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International Methane Emissions Observatory
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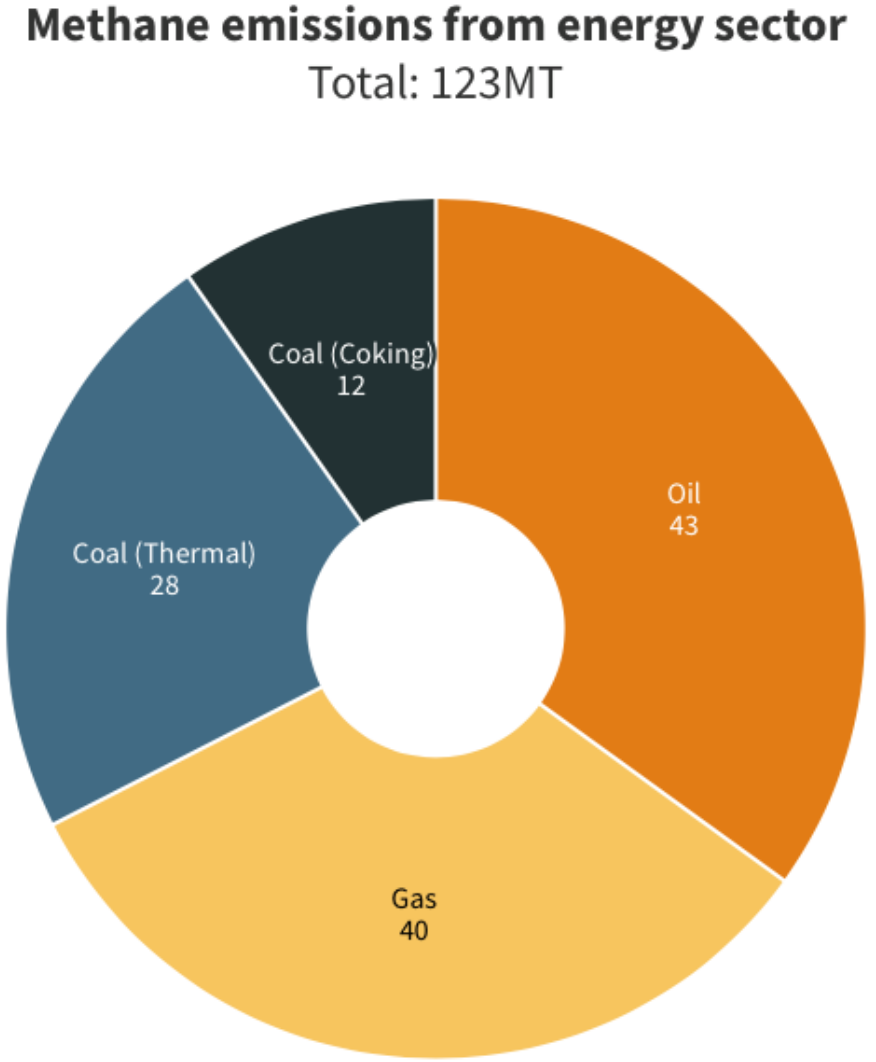
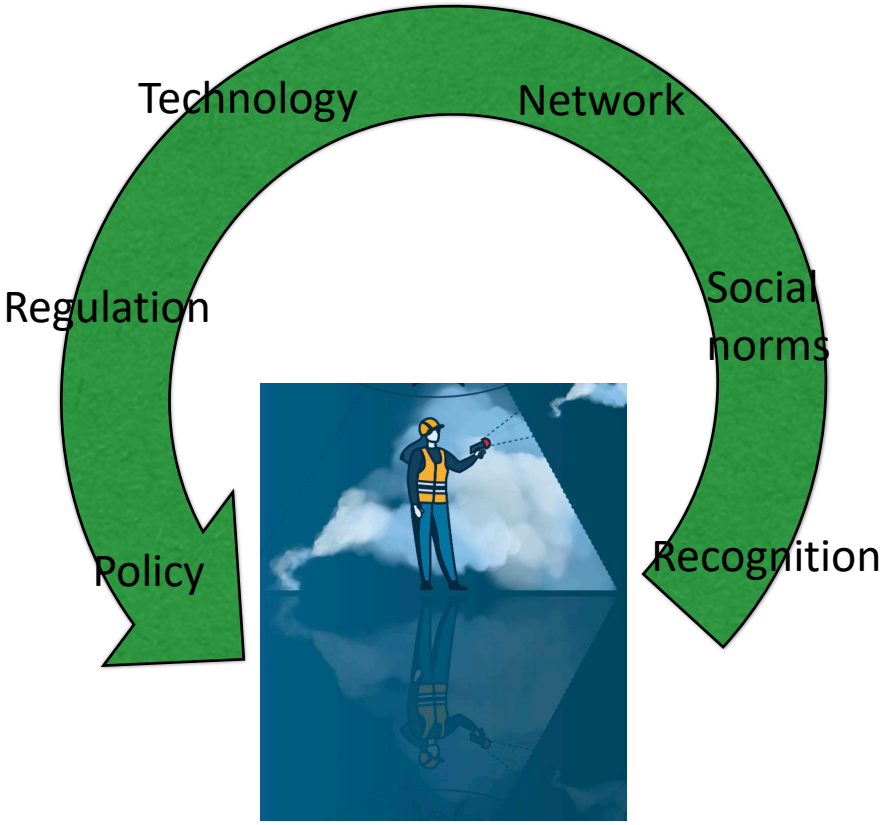
METCOAL METHANE PARTNERSHIP

