



Basic Information about National Meteorological and Hydrological service in Slovakia

Martin Benko

martin.benko@shmu.sk

SLOVAK HYDROMETEOROLOGICAL INSTITUTE

Slovak Republic

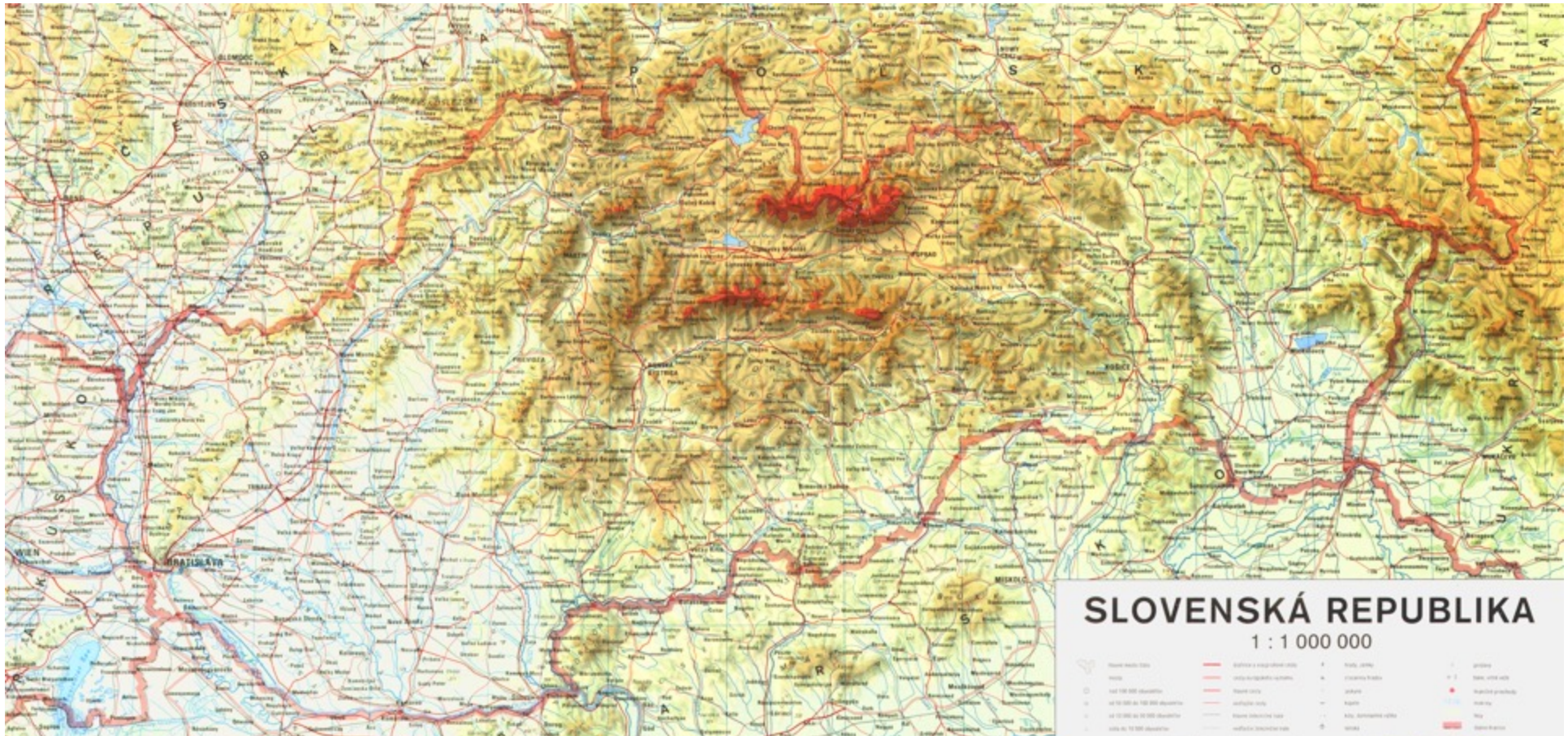
- Area: 49 036 km²
- Population: 5 370 000
- Capital: Bratislava
- Almost in the middle of Europe
- Land locked country
- Mild climatic zone



We are located mainly in the Danube Basin



Slovak Republic



The lowest point (Streda n. Bodrogom): 94 m a.s.l., the highest point (Gerlach): 2655 m a.s.l.
Average annual precipitation total is 747 mm; 65% is evaporated, 35% represents runoff.
The average temperature – January: from -1°C to -12°C; July: more than 20°C to about 14°C.
The length of Slovak rivers: 8437 km totally, 3156 km regulated.

