

CORSO: CO2MVS Research on Supplementary Observations

Description

To support EU countries in assessing their progress for reaching their targets agreed in the Paris Agreement, the European Commission has clearly stated that an objective way to monitor anthropogenic CO₂ emissions is needed. Such a capacity will deliver consistent and reliable information to support policy- and decision-making processes. To maintain Europe's independence in this domain, it is imperative that the EU establishes an observation-based operational anthropogenic CO₂ emissions Monitoring and Verification Support (CO₂MVS) capacity as part of its Copernicus programme.

The H2020 projects CHE and CoCO₂ have already started the ramping-up of the CO₂MVS prototype systems, so it can be implemented within the Copernicus Atmosphere Monitoring Service (CAMS) with the aim to be operational by 2026. The CORSO project will further support establishing the new CO₂MVS addressing specific research & development questions. CORSO will deliver the capabilities at global and local scale to optimally use observations of co-emitted species using their emission ratios and uncertainties to better estimate anthropogenic CO₂ emissions. CORSO will also assess the added-value of high-temporal resolution in-situ 14CO₂ and APO observations in global and regional scale inversions and of satellite observations of soil moisture, LAI, SIF, and Biomass in the global CO₂MVSsystem to better separate the impact of fossil fuel and biospheric fluxes on the atmospheric CO₂ concentrations. The main long-term impact ofCORSO will come through the delivery of documented methodologies, prototype systems, and recommendations, addressing the identified topics above, feeding into the ramping-up of the operational CO₂MVS capacity and therefore ensuring a more comprehensive and accurate CAMS anthropogenic CO₂ emission monitoring and verification support capacity.

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