



COST

European Network on New Sensing Technologies for Air
Pollution Control and Environmental Sustainability - *EuNetAir*

COST Action TD1105

WGs and MC Meeting at Rome, 4-6 December 2012

Action Start date: 01/07/2012 - Action End date: 30/06/2016

Year: 2012-2013 (*Starting Action*)



Nuria Castell Balaguer

Sub-WG 3.1 Leader

NILU- Norwegian Institute for Air Research / Norway



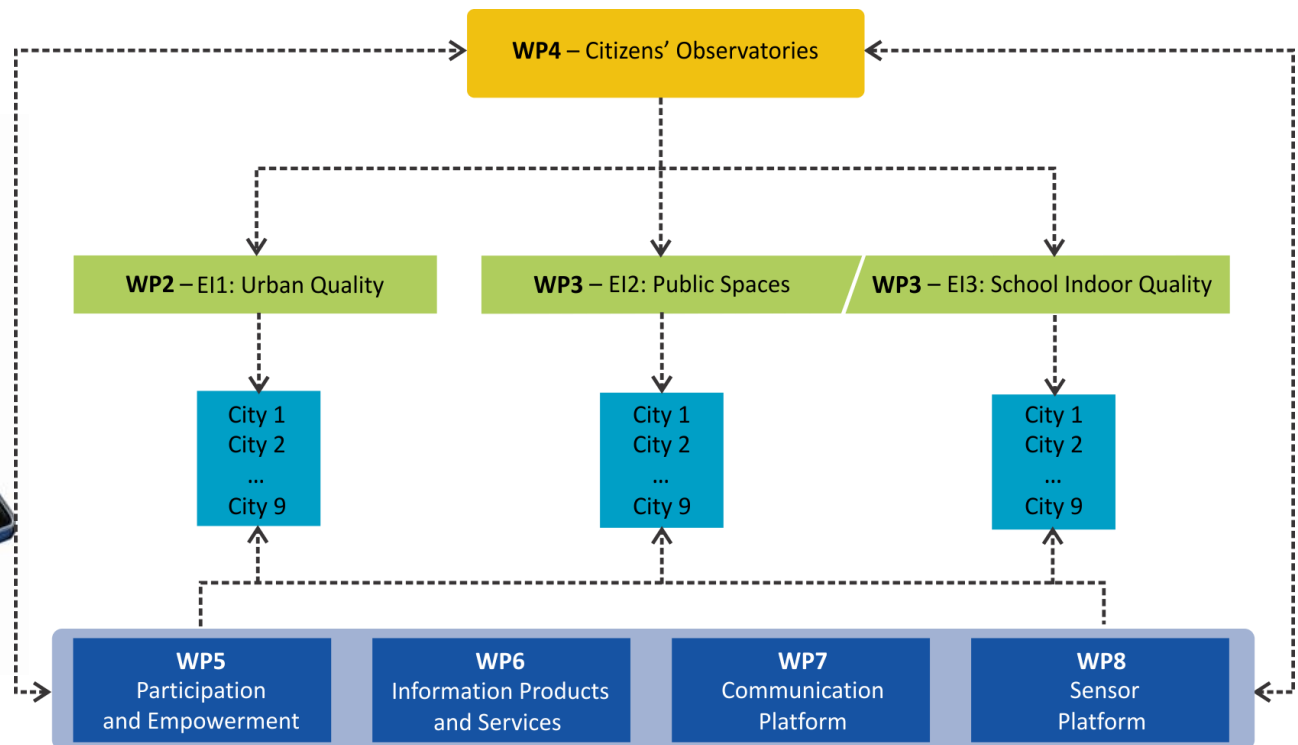
Scientific context and objectives in the Action

- **Background / Problem statement:**
 - Calibration of low-cost sensors
 - Evaluation of their uncertainty
 - Test in the real field
- **Brief reminder of MoU objectives:**
 - NILU, Air Quality Reference laboratory
 - NILU, daily AQ forecasting for Oslo
 - Fixed monitoring stations in Oslo
 - CITI-SENSE, fixed and mobile low-cost sensors

Current research activities of the Partner (1/2)



