



The use of Sentinel satellite data in the MACC-II GMES pre-operational atmosphere service

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The Monitoring Atmospheric Composition and Climate (MACC-II) project is the current pre-operational atmosphere service of the European GMES programme. MACC-II provides data records on atmospheric composition for recent years, data for monitoring present conditions and forecasts of the distribution of key constituents for a few days ahead. MACC-II combines state-of-the-art atmospheric modelling with Earth observation data to provide information services covering European Air Quality, Global Atmospheric Composition, Climate, and UV and Solar Energy.

MACC-II uses a wide array of satellite and in-situ data observing both meteorological and atmospheric composition variables to provide a best estimate of the current state of the atmosphere on a daily basis. These analyses are then used as initial conditions for 5-day global forecasts of atmospheric composition and 4-day European air quality forecasts.

This presentation will provide an overview of the MACC-II pre-operational monitoring/forecasting system focusing on the use of current and future satellite data. The Sentinel missions will provide crucial new information on atmospheric composition and we will show how MACC-II is preparing for these new observations.