Basic Information

3 main group of activities:

- Meteorological service
- Hydrological service
- Air quality

Main goals:

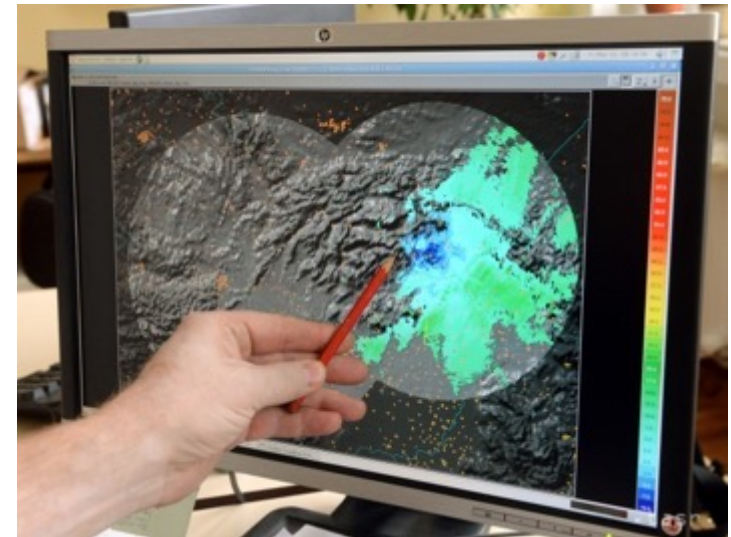
- monitoring of parameters characterizing the state of air and water,
- study and description of processes in the atmosphere and hydrosphere,
- creation and issue of meteorological and hydrological forecasts, warnings and information

According to the law no. 201/2009 „The Law on State Hydrological Service and the State Meteorological Service“



Basic activities

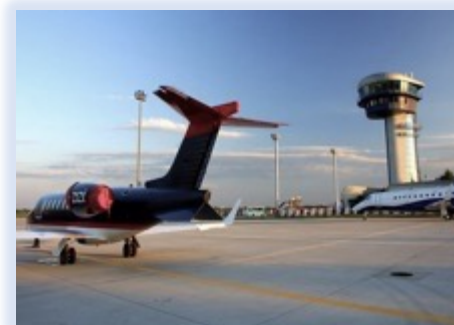
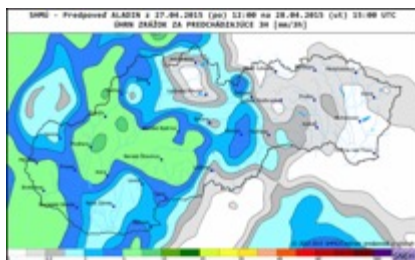
- Monitoring of atmosphere and hydrosphere (operational running of state hydrological and meteorological networks) includes quantity and quality
- Monitoring of radiation (operation of radiation network)
- Monitoring of ambient air (operation of the national air quality monitoring network)
- Running of aeronautical meteorological services
- Evaluation of emissions
- Issuing of predictions and warnings
- Making studies, expertises and assessment activities
- Cooperation in the creation of European programs (Copernicus, INSPIRE), implementation of EU Directives
- Implementation of various projects
- International cooperation within ECMWF, EUMETNET, EUMETSAT, WMO, ALADIN, RCLACE, etc.



Organizational structure

SHMU is divided into different sections:

- Meteorological service
- Hydrological service
- Centre of forecasts and warnings
- Aviation meteorological service
- Air quality
- Informatics
- Economy and asset management