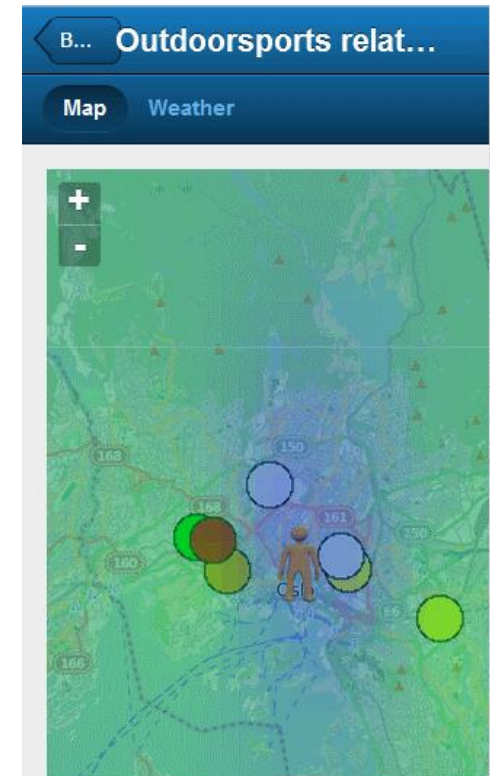
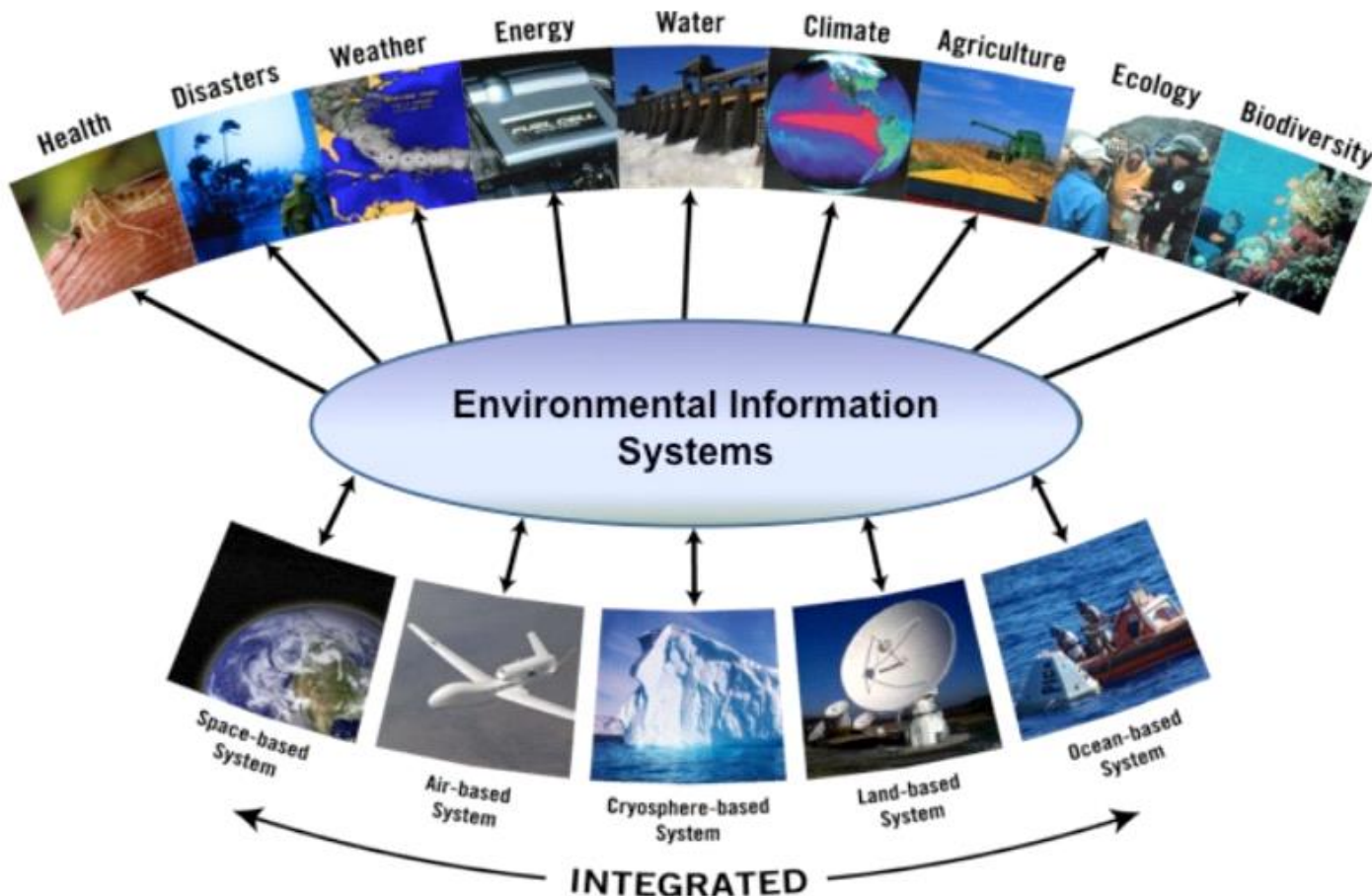
Development of sensor-based Citizens' Observatory Community for improving quality of life in cities



