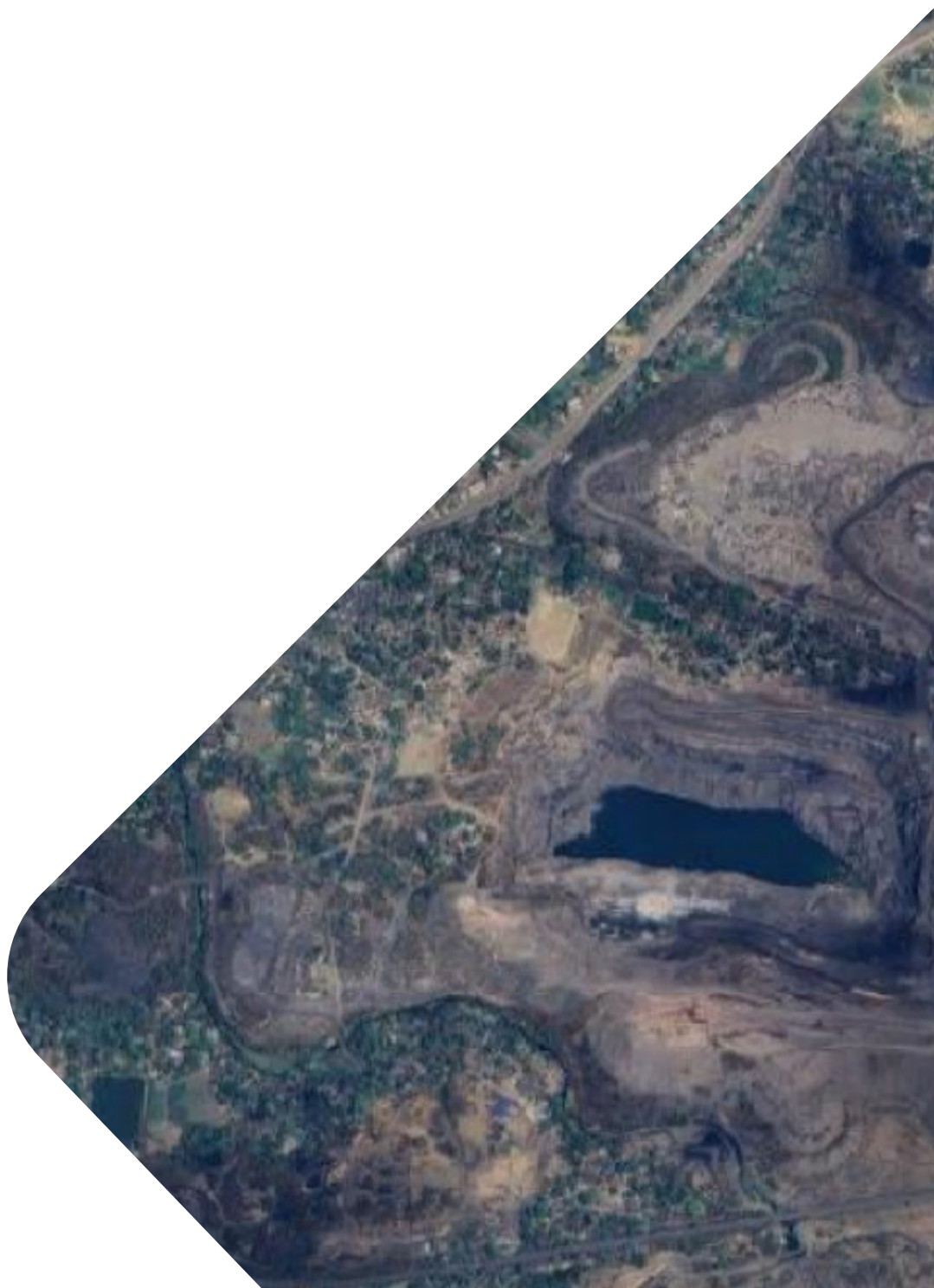


STEEL METHANE PROGRAMME //
COAL METHANE DATABASE MINE DATA SHEETS

INDIA



May 2026

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ABOUT THIS DOCUMENT

Greater transparency on methane emissions from coal mines is essential to understand, manage and ultimately reduce the climate footprint of steel production.

The steel sector faces an urgent need to reduce its greenhouse gas emissions. Metallurgical (met) coal – a key ingredient in global steel production – adds on average a quarter to the climate footprint of steel through its methane emissions. At the same time, it represents a major, cost-effective mitigation opportunity: up to 90 per cent of abatable emissions could be reduced at less than 1 per cent of the retail price of steel. Despite this, global inventories continue to rely largely on default emission factors that do not adequately reflect real-world conditions, slowing targeted mitigation efforts.

The Steel Methane Programme (SMP) is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain. SMP is managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO).

Robust quantification of methane emissions from met coal mining is essential. Existing estimates are often fragmented and inconsistent, reflecting methodological differences and variable data quality. To address these gaps, the United Nations Environment Programme's International Methane Emissions Observatory (IMEO) has developed an integrative modelling framework that combines different data sources to generate unified, probabilistic mine-level emission estimates.

Introducing mine data sheets

The Steel Methane Programme (SMP) increases methane transparency through its Coal Methane Database (database), hosted on IMEO's Eye on Methane data platform. The database compiles integrated, mine-level emissions estimates that draw on

scientific research, satellites and inventories. This provides mining companies, steel producers and policymakers with transparency to inform engagement and drive methane reductions.

The database now covers around 250 met coal mines globally, representing roughly half of global met coal production. The modelling framework is designed for operating mines and should be interpreted in that context. Mines included in the database span a broad geographic area, with priority given to operations with significant met coal output and relevance to the steel supply chain. Coverage and data availability vary by country and mine.

The mine data sheets presented in this document provide an overview of a country's methane emission estimates from individual met coal mines.

Data sources and methodology

Methane emission estimates draw on multiple, independent lines of evidence, including:

- Reported inventory data, where available.
- Peer-reviewed scientific literature.
- Satellite and aerial observations.
- Other publicly available data sources.

These inputs are integrated within IMEO's modelling framework to produce mine-level methane emission intensities and absolute emission estimates. Explicit uncertainty ranges reflect data availability and methodological uncertainty, providing insight into both emission magnitude and associated confidence.

Updates and further information

Mine data sheets are updated twice a year. Updates may include:

- Additional or improved data inputs.
- Methodological refinements.
- Expanded mine coverage.

The Coal Methane Database is an integral part of [Eye on Methane // GLOBAL](#). [Download Coal Methane Database data sets](#) or learn more about [IMEO's data integration approach](#).

For questions, feedback or to engage further, please contact: unep-smp@un.org.

How to read mine data sheets

Each data sheet provides key information on mine, location, production and coal type, alongside IMEO's mine-level methane emission intensity estimate and a summary of the underlying evidence base for that estimate.

Mine information and context

The upper section summarizes key contextual information about the mine. The "Production Estimate" is reported in million metric tonnes per annum (Mtpa) and expressed as run-of-mine (ROM) equivalent production. For this section, IMEO uses the nearest-year production data available from Global Energy Monitor's mine wiki. In rare cases – for example, where GEM records very low or outdated production – the estimate may draw on the primary source referenced by GEM to identify the most recent available value.

Where production data or direct ROM data are not available, values are derived according to the Coal Methane Database methodology. This may include capacity-based estimates or conversion from saleable production to ROM-equivalent production, where needed.



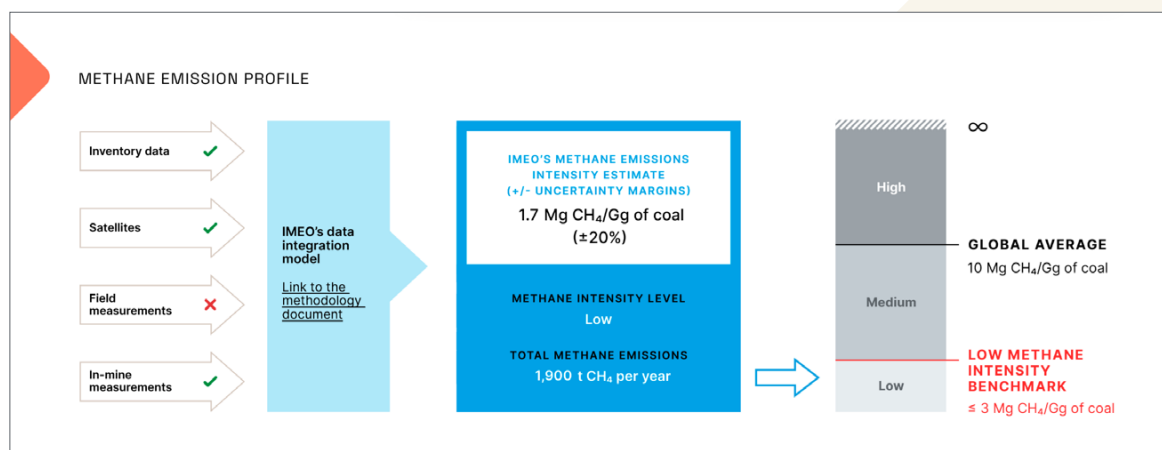
Methane emission profile

The methane emission profile presents IMEO's mine-level estimate of methane emissions intensity and absolute emissions:

- The central value represents IMEO's integrated methane emission estimate derived from multiple data inputs and its associated uncertainty margins (as a percentage). This value is based on nearest-year production data reported by Global Energy Monitor.
- The positioning of the estimate relative to global averages and **Low Methane Intensity Benchmark** thresholds provides contextual information on mine-level emissions in both quantitative and qualitative terms (Low, Medium, High) and is not a rating of compliance or performance.
- The arrows on the left-hand side indicate the types of data inputs that inform IMEO's data integration model for the mine.

