

# AN EYE ON METHANE FROM MEASUREMENT TO MOMENTUM

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**Dr. Xuefei Li**

**International Methane Emission Observatory (IMEO)**

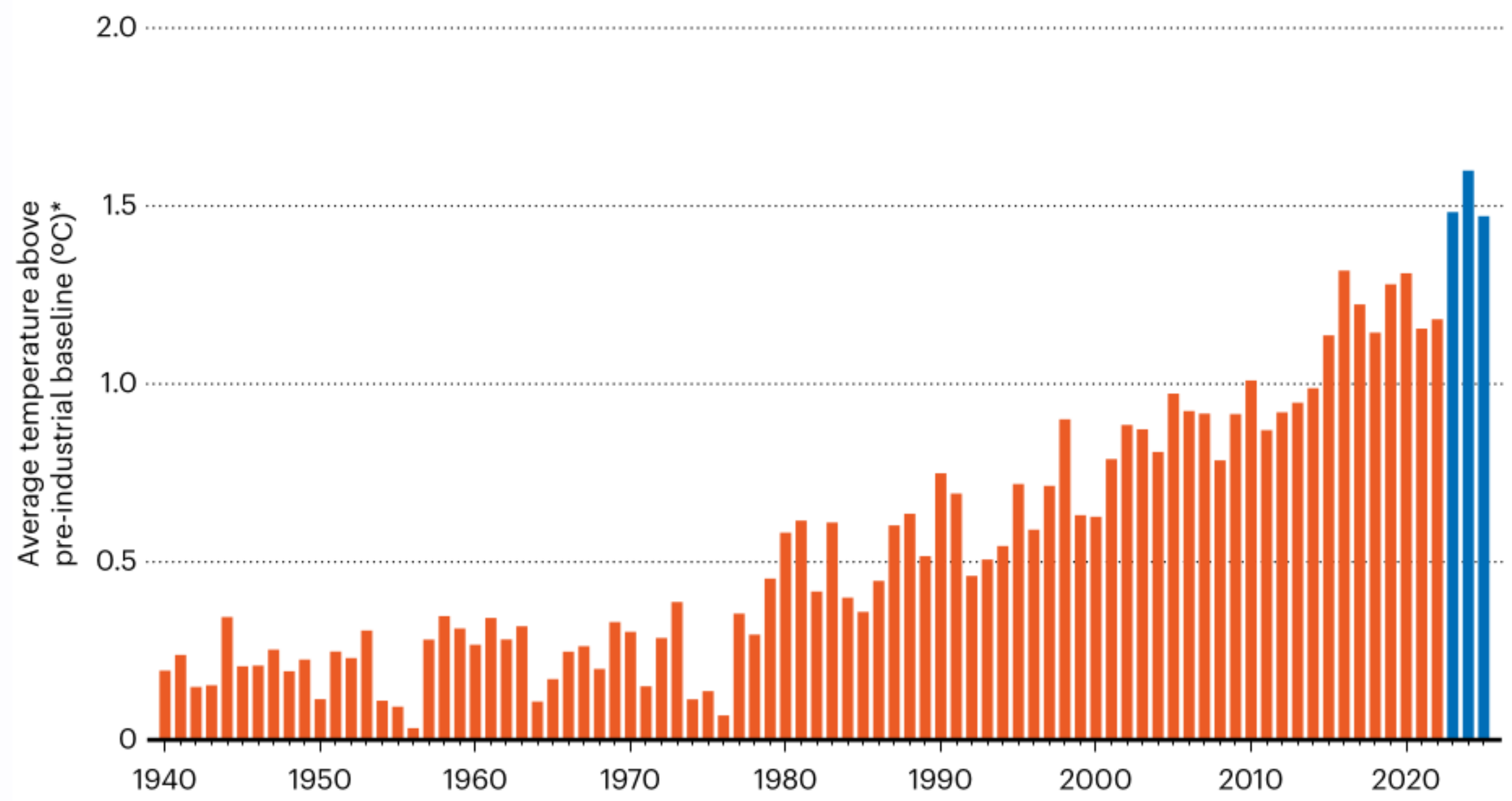
**Agriculture Science Lead**

5<sup>th</sup> ACCC Impact Week

