

Data to Action

Leveraging methane data for near-term climate action



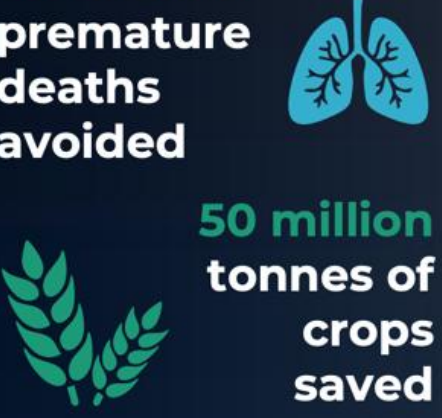
Vidvatta Sharma, Regional Associate, Asia
The Global Methane Hub



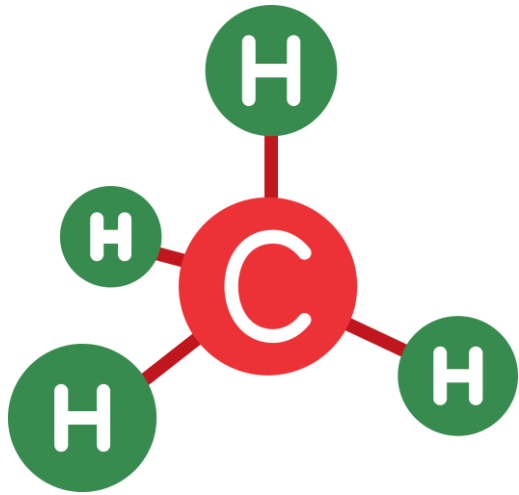
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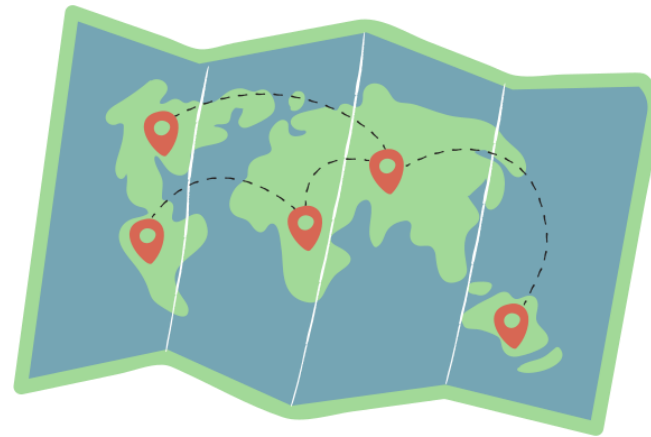
Methane Matters

Temperature Impact	Avoided Climate damages	Economic & health co-benefits
 <p data-bbox="435 925 861 1182">Critical to keep 1.5°C within reach -0.3°C warming avoid by 2050</p>	 <p data-bbox="1026 1032 1467 1182">\$8.3 trillion avoided damages annually by 2050</p>	 <p data-bbox="1651 511 2097 953">4.2 million premature deaths avoided 50 million tonnes of crops saved</p>
<p>\$370 billion annual savings in health costs & productivity</p>		

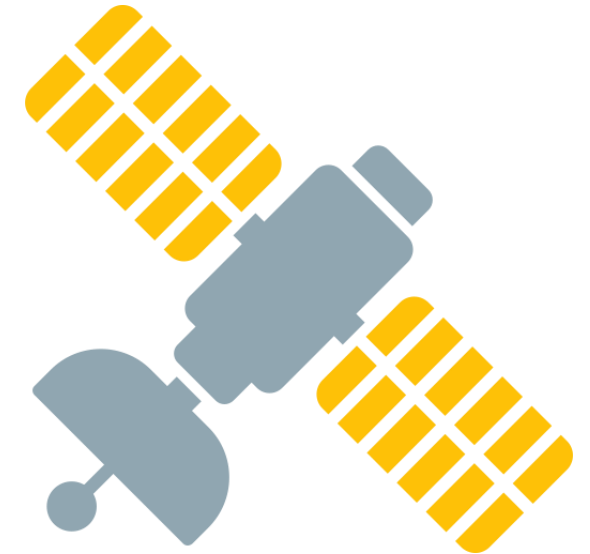
Why Do We Need Data on Methane Emissions



- Methane is invisible to the naked eye.
- What gets traced can be acted upon



- Enhanced transparency and open-source data allows authorities to pinpoint emission sources.



- Various sources of data necessary to identify methane emissions and verify them across sectors.
- Satellites, OGI Cameras etc.

Different Tools, Similar Impact

WASTE MAP
Login or Sign Up

Measure, map, and mitigate global waste methane emissions

View Map

Go one step further and explore ways to improve waste management using our Decision Support Tools.

City Decision Support Tool

Site Decision Support Tool

Powered by RMI, Clean Air Task Force, and The Global Methane Hub.

