

# AGRICULTURE AND WATER POLICIES: MAIN CHARACTERISTICS AND EVOLUTION FROM 2009 TO 2019<sup>1</sup>

## BELGIUM (Flanders and Wallonia)

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 Secretariat<sup>2</sup> and additional official sources.

### A. Agriculture and Water Characteristics

- Belgium's agriculture mainly produces pigs, cattle, milk, vegetables and crops (Eurostat, 2019).
- In Flanders, agriculture represented 10% of total water abstractions in 2018 (Flemish government, 2020a). Within the agricultural sector, specialised livestock farming accounts for 41% of water consumption (Flemish Government, 2020b). In Flanders, agricultural pressures on water are high, with eutrophication affecting most waters (European Commission, 2019).
- In Wallonia, agriculture represents 40% of the total surface water abstractions, slightly decreasing between 2009 and 2019 (-2.5%). The main pressures on water resources in Wallonia are, as in Flanders, non-point source pollutions by nutrients and pesticides. The use of fertilizers containing nitrogen and phosphorus is quite stable on 2009-2019 period. The runoff flux towards surface waters and the leaching flux toward groundwaters in nitrogen was stable between 2010 and 2018 (État de l'environnement wallon, 2019).
- In Belgium more generally, the most significant pressure on rivers and on groundwater bodies comes from diffuse agricultural sources for nitrogen and from diffuse agriculture sources and also household sources for phosphorus. The nitrogen balance decreased between 2000 and 2015 from 190 to 132 kg/ha, and the phosphorus balance went down from 20 kg/ha to 5 kg/ha during the same period (OECD, 2020a).

**Table 1. Main challenges related to water in agriculture**

Water use +	Water pollution ++	Water-related risks ++
Agricultural water abstractions represent 10% of total water abstractions in Flanders. In Wallonia, agriculture represents 40% of the total surface water abstractions in 2019.	Key pollutants from the agricultural sector are nutrients and pesticides as well as sediments from erosion (Flanders and Wallonia)	Recent years (2017 - 2020) were dry years, during which farmers faced water scarcity on an unprecedented scale

Note: +: Minor issue; ++: Problematic issue; +++: Major issue. Source: Flemish government, 2020a, État de l'environnement wallon, 2019, OECD (2019).

<sup>1</sup> 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.

<sup>2</sup> See more, 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 2019<sup>3</sup>

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

**Table 2. Key agriculture and water policies and policy changes**

<p><b>Key Policies</b></p>	<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>Flanders has decided to apply the measures of the EU Nitrates Action Programme to its whole territory, adding targeted measures for areas where the water quality is particularly low. Flanders benefitted from a derogation from the Nitrates Directive relating to the maximum amount of nitrogen from livestock manure that can be applied on land until December 2018.</p>
<p><b>Main Evolution from 2009 to 2019</b></p>	<ul style="list-style-type: none"> <li>▶ Three new manure plans were established. Manure policy has evolved in the direction of a more locally differentiated approach, with additional focus on phosphorus. New modelling tools for manure distribution and nutrient losses to surface water were created.</li> <li>▶ Several municipalities have changed the management of water courses on their territory, by transferring it to “higher” levels, mostly the provincial level.</li> <li>▶ In Wallonia, in accordance with Nitrate Directive, the “Plan de gestion durable de l’azote” has also been reviewed during this period.</li> <li>▶ In Wallonia, since 2013 new regulations has imposed to farmers to install fences along main watercourses to reduce point source pollutions by cattle.</li> <li>▶ Since 2017, preparation of post 2020 EU Common Agricultural Policy (CAP) is conducted (some articles from the Framework Directive are included in the new green architecture of the new CAP, interventions on the relation between agriculture and water are proposed in the strategic plan of Flanders in format.)</li> </ul>
<p><b>Consistency between Agriculture and Water Policies</b></p>	<p>A specific project program for water and agriculture was initiated (“Water-land-schap”) in 2017. Since 2017, preparation of the post 2020 CAP is ongoing.</p>

<sup>3</sup> 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><b>Quantified national future targets for the use of water resources in the agriculture sector</b></p> <p>Yes: Surface water and groundwater targets are specified in River (sub-) Basin management plans (Flemish and local level). These targets are a set of objectives to be attained</p>	<p><b>Metering, monitoring and reporting</b></p> <p><u>Metering</u>: Yes. Since 2010, every groundwater extraction site must have a water flow meter<sup>4</sup></p> <p><u>Monitoring</u>: Yes. Declaration of water consumption and specific additional monitoring obligations to assess the impact on groundwater levels for larger abstractions</p> <p><u>Reporting</u>: Yes. River basin management plans contain a pressure and impact assessment that combines groundwater uses per sector</p>
<p><b>Quantity targets accounting for climate change</b></p> <p>No</p>	<p><b>Enforcement mechanisms</b></p> <p>Yes</p>
<p><b>Water entitlements</b></p> <p><i>Surface water</i>: For navigable rivers, abstraction is unlicensed or licensed, depending on the quantity. For un-navigable rivers use right for riparian owners</p> <p><i>Groundwater</i>: Licenses for use are issued by province or local council (depending on quantity).</p>	<p><b>Scarcity pricing</b></p> <p>It depends on aquifers and regions</p>
<p><b>Proportion of cost recovery</b></p> <p><i>Unspecified</i></p>	<p><b>Other policy instruments used to encourage water use efficiency</b></p> <p>Subsidies, Taxes, Farm advice and research</p> <p>Fees are paid to regional governments for extraction of surface water from navigable rivers and groundwater, alongside a water pollution tax.</p> <p>The Rural Development Programme is used to fund the capture and use of rainwater</p>

