes and preparing sectorial strategies for fruit and vegetables, wine and apiculture, or in a limited number of Member States for hops and olive oil.

The planning phase is therefore estimated to represent only a limited share in the overall administrative costs (the preparation cost of rural development programmes is estimated at around 2% of total costs over the 7-years programming period).\(^9\)

The paying agencies carry out ex-ante administrative checks on each payment, as well as on-the-spot checks for at least 5% of beneficiaries of direct payments and rural development expenditure. Not surprisingly, applications and controls therefore represent a significant share in the administrative costs of national administrations. The current monitoring and reporting system consists of the preparation of the annual accounts of the paying agency (for financial clearance), the management declaration, the reporting on control data and control statistics, the annual implementation reports of rural development programmes and the evaluations of these programmes. Finally, a significant share of the administration’s costs is linked to the maintenance of systems for controls, and to management tasks.

**Figure 2. Estimated share of administrative burden under the 2014-2020 CAP for the main cost categories**

![Diagram showing share of administrative burden](image)

- **Public administrations:**
  - programming and notifications
  - audit and on-the-spot controls
  - systems and general management

- **Beneficiaries:**
  - applications and administrative checks
  - monitoring and reporting

*Source: DG Agriculture and Rural Development, based on literature review*

Applications represent the bulk of costs for beneficiaries, as they require the understanding of requirements and the gathering the evidence before filling-in the application and entering payment claims.

---

\(^9\) Spatial Foresight & t33 (2018)
In particular, applications for projects under rural development are time-consuming in view of the detailed eligibility criteria. As information obligations are generally not significantly different in function of the amount of area or animal-related payments, the administrative burden on beneficiaries is proportionally higher for small amounts. Given that controls are carried out on a small share of beneficiaries each year (around 1.5% annually), they represent on average only a limited share of administrative burden for beneficiaries, although they are burdensome for those farmers being controlled. The progressive shift from 1992 onwards from price support towards area-based payments was accompanied by reduced burden related to checks as delivery controls were not further necessary. However, the reform missed the opportunity to rethink the control system and to further relax checks.

c. **Complexity in measures**

The administrative burden related to various CAP measures depends largely on the eligibility requirements under each scheme. These determine the amount and complexity of the information to submit, the evidence to attach to the application, the number and complexity of the checks to perform and the number of indicators to monitor and report on.

**Table 2. Reported administrative burden linked to Direct Payments**

<table>
<thead>
<tr>
<th>measures</th>
<th>associated administrative burden</th>
</tr>
</thead>
<tbody>
<tr>
<td>basic payment scheme / single area payment scheme</td>
<td>reported burdensome for beneficiaries due to eligibility requirements e.g. declaration of land cover and use of parcels</td>
</tr>
<tr>
<td>active farmer</td>
<td>definition impacts the number of beneficiaries and corresponding administrative burden for administrations - requirements in term of hectares are simpler to implement (compared to share in income)</td>
</tr>
<tr>
<td>payment entitlements</td>
<td>use of historic references constitutes additional burden for both administrations and beneficiaries, in particular the verification of payment entitlements for young farmers</td>
</tr>
<tr>
<td>small farmers scheme</td>
<td>simplified application procedures reduce burden for beneficiaries</td>
</tr>
<tr>
<td>young farmer</td>
<td>reported less burdensome for beneficiaries</td>
</tr>
<tr>
<td>optional voluntary coupled support</td>
<td>reported burdensome for beneficiaries and administrations due to the design of the schemes, approval of applications and justification to the Commission</td>
</tr>
<tr>
<td>cross-compliance</td>
<td>on the spot controls are often combined with sectorial checks, which limits the related burden</td>
</tr>
<tr>
<td>greening</td>
<td>set forward as more burdensome</td>
</tr>
</tbody>
</table>

*Source: European Commission (2018) Impact Assessment, based on literature review (see references)*
Table 3. Reported administrative burden linked to Rural Development

