SNAPSHOT: TOP 50 EMITTERS, COUNTRY RESPONSES AND MITIGATION

June 2026 Update

UNEP's Methane Alert and Response System (MARS) integrates data from more than 30 satellites to alert countries of major methane emissions and enable action.

This snapshot provides information on mitigation cases enabled and confirmed via MARS, country response rates to alerts, and the world's 50 largest methane sources across sectors, as detected by satellites.

MITIGATION

MARS has confirmed mitigation of a major source in Iraq. The corroded pipeline leaked an estimated 18,600 tonnes of methane over nearly two years. This is comparable in climate impact to around 356,000 gasoline-powered cars driven for a year. Explore the new mitigation case here.

To date, MARS has enabled and confirmed mitigation of over 40 major methane sources. Each mitigation involved issuing a MARS notification, evaluating the response for technical accuracy and confirming through subsequent satellite data that no further emissions have been detected.

Figure 1 shows where the mitigation cases have occurred, alongside information on each country's overall responsiveness to MARS alerts. The vast majority of mitigation occurs in countries with focal points who actively direct information to where it can be used to enable action.

Further information on each mitigation case is available here.

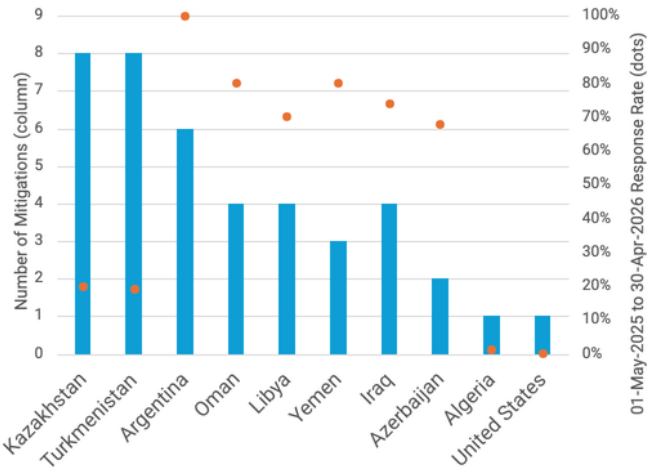


Figure 1
Number of confirmed mitigated sources by country, alongside country response rate for all MARS notified sources between 1 May 2025 and 30 April 2026

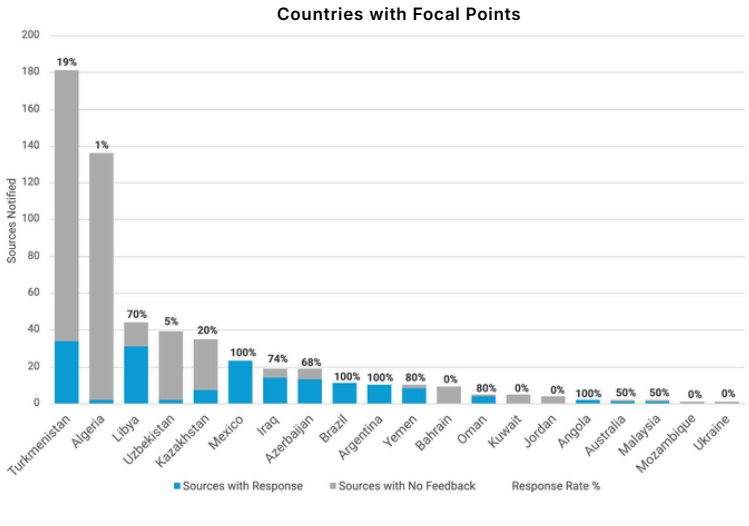
COUNTRY RESPONSES

Recipients of MARS alerts are asked to respond to UNEP with emission status, the underlying cause of emissions and any mitigation action taken or planned.

Figure 2 depicts the total number of sources notified by country, as well as the fraction of sources for which a response was received, across countries which have or have not designated a MARS focal point.

Response is a critical step towards methane mitigation, as it requires the investigation of a MARS-detected emission source. Responses may be submitted by governments or operators.

