



GHGSAT

PIONEERING METHANE MITIGATION FROM SPACE

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CHALLENGE

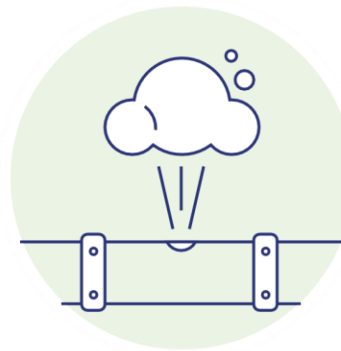
- In 2021, the UN Environmental Programme identified the reduction of anthropogenic methane emissions as critical to limiting global warming.
- Over 100 countries have committed to reducing global methane emissions to 30% of 2020 levels by 2030 through the Global Methane Pledge.
- To achieve this goal, accurate and timely data that is able to identify and quantify sources of emissions is required. However, current data sources and monitoring methods are insufficient.



High cost
to find leaks using
current methods



Infrequent
monitoring means
critical data gaps



Big leaks go
undetected for
months

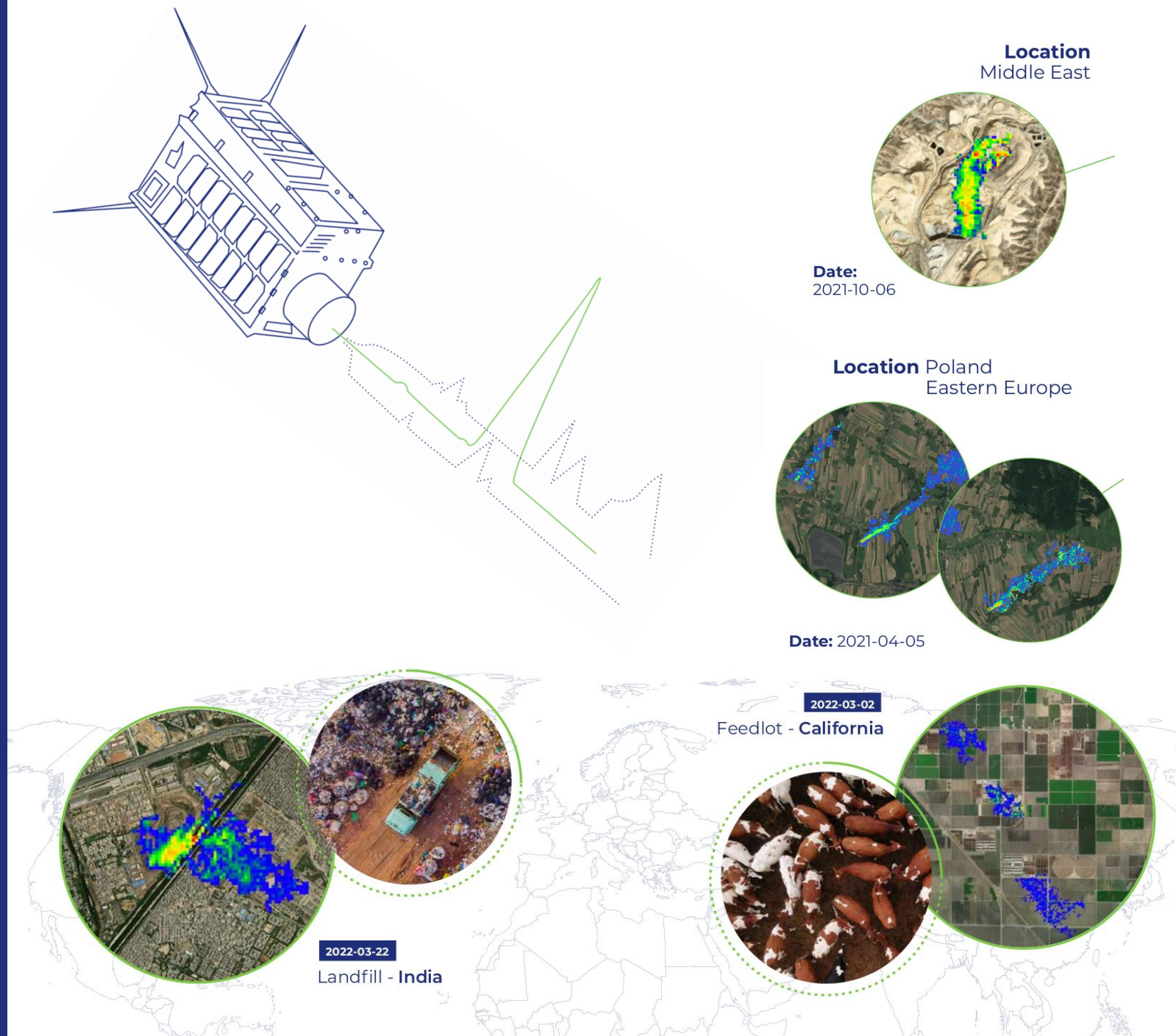


Uneven performance
caused by numerous
variables



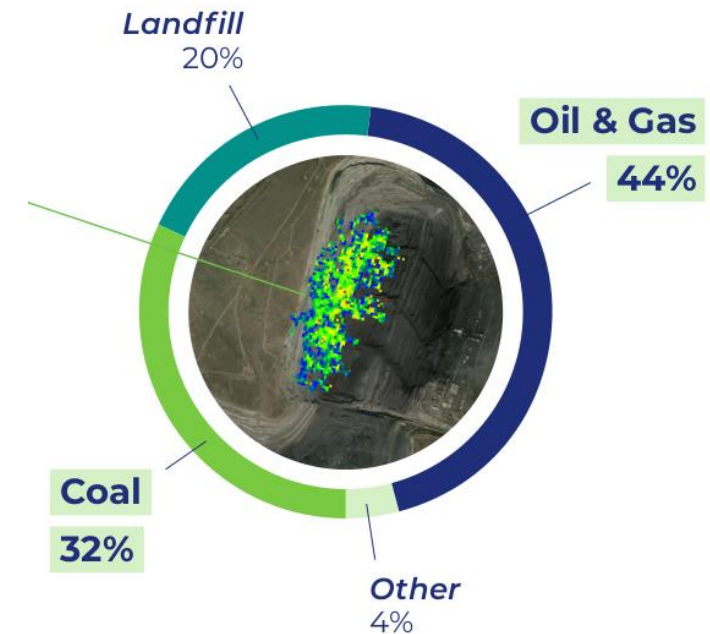
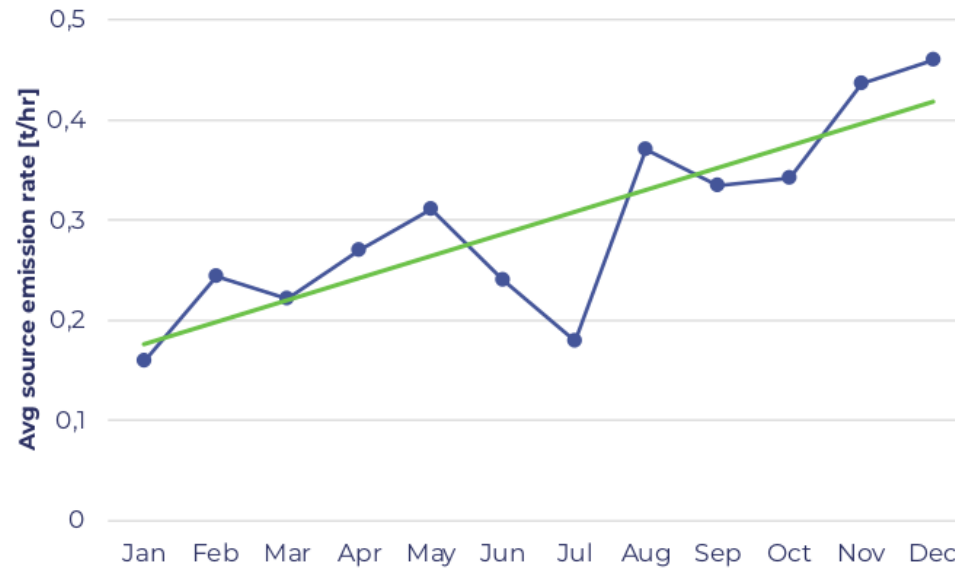
SOLUTION

- Satellites provide a cost-effective solution for methane mitigation, allowing for rapid and regular monitoring of globally-distributed and wide-area infrastructure for potential sources of emission.
- GHGSAT has pioneered high-resolution spectral imaging from space for methane. It is the only entity in the world able to identify sources of emissions as small as 100 kg/hr.
- Satellite constellation details:
 - **Number of satellites:** 6 (growing to 12 in 2023)
 - **Repeat period:** ~3 days (shrinking to ~1 in 2023)
 - **Resolution:** 25 m
 - **Detection threshold:** 100 kg/hr