Current research activities of the Partner (1/2)

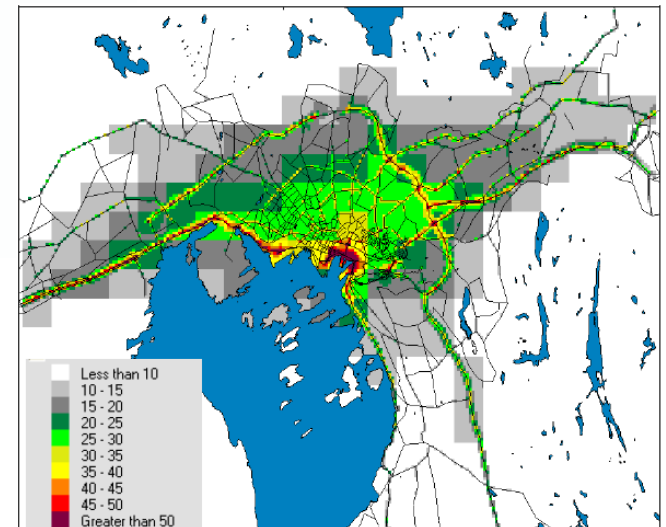
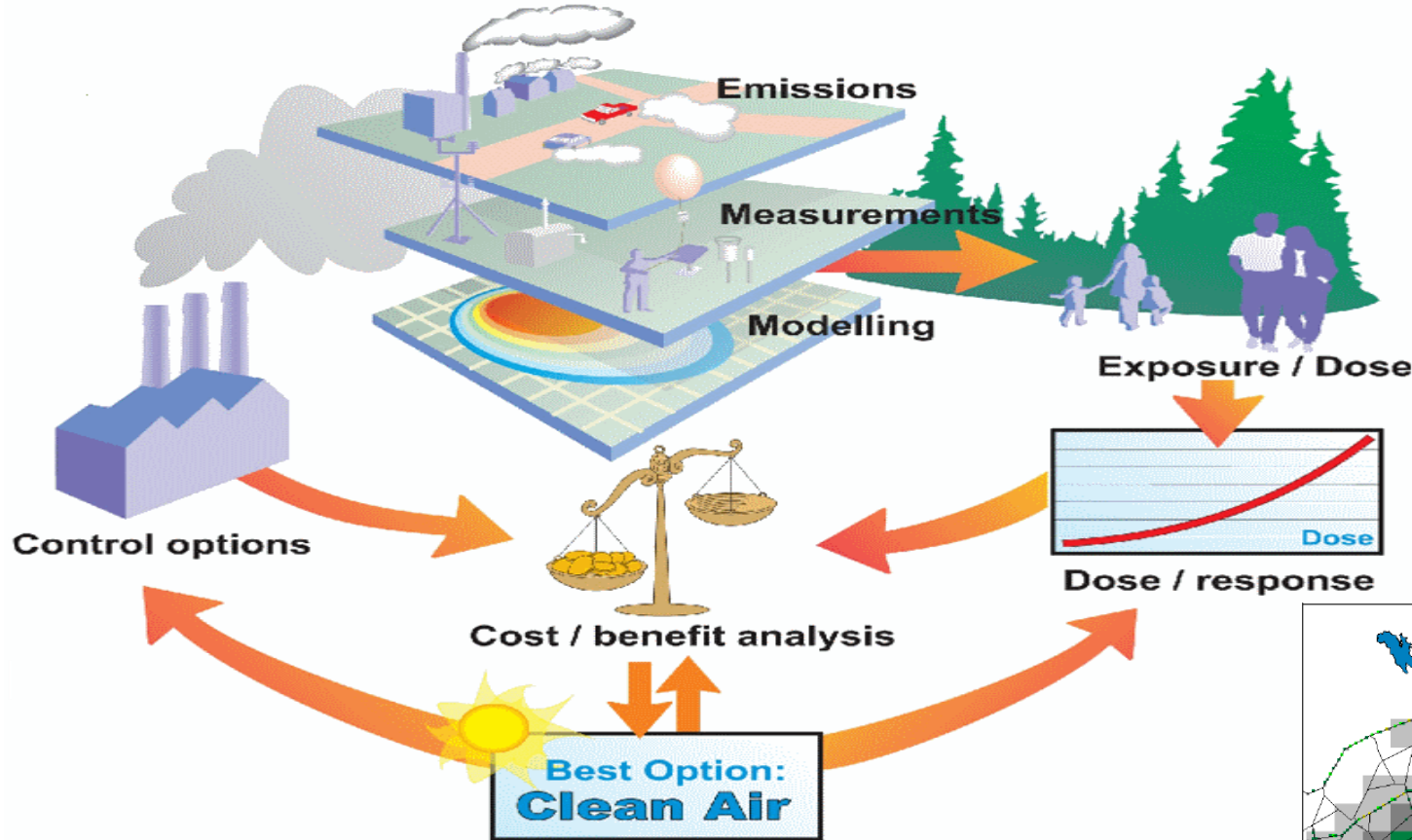