Note:

- The **global average** of 10 Mg CH₄/Gg of coal shown on the right-hand side corresponds to the 2022–2024 average met coal methane intensity based on the International Energy Agency's Global Methane Tracker and its annual Coal analyses.
- The 3 Mg CH₄/Gg **Low Methane Intensity Benchmark** is an indicative low-intensity reference for metallurgical coal. It represents the average methane intensity of metallurgical coal production with full abatement of methane emissions, consistent with the IEA's Net Zero Emissions by 2050 Scenario.

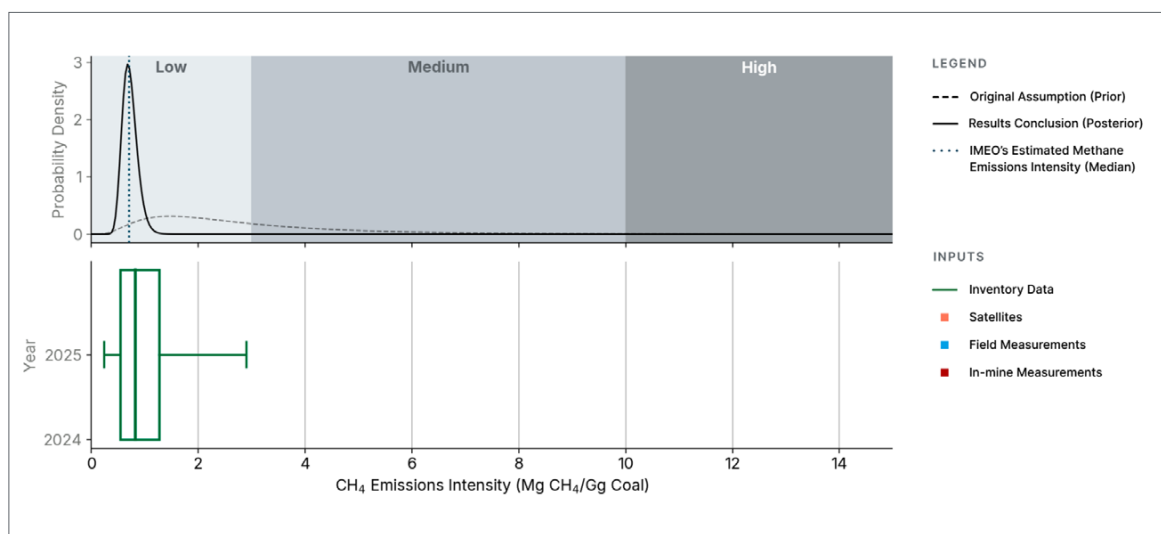


Data inputs and integration results

The charts illustrate how multiple data inputs are combined to produce IMEO's mine-level methane emissions intensity estimate:

- The lower chart shows the top 15 weighted data inputs, together with their associated uncertainty ranges, used to derive IMEO's methane emissions intensity estimate for the mine. The classification of these inputs is described in the Inputs section. Inventory estimates are presented as a single box-and-whisker representation.
- The upper chart presents the results of IMEO's data integration model, showing the probabilistic distribution of methane emission intensities consistent with the available evidence.

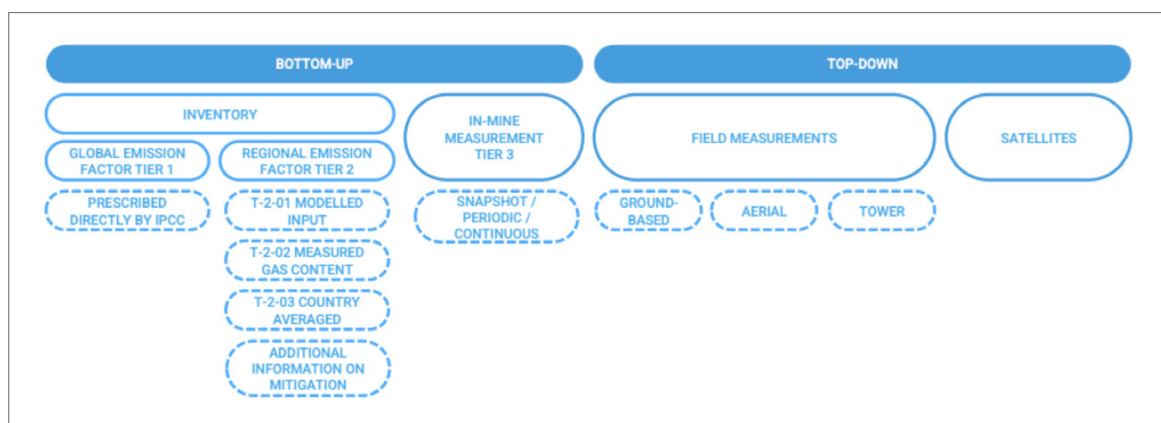
The relative influence of individual data inputs within the integration model is informed by their relative uncertainties, which have been attenuated by multiple factors including data recency, location of measurement in production chain (before or after potential mitigation), and data source trust.



Top data inputs table

The table lists the most influential data inputs used in the estimate and their identifiers including:

- **Data approach** – Method used to estimate the value
Examples:
 - Bottom-up;
 - Satellites;
 - Field measurements



- **Data category** – Sub-category of the method used to estimate the value

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Satellite	2025	1.2	38%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	

Examples:

- Bottom-up:
 - Inventory: Tier-1; Tier-2-01; Tier-2-02; Tier-2-03;
 - In-mine: Tier-3;
- Satellite
- Field measurements
 - Aerial;
 - Ground;
 - Tower
- **Data source** – Resource where the value was reported or published
Examples: Science study (external); Science study (IMEO); Company reporting; Independent reporting; IPCC; UNFCCC; IMEO MARS
- **Reporting period**
- **Emissions value and units**
- **Associated uncertainty**

Data categorisation is in line with the internal cataloguing presented above. Please note that for satellite entries, the values shown represent annualized mine-level estimates based on all available images (detects and non-detects), aggregated across the known emission sources associated with the mine. Additional data beyond those shown are available in the full data set.

Disclaimer

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

Further information

For more details, please consult the full Coal Methane Database and the accompanying methodology documentation or contact IMEO at unep-smp@un.org.

GONDUDIH KHAS KUSUNDA COAL MINE

LOCATION (LAT., LON.)

