



# Policies to Manage Agricultural Groundwater Use

## CZECH REPUBLIC

Groundwater is primarily use for domestic purposes in the Czech Republic. Agriculture groundwater use is managed via regulatory and economic instruments, supported by other conservation policies.

### 1. Main national governmental agency responsible for quantitative management of groundwater

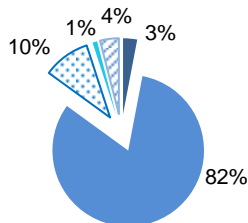
Institution	Role
River basin management (Povodí Labe, Povodí Vltava, Povodí Ohře, Povodí Odry, Povodí Moravy, s.p.)	Management and maintenance of river basins.
Small water courses management (Lesy České republiky, s.p.)	Management and maintenance of small water courses.
Water and sanitation (Vodovody a kanalizace).	Development plan of water and sanitation, regulations, customer protection, information for public; realization of the state policy in water, sanitation and flood damage to the water infrastructure.
Central water authority: the scope is assured by five Czech ministries: Ministry of Agriculture, M. of Environment, M. of Transportation, M. of Health, M. of Defence.	State administration in water management done by a three-level administration system (central, regional, municipal).

### 2. Status and use of groundwater resources

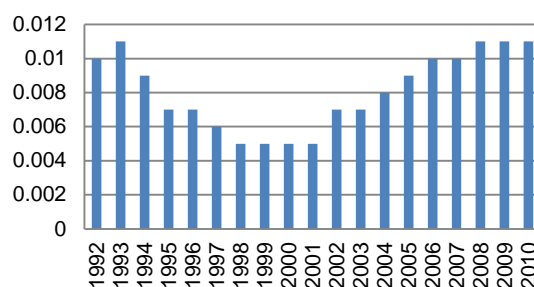
- Total groundwater resource: 1.59 km<sup>3</sup> in 2010.
- Annual groundwater use is estimated to 0.38 km<sup>3</sup> in 2012.
- Groundwater irrigation area: 1156 ha in 2010.
- Total irrigation area: 38 530 ha in 2007.
- Groundwater withdrawals for irrigation: 0.011 km<sup>3</sup> in 2010.

### Main groundwater withdrawing sectors at the national level

■ Agriculture ■ Domestic ■ Industry ■ Energy ■ Other



### Groundwater use in agriculture in the Czech Republic (km<sup>3</sup>)



## 3. Inventory of national policies affecting agricultural groundwater use

### Recent groundwater management reforms national and regional level

Reforms at the national level	Year	Scope and objective	Degree of implementation
Plan of main river basins.	2007	The basis for the plans of the river basins and other strategic documents: The concept of water management policy of the Ministry of agriculture for the period 2000 – 2004.	Complete
Convention on the protection and use of trans boundary watercourses and international lakes.	1996	Trans boundary agenda.	Complete
The development plan for water supply and sewerage systems the Czech Republic.	2001	The basic strategic document.	Partial
Reforms at the regional level	Year	Scope and objective	Degree of implementation
The regional development plans for water supply and sewerage systems	2004	Regional water using policy.	Partial
Plans of river basins	2009	8 plans, 1st step finished, now preparation of the 2nd step for the period 2016 - 2021 plus implementation of the Directive 2007/60/ES about flood risk evaluation and management.	Partial

### Core groundwater management approaches at national level

Groundwater entitlement characteristics	► Temporary
Beneficiaries of entitlement	► Individuals, collective bodies and companies
Groundwater entitlement allocation doctrine	► Nobody is the owner, but the landowner and land user, who have permission for water withdrawal, can use water in the area.