Search by location, coordinate or name

45 Plumes 6 Sources CARBON MAPPER

Esenguly, Balkan, Turkmenistan

PLUMES SUPPORTING DETAILS

3.6K \pm 1.0K Source Emission Rate (kg CH₄/hr)

100% Source Persistence

16 Number of Plumes

16 Days Observed

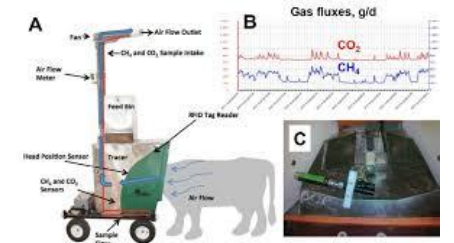
Date	Time (UTC)	Emission Rate (kg CH ₄ /hr)
OCT 19 2025	08:01:37	3.0K \pm 0.9K
AUG 12 2025	10:23:26	2.5K \pm 0.8K
JUL 20 2025	07:49:01	4.3K \pm 0.8K
JUN 22 2025	07:44:41	3.1K \pm 0.2K
MAY 18 2025	07:40:02	4.5K \pm 0.9K
APR 20 2025	07:36:09	1.0K

Methane Risk Map

Methane Risk Map

Tracking methane-linked health risks to communities.

Brought to you by PSE's Methane + Health Initiative



WASTE USE CASE WASTEMAP



WHAT

A heat map of landfill methane emissions paired with practical tools to support detection and action.

WHY IT MATTERS

Makes landfill methane visible and credible, enabling governments and civil society to target high-emitting sites and enforce accountability.

THE WIN SO FAR

195 Countries with landfills methane emissions, 55 with plumes.
>30% of global landfills and dumpsites
>380 Cities with with landfills methane emissions

WASTEMAP enabling action

Samambaia Landfill

Average methane emissions

3.0 ton/hr

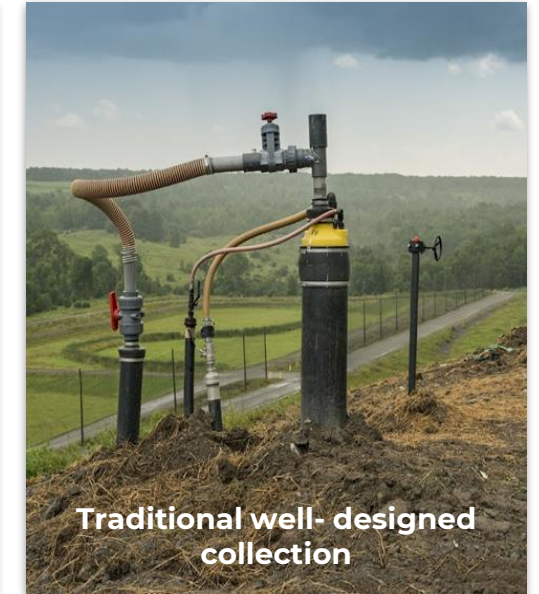
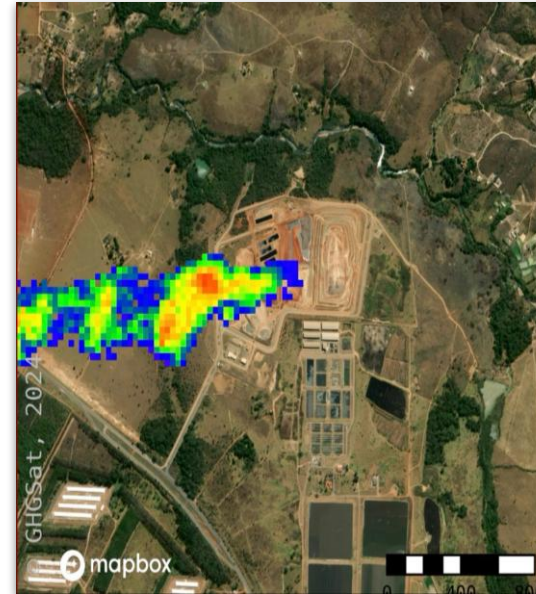
(*Canada new regulation - 1,000 tons/year)

Origin and source of plume

Manual flares in the central landfill were not operated correctly, highlighting the risks of poor design and inconsistent operation.

Outcome

Collaboration with the landfill operator and local government to develop a feasibility study for upgrading the flaring system and increasing organic waste diversion.



Traditional well- designed collection



Brasilia, Samambaia landfill site

76 hectares, 14 plumes, 800,000 tons waste per year, ~50% organics

AGRICULTURE USE CASE

Feed Ration Tool and Time2Graze



WHAT

Two farmer-focused tools that optimize feed and grazing to reduce methane while supporting productivity and cost savings.

Feed Ration Formulation Tool

Builds locally tailored diets that balance nutrition, cost, and methane impact.

Time2Graze

Uses satellite imagery to estimate pasture biomass, helping farmers match grass supply with herd needs.

WHY IT MATTERS

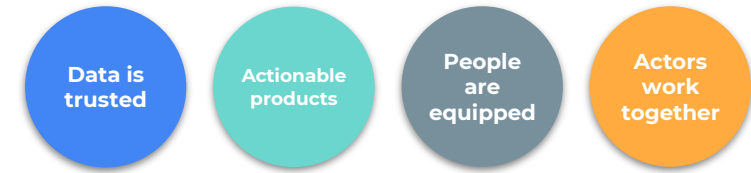
These tools translate complex science into practical guidance farmers can use daily, reducing emissions while sustaining livelihoods.

