



## **VERIFY: a new european project to derive an Observation-based system for monitoring and verification of greenhouse gases**

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Measuring the effectiveness of GHG emission reduction policies against agreed-upon international targets require accurate and precise estimates of emissions and their trends. These estimates need to be established and regularly updated using transparent methods, traceable to international standards. The EU-funded VERIFY project proposes to quantify more accurately carbon stocks and the fluxes of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) across the EU based on independent observations in support of inventories that rely only on statistical data. The same approach will also be tested for US, China and Indonesia, in collaboration with foreign partners. Accurate characterization of the space-time variations of GHG fluxes, separating their anthropogenic and natural components and their drivers, will be based on advanced modeling approaches using atmospheric GHG measurements, tracer transport inversions and various arrays of land observations, in-situ and from space. The improved knowledge of GHG budgets from VERIFY will be used to improve national inventories, in collaboration with national inventory agencies, and to deliver policy-relevant information to track progress of the EU mitigation efforts to meet the targets of the Paris Agreement on Climate.

This presentation will review the objectives of the project that started in February 2018. We will focus on the methodology that is deployed and also present few preliminary results.