COST ES0602:

Towards a European Network on Chemical Weather Forecasting and Information Systems

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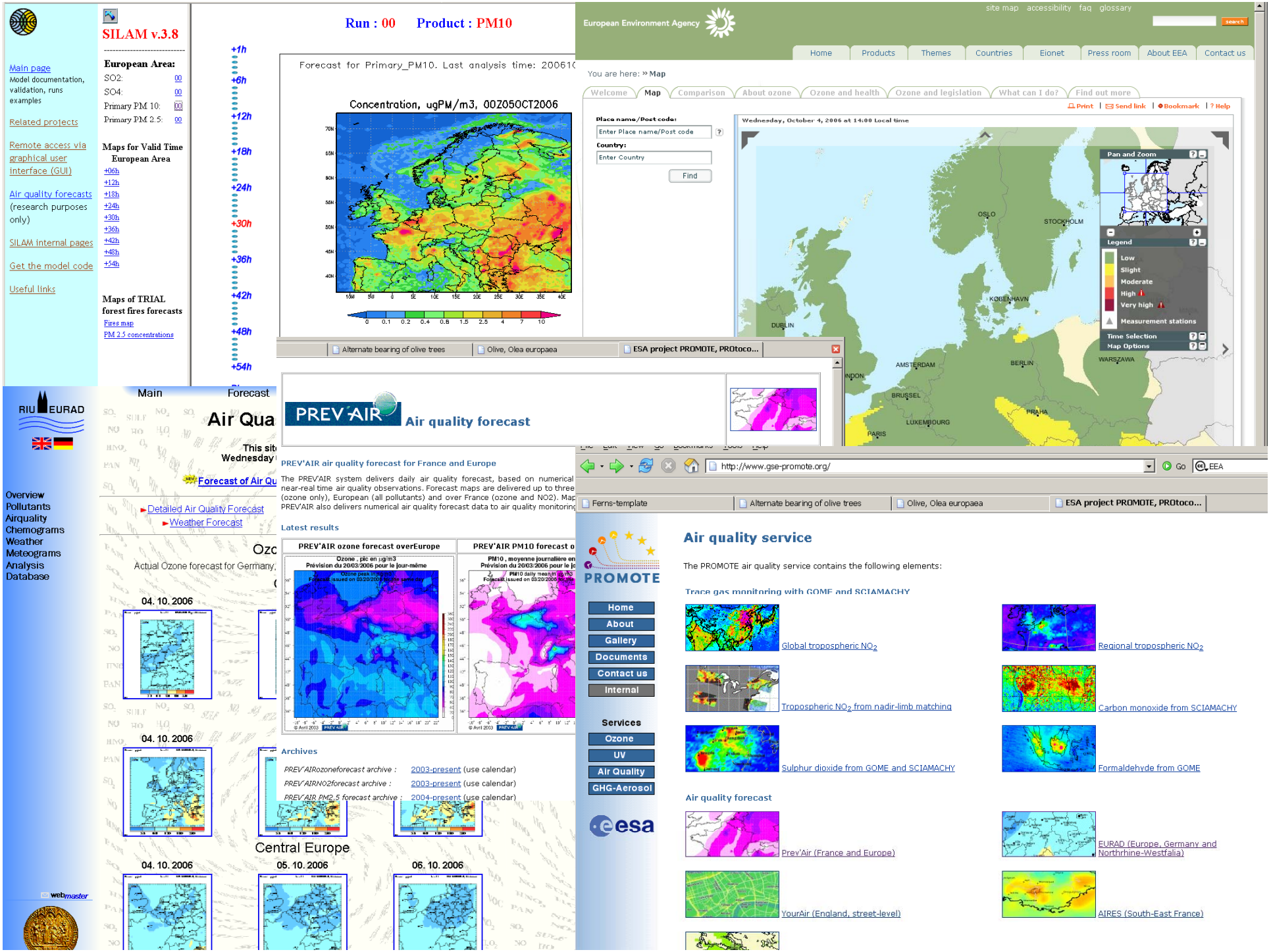
Vice-chair: Konstantinos Karatsas, Aristotle Univ., Thessaloniki

