EGU25-17051, updated on 18 Jan 2026
https://doi.org/10.5194/egusphere-egu25-17051
EGU General Assembly 2025

IMEO's Baseline Science Studies improves country-level methane quantification

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UNEP's International Methane Emissions Observatory (IMEO) is a data-driven, action-focused initiative. IMEO exists to provide open, reliable, integrated methane emissions data to facilitate actions to reduce methane emissions. The Baseline Science Studies are a subset of IMEO's science studies, which aim to estimate the current total and sectoral methane emissions (with uncertainties) at country-level through multi-scale measurement studies and integration with existing data. It will assist governments, civil society, industry, and other stakeholders to prioritize actions to reduce methane emissions.

IMEO's Baseline Studies couple multi-scale top-down approaches with more granular analysis of bottom-up data to improve the understanding of key methane emission sources relevant to selected countries. The focused sectors for methane emission are oil and gas, agriculture and waste. Currently, there are two Baseline Studies at the design phase for Colombia and Nigeria. We will conduct an initial assessment per country through literature and reports, feed the existing prior to satellite inversion model and apportion the emission by sector. Using the literature review and satellite information, we identify the major methane sources and those with large uncertainties in each country, and design small studies to provide measurement data where little to no data in-country is available. By combining activity data and geospatial mapping, the ultimate aim is creating a gridded methane inventory at the country level. This information will be used to update the country level methane budget and build local capacity to enable future estimations and refinement of sectoral emissions. The presentation here will demonstrate the concept and generalised progress of the IMEO baseline studies