23.804, 86.3773

GEM MINE ID

M2807

MINING TYPE

Surface

COAL GRADE

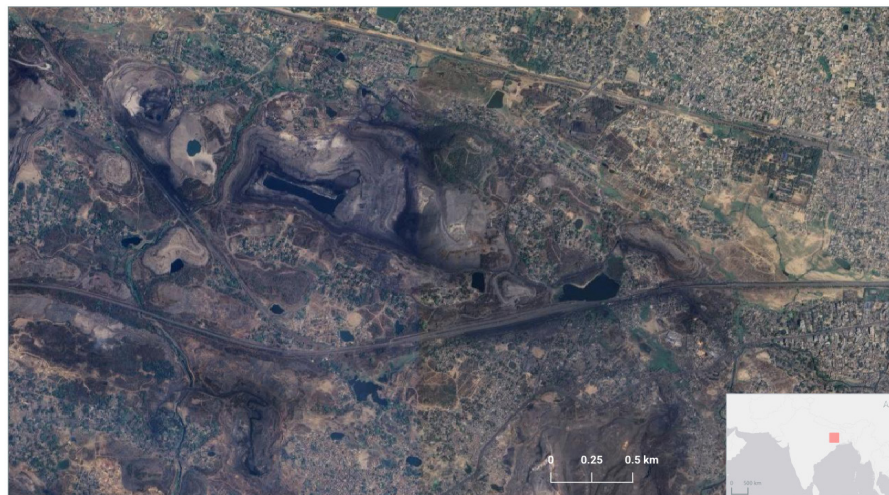
Metallurgical

ESTIMATED PRODUCTION

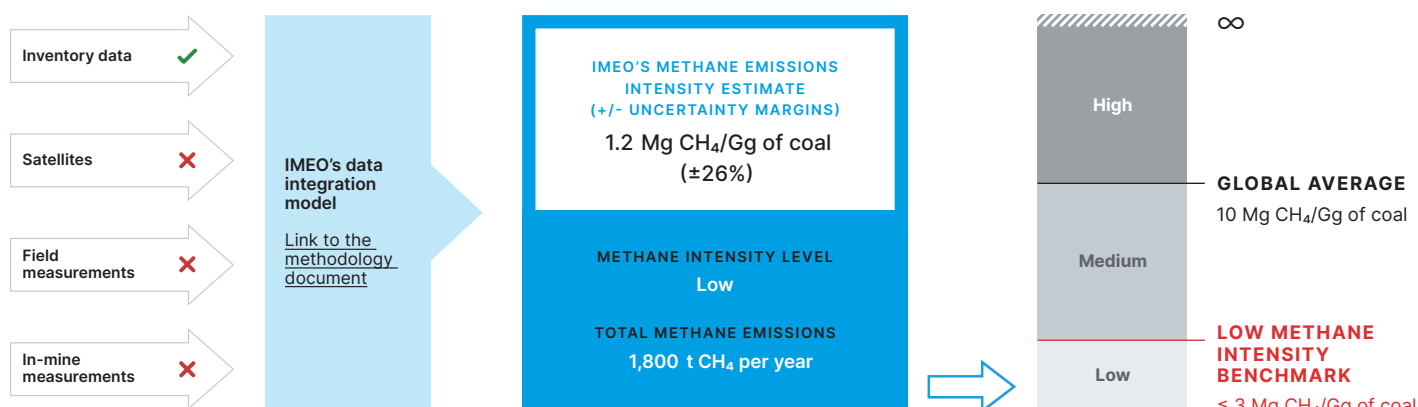
1.5 Mtpa (2023)

ADDITIONAL MINE INFORMATION

https://www.gem.wiki/Gondudih_Khas_Ksunda_coal_mine



METHANE EMISSION PROFILE



The Steel Methane Programme (SMP), managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO), is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain.

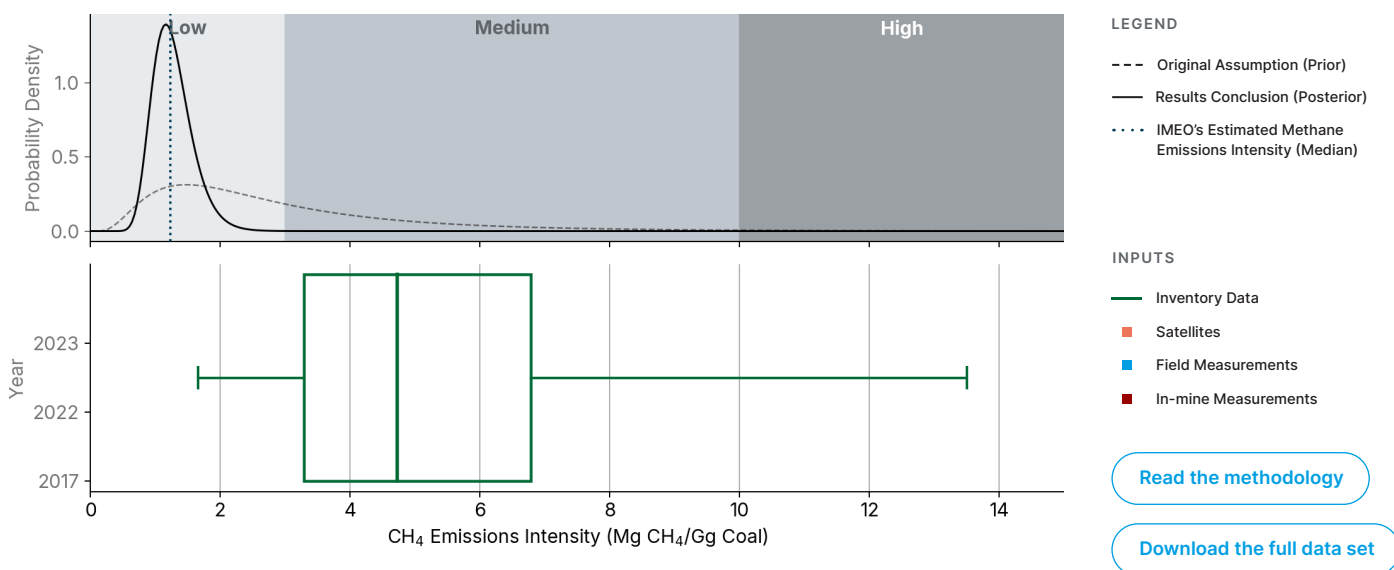
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR GONDUDIH KHAS KUSUNDA COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Inventory	2023	0.8	50%	Mg CH ₄ /Gg Coal	Tier-2-03	India's BUR	Link
Inventory	2023	3	75%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	0.8	106%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2017	10	118%	Mg CH ₄ /Gg Coal	Tier-2-02	Dasgupta et al., 2017	Link
Inventory	2023	1	137%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2022	1	157%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2023	1	199%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2023	10	206%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	1	222%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2022	20	236%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	2	291%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2023	1	295%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2023	0	298%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	10	333%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	20	334%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link

WEST BOKARO COAL MINE

LOCATION (LAT., LON.)

23.7927, 85.5542

GEM MINE ID

M0649

MINING TYPE

Surface

COAL GRADE

Metallurgical

ESTIMATED PRODUCTION

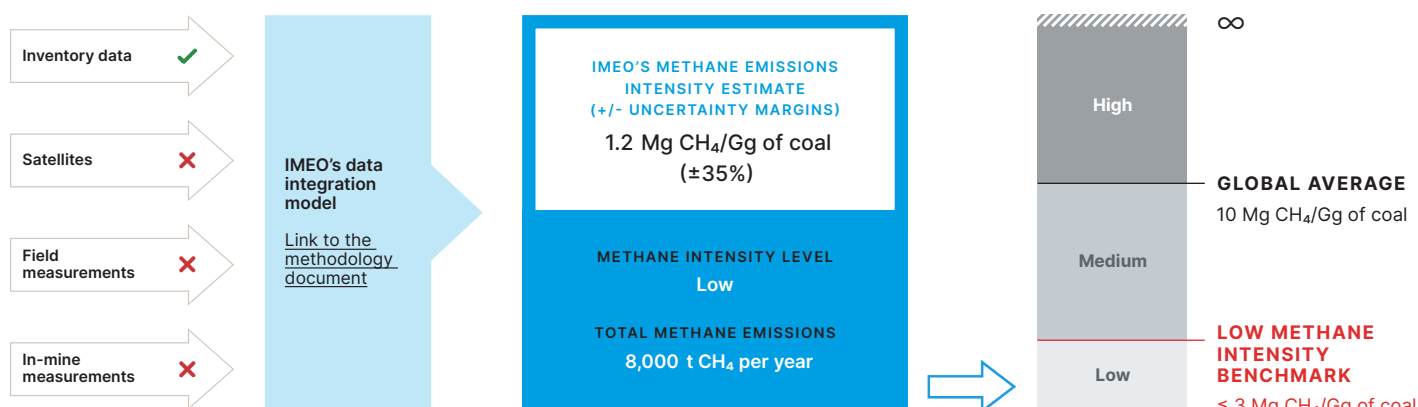
6.5 Mtpa (2023)

ADDITIONAL MINE INFORMATION

[https://www.gem.wiki/West_Bokaro_coal_mine_\(Tata\)](https://www.gem.wiki/West_Bokaro_coal_mine_(Tata))



METHANE EMISSION PROFILE



The Steel Methane Programme (SMP), managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO), is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain.

