

AGRICULTURE AND WATER POLICIES: MAIN CHARACTERISTICS AND EVOLUTION FROM 2009 TO 2019¹

FRANCE

This country profile reviews recent changes in agriculture and water policies. The content of the profile is based on a survey conducted in 2019 by the OECD Secretariat² and additional official sources.

A. Agriculture and Water Characteristics

- France's agriculture mainly produces cereals, milk, wine and cattle (Eurostat, 2019).
- Agriculture accounted for 11% of total freshwater abstractions in 2017 (OECD, 2020b). In 2010 it was estimated that 6% of farmland was irrigated (OECD, 2016).
- The most significant pressures on surface water bodies in France are diffuse agricultural pollutions. 32% of monitoring stations showed an overall increase in average nitrate concentration in groundwater for the period 2012-2015 by comparison with 2008-2011, while 35% showed a decrease. As regards surface water, 29% of monitoring stations showed a higher average nitrate concentration, while 27% of them had a lower one (European Commission, 2019). France's nitrogen balance declined between 2000 and 2018 from 58 kg/ha to 39 kg/ha, and the phosphorus balance went down from 9 kg/ha to 1 kg/ha between 2000 and 2017 (OECD, 2020a).

Table 1. Main challenges related to water in agriculture

Water use	Water pollution	Water-related risks
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Agricultural water abstractions represent 11% of total water abstractions	Key pollutants from the agricultural sector are nitrates and pesticides	Severe droughts are increasing in frequency and severity

Note: +: Minor issue; ++: Problematic issue; +++: Major issue. Source: OECD (2016, 2019, 2020b).

¹ This document, as well as any data included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

² For more details, Gruère, G., M. Shigemitsu and S. Crawford (2020), "Agriculture and water policy changes: Stocktaking and alignment with OECD and G20 recommendations", *OECD Food, Agriculture and Fisheries Papers*, No. 144, OECD Publishing, Paris, <http://dx.doi.org/10.1787/f35e64af-en>.

B. Key Agriculture and Water Policies & Main Evolution from 2009 to 2019³

B.1. Cross-Cutting Agriculture and Water Policies & Governance

Table 2. Key agriculture and water policies and policy changes

Key Policies	<p>The existing EU legislation imposes a protective framework with standards for all water bodies in EU countries and addresses specific pollution sources, including agricultural pollution. The three main directives involved are the Water Framework Directive (WFD) (2000/60/EC) (on water resources management), the Nitrates Directive (91/676/EEC) and the Floods Directive (2007/60/EC).</p> <p>The 2006 Water and Aquatic Environment Act relates to water pollution, the modernisation of collection networks, diffuse pollution, abstraction, storage in low-water times, barriers on watercourses and protection of the aquatic environment. Since the Water Act, farming has been subject to three fees: the fee for diffuse pollution, charged to distributors of plant protection products and graded according to product toxicity; the fee for non-domestic water pollution linked to livestock breeding, calculated per livestock unit; the fee for abstraction, modulated according to the purpose of the abstracted water and according to the resulting pressure on water resources in the zone in which the water is abstracted.</p>
Main Evolution from 2009 to 2019	<ul style="list-style-type: none">▶ Re-writing of the National Action Plan under the EU Nitrates Directive (2010-2016).▶ National instructions about drought management and water withdrawal in 2010, and about territorial projects for water management (2015-2019).
Consistency between Agriculture and Water Policies	<p>Integrated and multi-stakeholder territorial approaches for water catchment protection and water resource management involving agricultural stakeholders.</p> <p>Law for the future of agriculture of 2014 recognises agro-ecology and establishes economic and environmental interest groups (GIEE) composed of farmers.</p>

³ Agriculture and water policies are defined here as all policies that affect the interaction between agriculture production and water.

B.2. Policies to Manage Agricultural Water Use (Quantity)

Table 3. Key instruments for the management of water use

<p>Quantified national future targets for the use of water resources in the agriculture sector</p> <p>No targets available at the national level, but planning targets are set at the local level, such as within the framework of the Water Development and Management Plans (SAGE)</p>	<p>Metering, monitoring and reporting</p> <ul style="list-style-type: none"> ▶ Metering: Yes ▶ Monitoring: Yes ▶ Reporting: No
<p>Quantity targets accounting for climate change</p> <p><i>Unspecified</i></p>	<p>Scarcity pricing</p> <p>Yes for abstraction tax. Abstraction tax was implemented in accordance to the WFD. The amount of the tax is based on the abstracted volume. Tax amounts vary from one water district to another, set by the water agencies. They cannot exceed the legal maxima, which depend on the type of irrigation (gravity fed or not), and on the availability of water in the various sub-basins. Where the water is rare ("Area of Water Repartition", ZRE), the maximum rates for irrigation abstraction taxes are higher. However, for incentive reasons, when the abstraction is done by a collective structure, the maximum remains that of a normal region (non ZRE) whatever the availability of water is.</p>
<p>Water entitlements</p> <p>Farmers must obtain a licence to use water. Abstraction permits are issued by the préfets (state representatives at the "département" level) after an impact assessment has been made, and can be limited or revoked in situations of water shortage.</p> <p>In some cases land entitlement is associated with a right to abstract water from a collective infrastructure. In most cases, a licence must still be obtained by the association to supply the collective infrastructure with water from a water body (Authorised Ownership Associations ASA).</p>	<p>Enforcement measures</p> <p><i>Unspecified</i></p>
<p>Proportion of cost recovery for surface water</p> <ul style="list-style-type: none"> ▶ 100% of Operation and Maintenance ▶ 15%-95% of total capital costs depending on the water basin 	<p>Other policy instruments used to encourage water use efficiency</p> <ul style="list-style-type: none"> ▶ Quantitative regulation is a major instrument. Among the tools that implement quantitative regulation, one is particularly promoted by the government: the territorial project for water management (PTGE). A PTGE is a method to set up collective projects, including all uses of water (industrial, agricultural, drinking water etc.), and designed to make abstractions compatible with water resources, protection of aquatic ecosystems, and sustainable development in general. The systematic governance of the project design leads the stakeholders to choose a set of consistent actions. Those actions can include irrigation, soil management, development of a new productions, advice etc. ▶ Subsidies (new efficient irrigation equipment, diversification and decrease in water consumption) ▶ Farm advice (agricultural chamber) and research ▶ Support for both water saving technologies and under agri-environmental measures to reduce area of irrigation