Country response rates vary, with some countries exceeding 80 per cent, demonstrating strong engagement and effective follow-through. Others—including countries with many emission sources—are making progress as they scale their response capacity. Countries that have designated a MARS focal point are linked to higher response rates.



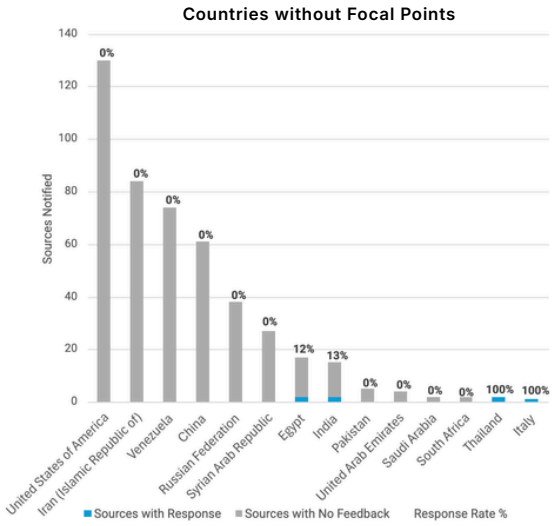


Figure 2
Response rate by country (1 May 2025 – 30 April 2026)

TOP 50 METHANE SOURCES

The map and table below present the 50 largest methane emission sources detected via satellite, based on a six-month rolling period to reflect changes over time. These are significant emitters across the oil and gas, coal, and waste sectors that emit either continuously or frequently.

Satellites detect only the largest methane emissions. While the top 50 sources identified here reflect a small share of total global emissions, they represent priorities for mitigation.