<table>
<thead>
<tr>
<th>measures</th>
<th>associated administrative burden</th>
</tr>
</thead>
<tbody>
<tr>
<td>area-based environmental payments (Agro-environmental measures (AECM) and forestry)</td>
<td>the multi-annual nature of the measure facilitates budget planning and potential shift of budget towards/from other measures in function of the uptake by beneficiaries - administrative burden for both administrations and beneficiaries linked to information to provide on income foregone and cost incurred for premium calculation</td>
</tr>
<tr>
<td>project-based measures (investments, financial instruments, business development support, risk management, cooperation, advice)</td>
<td>Information obligations are reported as the most burdensome for the individual beneficiary, e.g. installation grants require a business plan to be drawn up - use of simplified cost options can reduce administrative burden on both national administrations and beneficiaries</td>
</tr>
</tbody>
</table>

Source: European Commission (2018) Impact Assessment, based on literature review (see references)

In summary, a trade-off between targeting and simplification can arise without challenging the objectives: the more adapted and detailed the measure, the more the burden resulting thereof.

   d. Adding up national specificities to EU requirements

The implementation of the CAP regulations at national level requires translating the same detailed EU rules to very diverse agricultural and socio-economic conditions and priorities. The level of subsidiarity introduced with the 2013 reform resulted in different levels of burden (some more, some less) in function of Member State choices.

This is due to the transposition and implementation of EU requirements into national realities, which can generate significant additional administrative burden if supplementary requirements are added where not needed.

This so-called “gold-plating” typically results in another layer of systemic complexity: detailed (and possibly disproportionate) requirements and excessive documentation requests translate in increased administrative burden for beneficiaries and national administrations. The burden on beneficiaries of the EAFRD from gold-plating is estimated at 35% of the total burden.¹⁰

The diversity in conditions and priorities is not the sole reason for gold-plating, another one being the fear from national authorities that their action would be challenged later or that the EU auditors might disagree with the solution chosen by them.¹¹

---

¹⁰ Sweco, t33 & Spatial Foresight (2017)
¹¹ Final conclusions and recommendations of the High Level Expert Group monitoring simplification for beneficiaries of ESI Funds
**The multiplier effect of complexity**

*Issues in one part of the implementation chain can lead to complexity, burden and costs in other parts.*

*First, the proliferation of measures and eligibility requirements drive higher administrative burden. These may even become disproportionate when few beneficiaries are targeted by the measure, and limit economies of scale in terms of administrative procedures.*\(^{12}\) *For example, dividing rural development measures in sub-thematic measures will spread beneficiaries over schemes with diverging requirements.*

*Secondly, complex, incomplete or ambiguous national legislation can lead to inefficiencies and confusion. This translates into significant time loss to interpret rules and understand requirements, and can lead to higher error rates. Complexity in both EU and national legislation also typically translates in higher hassle costs, which is the costs associated to time lost by waiting, e.g. for approval of programmes or for payments.*

---

**e. Uptake of technologies**

With the development of digital technologies booming, significant opportunities through digital solutions are also brought to the agricultural sector. Nevertheless, while many applications are developing for and are applied at improving farm management practices and precision agriculture, the use of technologies for administrative purposes has not been fully exploited.

---

\(^{12}\) To some extent, combined checks allow limiting the increase in administrative burden.
In the era of big data and artificial intelligence, administrative systems need to be modernised to allow the integration of the wide array of available information as well as interconnectivity between administrative databases.

Sensor technologies such as Global Navigation Satellite Systems (GNSS), like GPS or Galileo, and satellite Earth Observation (EO) technologies like the Copernicus Sentinels are widely used for geo-positioning and allow machinery guidance and auto-steering. Space Based Augmentation Systems (SBAS), like EGNOS, further increase the accuracy of geo-positioning.

**Towards the use of Sentinel data – Sen4CAP project**

The Sentinels for Common Agricultural Policy (Sen4CAP) project, initiated in 2017, aims at demonstrating the use of Sentinel data for the management of the CAP. Paying Agencies from six pilot countries participate in the project: Czech Republic, Italy, Lithuania, Netherlands, Romania and Spain (Castilla y Leon). Time-series satellite data is used to gather and monitor information on agricultural crops, grasslands and agricultural practices, which is to be crosschecked with information transmitted by farmers in their applications for CAP subsidies (proving compliance with eligibility criteria and requirements).

