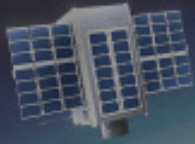




OIL AND GAS CLIMATE INITIATIVE



EXECUTIVE SUMMARY

Results of OGCI Satellite Monitoring Campaign 2022–2023 over Kazakhstan, Algeria and Egypt

MARCH 2024



EXECUTIVE SUMMARY

OGCI Satellite Monitoring Campaign 2022–2023

A significant and rapid reduction in methane emissions is critical to achieve the goals of the Paris Agreement and has been a top priority for the Oil and Gas Climate Initiative (OGCI) since the group was founded in 2014.

Methane emissions from venting, fugitives and flaring comprise around 2 gigatonnes of carbon dioxide equivalent a year (CO₂e) – almost half the oil and gas industry’s total Scope 1 and 2 emissions, according to the International Energy Agency.

In 2022-2023, OGCI extended its flagship Satellite Monitoring Campaign (SMC) to Algeria, Kazakhstan and Egypt to support more countries taking practical action to reduce methane emissions from oil and gas operations.

A successful pilot of the SMC in Iraq in 2021 had already demonstrated the capability of satellite technology to detect and quantify methane emissions and provide information to local operators to help them reduce emissions. Detection and measurement of methane emissions is a critically important first step to reducing methane emissions.

For this latest phase of the campaign, greenhouse gas monitoring company GHGSat performed over 530 high-resolution observations during one year over a total of 18 pre-selected sites (six per country), using its own satellites and public satellite data.¹

FOOTNOTES

¹ Please note GHGSat is also an early investee of [Climate Investment](#).

Sites were selected on criteria that included the number and size of previous and historic methane emissions, suitability for satellite monitoring, and the feasibility of engagement. The areas included oil- and gas- producing assets operated by OGCI members and non-members.

The campaign demonstrated that there are opportunities associated with using satellite data and engaging with local operators to support mitigation of methane emissions.

Importantly, it provided reliable data to local operators to further identify and characterize previously unknown persistent methane emissions sources.

It also highlighted the important role that OGCI can play in collaborating with local operators, including national oil companies and joint-venture partners, to accelerate the oil and gas industry's activities to eliminate methane emissions.

Quick win

The campaign has already enabled substantial – and quick – greenhouse gas mitigation at some locations, and has identified additional opportunities to further reduce methane emissions by continuing to engage with the operators and conduct asset specific analysis over the next 12 months, based on satellite data collected throughout this campaign.

This information and process will aid in better understanding the source of the emissions to more effectively tailor next steps and support local operators.

As of October 2023, two operators in Algeria and Kazakhstan confirmed they were able to mitigate three persistent methane emissions sources which had been confirmed with the local operators.

The three sources had a combined average emissions rate of 3,200 kg CH₄/h. This is equivalent to the hourly carbon emissions from almost 4,000 gasoline-fueled passenger vehicles.

OGCI is continuing to engage with four operators to help identify mitigation solutions for the remaining persistent emissions sources. Six emissions sources were confirmed with one operator over two monitored assets. The operator is in the process of exploring the best mitigation options.

Key findings

- **The campaign provided valuable data to operators** to further identify and characterize previously unknown persistent methane emissions sources. Operators provided on the ground confirmation for 15 persistent large sources previously detected through satellite monitoring. This additional data enables operators to locate the emissions sources and take faster methane emissions mitigation action on the assets being monitored.
- **The campaign further demonstrated that OGCI can play an important role supporting local operators, including national oil companies and joint-venture partners, to eliminate methane emissions.** Their vast networks and experience developing reporting and mitigation programs make them best placed to help partners and NOCs accelerate the oil and gas industry's activities to eliminate methane emissions.
- **Effectiveness of engagement strategies depends on geography, asset and operator.** Asset-level inventories combined with satellite and on-site measurements and monitoring technologies, such as remote sensing data and infrared cameras, are key to understanding methane emissions and the necessary mitigation actions.
- **Trust and confidentiality is critical for effective collaboration.**

Conclusion

Satellite technologies, combined with trust based on long-held relationships with local operators, can unlock large opportunities to reduce methane emissions from oil and gas operations.

OGCI member companies can support local operators by sharing established knowledge, expertise and learnings to help accelerate methane emissions reduction.

Based on this latest phase of the SMC and feedback from participants, OGCI is [extending the campaign](#) to more countries and operators. It recommends that satellite monitoring is supplemented with on-site monitoring and complementary initiatives, and knowledge and learnings are shared beyond the campaign.



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