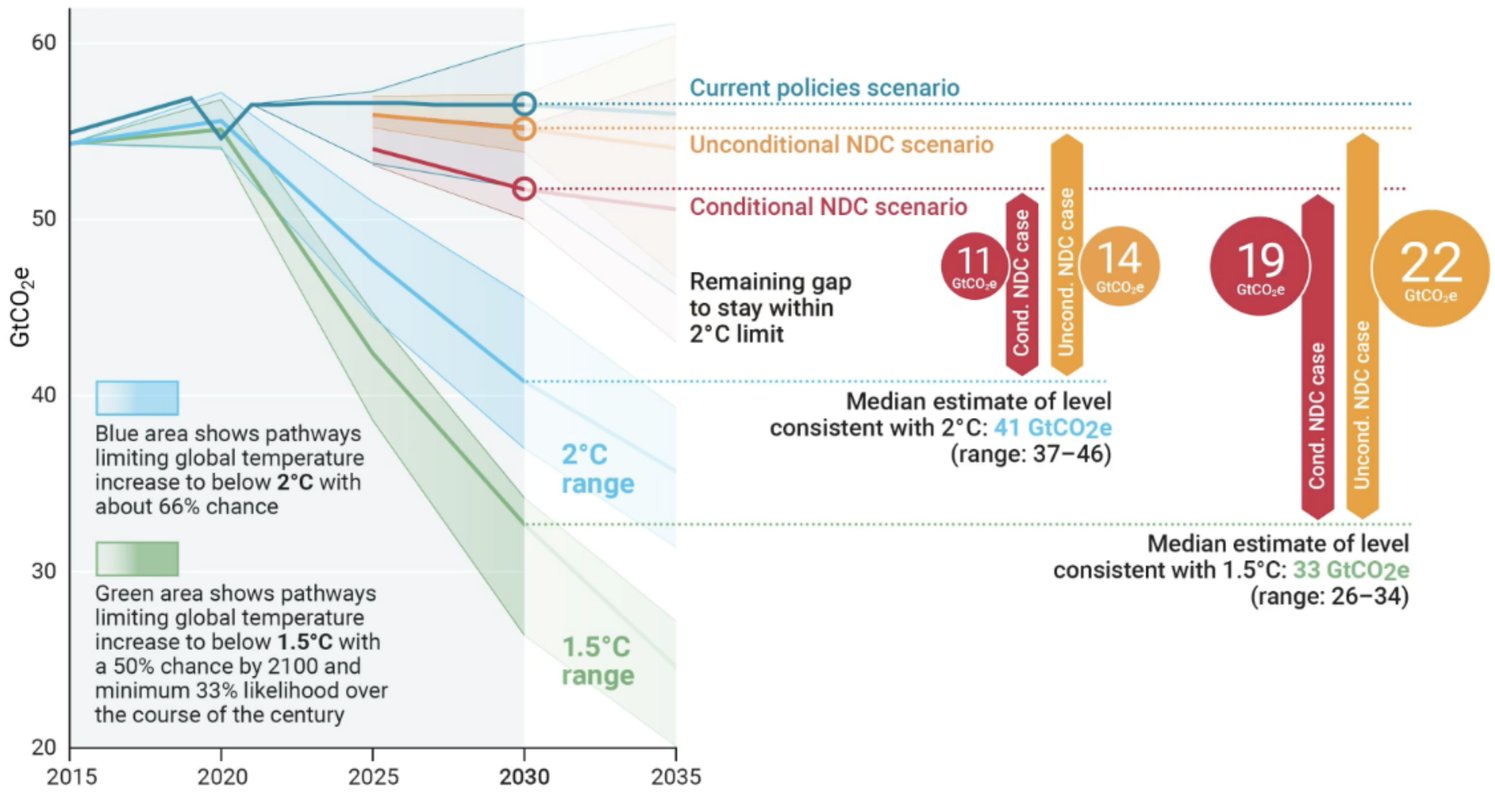
Attaining Global Methane Pledge

Strategies and challenges

Andris Piebalgs 08/05/2024

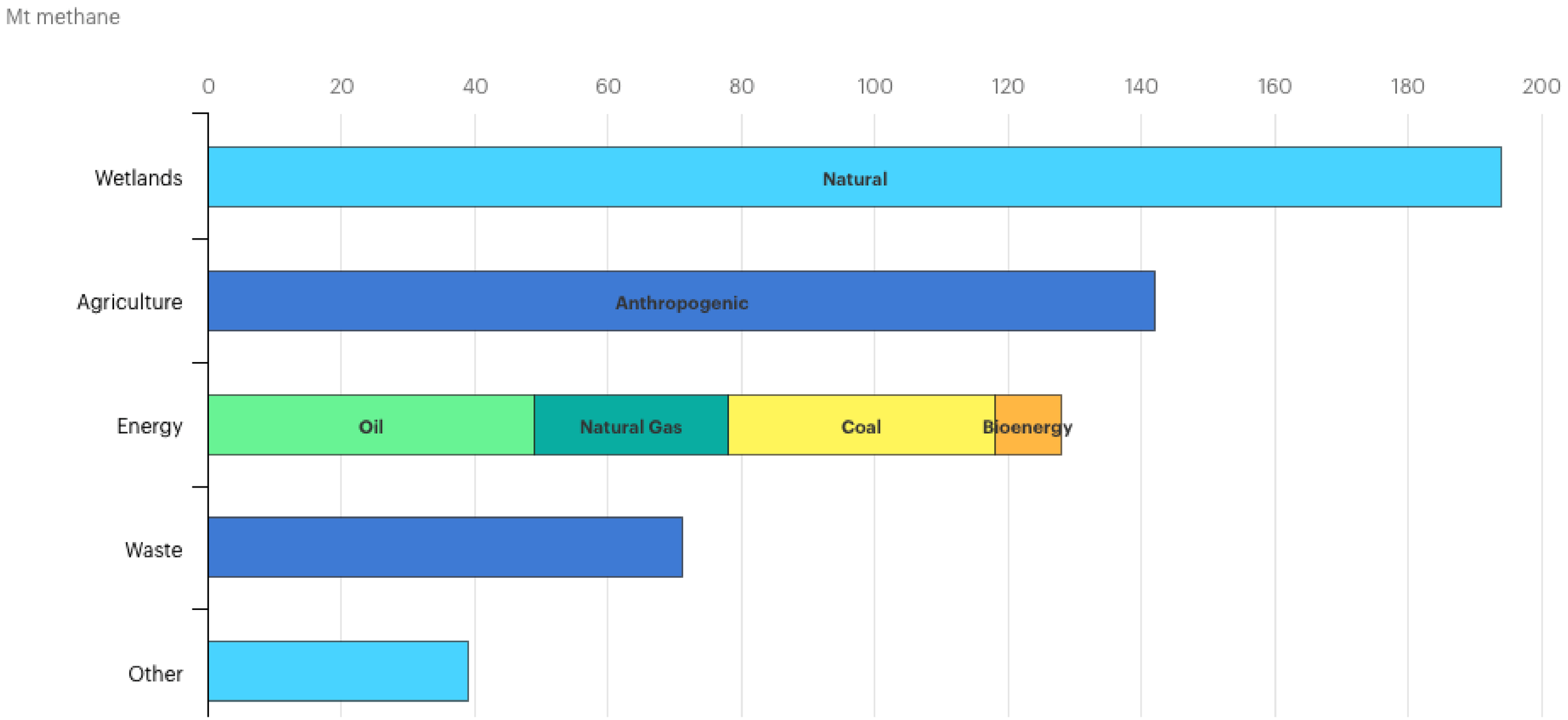
The emissions gap in 2030 remains high



- The emissions gap in 2030 between unconditional NDCs and 1.5°C is ~22 Gt CO2e
- Unconditional and conditional NDCs for 2030 reduce emissions by 2% and 9% respectively
- A 28% reduction is needed to get on track to 2°C and 42% to 1.5°C
- Methane has significantly higher GWP than CO2 (~x80) but much shorter atmospheric lifetime (~12 years)
- Reducing methane emissions is the single fastest way to slow the rate of warming in the short term

Some important facts about methane emissions

- Very potent GHG. Second in causing global warming after carbon dioxide. Responsible for one third of current warming.
- Methane emissions reduction of 45% by 2030 could avoid 0.3 degrees Celsius by 2045
- Methane average atmospheric residence time is 10-12 years. GWP20=82.5 GWP100=29.8
- Methane causes air pollution (ground-level ozone), makes an impact on human health


Mt methane
0
20
40
60
80
100
120
140
160
180
200
Wetlands
Natural
Agriculture
Anthropogenic
Energy
Oil
Natural Gas
Coal
Bioenergy
Waste
Other

