

Special Report

## Sustainable water use in agriculture:

CAP funds more likely to promote greater rather than more efficient water use



EUROPEAN  
COURT  
OF AUDITORS

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## Executive summary

**I** Demographic growth, economic activity and climate change are increasing both seasonal and perennial water scarcity in the EU. A substantial part of the territory is already affected by water abstraction in excess of the available supplies, and current trends indicate increasing water stress.

**II** Agriculture depends on water availability. Irrigation helps to shield farmers from irregular rainfall, and to increase the viability, yield and quality of the crops, but is a significant drain on water resources. While around 6 % of EU farmland was irrigated in 2016, the sector was responsible for 24 % of all water abstraction.

**III** In 2000, the Water Framework Directive (WFD) introduced the concept of water quantity into EU policy-making. It established the ambitious target of “good” quantitative status for all groundwater bodies by 2027 at the latest. This means that water abstractions should not lower groundwater levels to the extent that it leads to a deterioration, or non-achievement of good water status. For most Member States, the situation has improved, but in 2015, the quantitative status of around 9 % of groundwater in the EU was “poor”. The Commission has assessed the WFD as being largely fit for purpose, but has noted significant delay in achieving targets.

**IV** The common agricultural policy (CAP) could incentivise sustainable agriculture in the EU by linking payments to environmental standards. Sustainable agriculture in terms of water use is embedded in the current CAP’s policy objectives and in the proposals for the post-2020 CAP. The wide range of practices supported (including support coupled to specific products, support for water retention measures or investments in new irrigation) affect water use in agriculture in different ways.

**V** Our audit focused on the impact of agriculture on the quantitative status of water bodies. We examined to what extent the WFD and the CAP promote the sustainable use of water in agriculture.

**VI** We found that agricultural policies at both EU and Member State level were not consistently aligned with EU water policy. Systems for authorising water abstraction and water pricing mechanisms contain many exemptions for agricultural water use. Few CAP schemes link payments to strong sustainable water use requirements. Cross-compliance, a mechanism that may lead to (typically small) reductions in subsidy payments if farmers are found to have breached certain requirements, discourages

unsustainable water use, but does not apply to all CAP support or to all farmers. The CAP funds projects and practices expected to improve sustainable water use, such as water retention measures, wastewater treatment equipment and projects improving the efficiency of irrigation systems. However, these are less common than projects likely to increase the pressure on water resources, such as new irrigation projects.

**VII** Based on our findings, we recommend that the Commission:

- (1) ask Member States to justify water pricing levels and exemptions from the requirement for water abstraction authorisations when putting the WFD into practice in agriculture;
- (2) link CAP payments to environmental standards on sustainable water use;
- (3) ensure that EU-funded projects help achieve the WFD objectives.

# Introduction

## Water availability in the EU: current status and future scenarios

**01** According to the World Bank, over the past 55 years, there has been an EU-wide decrease of 17 % in renewable water resources per capita<sup>1</sup>. Though this is partly due to population growth, pressure from economic activity and climate change is also aggravating seasonal and yearlong water scarcity in parts of the EU.

**02** Climate change, with higher average temperatures and more frequent, more extreme weather events (including droughts), is making freshwater scarcer in the EU<sup>2</sup>. Forecasts indicate water stress is likely to increase in a significant portion of the EU by 2030 (*Figure 1*).

**03** According to the Commission, “extreme droughts in western and central Europe in 2018, 2019 and 2020 caused considerable damage. (...) With global warming at 3 °C, droughts would happen twice as often and the absolute annual drought losses in Europe would increase to €40 billion/year<sup>3</sup>.”

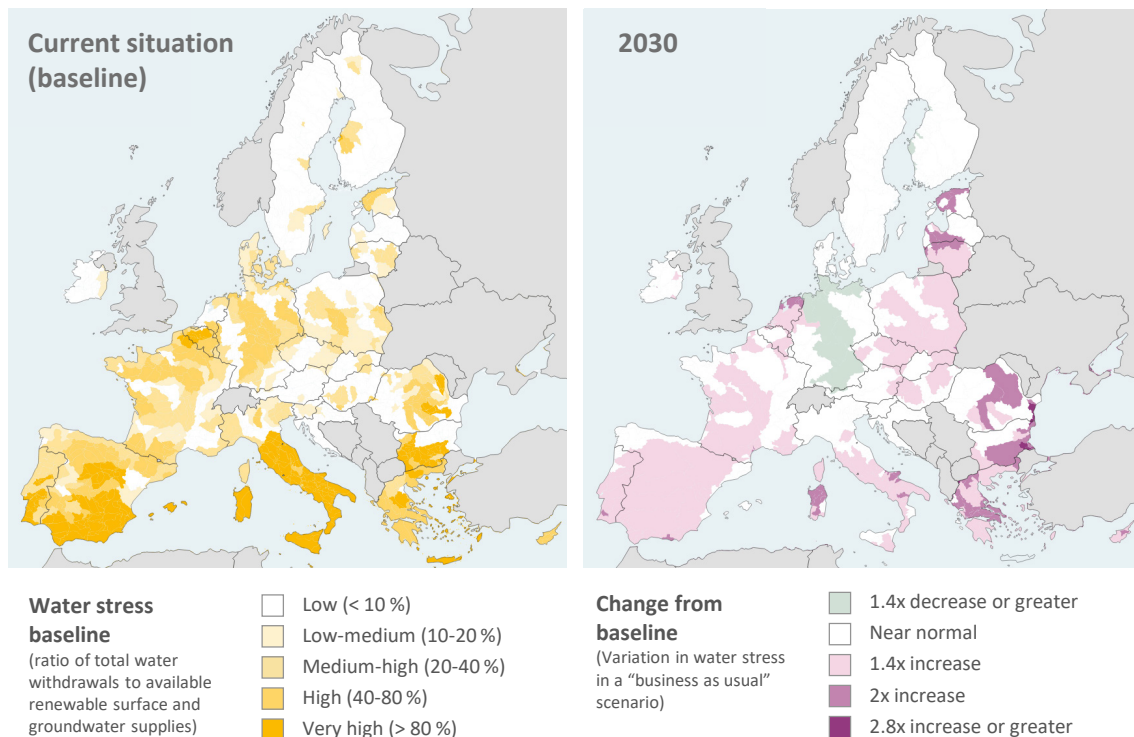
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<sup>1</sup> World Bank, [Renewable internal freshwater resources per capita \(cubic meters\) - European Union](#).

<sup>2</sup> European Commission – JRC, “World Atlas of Desertification”, [Change in aridity - shifts to drier conditions](#).

<sup>3</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: [Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change](#) (COM(2021) 82 final).

**Figure 1 – Water stress in the EU and future projections**



© World Resources Institute – [Aquaduct](#), accessed on 22/03/2021.

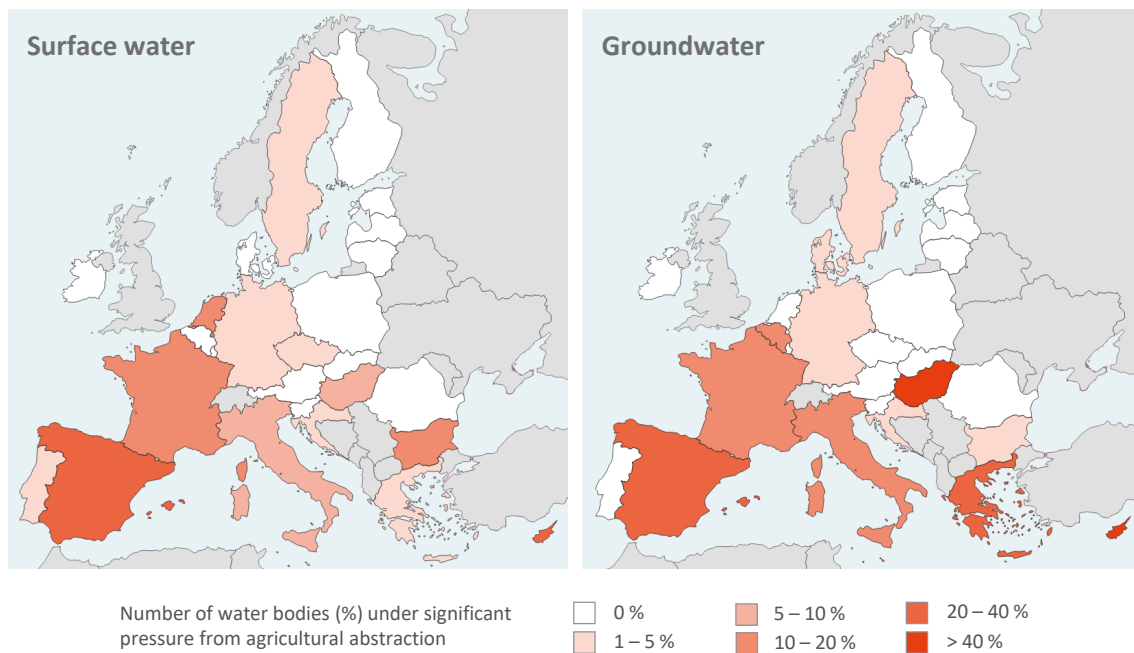
## Agriculture needs water

**04** Agricultural production depends on water availability. Irrigation offers multiple benefits to farmers, such as increased crop viability, yield and quality. Irrigation water comes from streams, rivers and lakes (surface water bodies), wells (groundwater bodies), rainwater collection and reclaimed wastewater. Around 6 % of farmland in the EU was irrigated in 2016. Drinking water for animals accounts for a small proportion of agricultural water use.

**05** Agriculture affects both water quality (e.g. through diffuse pollution from fertilisers or pesticides) and water quantity. Low water flow, for example, decreases the dilution of pollutants, thereby reducing water quality, and excessive water abstraction in coastal areas can cause saltwater intrusion in the groundwater.

**06** A recent report of the European Environment Agency (EEA)<sup>4</sup> indicates that agriculture is responsible for 24 % of water abstraction in the EU: “the last 30 years have seen some reduction in pressures, achieved thanks to efficiency gains in resource use. Agricultural water use at the EU level has decreased by 28 % since 1990, while nitrogen surplus has decreased by 10 % and nitrate concentration in rivers by 20 % since 2000. However, further gains were modest in the 2010s and pressures continue to remain at highly unsustainable levels.” In 2015, Member States reported to the Commission the share of water bodies under significant pressure from agricultural water abstraction (see [Figure 2](#)).

**Figure 2 – Number of water bodies under significant pressure from agricultural water abstraction**



Source: ECA, based on EEA, 2018, ‘[WISE Water Framework Directive \(data viewer\)](#)’, European Environment Agency.

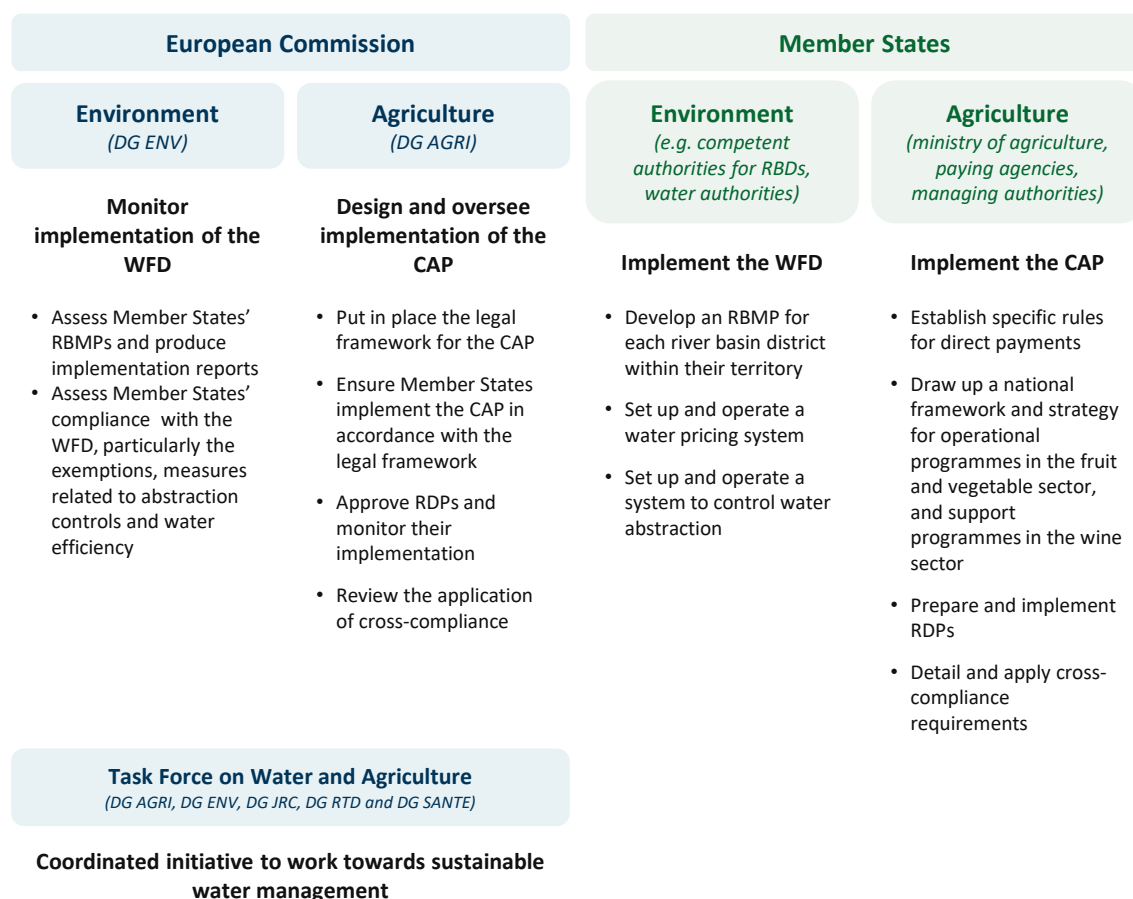
<sup>4</sup> European Environment Agency, “[Water and agriculture: towards sustainable solutions](#)”, EEA Report No 17/2020.



