



## Global Earth Observation and Monitoring - GEOmon

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GEOmon is an Integrated Project of the 6th European framework program that has started in early 2007. The overall goal of the GEOmon project is to sustain and analyze European ground-based observations of atmospheric composition, complementary with airborne and satellite measurements, in order to quantify and understand the ongoing changes and trends.

GEOmon contributes to building a future integrated pan-European Atmospheric Observing System acquiring, providing and maintaining systematic observations of long-lived greenhouse gases, reactive gases, aerosols, and stratospheric ozone. GEOmon intends to lay the foundations for a European contribution to GEOSS and to optimize the European strategy of environmental monitoring in the field of atmospheric composition observations, e.g. in the framework of GMES. Specifically, the main European networks of surface and aircraft-based measurements of atmospheric composition parameters are unified and harmonized, and integrated with satellite measurements.

Up to now, GEOmon has been supporting various data gathering activities at existing networks, rescuing and compiling existing ground-based data, and developing new methodologies to use these data for satellite validation, interpretation and various modeling and trend analysis studies. In addition, GEOmon has been enabling innovative ground based measurements and measurement campaigns complementary to satellites, made by upward looking ground based remote sensing instruments like MAXDOAS, FTIR (installation of two new FTIR's at Bialystok and Orleans), and LIDAR, and by systematic measurement programs of upper-tropospheric composition using the passenger aircrafts CARIBIC and MOZAIC. These data have been shown to reduce biases and random errors in satellite observations and facilitate interpretation of the columnar measurements in combination with surface data. Overall, this will continue to result in a significant improvement in the use of existing and future satellite data. Access to data, data-products and metadata is coordinated at the GEOmon Distributed Data Base for more efficient use. Common techniques and modeling tools are applied in order to add value to the GEOmon data observations and data products, to facilitate their use in satellite validation and help design an optimal network.

Please visit the GEOMON web site for more information: <http://www.geomon.eu>  
GEOmon Distributed Data Base: <http://dev0.nilu.no/geomon/>

The Description of Work can be found under  
[http://www.geomon.eu/documents/GEOMON\\_DOW\\_fina11072006.pdf](http://www.geomon.eu/documents/GEOMON_DOW_fina11072006.pdf)