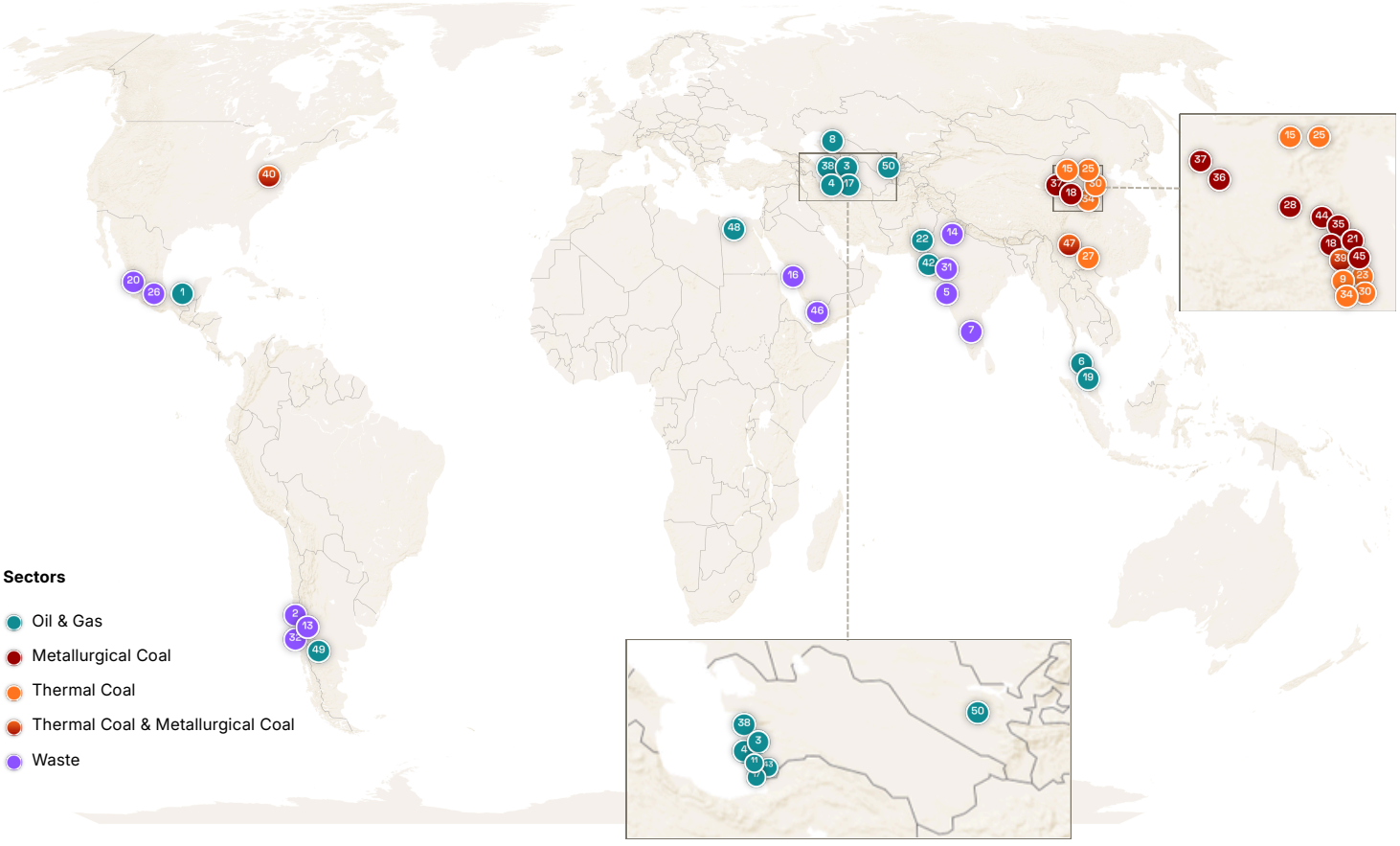


Figure 3
Top 50 methane sources globally (June 2026)

Table 1
List of top 50 methane sources

#		Country	Sector	Potential Source Type	Source ID	Coordinates	Feedback Received	Estimated Annual Emissions (tonnes CH_4)
1	NEW	Mexico	Oil and gas	Production offshore	MEX_S_003	19.56611, -92.237	Y	150,591
2	▼ 1	Chile	Waste	Landfill	CHL_S_001	-32.95405, -70.79594	—	88,213
3	▼ 1	Turkmenistan	Oil and gas	Flare	TKM_S_047	38.64869, 54.28269	N	81,494
4		Turkmenistan	Oil and gas	Gas disposal facility	TKM_S_022	38.33075, 54.02815	Y	73,661
5	▼ 2	India	Waste	Landfill	IND_S_042	19.12256, 72.95102	—	67,802
6	▼ 1	Thailand	Oil and gas	Production offshore	THA_S_008	7.49474, 102.61433	Y	61,325
7	▼ 1	India	Waste	Landfill	IND_S_024	13.10912, 77.65866	—	50,107
8	NEW	Kazakhstan	Oil and gas	Transmission compressor station	KAZ_S_003	45.34143, 55.19165	N	48,968
9	▲ 9	China	Thermal coal	Venting shaft	CHN_S_192	35.63986, 112.65204	—	48,004
10	NEW	China	Thermal coal	Drainage station	CHN_S_018	35.64253, 112.56866	—	46,603
11	▼ 3	Turkmenistan	Oil and gas	Flare	TKM_S_024	37.90823, 53.89861	Y	45,545
12	▼ 5	China	Thermal coal	Venting shaft	CHN_S_088	36.23247, 112.94554	—	44,938
13	▼ 4	Chile	Waste	Landfill	CHL_S_002	-33.69123, -70.79734	—	40,849
14	▲ 11	India	Waste	Landfill	IND_S_022	28.74244, 77.1562	—	39,157
15	▲ 6	China	Thermal coal	Venting shaft	CHN_S_033	37.938, 113.02297	—	38,193
16	▲ 3	Saudi Arabia	Waste	Landfill	SAU_S_011	21.65043, 39.40224	—	36,792
17	▲ 9	Turkmenistan	Oil and gas	Flare	TKM_S_367	37.76777, 53.9164	N	35,845
18	▼ 3	China	Metallurgical coal	Venting shaft	CHN_S_072	36.41495, 112.9372	—	35,828
19	NEW	Malaysia	Oil and gas	Production offshore	MYS_S_001	7.5925, 102.98746	Y	35,393
20	▼ 4	Mexico	Waste	Landfill	MEX_S_074	20.91518, -103.45535	—	35,215
21	▲ 2	China	Metallurgical coal	Venting shaft	CHN_S_098	36.24638, 112.99023	—	34,531
22	▲ 2	Pakistan	Oil and gas	Gathering and boosting facilities	PAK_S_001	27.96851, 69.80955	N	33,463
23	NEW	China	Thermal coal	Venting shaft	CHN_S_195	35.60638, 112.64465	—	31,273
24	▼ 2	China	Thermal and metallurgical coal	Drainage station	CHN_S_182	35.99206, 112.89036	—	28,287
25	▲ 2	China	Thermal coal	Venting shaft	CHN_S_131	37.96728, 113.43696	—	27,594
26	▲ 3	Mexico	Waste	Landfill	MEX_S_099	19.40711, -98.84907	—	24,615

