



# Policies to Manage Agricultural Groundwater Use

## SLOVAK REPUBLIC

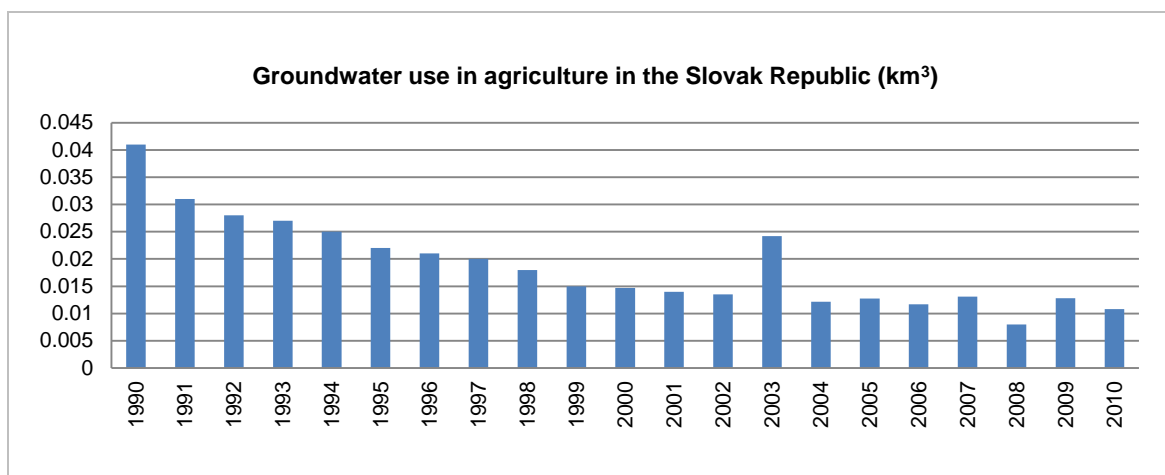
Agricultural groundwater use is limited in the Slovak Republic, with the sector representing only 3% of total withdrawals. A number of instruments are used to manage groundwater use including management plans, regulations on wells, and pricing of pumped water. Conservation, climate change, and supply-side programs are also applied.

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

Institution	Role
Slovak Hydro meteorological Institute	Monitoring and assessment of groundwater quality and quantity, water balance assessment.
Water Research Institute	Water management planning, program of measures development, water accounting, research of groundwater regime and groundwater interactions.
State Geological Survey of the Slovak Republic	Monitoring and assessment of groundwater quantity, geological research.

### 2. Status and use of groundwater resources

- Total groundwater resources: 2.48 km<sup>3</sup> in 2012.
- Annual groundwater use is estimated to 0.33 km<sup>3</sup> in 2012.
- In 2012, there were 24 847 ha of total irrigated agricultural land (surface and groundwater).
- Groundwater withdrawals for irrigation: 0.003 km<sup>3</sup> in 2012.



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

#### Recent groundwater management reforms

Reforms	Year	Scope and objective	Degree of implementation
Transposition and implementation of EU legislation related to waters (Water Framework Directive, Nitrate Directive)	2004	To reach good status, environmental objectives and sustainable use of groundwater bodies.	Ongoing
Code of good agricultural practice - protection of waters against pollution caused by nitrates from agricultural sources	2001	Protection of waters against pollution caused by nitrates from agricultural sources.	Ongoing
Action program in respect of designated vulnerable zones (under EU Nitrate Directive)	2008	Reducing water pollution caused or induced by nitrates from agricultural sources.	Ongoing
Water Plan of the Slovak Republic and Program of measures	2009	To reach good status, environmental objectives and sustainable use of groundwater bodies.	Ongoing

#### Core groundwater management approaches at national level

##### Groundwater ownership

► Surface water and groundwater is property of the Slovak Republic. According to the Constitution of the Slovak Republic, there is no private or public ownership of water sources.

##### Groundwater entitlement characteristics

► Permanent, temporary

Abstraction license or permit for ground water abstraction is based on permission approved by state water management authority. Permissions could be temporal or permanent, according to specific conditions.

## Beneficiaries of entitlement

- ▶ Beneficiary of water abstraction charges is state organization under Ministry of Environment.