**Figure 4. Normalised Difference Vegetation Index (NDVI) time series of a parcel with winter cereal from Sentinel data**

*Source: Joint Research Centre, European Commission, based on Copernicus Sentinel-2 images*
Through remote sensing, GNSS receivers can gather point- or spatial-based information. Among other uses, this allows the measurement of areas, the identification of crops and information on soils. Geographic Information Systems (GIS) transform the data collected and geo-referenced through GNSS into information.

This information can be further processed into farm management systems that help farmers to monitor, analyse and plan activities such as tillage, planting, crop protection, irrigation, etc. Hence, a concrete possible application of remote sensing for administrative purposes lies in the integration of monitoring information from Copernicus into IACS. Such integration can significantly lower the amount of information to be submitted by farmers in their application, as well as reduce the need and frequency of controls.

Further digital solutions also offer opportunities for simplification, including the use of geotagged photographs, i.e. field pictures with reliable location and time stamp, by farmers for administrative purposes.

Towards integration and digitalisation of the CAP governance infrastructure – New IACS Vision in Action (NIVA)13

*Under Horizon 2020, the European Commission is funding a project to promote the transition towards digital solutions and e-tools to modernise the CAP. The project will look into data interoperability and accessibility to reduce administrative burden linked to managing the CAP and permitting a broader use of IACS data beyond agriculture. The aim is to combine data available in IACS with data from new technologies (satellite data, etc.) and other data (e.g. agri-environment-climate data), allowing enhanced payment and performance monitoring, including with regard to the overall social, economic and environmental performance of the CAP. Furthermore, IT solutions aimed at simplifying farmers’ access to CAP subsidies will be tested. An example is the seamless claim. The notion of seamless claims refers to the automation of applications and administrative checks such that farmer involvement is limited to the approval of the application. This would further reduce the farmer workload compared to the current system of submission of applications for CAP payments.*

Facilitating modernisation of the EU agricultural sector could bring significant simplification for farmers and administrations. This can take various forms.

---

13 Presentation of the New IACS Vision in Action
A non-exhaustive list includes:

- **Pre-filled application forms and payment claims, automatically updated with information from other national administrations and from geo-spatial aid applications, possibly combined with Sentinel images uploaded in the Land Parcel Identification System (LPIS) - LPIS is a system embedded in IACS, which allows for identification of all EU agricultural areas.**
- **Facilitated administrative checks with remote sensing and satellite images, and reduced number of on-the-spot controls.**
- **Automated monitoring and possible automatic generation of data for reporting.**

The European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI), launched in 2012, brings together innovation actors and contributes to integrating different funding streams (such as EAFRD and Horizon 2020) so that they contribute together to a same goal. It has however been challenging to support innovation projects under the EIP-AGRI due to inflexible rules and burdensome procedures.\(^{14}\)

---

**A case study: Estonia**

**Modern e-services as a key driver for decreasing bureaucracy\(^{15}\)**

Estonia invested significant resources in digitalising public services. It provides performing e-services, facilitated by the interconnectivity of administrative databases and their synchronisation with applications for farm management. These advancements allow farmers to save significantly on time spent to apply for CAP subsidies and compliance reporting. It is estimated that the time spent per applicant on applying for CAP subsidies decreased from 300 minutes in the case of paper applications to 45 minutes online.

---

2. **Simplification potential and challenges**

a. **Efforts towards simplification**

The prominence of the CAP in terms of budget and scope has made it an easy target for discussions and criticism. Calls for reducing red tape were raised repeatedly over the last decades. In response, several reforms have strived, with more or less success, to address the issue and reduce the bureaucracy. Notable evolutions include the set-up of the Integrated Administrative Control System (IACS) with the 1992 MacSharry reforms, the single Common Markets Organisation (CMO) in 2007, or the Small Farmer’s scheme introduced in the 2013 reform.