Increased momentum on methane:
Global Methane Pledge

Over 150

Countries that have signed on to the EU- and US-led Global Methane Pledge

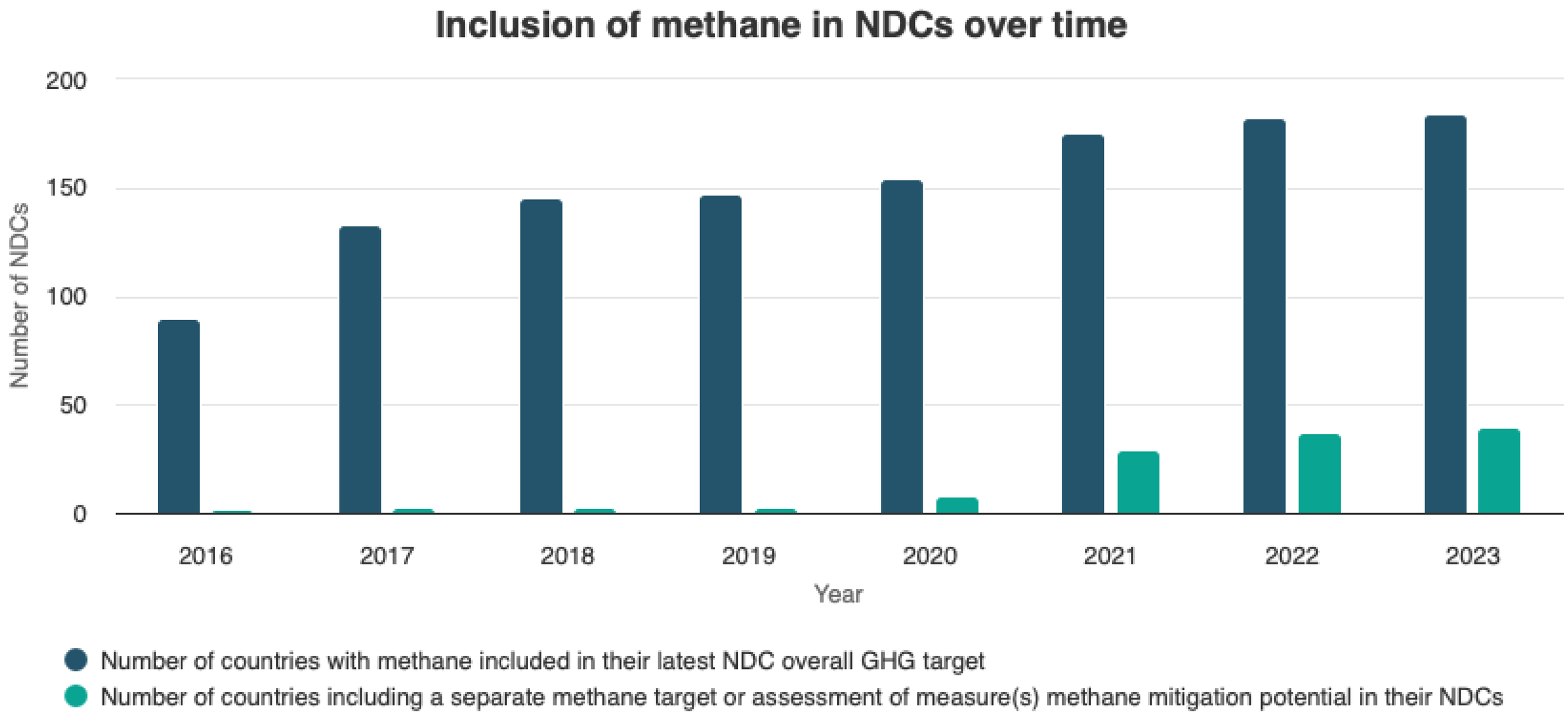
70%

Portion of the global GDP covered by signatories

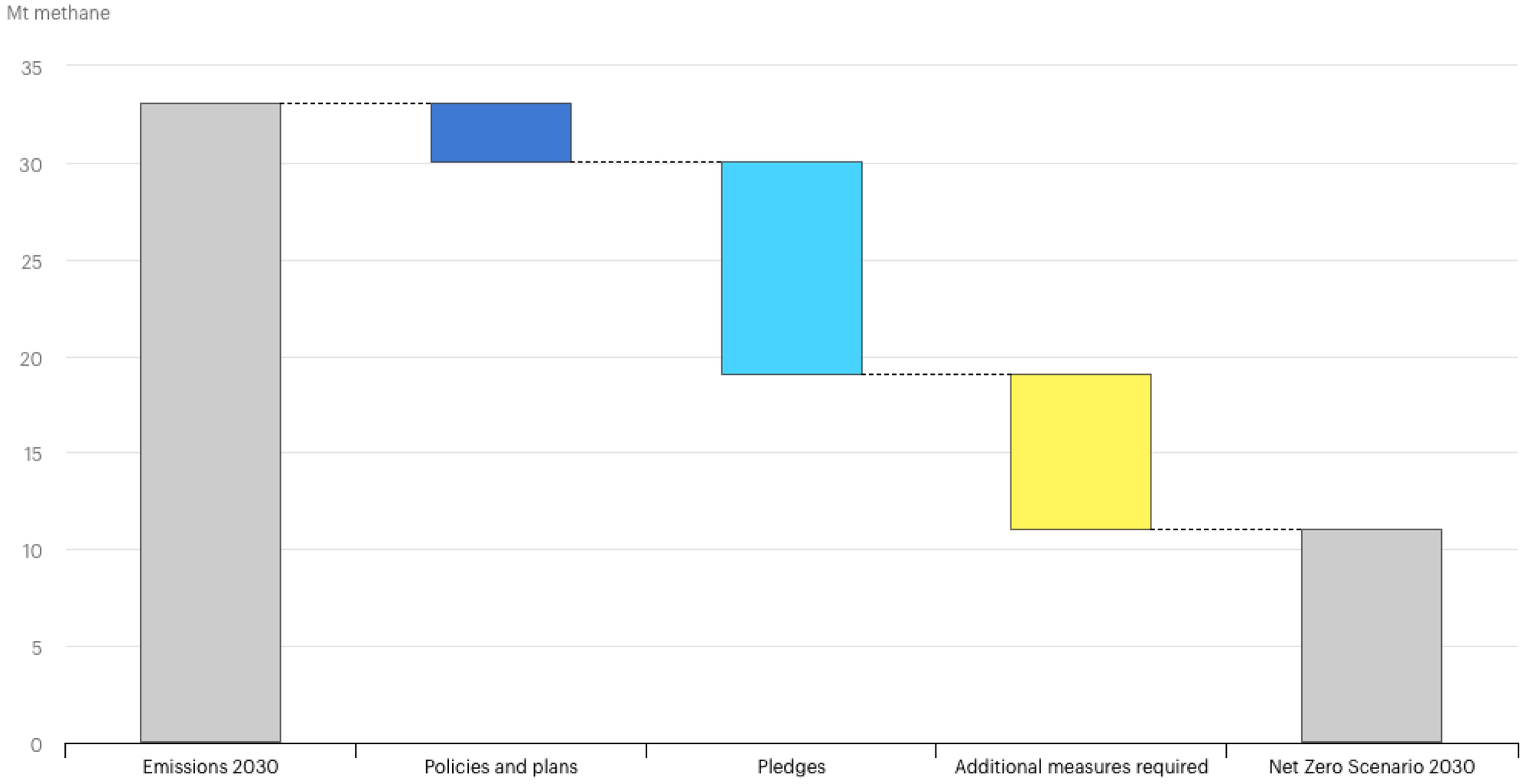
30%

Methane reduction target by 2030

IMEO is a core implementing partner of the Global Methane Pledge, which will provide emissions data to track progress and facilitate technical assistance on science & transparency.