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

Regulatory approaches	Economic instruments	Collective management approaches
<b>Groundwater management plans</b> <ul style="list-style-type: none"><li>▶ Mandated</li></ul>	<b>Economic instruments to regulate quantity: pricing</b> <ul style="list-style-type: none"><li>▶ There charges are on pumped water.</li></ul>	<b>Collective management schemes</b> <p>There are several voluntary associations in Slovakia, for example: Association of Water Companies, Association of Employers in Water Management, Association of Producers of Agricultural and Food Products, Slovak Agricultural and Food Chamber, Association of Organic Farming. They are mostly product-oriented.</p>
<b>Coordination with surface water management</b> <ul style="list-style-type: none"><li>▶ Systematic</li></ul>	Each groundwater user who abstracts more than 15 000 m <sup>3</sup> per year or more that 250 m <sup>3</sup> per month is obliged to ask for permission for abstraction and also to pay charges for abstraction. According the Water Law, groundwater irrigation abstraction is excluded from this charge. However due to EU legislation this exemption is going to be amended soon. The amount of charge is set down by national regulation No. 755/2004 Coll. Environmental externalities and the scarcity value of water are not accounted for yet, however the new methodologies for calculation of charges are under development due to WFD.	There are no sub-regional or local groups of agricultural users that collectively manage water resources. Water management is locally regulated by regional state water authorities and the permitting (authorization) process is in line with the principles of river-basin district management plan.
<b>Regulations on wells</b> <ul style="list-style-type: none"><li>▶ Approval of new wells</li><li>▶ Groundwater withdrawal restrictions</li></ul>		
<b>Regulations on irrigated land</b> <ul style="list-style-type: none"><li>▶ Irrigated land buyout</li></ul>	<b>Irrigation programs</b> <ul style="list-style-type: none"><li>▶ Irrigation subsidies focusing on efficiency.</li></ul>	

## Other policies and programs affecting agricultural groundwater use

### Agriculture water conservation programs

- ▶ Subsidies

### Climate change adaptation programs

- ▶ Investment in agriculture and groundwater R&D
- ▶ Water infrastructure investment
- ▶ Groundwater modelling and data development

### Watershed conservation programs

- ▶ Exclusion zone for conservation area
- ▶ Acquired groundwater entitlements for water conservation

## Supply side management approaches

### Aquifer recharges programs

- ▶ Aquifer storage and recovery programs
- ▶ Infiltration ponds

### Programs supporting the development alternative water supplies

- ▶ Surface water reservoir expansion
- ▶ Rainwater harvesting
- ▶ Recycled water

## Others

### Drought insurance programs

- ▶ Private insurance only

## 5. Bibliography

### Institutional websites

- [www.shmu.sk](http://www.shmu.sk)
- [www.vuvh.sk](http://www.vuvh.sk)
- [www.geology.sk](http://www.geology.sk)

### Official reports

- Report on water management balance in Slovak Republic, [www.shmu.sk/sk/?page=1571](http://www.shmu.sk/sk/?page=1571)
- Report on water management balance of groundwater quantity, [www.shmu.sk/sk/?page=1571](http://www.shmu.sk/sk/?page=1571)
- Water Plan of the Slovak Republic, 2009, [www.vuvh.sk/rsv2/index.php?option=com\\_content&view=article&id=67&Itemid=87&lang=sk](http://www.vuvh.sk/rsv2/index.php?option=com_content&view=article&id=67&Itemid=87&lang=sk)
- Report of Water Management in the Slovak Republic, [www.minzp.sk/oblasti/voda/spravy-ovodnom-hospodarstve](http://www.minzp.sk/oblasti/voda/spravy-ovodnom-hospodarstve)
- State of the Environment Report of the Slovak Republic, <http://enviroportal.sk/spravy/spravy-o-zp/kapitola/1>
- Agriculture and its Impact on the Environment in the Slovak Republic 2011, [www.enviroportal.sk/spravy/spravy-o-zp/sprava/563/75](http://www.enviroportal.sk/spravy/spravy-o-zp/sprava/563/75)
- Green Report 2013, Annex 2, [www.mpsr.sk/en/index.php?navID=1&id=43](http://www.mpsr.sk/en/index.php?navID=1&id=43)

### Additional sources

- Sectorial indicator reports, [www.enviroportal.sk/spravy/spravy-o-zp/kapitola/78/en](http://www.enviroportal.sk/spravy/spravy-o-zp/kapitola/78/en)

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)