\(^{15}\) Kärner, E. (2017)
Further, a large series of smaller changes provided for increased flexibility, less delays, clarifications and higher reliance on technologies, thereby contributing to simplifying CAP payments.

The Regulatory Fitness and Performance Programme (REFIT), launched in 2012, also identified opportunities for burden reduction. This resulted for example in the reduction of the number of Commission Regulations under the CMO from 200 to 40 and to the adjustment of a number of greening provisions.

As a significant budget is involved under the CAP, it is indispensable for the public sector to have a clear view and take of how public money is spent and for what benefits. Administrative burden is thereby unavoidable. The proportionality of the burden in relation to the benefits is nevertheless key: an efficient policy will minimise costs, including bureaucracy, to the highest possible effectiveness.

b. The proposed shift towards performance

A compliance approach focuses mainly on implementation of rules. Instead, a performance-based model encompasses the notion of efficiency, as it will shift the focus from how things are done to how the results are achieved in line with the underlying policy objectives and results. From the beginning of the CAP, discussions at EU-level have been marked by diverging and specific needs. It is deemed essential for the CAP to be sufficiently flexible to address EU ambitions and local realities.

The post-2020 CAP proposal introduces enhanced margin of manoeuvre for Member States to shape measures to address their needs: within a simplified, but still common EU framework (e.g. common objectives and indicators, common list of broad types of interventions, common requirements), Member States will benefit from enhanced flexibility to choose and design the details of their interventions in line with their evidence-based needs.

Such flexibility provides an enormous potential for increased effectiveness resulting in more balanced costs. In such a context, the way in which the EU-provided frame is translated in national strategies is the key determinant of effective simplification. The main challenge lies in how Member States will grasp the opportunities for simplification while addressing the real national and local concerns.

A series of risks challenge simplification all along the policy cycle, from the policy ex-ante evaluation and planning to policy implementation, assurance and ex-post evaluation. These risks encompass lack of vision, inadequate strategies, administrative, timing or implementation issues and market risks, and have the potential to add to real, and sometimes generate perceived bureaucracy (see Figure 5 for a synopsis of such risks, and Figure 6 for their mitigating factors).
c. The design of the national strategy

The experience of the current CAP shows limited coordination between the implementation of measures under the two pillars of the CAP. Increased complementarity and synergies among all interventions would avoid inconsistencies and overlaps that lead to inefficient use of funds and unnecessary bureaucracy.

---

In order to address these issues, for the CAP post-2020 the Member States are asked to come up with one CAP strategic plan which combines direct payments, sectorial programmes and rural development measures into one coherent strategic plan. The combination of interventions should also be designed in order to avoid offsetting effects. Tensions between economic, environmental and socio-economic needs translate in a clear risk that strategies may excessively favour one of these. This could lead to undesired imbalances and underachievement of some of the CAP objectives, resulting in lower efficiency of the CAP. For example, the tension between environmental ambition and economic strength of the sector can result in insufficient environmental requirements set on farmers.

Similarly, an adequate targeting of beneficiaries in terms of farm size, sectors and areas is needed. Here again, imbalances can arise. For example, setting too high requirements to identify genuine farmers can exclude too many beneficiaries from payments.

The eligibility criteria for beneficiaries, evidence to be submitted and national controls of compliance with nationally established rules will also have strong implications on administrative burden. It is moreover essential for an efficient CAP that suitable preconditions are set to foster results and encourage beneficiaries to perform.

Finally, an adequately planned assessment of data needs can allow data collection at time of applications, so limiting additional reporting effort from beneficiaries at a later stage for monitoring purposes. Other opportunities include linkage with other existing data sources (e.g. administrative data from other administrations) and automatic generation of data for reporting. There is also still scope for more cooperation between national administration and better reuse of information that has already been submitted by beneficiaries elsewhere for other administrative purposes (e.g. tax returns).