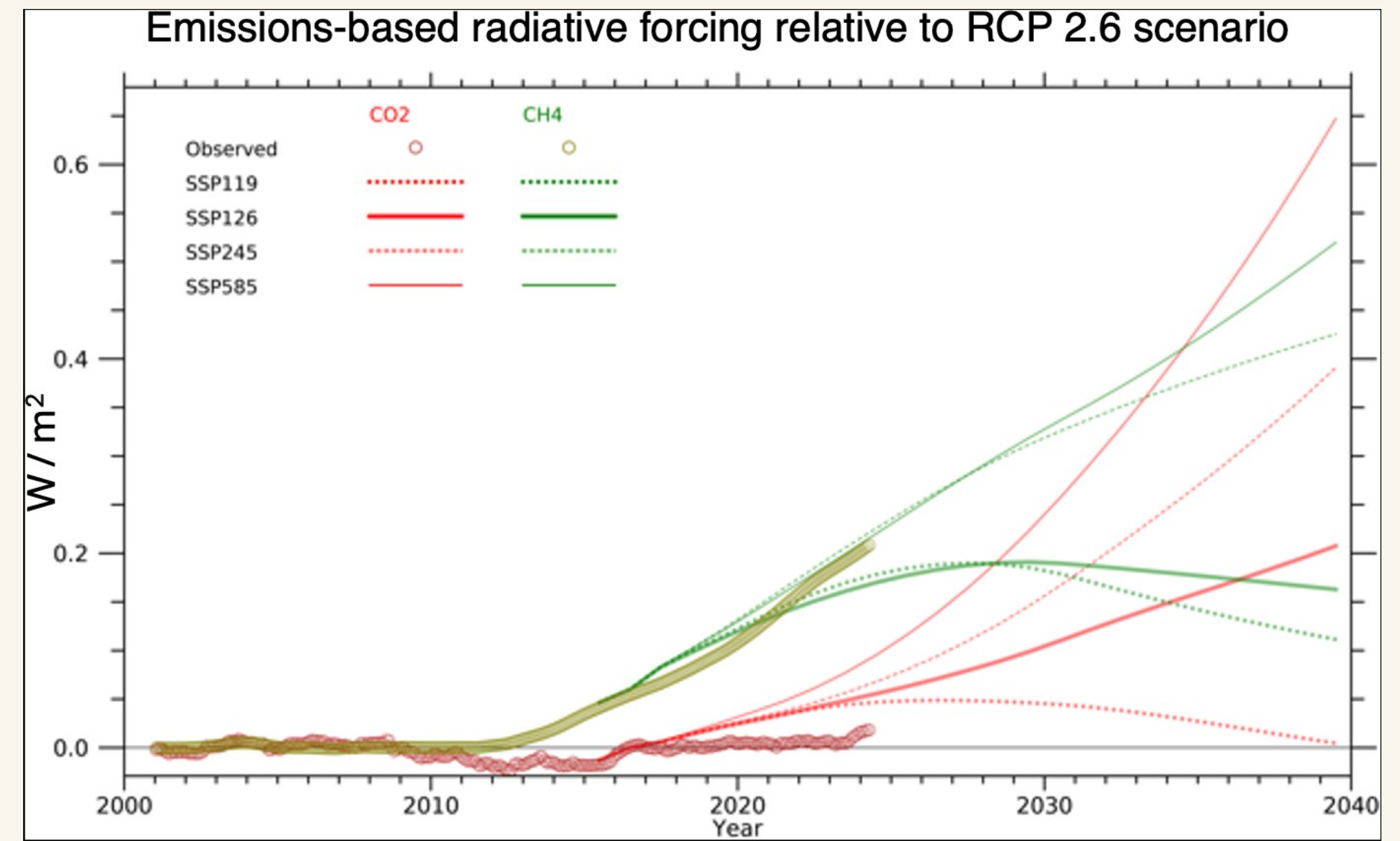
14 April 2026, Helsinki



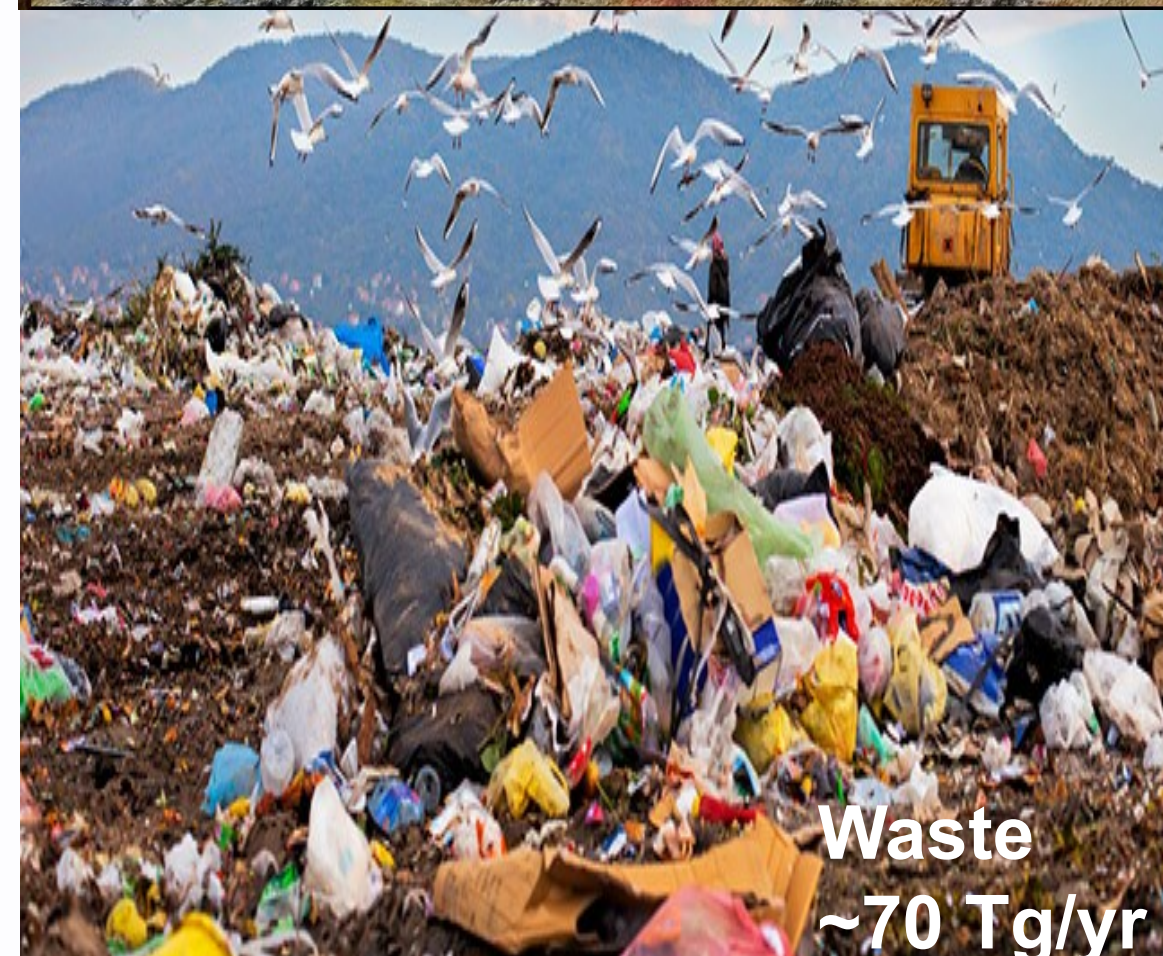
# Methane's recent sharp growth may lead to failure of the Paris Agreement



(Witze, 2026, *Nature* 651, 569-570)

