

GLOBAL ANALYSIS OF EMISSIONS FROM ABANDONED WELLS



Assessing global emissions from abandoned oil and gas wells.



DONOR:
Oil and Gas Climate Initiative



BENEFITTING COUNTRIES OR REGIONS:
All



SECTOR:
Oil & Gas



Subsector, if applicable:
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STATUS:
Measurement campaign ongoing

TIMELINE:
Measurements 2023 to present



IMEO SCIENCE OBJECTIVE:

→ **Initiate scientific studies in support of data assurance and to characterize regions/sources with high uncertainty or discrepancies in the integrated data.**



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KEY FINDINGS

This work will provide data on abandoned well emissions from regions around the world and reconcile currently available data to provide an estimate of abandoned wells' total emissions. The results will contribute to understanding the conditions that lead to high-emitting abandoned oil and gas wells.

RATIONALE

Globally, there are millions of abandoned oil and gas wells but only a very small number of methane emissions measurements of them exist outside North America. These wells have the potential to collectively emit significant methane emissions, but additional data is needed to understand their impact in regions beyond North America so that inventories can effectively account for them and mitigation resources can be effectively deployed.



RELATED PUBLICATIONS

In progress



SIGNIFICANCE FOR DECISIONMAKERS

The uncertainty in the scale of abandoned well emissions makes for very challenging adoption of policy, especially outside of North America. The work here will shed light on whether countries require plans for well plugging efforts (such as seen in North America) and will also guide as to whether more sophisticated emission factors are required for national inventory reporting.



STUDY APPROACH/ACTIVITIES

This study entails a comprehensive review of current knowledge on abandoned well emissions. This will enable development of a number of models in order to best estimate current global methane emissions from abandoned oil and gas infrastructure. In addition, a suite of new measurement studies outside of North America will be conducted. This measurement campaign is currently focused on regions in Romania, Italy and Germany. Further campaigns may be possible in Colombia and Azerbaijan (subject to site access and safety agreements).



CATALYZING ACTION

Engagement with North American stakeholders through expert panel discussions: Practices and Standards for Plugging Orphaned and Abandoned Hydrocarbon Wells - A Workshop. National Academy of Sciences, USA.

Presentations: Engagement with global stakeholders via numerous expert presentations and North American stakeholders through expert panel discussions such as: Practices and Standards for Plugging Orphaned and Abandoned Hydrocarbon Wells - A Workshop. National Academy of Sciences, USA.

OTHER SUPPORTERS/STAKEHOLDERS

Principal Investigator: **McGill University**

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The UN Environment Programme's International Methane Emissions Observatory (IMEO) exists to provide open, reliable, and actionable data to the individuals with the agency to reduce methane emissions. IMEO does this by integrating and reconciling data across sources, including its global methane science studies. IMEO supports measurement and research studies around the world to close the knowledge gap on methane emissions and provide policy-relevant insights to decisionmakers.