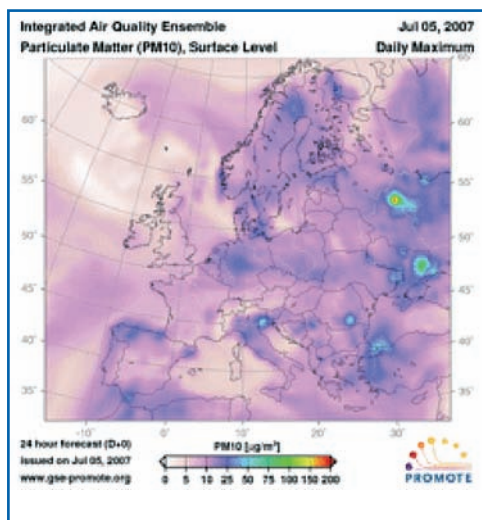


European Space Agency GMES Service Element Project “PROtocol MONiToring for the GMES Service Element: Atmosphere (PROMOTE)” <http://www.gse-promote.org/>

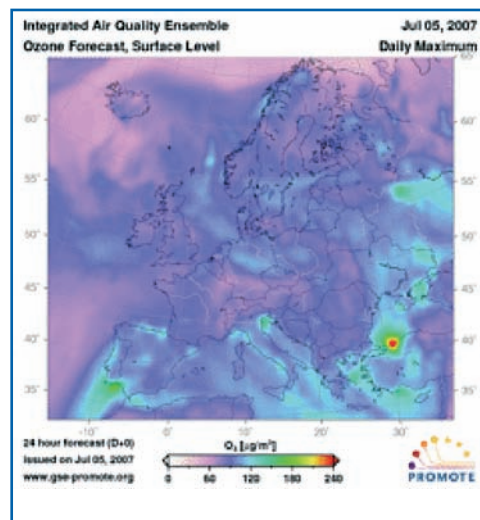
Description

The GMES Service Element for Atmosphere PROMOTE, sponsored by the European Space Agency (ESA), delivers policy-relevant services on multiple atmospheric issues to end-users. With a consortium of over 20 European and Canadian institutes, including service providers and researchers, PROMOTE focuses on stratospheric ozone, surface ultraviolet radiation, air quality, greenhouse gases, and special services. PROMOTE services assist user organizations in the public sector in things such as their monitoring obligations and in their tasks to warn the public for air pollution episodes or enhanced levels of ultraviolet radiation. Currently about 50 such user organisations in 16 European countries have signed a Service Level Agreement with PROMOTE service providers. With these services PROMOTE reaches out to 30 % (air quality) or even 60% (UV) of the population in EU25. International organizations like EEA and WMO are provided with information such as long-term satellite data on stratospheric ozone and up-to-date information, including forecasts, on the Antarctic ozone hole.

One of the biggest challenges being addressed by PROMOTE is the integration of existing ground-based air quality networks with models and the newly available satellite measurements on air pollution in order to generate accurate daily information on air pollution levels over Europe. The maps below represents an integrated forecast of air quality (surface-level PM10 and ozone) over Europe produced jointly by several of the leading models in Europe.



Particulate matter, surface level



Ozone forecast, surface level

PROMOTE covers spatial scales from the ozone hole over Antarctica to polluted streets in London, and temporal scales from climate and ozone trends across decades to hourly information on ultraviolet radiation levels on Mediterranean beaches. Of special note regarding PROMOTE, the close interaction of providers and users in the project helps to ensure high-quality services that directly address users' needs.

Added Value

Through the gathering together of and cooperation among European and Canadian experts into a consortium focused on delivering operational products, PROMOTE has made an excellent step towards beginning a global network of experts concerned with the use of Earth Observation for further understanding the Earth's atmosphere and its effects. Through the GEO initiative, the User Interface Committee on 'Air Quality and Health' has brought together the European side, including PROMOTE, and the United States initiatives of NASA on similar topics and a dialog has begun on how best to collaborate. It is expected that the GEO initiative will continue to foster these connections and dialogs between Europe and North America and it is hoped that similar connections can be made with other regions such as Asia and Africa.

Relevance to GEO

PROMOTE is directly relevant to the Climate, Health, Weather, and User SBAs.

In the Climate SBA, the PROMOTE services being provided on Greenhouse Gases, Aerosols and Stratospheric Ozone are all directly related to Task CL-06-02 (Key Climate Data from Satellite Systems). In the Health SBA, the PROMOTE services being provided on ground-level Air Quality and Personalized UV Information are directly applicable to the aims of Task HE-07-03 (Integrated Atmospheric Pollution Monitoring, Modelling and Forecasting) and the epidemiological aspects of HE-07-02 (Environment and Health Monitoring and Modelling) as relates to UV/skin cancer relationships. In the Weather SBA, the stratospheric ozone services are of direct application to Task WE-07-01 (Development of Data Assimilation for Operational Use). In the User SBA, PROMOTE is providing support to Task US-06-02 (Pilot Communities of Practice) in the 'Air and Health' Community of Practice.

Participants

- Austria
- Belgium
- Canada
- Denmark
- Finland
- France
- Germany
- Greece
- Ireland
- Italy
- Netherlands
- Norway
- Portugal
- Spain
- Switzerland
- United Kingdom
- ESA
- ECMWF
- WMO
- CEOS

Current Status and Next Steps

The PROMOTE project has funding through late 2009 and many services are expected to be funded in further GMES funding mechanisms of the European Commission, notably the 7th Framework Programme (FP7). Additionally, participation in the CEOS Atmospheric Composition Constellation (ACC) project will contribute toward continuation of international cooperation and addressing potential gaps in the availability of Earth Observation data necessary to continue provision of operational services.