http://www.chemicalweather.eu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forest fires forecasts
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Forecast for Primary_PM10. Last analysis time: 200610
Concentration, ugPM/m3, 00Z050CT2006
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Olive, Olea europaea
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Weather Forecast
Actual Ozone forecast for Germany.
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Archives
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PREV'AIRNO2forecast archive : 2003-present (use calendar)
PREV'AIR PM2.5 forecast archive : 2004-present (use calendar)
http://www.gse-promote.org/
Ferns-template
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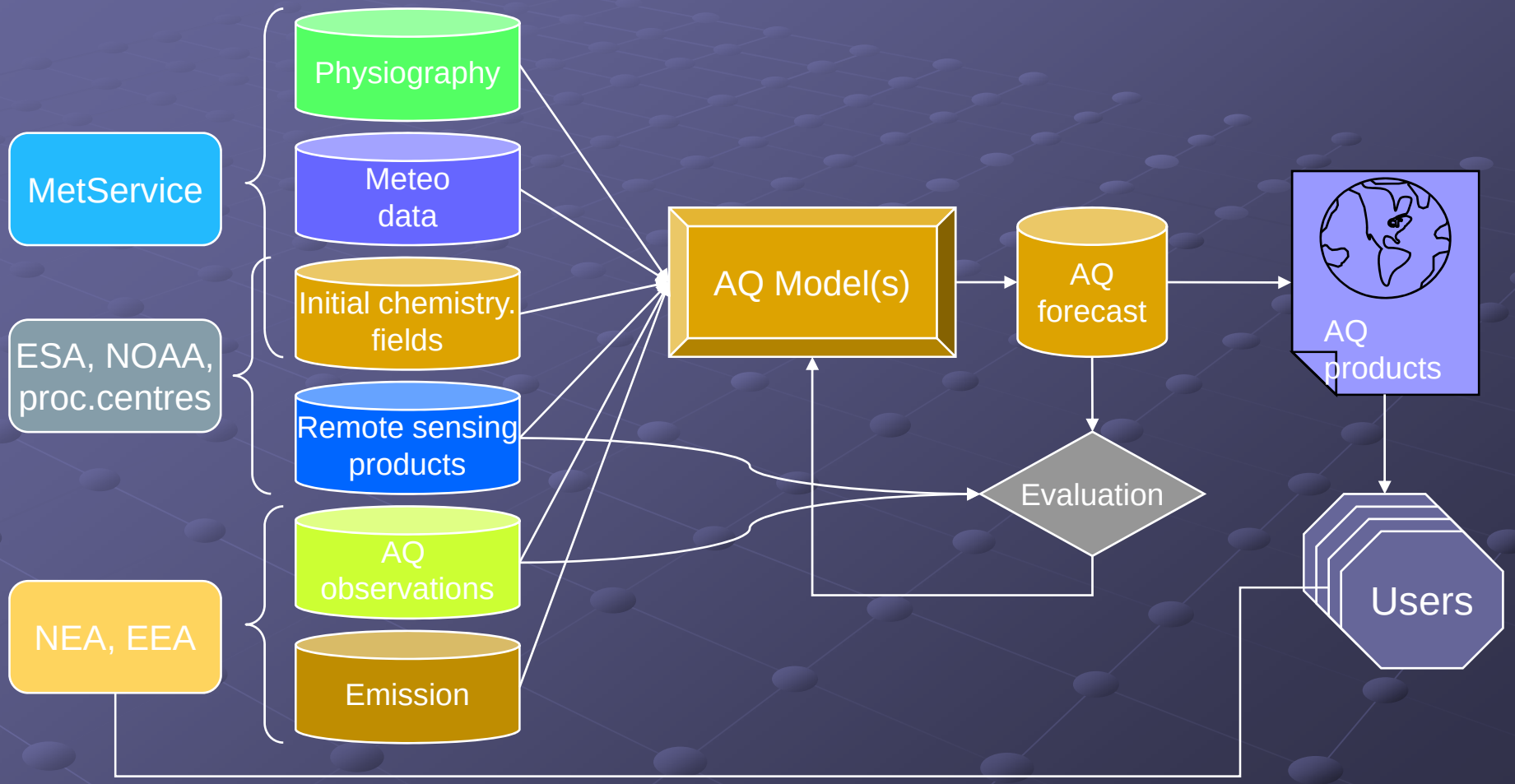
esa
Air quality service
The PROMOTE air quality service contains the following elements:
Trace gas monitoring with GOME and SCIAMACHY
Global tropospheric NO2
Regional tropospheric NO2
Tropospheric NO2 from nadir-limb matching
Carbon monoxide from SCIAMACHY
Sulphur dioxide from GOME and SCIAMACHY
Formaldehyde from GOME
Air quality forecast
Prev'Air (France and Europe)
EURAD (Europe, Germany and Northrhine-Westfalia)
YourAir (England, street-level)
AIRES (South-East France)

