



Co-ordinated by
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WP6 - INTERNATIONAL STAKEHOLDER COORDINATION AND LIAISON

CHE/VERIFY General Assembly

Richard Engelen
ECMWF
12-14/03/2019

WP Objectives

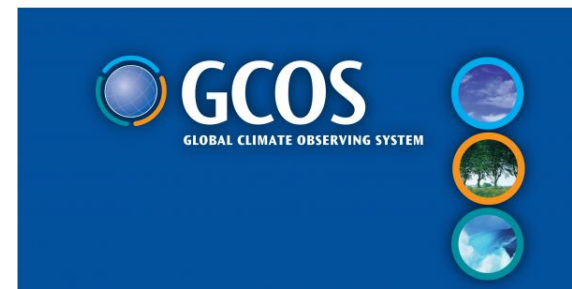
- Liaise with European Commission, ESA and Task Force A and B
- Liaise with other stakeholders, such as Copernicus services, GCOS, GAW, IG3IS, CEOS/CGMS, GEO, WIGOS
- Organise workshops to discuss elements of the CO₂ emissions monitoring system with wider community
- Coordinate with international collaborations, such as Transcom and Eurocom.





CO₂ Task Force

CO₂ MAG



United Nations
Framework Convention on
Climate Change



3

EU Member States



HORIZON 2020

The EU Framework Programme for Research and Innovation

VERIFY



Others...

CHE Connectivity & Stewardship

External Advisory Board

Han Dolman, Chair (Vrije Universiteit, Netherlands),
Guy Brasseur (WCRP, Germany),
Werner Kutsch (ICOS, Finland),
Pierre-Yves Le Traon (CMEMS, France),
Philippe Peylin (Coordinator of VERIFY, LSCE, France)
Sonia Seneviratne (ETH, Switzerland),

Advise from CHE reviewer and EEG to extend the EEG with people more closely related to international frameworks and especially UNFCCC process.

Currently, link with latter is mostly through VERIFY (WP1).

CHE will further investigate this.

External Expert Group

Peter Rayner, Chair (University of Melbourne, Australia)
Arlyn Andrews (NOAA, United States)
Kevin Bowman (NASA JPL, United States)
Pep Canadell (CSIRO, Australia)
Jing M. Chen (U NANJING, China; U TORONTO, Canada)
David Crisp (NASA JPL, United States)
Heather Graven (Imperial College, United Kingdom),
Kevin Gurney (Arizona State University, United States)
Shamil Maksyutov (CGER/NIES, Japan)
Yasjka Meijer (ESA, EU)
Chris O'Dell (Colorado State University, United States)
Paul Palmer (University of Edinburgh, United Kingdom)
Saroja Polavarapu (ECCC, Canada)
Oksana Tarasova (WMO)
Alex Vermeulen (ICOS, Lund University, Sweden)
Ning Zeng (University of Maryland, United States)

Task 6.1 - Liaison

- Task Objectives
 - **Liaison with the European Commission, ESA, EUMETSAT and the CO₂ Task Force to ensure the project is addressing the relevant questions for which the Task Force needs support.**
- Progress
 - CO₂ Monitoring MAG meeting, 12 - 13 June 2018
 - CO₂ Monitoring MAG meeting, 1 - 2 October 2018
 - CO₂ Monitoring MAG meeting, 30 - 31 January 2019
 - CO₂ Task Force meeting, 22 January 2019
 - CO₂ Task Force meeting, 12 March 2019

Task 6.1 - Liaison

Participation in Task Forces and MAG

- CO2 Task Force
 - Philippe Ciais, Hugo Denier van der Gon, Richard Engelen , Greet Maenhout, Marko Scholze
- CO2 Monitoring MAG
 - Hartmut Boesch, Michael Buchwitz , Philippe Ciais, Richard Engelen, Sander Houweling, Greet Maenhout

Task 6.2 - Clustering

- Task Objectives
 - **Ensuring interaction with other relevant H2020 projects to identify synergies, exploit them and possibly reinforce certain activities.**
- Progress
 - Attended and presented CHE at relevant project meetings
 - VERIFY, 13 - 15 February, Kick-off meeting
 - SCARBO, 14 March, Kick-off meeting
 - URBAN-FLUXES, 23 January 2018, Final progress meeting
 - COOP+ Conference on the Research Infrastructures and the Paris Agreement on climate, 20-21 November 2018
 - Report on Synergies and Complementarities between CHE and VERIFY

Task 6.2 - Clustering

Interaction between CHE and VERIFY



- Combining resources (complementarity of objectives)

CHE-VERIFY Joint General Assembly

The H2020-funded projects CHE and VERIFY will hold a joint General Assembly between the 12th and 14th of March 2019 at ECMWF in Reading, UK. The meeting will consist of discussions on CHE and VERIFY work packages, collaboration opportunities, external lectures and working groups.