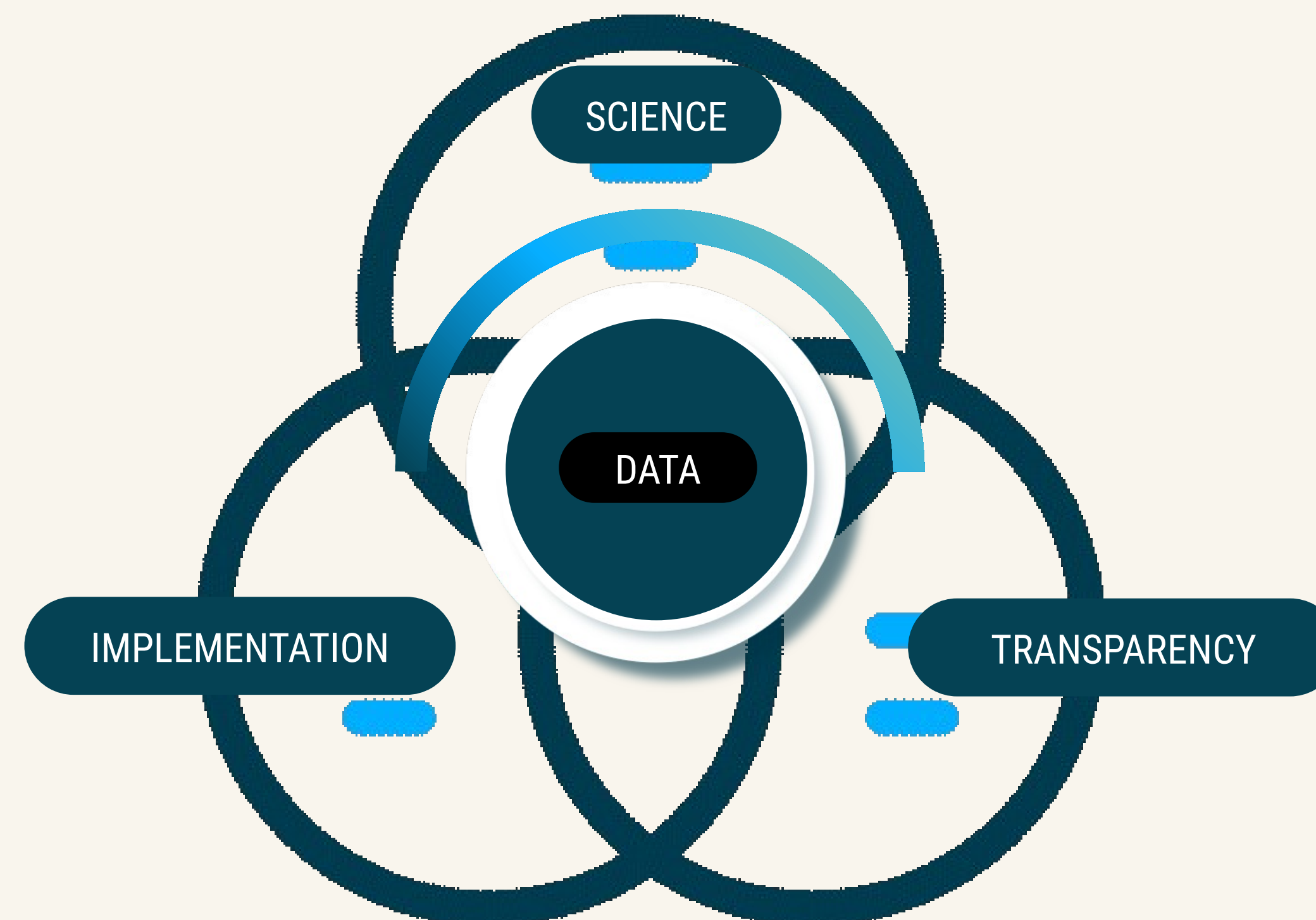


(Nisbet, E.G., et al. 2025, *Proc A, Royal Society*, 481,020240390)



## UNEP's IMEO interconnects better data with targeted action

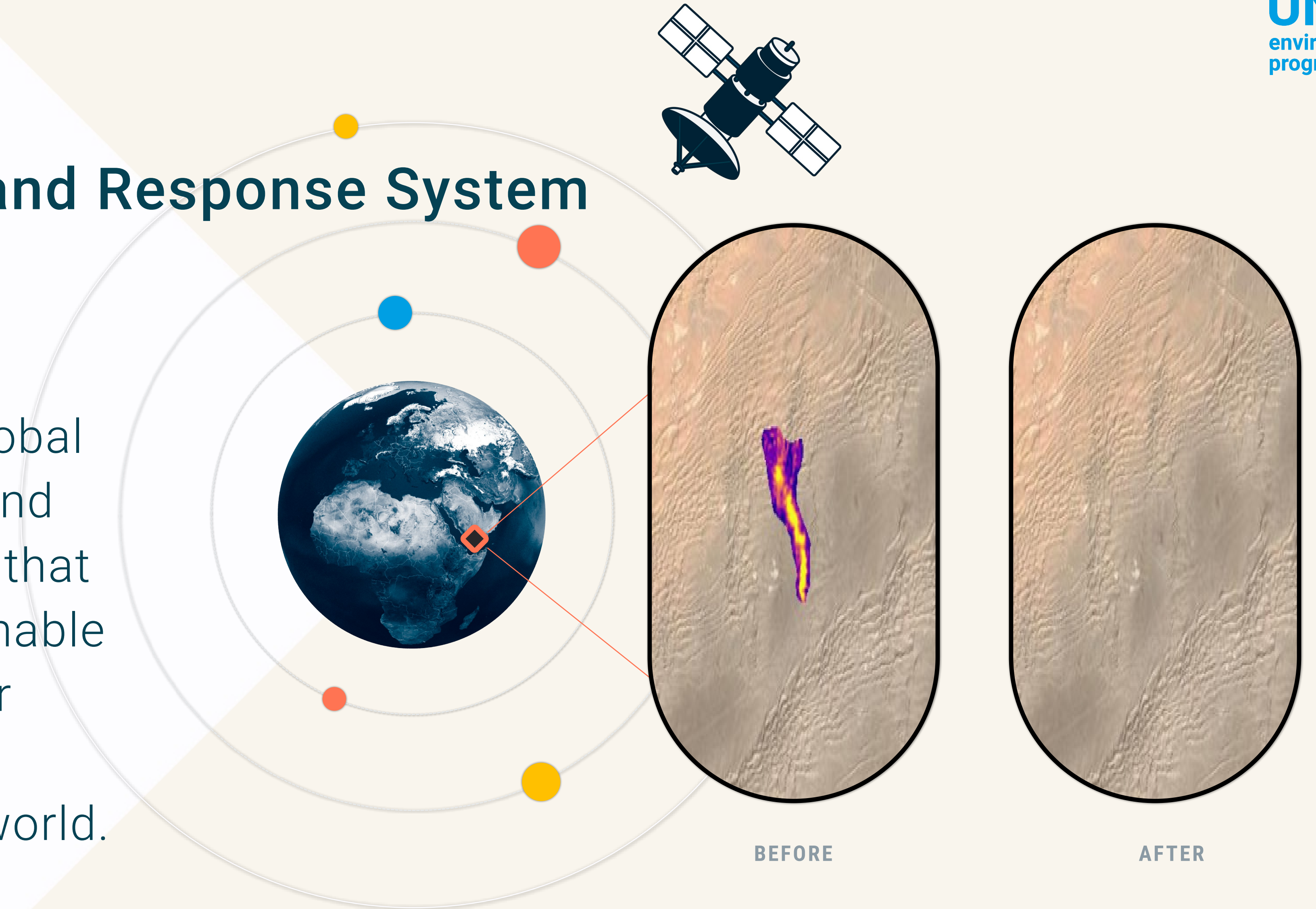
IMEO exists to provide open, reliable, and actionable data to the individuals who have the agency reduce methane emissions.



