

	DAY 1 (7 Octobre 2025)	
08:00	Registration	
09:00	Opening of the workshop	Nir Stav
09:10	Overview and updates on G3W	Greg Carmichael
09:20	Objectives and structure of the workshop	Prabir Patra
	Session 1: Network optimization based on the results of model intercomparisons and satellite data utilization	
09:40	Greenhouse gas observation gaps and requirements as identified from current and past atmospheric model intercomparisons	Sourish Basu
10:00	Quantitative Design of Observational Networks for the Carbon Cycle: History, Theory, and Applications to Ecosystem and Atmospheric Networks	Thomas Kaminski*
10:15	Evaluation on the inter-comparison of the atmospheric inversion models to examine the spatial-temporal differences in atmospheric CO₂	Ravi Kumar Kunchala
10:30	COFFEE break	
10:50	The CATRINE TransCom CO₂ global transport model intercomparison exercise	Anna Agusti-Panareda
11:05	Optimizing CO₂ Observation Network Coverage for the Asian Summer Monsoon: Insights from Assimilating Machine Learning-Derived Satellite XCO₂ in Atmospheric Inverse Modelling	Yeon Bae
11:20	Summary and lessons learned from intercomparisons and use of satellite data: recommendations	Facilitated by Sourish Basu
12:40	Lunch break	
	Session 2: Network optimization based on the footprint analysis	
14:00	Regional network design using LPDM footprints	Matt Rigby*
14:15	A Novel Method for Network Design Based on Information Theory	Rona Thompson*
14:30	Optimal network design for atmospheric CO₂ concentration monitoring over India: Implications for constraining Indian land fluxes	Yogesh Kumar Tiwari
14:45	Designing an Atmospheric Monitoring Network to Verify National CO₂ Emissions	Sojung Sim
15:00	Developing the UK Tall Tower Observational Network and Preparatory Work in Expanding the Global Network	Alistair Manning*
15:15	GHG network design for Africa	Alex Vermeulen
15:30	COFFEE break	
15:50	OSSE-Based Assessment of the Spatial and Temporal Coverage of ¹⁴CO₂-Derived Fossil Fuel CO₂ Constraints in the ICOS Network	Samuel Hammer*
16:05	Carbon budgets and assessment metrics from the GCB ensemble of atmospheric inversions	Ingrid Luijkx *

16:20	Summary and lessons learned from the footprint analysis: recommendations	Matt Rigby*
17:50	End of day 1	

	DAY 2 (8 October 2025)	
	Session 3: Results of the Observing System Simulation Experiments, including benefits and impact of the optimized network	
09:00	Network design using Incremental Optimisation with the help of MIROC4-ACTM simulations	Prabir Patra
09:15	Observation System Simulation Experiments for flux inversions at ECMWF	Ernest N. Koffi
09:30	Insights for optimal GHG observation networks gained from model simulations	Yosuke Niwa
09:45	Improving top-down European national CO₂ estimates through strategic expansion of the ICOS network: lessons learnt from Italy	Yohanna Villalobos*
10:00	<i>Airborne network design for monitoring carbon fluxes in Alaska</i>	<i>Nicholas Parazoo*(cancelled)</i>
10:15	CRO2A - A Novel Automated Optimal Scheme for the Design of GHG Atmospheric Monitoring Networks	David Matajira Rueda
10:30	COFFEE break	
10:50	Ongoing CO₂ Monitoring Verifies CO₂ Emissions and Sinks in China	Lifeng Guo*
11:05	Discussions on how to set up OSSE, how to test tiered networks	Prabir Patra
12:30	LUNCH break	
	Session 4: Optimization of the surface ocean observing networks	
14:00	Insights from Past Optimal Observing Studies for Surface Ocean CO₂	<i>Adrienne Sutton*(pre-recorded)</i>
14:15	An overview of the current ocean observing system and how we are evolving it using EU funding to match the needs of the G3W	Richard Sanders
14:30	Multi-objective design of a sustainable observational network for ocean-atmosphere CO₂ exchange	Ute Schuster*
14:45	Quality control procedures to improve Marine Boundary Layer (MBL) measurements from ships as part of the surface ocean CO₂ reference network (SOCNET)	<i>Rik Wanninkhof*(pre-recorded)</i>
15:00	<i>Surface pCO₂ observations in the Indian Ocean</i>	<i>VVSS Sarma (cancelled)</i>
15:15	Using machine learning and model testbeds to understand the ocean carbon sink	Thea Hatlen Heimdal

15:30	COFFEE break	
15:50	Observation system simulation experiments for improved surface ocean pCO₂ reconstructions at the scale of the Atlantic Ocean	Marion Gehlen*
16:05	The observational scale sensitivity of pCO₂ reconstruction uncertainties and biases in the Southern Ocean: going from the observations we have to the observations we need	Laique M. Djeutchouang*
16:20	Discussions on the ocean network design: recommendations	Maciej Telszewski, Richard Sanders and Dorothee Bakker
17:40	End of the day	

	DAY 3 (9 October 2025)	
	Session 5: Considerations for the network design	
09:00	WIGOS implementation principles, the Rolling Review of Requirements and Tiered Networks	Erik Andersson*
09:15	Network characterisation tools	Alex Vermeulen
09:30	<i>Seeing the forest and the trees: A network design for monitoring and understanding regional GHG fluxes</i>	<i>Kenneth J. Davis* (cancelled)</i>
09:45	Where Are the Gaps? Evaluating the Representativeness of the European Eddy Covariance Tower Network with Machine Learning	Theo Glauch
10:00	Ground-based remote sensing of greenhouse gases by the networks TCCON, COCCON and NDACC	Thorsten Warneke*
10:15	Assessing network requirements for atmospheric GHG sensors to reduce uncertainties in Finland's GHG budget	Tuula Aalto*
10:30	COFFEE break	
10:50	Potential of CO₂ sensor networks for monitoring CO₂ emissions at national to city scale	Dominik Brunner
11:05	Telecommunication networks and infrastructure (ITU)	Walid Mathlouthi
11:20	Progress with the network development in Africa and South America	Michel Ramonet
11:35	Africa monitoring work for CH₄ emission tracking	Benjamin Poulter
11:50	Advances with the network development in Indonesia	Albert Nahas*
12:05	The current infrastructure of the CTBTO monitoring facilities	Guillermo Rocco*
12:20	Using mid-range commercial aircraft networks for detecting changes in carbon emissions in urban and climate critical regions	<i>Colm Sweeney* (pre-recorded)</i>
12:35	Lunch break	

14:00	Discussions and conclusions/way forward	Prabir Patra
15:30	Meeting closure	

Poster presentations

Systematic Uncertainty in CO ₂ Inverse Modelling and Its Impact on Emission Estimates in Seoul	Munsu Park
Alternative Solutions for Low-Cost Eddy Covariance of CO₂ and H₂O for Land and Sea Sensing	Scott Cornelsen
The new measurement guidelines for in-situ CO₂, CH₄ and N₂O observations at Global Atmosphere Watch stations	Martin Steinbacher