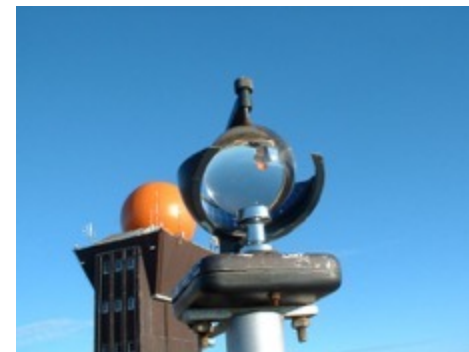


State Monitoring Networks

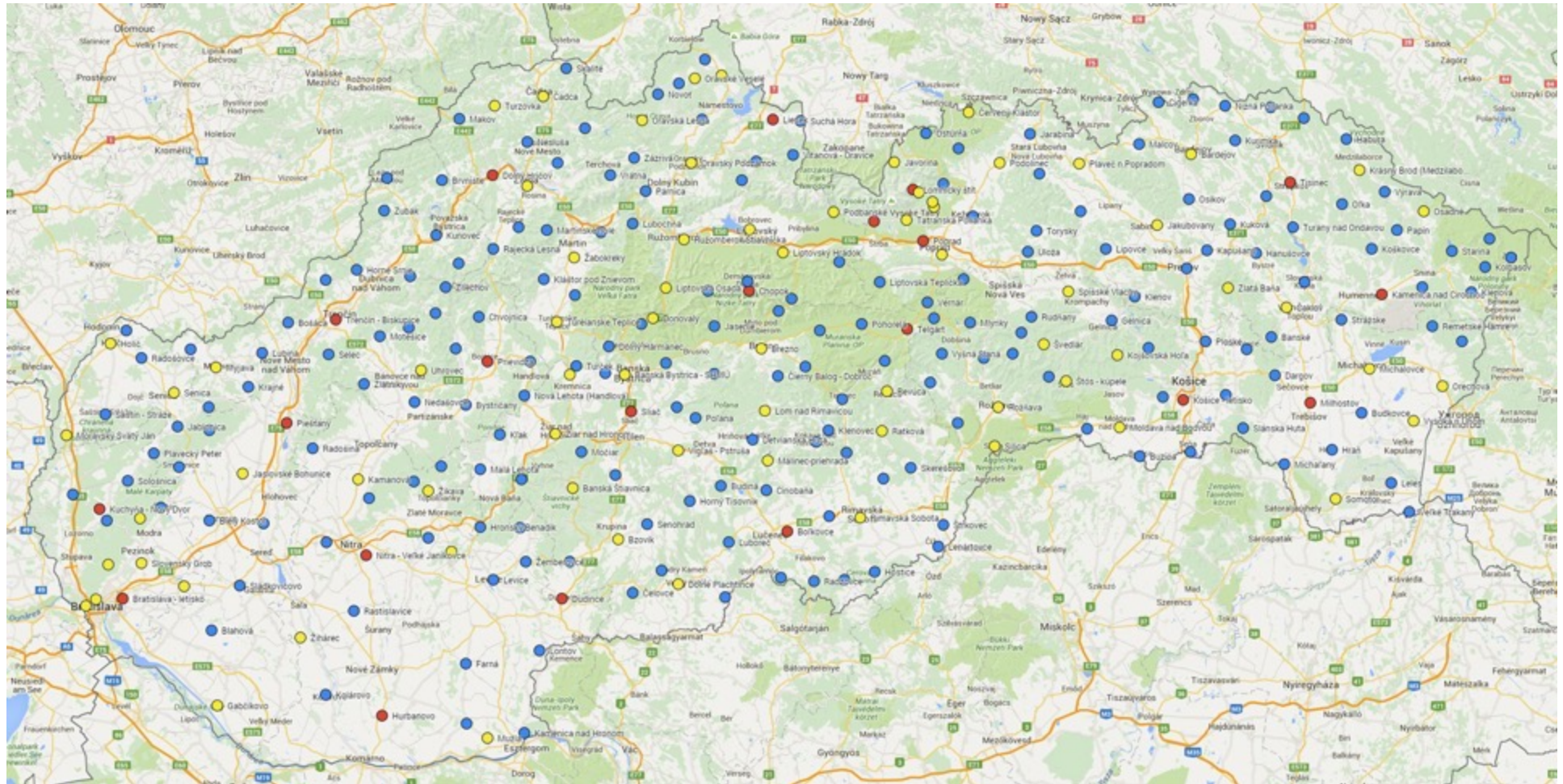
State Meteorological Network	
automatic weather stations	93
synoptic meteorological stations (professional)	20
climatic stations (voluntary)	63
precipitation stations	540
automatic precipitation stations	196
stations for measuring the sun's radiation	5
mast meteorological observatories (mast 200m)	1
agrometeorological stations	55
phenological stations	217
stations for environmental radioactivity monitoring	18
station for the measurement of total atmospheric ozone	1
upper air station	1
radar observatories	4

State Hydrological Network	
gauging stations for surface waters	420
monitoring objects for water sources	356
groundwater observation probes	1143
monitoring sites for the collection of surface water quality data	436
observation objects of groundwater quality	587

