CONCEPT NOTE

Opportunities for Coal Mine Methane Mitigation: MRV, Policies and Best Practices

28 October, 14:00-17:00 (Skopje/Geneva)

Link for online participation (to be provided shortly)

Background

Methane Challenge

Methane represents one of the most significant yet addressable climate challenges of our time. As a greenhouse gas, methane's warming potential far exceeds that of carbon dioxide, being 25 times more potent over 100 years, 84 times more potent over 20 years, and reaching 120 times more potent on an instantaneous basis. Since pre-industrial times, atmospheric methane concentrations have increased by nearly 150%, contributing to approximately one-third of current global warming. The urgency of addressing methane emissions has been recognized globally, with experts estimating that effective methane mitigation could help avoid up to 0.1°C of warming by 2050 while providing around $260 billion in direct economic benefits.

Impact of Coal Mining

Human activities generate 60% of global methane emissions, with fossil fuel operations alone releasing 110 million tons annually, representing 30% of all anthropogenic methane emissions. Coal mining presents a particular challenge, as methane is often co-located with coal deposits worldwide. Methane emissions arise from multiple sources across the coal mining lifecycle, including active

underground and surface mines, abandoned mine sites, undeveloped coal seams, and coal processing and distribution activities. Major coal-producing nations collectively emit over 52.5 billion cubic meters of methane annually, much of it as Ventilation Air Methane (VAM), which consists of low-concentration emissions mixed with mine air.

Monitoring, Reporting and Verification

Action on methane requires solid understanding of emission sources at national, subnational, and local levels. Only with reliable emissions data, can policymakers design effective GHG policies, evaluate mitigation opportunities, and comply with their international climate commitments.

National monitoring, reporting and verification (MRV) programmes can not only help countries better understand the contribution of coal mining to their overall methane and GHG emissions but also identify opportunities for mitigation. MRV can help assess and track the effectiveness of the adopted climate policies. Setting up efficient MRV schemes is also important to deliver on international climate commitments in the context of the Paris Agreement.

The Opportunity

Unlike other greenhouse gases, methane presents a unique dual opportunity for both emission reduction and energy recovery. Proven technologies exist to capture and utilize coal mine methane, delivering clean energy generation, climate change mitigation, improved local air quality and public health, and enhanced mine safety. This transformation of a waste product into a valuable resource represents a compelling economic and environmental proposition, particularly considering the new regulatory requirements that create both obligations and incentives for action.

EU Regulation

In August 2024, entered into force the European Union's comprehensive regulation to address methane emissions in the energy sector, both within and beyond EU borders. The regulation introduces strict monitoring, reporting, and verification (MRV) requirements for coal mine methane emissions, with implementation timelines spanning from 2025 to 2031. The regulation impacts both active and abandoned mines, with Poland and Romania being the most affected EU member states regarding active underground mines. Significantly, the regulation extends beyond EU operators to include coal importers, who must comply with the same stringent standards, thereby creating a global ripple effect in methane management practices. In addition, any country joining the Union in the future, having an obligation to align its legal system with *acquis communautaire*, will have to adjust its methane emission regulation with the requirements set by the document in question.

Objectives

- To provide participants with a clear understanding of EU regulatory requirements for methane emissions from operating and closed coal mines, identify specific challenges facing Central and South-East European countries in achieving EU compliance, and share implementation experiences from the current EU member states, particularly those most affected by the new regulations.
- To enhance technical knowledge of MRV systems and mitigation technologies among participants through demonstration of proven technologies for methane measurement, reporting, and verification while showcasing best practices for methane destruction and utilization and presenting cost-effective approaches suitable for different mine types and conditions, including specialized considerations for coking coal operations.
- To facilitate peer-to-peer learning between countries at different stages of regulatory implementation, build regional capacity for methane management, and establish ongoing collaboration networks.

Target Group

Policy makers and regulators, as well as practitioners working on coal mine methane-related matters

Provisional Programme

14:00-14:25 Introductions

14:00-14:05 Openig remarks (Raymond Pilcher, UNECE Group of Experts on Coal Mine Methane and Just Transition)

14:05-14:15 UNECE Group of Experts on CMM and JT and the *Best Practice Guidance for Effective Management of Coal Mine Methane at National Level: Monitoring, Reporting, Verification and Mitigation* (Chiara Giamberardini, UNECE)

14:15-14:25 Introduction to the Fossil Fuel Regulatory Programme (Felicia Ruiz, CATF)

14:25-15:15 EU Methane Regulation: Coal Mines

14:25-14:45 Overview, Upcoming Deadlines, and Status Update (EU representative – TBC)

14:45-15:00 Implementation in Romania: progress and next steps (Representative of the Government or another relevant stakeholder from the country – TBC)

15:00-15:15 Implementation in Poland: progress and next steps (Representative of the Government or another relevant stakeholder from the country – TBC)

15:15-15:45 Coffee break

15:45-16:45 Monitoring, Reporting, Verification (MRV), and Mitigation of Methane emissions from the Coal Sector

15:45-16:30 CMM MRV and Policy Outlook with special focus on the Central and South-East Europe (Panel discussion)

Moderator: Raymond Pilcher, Chair, UNECE Group of Experts on Coal Mine Methane and Just Transition

This panel will bring together representatives from government and civil society primarily from the Central and South-East Europe, but also from other parts of the world to explore the evolving landscape of coal sector policy and MRV systems. The discussion will focus on the region's shift away from coal, examining how enhanced MRV frameworks and policy changes could shape a just and effective energy transition.

16:30-16:45 International Best Practices for Effective MRV and CMM Capture, Destruction, and Use (Michal Drabik, UNECE)

16:45-17:00 Final Questions and Closing Remarks (UNECE/CATF)

Mode of participation

The workshop (seminar, roundtable, etc.) will take place in a hybrid format (in-person and online).

Contact

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