

KAZAKHSTAN (KAZ_S_026)

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
KAZ_S_026



COUNTRY
Kazakhstan



COORDINATES
43.44189°, 52.83239°



SECTOR
Oil & Gas



SOURCE TYPE
Pipeline



TOTAL NUMBER OF PLUMES DETECTED
3



DATE OF FIRST DETECTION
10 December 2024



DATE OF REPORTED MITIGATION
27 February 2025



ESTIMATED TOTAL VOLUME OF
EMISSIONS

11,000 tonnes



SAME CLIMATE IMPACT AS

~210,000 cars

DRIVEN FOR A YEAR

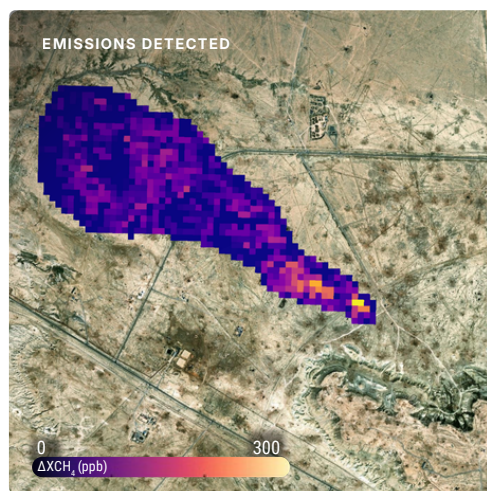


DETECTION & ACTION

THE CAUSE AND THE SOLUTION

The emissions were caused by a leaking pipeline. The operator replaced the damaged section of the pipeline, stopping the emissions.

The image shows a plume detected by NASA's Landsat 8 in Kazakhstan, on 10 December 2024. No further emissions have been detected at the location since 27 February 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.