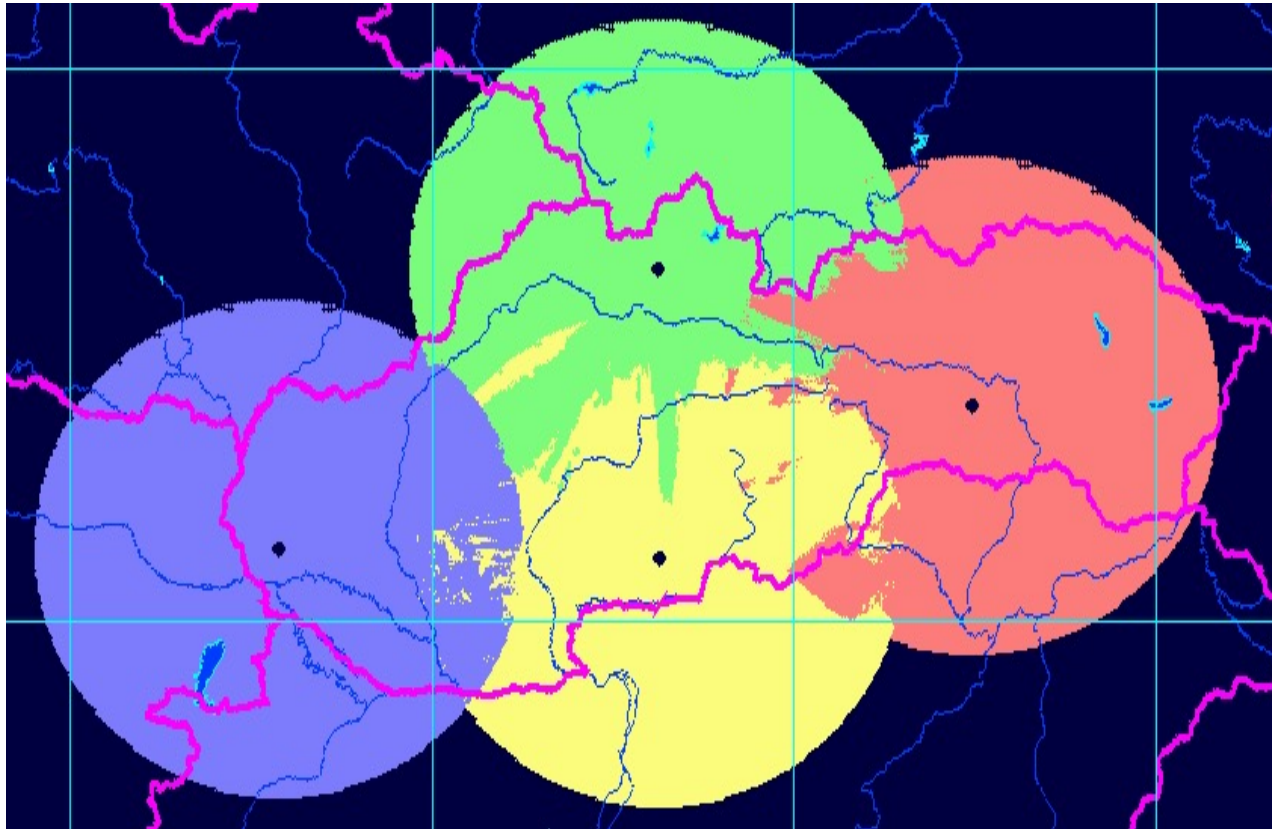
National air quality monitoring network	
automatic monitoring stations for air pollution	34
stations for monitoring regional air pollution and rainwater quality	4



