

METHANE MEASUREMENT FOR DUMMIES

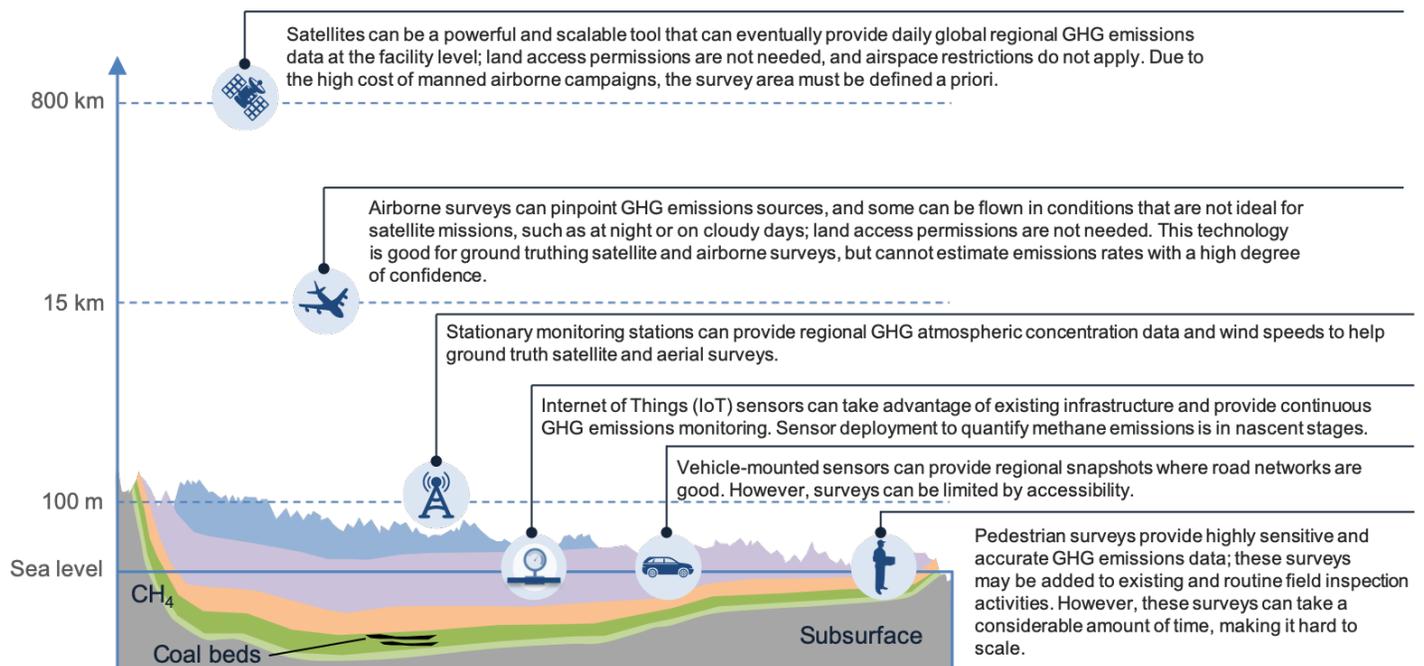
If you can't measure it, you can't manage it: understanding methane levels is necessary for designing abatement action

Methane is a super-potent greenhouse gas responsible for around 25 percent of global warming. This is because methane has a greater warming potential than CO₂: approximately 84 times more powerful on a 20-year time frame. Methane emissions stem from a variety of natural and anthropogenic sources. Approximately 14 percent of methane in our atmosphere comes from oil- and gas-related activities. Eliminating oil and gas methane can reduce as much as 6 gigatons per year of CO₂e; this is nearly 30 percent of the emissions reduction needed by 2030 for the Earth's temperature to remain below the 1.5°C scenario.

In order to design and deploy methane abatement activities, at a scale that really addresses the underlying problem, the industry, regulators, and consumers must have reliable data on the sources and volumes of emissions in order to inform actionable insights.

No single sensor technology provides a silver bullet for comprehensive measurement, but together they paint a clearer picture about global emissions

Several methane measurement data technologies exist to help us monitor methane sources. All technologies aim to capture the rate of methane emissions. Each has its pros and cons for enabling scientists to estimate this rate. An overview of the technologies is summarized below.



Complementing measured data with modeled data

Modeled methane data, such as Oil Production Greenhouse Gas Emissions Estimator (OPGEE), provide a life-cycle assessment of methane emissions from the oil and gas supply chain. When measured data is absent, these models can identify areas where methane emissions are highly probable, helping to direct future data measurement campaigns.

Integrating measured and modeled data into an open access platform

RMI and SYSTEMIQ's Global Methane Solutions partnership is developing an online methane platform that will autonomously integrate high-fidelity methane data, both measured and modeled. It will generate actionable abatement insights, analysis and news for operators, buyers, regulators and investors. Outputs from this platform will be integrated into appropriate distribution channels for adoption by leading industry players.