THE WIN SO FAR

Initial grants will enable rollout in **25 countries**. Aim to expand to **33 countries**.

ENERGY USE CASE

IMEO MARS



WHAT

Methane Alert and Response System (MARS) is a satellite-based system that detects large methane emissions, alerts stakeholders, and supports accountability.

WHY IT MATTERS

Makes methane emissions from oil and gas visible and actionable, enabling faster responses and systemic improvements.

THE WIN SO FAR

15,000 total detections (Nov 2023 – Sept 2025)
12,000 high-resolution detections in oil and gas
4,000 notifications sent
25 country focal points and 150+ company focal points engaged
63% of global oil and gas production covered

Methane Risk Map

Tracking Methane-Linked Health Risks to Communities

The Methane Risk Map a cornerstone of PSE's Methane + Health Initiative launched in August 2025.

A new interactive map by PSE Healthy Energy reveals that over 99% of more than 1,300 upstream methane emissions events lead to modelled health risks, highlighting urgent implications for energy and air quality regulation and policy.



Inside Climate News

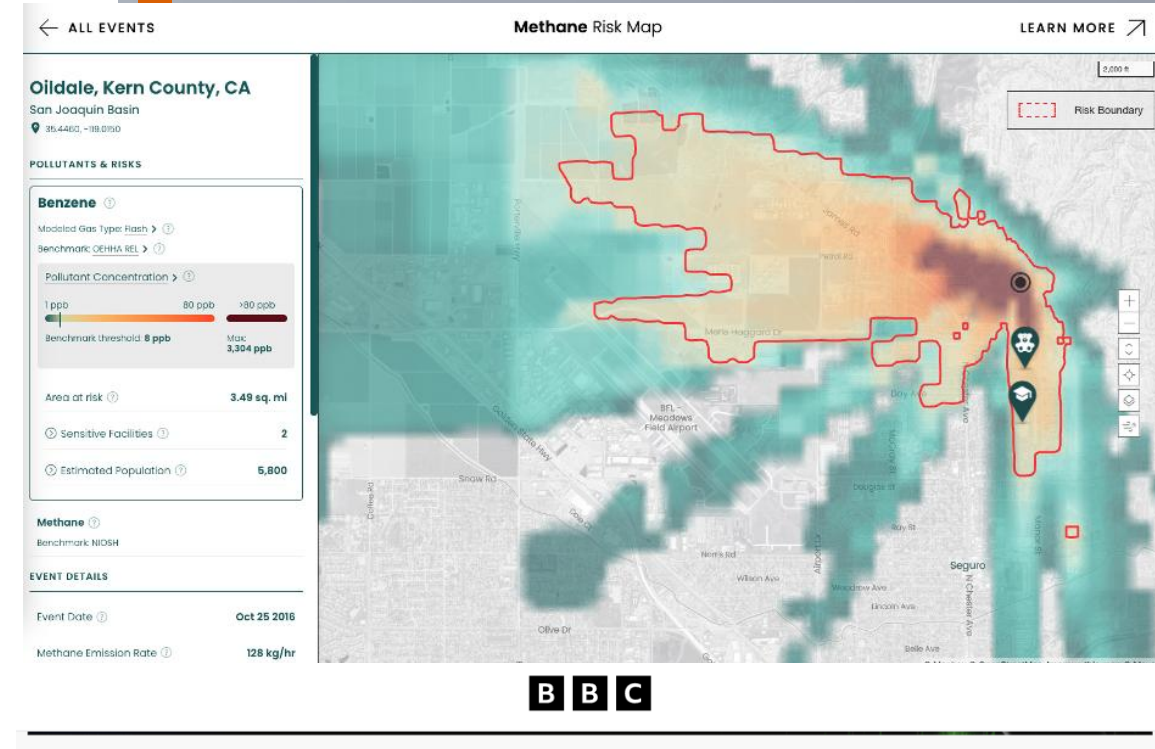
Fossil Fuels

New Tool Maps the Health Impact Air Pollutants Released With Methane Super-Emitter Events

When oil and gas infrastructure leaks the potent greenhouse gas methane, it also releases toxic air contaminants that have escaped notice, until now.

By Liza Gross

Data-Driven Decisions: Leveraging tools for quality management decisions



The health impact of living near a fossil gas leak

24 June 2024

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New Research Details Hidden Health Risks of Methane Emissions

EU Faces Trump Administration Pressure to Roll Back Regulations

Methane leaks at California oil facilities are also spewing toxic chemicals

ENERGY USE CASE

Methane Risk Map



WHAT

An interactive map that links methane emissions events to modeled health risks for nearby communities.

WHY IT MATTERS

Shows the direct connection between methane leaks and human health impacts, giving regulators and advocates clear evidence to push for stronger air quality and energy policies.

THE WIN SO FAR

Analysis of 1,300+ upstream methane events found that over 99% lead to measurable community health risks — making invisible impacts visible.

BAQ 2026

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