



Inventory of gas flux measurements from volcanoes of the global Network for Observation of Volcanic and Atmospheric Change (NOVAC)

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NOVAC, the Network for Observation of Volcanic and Atmospheric Change, was initiated in 2005 as a 5-year-long project financed by the European Union. Its main purpose is to create a global network for the monitoring and research of volcanic atmospheric plumes and related geophysical phenomena by using state-of-the-art spectroscopic remote sensing technology. Up to 2012, 64 instruments have been installed at 24 volcanoes in 13 countries of Latin America, Italy, Democratic Republic of Congo, Reunion, Iceland, and Philippines, and efforts are being done to expand the network to other active volcanic zones. NOVAC has been a pioneer initiative in the community of volcanologists and embraces the objectives of the World Organization of Volcano Observatories (WOVO) and the Global Earth Observation System of Systems (GEOSS).

In this contribution, we present the results of the measurements of SO_2 gas fluxes carried out within NOVAC, which for some volcanoes represent a record of more than 7 years of continuous monitoring. The network comprises some of the most strongly degassing volcanoes in the world, covering a broad range of tectonic settings, levels of unrest, and potential risk. We show a global perspective of the output of volcanic gas from the covered regions, specific trends of degassing for a few selected volcanoes, and the significance of the database for further studies in volcanology and other geosciences.