## The EU's role in water quantity policy

**07** The main elements of the EU's regulatory framework for water quantity and agriculture are the Water Framework Directive<sup>5</sup> (WFD) and the common agricultural policy (CAP). The main roles and responsibilities within the EU are outlined in *Figure 3*.

**Figure 3 – Main roles and responsibilities (2014-2020)**



Acronyms: CAP – common agricultural policy; WFD – water framework directive; RDP – rural development programme; RBMP – river basin management plan; RBD – river basin district

Source: ECA.

<sup>5</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, pp. 1-73).

## Water Framework Directive

**08** The EU has had policies for improving water quality since 1991 (Urban Waste Water Treatment and Nitrates directives). In 2000, the WFD introduced policies relating also to water quantity. It promotes an ecosystem-based approach to managing water, including principles such as water management at the scale of river basins, public participation, and the need to consider the impact of human activities on water resources.

**09** Under the WFD, Member States must prepare river basin management plans (RBMPs)<sup>6</sup>. These documents give details of monitoring, main pressures, objectives, exemptions and measures for the next six-year period. Member States first submitted plans to the Commission in 2009, and again in 2015. The Commission assesses progress every three years<sup>7</sup>.

**10** The WFD set a target of achieving good quantitative status for all groundwater bodies by 2015, and by 2027 at the latest where justified exemptions apply. This means that water abstractions should not lower groundwater levels to the extent that it leads to a deterioration, or non-achievement of good water status. According to the Commission's latest implementation report<sup>8</sup>, in most Member States the situation improved from 2009 to 2015, but the quantitative status of around 9 % of groundwater bodies in the EU (by area) was still "poor" (*Figure 4*). The WFD addresses quantitative aspects of surface water bodies in the definition of good ecological status, namely the hydro-morphological elements (i.e. flow regime). Member States should define objectives of "ecological flow" for each surface water body, which aim at ensuring that there is sufficient water.

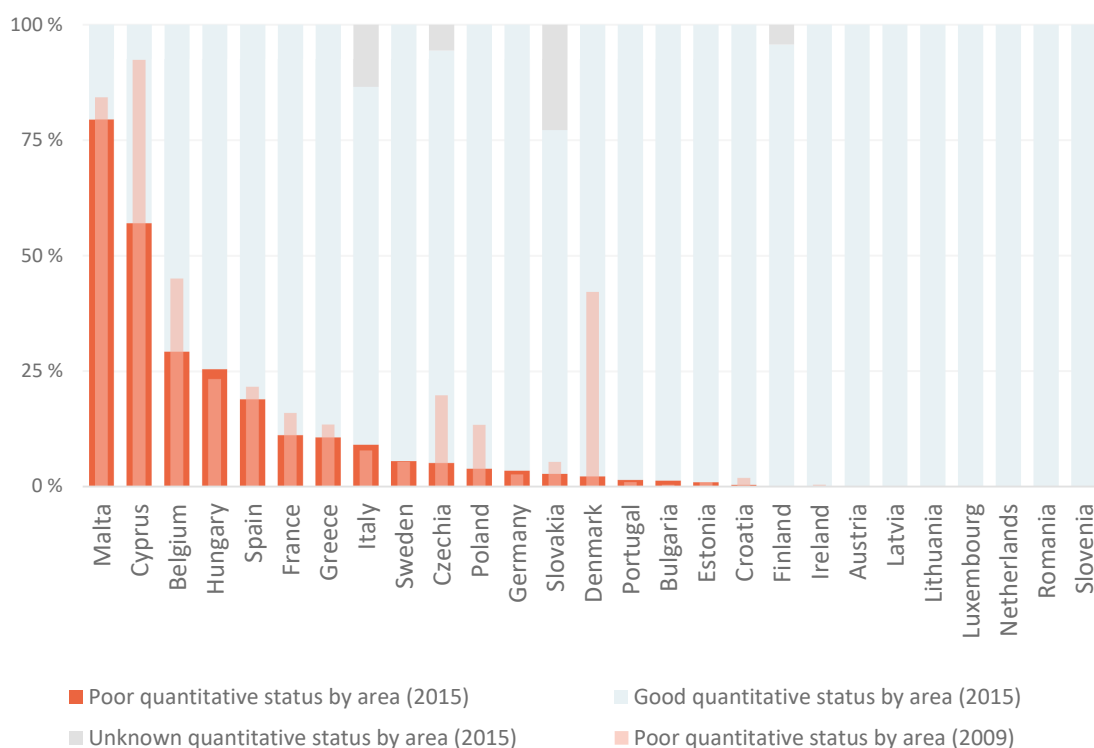
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<sup>6</sup> European Commission, [Status of implementation of the WFD in the Member States](#).

<sup>7</sup> [Directive 2000/60/EC](#), Article 18.

<sup>8</sup> European Commission, SWD(2019) 30 final, "[European Overview - River Basin Management Plans](#)".

**Figure 4 – Quantitative status of groundwater bodies**



Source: ECA based on EEA, 2018, 'Groundwater quantitative and chemical status'.

**11** In 2019, the Commission assessed the performance of the WFD between the end of 2017 and mid-2019<sup>9</sup>. The overall conclusion of this assessment was that the WFD was largely fit for purpose, although the Commission also noted: “the Directive’s implementation has been significantly delayed (...). This is largely due to insufficient funding, slow implementation and insufficient integration of environmental objectives in sectoral policies.”

## Common agricultural policy

**12** Sustainably managing natural resources (including water) is one of the three policy objectives for the 2014-2020 CAP<sup>10</sup>, alongside viable food production and balanced territorial development. In 2018, the Commission published a proposal for

<sup>9</sup> European Commission, [EU Water Legislation - Fitness Check](#).

<sup>10</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "[The CAP towards 2020: Meeting the food, natural resources and territorial challenges of the future](#)", COM(2010) 0672 final.

the post-2020 CAP<sup>11</sup>. The nine specific objectives proposed include fostering sustainable development and efficiently managing natural resources such as water, soil and air.

**13** The largest share of the CAP budget goes to direct payments (71 %)<sup>12</sup>. These include:

- o Decoupled income support such as the basic payment scheme (BPS), the single area payment scheme (SAPS) and the greening payment, which together account for 61 % of the CAP budget: €35.3 billion in 2019<sup>13</sup>.
- o Voluntary coupled support (VCS), paid by area or by head of livestock. Member States can use this optional direct payment scheme to support specific agricultural sectors that are undergoing difficulties and are particularly important for economic, social or environmental reasons. They allocated around €4.24 billion to VCS in 2020<sup>14</sup>, with one quarter going to area-based support.

**14** Producers of fruit and vegetables, wine and olive oil qualify for “common market organisation” (CMO) support to help them adapt to market changes. CMO measures include support for investments with a potential impact on water use.

**15** The European Agricultural Fund for Rural Development (EAFRD) supports EU rural development policy through Member States’ rural development programmes (RDPs). RDPs are drawn up on a national or regional basis and address EU priorities over a seven-year period. They include support for agricultural practices and investments with a potential impact on water use.

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<sup>11</sup> Proposal for a Regulation of the European Parliament and of the Council establishing rules on support for strategic plans to be drawn up by Member States under the Common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD), COM(2018)392 final.

<sup>12</sup> European Commission, CAP Indicators - [Financing the CAP](#).

<sup>13</sup> European Commission, [SWD\(2020\) 168 final](#).

<sup>14</sup> European Commission, “[Voluntary coupled support - Review by the Member States of their support decisions applicable as from claim year 2020](#)”.

**16** Reusing treated wastewater is part of a circular economy. According to a 2015 study carried out for the Commission, around 1 100 million m<sup>3</sup> of wastewater (some 0.4 % of annual EU freshwater abstractions) was being reused every year in the EU<sup>15</sup>. The EU adopted a regulation on reusing wastewater for agricultural irrigation in May 2020<sup>16</sup>. It sets minimum requirements for water quality, monitoring, risk management and transparency, and will apply from June 2023. According to the Commission’s impact assessment<sup>17</sup>, the regulation will enable the reuse of “more than 50 % of the total water volume theoretically available for irrigation from wastewater treatment plants in the EU and avoid more than 5 % of direct abstraction from water bodies and groundwater, resulting in a more than 5 % reduction in water stress overall”. The CAP can finance water treatment infrastructure for the reuse of wastewater for irrigation.

**17** Most direct payments, as well as some rural development and certain CMO payments for the wine sector, are subject to a set of rules known as *cross-compliance*. These comprise statutory management requirements (SMRs) from selected directives and regulations on the environment, food safety, plant health, animal health and welfare, and standards for good agricultural and environmental condition (GAEC), which impose sustainable agricultural practices. CAP beneficiaries that are found not to respect these rules as defined by national legislation may face a reduction in their annual EU grant.

**18** For example, GAEC 2 provides a mechanism to assess whether farmers abstracting water for irrigation comply with the authorisation procedures in their Member State. Between 2015 and 2018, 1.2 % of the CAP beneficiaries to which GAEC 2 applied were checked each year. These checks detected a low percentage of infringements (1.5 %), most of which were penalised by a reduction of 3 % (*Figure 5*) in the subsidy paid to the farmer concerned.

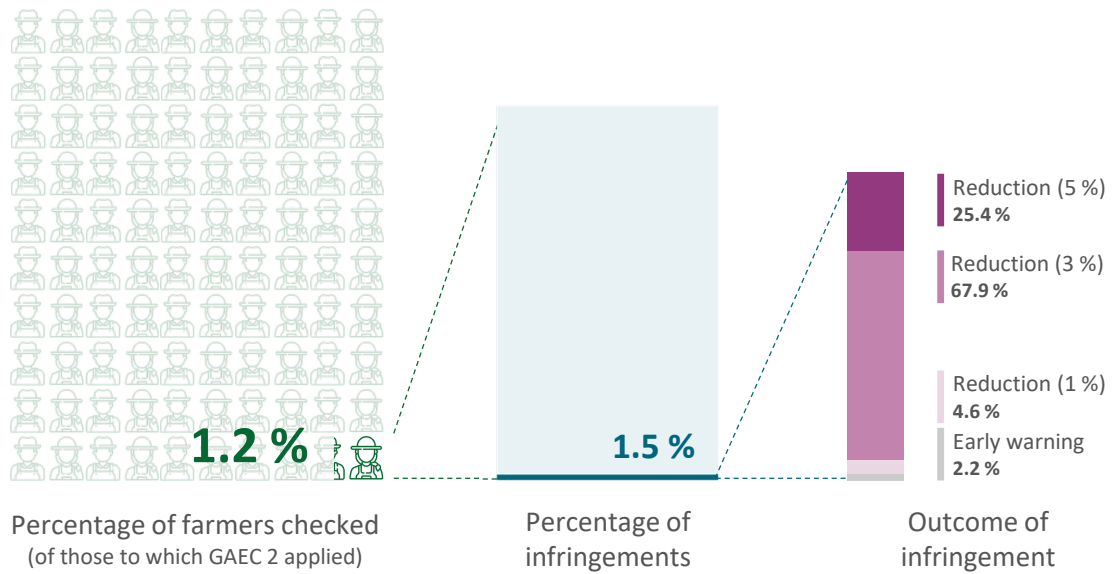
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<sup>15</sup> BIO by Deloitte (in collaboration with ICF and Cranfield University), “Optimising water reuse in the EU – Final report prepared for the European Commission (DG ENV)”, Part I.

<sup>16</sup> Regulation (EU) 2020/741 of the European Parliament and of the Council of 25 May 2020 on minimum requirements for water reuse (OJ L 177, 5.6.2020, pp. 32-55).

<sup>17</sup> European Commission, SWD(2018) 249 final/2 - 2018/0169 (COD).

**Figure 5 – GAEC 2 checks (average 2015-2018)**



Source: ECA based on data received from the European Commission.

## Audit scope and approach

**19** This audit focuses on the impact of agriculture on the quantitative status of water. As agriculture is both a major user of freshwater and one of the first sectors to be impacted when water is scarce, we assessed to what extent EU policies, namely the CAP and water policy, promote the sustainable use of water in agriculture.

**20** The Council declared in 2016<sup>18</sup> that the EU's water policy objectives should be better reflected in other policy areas, such as food and agriculture. The European Parliament has also called for better policy coordination. Water is the subject of UN Sustainable Development Goal 6 ("water and sanitation for all"), whose targets relate to water efficiency and integrated water management.

**21** We examined to what extent:

- the WFD promotes sustainable water use in agriculture;
- CAP direct payment schemes take account of the WFD principles of sustainable water use;
- CAP rural development and market measures have taken up the WFD principles of sustainable water use.

**22** The audit did not cover diffuse pollution of water due to agriculture (e.g. from nitrates or pesticides). Previous ECA reports<sup>19</sup> have focused on this in more detail.

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<sup>18</sup> Sustainable Water Management Council Conclusions, 17 October 2016.

<sup>19</sup> ECA special report 04/2014: "Integration of EU water policy objectives with the CAP: a partial success"; ECA special report 23/2015: "Water quality in the Danube river basin: progress in implementing the water framework directive but still some way to go"; ECA special report 03/2016: "Combating eutrophication in the Baltic Sea: further and more effective action needed".