[Learn more](#)



- Participation in advisory boards

Task 6.3 – Workshop organisation

- Task Objectives

- **Organisation of two workshops open to the wider community to discuss, document and learn from the various efforts outside the project**

- Progress

- The first workshop was anticipated to enable a meeting with Chinese colleagues to discuss scientific collaboration (in view of the Copernicus – China discussions on CO₂ monitoring). Due to lack of responsiveness from the Chinese colleagues, this had to be postponed.
- Plans to organise workshop on AFOLU (Agriculture, Forest and Other Land Use) towards end of 2019. This topic was suggested by the CO₂ Task Force at its last meeting. AFOLU addresses an important element of the carbon cycle with still large uncertainties.

Task 6.4 - Events

- Task Objectives
 - **Participation at key events related to a future CO₂ emission monitoring system and related international collaboration programmes, such as Transcom, Eurocom and ICOS.**
- Progress
 - EGU, 9 - 12 April 2018
 - CEOS AC-VC-14 meeting, 2 – 4 May 2018
 - CEOS GHG workshop, 18 – 19 June 2018
 - IG3IS/Transcom meeting, 17 - 20 September 2018
 - GEWEX SSG, 25 February – 1 March 2019

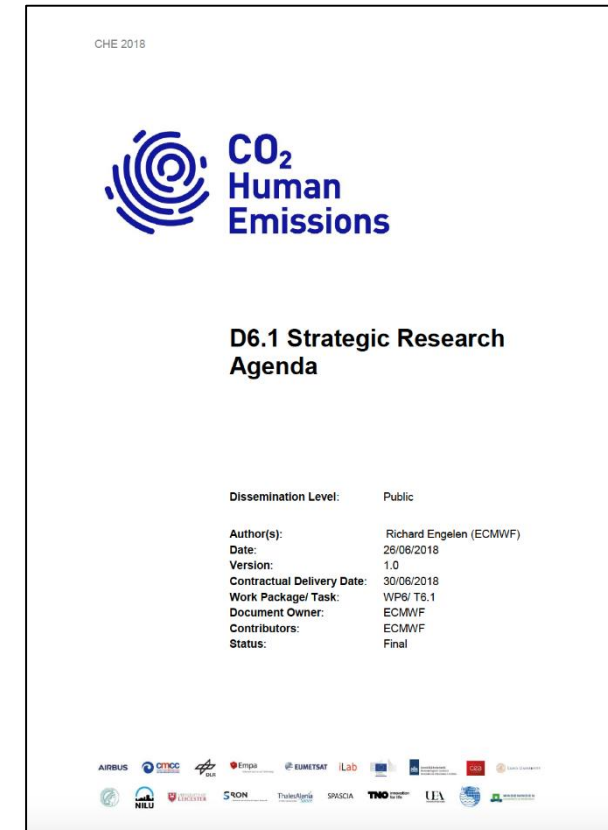
Task 6.5 – Strategic Research Agenda

- Task Objectives

- **Development of the strategic research agenda documents that will use input from WPs 1 to 5 as well as the results from the liaison and clustering work in this work package.**

- Progress

- First version of document was published in 2018
- Update of document planned for Q2-2019



Task 6.5 – Strategic Research Agenda

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Advise from CHE Review Meeting was to ensure that the SRA outlines required research activities for the development of the future CO₂ service.

The research activities need to be prioritized to ensure they are actionable.

ESA studies

Observation system

First **draft** research recommendations from CHE

- WP2: Simulations of NO₂ should receive more attention
 - Accurately simulating NO₂ needs models with full interactive chemistry, but maybe a simplified NO₂ tracer with a constant lifetime would be sufficient for some applications such as identifying the location of plumes
- WP3: Improve the CCFFDAS quantitative network design system in terms of available observational data streams
 - The prototype CCFFDAS quantitative network design system has evolved into a powerful tool for quick exploration/assessment of design options of the MVS capacity. Initial assessments of the sensitivity with respect to observational data streams, prior information, and temporal domains in flux and observation spaces have demonstrated the potential of the approach
- WP4: Modelling of non-CO₂ tracers (biogenic ¹⁴C fluxes, CO:CO₂ emission ratios, maybe other components) requires more work to refine the description of their space-time variations

- No prioritization in this list yet.
- No input from VERIFY yet.
- No input from ESA studies yet.

Summary

- The Copernicus CO₂ initiative as well as CHE are clearly on the international agenda
- Exchange of ideas in European and international context is happening.
- Good connections with IG3IS, GEO, GCOS and CEOS have been established
- Close links with CO₂ MAG and CO₂ Task Force are in place and help with exchange of information. This will also strongly support the definition of the work needed after CHE
- Fruitful collaboration established with VERIFY

THANK YOU