The Environmental Observation Web and its Service Applications within the Future Internet



Current research activities of the Partner (1/2)

AQ Modelling



Current research activities of the Partner (1/2)

NILU har (gjennom BAKGRUNNprosjektet) utviklet en applikasjon som gir et anslag over gjennomsnittlig konsentrasjon. Kartene med årlige konsentrasjoner gjelder for 2007 (NO₂) og 2008 (O₃, PM₁₀, PM_{2.5}), mens tidsseriene er middelværdier fra de siste fem til ti årene. Resultatene fra applikasjonen er tenkt å gi en indikasjon på bakgrunnsverdier, og resultatene bør brukes med omtanke siden de har en usikkerhet.

Component

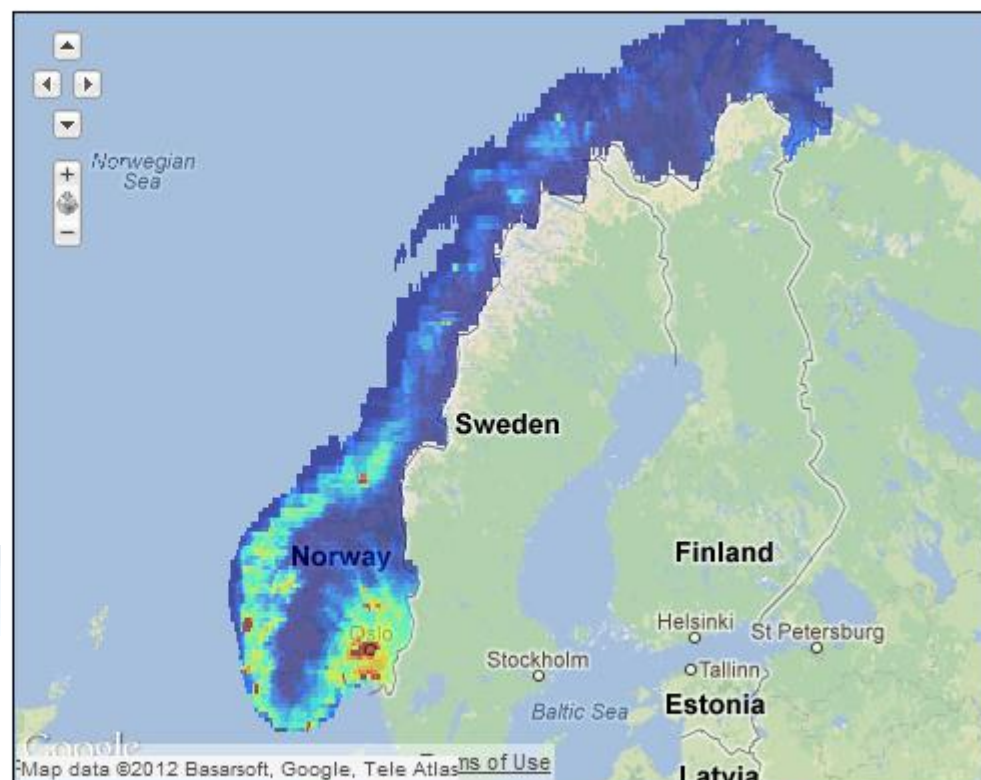
Latitude

Longitude

From date

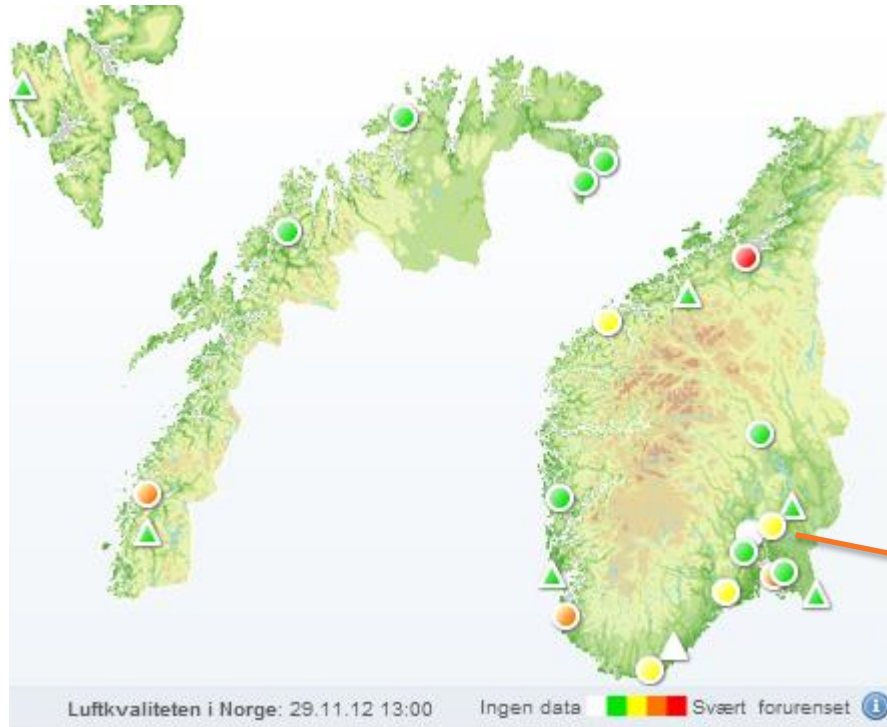
To date

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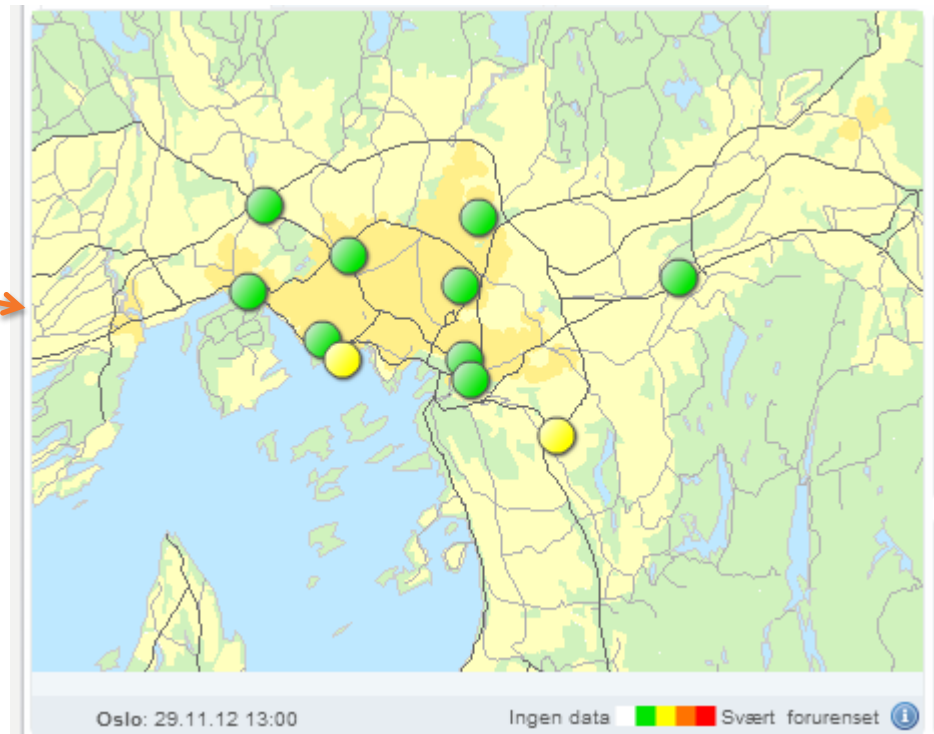