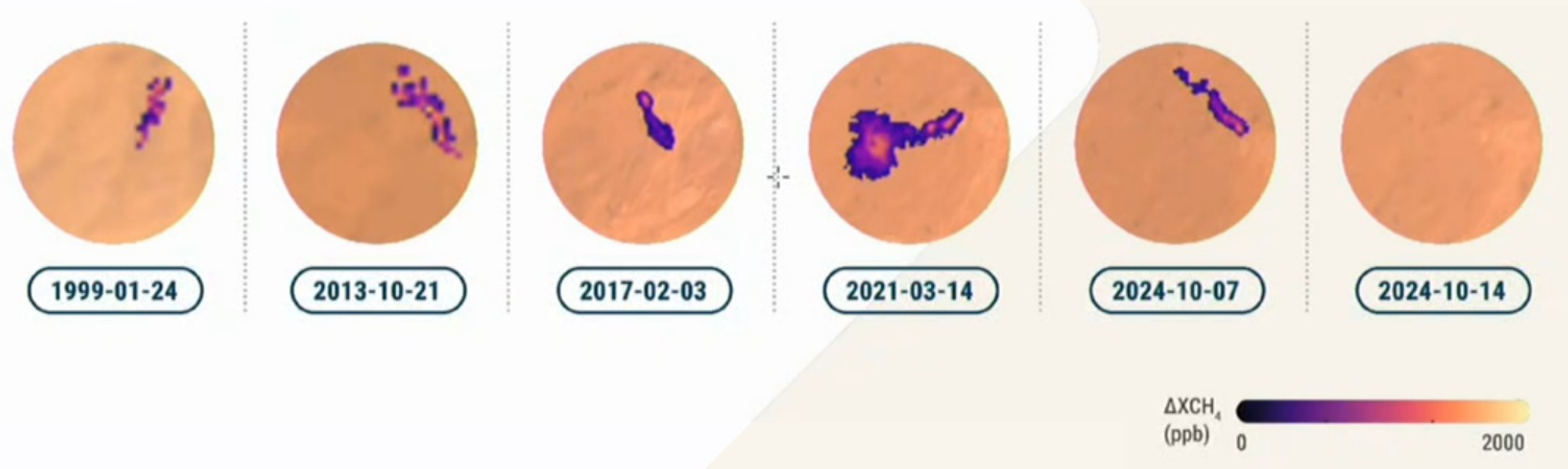


# Methane Alert and Response System (MARS)

MARS is the first global satellite detection and notification system that provides free, actionable data alerts on major methane emissions events around the world.