Methane emissions from energy production



Source: IEA's Global Methane Tracker https://www.iea.org/reports/global-methane-tracker-2022/

UNEP's IMEO: action centered around the agent of change



From data to action

The International Methane Emissions Observatory exists to provide open, reliable, and actionable data *to the individuals* that can act to reduce methane emissions

IMEO Metcoal Theory of Change

Low carbon alternatives are insufficiently mature to replace metcoal in steel production at scale.
Thermal coal use has a plethora of clean alternatives

Demand for steel and metcoal will persist
IEA's most aggressive decarbonisation scenario sees only a 30% drop in metcoal production by 2030. For thermal coal the drop is starker, standing at 50%.

Metcoal has high value supply chain
Metcoal is typically twice as expensive as thermal coal.

The UN position on thermal coal is clear: thermal needs to be phased out
in OECD nations by 2030 and by 2040 in other countries. The UN position on metallurgical coal is not explicit.

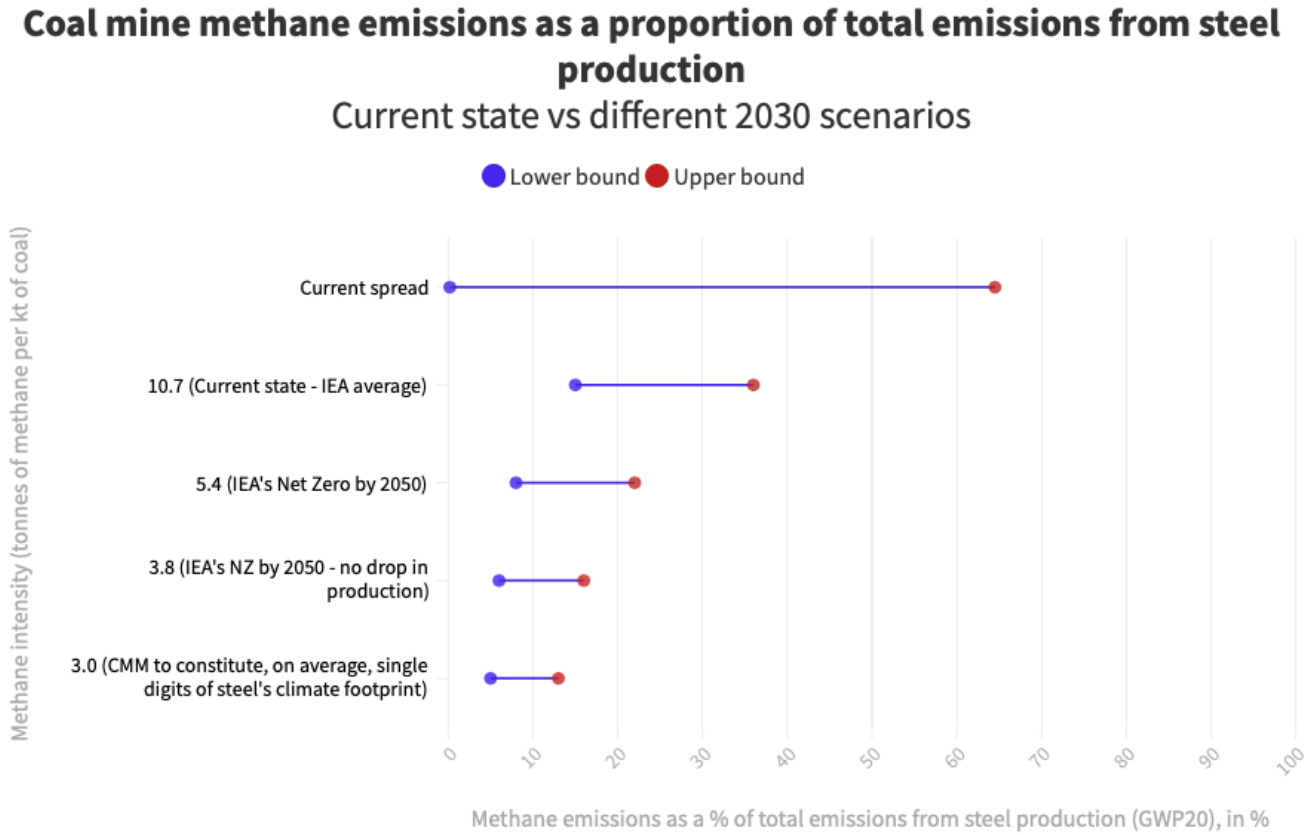
METCOAL

Used mainly in steelmaking, usually high calorie content

THERMAL COAL

Used mainly in heat and electricty generation

Coal Mine Methane averages 1/3 of steel climate footprint



Source: IMEO's own calculations
Lower and upper bound estimates have been calculated based on the following ranges: CO2 intensity of steel production (excl coking coal extraction): 1,5-3 tCO2/tonne of raw steel; tonnage of coking coal needed to produce one tonne of steel: 0,59-0,9t

MMP Principles

Partnership

Reporting Commitments

Member companies commit to reach level 5 reporting for their sites within 3 years from joining the partnership for operated underground sites. For non-operated sites and all surface mines this is 5 years.

2030 Performance Targets

Achieving a 60-75% reduction of methane emissions per unit of marketed coal down to a level of 1-3 tonnes of methane per kilotonne of marketed coal.

Science Studies

Member companies are supported throughout the journey from level 1 to level 5 reporting and can partner in IMEO funded science studies that help to define best reporting methods.

Reporting: from emission factors to empirical measurements

Level 1 – per aggregated source categories | country level

Level 2 – per aggregated source categories using available source-specific activity data and regional or country-specific emission factors | asset level

Level 3 – per detailed source type using available source-specific activity factors and generic emission factors for a given source type derived from existing literature, engineering calculations, or source-level measurements | source level

Level 4 – per detailed source type using source-specific activity factors and source-specific emission factors established with **empirical measurements**, taken at an appropriate sampling frequency | source level

Level 5 – **Emissions reported similarly to Level 4, but with the addition of reconciliation with site-level (top down) measurements**

Progression to the next reporting level represents a reduced uncertainty in the reported emissions figures.

