ACTRIS: Aerosols, Clouds and Trace gases Research Infrastructure Network

Description

Climate change is heavily governed by atmospheric processes, in particular the interaction between radiation and atmospheric components (e.g., aerosols, clouds, greenhouse and trace gases). Some of these components also provoke adverse health effects that influence air quality. The EU's IPCC Fourth Assessment Report and Thematic Strategy on air pollution clearly asserts the need for strengthening the ground-based component of the Earth Observing System for these key atmospheric variables. However, there is was no coordinated research infrastructure for these observations.

ACTRIS (Aerosols, Clouds and Trace gases Research InfraStructure Network) worked to fill this observational gap through the coordination of European ground-based network of stations equipped with advanced atmospheric probing instrumentation for aerosols, clouds and short-lived trace gases. ACTRIS was a coordinated network that contributed to: providing long-term observational data relevant to climate and air quality research produced with standardized or comparable procedures; supporting transnational access to large infrastructures; strengthening collaboration in and outside the EU and access to high quality information and services to the user communities; developing new integration tools to fully exploit the use of atmospheric techniques at ground-based stations, in particular for the calibration/validation/integration of satellite sensors and for the improvement of global and regional-scale climate and air quality models.

ACTRIS supported the training of new users, specifically young scientists in the field of atmospheric observations and promoted the development of new technologies for atmospheric observation of aerosols, clouds and trace gases through close partnership with SMEs. ACTRIS played an essential role in supporting integrated research actions in Europe for building the scientific knowledge required to support policy issues on air quality and climate change.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación