CAMS update

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Greenhouse gas emissions monitoring capacity

INTEGRATION AND MODELLING
Using computer models of the Earth system, the data are combined to provide timely emission estimates.

GLOBAL
Supporting the Paris Agreement

OUTPUTS

EMISSION MONITORING DATA

USER SUPPORT

POLICY TOOLS

LOCAL
Supporting green cities

INDUSTRY

GOVERNMENTS AND POLICYMAKERS

USERS
Consistent, reliable information
Supports policy and decision-making processes

SCIENTIFIC COMMUNITY

THE PUBLIC

WHAT WE ALREADY KNOW

OBSERVATIONS OF ATMOSPHERIC CO₂ AND CH₄
Support for new challenges – emission monitoring

Submission under the United Nations Framework Convention on Climate Change and the Kyoto Protocol 2022

National Inventory Report for the German Greenhouse Gas Inventory 1990–2020

Federal Environment Agency

UNFCCC Submission
15 April 2022
CAMS CURRENT OFFER ON GHG INFORMATION PRODUCTS

Inventory-based emissions

Activity-based emissions

Daily global forecasts of atmospheric $CO_2$ and $CH_4$ concentrations at high resolution

Annually updated flux inversions (monthly) for $CO_2$, $CH_4$, and $N_2O$
Horizon 2020

- CO₂ Human Emissions
- CoCO2
- VERIFY
- ICOS

Greenhouse gases

Atmospheric pollutants

Horizon Europe

- CORSO
- CATRINE
- PARIS
- AVENGERS
- EYE-CLIMA
- AMEO

Greenhouse gases

Atmospheric pollutants
CAMS new products

CAMS2_53a Development and provision of hot-spot observation-based emissions of methane

This ITT, entitled “Development and provision of hot-spot observation-based emissions of methane”, is for providing quantitative estimates of methane emissions from large point sources around the world based on satellite data.

DEADLINE 6th October 2023

And...

- Further IFS development
- Increased focus on bottom-up emissions
- Implementation of EQC framework
- More user engagement
- Continuation of existing products & services
Preliminary results: IFS-based CH₄ and NOₓ emissions

CH₄ inversion over Permian Bassin
IFS posterior

- CH₄ inversion results in agreement with previous studies.
- NOₓ inversion results show small improvements over Southeast Asia (ongoing prior errors sensitivity tests).

NOₓ inversion (04/2020)

% rms change for i1fb (std=0.1) vs hy18 (ctrl)

Evaluation of 24h forecasts (0-24h) of IFS against TROPOMI NO2 (PAL)
Last year of CoCO2, but the work continues

CoCO2 Final Meeting and CORSO GA Meeting

The CoCO2 project, in collaboration with the CORSO project, will hold its final General Assembly from Monday 20 to Wednesday 22 November 2023.

Learn more

Atmosphere Monitoring Service

atmosphere.copernicus.eu

CoCO2 – Prototype system for a Copernicus CO₂ service
Thank you