B.3. Policies to Control Agricultural Water Quality

Table 4. Key instruments to improve water quality

<p>National water quality data collection tools</p> <p>Database open to the public (Water information system (SIE), national data base on groundwater (ADES) (2006)</p>	<p>Main policy instruments</p> <p><u>At the national level, 1000 high-priority catchments have been identified (the first 500 high-priority catchments have been identified in 2009, and the other 500 catchments in 2013). In each catchment, local authorities have set quantitative target for water quality. At the river basin level, quantitative targets are set in the river basin management plans.</u></p> <p>National objective of pesticides usage reduction set in the plan Ecophyto.</p> <ul style="list-style-type: none"> ▶ <u>Regulatory: National Action Plan under the EU Nitrates Directive, DCE (regulation due to areas with natural constraints (ZSCE), wetlands), Water Development and Management Plans regulation, which impose certain agricultural practices.</u> ▶ <u>Economic: Aids, Labels, Taxes, Changes in the CAP and creation of an environmental certification (payments for environmental services)</u> ▶ <u>Information: Farm advisory systems, Communication tools and Decision tools</u>
<p>Spatial tools (e.g. topological, geometric, or geographic data analysis) to target policies in specific areas</p> <ul style="list-style-type: none"> ▶ Yes: Spatially-based hydrological and soil studies are conducted at the catchment level in the high-priority catchments and in the catchments concerned by green algal blooms ▶ <u>Since 2009, new national methodological guidelines have been published, and new tools have been developed by research institutes</u> 	<p>Enforcement measures</p> <p>Binding measures in Nitrates Vulnerable Zones: periods when the land application of certain types of fertilizer is prohibited; minimum manure storage capacity; limitation of the land application of inputs (fertilisers, pesticides); buffer strips along certain watercourses and water bodies; minimum distances from water courses and water bodies for the application of inputs (fertilisers, pesticides)</p>

Note: Underline indicates changes since 2009.

B.4. Policies to Manage Climate-Induced Water Risks

Table 5. Water risks and responses

	Droughts	Floods
Reported Trends	Since 2017, the recurrence and severity of droughts have increased over almost the entire country, and in areas that were not very exposed to droughts (the Massif Central, North and North-East of France).	No clear evidence of an increased frequency of flooding but in terms of severity, agricultural damage costs have risen.
Key Policies	<p>There is a seasonal maximum volume of abstractions per water basin, in which there is a recurrent drought issue (Area of Water Repartition, ZRE). This maximum is then shared, within one use, among different users. For agriculture, in ZRE areas, the agricultural quota is shared between farmers by a collective structure (OUGC).</p> <p>In case of droughts, despite this “structural” quantitative regulation, the State can forbid all or part of the water abstractions for agriculture in areas of drought.</p> <p>Investment support for creation of substitute reservoir storage to replace existing withdrawals from the environment.</p> <p>Changes in farming practices and systems (e.g. replace irrigated crops by dryland crops).</p>	<p>Flood easements entitle landowners to compensation for areas designated to become flooded; support to flooded meadows.</p> <p>Risks and costs of flooding are being eased by: allowing large areas of farmland to become flooded as a means to store water and slow water flows; encouraging conservation tillage and hedge rebuilding.</p>
Main Changes from 2009 to 2019	<p>Support for the emergence and animation of economic and environmental interest groups.</p> <p>Integrated and multi-stakeholder territorial approaches for water catchment protection and water resource management involving agricultural stakeholders.</p>	<p><i>Financial instruments:</i> Private insurance for some crops (cereals in particular); Public insurance for other crops; Subsidies to adapt farm buildings to flood risks (since 2018); Financial compensation in case of over-flooding (possible since 2003 but particularly promoted since 2018)</p> <p><i>Advice:</i> Policies encouraging agroecology have a positive incidence on flood management (natural hedges, ground cover etc); A practical guide was edited in 2016 and is regularly updated in order to give tools and methods to better take into account of agricultural activity in floods management.</p>
Factoring of Climate Change in Policies	2/5: Recent national debates about water management and climate change have led the government to aim at reducing water consumption at a national level in the coming years (-10% in 2025, -25% in 15 years, in comparison to 2019), as well as developing Territory Projects for Water Management (climate change must be included in calculations of volumes and in the design of the program of actions) and REUSE (the reuse of non-conventional water (treated wastewater, rainwater and gray water, which includes all domestic wastewater except for sanitary facilities). Those goals have been set very recently (2019) and implementation is yet to be completed.	

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