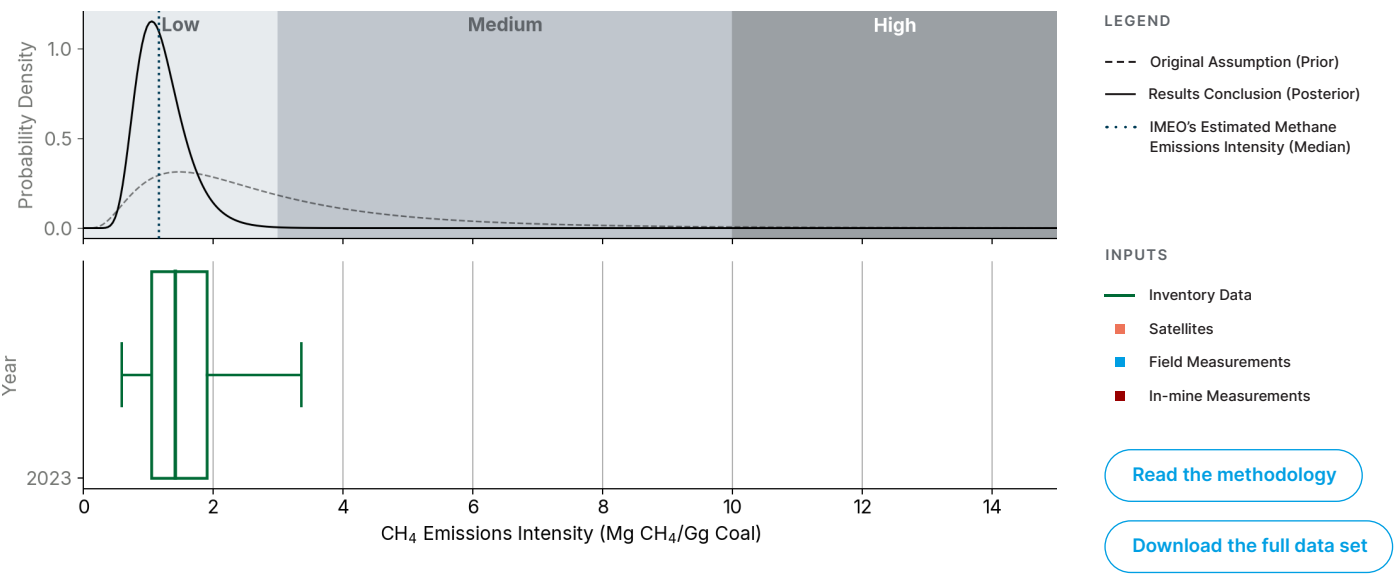
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR WEST BOKARO COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Inventory	2023	0.8	50%	Mg CH ₄ /Gg Coal	Tier-2-03	India's BUR	Link
Inventory	2023	3	75%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	0.8	106%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link

KONAR COAL MINE

LOCATION (LAT., LON.) 24.1553, 86.3032

GEM MINE ID

M0560

MINING TYPE

Surface

COAL GRADE

Thermal & Metallurgical

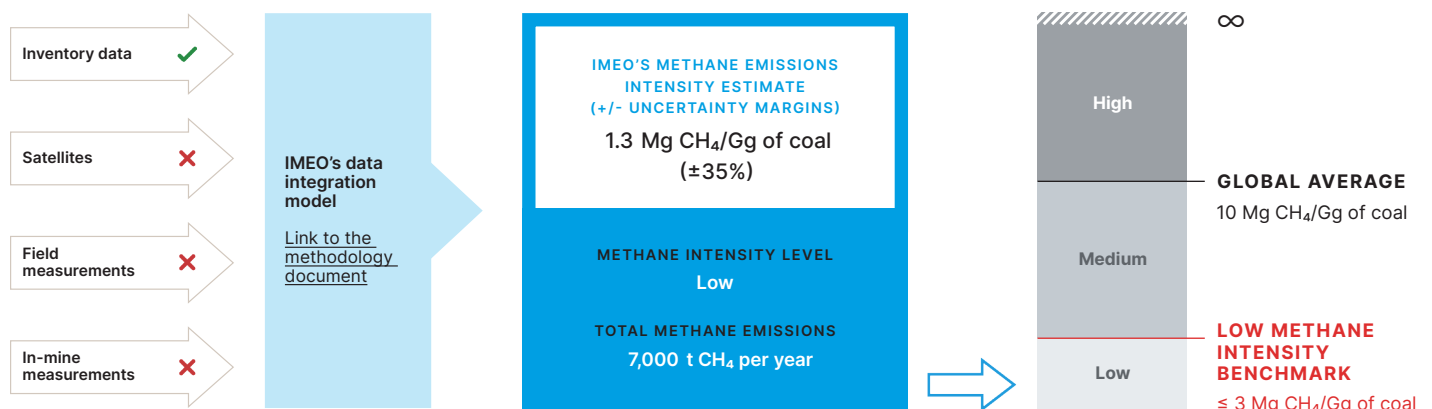
ESTIMATED PRODUCTION

5.4 Mtpa (2023)

ADDITIONAL MINE INFORMATION

https://www.gem.wiki/Konar_Coal_Mine

METHANE EMISSION PROFILE



The Steel Methane Programme (SMP), managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO), is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain.

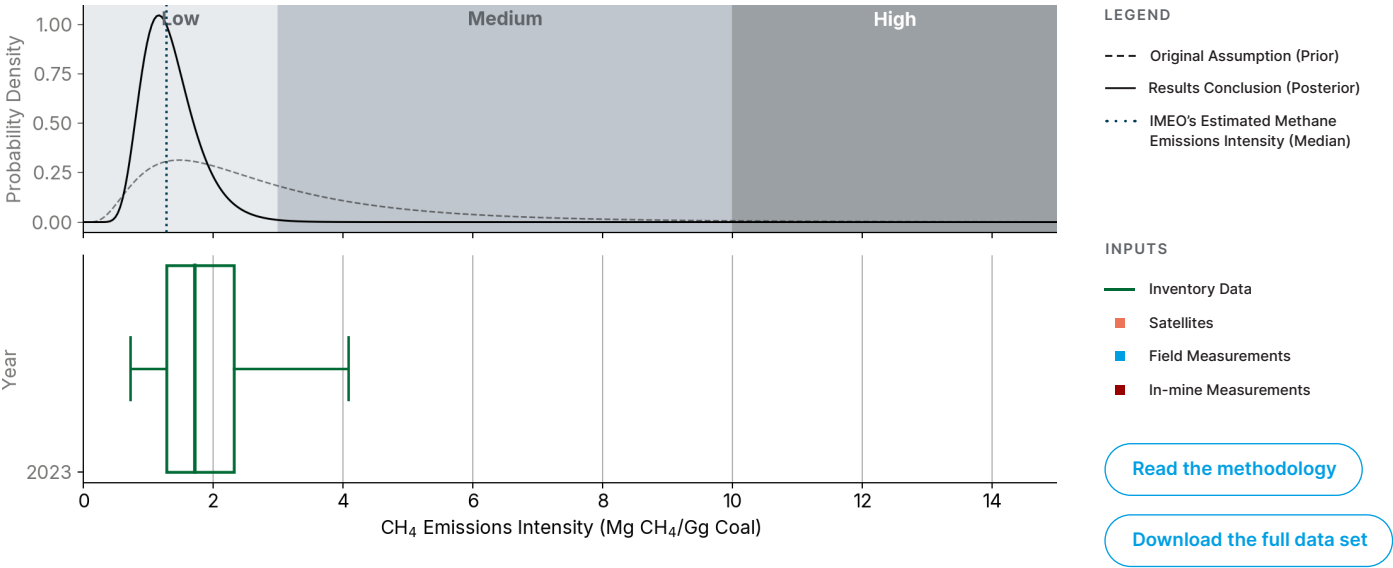
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR KONAR COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Inventory	2023	0.8	50%	Mg CH ₄ /Gg Coal	Tier-2-03	India's BUR	Link
Inventory	2023	4	75%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	1	106%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link

JHARIA COAL MINE

LOCATION (LAT., LON.)

