METHANE ALERT AND RESPONSE SYSTEM (MARS)
CONFIRMED MITIGATION ACTION

TURKMENISTAN (TKM_S_080)

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 April 2026

SOURCE ID
TKM_S_080

COUNTRY
Turkmenistan

COORDINATES
37.89800°, 63.24648°

SECTOR
Oil & Gas

SOURCE TYPE
Well

TOTAL NUMBER OF PLUMES DETECTED
1

DATE OF FIRST DETECTION
7 October 2024

DATE OF REPORTED MITIGATION
10 November 2024

ESTIMATED TOTAL VOLUME OF EMISSIONS

1,500 tonnes

SAME CLIMATE IMPACT AS

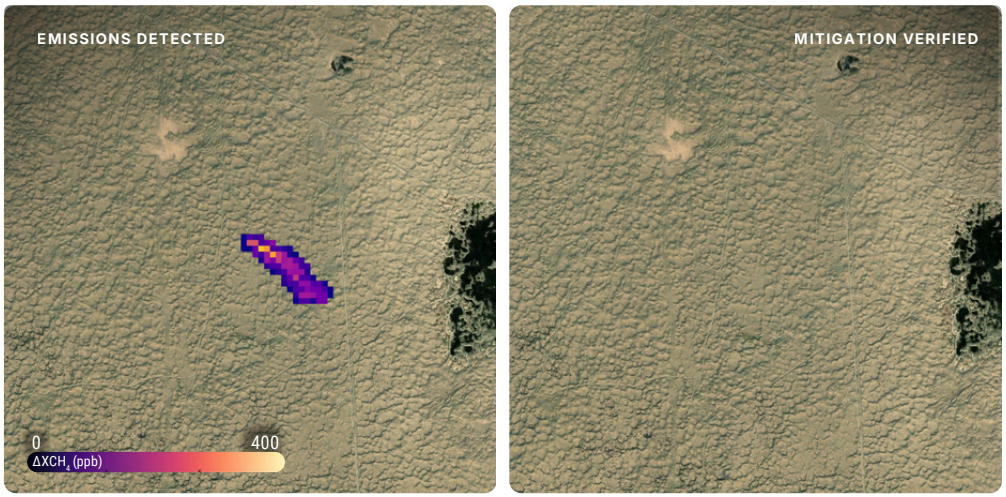
~29,000 cars

DRIVEN FOR A YEAR

DETECTION & ACTION

THE CAUSE AND THE SOLUTION

The emissions resulted from a leaking section in a well site linked to equipment integrity issues. The operator repaired the affected section and restored containment, stopping the emissions.



The image shows a plume detected by NASA's EMIT in Turkmenistan, on 7 October 2024. No further emissions have been detected at the location since 10 November 2024.

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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