METHANE ALERT AND RESPONSE SYSTEM (MARS)
CONFIRMED MITIGATION ACTION

YEMEN (YEM_S_003)



Through MARS, UNEP's International Methane Emissions Observatory (IMEO) turns satellite data into methane action. MARS is the only public global satellite-based system alerting governments and companies of extreme methane emissions. Using 30+ satellite instruments, combined with expert analysis and AI models, MARS detects major emission events and enables rapid response.

LAST UPDATED
15 July 2025

SOURCE ID
YEM_S_003

COUNTRY
Yemen

COORDINATES
15.54291°, 45.95506°

SECTOR
Oil & Gas

SOURCE TYPE
Flare

TOTAL NUMBER OF PLUMES DETECTED
3

DATE OF FIRST DETECTION
3 May 2025

DATE OF REPORTED MITIGATION
8 May 2025*

ESTIMATED TOTAL VOLUME OF EMISSIONS

60 tonnes

SAME CLIMATE IMPACT AS

~1,100 cars

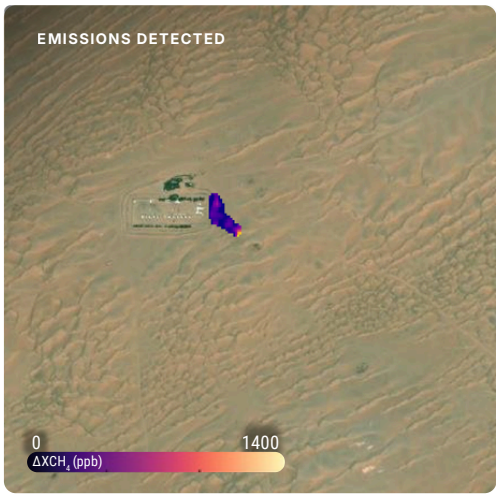
DRIVEN FOR A YEAR

*AS OF 20 APRIL 2026, IMEO OBSERVED SUBSEQUENT METHANE EMISSIONS AT THIS LOCATION. THROUGH MARS, IMEO CONTINUES TO ENGAGE STAKEHOLDERS TO SUPPORT SUSTAINED MITIGATION.

DETECTION & ACTION

THE CAUSE AND THE SOLUTION

The emissions occurred when a ground flare did not ignite automatically. The operator adjusted the pilot operating settings to avoid unlit flaring.





The image shows a plume detected by ESA's Sentinel-2 in Yemen on 3 May 2025. No further emissions have been detected at the location since 8 May 2025.

In implementing MARS, UNEP collaborates with various institutional partners, including the World Bank, International Energy Agency, the Climate and Clean Air Coalition, Universitat Politècnica de València, the Netherlands Institute for Space Research, the Committee on Earth Observation Satellites and the Copernicus Atmosphere Monitoring Service.

Based on satellite data used by MARS, it is not possible to confirm the presence of minimal methane emissions at a given location. Rather, this data can confirm the absence of emissions at levels higher than a given satellite's detection limit, which varies based on the technology, ground conditions and the weather.

UN environment programme | International Methane Emissions Observatory

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