While sufficient ambition is needed to draw up a coherent and efficient approach, the planning needs to remain a proportionate and pragmatic exercise and avoid unnecessary complexity from gold-plating. It is also beneficial to involve in the design of the national strategy, those involved in its implementation at all stages (including beneficiaries, paying agencies, managing authorities and possibly other interested parties).

**d. The digitalisation of the agricultural sector**

The uptake of innovative solutions is often marked by excess inertia. Despite the availability of improved technologies, which would result in significant time and cost savings, actors tend to delay the transition to these modern solutions. For administrations, the modernisation of administrative systems indeed involves significant investments and organisational changes. The time lag between the high one-off costs of new technologies, and the corresponding
adaptation costs e.g. for updating procedures and training staff, and the benefits in reduced one-off costs is a clear disincentive.

Without sufficient means allocated towards innovation, there is a risk that the significant opportunities for efficiency over time would not be reached. Interoperability of systems as well as privacy and data protection issues also restrain the application of technologies.

On the side of beneficiaries, the slow uptake of digital solutions can be explained by several factors. First, digital technologies are in many cases not sufficiently tailored to farmer needs. Furthermore, the awareness of existing tools is insufficiently widespread. Proper guidance and advisory services have a key role in disseminating knowledge and promoting innovation.\(^\text{17}\) Connectivity, in particular in remote rural areas, also remains an important issue and requires further penetration of broadband. In 2018, only 52% of EU households in rural areas had access to next generation broadband. Finally, age, education and farm size can also possibly play a role in the uptake of digital solutions by farmers. In 2018, 15% of individuals in rural areas had never used the internet, while a further 7% are not regular internet users. This results in a digital divide between urban and rural areas.

\(^\text{17}\) See brief on AKIS, European Commission (2019)
References

Alliance Environment et al. (2017) Evaluation study of the payment for agricultural practices beneficial for the climate and the environment, Study to the European Commission

Capgemini et al. (2011) Study on administrative burden reduction associated with the implementation of certain Rural Development measures, Study to the European Commission

Deloitte (2012) eGovernance study at EU / Member State level, Study to the European Commission

Ecorys et al. (2016) Mapping and analysis of the implementation of the CAP, Study to the European Commission

Ecorys (2017) Modernising and simplifying the CAP. Summary of the results of the public consultation, Study to the European Commission

Ecorys (Forthcoming) Synthesis of Rural Development Programmes (RDP) ex-post evaluations of period 2007-2013

Ecorys et al. (2019) Analysis of administrative burden arising from the CAP

European Commission (2014) Precision agriculture: an opportunity for EU farmers – potential support with the CAP 2014-2020, Joint Research Centre (JRC), study to European Parliament

European Commission (2017) Consultation on modernising and simplifying the common agricultural policy (CAP), Directorate General for Agriculture and Rural Development

European Commission (2017) Evaluation of the impact of the CAP measures towards the general objective of “viable food production”, Indicative roadmap

European Commission (2017) Final conclusions and recommendations, High Level Expert Group monitoring simplification for beneficiaries of ESI Funds

European Commission (2017) High Level Group monitoring simplification for beneficiaries of ESI Funds, Regional Policy


European Commission (2018 and 2019) **CAP briefs** on the nine CAP specific objectives


European Commission (2019) **Building stronger Agricultural Knowledge and Information Systems (AKIS) to foster advice, knowledge and innovation in agriculture and rural areas**

European Commission (2019) **Digital Scoreboard – Data & Indicators**


Kritikos, M. (2017) **Precision agriculture in Europe: Legal and social-ethical reflections**, Study to the European Parliament

ÖIR et al. (2012) **Synthesis of Mid-Term Evaluations of Rural Development Programmes 2007-2013**, Final Report for the European Commission

Ramboll (2006) **Study to assess the administrative burden on farms arising from the CAP**, Study to the European Commission

Roza, P. *et al.* (2012) **Simplification of the CAP, Assessment of the European Commission's reform proposals**, LEI Wageningen


Sweco, t33 & Spatial Foresight (2017) **Use of new provisions on simplification during the early implementation phase of ESIF**, Final Report for the European Commission