Luftkvalitet.info - ModLUFT

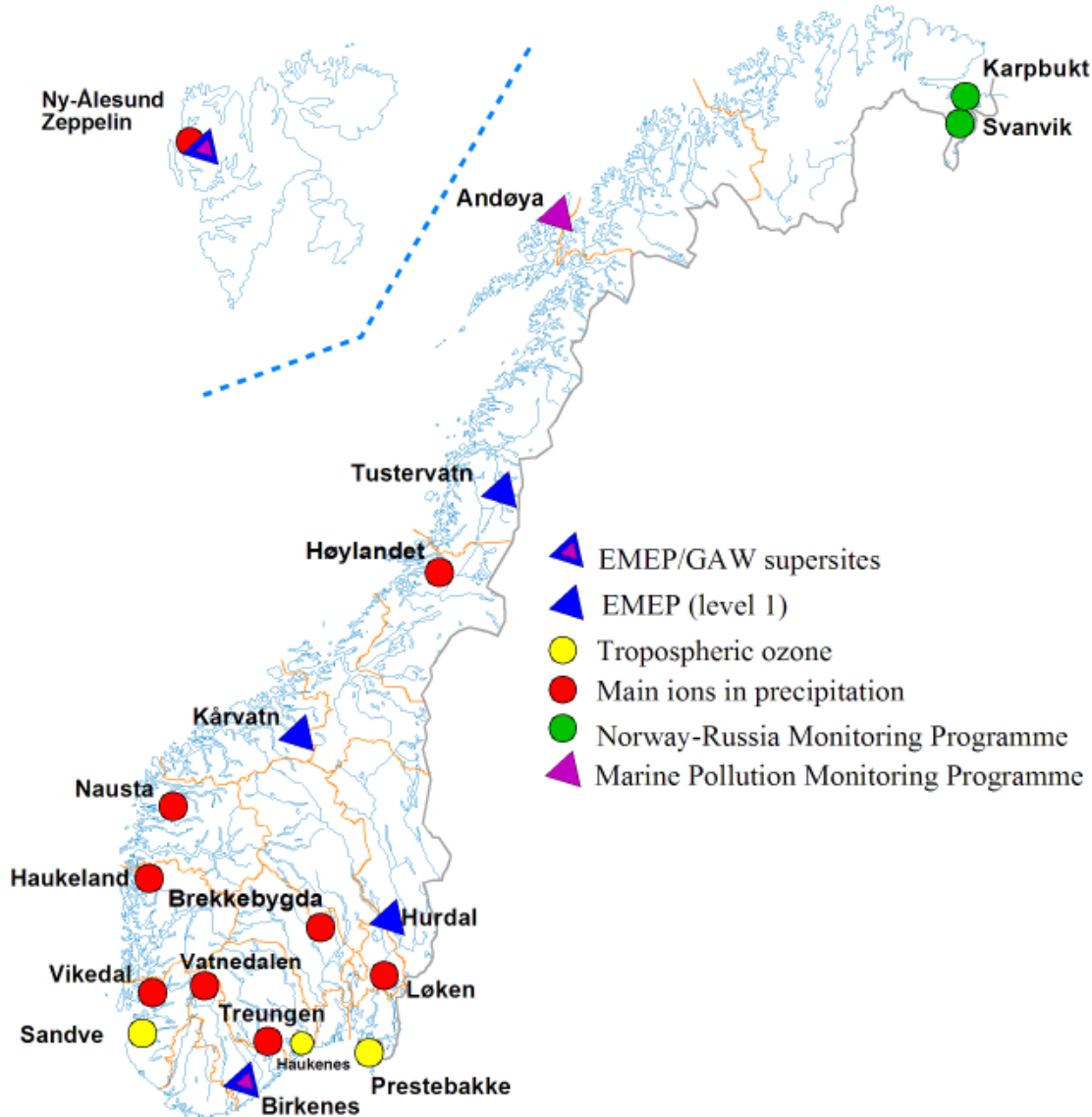
Current research activities of the Partner (1/2)