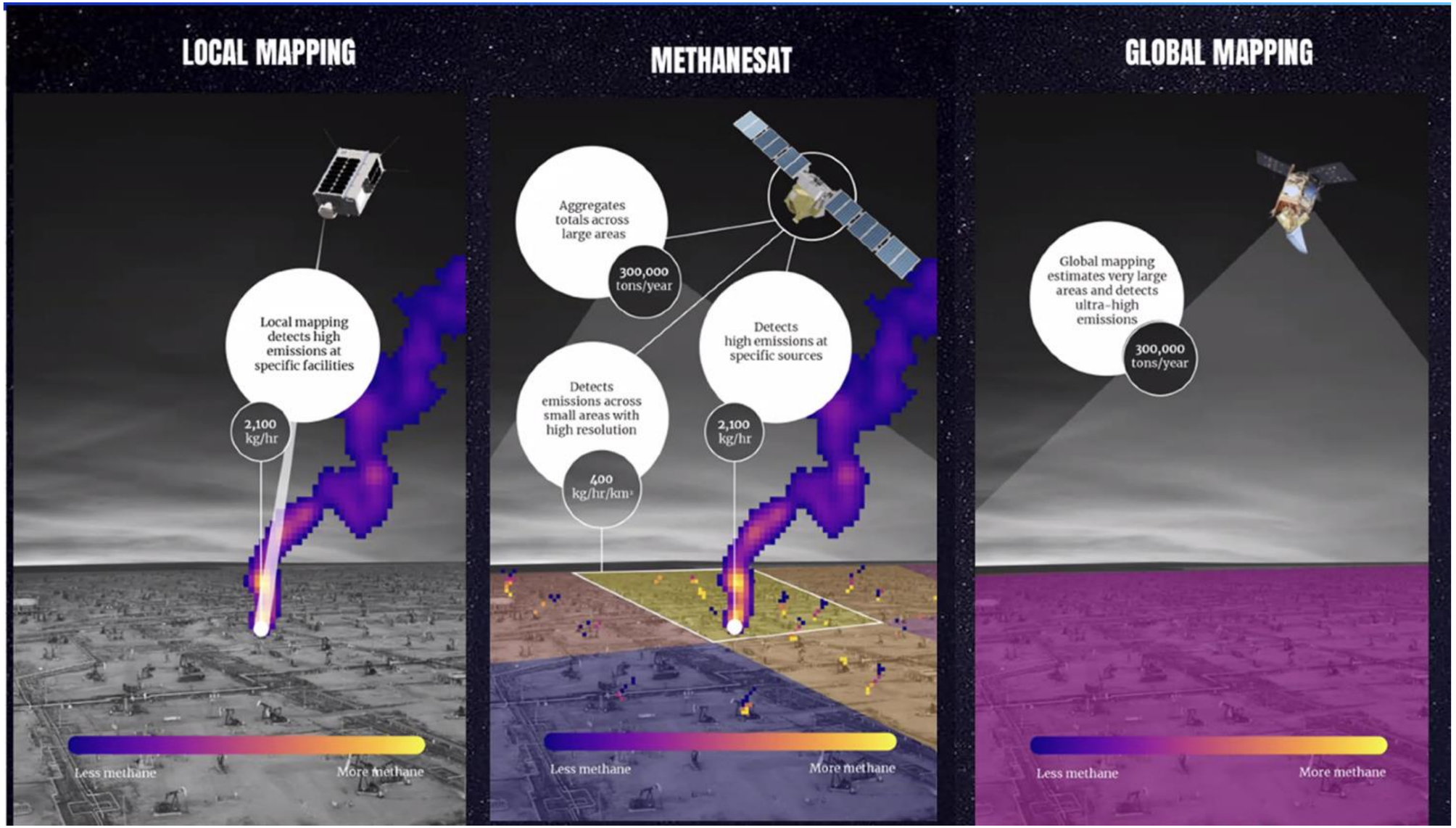

Inclusion of methane in NDCs over time
200
150
100
50
0
Number of NDCs
2016
2017
2018
2019
2020
2021
2022
2023
Year
Number of countries with methane included in their latest NDC overall GHG target
Number of countries including a separate methane target or assessment of measure(s) methane mitigation potential in their NDCs