Motivation (2): structure of AQ forecasting system

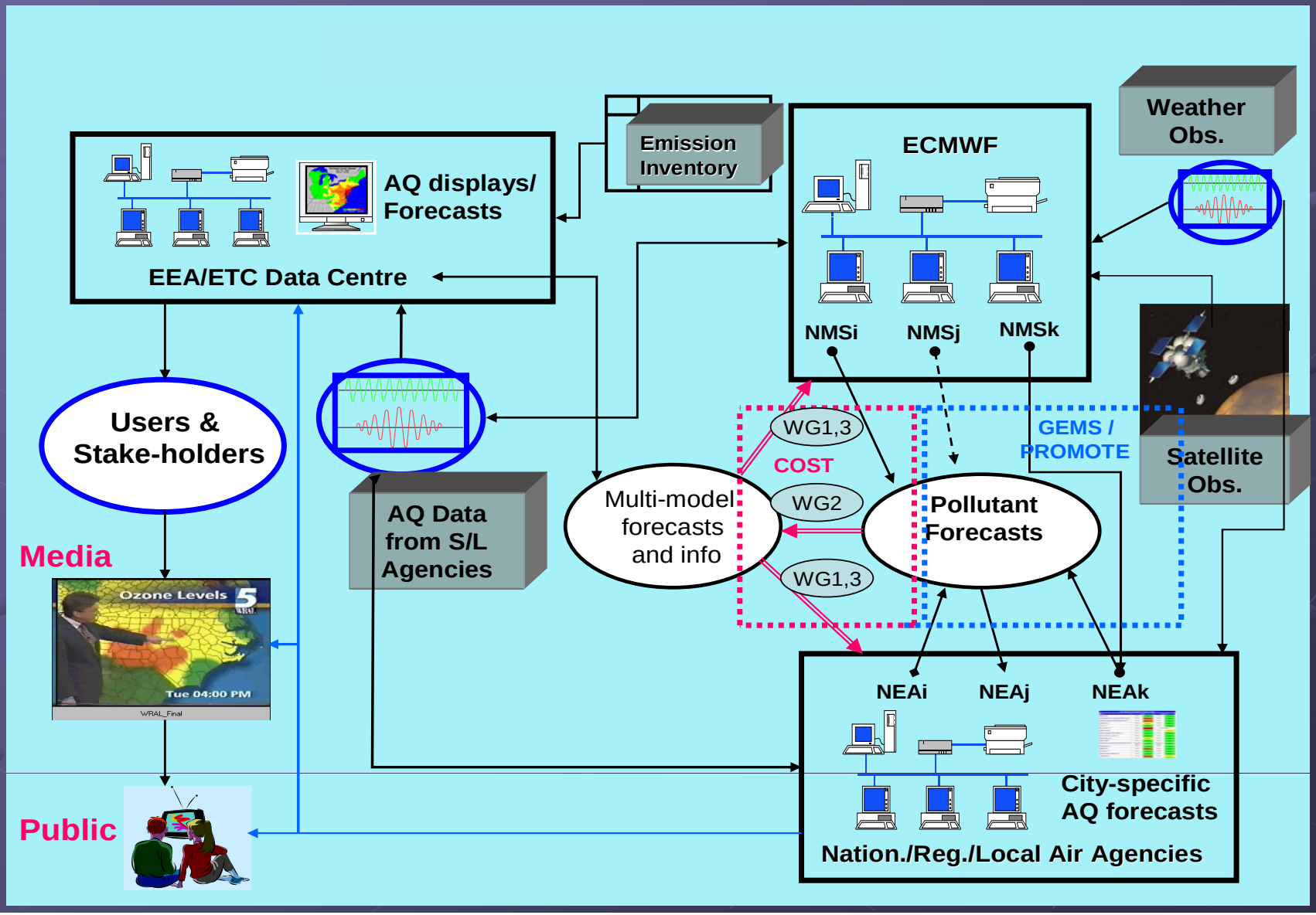


Objectives

To setup a forum for benchmarking, harmonizing and developing approaches and practices for chemical weather forecasting network and near-real-time information systems in Europe.

- Identify needs for the optimisation and harmonization of exchange of AQ data & integration of modelling systems;
- Find out the gaps of existing knowledge and practices;
- Review the potential for and means of multi-model ensemble and chemical data assimilation;
- QA/QC criteria for CW forecasting systems;
- Assess visualisation and dissemination platforms, arrangements, formats and protocols;
- Build up on current systems, enhance cooperation and coordination between providers, operators, and users for improving the science and application of CW forecasting;
- Establish and/or strengthen links with similar ongoing national and international activities and dedicated projects

ENCWF: scope and interactions



Scientific Programme

- WP1. Exchange of AQ forecasts and input data (Kjetil Torseth, NILU):
  - requirements on data exchange frequency, formats, existing infrastructure. Combining forecast data and NRT observations in a single system. Provisions for quality checks.
- WP2. Multi-scale forecasting, multi-model ensemble, boundary data (Mikhail Sofiev, FMI)
  - Multi-model AQ assessments and forecasting. QA/QC issues. Ensemble. Feasibility of emission scenarios (short term abatement). Multi-scale CW forecast and assessment