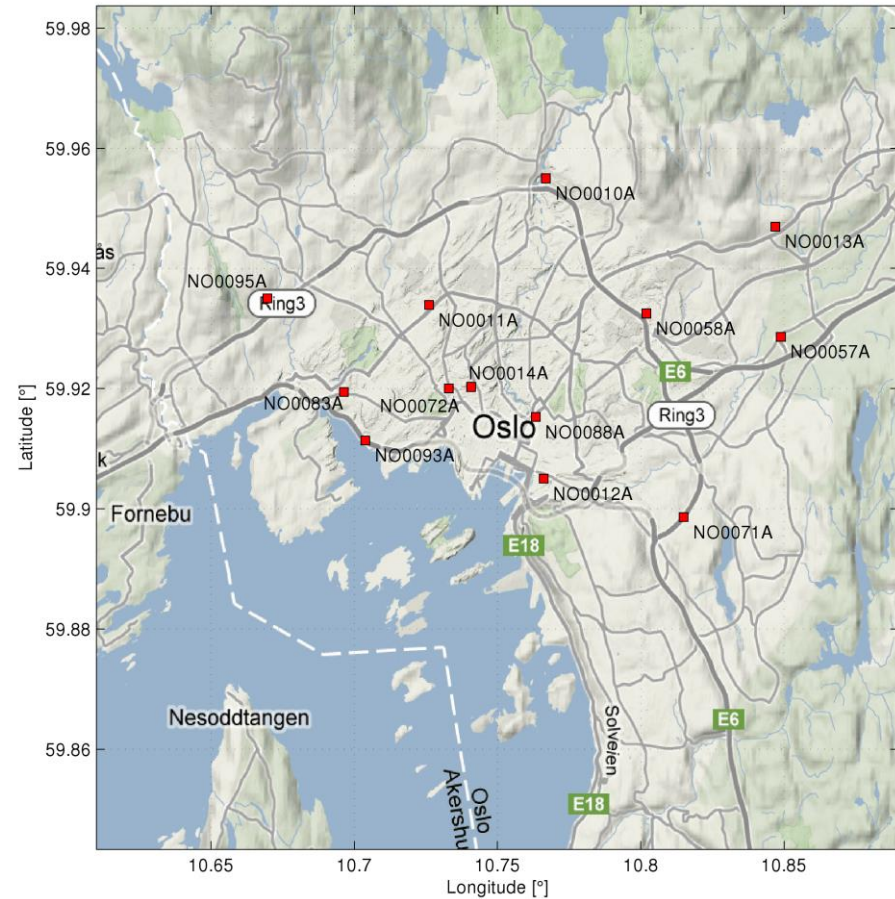
Luftkvalitet.info



Current research activities of the Partner (1/2)



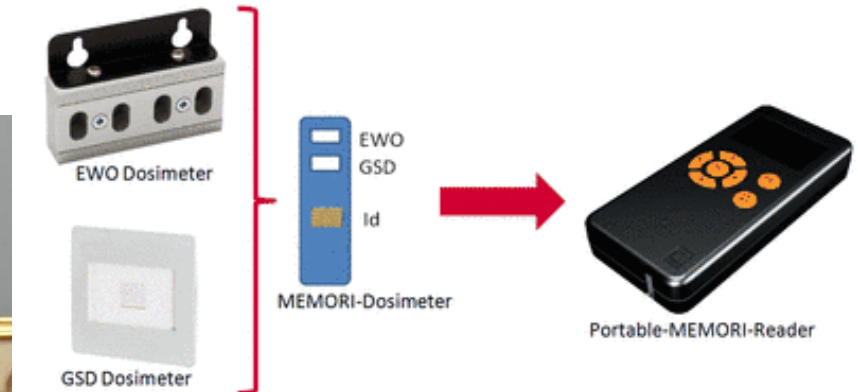
AQ Monitoring Network



Current research activities of the Partner (1/2)



Measurement, Effect Assessment and Mitigation of Pollutant Impact on Movable Cultural Assets. Innovative Research for Market Transfer.

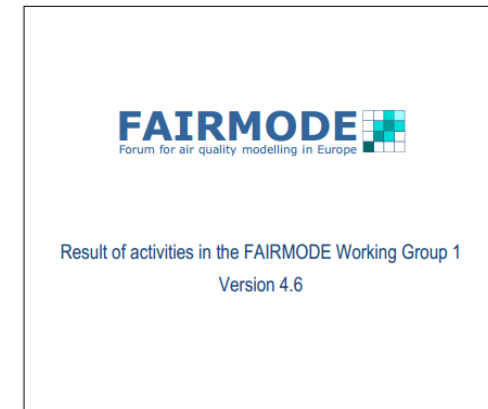


Current research activities of the Partner (1/2)



Modelling guidance Review of the AQ Directive

**Guide on modelling Nitrogen Dioxide (NO₂)
for air quality assessment and planning relevant to
the European Air Quality Directive**