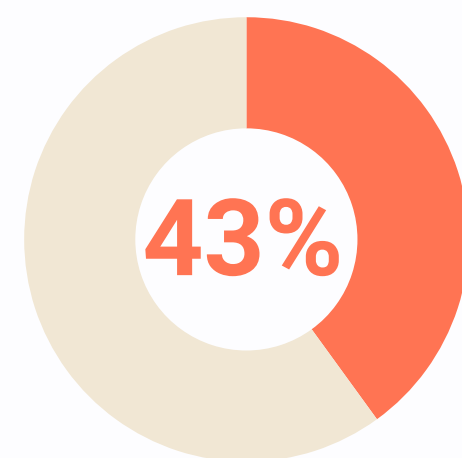
# Data triggers Action



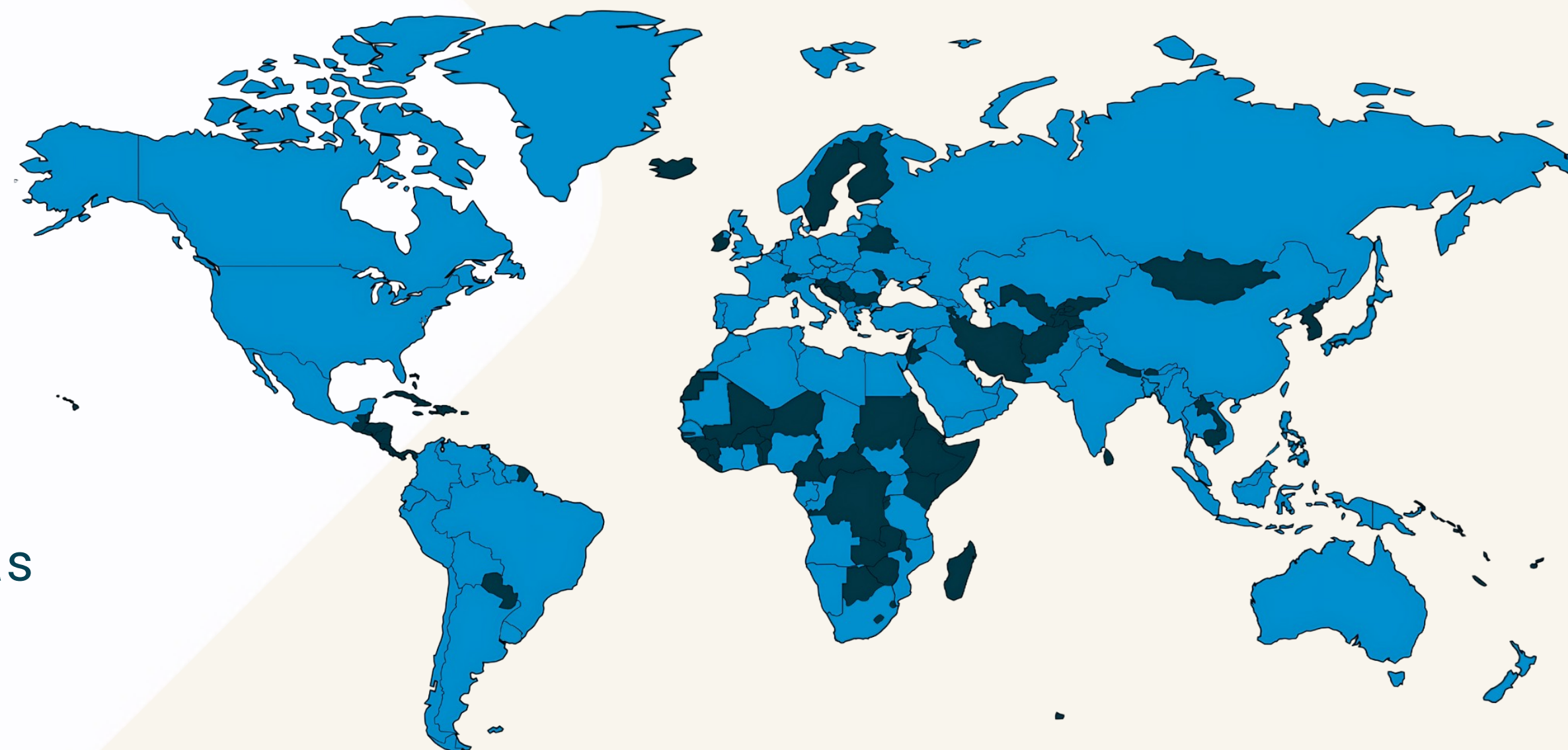
Hassi Messaoud oil field (Nigeria) :  
Plumes detected between 1999 and 2024.  
No further emission detection since October 2024

# The Oil and Gas Methane Partnership 2.0: Driving transparency and mitigation

**>155**  
member companies



Of global oil and gas production represented



As of January 2026

- OGMP 2.0 companies operated and non-operated assets
- Countries not covered by OGMP 2.0

Non-company  
Members



# IMEO Supports Scientific research to advance the world's understanding of methane emissions



**25 studies** in implementation phase in 27 countries (Nigeria, Colombia, India, Azerbaijan)



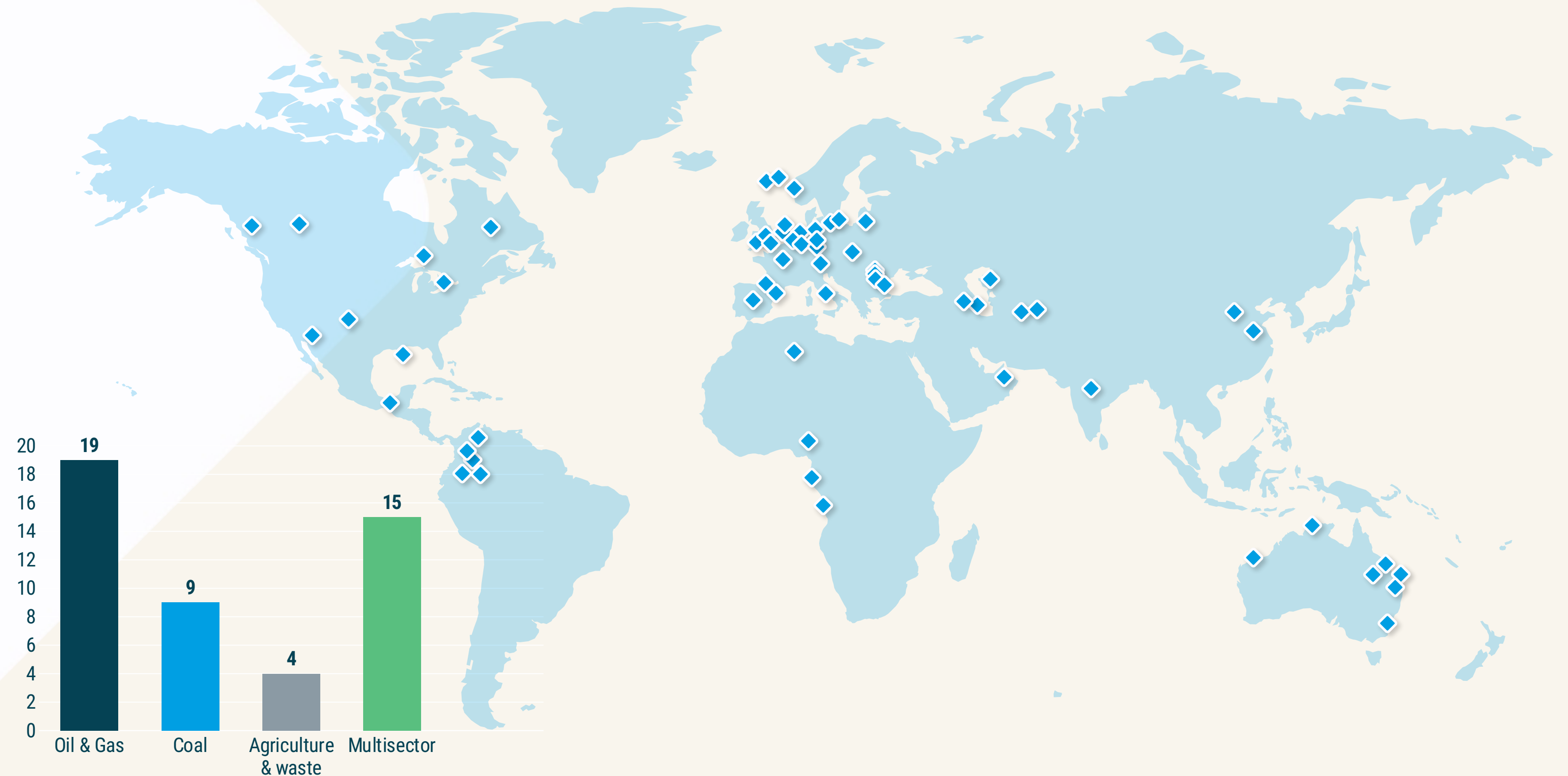
**36 published papers** (2020-)