Reductions of methane emissions from coal by 2030



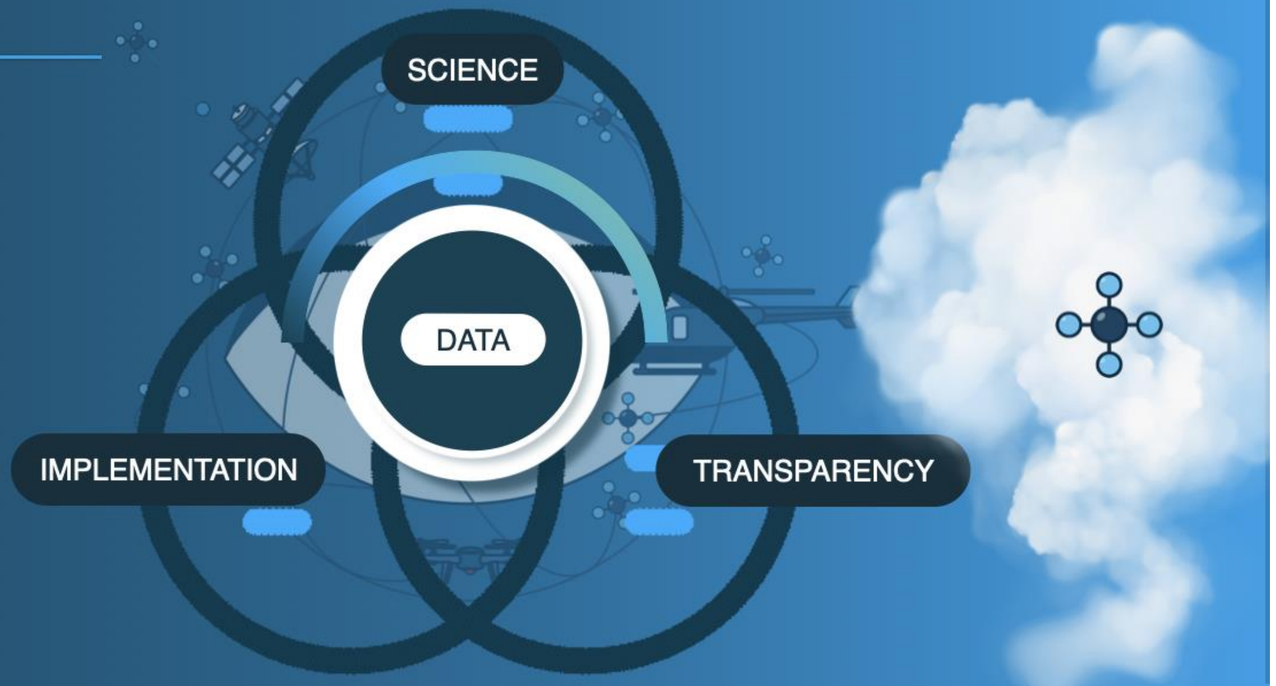
Source: IEA

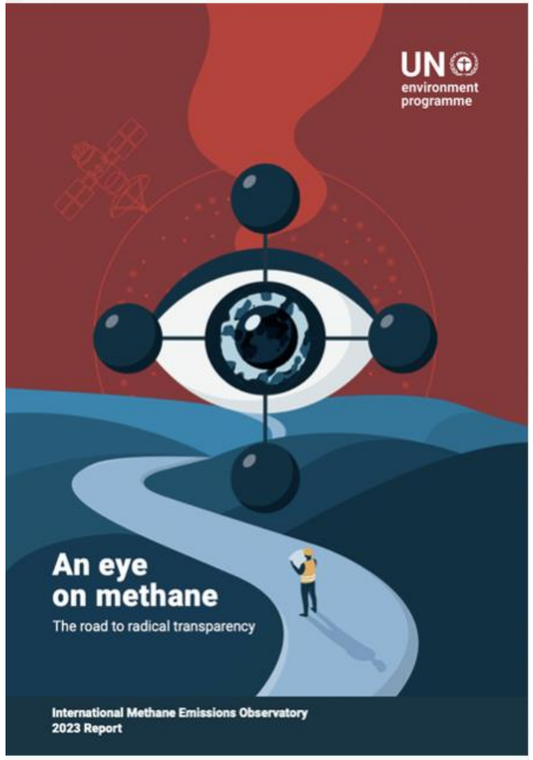
Technological revolution supporting transparency



UNEP's IMEO
interconnects better data with targeted action

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





2023 IMEO Report

IMEO takes a revolutionary approach to methane data

Data flow of the IMEO

COLLECT DATA