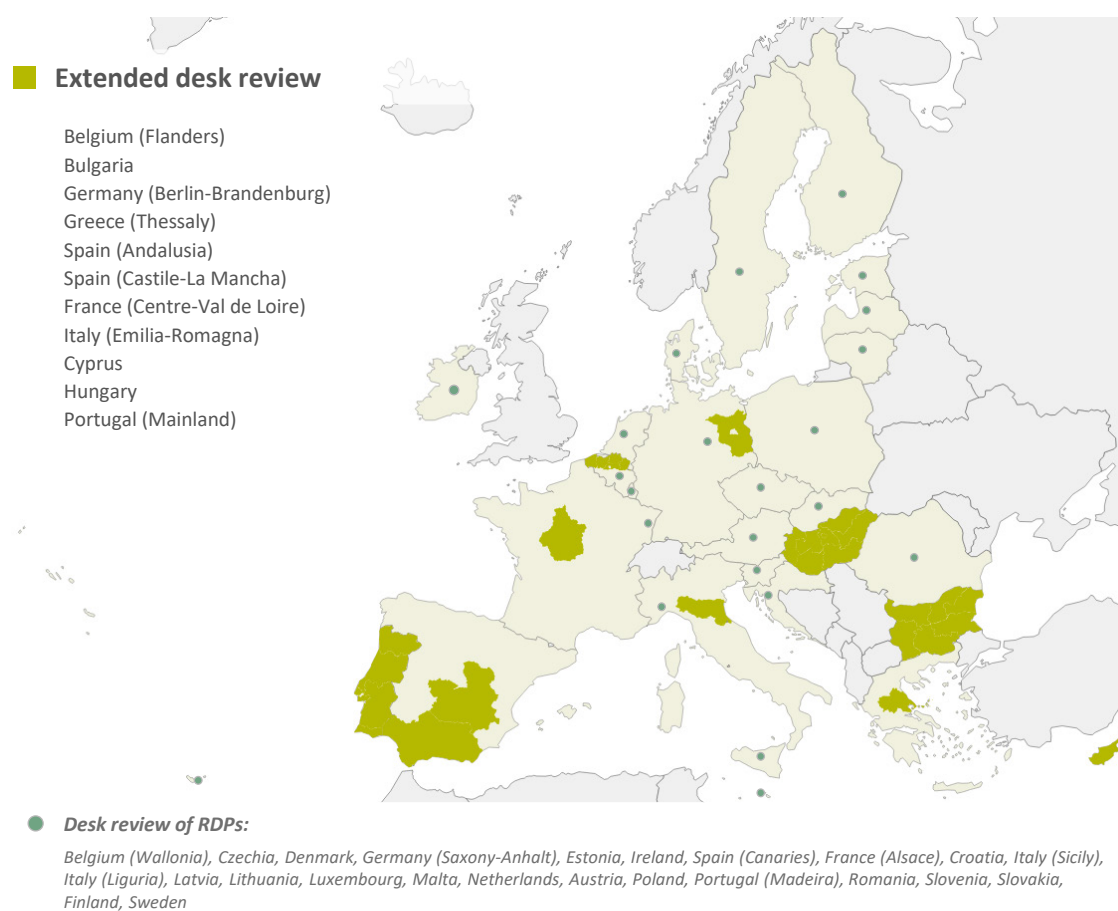
**23** The audit ran from April to December 2020. We interviewed staff at the Commission and Member State authorities and consulted other stakeholders in the water and agricultural sectors. We examined:

- the Commission's strategic documents, working documents, studies, evaluations, guidance documents, statistics, water quantity implementation reports and agricultural policies;
- rural development programmes, and national and regional rules and guidance on cross-compliance, direct payment schemes, market and rural development measures, as well as studies, research, analysis and statistics on penalties;
- river basin management plans, water abstraction rules and pricing policies;
- other relevant studies and reports, including those by the Organisation for Economic Co-operation and Development (OECD) and the European Environment Agency (EEA).

**24** Our audit covered the 2014-2020 CAP programming period. We performed extended desk reviews for 11 Member States/regions (see [Figure 6](#)), seeking a geographical balance between areas currently facing water scarcity and others where this is likely to become an issue in the future. In six of the Member States, we focused our work on one or two regions, as some Member States have regional RDPs and water management measures are decided at river basin level. We also obtained evidence for other Member States/regions from a desk review of 24 additional RDPs and the audit work carried out for our annual report.



## Figure 6 – Desk reviews



Source: ECA.

# Observations

## EU policy on sustainable water use involves derogations that apply to agriculture

**25** The WFD provides safeguards against unsustainable water use. It requires Member States, inter alia, to:

- operate a water abstraction authorisation system and register<sup>20</sup>;
- adopt water pricing policies that incentivise efficient water use and ensure adequate cost recovery for water services from the various users (including farmers)<sup>21</sup>.

**26** We examined the extent to which Member States apply the above requirements on water abstraction management, water pricing and cost recovery in the agricultural sector, and how the Commission monitors their work.

## Member States have authorisation systems in place, and apply many derogations

**27** The WFD requires Member States to keep a register of surface water and groundwater abstractions and surface water storage (“impoundment”). Water users must request prior authorisation to abstract or store water, but Member States may choose to apply exemptions where abstraction or storage has no significant impact on water status.

**28** As part of water abstraction management, Member States are required to identify and penalise any parties that use water without authorisation/notification or fail to comply with water abstraction rules (e.g. as specifically authorised).

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<sup>20</sup> Directive 2000/60/EC, Article 11.3(e).

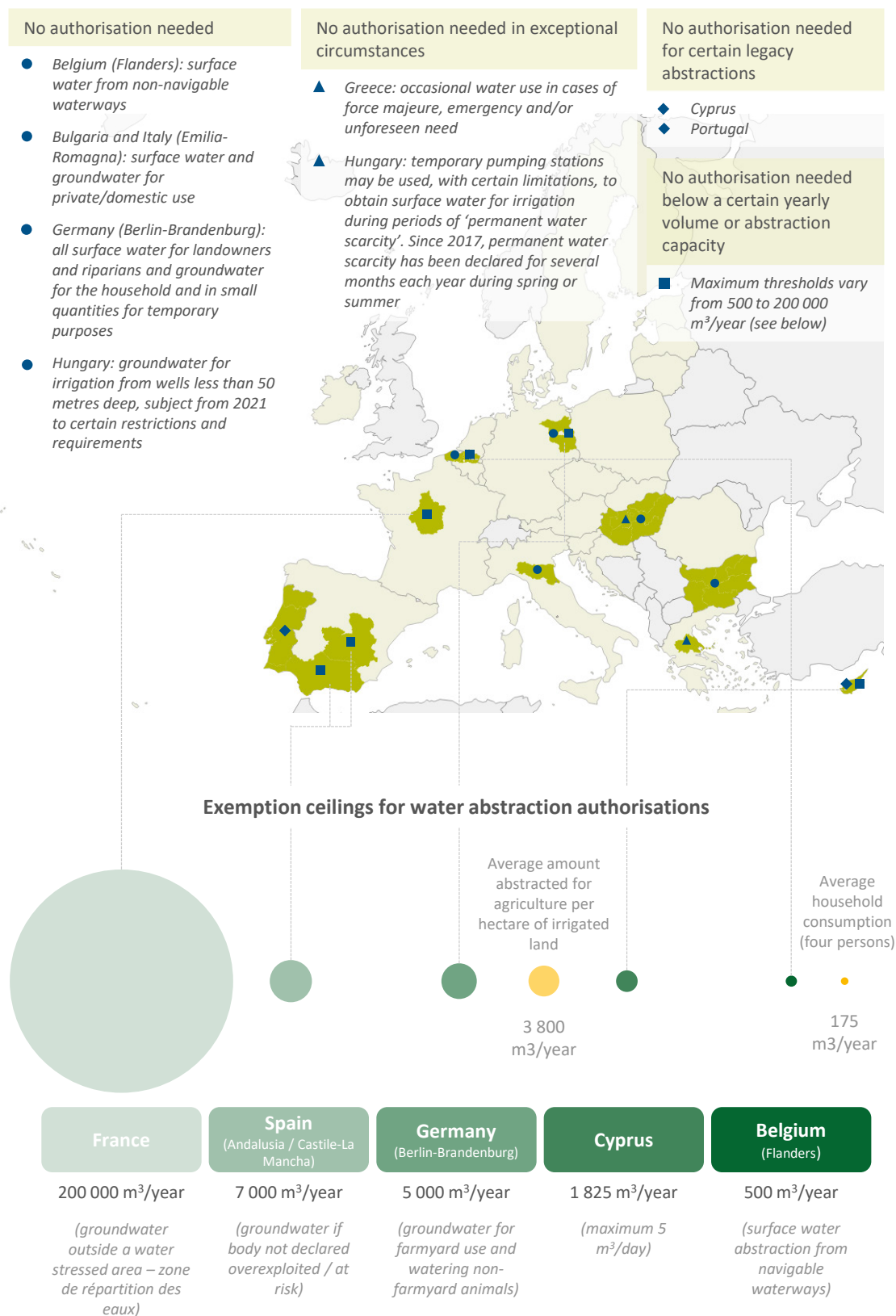
<sup>21</sup> Directive 2000/60/EC, Article 9.

### Prior authorisation systems

**29** In eight of the 11 Member States/regions we covered in our audit, all water abstraction points must be notified to the authorities. All of the Member States/regions covered in our audit have a prior authorisation system for water abstraction. When granting authorisations, Member State authorities take into account the status of the water body concerned and specify the maximum annual (or monthly) quantity that may be abstracted.

**30** Member States apply numerous exemptions (see [Figure 7](#)). These can have a significant impact on the quantitative status of the water bodies concerned. Where there is also no mandatory metering, the authorities cannot monitor whether abstraction remains below a significant level. This is the case for certain types of abstractions in Belgium (Flanders), Bulgaria, Germany (Berlin-Brandenburg), Italy (Emilia-Romagna), Cyprus and Portugal.

**Figure 7 – Exemptions from authorisation for water abstraction**



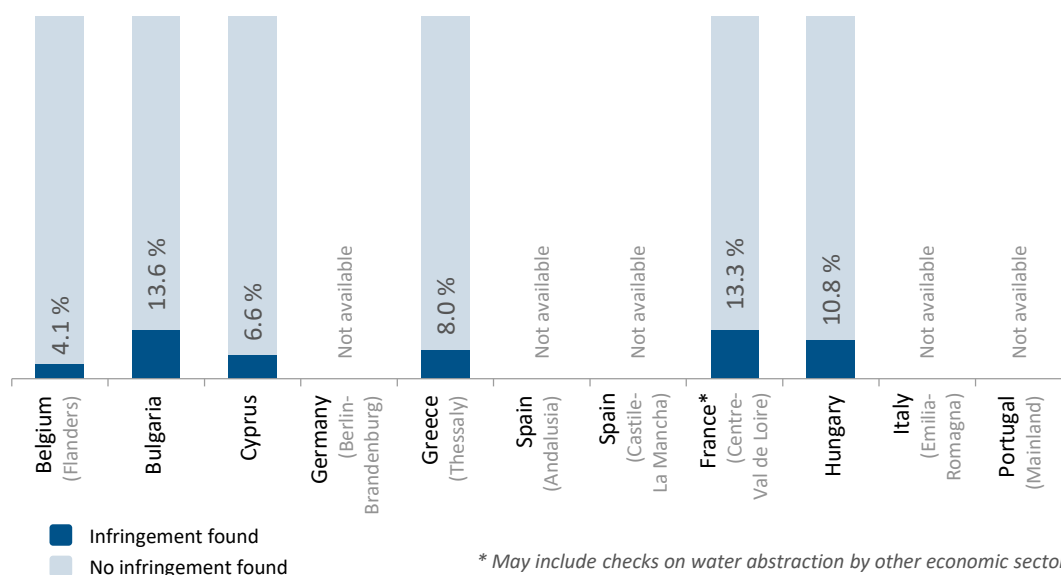
Source: ECA, based on data from the Member States, and Eurostat.

## Systems for detecting illegal water use

**31** Official recent data on illegal water abstraction in the EU is scarce. In 2015, the OECD compiled estimates from a range of sources, such as 50 000 illegal boreholes in Cyprus and over half a million unauthorised or illegal wells in Spain<sup>22</sup>. According to the Worldwide Fund for Nature, the issue is especially acute in Castile-La Mancha and Andalusia<sup>23</sup>. In Hungary, experts estimate unlicensed water use at nearly 100 million m<sup>3</sup>/year, or 12 % of registered abstractions<sup>24</sup>.

**32** Ten of the Member States/regions we examined have a control system in place to detect and penalise illegal water use. They carry out on-the-spot checks of registered abstraction points based on an annual control plan, risk analysis and/or complaints. The infringements detected in this way include unauthorised water use, unmetered pumping, excessive pumping and various other breaches of the terms of authorisation. **Figure 8** shows the rate of infringements revealed by inspections of water abstraction points.

**Figure 8 – Infringements revealed by inspections of water abstraction points for agriculture**



Source: ECA.

<sup>22</sup> OECD, “Drying Wells, Rising Stakes: Towards Sustainable Agricultural Groundwater Use”.

<sup>23</sup> WWF, “Illegal water use in Spain: Causes, effects and solutions”.

<sup>24</sup> Second river basin management plan of the Danube (2015), point 2, p. 10.

**33** In addition to on-the-spot checks of registered water abstraction facilities, some Member States have established or are developing other control mechanisms. These include:

- satellite remote sensing (see [Box 1](#));
- mandatory accreditation of drilling companies for new groundwater abstraction. Drilling companies in Belgium (Flanders) must provide regular reports on drilling operations and inform the authorities in advance of the start date to allow checks during construction. Non-compliance may result in the suspension or withdrawal of accreditation;
- regular checks on the correct functioning of flow meters for groundwater abstraction facilities in Belgium (Flanders). Metered values are compared against farm data and the annual declaration of groundwater extraction.

### Box 1

#### Use of satellite images to detect illegal water use

Several **research projects** ([DIANA](#), [IPSTERS](#), [WODA](#)) have looked into the potential of satellite images to detect unauthorised water abstraction. The results show that it is feasible to:

- identify local or regional **soil subsidence** (vertical soil movements) with millimetre accuracy using radar images (e.g. from Copernicus Sentinel 1), which can indicate groundwater over-abstraction across a given area;
- identify **irrigated areas**, estimate **abstracted volumes** for irrigation and improve water management policies and practices, especially in extreme conditions such as drought, using optical remote sensing images (e.g. from Copernicus Sentinel 2).

The projects encompassed **pilot studies** in Spain, Italy, Romania and Malta and resulted in **commercial platforms** in Italy and Spain proposing services to water use associations and farmers. The uptake of services depends not only on easy access to comprehensive auxiliary data that is digital, geo-referenced and validated, but also on the absence of legal barriers to using earth observation as a detection method or metering device.