**13 global studies**

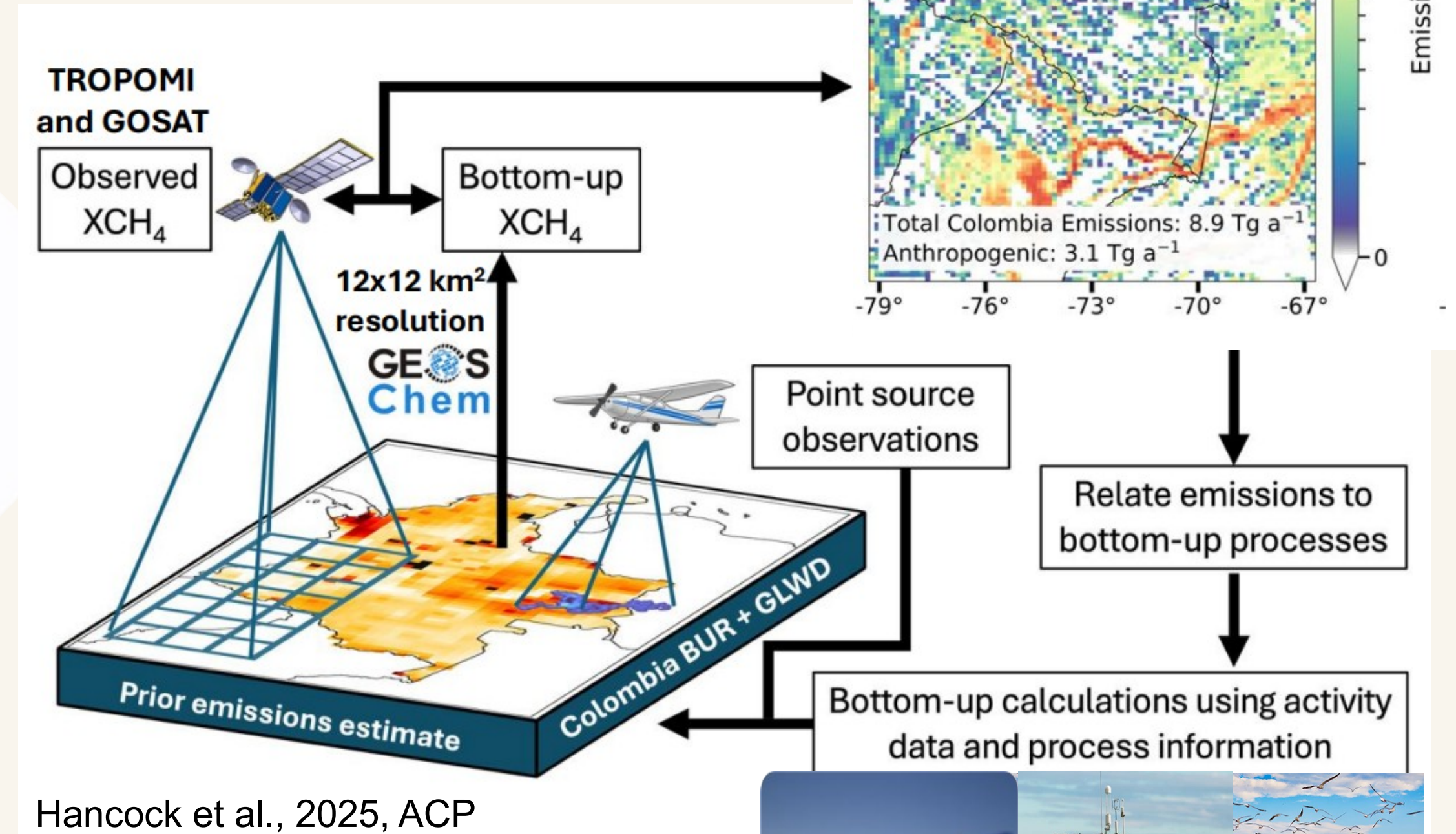


**25+ expected publications** in 2025 and 2026



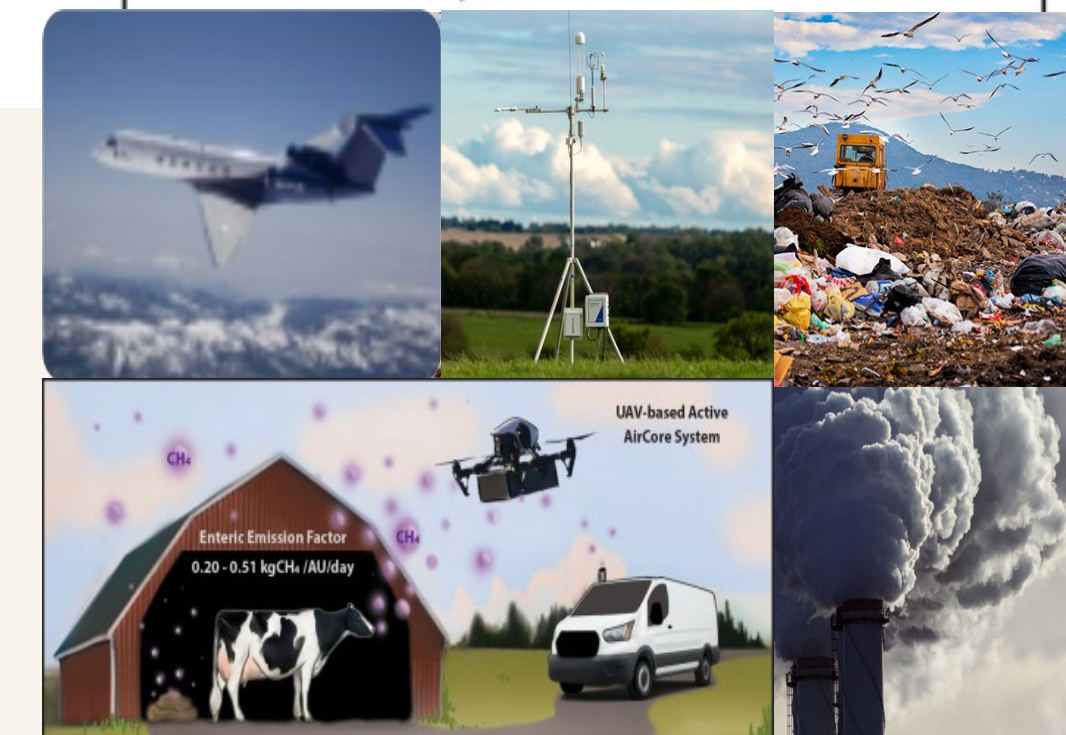
# Data-based national methane inventory

To estimate the current total and sectoral methane emission at country-level through measurement