- OGMP 2.0 companies' assets data
- Science measurements studies
- National inventories
- Satellite data

Data integration

Reconcile inconsistencies and identify gaps

GENERATE FINAL PRODUCTS

- Global, public, dataset of empirical emissions data
- Annual methane report
- Development of Methane Supply Index
- MARS

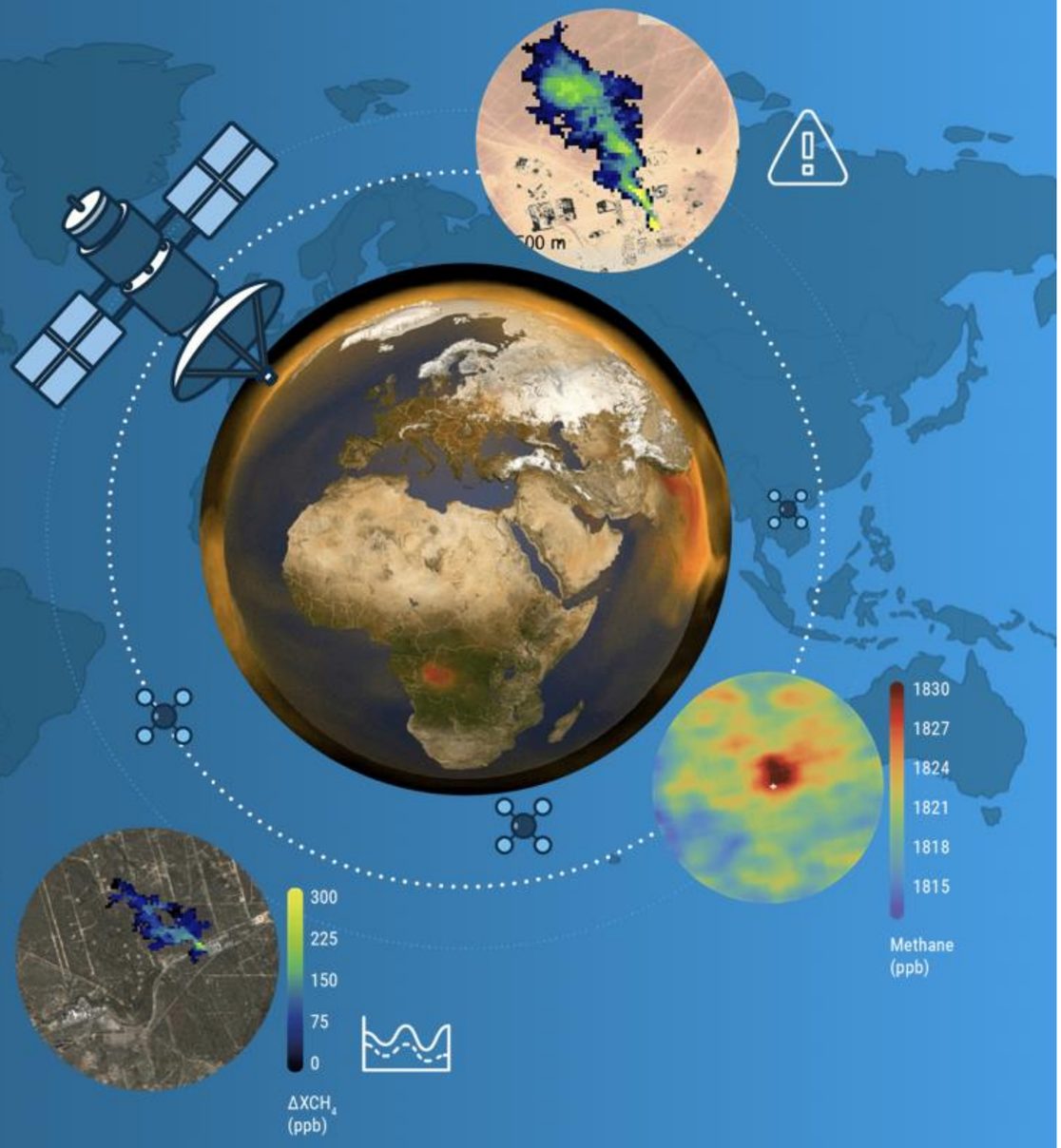
IMEO's MARS uses satellites to provide rapid, actionable data to stakeholders

