

**2013 Activity Report of the  
Slovenian National Meteorological Service  
performed by the  
Slovenian Environment Agency**



Slovenian Environment Agency (ARSO) is a body of the Ministry of Agriculture and Environment (100% governmental institution). ARSO all together includes six offices: Meteorological Office, Hydrology and State of Environment Office, Water Management Office, Environment and Nature Conservation Office, Seismology and Geology Office, and Office of General Affairs.

Tasks of Slovenian National Meteorological Service (NMS) are mainly performed by the Meteorological Office (ARSO/Met.Office) and partially by the Hydrology and State of the Environment Office (ARSO/HSE.Office) that includes Calibration Laboratory and Automatic Network Development and Maintenance Departments. IT support and Financial, Human Resources, and Legal Services are offered to the Meteorological Office by the Office of General Affairs (ARSO/Gen.Office). In September 2013 Section for Air Quality was attached to the Meteorological Office.

**STAFF:** At the end of 2013 ARSO had 383 employees (additional reduction of staff for 3.0% in comparison to 2012), 89 of them belonged to ARSO/Met.Office. For more than a decade ARSO/Met.Office suffered a constant reduction of staff for a few % per year. This brought it in a situation where some crucial activities depend only on one or two employees. With further reduction of staff some of ARSO/Met.Office activities related to official duty will have to be cancelled.

**BUDGET:** The budget of ARSO for 2013 was 30 M€, which is almost the same as budget for 2012 after the rebalance in June 2012. In addition 8 M€ were spend for investments within an EU cohesion project "Upgrade of the System for Monitoring and Analyzing of the Water Environment in Slovenia" (85% funds provided by EU, 15% by the Republic of Slovenia).

Approved budget of ARSO for 2014 is 29 M€, in addition 12 M€ are expected to be gained through EU cohesion funds for before mentioned investment project.

Approximately 5 M€ of ARSO budget is allocated for ARSO/Met.Office including international contributions (WMO EUMETSAT, ECMWF, EUMETNET, ECOMET & RC-LACE). Operational activities and official duties of ARSO/Met.Office are for the time being still 100% covered by the state budget. In addition about 5% of total ARSO/Met.Office budget is earned by providing special user services. These financial resources can be only used for the improvement of user services.

**CERTIFICATES:** Aviation Meteorology Service is a part of ARSO/Met.Office. ARSO is a Certified Meteorological Service Provider according to the Single European Sky legislation, in particular Regulation (EC) N°550/2004 on the provision of air navigation services and Commission Regulation (EC) N°2096/2005. The Calibration Laboratory of ARSO is accredited according to the ISO/IEC/SIST 17025 for temperature, barometric pressure, relative humidity and air quality quantities calibration: CO, SO<sub>2</sub>, NO<sub>x</sub> and ozone. The laboratory is also recognized by WMO as a Regional Instrument Centre (RIC) for SE Europe. ARSO is also hosting the Drought Management Centre for SE Europe, the project initiated by UNCCD, WMO and 13 countries from the region.

**MEMBERSHIP:** Republic of Slovenia is a member state of WMO, EUMETSAT and ECMWF. Slovenian Environment Agency is co-founder of the EUMETNET E.I.G. and member of the ECOMET E.I.G. In addition to that the agency is an active member of the ALADIN consortium and its sub-regional grouping of RC-LACE. ARSO also have bilateral cooperation agreements with DHMZ (Croatia) and ARPA/OSMER (Italy / province Friuli Venezia Giulia), agreement with ZAMG (Austria) is under preparation.

PROJECTS: Beside active role in several ICAO, WMO, COST and EUMETNET initiatives and programs, Slovenian NMS run several internal projects and other developmental activities to improve its performance:

- Reorganization of weather prognostic process by introducing objective/automatic methods
- Reorganization of avalanche warning service
- Upgrade of warning system in cooperation with Civil Protection and Rescue Administration
- Variability of Slovenian climate – overview of past trends in mean values and extreme events
- Preparation of new climate change scenarios for Slovenia based on RCP
- Progress in local numerical weather prediction model applications (ALADIN/ALARO)
- Establishment of the Service for marine meteorology and oceanography
  
- Practically all our current investments are included in the large investment project “Upgrade of the System for Monitoring and Analyzing of the Water Environment in Slovenia”. The *project deadline was extended to 2015* and it is all together worth 30.6 M €, 85% financed from European Cohesion Funds. Project includes (activities of ARSO/Met.Office in 2013):
  - Upgrade and extension of precipitation and avalanche network
    - 90 additional automated weather stations / **construction in progress**
  - Upgrade and extension of hydrological network (surface and ground waters)
  - Upgrade of computing center including the new HPC / **purchased, operational**
    - more than 100 cores, 120 TB memory, 2 MB RAM
  - Second meteorological radar in W part of Slovenia
    - new Vaisala radar / **in place, testing phase**
  - Development and application of several monitoring and forecasting systems:
    - Forecasting model for Sava and Soča river;
    - Drought Monitoring System for Slovenia; / **implemented**
    - System for Monitoring of Ecological and Chemical Status of Waters;
    - System for Monitoring and Modeling the North Adriatic See (circulation, waves, chemical and ecological pollution, etc.).
  - An extension of the current ARSO building mainly for Chemical Laboratories but also for Meteorological and Hydrological Forecasting Units. / **construction in progress**
  
- International projects: INCA CE / **finished**

MAIN PROBLEMS:

Due to the universal financial system for governmental institutions we are not able to efficiently use:

- Available project funds (e.g. H2020, InterReg, TCP, National research funds, ...)
  - Refunds are returned to the integral governmental budget not ARSO's budget
  - Employments financed through projects funds not allowed
- Revenues earned on the marked
  - Employment financed through revenues not allowed / new services not developed

Minor change of the Act on the execution of state budget is needed and we are still trying to get political support for the change.



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