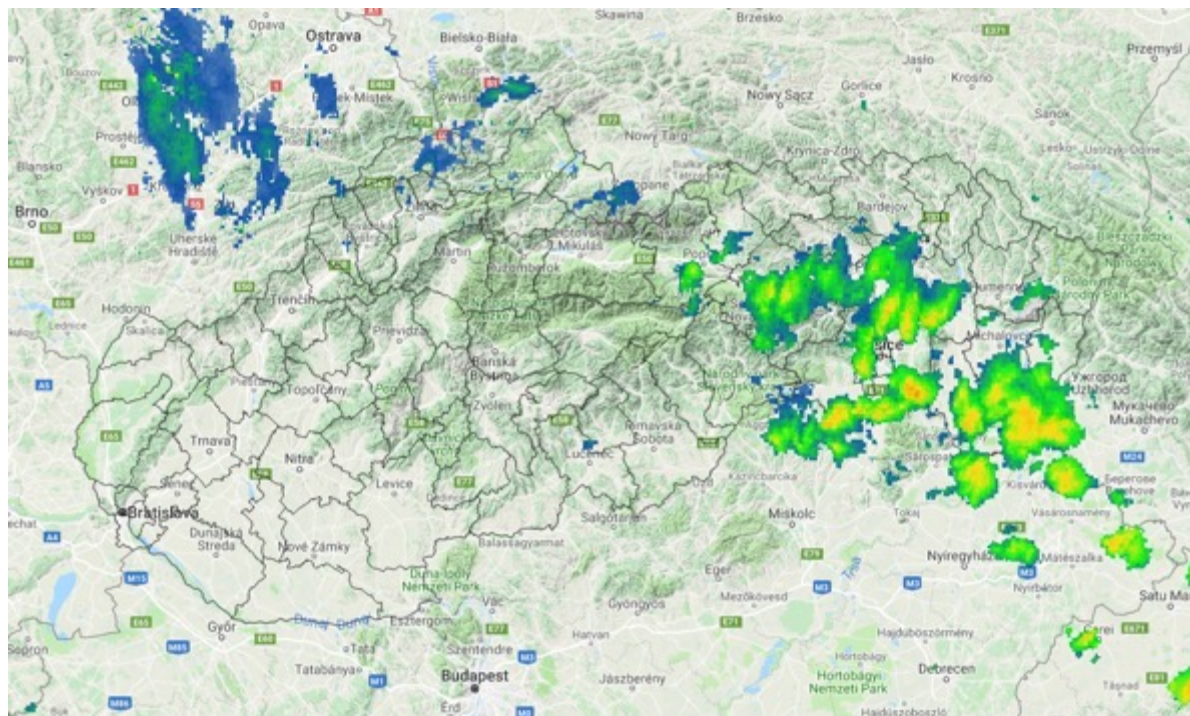
Network of Automatic Stations