23.7082, 86.4

GEM MINE ID

M1686

MINING TYPE

Underground

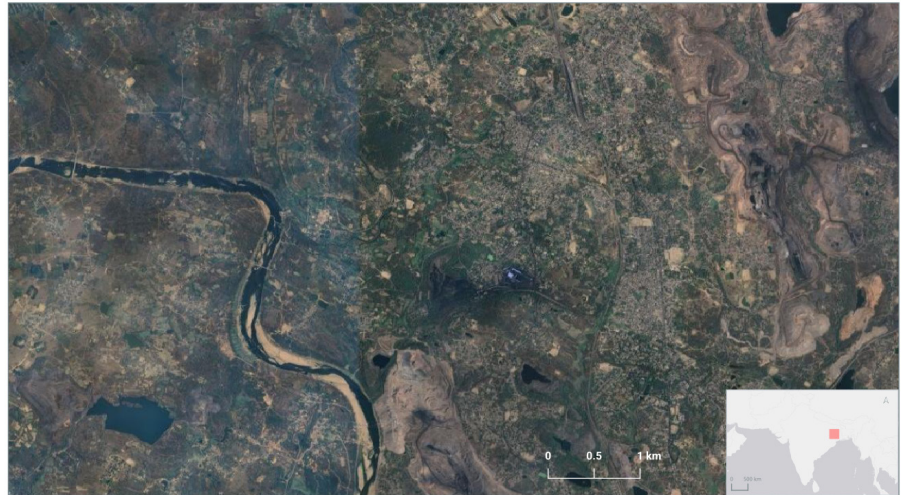
COAL GRADE

Metallurgical

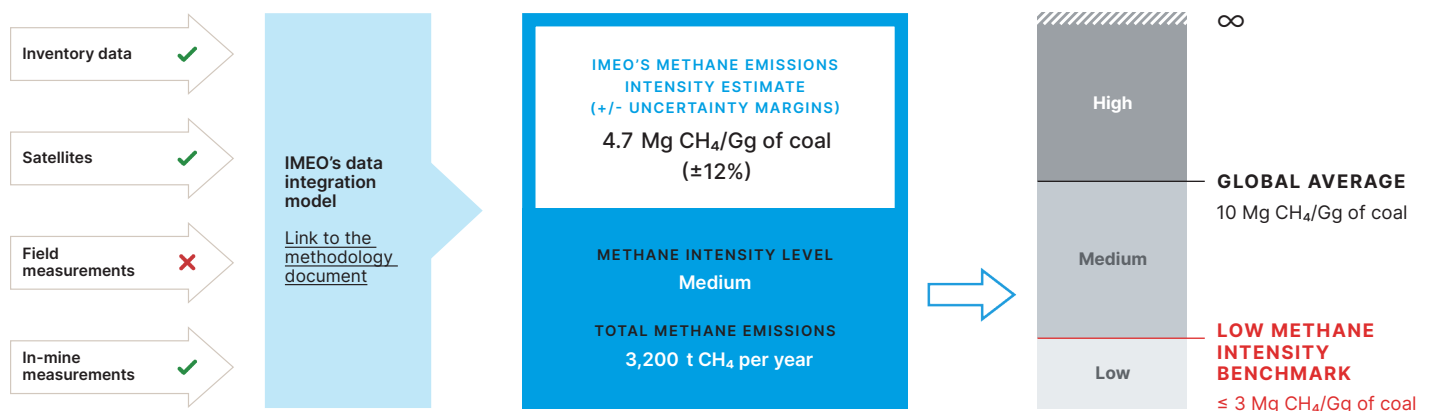
ESTIMATED PRODUCTION

0.7 Mtpa (2022)

ADDITIONAL MINE INFORMATION

https://www.gem.wiki/Jharia_coal_mine

METHANE EMISSION PROFILE



The Steel Methane Programme (SMP), managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO), is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain.

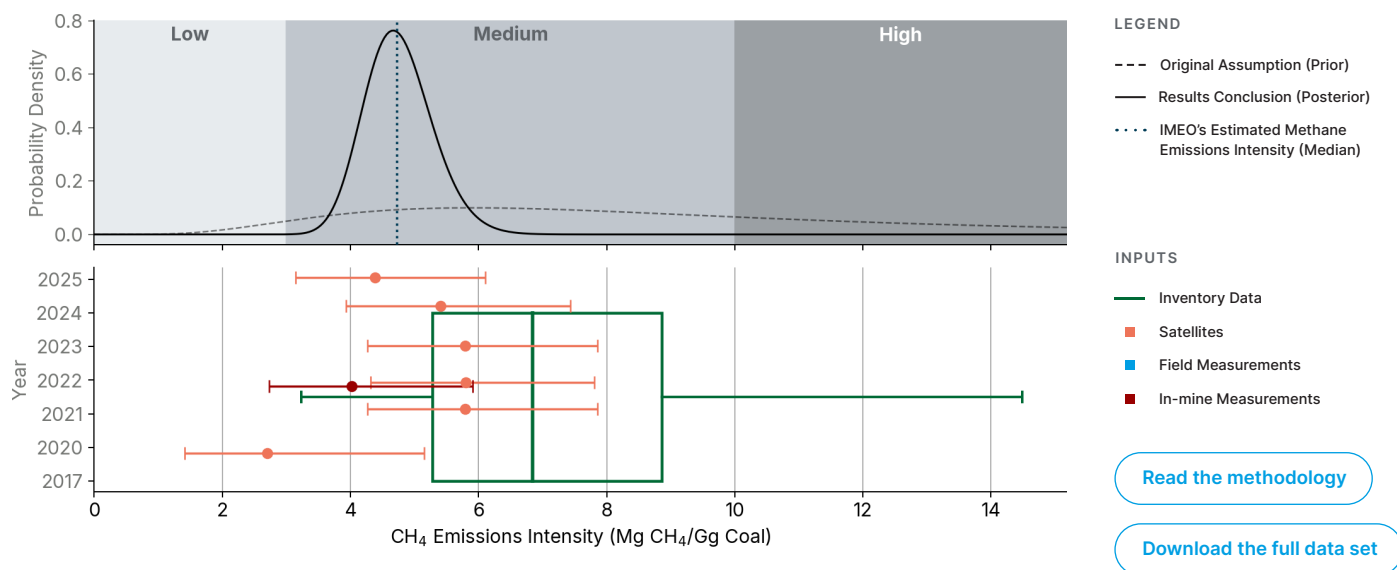
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR JHARIA COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Satellite	2022	6	30%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2021	6	31%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2023	6	31%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2024	6	33%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2025	5	34%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
In-mine measurements	2022	4	40%	Mg CH ₄ /Gg Coal	Tier-3 / In-mine	Singh et al., 2022	Link
Inventory	2017	12	60%	Mg CH ₄ /Gg Coal	Tier-2-02	Dasgupta et al., 2017	Link
Inventory	2022	12	65%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Satellite	2020	3	72%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Inventory	2022	10	90%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2022	1	103%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2022	20	114%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	4	134%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	1	136%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2023	1	158%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link

MOONIDIH COAL MINE

LOCATION (LAT., LON.) 23.7409, 86.3525

GEM MINE ID

M2881

MINING TYPE

Underground

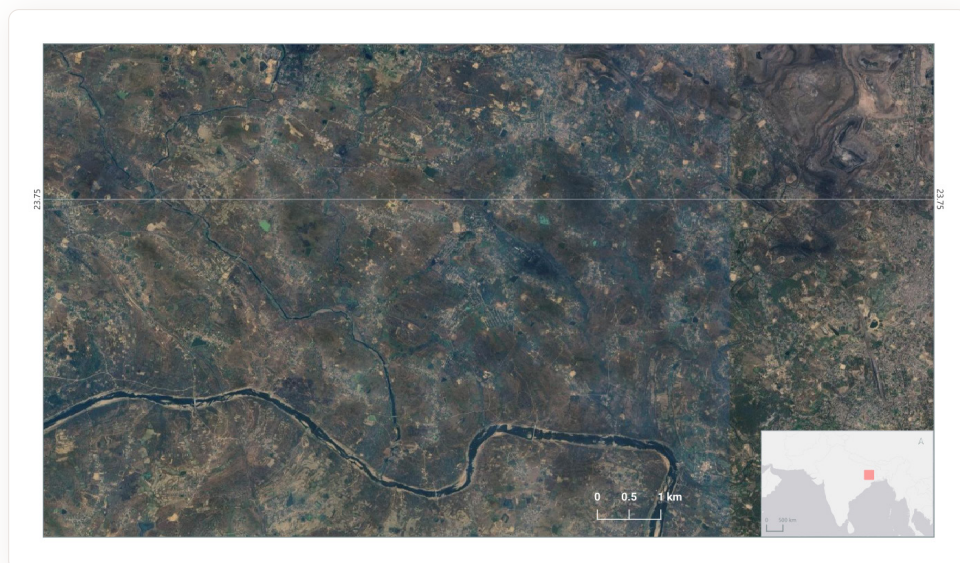
COAL GRADE

Metallurgical

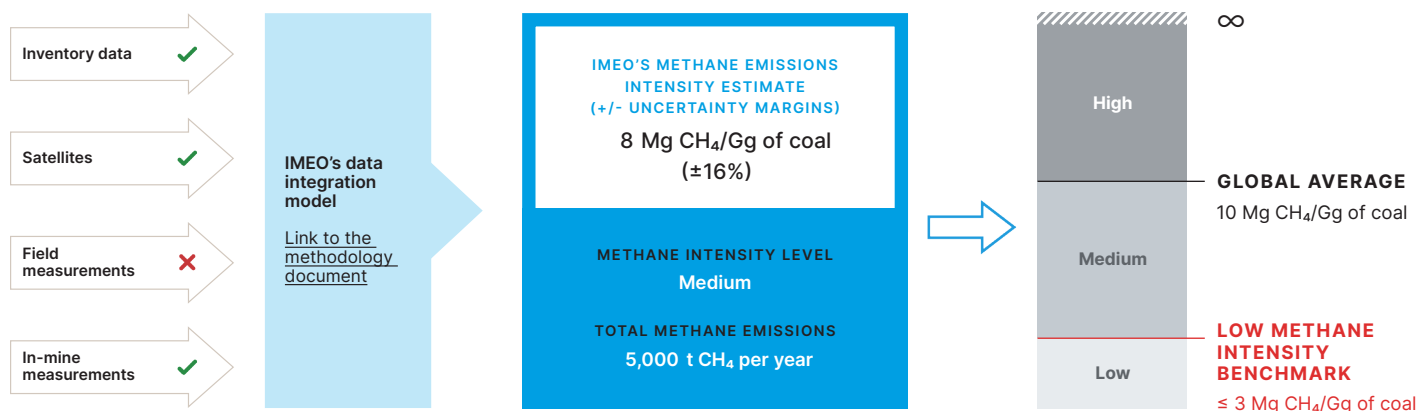
ESTIMATED PRODUCTION

0.6 Mtpa (2022)

ADDITIONAL MINE INFORMATION

https://www.gem.wiki/Moonidih_coal_mine

METHANE EMISSION PROFILE



The Steel Methane Programme (SMP), managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO), is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain.