studies, satellite inversions and integration of existing data



Hancock et al., 2025, ACP

Example of Colombia



+ science studies

# IMEO's Eye on Methane data platform – How is it different?

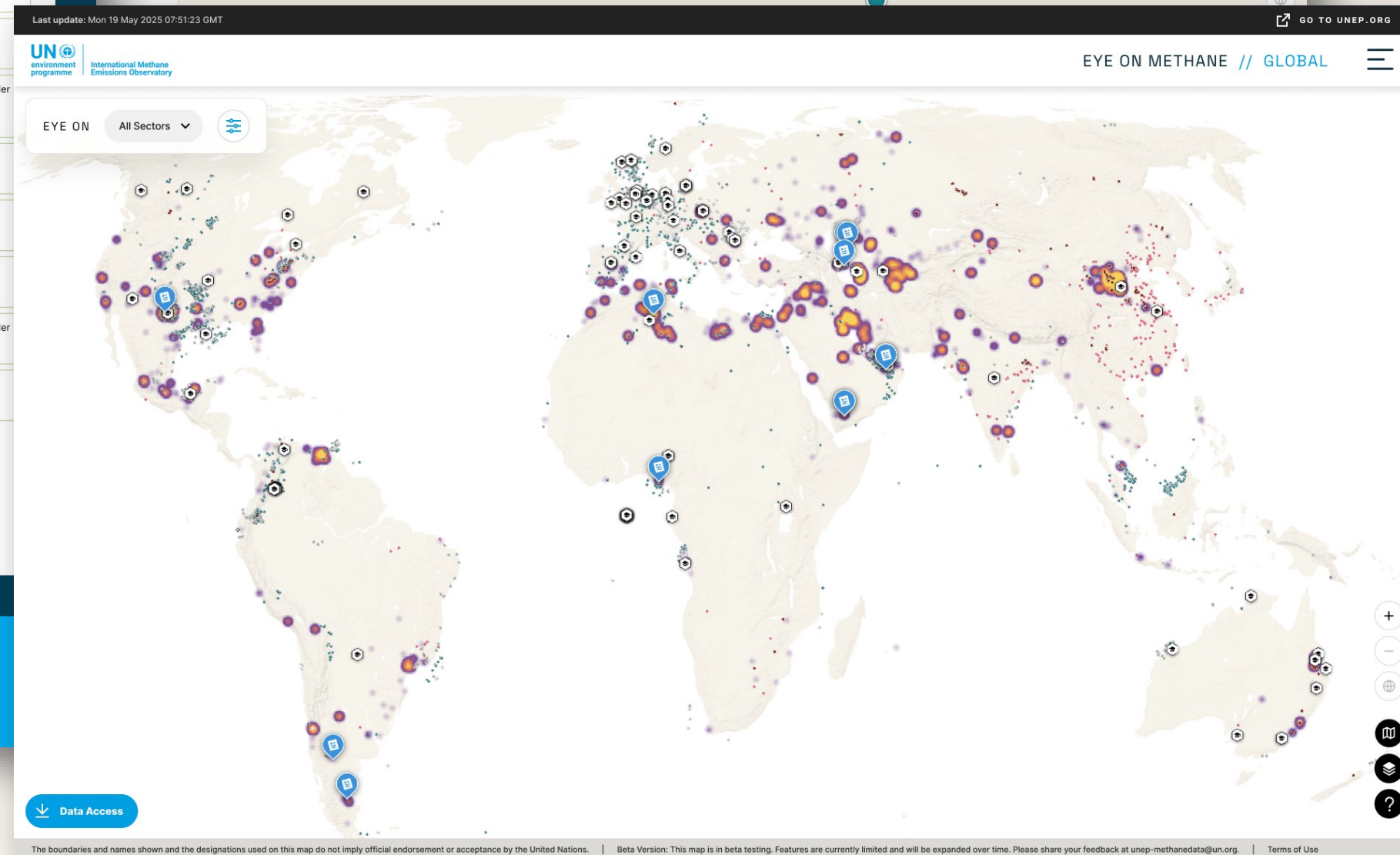
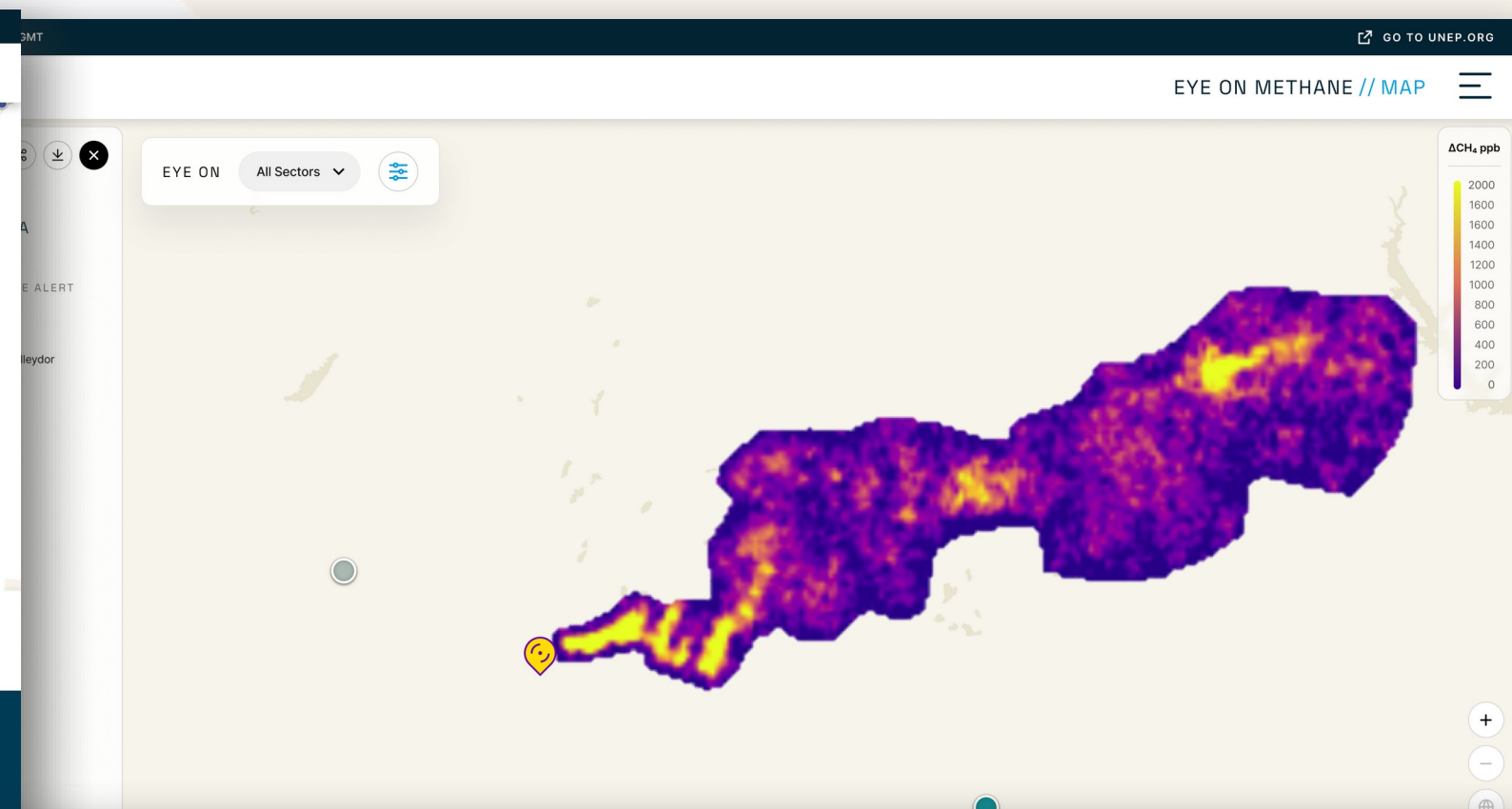
**MARS detected emissions**