The [La Mancha Oriental aquifer in Spain](#) is a good example of a long-lasting operational system of self-regulation. The local irrigation board monitors and manages groundwater abstraction using satellite data in combination with flow meters on the ground.

**34** In some Member States, practical difficulties make the systems in place for combating illegal water use less effective. **Belgium (Flanders)** and **Bulgaria** reported that they were unable to deploy their respective systems as intended due to staff shortages. In **Cyprus**, until October 2020, the authorities rarely imposed penalties or sanctions, since those at fault had two months to comply and submit an amended licence. **Bulgaria** and **Hungary** have repeatedly extended their deadlines for making illegal abstractions compliant without a fine.

**35** Regional authorities in the two Spanish regions we examined (**Andalusia and Castile-La Mancha**) did not provide us with any information on whether or how they detect and sanction illegal water use.

### Member States have introduced incentivising pricing mechanisms, but cost recovery is lower in agriculture than in other sectors

**36** The WFD requires Member States to embrace the principle of cost recovery for water services in accordance with the polluter pays principle. This means applying incentivising pricing policies and ensuring that all categories of water users (industry, households, agriculture, etc.) contribute adequately to cost recovery.

#### Incentivising pricing

**37** Several Member States/regions have introduced pricing mechanisms that incentivise efficient water use. Some of these mechanisms apply only to agriculture and others to all water users. For example:

- Germany (Berlin-Brandenburg), Hungary and Portugal apply a **water resource tax** based on the measured volume of use;
- Cyprus imposes a **surcharge** for every cubic metre of water used beyond the authorised volume;
- Italy (Emilia-Romagna) is planning a system of variable water prices according to the **efficiency of the irrigation system**;




- Bulgaria charges more for water used beyond a certain fixed volume for a given crop;
- Belgium (Flanders) uses **progressive pricing** for certain types of groundwater (the greater the volume abstracted, the higher the price).

**38** Other Member States/regions have introduced **price differentiation** to discourage/encourage the use of water from various sources. For example:

- prices are higher in areas where water is scarcer or under greater quantitative pressure in Belgium (Flanders), France (Centre-Val de Loire), Hungary and Portugal;
- groundwater is more expensive than surface water in Bulgaria, Germany (Berlin-Brandenburg) and France (Centre-Val de Loire);
- fresh water is more expensive than recycled water in Cyprus.

**39** Member States use a variety of methods to measure water used for agriculture (see [Figure 9](#)). Volumetric pricing at an appropriate level can incentivise the shift to water-efficient irrigation technologies and practices or to crops requiring less water. Spain (Andalusia and Castile-La Mancha) bills most irrigation water on the basis of the irrigated area, while in Italy (Emilia-Romagna) the charge for irrigation water usually depends on pumping capacity.

**Figure 9 – Billing methods: water for irrigation**

	<b>Volume</b>		<b>Capacity</b>		<b>Area</b>
<p>Water is billed by volume. The volume of abstracted water is measured by means of a flow meter installed at the abstraction point (e.g. groundwater well).</p>	<p>The water price depends on the maximum capacity of the pumping installation (e.g. expressed in kW/h or l/h).</p>	<p>Farmers pay a price per hectare, regardless of their actual water use. This sometimes depends on the crop grown.</p>			

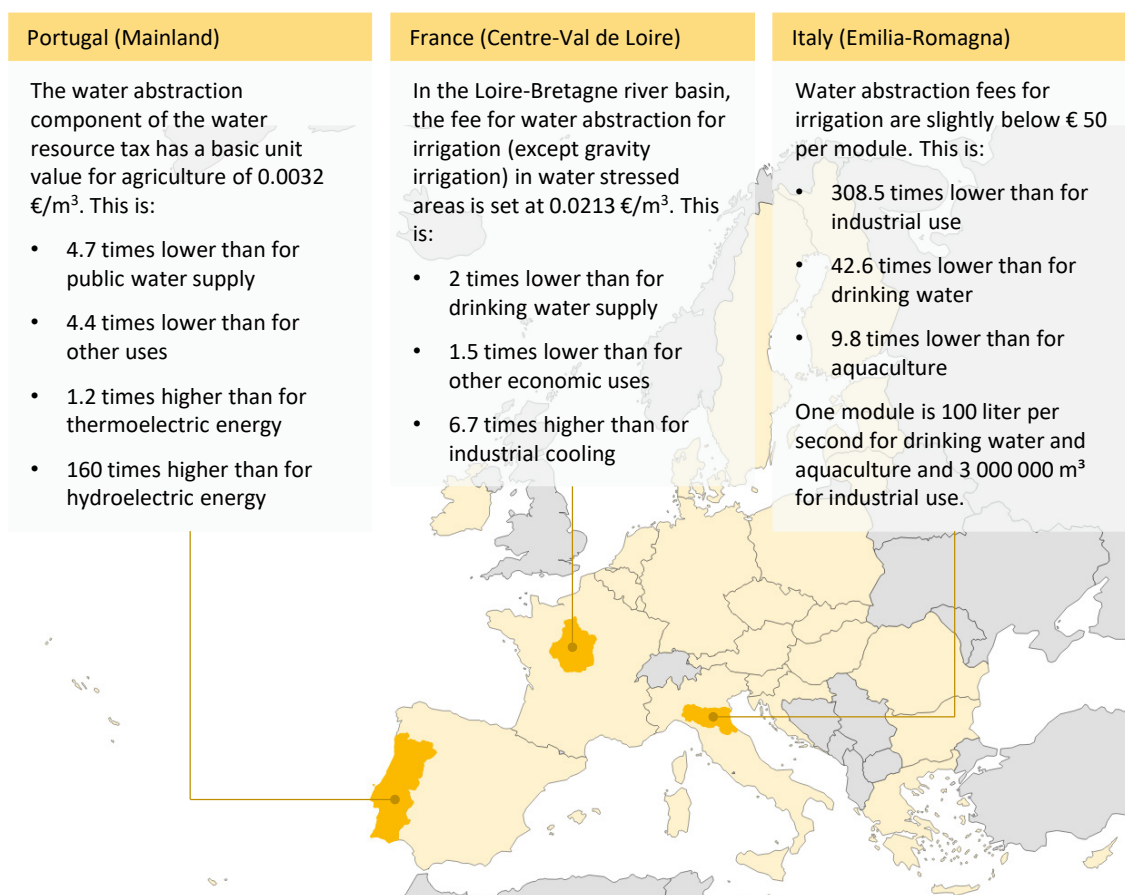
Source: ECA.



## Lower water prices for agriculture

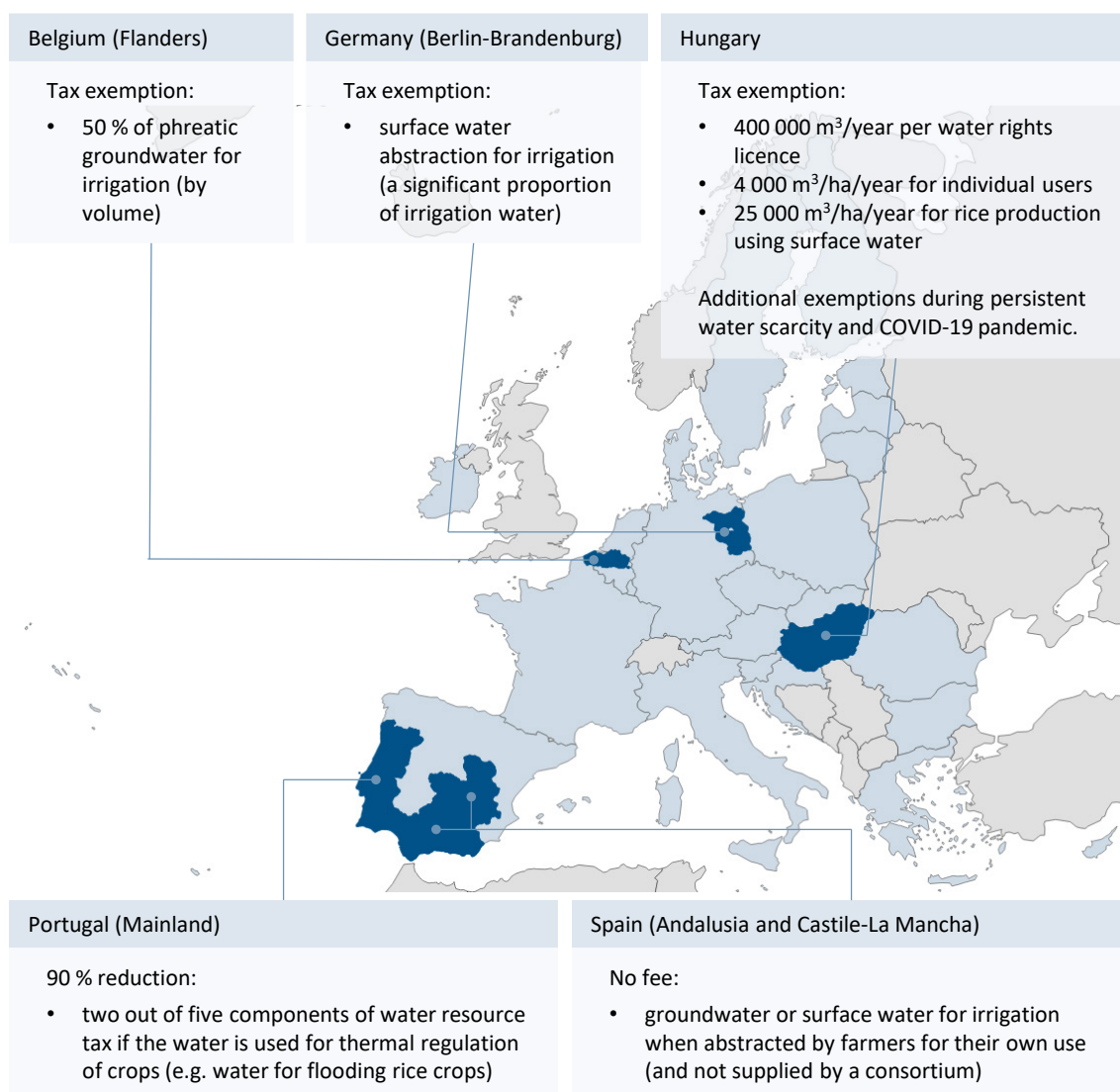
**40** In eight of the 11 Member States/regions covered in our audit, water is significantly cheaper if used for agriculture. *Figure 10* compares some water abstraction fees for agricultural use with the fees charged for use in other sectors. Several Member States/regions apply specific derogations for irrigation water (see *Figure 11*).

**Figure 10 – Comparison of water abstraction fees by sector**



Source: ECA, based on information provided by the Member States.

**Figure 11 – Price reductions applicable to irrigation water**



Source: ECA based on information provided by the Member States.

**41** Six of the Member States/regions do not require any payment for water abstraction **up to a certain volume**. The pricing threshold varies. It is 500 m<sup>3</sup>/year in Belgium (Flanders) and Hungary, 10 m<sup>3</sup>/day in Bulgaria, 7 000 m<sup>3</sup>/year in Spain (Andalusia) and France (water-stressed areas), 10 000 m<sup>3</sup>/year in France (outside water-stressed areas), and 16 600 m<sup>3</sup>/year in Portugal (private abstraction). In every case it applies to all users, not only farmers.

## Cost recovery of water services

**42** The WFD requires Member States to carry out an economic analysis of water use. This calculation should help with assessing the extent to which the costs of water services (e.g. water abstraction for irrigation) are paid by users (the cost recovery principle). According to the EU guidance<sup>25</sup>, Member States should consider including the following in the economic analysis:

- (1) The financial costs of providing and administering water services:
  - operating and maintenance costs (e.g. energy);
  - capital costs (e.g. infrastructure depreciation);
  - administrative costs (billing, administration and monitoring).
- (2) The environmental and resource costs of water services:
  - environmental damage due to abstraction, storage and impoundment;
  - opportunity costs of alternative water uses (e.g. costs relating to groundwater over-abstraction), as current and future users will suffer if water resources are depleted.

**43** In their economic analyses, several Member States/regions assess the environmental costs by estimating the cost of the measures needed to achieve good water status throughout a river basin district. The authorities in Italy (Emilia-Romagna) and Spain (Andalusia and Castile-La Mancha) consider resource costs relevant only if they assess water to be scarce. The authorities of Bulgaria and Germany (Berlin-Brandenburg) comment that there is still no common agreement on the methodology for calculating environmental and resource costs.

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<sup>25</sup> European Commission, Common Implementation Strategy for the Water Framework Directive, “Guidance document no. 1 Economics and the environment” and “Information Sheet on Assessment of the Recovery of Costs for Water Services for the 2004 River Basin Characterisation Report (Art 9)”.

**44** Eight of the national and regional authorities of the Member States covered in our audit considered that cost recovery for water services in agriculture is incomplete. One element in this is that environmental and resource costs are not (yet) reflected in water pricing. The Commission pointed out in its WFD fitness check (see paragraph [11](#)) that this represents a hidden cost to society and puts a strain on a potential source of revenue for financing measures to implement the WFD.

### **The Commission considers WFD implementation to be progressing slowly**

**45** The Commission is required to monitor how Member States implement the WFD. To this end, it assesses the progress of implementation (see paragraph [09](#)) every three years, mainly relying on Member States' reports, and publishes its own implementation report. The most recent Commission report (February 2019) covered the second round of RBMPs and contained an EU-wide overview and country-specific assessments with recommendations.

#### **Prior authorisation systems**

**46** A Commission staff working document<sup>26</sup> reported progress in the creation and operation of prior authorisation systems, such as improvements in metering, water abstraction controls, licenses and water abstraction datasets. However, as our observations confirm (paragraphs [29-30](#)), the staff working document concluded that “more progress is needed especially in those Member States in which small abstractions are exempted from controls and/or register, but water bodies are suffering from significant water abstraction pressures and therefore do not achieve good status”. The document concluded that there had been little progress in improving status due to reducing abstraction pressures since the first round of RBMPs, but that total water abstraction had decreased by around 7 % between 2002 and 2014.