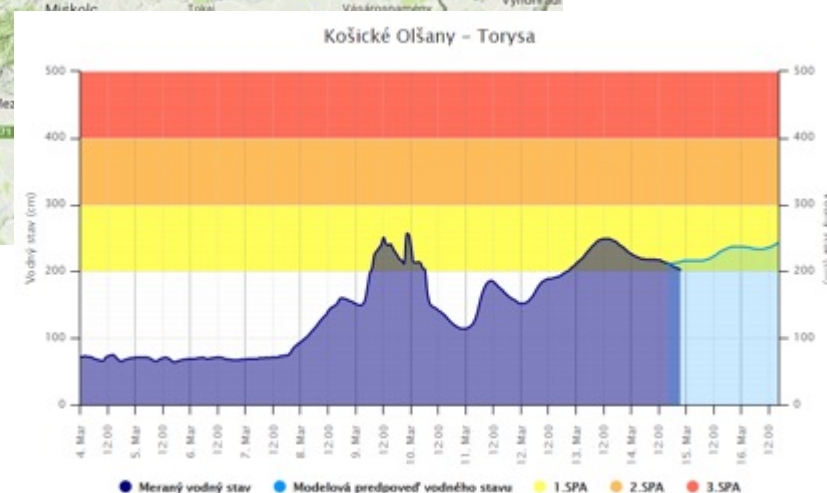
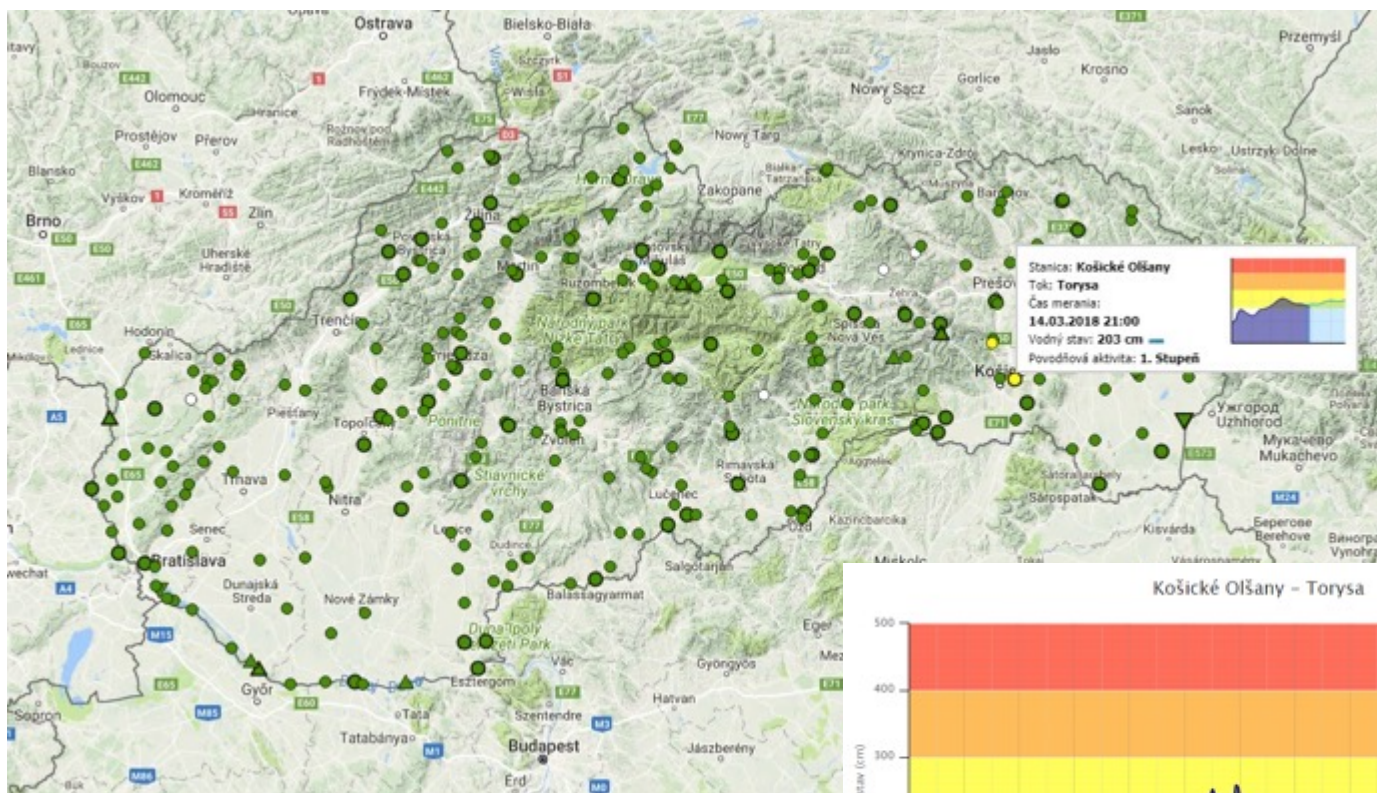
Weather Radar Network