METHANE → Detect and Attribute

ALERT → Notify and Engage Stakeholders

RESPONSE → Stakeholders Take Action

SYSTEM → Track, Learn, Collaborate, Improve



The Oil and Gas Methane Partnership 2.0

What is OGMP 2.0 ?

OGMP
Oil And Gas Methane Partnership 2.0

The only comprehensive, measurement-based reporting framework for oil and gas industry

Coverage of OGMP 2.0 Companies

over

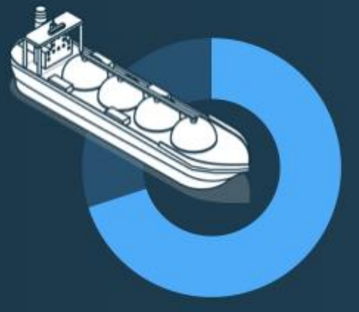
35%

of the global oil and gas production

over

70%

of LNG flows



over

25%

of global natural gas transmission and distribution pipelines

over

10%

of global storage capacity

Main Provisions in the EU Methane Regulation

- Requirements for Measurement, Reporting and Verification (MRV)
- General Mitigation Obligation
- Mandatory Leak Detection and Repair (LDAR) for all facilities
- Limitations on venting and Flaring
- Requirements on inventory and measurement of emissions from inactive and abandoned wells
- Reduction of emissions from coal mines
- Provision on imports

Methane Regulation Matters

- Expected reduction (IA) -77% below BAU by 2030 & improved SoS & impact on global gas market
- Regulation - general application, binding in its entirety and directly applicable
- Scope: **O&G** upstream exploration and production (incl. inactive wells, temporary plugged wells, permanently plugged and abandoned wells), gas gathering and processing, gas transmission, distribution, underground storage,LNG terminals; **Coal** operating underground and surface coal mines, closed underground coal mines, abandoned underground coal mines
- **MRV** of emissions in the oil, gas, coal; **abatement** - LDAR, restrictions on venting and flaring; **transparency**

Obligations to Member States

EU MSs and EEA (subject to Decision by EEA Joint Committee)

- MSs are responsible for the proper implementation of the Regulation
- Designate Competent Authorities
- Lay down rules on penalties and publish annually information on penalties imposed
- Ensure qualification schemes with respect to the LDAR surveys
- Activities on inactive, plugged and abandoned O&G wells (inventory, mitigation plan and implementation). Also for closed and abandoned coal mines.
- Submit information provide by importers to EU Commission
- Respond to EU Commission notification of super-emitting event