## Main types of instruments used to manage groundwater use in agriculture

### Regulatory approaches

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#### Groundwater management plans

- ▶ Mandated

#### Coordination with surface water management

- ▶ Systematic

#### Regulations on wells

- ▶ With environment impact assessment
- ▶ Groundwater withdrawal restrictions

#### Regulations on irrigated land

- ▶ No regulation

#### Mandated metering or monitoring system for groundwater

- ▶ Mandated metering for other users, these measures are enforced
  - 65 wells for monitoring of yield and quality (weekly)
  - 1142 observation wells for monitoring of level and quality (daily)
  - 651 wells for monitoring of quality twice a year

### Economic instruments

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#### Economic instruments to regulate quantity: pricing

- ▶ There charges are on pumped water in agriculture and other. They based on cost recovery.

The price is done each year by a decree of the Ministry of Finance; it is adjusted according to the regional and local costs.

#### Irrigation programs

- ▶ Irrigation subsidies focusing on efficiency

## Other policies and programs affecting agricultural groundwater use

### Agriculture water conservation programs

- ▶ Subsidies
- ▶ Conditional payments
- ▶ Penalty

### Land policies with implications on groundwater use

- ▶ Zoning with restriction on groundwater use
- ▶ Regional allocation system with groundwater priority for other uses

### Climate change adaptation programs

- ▶ Water infrastructure investment

### Watershed conservation programs

- ▶ Limits of groundwater use close to protected areas

## Supply side management approaches

### Programs supporting the development alternative water supplies

- ▶ Surface water reservoir expansion

## Others

### Agriculture income support policies

- ▶ Biofuel production support

## 5. Bibliography

### Institutional websites

- [www.pla.cz](http://www.pla.cz)
- [www.pvl.cz](http://www.pvl.cz)
- [www.poh.cz](http://www.poh.cz)
- [www.pod.cz](http://www.pod.cz)
- [www.pmo.cz](http://www.pmo.cz)
- [www.lesy.cz](http://www.lesy.cz)
- [eagri.cz/public/web/mze/voda/vodovody-a-kanalizace/](http://eagri.cz/public/web/mze/voda/vodovody-a-kanalizace/)
- [www.eagri.cz](http://www.eagri.cz)
- [www.env.cz](http://www.env.cz)
- [www.mdcz.cz](http://www.mdcz.cz)
- [www.mzcr.cz](http://www.mzcr.cz)
- [www.army.cz](http://www.army.cz)

### Official reports

- Report on water management CR 2012, MZe, MŽP, The concept of water policy of the Ministry of Agriculture until 2015.

### Additional sources

- [www.chmi.cz](http://www.chmi.cz)
- [www.heis.vuv.cz](http://www.heis.vuv.cz)
- [www.cenia.cz](http://www.cenia.cz)
- [www.eagri.cz](http://www.eagri.cz)
- [www.env.cz](http://www.env.cz)
- Recalculation of groundwater supplies in selected regions CR ([www.geology.cz/extranet/vav/podzemni-vody](http://www.geology.cz/extranet/vav/podzemni-vody))
- European Topic Centre on Water 2007-2010
- Journal of Water - Vodohospodářský vesting 2010 ([www.heis.vuv.cz](http://www.heis.vuv.cz))
- [epp.eurostat.ec.europa.eu/portal/page/portal/agriculture/data/main\\_tables](http://epp.eurostat.ec.europa.eu/portal/page/portal/agriculture/data/main_tables)
- [voda.gov.cz/portal/cz/](http://voda.gov.cz/portal/cz/) (not only agricultural)
- [eagri.cz/public/web/mze/voda/](http://eagri.cz/public/web/mze/voda/)
- [heagri.cz/public/web/mze/voda/dotace-ve-vh/](http://heagri.cz/public/web/mze/voda/dotace-ve-vh/)

This country profile was compiled by the OECD Secretariat and reflects information obtained in a 2014 OECD questionnaire on groundwater use in agriculture. Further information and analysis can be found in OECD (2015), *Drying Wells, Rising Stakes: Towards Sustainable Agricultural Groundwater Use*, OECD Studies on Water, OECD Publishing. The countries profiles for 16 countries of OECD are available for download at: [www.oecd.org/tad/sustainable-agriculture/groundwater-use.htm](http://www.oecd.org/tad/sustainable-agriculture/groundwater-use.htm)