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<sup>26</sup> European Commission, [SWD\(2019\) 30 final](#).

## Water pricing and cost recovery

**47** In the 2014-2020 programming period, the Common Provisions Regulation<sup>27</sup> introduced a mechanism known as “ex-ante conditionality” for several EU funds, including the rural development fund. If any ex-ante condition was not fulfilled by 30 June 2017, the Commission had the option of suspending interim payments to the relevant RDP priority pending corrective action.

**48** One such condition concerns the water sector. In practice, the financing of irrigation investments programmed in focus area 5(a) “increasing efficiency in water use by agriculture” depends on the Member State or region having a water pricing policy that:

- (a) provides adequate incentives for users to use water efficiently; and
- (b) takes cost recovery for water services into account.

**49** Overall, the Commission considers that the ex-ante conditionality mechanism was an effective way of inducing Member States to upgrade their water pricing policies<sup>28</sup>: “Steps were made in defining water services, calculating financial costs, metering, performing economic analysis and assessing both environmental and resource costs”. At the same time, the Commission acknowledges that cost recovery for water services is incomplete in most Member States.

**50** Despite the positive impact of the ex-ante conditionality for the water sector during 2014-2020, the ex-ante conditionality mechanism did not appear in the Commission’s proposal for the post-2020 CAP.

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<sup>27</sup> Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006 (OJ L 347, 20.12.2013, p. 320).

<sup>28</sup> Report from the Commission to the European Parliament and the Council on the implementation of the Water Framework Directive (2000/60/EC) and the Floods Directive (2007/60/EC), COM(2019) 95 final.

## Compliance with the WFD

**51** If the Commission considers that a Member State does not comply with the WFD obligations, it can bring an infringement procedure against the Member State in the EU Court of Justice. In case C-525/12<sup>29</sup>, the Court found that Member States are free to determine the mix of policies and the funding that are needed to achieve the WFD objectives. In accordance with its general policy on infringements, the Commission now prioritises structural rather than individual cases of non-compliance.

**52** The Commission recently decided to address specific points requiring attention in letters to all Member States. Between September 2020 and April 2021, it sent letters following up on its assessment of the information reported in the second round of RBMPs. In those letters it identified apparent instances of non-compliance and asked the Member States to justify those issues, rectify them or clarify how they had already been addressed or would be addressed in the third round of RBMPs. In December 2020, the Commission sent another set of letters to all Member States in which it specifically addressed their mechanisms for compliance assurance and penalties in the field of abstraction and point source / diffuse pollution. The Member States were asked to provide details of their domestic rules on water abstraction under Article 11(3)(e) WFD.

## CAP direct payments do not significantly encourage efficient water use

**53** According to the Treaty on the Functioning of the European Union, “environmental protection requirements must be integrated into the definition and implementation of the Union policies and activities, in particular with a view to promoting sustainable development”. We therefore checked whether the EU’s water policy objectives were reflected in the main CAP funding instruments.

**54** Both decoupled (income support) and coupled (area-based) schemes assign aid on the basis of the area farmed. We assessed whether:

- (1) these support payments were conditional on sustainable water use; and
- (2) they were an incentive or a disincentive to irrigate.

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<sup>29</sup> Judgement of the European Court of Justice of 11 September 2014 in Case C-525/12.

## CAP income support does not promote efficient water use or water retention

**55** Payments under both the SAPS and the BPS are currently neutral on irrigation: they neither provide an incentive to use water efficiently, nor to irrigate or use more water. The **SAPS** payment rate per hectare is identical for all beneficiaries and crop types within each of the ten Member States that apply the SAPS. The **BPS** payment rate is set by the Member States and may vary between beneficiaries, partly depending on their CAP payment history. In some Member States (e.g. Spain and Greece) it may also vary by type of agricultural land. The ECA has previously reported<sup>30</sup> on the significant differences that persist in certain Member States, such as Spain.

**56** Neither of these two direct payment schemes, nor the Greening Payment scheme imposes obligations on farmers regarding sustainable water use. Greening may, however, have indirect positive effects through the requirement for farmers to preserve permanent grassland (which, unlike arable land, is not normally irrigated). It also focuses on the conservation of terraces, other landscape features, and ecological focus areas such as uncultivated buffer strips, all of which can increase natural water retention. In practice, as we reported in 2017<sup>31</sup>, greening led to changes in farming practices on only around 5 % of all EU farmland.

**57** CAP support incentivises the drainage of fields rather than water retention. The 2014-2020 CAP makes drained peatlands eligible for income support, whereas inspections sometimes consider farmed wet peatlands to be ineligible. Apart from having a negative impact on groundwater reserves, draining peatland releases greenhouse gases<sup>32</sup>. The European Parliament's amendments to the Commission's post-2020 CAP proposal<sup>33</sup> take into account paludiculture (farming and forestry on wet

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<sup>30</sup> ECA special report 10/2018: "Basic Payment Scheme for farmers – operationally on track, but limited impact on simplification, targeting and the convergence of aid levels".

<sup>31</sup> ECA special report 21/2017: "Greening: a more complex income support scheme, not yet environmentally effective".

<sup>32</sup> Peatlands in the EU - position paper.

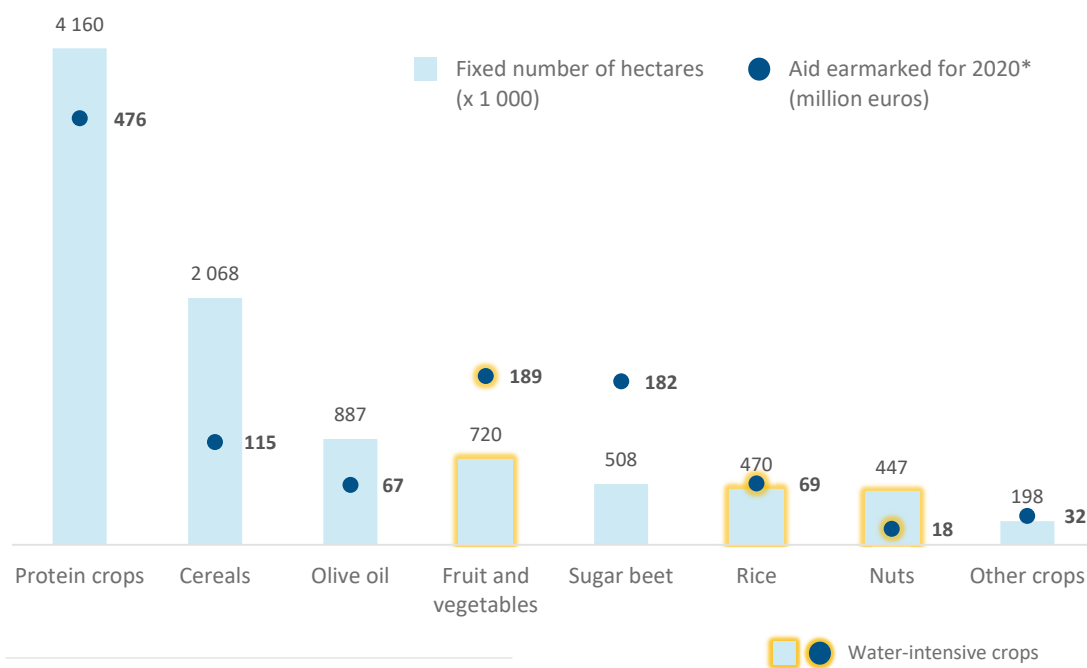
<sup>33</sup> Amendments adopted by the European Parliament on 23 October 2020 on the proposal for a regulation of the European Parliament and of the Council establishing rules on support for strategic plans.

soils, predominantly peatlands) as an eligible agricultural activity for CAP income support.

## The EU supports water-intensive crops in water-stressed areas through voluntary coupled support

**58** VCS is used by all Member States except Germany to maintain or increase production of certain crops from sectors in difficulties<sup>34</sup>. The EU restricts support to specific sectors<sup>35</sup>, including water intensive crops such as rice, nuts, and fruit and vegetables (see *Figure 12*).

**Figure 12 – Notified VCS measures for crops (2020)**



Source: European Commission.

<sup>34</sup> European Commission, “Voluntary coupled support - Review by the Member States of their support decisions applicable as from claim year 2020”.

<sup>35</sup> Regulation (EU) No 1307/2013, Article 52.2.



**59** The EU's rules on VCS state that "any coupled support granted (...) shall be consistent with other Union measures and policies"<sup>36</sup>, which should allow the Commission to reject incompatible schemes. The Commission has not assessed the impact of proposed measures on sustainable water use.

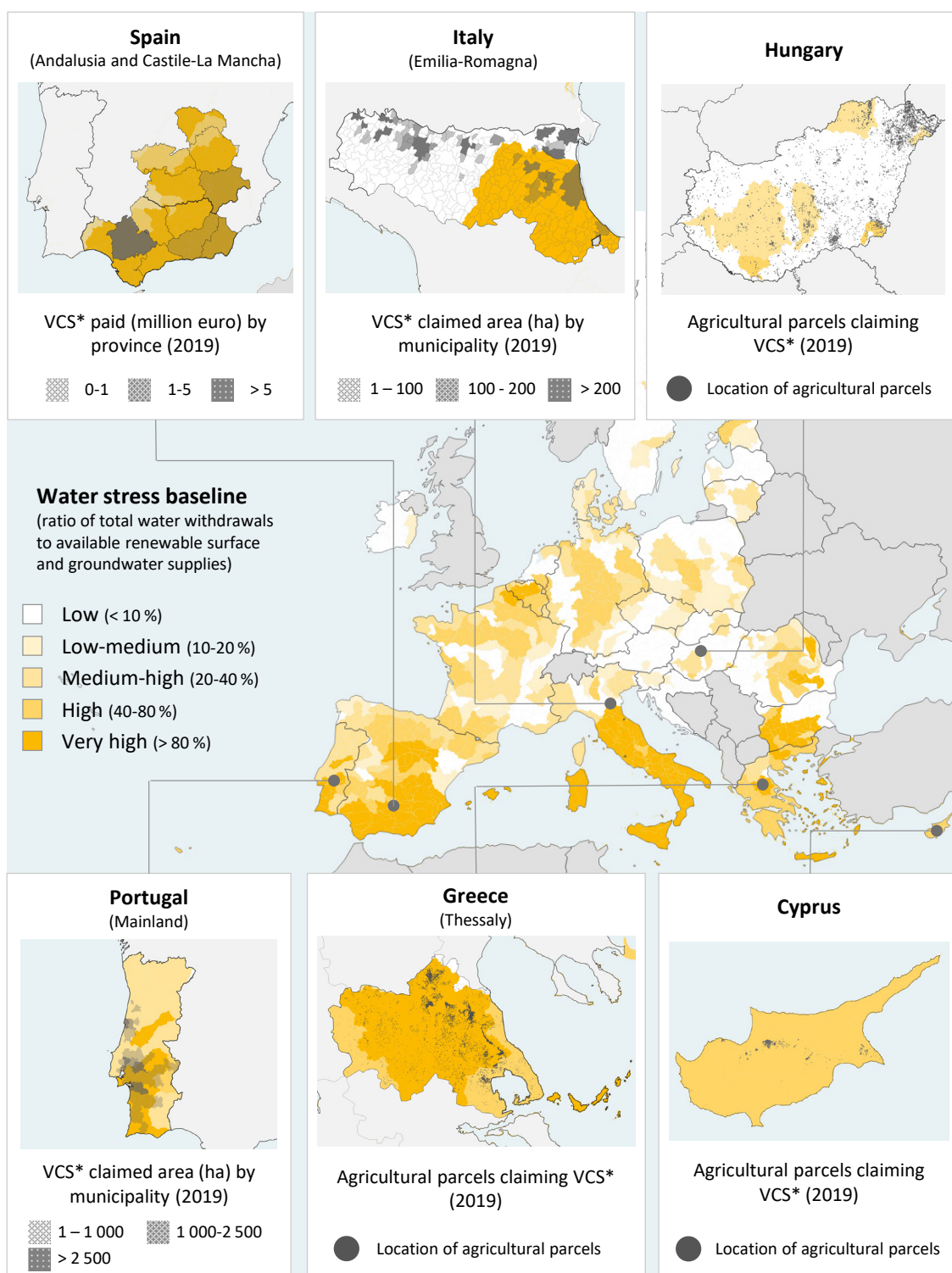
**60** None of the Member States/regions we reviewed had introduced safeguards on water use, such as restrictions on support in water-stressed areas or for parcels without efficient irrigation systems.

**61** Nine of the eleven Member States/regions covered in our audit use VCS for crops. Eight support water-intensive crops without geographical restriction. As a result, Member States use EU funds to support water-intensive crops in water-stressed areas. *Figure 13* shows that six Member States use VCS for water-intensive crops in areas with high or very high levels of water stress.

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<sup>36</sup> Regulation (EU) No 1307/2013, Article 52.8.

**Figure 13 – VCS for water-intensive crops and areas under water stress**



\* VCS for water intensive crops only. Based on the analysis of data from several sources, we considered the following crops to be water intensive: fruit and vegetables, rice, and nuts.

Disclaimer: due to differences in the source data, the maps are not comparable between countries.

Source: ECA and World Resources Institute Aqueduct, accessed on 22/03/2021.

## Cross-compliance covers illegal abstraction of water, but checks are infrequent and penalties are low

**62** Cross-compliance ties direct payments (and some other CAP payments) to certain environmental obligations. One of the cross-compliance conditions (GAEC 2) covers water abstraction authorisation procedures set by the Member States.

National/regional authorities check 1 % of specified groups of farmers who irrigate their fields, and impose penalties (typically a 3 % reduction in their subsidy under BPS or SAPS) for those who do not comply with national/regional water abstraction authorisation procedures

**63** In practice, arrangements have changed little since we reported on this in 2014<sup>37</sup>. GAEC 2 is worded generically: “Where use of water for irrigation is subject to authorisation, compliance with authorisation procedures”. The Commission did not ask Member States to impose specific requirements, such as installing water meters and reporting on water use. The GAEC will have no impact in Member States with weak authorisation procedures. The fact that it does not apply to all CAP beneficiaries (e.g. beneficiaries of the small farmers scheme, non-annual rural development payments or CMO aid for the fruit and vegetable or olive sectors), and that Member States do not carry out proper checks, further reduces its potential.