Technical guidance will be provided to ensure that requirements/criteria for meeting each of the 5 levels is clear and science-based.

UNEP's IMEO will provide support towards meeting reporting requirements

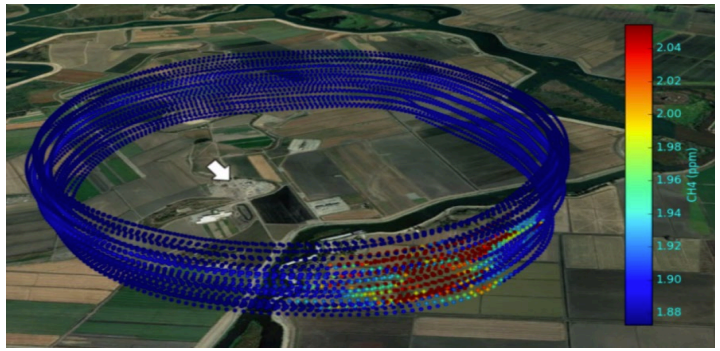
IMEO Science Studies

Atmos. Meas. Tech., 10, 3345–3358, 2017
https://doi.org/10.5194/amt-10-3345-2017

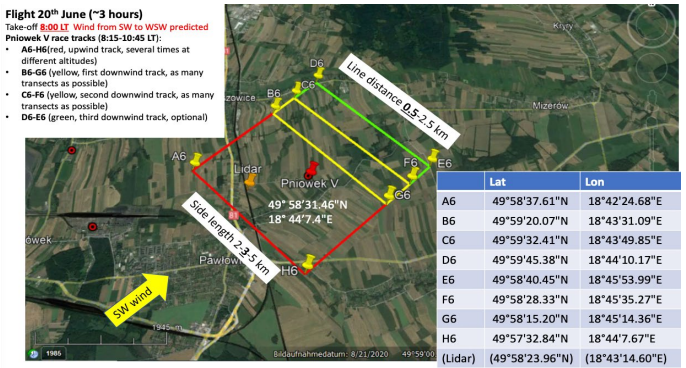
Atmospheric Measurement Techniques
Open Access
EGU

Application of Gauss's theorem to quantify localized surface emissions from airborne measurements of wind and trace gases

Stephen Conley[1,6], Ian Faloona[1], Shobhit Mehrotra[1], Maxime Suard[1], Donald H. Lenschow[2], Colm Sweeney[4], Scott Herndon[3], Stefan Schwietzke[4,5], Gabrielle Pétron[4,5], Justin Pifer[6], Eric A. Kort[7], and Russell Schnell[5]



Flight 20th June (~3 hours)
Take-off 8:00 LT Wind from SW to WSW predicted
Pniowek V race tracks (8:15-10:45 LT):
- **A6-H6**(red, upwind track, several times at different altitudes)
- **B6-G6** (yellow, first downwind track, as many transects as possible)
- **C6-F6** (yellow, second downwind track, as many transects as possible)
- **D6-E6** (green, third downwind track, optional)



	Lat	Lon
A6	49°58'37.61"N	18°42'24.68"E
B6	49°59'20.07"N	18°43'31.09"E
C6	49°59'32.41"N	18°43'49.85"E
D6	49°59'45.38"N	18°44'10.17"E
E6	49°58'40.45"N	18°45'53.99"E
F6	49°58'28.33"N	18°45'35.27"E
G6	49°58'15.20"N	18°45'14.36"E
H6	49°57'32.84"N	18°44'7.67"E
(Lidar)	(49°58'23.96"N)	(18°43'14.60"E)

The future of Metcoal Methane Partnership

Current Status

Draft framework under consideration by the 4 foundational companies

Next steps

Joint creation of Technical Guidance Documents

Contact Us

Open to all metcoal companies co-designing the partnership.

Thank you

METCOAL METHANE PARTNERSHIP