Sectors: Oil & Gas · Metallurgical Coal · Thermal Coal · Thermal Coal & Metallurgical Coal · Waste

Note: IMEO currently provides MARS notifications for sources detected in the oil and gas sector. In May 2026, IMEO announced the launch of a pilot phase for rapid alerts in the coal and waste sectors.

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27	▲ 7	China	Thermal coal	Venting shaft	CHN_S_830	25.69842, 104.94445	—	23,389
28	NEW	China	Metallurgical coal	Venting shaft	CHN_S_228	36.83699, 112.28427	—	22,951
29	▲ 1	China	Thermal and metallurgical coal	Venting shaft	CHN_S_157	36.38906, 112.87599	—	22,566
30	NEW	China	Thermal coal	Drainage station	CHN_S_196	35.59816, 112.68846	—	22,075
31	▼ 3	India	Waste	Landfill	IND_S_017	22.98321, 72.56738	—	21,900
32	▲ 3	Chile	Waste	Landfill	CHL_S_009	-36.69538, -72.16774	—	20,323
33	NEW	China	Thermal and metallurgical coal	Drainage station	CHN_S_175	36.0917, 112.86259	—	19,955
34	NEW	China	Thermal coal	Venting shaft	CHN_S_498	35.54312, 112.63044	—	19,192
35	NEW	China	Metallurgical coal	Venting shaft	CHN_S_205	36.48175, 112.98714	—	18,493
36	NEW	China	Metallurgical coal	Venting shaft	CHN_S_337	37.3317, 110.99532	—	17,958
37	NEW	China	Metallurgical coal	Drainage station	CHN_S_095	37.48456, 110.84861	—	17,101
38	▲ 4	Turkmenistan	Oil and gas	Pipeline	TKM_S_029	39.46192, 53.77668	Y	16,551
39	NEW	China	Thermal and metallurgical coal	Drainage station	CHN_S_161	36.13813, 112.92011	—	16,450
40	NEW	United States of America	Thermal and metallurgical coal	Coal mine facility (generic)	USA_S_1059	39.12475, -80.18965	—	16,381
41	▼ 1	China	Thermal coal	Venting shaft	CHN_S_328	36.25226, 112.88337	—	16,206
42	▲ 1	India	Oil and gas	Flare	IND_S_014	23.48031, 72.27994	N	16,206
43	▲ 1	Turkmenistan	Oil and gas	Oil and gas facility (generic)	TKM_S_438	38.09913, 54.02161	N	15,986
44	NEW	China	Metallurgical coal	Venting shaft	CHN_S_204	36.52844, 112.89058	—	14,856
45	NEW	China	Metallurgical coal	Venting shaft	CHN_S_212	36.10827, 112.98069	—	14,348
46	▼ 1	Yemen	Waste	Landfill	YEM_S_019	15.47439, 44.15514	—	13,875
47	▲ 2	China	Thermal and metallurgical coal	Coal mine facility (generic)	CHN_S_840	26.34904, 104.67365	—	13,578
48	▼ 2	Egypt	Oil and gas	Gas disposal facility	EGY_S_055	29.78652, 28.15206	N	12,915
49	▲ 1	Argentina	Oil and gas	Tank batteries	ARG_S_053	-38.76047, -68.83698	Y	9,835
50	NEW	Uzbekistan	Oil and gas	Transmission compressor station	UZB_S_009	39.9168, 65.90373	Y	7,183

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