**64** The Commission’s proposal for the post-2020 CAP continues with the concept of cross-compliance (now re-named “conditionality”). It expands coverage to the small farmers scheme, but simultaneously excludes beneficiaries of CMO wine payments.

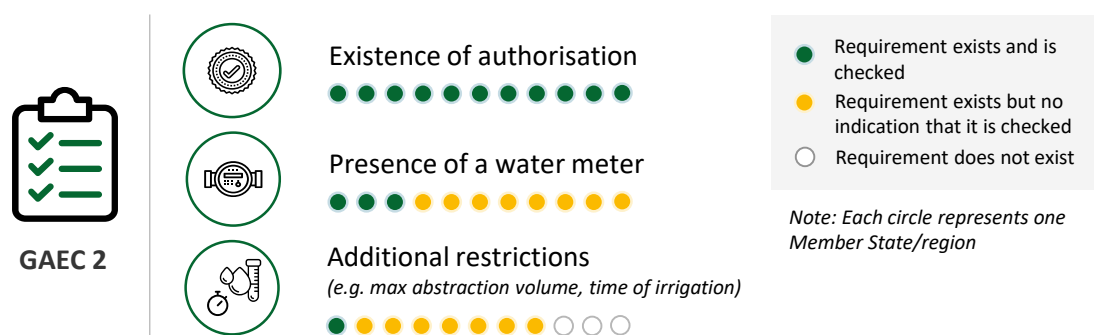
**65** Under the principle of subsidiarity, Member States are free to implement and enforce the water authorisation obligation as they see fit. Ten of the Member States/regions covered in our audit take a selective approach towards GAEC 2, often omitting certain national or regional regulatory requirements for water abstraction in their checks (*Figure 14*).

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<sup>37</sup> ECA special report 04/2014, “Integration of EU water policy objectives with the CAP: a partial success”, paragraphs 38-48.

**66** The only check common to all control systems we examined is on the need for authorisation to abstract irrigation water. In most cases, inspections also include a visual check of parcels to detect illegal abstraction or irrigation. This applies to Belgium (Flanders), Germany (Berlin-Brandenburg), Spain (Andalusia and Castile-La Mancha), Italy (Emilia-Romagna), Hungary and Portugal. Three of the eleven Member States and regions check for the presence of meters - Belgium (Flanders), France (Centre-Val de Loire), Cyprus. Ten of the 11 did not check the content of authorisations, such as maximum abstraction volume and time of irrigation (all Member States/regions covered in our audit except Belgium (Flanders)). A similar weakness is reported in the evaluation support study on the impact of the CAP on water.<sup>38</sup>

**Figure 14 – GAEC 2 components checked in 11 Member States/regions**

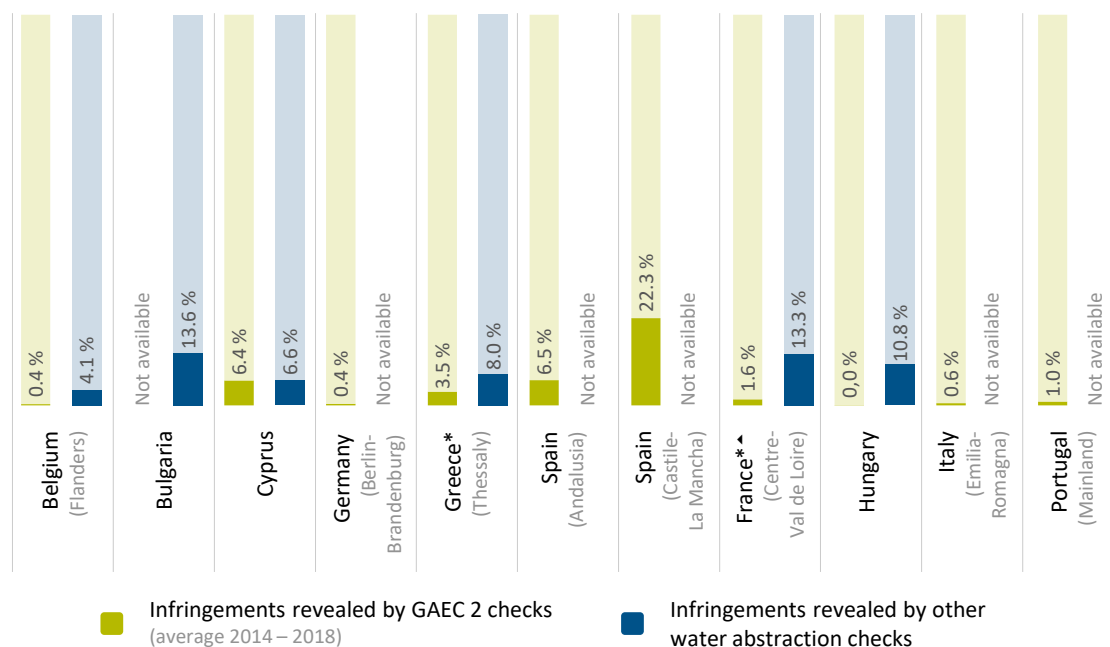


Source: ECA.

**67** The cross-compliance control statistics which Member States report to the Commission show significant differences both between countries and between regions. In Spain, for example, the average non-compliance rate is significantly higher for Castile-La Mancha than for Andalusia (**Figure 15**). In all the Member States/regions for which we obtained data, the GAEC 2 non-compliance rate is lower than the rate for other water abstraction checks as described in paragraph 32 (see **Figure 15**). There is a significant risk that cross-compliance checks do not detect cases of illegal water abstraction.

<sup>38</sup> DG AGRI and EEIG Alliance Environnement, “Evaluation of the impact of the CAP on water. Final report”.

**Figure 15 – Non-compliance rates revealed by GAEC2 checks and other water abstraction checks in 11 Member States/regions**



\* Cross-compliance results are for the whole country, the results on other infringements for the region

^ Other water abstraction checks may include economic sectors other than agriculture

Source: ECA.

**68** In 2013, the European Parliament and Council called on the Commission<sup>39</sup> to monitor the Member States' transposition of the WFD into national law, and its implementation, and to present a proposal for including relevant parts of the WFD in cross-compliance. The Commission did not make a proposal on including any parts of the WFD in the 2014-2020 cross-compliance framework. However, the proposal for the post-2020 CAP does explicitly refer to the WFD article on controls over water abstraction<sup>40</sup>, making them a mandatory requirement (SMR1) under the new conditionality rules. This introduces a clear link between the WFD and CAP payments to farmers and could lend the article greater force.

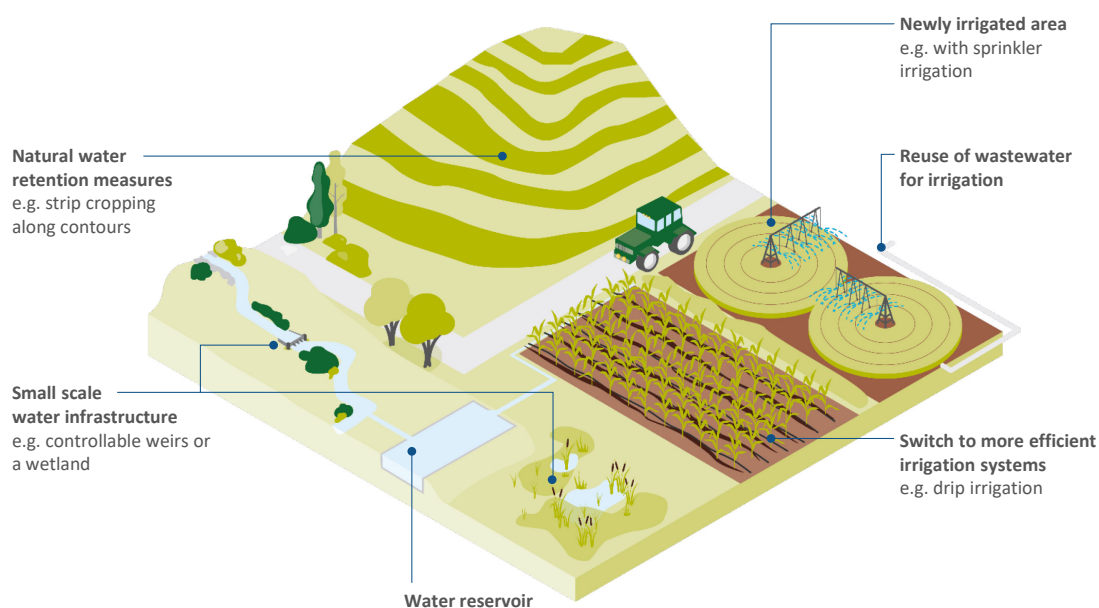
<sup>39</sup> Regulation (EU) No 1306/2013 of the European Parliament and of the Council of 17 December 2013 on the financing, management and monitoring of the common agricultural policy (OJ L 347, 20.12.2013, pp. 549-607), Joint statement by the European Parliament and the Council on cross-compliance.

<sup>40</sup> Directive 2000/60/EC, Article 11.3(e).

## Rural development funds and market measures do not significantly promote sustainable water use

**69** Apart from direct payments, the CAP also funds farmers' investments in fixed assets and supports specific actions, such as a commitment to certain agricultural practices. Some investments and actions have a positive impact on water use, while others increase water use (see also [Figure 16](#)). Funding for farm advisory systems or cooperation projects may also have an impact on water use, though indirectly.

**Figure 16 – Agricultural practices and investments that affect water use**



Source: ECA.

## Rural development programmes are seldom used to improve water quantity

**70** Through rural development programmes national or regional authorities can support:

- (a) agricultural practices or green infrastructure with a positive effect on water availability in agricultural soils (water retention measures);
- (b) farmers for the additional costs and lost income stemming from implementing WFD requirements;
- (c) waste water treatment infrastructure for water reuse in irrigation.

We examined the extent to which these options are used.

**71** Member States can use rural development funds to finance **natural water retention measures** (see [Figure 17](#)). Five of the Member States/regions covered in our audit take advantage of this opportunity:

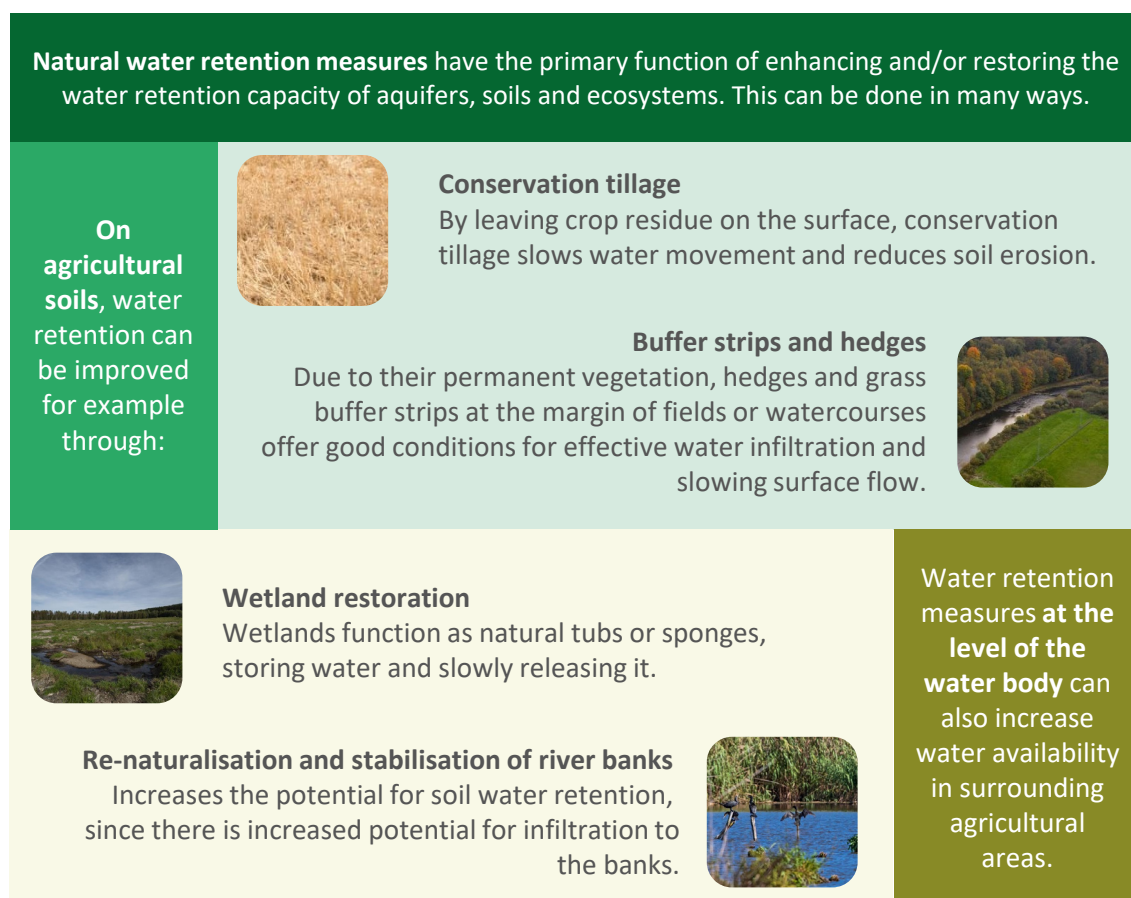
- Belgium (Flanders), Spain (Andalusia), Hungary, Italy (Emilia-Romagna) and Portugal have funded agri-environment-climate commitments<sup>41</sup> whose main purpose is to conserve soil, build up organic matter and reduce erosion, thereby helping to increase water retention.
- Belgium (Flanders) has financed one project concerning green infrastructure for water retention<sup>42</sup>, and Hungary eight projects.

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<sup>41</sup> Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) (OJ L 347, 20.12.2013, p. 487), Article 28.

<sup>42</sup> Regulation (EU) No 1305/2013, Article 17.1(d).