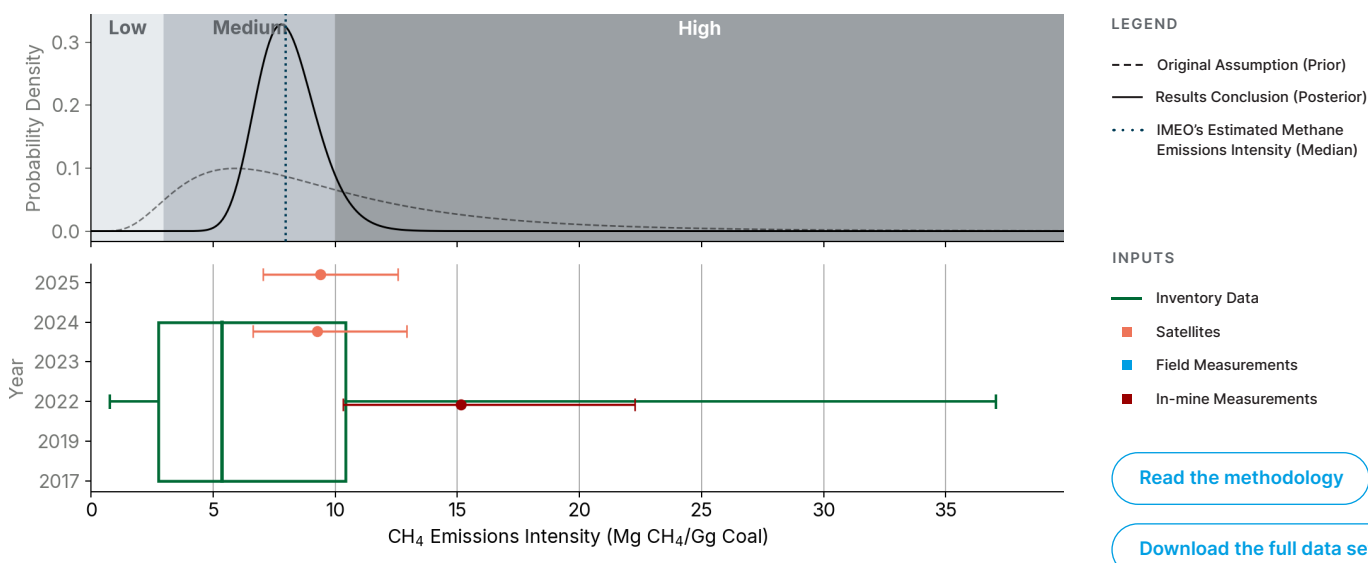
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR MOONIDIH COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Satellite	2025	10	30%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2024	10	34%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
In-mine measurements	2022	16	40%	Mg CH ₄ /Gg Coal	Tier-3 / In-mine	Singh et al., 2022	Link
Inventory	2019	16	60%	Mg CH ₄ /Gg Coal	Tier-2-01	Global Methane Initiative 2011	Link
Inventory	2017	10	88%	Mg CH ₄ /Gg Coal	Tier-2-02	Dasgupta et al., 2017	Link
Inventory	2022	20	105%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	20	127%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2022	10	170%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	10	215%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2023	10	318%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	0	370%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	0	454%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	1	758%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2023	1	788%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2022	1	791%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link

CHASNALA COAL MINE

LOCATION (LAT., LON.) 23.6589, 86.4498

GEM MINE ID

M1669

MINING TYPE

Underground & Surface

COAL GRADE

Metallurgical

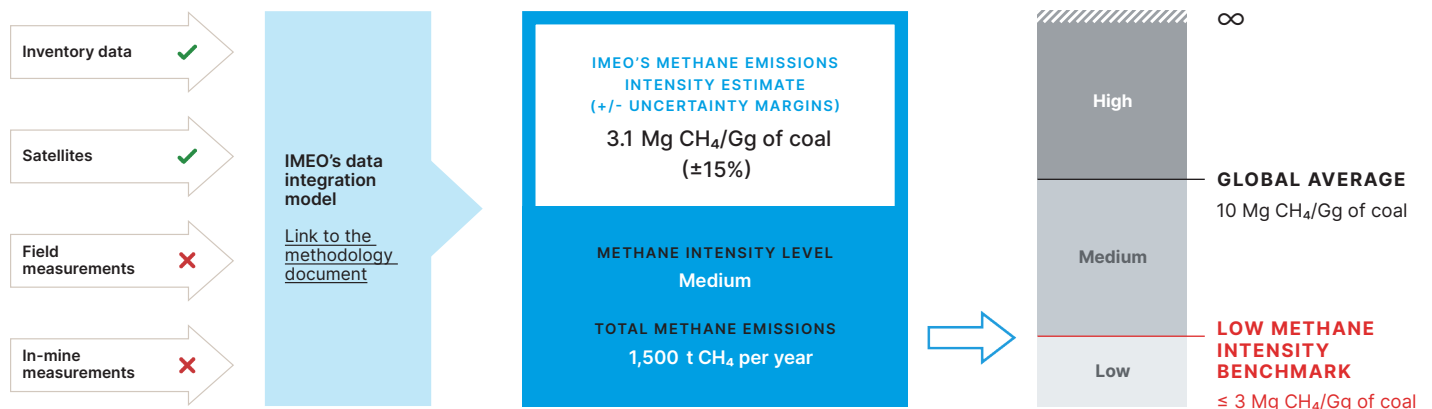
ESTIMATED PRODUCTION

0.5 Mtpa (2023)

ADDITIONAL MINE INFORMATION

https://www.gem.wiki/Chasnala_coal_mine

METHANE EMISSION PROFILE



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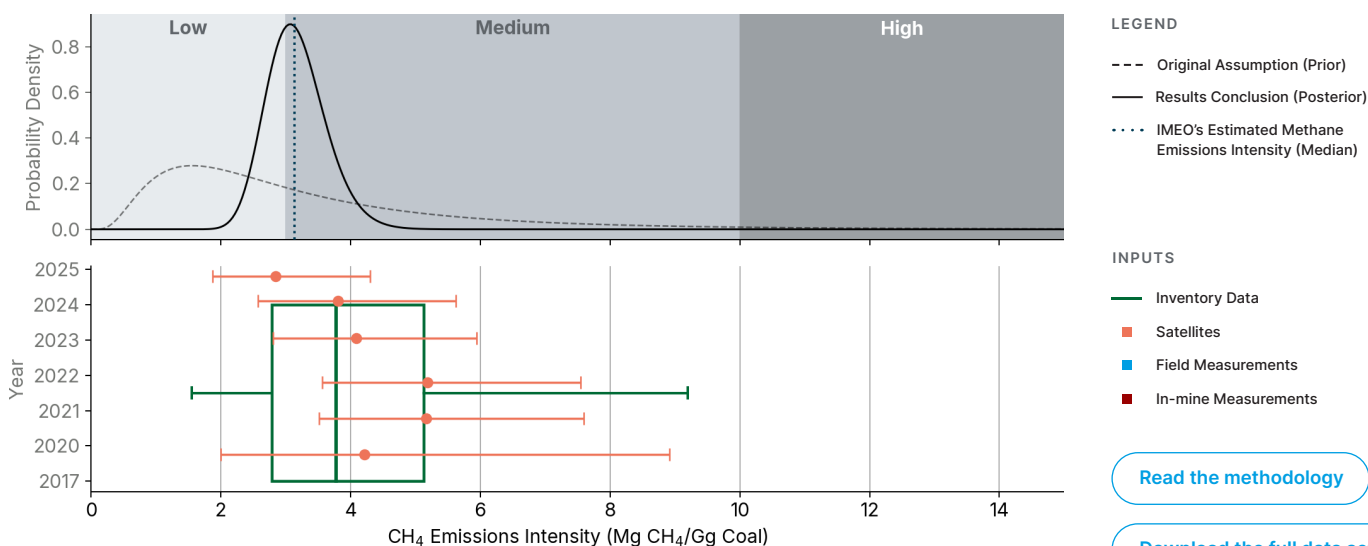
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR CHASNALA COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Satellite	2022	6	39%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2023	4	39%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2021	6	40%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2024	4	41%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2025	3	43%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Inventory	2023	4	70%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Satellite	2020	6	87%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Inventory	2023	0.8	94%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2023	4	115%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	1	117%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2023	0.8	124%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2022	1	169%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2017	10	176%	Mg CH ₄ /Gg Coal	Tier-2-02	Dasgupta et al., 2017	Link
Inventory	2023	1	181%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2022	10	193%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link

