

InGOS – Integrated non-CO₂ Greenhouse gas Observing System

Deliverable D1.10: Greenhouse gas measurement workshop

Delivery month Annex I	24			
Actual delivery month	12			
Lead participant: UHEI	Work package: 1	Nature: Other		Dissemination level: PU
Version: 2				

Project coordinator

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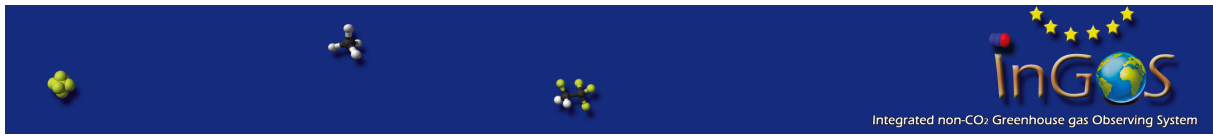
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1. Summary

UHEI was leading beneficiary organizing a “Greenhouse gas measurement workshop” (D1.10). This workshop was held 10.-12.10.2012 in Arona, in collaboration between WP2, WP3, and WP15. Several partners of InGOS participated in this workshop about “Atmospheric GHG measurements and inverse modeling”. The presentations and the agenda of the workshop are available on the website (http://www.ingos-infrastructure.eu/?page_id=2861). Associated to this workshop WP2, WP3, and WP15 organized parallel work package meetings.

2. Participants

In total 45 participants joined the workshops and the meetings.

Tuula Aalto
Alba Agueda
Anna Agusti–Panareda
Jgor Arduini
Maria Athanassiadou
Peter Bergamaschi
Gregoire Broquet
Dominik Brunner
Roger Curcoll
Grant Forster
Francesco Furlani
Michal Galkowski
Christoph Gerbig
Samuel Hammer
László Haszpra

Lynn Hazan
Ove Hermansen
Corinne Hoerger
Sander Houweling
Greet Janssens–Maenhout
Ute Karstens
Ernest Koffi
Aki Koyama
Jost Valentin Lavric
Ingeborg Levin
Anders Lindroth
Morgan Lopez
Giovanni Manca
Sebastien Massart
Frank Meinhardt

Marilena Muntean
Jaroslaw Necki
Euan Nisbet
Paola Occhipinti
Olli Peltola
Stefan Reimann
Peter Salameh
Marielle Saunois
Hubertus A. Scheeren
Martina Schmidt
Jerome Tarniewicz
Rona Thompson
Sanam Vardag
Alex Vermeulen
Philip Wilson

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3. Agendas

InGOS workshop: Atmospheric GHG Measurements and Inverse Modeling, 11–12 October 2012 (Deliverable 1.10)

11 October 2012		
14:00	Welcome and workshop overview	Peter Bergamaschi
14:10	Overview of InGOS	Alex Vermeulen
14:20	Regional modeling issues	Christoph Gerbig
14:40	CH ₄ inversions using aircraft measurements in Switzerland	Dominik Brunner
15:00	Mesoscale inverse modeling of CO ₂ fluxes in Europe	Grégoire Broquet
15:20	Inverse modeling of European and French N ₂ O emissions	Marielle Saunois
15:40	Coffee Break	
16:10	Continuous measurements of halocarbons for the inversion of European sources	Stefan Reimann
16:30	IAGOS GHG measurements	Christoph Gerbig
16:50	First continuous FTIR 13CO ₂ isotope measurements at Heidelberg	Sanam Vardag
17:10	LSCE CH ₄ measurements	Martina Schmidt
17:30	Pre-2004 CH ₄ measurements from Schauinsland	Ingeborg Levin
20:00	Dinner	
12 October 2012		
9:00	MACC project and ECMWF CO ₂ modeling	Anna Agusti-Panareda
9:20	MACC GHG assimilation: current status and future plan with insitu observations	Sebastien Massart
9:40	MACC: inverse modeling of global CH ₄ emissions using satellite retrievals and surface observations	Peter Bergamaschi
10:00	Carbon Tracker Europe	Sander Houwling
10:20	Coffee Break	
10:50	Elgin gas leak	Euan Nisbet
11:10	Developing a parameterization of the 222 Rn activity flux from soils	Ute Kartens
11:30	Seasonal variation of N ₂ O emission in France inferred from atmospheric N ₂ O and 222 Rn measurements	Morgan Lopez
11:50	GHG measurements at the JRC monitoring station Ispra and 222 Rn based emission rates	Bert Scheeren
12:30	Lunch	
14:00	Variability of CH ₄ as seen by bottom-up and top-down models	Marielle Saunois
14:20	General discussion	
15:30	End of workshop	

Additional meeting – JRA3: Integration of data with models, 10–11 October 2012

10 October 2012		
12:30	Lunch	
14:00	Task 15.1: Modelling of CH ₄ / Task 15.2: Modelling of N ₂ O / Task 15.4: Link to remote sensing	Peter Bergamaschi
15:00	Model validation	Ute Karstens
16:00	Coffee Break	
16:30	Task 15.5: Modeling of halocarbons	Dominik Brunner
17:30	Task 15.6: Modeling of δ ¹³ CH ₄	Sander Houwling
11 October 2012		
9:00	Task 15.7: Network analysis and optimization	Marielle Saunois
10:00	Bottom-up inventories for inverse modeling	Greet Maenhout
11:00	Coffee Break	
11:30	Joint discussion NA2/3 with JRA3: Use of InGOS data for inverse modeling	
12:30	Lunch	
14:00	Start workshop "Atmospheric GHG Measurements and Inverse Modeling"	

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Additional Meeting – NA2: Correction and harmonisation of historic concentration measurements, 10–11 October 2012, NA3: Harmonisation and quality control of future measurements of CH₄, N₂O, and H₂, 10–11 October 2012

10 October 2012		
9:00	Presentation and approval of corrected "historical" CH ₄ data sets	Ingeborg Levin
10:00	Continuous data and meta-data submission of corrected CH ₄ measurements	Lynn Hazan
10:30	Coffee Break	
11:00	Presentation of suggestions for error estimates based on standard repeatability, target gas records, and uncertainty of scale transfer	Samuel Hammer
11:30	Presentation and suggestion for error estimates in case no target gas has been measured	Stefan Reimann
12:00	Consolidation of the station-dependent methodologies for error estimation	Ingeborg Levin
12:30	Lunch	
14:00	Presentaiton of the "historical" N ₂ O data together with standard repeatability, repeatability of target gas analyses and comparison with co-located flasks	Martina Schmidt
15:00	Summary of calibration strategies and associated non-linearity corrections, discussion and examples of stability of ECD non-linearity	Morgan Lopez
16:00	Coffee Break	
16:30	Discussion and consolidation of N ₂ O corrections and error estimates, including uncertainty of scale transfer	Ingeborg Levin
17:30	GC-Werks software: presentation and discussion on applicability for InGOS	Peter Salameh
11 October 2012		
9:00	Lessons learned and good practice methodology for quality assurance and control of future InGOS GC measurements	Martina Schmidt
10:00	Future work for NA2 and NA3 towards final N ₂ O corrections and start of the data digging for H ₂ corrections, deadlines and delivery dates	
10:30	Discussion on missing NA2 station data evaluation	
11:00	Coffee Break	
11:30	Joint discussion NA2/NA3 with JRA3 about use of InGOS data for inverse modeling	
12:30	Lunch	
14:00	Start workshop "Atmospheric GHG Measurements and Inverse Modeling"	