**Figure 17 – Natural water retention measures**



Source: ECA, based on the EU catalogue of natural water retention measures.

**72** Natural water retention measures may deliver multiple benefits, including groundwater recharge, drought management and flood risk reduction, but their effectiveness is limited if they are used in a small area<sup>43</sup>. Seven of the eleven Member States/regions covered in our audit do not finance such measures through rural development measures (see also [Figure 18](#)).

**73** Member States can use rural development funds<sup>44</sup> to **compensate farmers** for the additional costs and lost income resulting from requirements in a river basin management plan. None of the Member States/regions covered in our audit used this option.

<sup>43</sup> EEA Report No 17/2020, p. 68.

<sup>44</sup> Regulation (EU) No 1305/2013, Article 30.



**74** National/regional authorities can include support for investments in infrastructure for **reusing wastewater for irrigation** in their RDPs<sup>45</sup>. Five of the Member States/regions we examined did not include the option in their RDPs. In three Member States/regions it is included as part of a sub-measure but has not been used to finance any projects. Two Member States have financed relevant projects (see **Box 2**).

### Box 2

#### Rural development funded investments in wastewater reuse

In **Cyprus**, rural development funds were used to finance one large project, which involves building a 500 000 m<sup>3</sup> water tank to store excess recycled water for use in agriculture during the summer, as well as a 20 km primary and secondary distribution network covering 1 700 hectares.

In **Belgium (Flanders)**, rural development funds supported several projects for the treatment of wastewater for irrigation or watering livestock. Two examples:

- water purification equipment at a tomato grower to disinfect the processed water and remove pesticide residue;
- a purification plant to convert wastewater from a dairy processing company into drinking water for cattle and liquid digestate from a dairy farm into irrigation water.

### EU funding for irrigation projects has weak safeguards against unsustainable water use

**75** Various forms of EU funding are available to finance irrigation projects. Member States can use rural development funds for investments in physical assets, or CMO support in certain sectors (fruit and vegetables, olives and olive oil, wine), to finance the modernisation or first installation of irrigation equipment (e.g. on farms) or infrastructure (e.g. networks).

**76** We examined:

- (1) the extent to which these funds are used to support irrigation projects;

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<sup>45</sup> Regulation (EU) No 1305/2013, Article 17.

- (2) whether the Commission and Member States have defined safeguards against unsustainable water use; and
- (3) whether Member States have checked the respective requirements.

**77 Modernising existing irrigation systems** may increase water use efficiency, for example by repairing leaking channels, covering open channels to reduce evaporation or switching to more efficient irrigation systems. However, efficiency improvements do not always result in overall water savings, since the saved water may be redirected to other uses, such as more water-intensive crops or irrigation across a wider area. This is known as the rebound effect<sup>46</sup>. In addition, in a phenomenon known as the “hydrological paradox”, increased irrigation efficiency may reduce the return of surface water to rivers, decreasing base flows that are beneficial to downstream users and sensitive ecosystems<sup>47</sup>.

**78 Installing new irrigation infrastructure** that extends the irrigated area, is likely to increase the pressure on freshwater resources unless the system uses rainwater or recycled water. The Commission evaluation support study on the impact of the CAP on water (see footnote 38) confirmed this risk: “to date, it is difficult to guarantee that investments in irrigation are beneficial to water bodies, especially if the irrigated area increases where water bodies are under stress.”

#### **Rural development investment support**

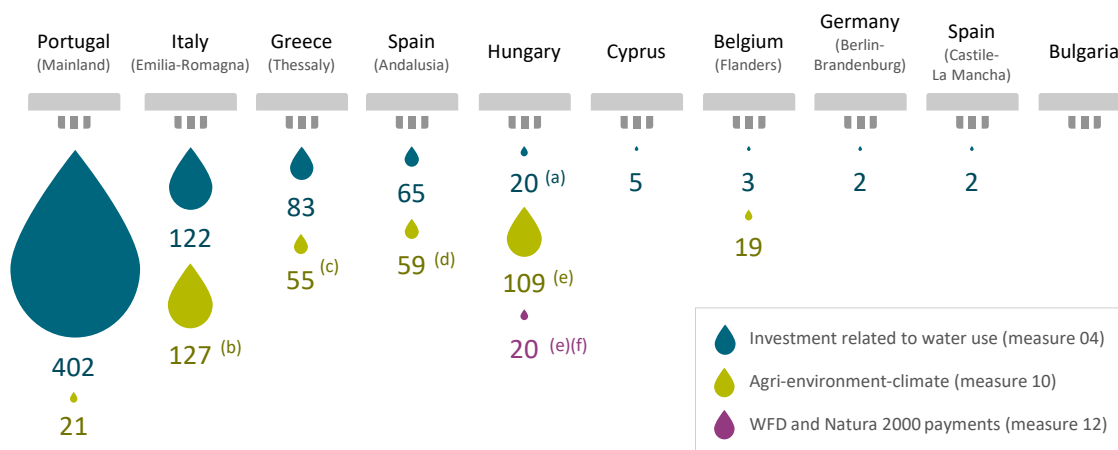
**79** All but one of the Member States/regions we assessed use the rural development funds to finance investments with an impact on water use (see [Figure 18](#)). New irrigation installations and infrastructure are eligible in all ten of the Member States/regions, and investments in abstraction infrastructure (e.g. wells) are eligible in at least three. Half of the 24 RDPs in our additional sample allowed investment in new irrigation infrastructure.

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<sup>46</sup> OECD (2016), [Mitigating Droughts and Floods in Agriculture: Policy Lessons and Approaches](#), OECD Studies on Water, OECD Publishing, Paris.

<sup>47</sup> EEA Report No 17/2020.

**Figure 18 – EAFRD funding with an impact on water use in agriculture (funds committed or paid in million euros) (2014-2020)**



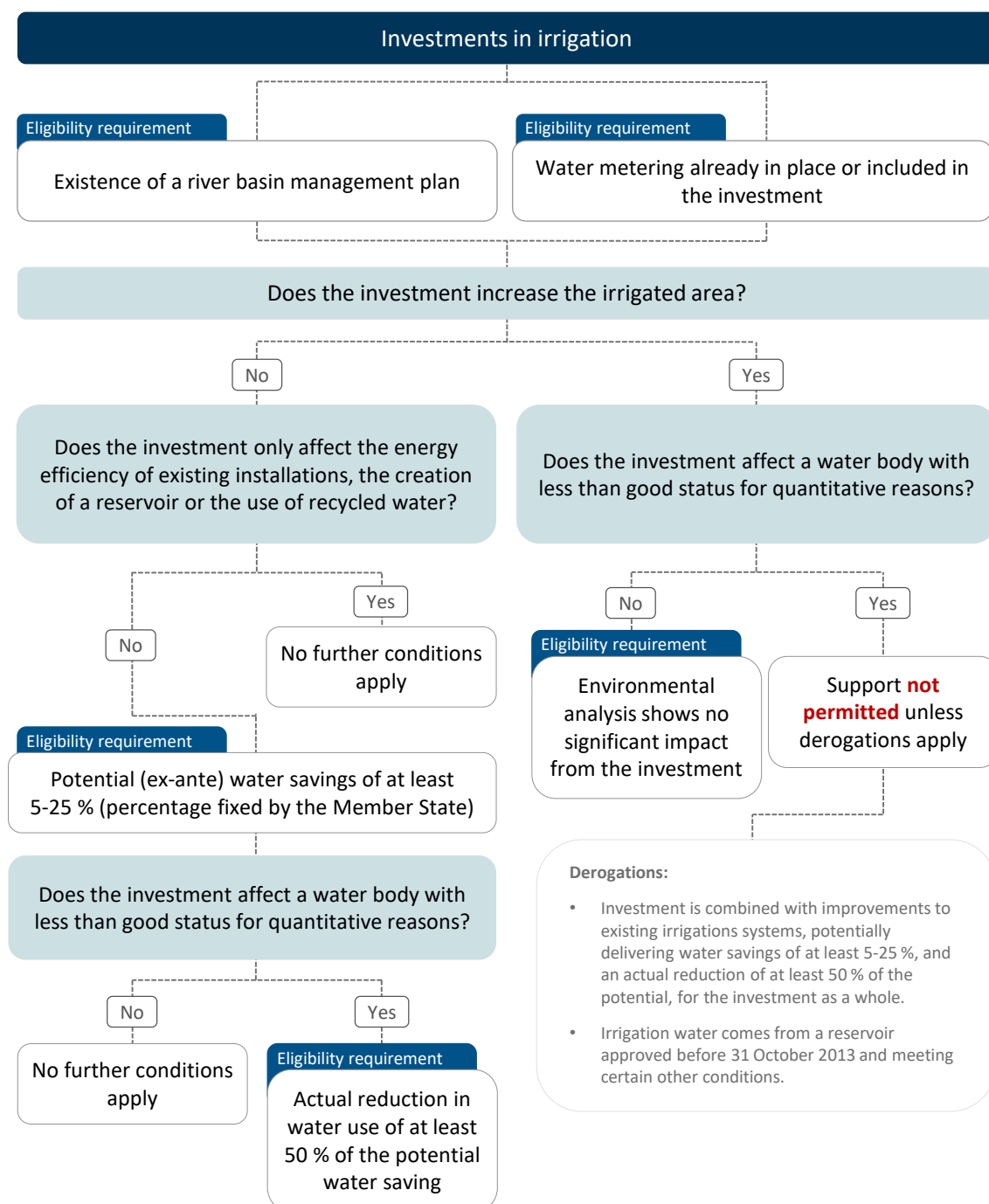
(a) all public support; (b) only partly corresponds to irrigated crops; (c) only partly corresponds to measures with an impact on water use; (d) total expenditure declared for 2014-2020; (e) amount paid for claim year 2018; (f) only Natura2000 payments for not draining and not irrigating grasslands.

Source: ECA, based on data received from the Member States.

**80** EAFRD support for **investments in irrigation** is subject to conditions set out in the EU rules<sup>48</sup> (see [Figure 19](#)). Member States can also establish additional requirements. For certain investments, three Member States/regions covered in our audit require potential water savings beyond 5 %. For new irrigation infrastructure, five Member States/regions require proof of title to the land and/or a valid water abstraction authorisation.

<sup>48</sup> Regulation (EU) No 1305/2013, Article 46.

**Figure 19 – Conditions for irrigation projects under rural development**



Source: ECA, based on Article 46 of Regulation 1305/2013.

**81** Some of the requirements described in [Figure 19](#) are not explained further in the legal texts. For example, the WFD does not define what is meant by the quantitative status of surface water bodies. The Member States therefore need to define what they consider to be “less than good” status for quantitative reasons’ in the case of surface water bodies. In eight of the Member States/regions we covered in our audit, it is unclear how, and indeed whether, this is defined. The Commission has provided non-

binding guidance on this issue<sup>49</sup>. Member States also interpret differently what is an extension of irrigation area, as they may include areas that were irrigated in the recent past as irrigated area. Some consider the “recent past” as up to five years ago, while others interpreted it as going back to 2004.

**82** As the EU rules allow for multiple possible interpretations and exemptions (see [Figure 19](#)), there is a risk that the EU is funding irrigation projects that go against the WFD objectives. For the post-2020 CAP the Commission proposed some simplification of the conditions for financing irrigation projects. Investments in irrigation would be explicitly excluded from financing if not consistent with achieving the WFD objectives of reaching good status. Expanding irrigated area would not be eligible if the irrigation affects water bodies whose status has been defined as less than good<sup>50</sup>. It would be up to the Member States to transpose this into their eligibility conditions.

**83** Compliance with the conditions in [Figure 19](#) is not checked thoroughly. Eight of the Member States/regions we assessed state that they check the basic requirements (such as the need for water metering and potential water savings) on the basis of the project application or ex post. Seven Member States/regions provided documentary evidence of ex-post checks of actual water savings. In four cases it was unclear from the documents how the increase in irrigated area is assessed. We asked two Member States/regions for more detailed project information. From the documentation we received in reply, it was sometimes unclear how the requirements were checked: we found no evidence at all for some checks, including basic verifications of water metering or potential water savings.

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<sup>49</sup> Guidance document. Support through the EAFRD for investments in irrigation (version: November 2014).

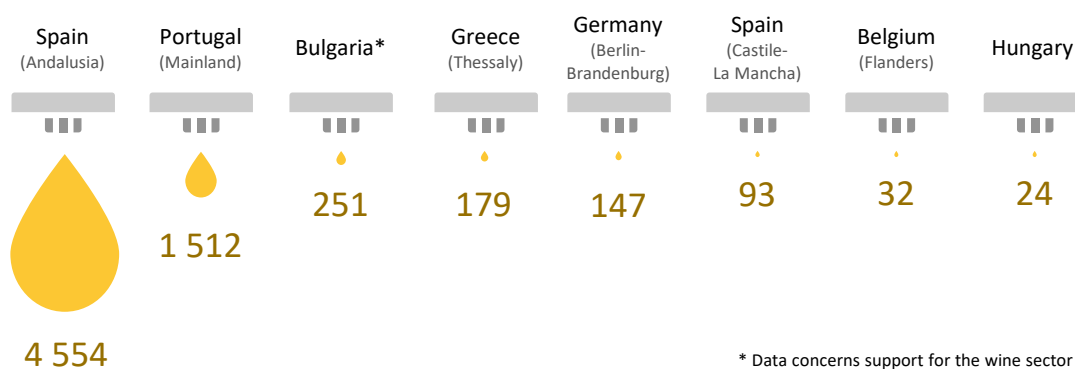
<sup>50</sup> COM(2018) 392 final, Article 68.3(f).

## Common organisation of markets

**84** The EU also finances irrigation infrastructure through the CMO for three sectors: fruit and vegetables, olives and olive oil, and wine. The fruit and vegetables sector receives support for irrigation infrastructure in ten of the 11 Member States/regions covered in our audit, the olives and olive oil sector in two and the wine sector in three. All the Member States/regions offer support both for new infrastructure and for the modernisation of existing systems – except for the olives and olive oil sector, where only improvements are eligible for EU support. The rules applicable to investments funded under a CMO differ from those applicable under rural development.