- WP3. Dissemination and visualization (Kostantinos Karatsas, AUT):
  - Dissemination of AQ information to users. What to display, harmonization possibilities: separate pollutants vs. AQ index. Inventory of national systems, other activities and organisations.

- A cross-cutting activity: to coordinate with other organizations (EEA, EUMETNET/WG-ENV, WMO, etc.) and ongoing activities (GEMS, PROMOTE).

Time table, Management, Dissemination

Phase 1: Planning, operational arrangements, establishment of WGs and inventory activities (year 1);

Phase 2: Main assessment, benchmarking and development work to be conducted by all WGs (years 2, 3);

Phase 3: Final conclusions and recommendations to be formulated in reports and final publications (year 4).

Participation / contributions: EoC

Web-site: continuous updating: reports & selected results

Workshops with proceedings;

Dedicated attention to relevant international organisations concerning the process, solutions and outreach in order to achieve a broader impact, e.g.: the UN-ECE, WMO, EEA, DG-ENV, …

Participants

- From each country:
  - one **met-service** delegate to MC
  - one environmental agency (or other AQ forecast provider) delegate to MC
- EEA
- Key on-going European activities in the field
  - GEMS (Global and regional Earth-system Monitoring using Satellite and in-situ data), lead by ECMWF
    - involvement of **WMO** through ECMWF
  - PROMOTE (Near-Real-Time delivery of the satellite products of GMES system), project of ESA lead by DLR
    - involvement of **ESA**