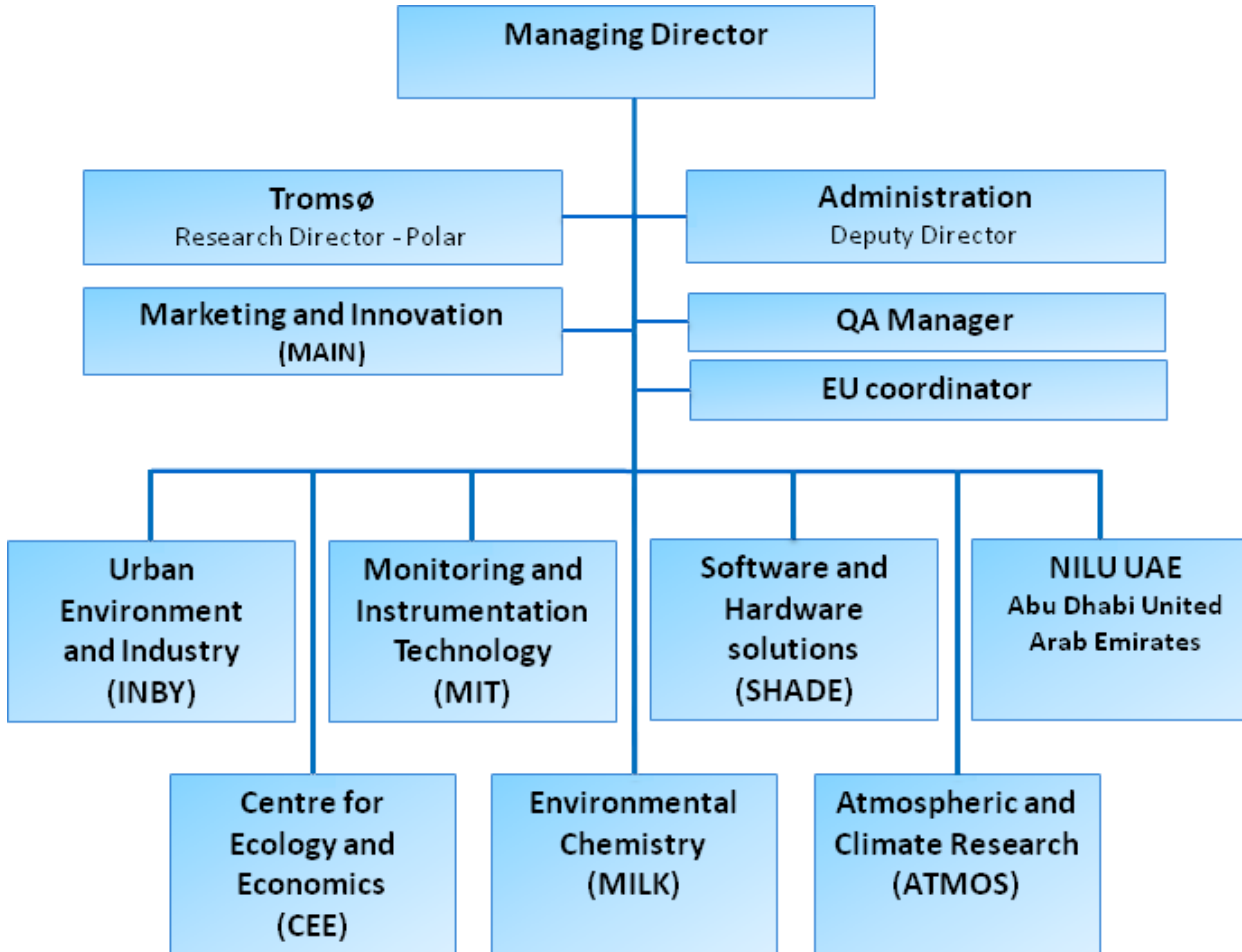
**ETC/ACM Technical Paper 2011/15
December 2011**

Bruce Rolstad Denby



The European Topic Centre on Air Pollution and Climate Change Mitigation (ETC/ACM) is a consortium of European institutes under contract of the European Environment Agency
RIVM UBA-V ÖKO AEAT EMISIA CHMI NILU INERIS PBL CSIC

Research Facilities available for the Partner (2/2)



Suggested **Priorities** for future research

- **Research directions as PRIORITIES:**
 - Literature review
 - Validation of low-cost sensors for AQ
 - Link the generated data with existent data (monitoring stations, models, etc.)
 - CITI-SENSE: First tests in indoor and outdoor environment (year 2013)
 - CITI-SENSE: Pilot study in convenience sample (year 2014)
 - CITI-SENSE: Full deployment, 6 month campaign (year 2015)



Suggested **Priorities** for future research

- **Research directions as PRIORITIES:**
 - Evaluation of low-cost sensor in laboratory
 - Assessment of environmental measurements in field
 - Data assimilation from integrated AQ gas sensors