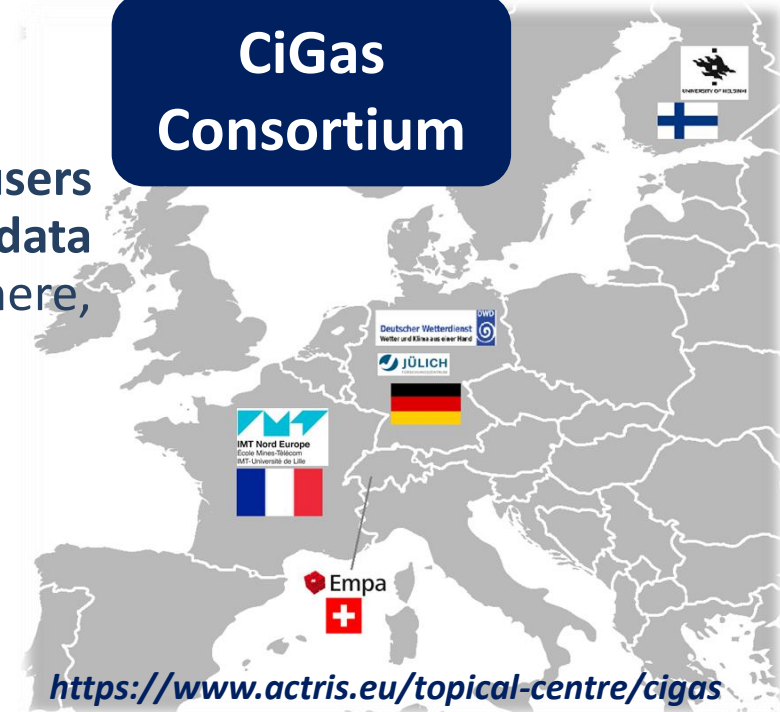


CiGas mission and activities

To strengthen the capabilities of **ACTRIS National Facilities (NFs)** with its **observational and exploratory platforms**, and external users to ensure state-of-the-art traceable measurements with known data quality for VOCs, condensable vapours, and NO_x in the atmosphere, **through:**

- offering **operational support** to NFs and users for high quality observations
- **guiding research** and service development
- developing **innovative methodologies** and providing tailored services for data users

CiGas Consortium



<https://www.actris.eu/topical-centre/cigas>

Centre for Reactive Trace Gases In Situ Measurements (CiGas)					
CiGas-FZJV	CiGas-Empa	CiGas-IMT	CiGas-UHEL	CiGas-DWD	CiGas-FZJN
NMHCs Contributing OVOCs	Contributing NMHCs OVOCs	OVOCs Contributing NMHCs and Nox	Condensable Contributing NMHCs and OVOCs	Contributing NMHCs, OVOCs and Nox	NO _x
Management and coordination (lead)	Management and coordination				
Link with associated communities					
Training and consultancy					
Measurement and data procedures and tools					
Measurement and data quality monitoring					
NF labelling and evaluation					
New scientific and technological developments					

ACTRIS National Facilities



Observational sites

Simulation chambers

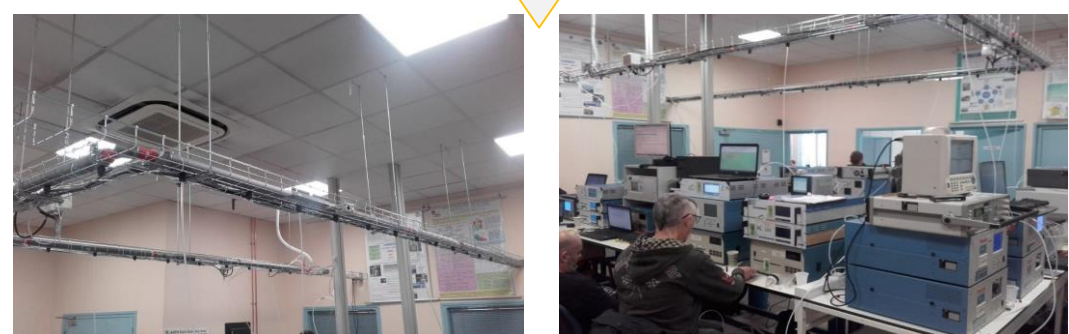
Scope: Trace gases of interest

Trace level: ppt to ppb; lifetime up to 1-2 months

Category	Variables	Interest
NMHCs	alkanes, alkenes, alkynes, aromatics,...	Primary anthropogenic processes; O ₃ & SOA precursors
OVOCs	formaldehyde, acetaldehyde, acetone, methanol, MEK, MVK, MACR,...	Primary & secondary compounds; anthropogenic & biogenic; oxidation products; SOA precursors
BVOCs	isoprene, pinenes, limonene, d3-carene, 1,8-cineol,...	Mainly biogenic; SOA precursors
NO _x	NO, NO ₂	Combustion tracers; local vs. regional; O ₃ precursors
Direct aerosol precursors & HOVOCs	e.g. sulfuric acid, iodine oxide, isoprene hydroxy hydroperoxide, etc.	SOA precursors

- Source apportionment;
- Trends in anthropogenic and biogenic tracers;
- Emission inventory evaluation
- Investigation of atmospheric processes
- Health issues

Multi-gas generation systems & intercomparison platform



Analytical Systems:
 GC-FID/MS; DNPH/HPLC;
 HCHO analyzer; PTR-ToF-MS;
 CI-API-ToF-MS; NO-CLD;
 NO₂-PLC/BLC-CLD; NO₂-CAPS

