

Italy

Capital city: Rome
Inhabitants: 60 Million



INSTITUTIONAL SETTING AND PURPOSE

The Italian Institute for Environmental Protection and Research (ISPRA) acts under the Italian Ministry for the Environment and the Protection of Land and Sea (MATTM). It was established in 2008 as a result of integration of the Agency for Environment and Technical Services (APAT), the Institute for Marine Environmental Research (ICRAM) and the Institute for Wild Fauna (INFS). ISPRA is composed of 20 Regional and 2 Provincial Environmental Agencies (named ARPAs and APPAs, respectively) and links the knowledge and experience of local environmental issues with national and European policies.

ISPRA's one of the main activities is data collection and validation of the National Environmental Information System (SINA).

The groundwater monitoring network in Italy is not centralized and consists of a group of regional groundwater monitoring networks that are managed by ARPAs. An example of Piedmont groundwater monitoring network is described below.

CHARACTERISTICS OF THE NETWORK

Piedmont Regional Groundwater Monitoring Network (RMRAS) has 605 wells (data from 2012) most of them private and measured manually.

There are 119 piezometers where water level is measured automatically. 116 wells are used for qualitative monitoring as well.

PROCESSING AND DISSEMINATION

The piezometric reference level in the RMRAS is represented by the range of fluctuation between the 1st and 3rd quartiles of monthly long-term average values (9-15 years). The range is considered as the natural annual fluctuation of the groundwater in that given piezometer of the network. Values of the piezometric level below 15-30% of the reference level are considered critical conditions for the quantitative state of the water body.

The data from the Network is available on the Piedmont ARPA web portal. When a user selects an observation point, a pop-up window appears with the possibility to see the depth to the groundwater level and its long-term fluctuation, figure 1 and figure 2.

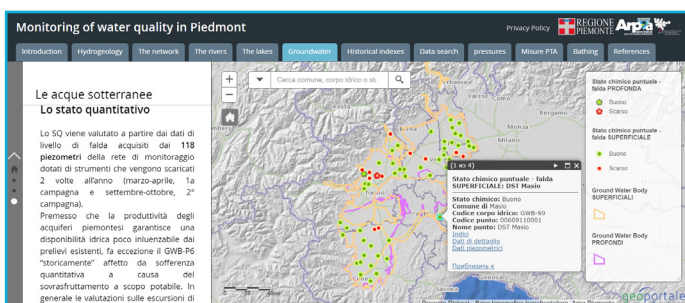


Fig. 1 – Piedmont groundwater monitoring web portal. Source: ARPA Piemonte

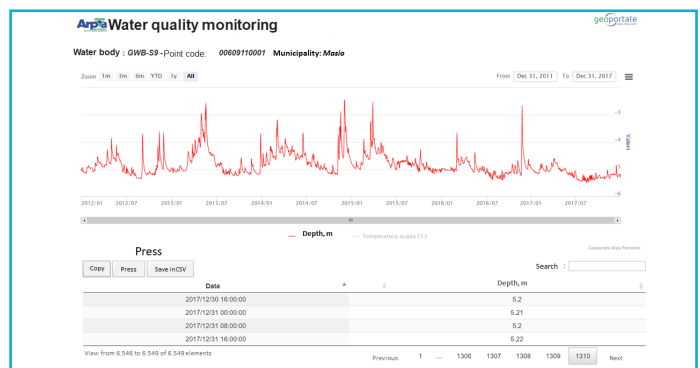


Fig. 2 – Groundwater level fluctuation time-series. Source: ARPA Piemonte

Sources

- **Regional Agency for Environmental Protection (ARPA) of Piemonte. Groundwater monitoring network** - <http://www.arpa-piemonte.it/approfondimenti/temi-ambientali/acqua/rete-di-monitoraggio/rete-di-monitoraggio-delle-acque-sotterranee>;
- **ARPA of Piemonte, water resource analysis** - <http://www.arpa.piemonte.it/approfondimenti/temi-ambientali/idrologia-e-neve/idrologia-ed-effetti-al-suolo/documenti-e-dati/rapporto-situazione-idrica-piemontese>.