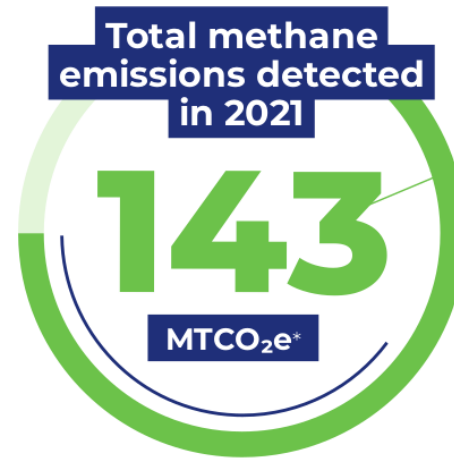
IMPACT

- Regular monitoring of facilities for carbon-intensive industries globally.
- Quick identification of fugitive methane emissions and alerting of operators for mitigation efforts.
- Sharper picture of global methane trends.



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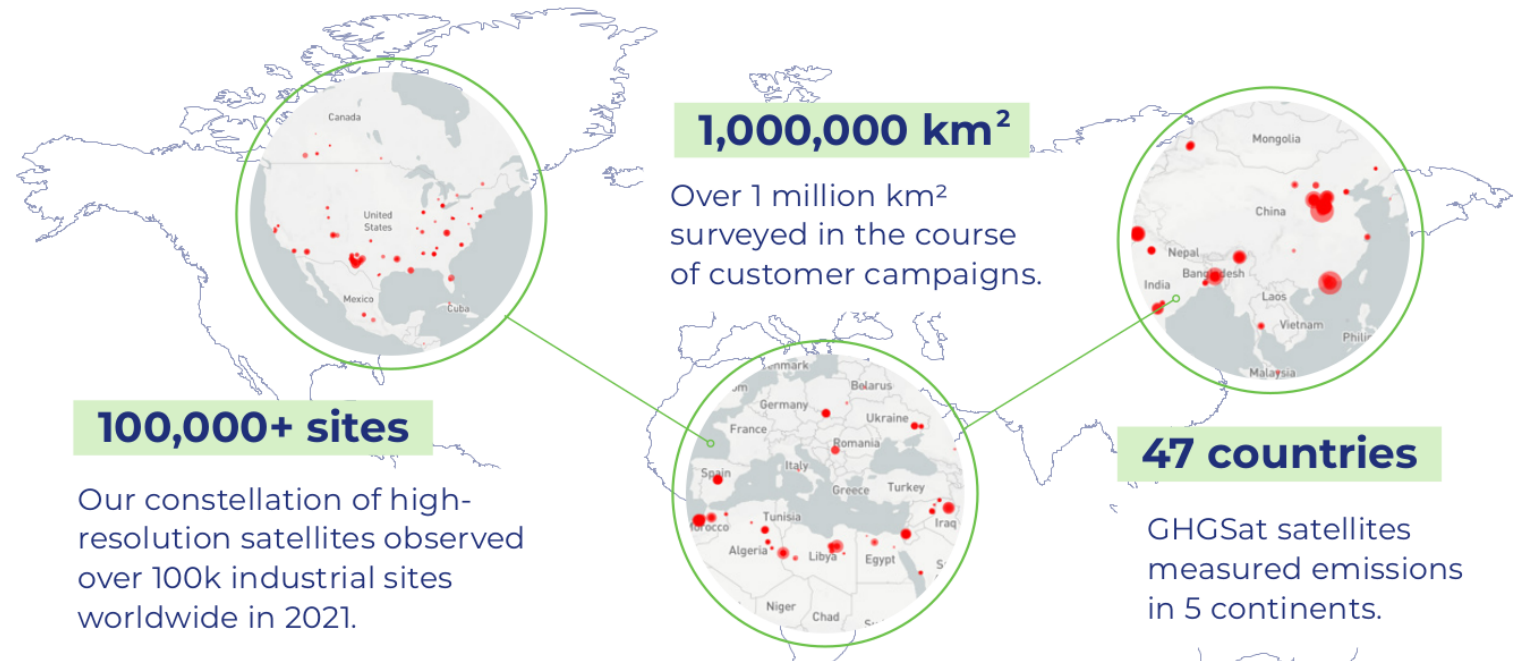
31.2 M



Emissions measured equate to 31.2 million cars driving on the road for a year.

