

## SA1 The InGOS Data Center

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InGOS Final Project Meeting  
Utrecht – The Netherlands  
September 21, 2015

Due to the heterogeneity of the data collected and the different expertises, the InGOS Data Center comprises three data centers

- Atmospheric Data Center, hosted by the Laboratoire des Sciences du Climat et de l'Environnement, France  
(LSCE) 
- Ecosystem Data Center, hosted by the Università degli Studi della Tuscia, Italy (UNITUS) 
- Halocarbon Data Center, hosted by the Norwegian Institute for Air Research, Norway (NILU) 

Developments have been done in close relation with the NA2/NA3 WPs.

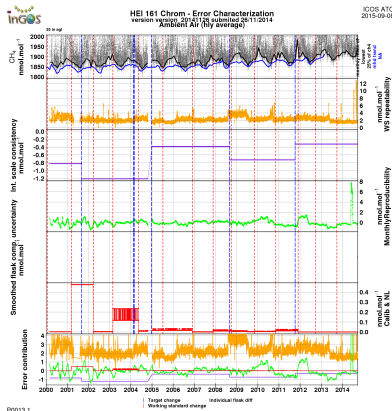
An important work has been made on metadata which can be provided and retrieved from the database.

The following historical data are available with more than  $\frac{2}{3}$  of the data sets having some or all of the 5 defined error estimates:

- corrected CH<sub>4</sub> data from 21 stations
- corrected N<sub>2</sub>O data from 14 stations
- H<sub>2</sub> data from 8 stations

A first InGOS atmospheric data release has been created (INGOS\_2014.1) containing data validated by NA2 WP members (CH<sub>4</sub> data from 18 stations and N<sub>2</sub>O data from 14 stations). Another release is ongoing.

A website ([ingos-atm.lsce.ipsl.fr](http://ingos-atm.lsce.ipsl.fr)) has been created to give access to the data and the automatically daily generated data products on historical data. The data products integrate tank metadata.





# Near Real time data (NRT)

Near Real Time data for 13 stations are submitted to the database. The last month of data is available for download and can be browsed from the website.



## IPR - NRT data view tool

This is an interactive time series line chart with optional annotations from the last measurements of N<sub>2</sub>O & CH<sub>4</sub> from ISFRA station. Measurement are hourly resolved. Use the zoom links ("1d 5d 1m" and so on) to navigate into the time series. Use your mouse to move into the time series, below the time series is the zoom range-selection area (the area at the bottom of the chart). The outline in the zoom selector is a log scale version of the time series in the chart, scaled to fit the height of the zoom selector. You can also use the selector to move into the time series. Note that the chart is rendered within the browser using Flash.

### CH<sub>4</sub>



### N<sub>2</sub>O



The database includes 14 sites from different countries and also from institutions not involved in InGOS (note: all are registered on voluntary basis). This highlight the need of a forum to exchange information and data on non-CO2 gases.



[www.europe-fluxdata.eu/ingos](http://www.europe-fluxdata.eu/ingos)

The results of the measurement campaigns from the JRA6 WP are available to potential users through the InGOS Ecosystem portal.

These data are particularly important in this phase where ICOS standards are under discussion and preparation and will remain available after the project end.



### InGOS Ecosystem

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### InGOS Specific Data

In this section of the database specific measurement and data collected in the context of the InGOS project are presented and available. Some of the dataset have been acquired and provided by external project partners and for this reason could have specific data policies and access restrictions.

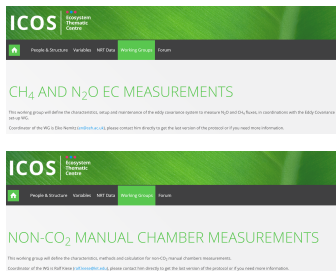
The products available are listed in the table below. To access the data click on the "Get it!" link. It will be requested to log-in and if you are authorized to access the data the file will be immediately available. If you are an external user, the request to authorize you to access the data will be automatically submitted to the data owner that will authorize or not the download. If authorized you will receive an email with a link to download the data.

Please note that these data are available under a data policy agreement that is attached to each single file and also available in the Guideline section of this site.

#### Data available

| Variable                        | Description                                                                                                                                                                             | Responsible     | Period | Download               |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------|------------------------|
| Cabauw intercomparison campaign | CH4 fluxes measured during the InGOS field campaign in Cabauw where different gas analyzer have been tested and compared                                                                | Eiko Nemitz     | 2012   | <a href="#">Get it</a> |
| Edinburgh campaign              | N2O fluxes measured during the InGOS field campaign in Edinburgh where different gas analyzer have been tested (please note: .rar file, size 2.7 Gb)                                    | Eiko Nemitz     | 2013   | <a href="#">Get it</a> |
| Cabauw spatial var. campaign    | CH4 fluxes measured during the second InGOS field campaign in Cabauw where flux variability in the landscape was studied with a tall tower and several short towers (JRA6 work package) | Ivan Mammarella | 2012   | <a href="#">Get it</a> |

In collaboration with WP5, 2 ICOS Working Groups hosted in the ICOS ETC portal have been created with the aim to prepare standard methods for non-CO<sub>2</sub> fluxes in ICOS (eddy covariance and chambers). Both of the Working Groups are coordinated by InGOS participants.



[www.icos-etc.eu/icos/working-groups](http://www.icos-etc.eu/icos/working-groups)

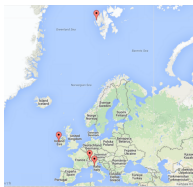
The BADM (Biological, Ancillary, Disturbances, Management) is the international template for data submission developed and adopted by different EU and US initiatives.

|                              |                                                                                             |                                         |
|------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------|
| CMB_FCH4                     | Methane flux measured using chambers                                                        | nmolCH4 m <sup>-2</sup> s <sup>-1</sup> |
| CMB_FCH4_SPATIAL_VARIABILITY | Methane flux measured using chambers spatial variability, estimated as standard deviation   | nmolCH4 m <sup>-2</sup> s <sup>-1</sup> |
| CMB_FCH4_SPATIAL_REP_NUMBER  | Methane flux measured using chambers spatial replicas used to determine spatial variability | integer number                          |

It has been further developed and it is now also used as standard in the ICOS Ecosystem components to collect non-continuous measurements and metadata.

- the non-CO<sub>2</sub> eddy covariance section has been modified to include specific sensors (as from Picarro, Los Gatos or Aerodyne)
- the chamber section is in stand by, waiting the list of mandatory parameters from WP5/ICOS\_WG\_Protocols

- [illegible]



The dataset comprises 2010-2014 data from Jungfraujoch, Mace Head and Zeppelin MEDUSA instruments and Mt.Cimone ADS instrument

- The data are stored as 144 individual datasets from 36 different components. The time resolution is of 2 hours
- The primary data archive is the CDIAC database ([cdiac.ornl.gov](http://cdiac.ornl.gov)), holding halocarbon data from all SOGE and AGAGE stations

A conversion program has been developed to handle the reformatting from AGAGE data format to NASA Ames 1001 EBAS data format. Its includes detailed flagging of identified pollution episodes.

- All data are forwarded to GAW-WDCGG under a formal agreement with GAW and Japan Meteorological Agency about EBAS serving as a sub-node data center for WDCGG
- The data center supports an open data policy following the general EBAS policy (available from the EBAS website)
- The data follow the data guidelines and formatting developed and implemented in the context of the I3 ACTRIS (Aerosol, Clouds, and Trace gases Research InfraStructure) project, and the EBAS-Online project