Weather Radar Network

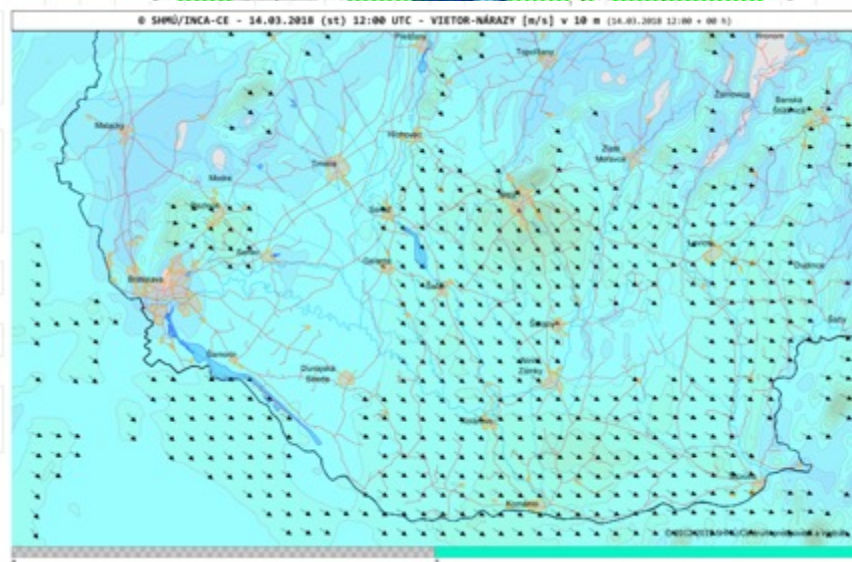
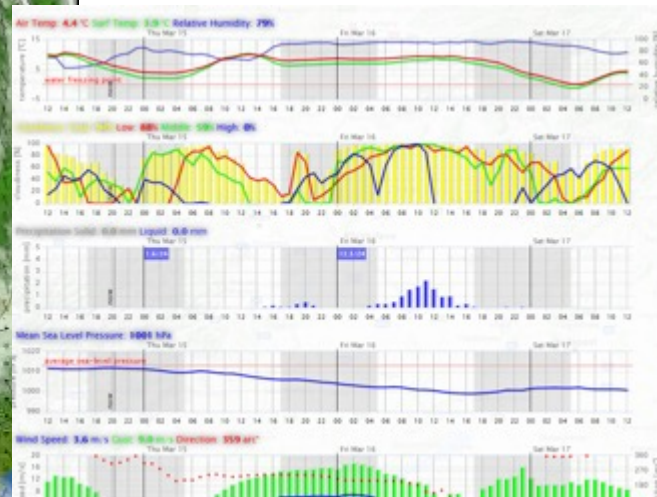
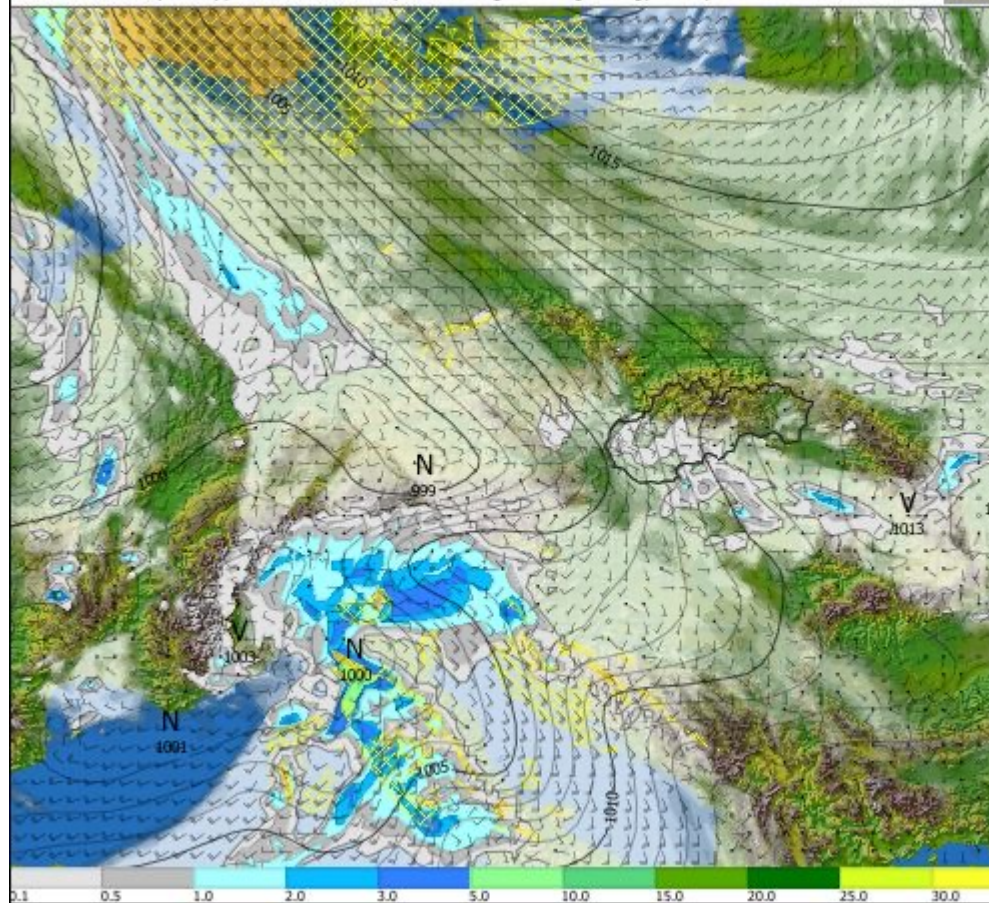


Online Hydrological Network



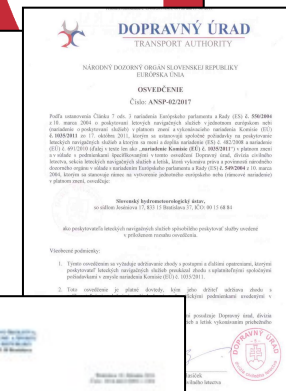
Numerical Weather Prediction and Nowcasting

© SHMÚ - Predpoveď ALADIN z 14.03.2018 (st) 12:00 na 15.03.2018 (št) 21:00 UTC
 OBLAČNOSŤ (biela), ÚHRN ZRAŽOK za predchádzajúcu 1h [mm/1h], MSLP, VIETOR a NÁRAZY VETRA >18m/s, >23m/s, >29m/s