BHOWRAH (SOUTH) COAL MINE

LOCATION (LAT., LON.) 23.6819, 86.4005

GEM MINE ID

M2835

MINING TYPE

Underground & Surface

COAL GRADE

Metallurgical

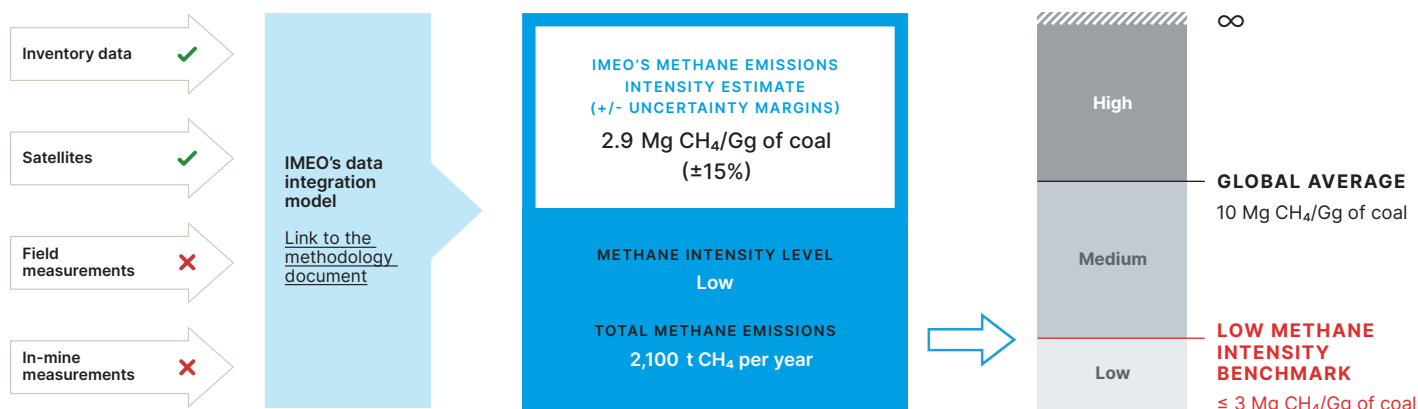
ESTIMATED PRODUCTION

0.7 Mtpa (2023)

ADDITIONAL MINE INFORMATION

https://www.gem.wiki/Bhowrah_South_coal_mine


METHANE EMISSION PROFILE



The Steel Methane Programme (SMP), managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO), is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain.

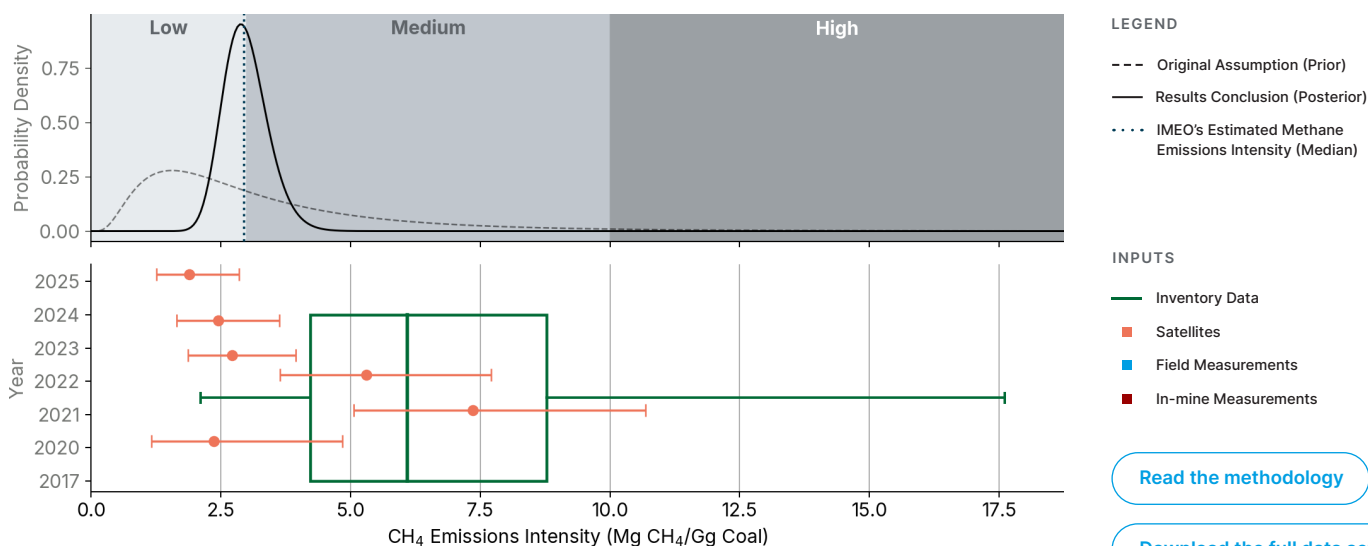
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR BHOWRAH (SOUTH) COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Satellite	2021	8	39%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2022	6	39%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2023	3	39%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2024	3	41%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2025	2.1	43%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2020	3	82%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Inventory	2023	4	94%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2017	10	113%	Mg CH ₄ /Gg Coal	Tier-2-02	Dasgupta et al., 2017	Link
Inventory	2022	10	132%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	4	140%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	10	182%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2023	1	194%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2022	20	212%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	1	224%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2022	1	227%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link

NEW AKASHKINAREE COAL MINE

LOCATION (LAT., LON.) 23.8026, 86.2783

GEM MINE ID

M2502

MINING TYPE

Underground & Surface

COAL GRADE

Metallurgical

ESTIMATED PRODUCTION

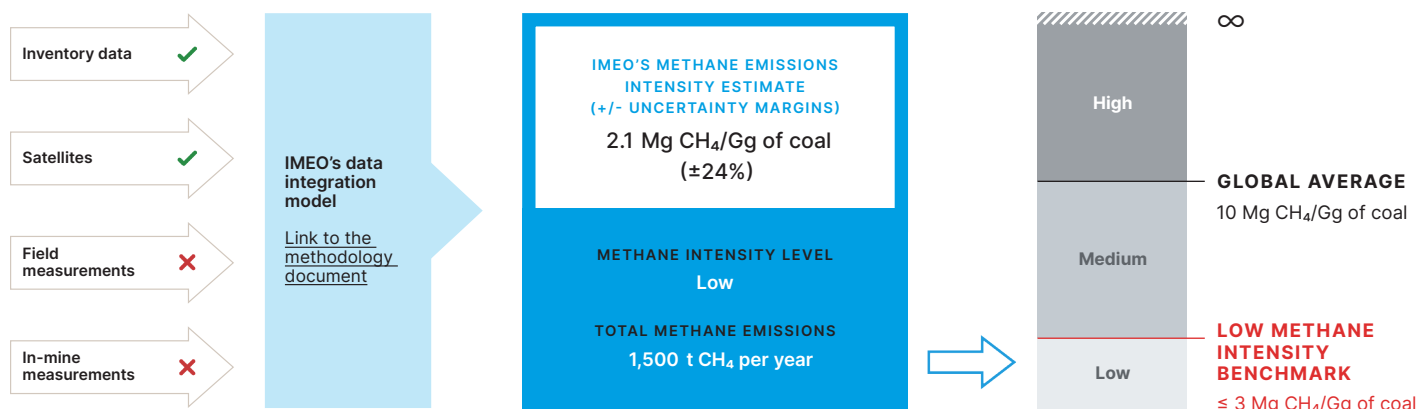
0.7 Mtpa (2023)

ADDITIONAL MINE INFORMATION

https://www.gem.wiki/New_Akashkinaree_coal_mine



METHANE EMISSION PROFILE



The Steel Methane Programme (SMP), managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO), is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain.