**85** In recent years, funding for irrigation projects in the fruit and vegetables sector has been highest in Spain (Andalusia) and Portugal (see [Figure 20](#)). France and Cyprus have seen little or no uptake of the available measures. In Italy (Emilia-Romagna), the authorities were unable to provide data on irrigation projects and the related funding, checks and sanctions.

**Figure 20 – Estimated average annual EU funding for irrigation projects under a CMO (in thousand euros)**



Source: ECA, based on data from the Member State authorities.

**86** Investments to reduce water use in the fruit and vegetables sector, if funded under the heading “Investments beneficial for the environment”<sup>51</sup>, should:

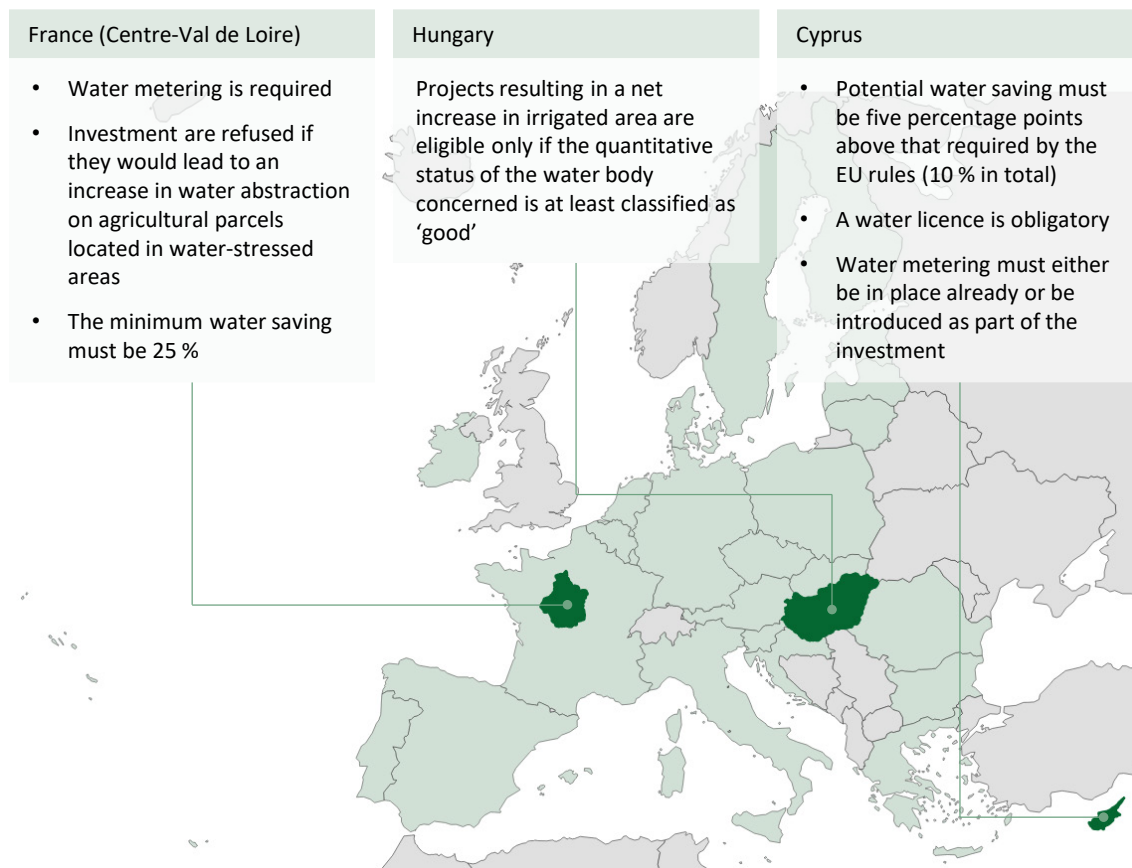
- reduce water consumption by at least 5 % if using drip irrigation or similar systems;
- not result in a net increase in the irrigation area unless total water consumption for irrigation on the whole farm, even after extending the area, remains below the average figure during the five years before the investment.

**87** Irrigation infrastructure can also be funded under other headings, such as “Production planning”. Where this is the case, the EU rules do not require any safeguards against unsustainable water use as they do for EAFRD funding (see paragraph 80). In Spain (Andalusia), 98 % of expenditure in 2018 for actions relating to irrigation and sustainable water use concerned production planning projects. Three of the 11 Member States we assessed went beyond the EU rules and set additional requirements for some or all irrigation projects (*Figure 21*).

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<sup>51</sup> In line with Article 3(4), final paragraph, of Commission Implementing Regulation (EU) 2017/892 of 13 March 2017 laying down rules for the application of Regulation (EU) No 1308/2013 of the European Parliament and of the Council with regard to the fruit and vegetables and processed fruit and vegetables sectors (OJ L 138, 25.5.2017, pp. 57-91).

**Figure 21 – Examples of additional requirements for CMO-funded irrigation projects**



Source: ECA.

**88** Member State authorities do not sufficiently check compliance with the conditions for investments that will benefit the environment (paragraph 86). Having reviewed guidelines, administrative checklists and reports from on-the-spot checks, we found no evidence, in most Member States/regions, of checks for compliance with the environmental requirements governing CMO funding.

**89** Overall, CMO funding for new irrigation infrastructure and improvements to existing systems comes with fewer environmental safeguards than are offered by the EAFRD. Certain types of investment are subject to conditions regarding water savings and the increase in irrigated area, but there are no requirements to have a water meter installed before or as part of an investment.



## Conclusions and recommendations

**90** The EU introduced the Water Framework Directive in 2000 with the aim of making the status of all EU water bodies “good” by 2015 or (with justified exemptions) 2027 at the latest. This included water quantity objectives. Our audit showed that support for agriculture was not consistently aligned with water policy objectives.

**91** While providing for safeguards against unsustainable water use, derogations under EU water policy frequently apply to agricultural producers. Since 2009, Member States have made progress in setting up prior authorisation systems for water abstraction, systems for detecting illegal water use and pricing mechanisms with the potential to incentivise water efficiency. However:

- there are still many exemptions for farmers for authorisations for water abstraction in the Member States we examined (including in water-stressed regions) (paragraphs [27-30](#)); and
- many Member States do not apply the principle of cost recovery for water services in agriculture as they do in other sectors (paragraphs [36-44](#)).

**92** The Commission monitors the Member States’ implementation of the Water Framework Directive and considers that it could be progressing faster (paragraphs [45-52](#)).

### Recommendation 1 – Request justifications for exemptions to Water Framework Directive implementation in agriculture

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The Commission should:

ask Member States to justify water pricing levels for agriculture and exemptions from the requirement for prior authorisation for water abstraction and explain the basis for concluding that these do not have a significant impact on the status of water bodies.

**Timeframe: 2025**

**93** Common agricultural policy (CAP) direct payment schemes do not impose obligations directly on farmers regarding sustainable water use. The EU rules on

voluntary coupled support allow Member States to fund water-intensive crops in water-stressed regions without any checks or environmental safeguards. The ex-ante conditionality on the water sector applicable to rural development funding has encouraged Member States to upgrade their water pricing policies. However, ex-ante conditionality looks likely to be discontinued in the post-2020 CAP (paragraphs [47-49](#) and [53-61](#)).

**94** Several Member States use voluntary coupled support to fund water-intensive crops in water-stressed areas (paragraphs [60-61](#)).

**95** The second good agricultural and environmental condition (GAEC 2) of cross-compliance has the potential to reduce overexploitation of water resources in agriculture by encouraging farmers to respect Member State water abstraction authorisation procedures. However, the EU rules do not impose cross-compliance obligations on all farmers receiving CAP funds, and Member States make relatively limited use of GAEC 2 to protect water resources. None of the Member States in our audit carry out comprehensive checks on GAEC 2 requirements (paragraphs [62-68](#)).

## **Recommendation 2 – Tie CAP payments to compliance with environmental standards**

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The Commission should:

- (a) make rural development support for investments in irrigation conditional on the implementation of policies that incentivise sustainable water use in Member States;
- (b) link all CAP payments to farmers, including those made through the Common market organisation, to explicit environmental requirements on sustainable water use, including through conditionality;
- (c) require safeguards to prevent the unsustainable use of water for crops funded through voluntary coupled support.

**Timeframe: 2023 (start of new CAP period)**

**96** The Commission has partially incorporated the principles of sustainable water use into the rules for CAP funding mechanisms, such as rural development and market support. Rural development funds can finance agricultural practices and infrastructure

that improve water quantity. Rural development funding and market support can also pay for irrigation projects. Payments of this type are linked to certain obligations, but the EU rules are inconsistent across programmes, allowing various interpretations and exemptions (paragraphs [69-89](#)).

**97** The Member States have partially used rural development and market support to incentivise sustainable water use in agriculture. We found that:

- Rural development programmes seldom support water retention measures and water reuse infrastructure (paragraphs [70-72](#));
- EU funds are used to support new irrigation projects in the Member States/regions covered in our audit (paragraphs [75-79](#) and [84-85](#));
- Member States do not sufficiently check compliance with the environmental conditions linked to rural development funding and market support (paragraphs [80-83](#) and [86-89](#)).

**98** The Commission's proposal for the post-2020 CAP would explicitly exclude financing investments in irrigation that are not consistent with achieving the Water Framework Directive objectives of reaching good status. Expanding irrigated area would no longer be eligible when affecting water bodies with less than good status (paragraph [82](#)).

### **Recommendation 3 – Use EU funds to improve the quantitative status of water bodies**

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The Commission should:

- (a) Ensure, when approving the Member State CAP strategic plans, that Member States apply the post-2020 CAP rules so that funded irrigation projects contribute to the Water Framework Directive objectives;
- (b) evaluate the impact of rural development funding and market support on water use in the post-2020 CAP.

**Timeframe: 2023 (start of new CAP period) and 2026 (interim evaluation)**

This Report was adopted by Chamber I, headed by Mr Samo Jereb, Member of the Court of Auditors, in Luxembourg on 14 July 2021.

*For the Court of Auditors*

Klaus-Heiner Lehne  
*President*

# Abbreviations

**BPS:** Basic payment scheme

**CAP:** Common agricultural policy

**CMO:** Common market organisation

**EAFRD:** European Agricultural Fund for Rural Development

**EEA:** European Environment Agency

**GAEC:** Good agricultural and environmental condition

**OECD:** Organisation for Economic Co-operation and Development

**RBMP:** River basin management plan

**RDP:** Rural development programme

**SAPS:** Single area payment scheme

**SMR:** Statutory management requirement

**VCS:** Voluntary coupled support

**WFD:** Water Framework Directive

# Glossary

**Abstraction:** Removal or diversion of water from a water environment.

**Basic payment scheme:** EU agricultural scheme which makes payments to farmers based on eligible land area.

**Convergence:** The process of adjusting payment entitlements to farmers to reflect national or regional averages in order to ensure a fairer distribution of direct agricultural support.

**Copernicus:** The EU's Earth observation and monitoring system, which collects and processes data from satellites and Earth-based sensors to provide environmental and security information.

**Cost recovery:** Principle whereby the user of a service pays for the cost of that service, and the total revenue to the service provider equals (or exceeds) the cost of supply.

**Cross-compliance:** A mechanism whereby payments to farmers are dependent on their meeting requirements on the environment, food safety, animal health and welfare, and land management.

**Decoupled support:** EU payments to farmers which are not tied to the production of a specific product.

**Direct payment:** An agricultural support payment, such as area-related aid, made directly to farmers.

**Fitness check:** An evaluation to identify any overlaps, gaps, inconsistencies or obsolete measures in the regulatory framework for a policy area.

**Good agricultural and environmental condition:** The state in which farmers must keep all agricultural land, especially land not currently used for production, in order to receive certain payments under the CAP. Includes issues such as water and soil management.

**Greening payment:** Area-based payment for agricultural practices that benefit the environment and climate.

**Quantitative status:** An expression of the degree to which a body of water is affected, directly and indirectly, by abstraction.

**River basin management plan:** Document covering the management of a designated river basin in the EU, setting out the actions planned to meet the objectives of the Water Framework Directive.

**Rural development programme:** A set of national or regional multiannual objectives and actions, approved by the Commission, for the implementation of EU rural development policy.

**Statutory management requirement:** An EU or national rule on the management of farmland to safeguard public, animal and plant health, animal welfare and the environment.

**Voluntary coupled support:** Optional way for Member States to make direct EU agricultural payments, based on production volumes, to farmers that choose to claim on this basis.

**Water body:** A lake, reservoir, stream, river or canal, a transitional area of water along a coastline, a stretch of coastal water, or a distinct volume of groundwater.

# Replies of the Commission

<https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=59355>

## Timeline

<https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=59355>



## Audit team

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This performance audit was carried out by Audit Chamber I Sustainable use of natural resources, headed by ECA Member Samo Jereb. The audit was led by ECA Member Joëlle Elvinger, supported by Ildikó Preiss, Head of Private Office and Charlotta Törneling, Private Office Attaché; Emmanuel Rauch, Principal Manager; Els Brems, Head of Task; Paulo Braz, Deputy Head of Task; Greta Kapustaite, Georgios Karakatsanis, Szilvia Kelemen, Dimitrios Maniopoulos, Dainora Venckeviciene and Krzysztof Zalega, Auditors. Thomas Everett provided linguistic support. Marika Meisenzahl provided graphical support.

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One fourth of all water abstracted in the EU is used for agriculture, mainly for irrigation. Many regions are already affected by water scarcity and climate change is likely to exacerbate this. The Water Framework Directive sets a target of good status for all water bodies by 2027 but there are significant delays in reaching this target. Common agricultural policy (CAP) support to farmers affects agricultural water use in different ways. We found that agricultural policies were not consistently aligned with EU water policy. We recommend that Member States better justify exemptions to Water Framework Directive implementation in agriculture and that the Commission links CAP payments to environmental standards on sustainable water use.

ECA special report pursuant to Article 287(4), second subparagraph, TFEU.



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