



## **Global Earth Observation and Monitoring - GEOMON**

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GEOMON is an Integrated Project of the 6th European frame work programme that has recently started. The overall goal of the GEOMON project is to sustain and analyse European ground-based observations of atmospheric composition, complementary with satellite measurements, in order to quantify and understand the ongoing changes. GEOMON is a first step to build a future integrated pan-European Atmospheric Observing System dealing with systematic observations of long-lived greenhouse gases, reactive gases, aerosols, and stratospheric ozone. This will lay the foundations for a European contribution to GEOSS and optimise the European strategy of environmental monitoring in the field of atmospheric composition observations, e.g. in the framework of GMES. Specifically, we will unify and harmonise the main European networks of surface and aircraft-based measurements of atmospheric composition parameters and integrate these measurements with those of satellites. GEOMON will support data gathering at existing networks if necessary, rescue and compile existing ground-based data, and develop new methodologies to use these data for satellite validation and interpretation. In addition, GEOMON will enable innovative ground-based measurements complementary to satellites, made by upward looking ground based remote sensing instruments like MAXDOAS, FTIR, and LIDAR, and by systematic measurement programmes of upper-tropospheric composition using passenger aircrafts CARIBIC and MOZAIC. These data will serve to reduce biases and random errors in satellite observations and facilitate interpretation of the columnar measurements in combination with surface data. This will result in a significant improvement

in the use of existing and future satellite data. The access to data and data-products will be coordinated at a common data centre for more efficient use. Common techniques and modelling tools will be used in order to add value to the GEOMON data observations, to facilitate their use in satellite validation and help design an optimal network.