[Text t.b.d.] We choose to go to the moon. We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills.

**Summary of detected emissions**

Space for context here. This is a comprehensive list of all plumes detected at this source and all relevant information. We choose to go to the moon. We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills.

Source ID <sup>1</sup>	Basin	Lat - Lon	Date of Last Plume Detected	Potential Operator ("COMP member")	Potential Emissions Source Category	Total Number of Plumes Detected	Persistence <sup>2</sup>	Feedback Status	Emissions Status <sup>3</sup>
KAZ_S_008	Precaspian Basin	30.99507 49.94779	14 Mar, 2025	Karachaganak Petroleum Operating BV	Flare	12	Persistent	Feedback Received by Government	NO
KAZ_S_007	North-Caspian	32.99507 52.94779	21 Feb, 2025	North Caspian Operating Company	Compressor Station	17	Frequent	No Feedback Received	MAYBE - NO Feedback
KAZ_S_006	Precaspian Basin	40.99507 58.94779	2 Mar, 2025	Petro Kazakhstan*	Flare	1	Sporadic	Feedback Received by Government and Operator	MAYBE - Under Review
KAZ_S_005	Precaspian Basin	30.99507 49.94779	14 Mar, 2025	Karachaganak Petroleum Operating BV	Flare	12	Absent	Feedback Received by Operator	NO
KAZ_S_004	Precaspian Basin	32.99507 52.94779	21 Feb, 2025	North Caspian Operating Company	Compressor Station	17	Undetermined	No Feedback Received	MAYBE - NO Feedback
KAZ_S_003	North-Caspian	32.99507 52.94779	21 Feb, 2025	Karachaganak Petroleum Operating BV	Compressor Station	17	Frequent	No Feedback Received	MAYBE - NO Feedback
KAZ_S_002	Precaspian Basin	40.99507 58.94779	2 Mar, 2025	Karachaganak Petroleum Operating BV	Flare	1	Sporadic	Feedback Received by Government	MAYBE - Under Review
KAZ_S_001	Precaspian Basin	30.99507 49.94779	14 Mar, 2025	Petro Kazakhstan*	Flare	12	Absent	Feedback Received by Government	NO



- Intuitive map
- MARS Notification
- Country & Company Insights
- Integrated Products
- Open Access

FROM MEASUREMENT TO MOMENTUM

# THANK YOU !

UNEP's IMEO gratefully acknowledges its donors:

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Supported by:  
 Federal Ministry for Economic Affairs and Climate Action  
 on the basis of a decision by the German Bundestag



Canada



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