

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

AUSTRIA

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

- Austria's agriculture mainly produces milk, cattle, cereals, pigs, wine and vegetables (Eurostat, 2019a).
- In 2017, agriculture accounted for 2.2% of the total water demand (FAO, 2021). In 2016, 1.4% of the agricultural area were irrigated (Eurostat, 2019b; also preliminary data from footnote⁴).
- Pollution of surface waters is very low. However, for groundwater bodies, agriculture is the most significant known pressure in 2019 (European Commission, 2019). Nitrogen balance increased from 44 kg/ha to 46 kg/ha between 2000 and 2017, whereas phosphorus balance decreased from 4 kg/ha to 2 kg/ha (OECD, 2020a).

Table 1. Main challenges related to water in agriculture

Water use +	Water pollution ++	Water-related risks ++
Agricultural water abstractions represent between 2.2 % of total water abstractions	Key pollutants from the agricultural sector are nitrates and pesticides	Climate Change might become a significant issue with impact on agriculture and water resources in Austria in future.

Note: +: Minor issue; ++: Problematic issue; +++: Major issue. Source: OECD (2013, 2019).

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 Austrian Water Act (1959) oversees water management policies and developed a system of prior authorisations of water abstractions which prevents over-abstraction. The Water Act was revised in 2003 to transpose the WFD into national law and take into account the EU integrated approach to water management. In order to achieve the objectives and principles of the Water Act, the Federal Minister of Agriculture, Forestry, Environment and Water Management, in cooperation with the water management plans of the Länder (Province/State level), prepares and publishes a National Water Management Plan (NGP) every six years. The NGP 2015 is updating the NGP 2009.</p>
Main Evolution from 2009 and 2019	<ul style="list-style-type: none"> ▶ To implement the EU Nitrates Directive, Austria has decided to apply the Nitrates Action Programme (NAP) on its whole territory. The NAP and the Rural Development Programme (RDP) within the EU Common Agricultural Policy (CAP) were both revised and updated since 2009. Additional measures were added for areas with higher agricultural intensity and/or low precipitation. ▶ Research on availability of groundwater resources and water demand for agriculture considering climate change impacts.
Consistency between Agriculture and Water Policies	<p>Additional measures were added to the RDP and the NAP for areas with higher agricultural intensity and/or low precipitation, such as lower level of fertilisation and larger storage volume for manure.</p>

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 quantified future targets (currently there are no large-scale water quantity problems)</p>	<p>Metering, monitoring and reporting</p> <p><i>Metering</i> is required for significant abstractions Intensive <i>monitoring</i> of groundwater levels exists; <u>monitoring of ecological status of surface waters and monitoring / control of abstractions have been intensified since 2009</u></p>
<p>Quantity targets accounting for climate change</p> <p>Yes⁴</p>	<p>Enforcement mechanisms</p> <p>Yes: Water Act</p>
<p>Water entitlements</p> <p><i>Surface water</i>: Under the Water Act, water resources are strongly regulated irrespective of public or private ownership, and authorisation for water abstraction is issued at district level</p> <p><i>Groundwater</i>: water rights generally belong to landowners, and authorisation for water abstraction is issued at the district level</p>	<p>Scarcity pricing</p> <p>No (water scarcity is not a major issue)</p>
<p>Proportion of cost recovery</p> <p>100% for both Operation & Maintenance and Capital Costs</p>	<p>Other policy instruments used to encourage water use efficiency</p> <p>Subsidies e.g. to introduce water saving irrigation (RDP), Water supply cost recovery, Farm advice and research</p> <p>Benchmarking is used among water suppliers to limit losses in distributional channels</p>

Note: Underline indicates changes since 2009

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

⁴ To address the possible regional problems due to climate change, a project ("Wasserschatz Österreich") financed by the Federal Ministry on Agriculture, Regions and Tourism compares the development of future water uses and groundwater resources to derive recommendations. The project is planned to be finished in 2021.

B.3. Policies to Control Agricultural Water Quality

Table 4. Key instruments to improve water quality

<p>National water quality data collection tools</p> <ul style="list-style-type: none"> ▶ Ecological and chemical monitoring of surface waters ▶ Chemical monitoring of groundwater <p><u>Significant increase of pesticide parameters monitored</u></p>	<p>Main policy instruments</p> <ul style="list-style-type: none"> ▶ <i>Regulatory</i>: NAP (ordinances) and <u>more effective measures added (e.g. larger storage volume for manure)</u> ▶ <i>Information</i>: Farmer advisory system and <u>online information / official scientific based recommendations for nitrogen fertilisation /trainings</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"> ▶ <u>Yes: topological data for erosion issues, geographic data for assessing water quality impacts</u> 	<p>Enforcement measures</p> <ul style="list-style-type: none"> ▶ No specific quantitative targets for the agricultural sector but implements controls by water authorities since before 2009

Note: Underline indicates changes since 2009

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

Table 5. Water risks and responses

	Droughts	Floods
Reported Trends	No clear trend over recent decades, but climate change projections indicate increasing incidence and severity of droughts.	Floods have been an increasing trend in the last 20 years. The impact of climate change is not clear yet.
Key Policies	Due to in general abundant water resources, no specific policy approaches were adopted to address drought mitigation, although efforts have been made to raise farmers' awareness and establish local storage for irrigation.	Development of flood maps and flood hazard maps to highlight areas of flood risk.
Main Changes from 2009 and 2019	-	-
Factoring of Climate Change in Policies	2/5: Based on current models, climate change is considered to have still an overall low impact on water resources, although the agricultural sector was affected by quite high damages due to prolonged drought periods in the past years. In areas with low precipitation, water scarcity might become a more significant water management issue in future, which is also reflected in the update of the Austrian National River Basin Management Plan.	

Bibliography

- Eurostat (2019a), *Agriculture, forestry and fishery statistics: 2019 edition*, Publications Office of the European Union, Luxembourg, <https://doi.org/10.2785/743056>.
- Eurostat (2019b), "Share of irrigable and irrigated areas in utilised agricultural area (UAA) by NUTS 2 regions", https://ec.europa.eu/eurostat/databrowser/view/AEI_EF_IR_custom_609828/default/table?lang=en
- European Commission (2019), *The EU Environmental Implementation Review 2019 Country Report: Austria*, https://ec.europa.eu/environment/eir/pdf/report_at_en.pdf.
- FAO [Food and Agriculture Organisation of the United Nations] (2020), FAO Aquastat. Retrieved from: <http://www.fao.org/aquastat/en/> (accessed 13 July 2020).
- FAO [Food and Agriculture Organisation of the United Nations] (2021), FAO Aquastat. Retrieved from: <http://www.fao.org/aquastat/en/> (accessed 01 February 2021).
- OECD (2013), *OECD Environmental Performance Reviews: Austria 2013*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/978926202924-en>.
- OECD (2019), OECD Survey on Monitoring Progress in Agricultural Water Management.
- OECD (2020a), "Nutrient balance" (indicator), <https://doi.org/10.1787/82add6a9-en> (accessed 13 July 2020).
- OECD (2020b), "Freshwater abstractions", <https://stats.oecd.org> (accessed 13 July 2020).