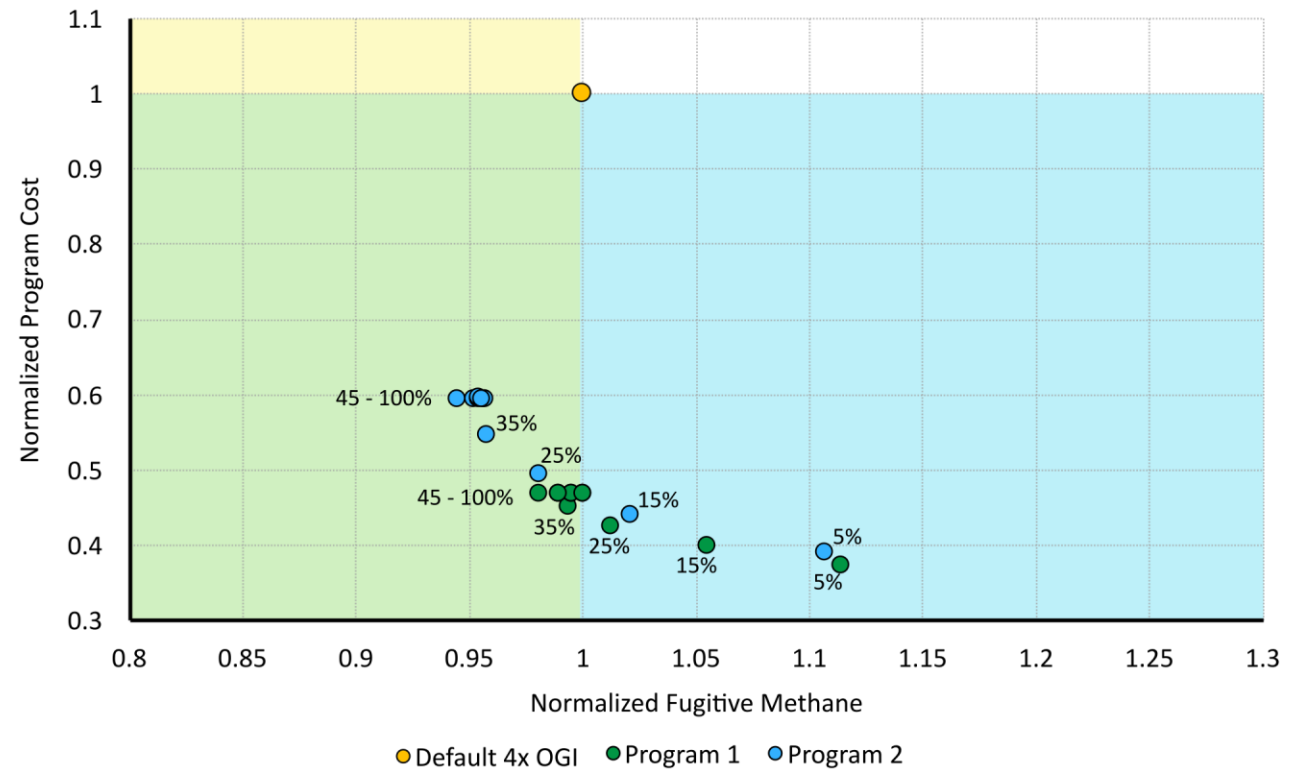
2.3 MTCO₂e*

Total methane emissions mitigated in 2021.



EFFICACY

- Recent proposed US EPA regulation for methane monitoring of oil and natural gas facilities would require all operator sites to be monitored 4 times per year using ground-based imagers.
- Based on comparative modeling of ground-based monitoring campaigns versus GHGSAT's satellite and aircraft monitoring, programs with satellite technologies are significantly more effective at mitigating emissions at a reduced cost.



ENGAGE

- GHGSAT's data is publicly accessible for scientific research and application development.
 - GHGSAT Pulse:
<https://www.ghgsat.com/en/pulse/>
 - ESA Third Party Mission Programme:
https://earth.esa.int/eo_gateway/catalog/ghgsat-archive-and-tasking
 - International Methane Emissions Observatory:
<https://www.unep.org/explore-topics/energy/what-we-do/imeo>
- If you have any questions or would like to learn more, please reach out to me at bryn.orth-lashley@ghgsat.com

