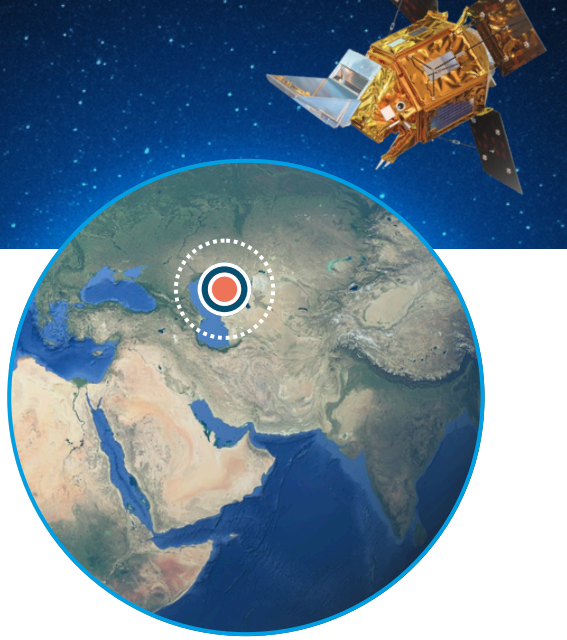
METHANE ALERT AND RESPONSE SYSTEM (MARS)
CONFIRMED MITIGATION ACTION

KAZAKHSTAN (KAZ_S_127)



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
KAZ_S_127

COUNTRY
Kazakhstan

COORDINATES
45.35945°, 52.07579°

SECTOR
Oil & Gas

SOURCE TYPE
Valve

TOTAL NUMBER OF PLUMES DETECTED
6

DATE OF FIRST DETECTION
7 June 2025

DATE OF REPORTED MITIGATION
1 September 2025

ESTIMATED TOTAL VOLUME OF EMISSIONS

2,200 tonnes

SAME CLIMATE IMPACT AS

~42,000 cars

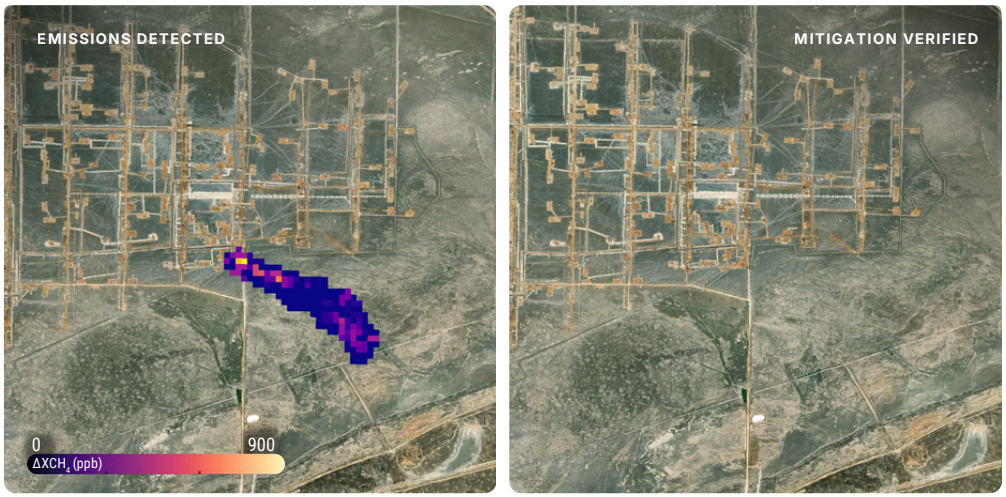
DRIVEN FOR A YEAR

*AS OF 05 AUGUST 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 were caused by gas passing through a worn valve in a gas line connected to a tank. The operator replaced the worn valve wedge, which restored proper sealing of the valve and brought the emissions to an end.



The image shows a plume detected by NASA's EMIT in Kazakhstan on 14 August 2025. No further emissions have been detected at the location since 1 September 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

United Nations Environment Programme | International Methane Emissions Observatory
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