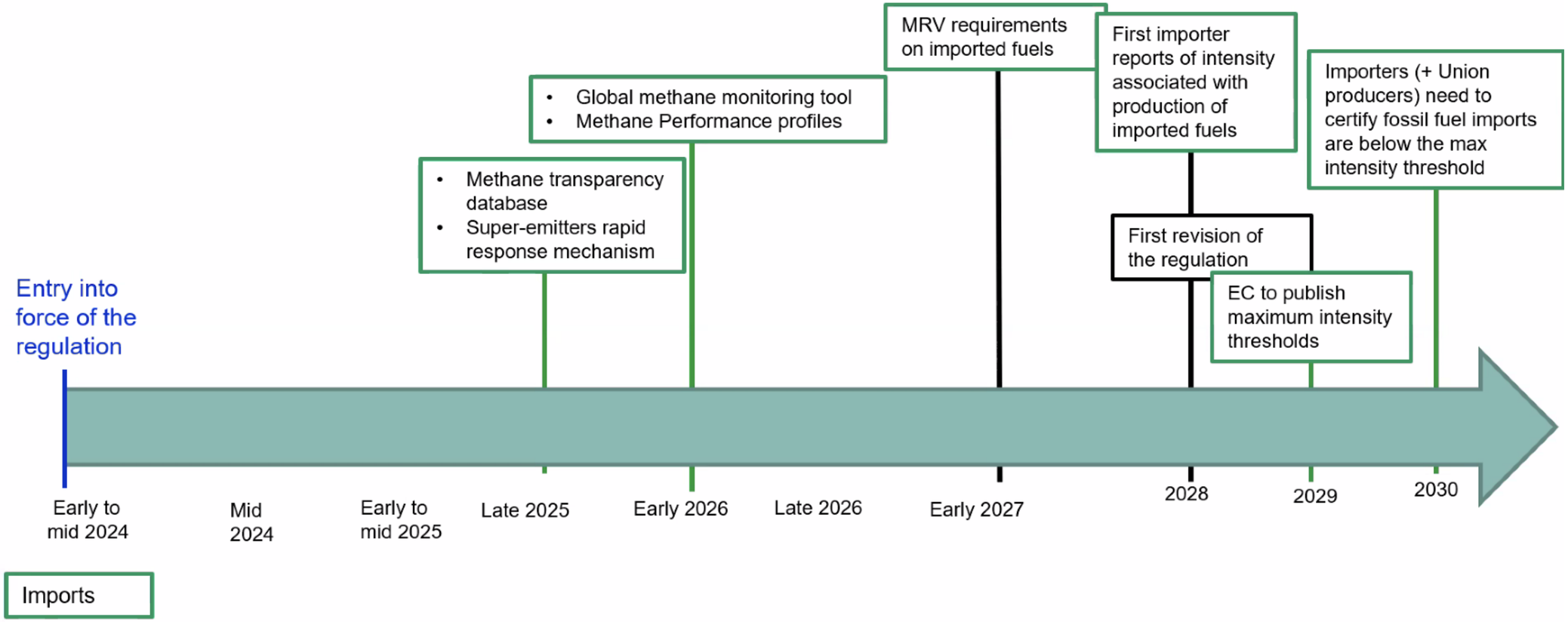
Obligations to the operators and importers

- ‘Operator” - a natural or legal person who operates or controls the asset or to whom decisive economic power over technical functioning of asset has been delegated
- Prevent and minimise ME in the operations; MRV; LDAR; V&F; Flaring efficiency requirements; Inactive, plugged , abandoned wells
- ‘Importer’ - a natural or legal person who places fossil fuels from a third country on the Union market
- Provide information, demonstrate and report MRV equivalence. Report methane intensity

DELEGATED ACTS	IMPLEMENTING ACTS
Art. 22(3) restrictions on venting methane from ventilation shafts for coking coal mines [3 yrs]	**Art. 12** MRV reports' templates *{advisory procedure}*
Art. 27(1) further information to be required from importers (Annex VIII)	**Art. 14** Minimum detection limits and detection techniques for LDAR [12 months] *{examination procedure}*
Art. 27b(1) the methodology for calculating, at the level of producer, the methane intensity associated with imports [3 yrs]	**Art. 27a** procedure and individual decisions in relation to the equivalence of MRV in third countries *{examination procedure}*
Art. 27b(2c) establish the relevant maximum methane intensity values and classes	
Art. 29a EU COM can establish a) mandatory standards or b) technical prescriptions if European standardisation organisations fail to adopt respective standards for: a) measurement and quantification of methane emissions referred to in Article 12(7); b) leak detection and repair surveys referred to in Article 14(1); c) equipment referred to in Article 15(3); d) quantification of methane emissions referred to in Article 18(2); e) measurement and quantification of methane emissions referred to in Articles 20	

Imports in Methane Regulation

- Need to comply with MRV requirements from 2027
- Methane Transparency Database; Methane Performance Profiles of supplier countries or producers; A high-emitter detection and response tool
- A methodology for calculating the methane intensity of the production of crude oil, natural gas and coal
- Mandatory maximum methane intensity values and classes.
- Thresholds coming into force by 2030. Noncompliance penalties will be applied to contracts made or renewed after the date of entry into force of the regulation. Old contracts need to show best efforts in complying.


Entry into force of the regulation
Methane transparency database
Super-emitters rapid response mechanism
Global methane monitoring tool
Methane Performance profiles
MRV requirements on imported fuels
First importer reports of intensity associated with production of imported fuels
First revision of the regulation
EC to publish maximum intensity thresholds
Importers (+ Union producers) need to certify fossil fuel imports are below the max intensity threshold
Early to mid 2024
Mid 2024
Early to mid 2025
Late 2025
Early 2026
Late 2026
Early 2027
2028
2029
2030
Imports