Note: Underline indicates changes since 2009

## B.3. Policies to Control Agricultural Water Quality

**Table 4. Key instruments to improve water quality**

<p><b>National water quality data collection tools</b></p> <ul style="list-style-type: none"> <li>▶ Ecological and chemical monitoring</li> <li>▶ Specific “manure monitoring network” within Nitrates Directive</li> <li>▶ Modelling of diffuse losses based on monitoring and inventories (livestock, pesticide use, manure sales...)</li> <li>▶ <u>Development of a manure allocation model and a nutrient emission model for agriculture</u></li> </ul>	<p><b>Main policy instruments</b></p> <ul style="list-style-type: none"> <li>▶ <i>Regulatory</i>: Manure rules (dose, timing, storage, etc.), riparian zones, sustainable use of pesticides in agriculture, Integrated Pest Management (IPM), pesticide restrictions in drinking water protected areas; CAP (compulsory and voluntary measures to reduce the loss of nutrients and pesticides to water)</li> <li>▶ <i>Economic</i>: Fines in manure legislation, management agreements, investment aid</li> <li>▶ <i>Information</i>: Information campaigns (MAP-man)</li> </ul>
<p><b>Spatial tools (e.g. topological, geometric, or geographic data analysis) to target policies in specific areas</b></p> <ul style="list-style-type: none"> <li>▶ Pesticide-sensitivity assessment tool for groundwater <u>developed based on local hydrogeological conditions</u></li> </ul>	<p><b>Enforcement measures</b></p> <p><i>Unspecified</i></p>

Note: Underline indicates changes since 2009

<sup>4</sup> The following groundwater extractions are not covered by this obligation: groundwater extractions equipped with a hand pump; groundwater extractions for domestic purposes up to a maximum of 500 m<sup>3</sup> per year (only for families, not for farms); drains necessary to enable or maintain the use and/or operation of construction and pastures. More information: <https://www.vmm.be/water/heffingen/debietmeters>

## B.4. Policies to Manage Climate-Induced Water Risk

**Table 5. Water risks and responses**

	Droughts	Floods
<b>Reported Trends</b>	There is a significant trend of longer meteorological drought duration and less rainfall in spring, and a significant trend of more frequent and longer lasting heatwaves, and their impact on agriculture. 2017 and 2018 have been problematic years for agriculture due to drought and extreme heat. <sup>5</sup>	Both yearly rainfall and winter totals have increased during the 20th century. Hourly extreme rainfall intensity has increased over recent decades above normal cyclic variations, contributing to higher frequency of local flooding and soil erosion events, and resulting in higher costs for agriculture. <sup>6</sup>
<b>Key Policies</b>	<p>Grants for investment in rainwater capture and storage, water use efficiency and re-use of wastewater.</p> <p>The Fund for Agricultural Disasters compensates for exceptional damage (for crops more than 30% of the value of a normal year) to crops, harvests, land and livestock.</p> <p>The Flemish Agricultural Investment Fund offers interest subsidies for bridging loans that were taken as a result of damage due to exceptional events such as climatic disasters.</p>	<p>The EU Floods Directive established a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences associated with significant floods.</p> <p>Compulsory water assessment of any initiative (e.g. drainage) that may cause detrimental changes in water flows.</p> <p>Compensation for water retention projects and ditch restoration on farmland.</p> <p>Fund for Agricultural Disasters (exceptional damage; c.f. damage on crops more than 30% of the value of a normal year) and Flemish Agricultural Investment Fund (interest subsidies for loans, maximum 3%).</p>
<b>Main Changes from 2009 and 2019</b>	-	-
<b>Factoring of Climate Change in Policies</b>	1/5: The measures of the recent River Basin Management Plans (RBMPs) have been reviewed to see whether they could aggravate the effects of climate change. It was verified whether the measured efficiency would decline significantly as climate change accelerates. For some areas of the water system (surface water), climate change measures have been defined in the RBMPs.	

## Bibliography

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<sup>5</sup> Climate report 2020: [https://www.meteo.be/resources/misc/climate\\_report/KlimaatRapport-2020.pdf](https://www.meteo.be/resources/misc/climate_report/KlimaatRapport-2020.pdf); Evaluation reports on drought in Flanders available : [www.opdehoogtevandroogte.be](http://www.opdehoogtevandroogte.be)

<sup>6</sup> Climate report 2020: [https://www.meteo.be/resources/misc/climate\\_report/KlimaatRapport-2020.pdf](https://www.meteo.be/resources/misc/climate_report/KlimaatRapport-2020.pdf); and floods <https://klimaat.vmm.be/nl/overstromingen>