AGRICULTURE AND WATER POLICIES: MAIN CHARACTERISTICS AND EVOLUTION FROM 2009 TO 2019[1]

CZECH REPUBLIC

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[2] and additional official sources.

A. Agriculture and Water Characteristics

- Czech Republic's agriculture mainly produces cereals, milk and non-food crops. Meat production has been decreasing since 2016, with the decline of the pig sector (Eurostat, 2019).
- Agriculture accounted for 3% of total water abstractions (OECD, 2018).
- Diffuse pollution from agriculture is the most significant pressure on groundwater bodies, with 61% of groundwater bodies being affected. Nutrient pollution affects 41 % of surface water bodies and 53% of groundwater bodies (European Commission, 2019). The nitrogen balance increased between 2000 and 2017 from 65 to 101 kg/ha, and the phosphorus balance went down from 2 kg/ha to -1 kg/ha during the same period (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 3% of total water abstractions	Key pollutants from the agricultural sector are nitrogen, phosphorus, and pesticides	The drought that affected Czech Republic in 2014 has persisted until 2018

Note: +: Minor issue; ++: Problematic issue; +++: Major issue. Source: OECD (2018); MOA (2018).

[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 2019[3]

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

Table 2. Key agriculture and water policies and policy changes

Key Policies	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). The 2001 Water Act is the overarching law for the protection and management of water resources. It includes provisions for water conservation, flood prevention, economic instruments for water management, and water planning and international co-operation. It also regulates water discharge permits.
Main Evolution from 2009 to 2019	► Establishment of the water management policy of the Ministry of Agriculture until 2015, and assessments of the achievements of previous policies. ► The second River Basin Management Plans (RBMP) (2015-2021) were approved in 2015. The implementation of the programmes of measures for achieving the environmental objectives is ongoing. ► Revised Action plan in nitrate vulnerable zones (2016-2020).
Consistency between Agriculture and Water Policies	Support of investment to flood prevention and mitigation of drought effects. The strategy of the Ministry of Agriculture up to 2030 includes targets for water management.

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

Table 3. Key instruments for the management of water use

Quantified national future targets for the use of water resources in the agriculture sector No	**Metering, monitoring and reporting** Metering: Yes Monitoring: Yes Reporting: Yes
Quantity targets accounting for climate change *Unspecified*	**Scarcity pricing** No
Water entitlements Water rights are owned by the State, and permissions for use of water are issued by regional and local government	**Enforcement measures** Yes
Proportion of cost recovery for surface water The price for the abstraction of surface water is set separately for the purpose of agricultural irrigation; this price shall not exceed the amount of operating costs incurred by the watercourse manager for this activity	**Other policy instruments used to encourage water use efficiency** Subsidies, Water supply cost recovery, Farm advice and research

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

B.3. Policies to Control Agricultural Water Quality

The main measures aimed at reducing diffuse water pollution from agricultural sources include the 2012 delimitation of vulnerable areas (under the EU Nitrates Directive) and a related programme seeking to reduce and prevent nitrate pollution in such areas. These measures ban nitrogenous fertilisers and provide for crop rotation, soil erosion monitoring and manure storage facilities. Nitrate vulnerable areas are subject to review every four years.

Table 4. Key instruments to improve water quality

National water quality data collection tools ► Ecological and chemical monitoring (public and also private water suppliers). Since 2009, the number of monitored chemical indicators and biological components increased ► Monitoring for the purpose of assessing the status of surface and groundwater bodies (based on WFD) monitors pollution indicators that may be related to the agricultural sector	**Main policy instruments** ► *Regulatory*: Water Act, River Basin Management Plans, Pesticides market at the EU level ► *Economic*: Payments to farmers for reduction of inputs use under EU Agri-environmental measure ► *Information*: Training advisors and farmers in basic rules regarding soil and water management which should be observed in order to avoid fines and to get financial support under agricultural policy
Spatial tools (e.g. topological, geometric, or geographic data analysis) to target policies in specific areas ► Yes: Action plan in nitrate vulnerable zones ► River basin authorities propose measures under the River Basin Management Plans related to geographically identified problems with water quality	**Enforcement measures** ► The Action plan for nitrate vulnerable zones is reported to the EU Commission ► If farmers do not comply with rules under nitrate vulnerable zones Action plan, they are in danger of losing support under agricultural policies ► Direct breach of Water Act (e.g. not authorised discharge of pollution into water) is fined according to the law

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	The incidence and severity of droughts are strongly increasing.	The incidence and severity of floods incurs an increasing cost for agriculture and water infrastructure.
Key Policies	Financial support to reservoirs construction; support to advanced methods of irrigation saving water; investments support to collection of rain water (Ministry of Environment). Financial support to help farmers cope with results of extreme drought events (covering part of the losses).	The Ministry of Agriculture runs three grant programmes focused on remedying flood damage. Support is provided for a range of farming practices (reducing soil erosion, helping slow water flows across farmlands).
Main Changes from 2009 to 2019	- .	The framework of the Complex Land Consolidation contains a proposal for measures leading to the improvement of the environment, soil protection, water management and increase in the ecological stability of the landscape and flood control measures. In 2017, an important tool was updated to provide a measure of erosion vulnerability.
Factoring of Climate Change in Policies	3/5: Research focuses on quantifying future climate change impacts, but also on financial support to irrigation and water retention (e.g. ponds construction support, support of soil management preventing quick water run-off).	

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