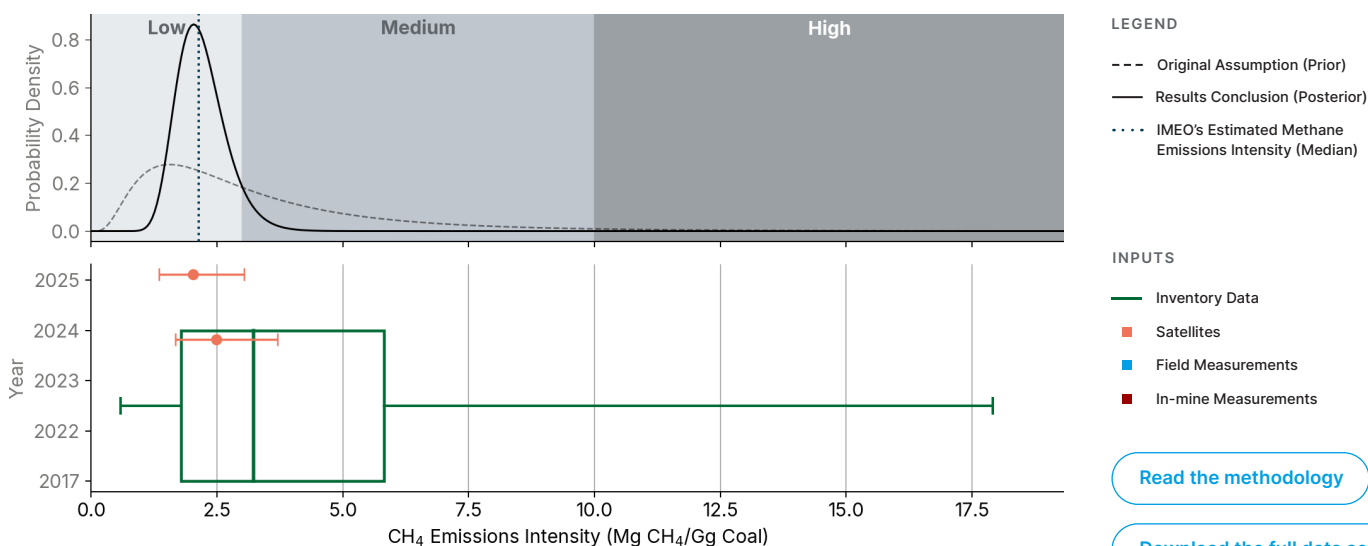
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR NEW AKASHKINAREE COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Satellite	2024	3	41%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2025	2.2	42%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Inventory	2023	10	82%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2017	10	143%	Mg CH ₄ /Gg Coal	Tier-2-02	Dasgupta et al., 2017	Link
Inventory	2023	2	203%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2023	1	241%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2023	3	250%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	20	263%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2022	1	397%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link
Inventory	2023	1	409%	Mg CH ₄ /Gg Coal	Tier-2-03	India's BUR	Link
Inventory	2023	1	527%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2023	1	539%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link

BLOCK II (BOCP) COAL MINE

LOCATION (LAT., LON.) 23.7572, 86.7945

GEM MINE ID

M0489

MINING TYPE

Underground & Surface

COAL GRADE

Metallurgical

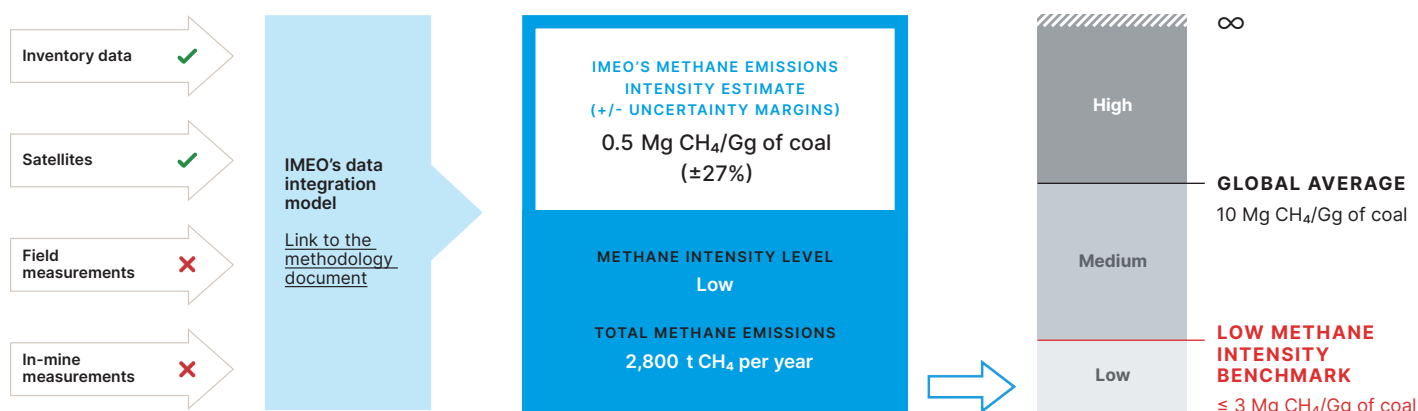
ESTIMATED PRODUCTION

5.4 Mtpa (2023)

ADDITIONAL MINE INFORMATION

https://www.gem.wiki/Block_II_mines

METHANE EMISSION PROFILE



The Steel Methane Programme (SMP), managed by the UN Environment Programme's International Methane Emissions Observatory (IMEO), is a global initiative to make methane emissions from coal measurable, transparent and actionable across the steel supply chain.

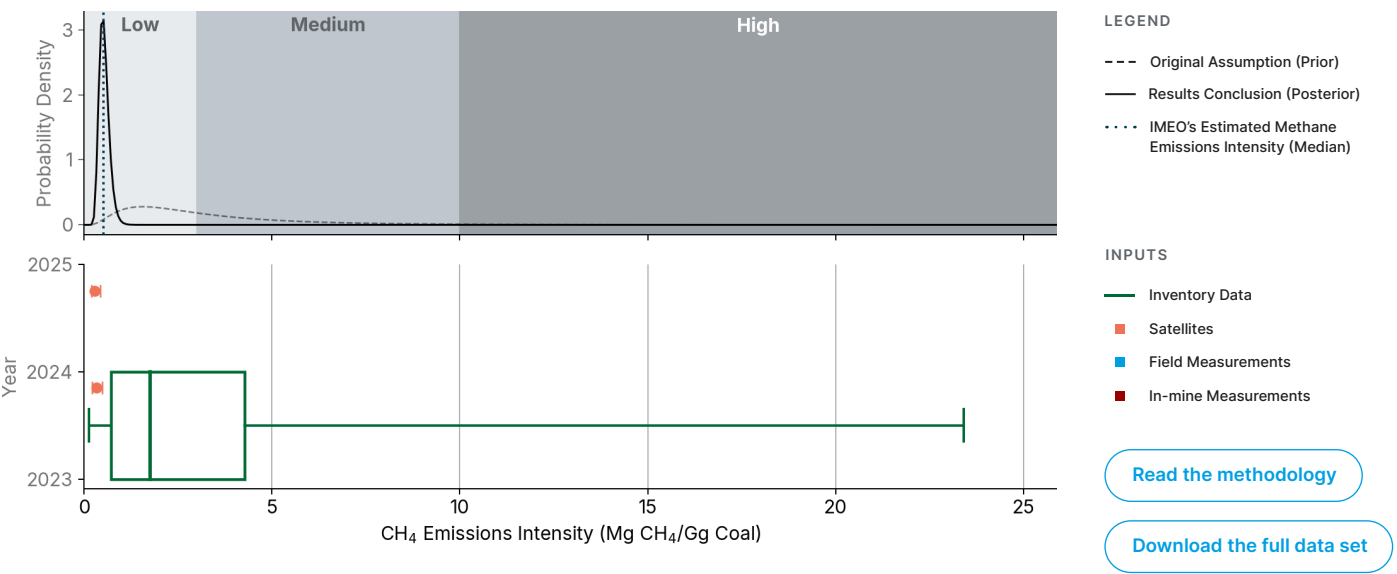
SMP increases methane transparency through its Coal Methane Database, hosted on IMEO's Eye on Methane data platform.

All emissions values presented in this document are model-derived estimates based on publicly available data sources, complemented by a limited set of third-party satellite data. They are subject to uncertainty and should not be interpreted as exact measurements or definitive representations of emissions at individual mines or companies. They are not a compliance or performance rating and are not a recommendation in view of procurement decisions.

[More information](#)

METHANE EMISSIONS DATA INPUTS

RESULTS OF IMEO'S DATA INTEGRATION MODEL FOR BLOCK II (BOCP) COAL MINE



TOP PUBLIC DATA INPUTS (WEIGHTED)

Data beyond top 15 data sources is available in the full data set.

Inventory inputs may appear more than once due to similarity indexing used to incorporate comparable data points into the model. See [methodology](#) for further detail.

Data Approach	Reporting Period	Value	Uncertainty (%)	Unit	Data Category	Source Category	
Satellite	2024	0.4	41%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Satellite	2025	0.3	42%	Mg CH ₄ /Gg Coal	Satellite	Sub mine level quantification	
Inventory	2023	10	97%	Mg CH ₄ /Gg Coal	Tier-2-01	GEM Tracker 2025	Link
Inventory	2023	1	374%	Mg CH ₄ /Gg Coal	Tier-1	IPCC 2006 guidelines	Link
Inventory	2023	1	529%	Mg CH ₄ /Gg Coal	Tier-2-03	Singh et al., 2022	Link