

METHANE EMISSIONS BASELINE FOR LIVESTOCK AND RICE PRODUCTION SYSTEMS IN COLOMBIA

An assessment of methane emissions from Colombia's agriculture sector



DONOR:
Global Methane Hub and
Bezos Earth Fund



**BENEFITTING COUNTRIES
OR REGIONS:**
Colombia



SECTOR:
Agriculture



Subsector, if applicable:
-

STATUS : Project initiation

TIMELINE : Measurements planned for 2026



**IMEO SCIENCE
OBJECTIVE :**

→ **Advance science studies in support of countries
targeting methane mitigation**



KEY FINDINGS

In progress

RATIONALE

Better measurement data is needed to ensure mitigation efforts are targeted and effective in the agriculture sector, which is responsible for 40 per cent of anthropogenic methane emissions globally. The project will deliver comprehensive baseline data on methane emissions from rice and livestock in Colombia, supporting the country's efforts to reduce methane and achieve its climate goals.





RELATED PUBLICATIONS

In progress



CATALYZING ACTION

This project will strengthen Colombia's capacity to track methane emissions, reduce uncertainties in national reporting and support the design of targeted mitigation strategies consistent with the country's NDCs.



SIGNIFICANCE FOR DECISIONMAKERS

For policymakers: The project will provide recommendations for enhancing Colombia's national methane inventory, which improves policymakers' understanding of opportunities to reduce methane emissions and supports their ability to track progress toward climate goals.

OTHER SUPPORTERS/STAKEHOLDERS

Principal Investigator: **The International Center for Tropical Agriculture (CIAT)**



STUDY APPROACH/ACTIVITIES

The project will first compile and assess all available methane measurement data to strengthen the understanding of rice and livestock emissions in Colombia. A foundational literature review has already been conducted, synthesizing knowledge on emissions from rice and enteric fermentation across different production systems. A gap analysis will follow to identify regions, production systems and management practices where direct methane measurement data is lacking.

For livestock methane emissions, the project will deploy multi-scale measurement methodologies, integrating bottom-up site-level data with regional-scale assessments to improve national emission estimates. Targeted field measurements using advanced techniques, such as polytunnels and respirometric chambers, will be implemented to ensure statistically representative emission estimates. Additionally, the study will account for seasonal and operational variability in emissions to improve accuracy.

The project will also determine activity data needs for upscaling methane measurements to the national level for rice and livestock—information used to calculate the emissions associated with a given process—ensuring alignment with UNFCCC reporting requirements. Finally, the project will provide recommendations for enhancing Colombia's national methane inventory, integrating validated measurement-based approaches for livestock and rice to improve accuracy and policy relevance.

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.