Certificates

- Certificate of quality management system SHMU according to the standard STN EN ISO 9001: 2015
- Certificate of the Ministry of Education, Science, Research and Sport of the Slovak Republic dated 10 February 2016 to carry out research and development
- Four entities accredited by the Slovak National Accreditation Service (SNAS) according to STN EN ISO / IEC 17025: 2005
 - Calibration Laboratory: Calibration of temperature, air humidity, air pressure, air flow rates, precipitation meters and air pollution measuring instruments.
 - Testing laboratory: performing physical and chemical tests of samples of outdoor air and atmospheric precipitation
 - Testing laboratory Water quality: groundwater sampling and physico-chemical analyzes in collected samples
 - National air quality monitoring network: conducting continuous measurements of external air pollution levels, sampling of PM particles and expressing opinions and interpretations on test results
- Aeronautical Meteorological Service: Certificate of air navigation service provider



International cooperation

Not only the weather, nor water or polluted air know the borders of states. It is therefore necessary to cooperate with other organizations within international structures:



- **WMO** – World Meteorological Organization (1993)



- **ALADIN** – association of countries creating a forecasting model (1993)



- **RCLACE** – Regional cooperation for modeling in a limited area in Central Europe (1994)



- **EUMETSAT** – European Organization for the Use of Meteorological Satellites (2005)



- **ECMWF** – European Centre for Medium-Range Weather Forecast (2008)



- **ESSL** - European Severe Storms Laboratory (2013)



- **EUMETNET** – European Meteorological Network - Association of 30 European National Hydrometeorological Services based in Brussels (2013)



- **ECOMET** - Economic grouping of national meteorological services of the European Economic Area (2020)

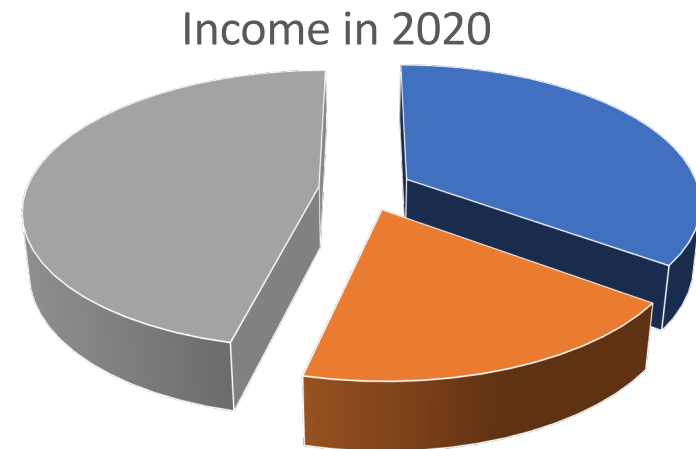


Financing of Activities

- Contribution from the state budget
- Revenues from own activities
- Specific targeted - local grants

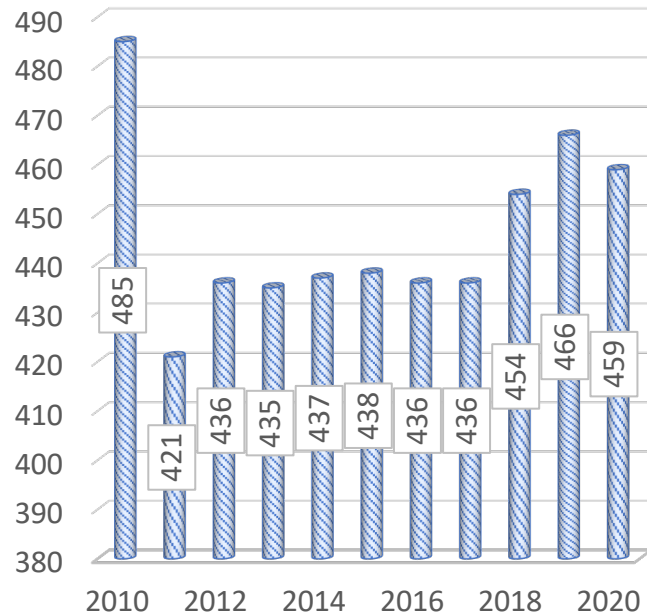


foreign grants
(EU programs)



■ State budget ■ Revenues ■ Projects

Personal Capacity



The average registered number of employees in 2020 was 459, of which 180 were women.

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