

IVS FEB RAS Geoportal for integration and increasing availability of volcanological data

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Local Spatial Data Infrastructure (SDI) of the Institute of Volcanology and Seismology (IVS) FEB RAS as a peripheral node of SDI of Russian Academy of Sciences was created in 2010 and has been developing since that time. The SDI is aimed at providing free access to the distributed spatial data, and is designed to provide data exchange and complex utilization of data in scientific research. IVS FEB RAS Geoportal as a single point of access to volcanological data is the main element of SDI (<http://geoportal.kscnet.ru>). Architecture of the geoportal is being developing on the base of free open source software (GeoNetwork, GeoServer, etc.) that is distributed under the GPL license (GNU General Public License), as recommended by the OGC (Open Geospatial Consortium). One of the most important geoportal functions is providing an opportunity for search of data and services. A metadata management system with metadata catalogue serves this purpose. The catalogue contains descriptions of information volcanological resources: databases, datasets, publications, geoinformation systems (GIS), maps, photos, video content etc. Metadata in the catalogue correspond to the international standards. This allows the system to exchange metadata with remote sources on the Internet through a mechanism of metadata harvesting. Geoportal provides access to WMS and Google Earth services of spatial data visualization and interactive thematic maps. One of the directions of geoportal development is creation of data collections and providing access to this data using modern web-technologies. Examples of these resources: Volcanoes of the Kurile-Kamchatka Island Arc (VOKKIA) information system, Active volcanoes of Kamchatka and Northern Kuriles catalogue, Holocene Kamchatka Volcanoes catalogue, Late Cenozoic Pacific Submarine Volcanoes database, archives of Kamchatkan Volcanic Eruption Response Team (KVERT), Earthquakes of the Northern Group of Kamchatka Volcanoes 1973-1996 database etc. Geoportal promotes systematization of a wide range of IVS scientific information and ensures its integration in the global science information space.