



Economic Commission for Europe**Committee on Sustainable Energy****Twenty-eighth session**

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Sustainable resource management:**Groups of Experts on Energy Efficiency, Renewable Energy and Coal Mine Methane: Mandates and work plans****Work plan of the Group of Experts on Coal Mine Methane
for 2020-2021****Prepared by the Group of Experts on Coal Mine Methane****I. Introduction**

1. The mandate of the Group of Experts on Coal Mine Methane (the Group of Experts) is to promote the reduction of greenhouse gas emissions from coal mines by means of concrete, results-oriented activities that may help the recovery and use of methane in order to reduce the risks of explosions in coal mines, mitigate climate change, and support sustainable development.
2. The Group of Experts focuses on best practices for effective drainage, recovery and usage of coal mine methane.

II. Concrete activities in 2020-2021

3. Taking account of the outcomes and lessons learned from implementation of its previous work plans, extensive consultations with a wide range of stakeholders, and the outcomes of the thirteenth session of the Group of Experts on Coal Mine Methane, the Group of Experts proposes to undertake the following activities in 2020 and 2021.

A. Disseminate and facilitate application of best practices for effective methane recovery and use from active and abandoned coal mines.**Description:**

4. Since 2005, the Group of Experts has collaborated with the Global Methane Initiative (GMI), a voluntary, multilateral partnership that aims to reduce global methane emissions and to advance the abatement, recovery and use of methane. In partnership with GMI, in 2010 the Group of Experts published and has since disseminated the "Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines". In 2016, the Best Practice Guidance was revised, updated and supplemented by a number of new case studies. On 30 June 2015, the Executive Committee of the United Nations Economic Commission for Europe (ECE)

approved an extrabudgetary project “Dissemination of best practices in the abatement, recovery, and use of methane”, that was implemented in 2016 and 2017. Within the framework of this project, the Best Practice Guidance was effectively disseminated to a target audience of potential beneficiaries in the coal mining industry. In 2019, the Group of Experts together with GMI, prepared and published the “Best Practice Guidance for Effective Methane Recovery and Use from Abandoned Coal Mines”. The document is to be promoted by the Group through dissemination activities targeting countries facing challenges resulting from gradual phaseout of coal and the ensuing mines closure. The work of the Group of Experts to deliver the above-mentioned activities is supported by an extension of the grant that ECE received from the United States Environmental Protection Agency (U.S. EPA) to continue the extrabudgetary project “Dissemination of best practices in the abatement, recovery, and use of methane; Phase II”.

Work to be undertaken:

(a) Plan, organize, and execute one or two demand-driven capacity-building workshops on best practices for effective methane drainage and use in coal mines, subject to availability of extrabudgetary resources;

(b) Plan, organize, and execute one or two demand-driven capacity-building workshops on best practices for effective methane recovery and use from abandoned coal mines, subject to availability of extrabudgetary resources;

(c) Collect, compile, and analyse information about location of, and emissions from abandoned coal mines around the world (mapping), including data on sources and generation rates of methane in such mines, as well as influence of mine gas production from abandoned coal mines on the total methane budget and the release rates, subject to availability of extrabudgetary resources;

(d) Investigate the issues related to sustainable management of surface mine methane, subject to availability of extrabudgetary resources;

(e) Continue the collaboration with GMI, including through the extension of the phase II of the extrabudgetary project on “Dissemination of best practices in the abatement, recovery, and use of methane”, the Group of Experts’ engagement in the Global Methane Challenge activities, and joint support to the International Year of Methane initiative.

Deliverables:

(a) One or two demand-driven capacity-building workshops on best practices for effective methane drainage and use in coal mines, subject to availability of extrabudgetary resources;

(b) One or two demand-driven capacity-building workshops on best practices for effective methane recovery and use from abandoned coal mines, subject to availability of extrabudgetary resources;

(c) A summary report identifying issues that need to be addressed in order to develop a comprehensive publication indicating locations of abandoned mines in the ECE region and the volume of methane emitted from each of them, subject to availability of extrabudgetary resources;

(d) A summary report analysing the scale, as well as challenges with, and benefits of capturing and utilizing methane emissions from surface mines, subject to availability of extrabudgetary resources;

(e) A set of events focussing on CMM organized jointly by the Group and GMI within the framework of the Global Methane Challenge and the International Year of Methane, should the latter be declared, subject to availability of extrabudgetary resources.

Timeline:

(a) Workshops on best practices for effective methane drainage and use in coal mines, by December 2021, subject to availability of extrabudgetary resources;

(b) Workshops on best practice guidance for effective methane recovery and use from abandoned coal mines, by December 2021, subject to availability of extrabudgetary resources;

(c) A summary report identifying issues that need to be addressed in order to develop a comprehensive publication indicating locations of abandoned mines in the ECE region and the volume of methane emitted from each of them, by December 2021, subject to availability of extrabudgetary resources;

(d) A summary report analysing the scale, as well as challenges with, and benefits of capturing and utilizing methane emissions from surface mines, by December 2021, subject to availability of extrabudgetary resources;

(e) A set of events organized jointly by the Group and GMI within the framework of the Global Methane Challenge and the International Year of Methane, throughout the biennium, subject to availability of extrabudgetary resources.

B. Launch and support the work of the International Centres of Excellence on Coal Mine Methane.

Description:

5. An International Centre of Excellence on Coal Mine Methane (ICE-CMM) is a non-profit entity established in a United Nations Member State under the national laws of that Member State that, under the auspices of and in close collaboration with the Group of Experts, supports capacity-building activities through dissemination of best practices in economically viable methane abatement and utilisation, socially acceptable underground coal mine practices, and environmentally-responsible methane management. The Group of Experts seeks to establish a network of independent ICE-CMMs operating in different locations and collaborating with one another under the guidance and oversight of the Group. The first and second ICE-CMMs, located in Poland and China respectively, became operational in 2017. The Bureau of the Group of Experts will engage in planning, delivering, and overseeing the activities of the existing ICE-CMMs. The Group of Experts will assist ICE-CMMs with organizing and delivery of activities specified in their respective Work Plans, as well as provide oversight of their work. In terms of the latter, each Centre's yearly status report, as well as its work plan for the upcoming year, will be subject to the Group's review and approval. The Bureau of the Group of Experts together with the Secretariat will also encourage the Group of Experts' partners in the Russian Federation, Ukraine, the United States of America, and Colombia to continue their work on establishing additional Centres of Excellence in these countries, as well as seek other opportunities to expand the network of ICE-CMMs worldwide.

Work to be undertaken:

(a) Assist ICE-CMM in Poland in carrying out its work, as requested or needed in accordance with the ICE-CMM's Terms of Reference;

(b) Assist ICE-CMM in China in carrying out its work, as requested or needed in accordance with the ICE-CMM's Terms of Reference;

(c) Support the Group's partners in Russian Federation, Ukraine, the United States of America, and Colombia to continue their work on establishing additional Centres of Excellence in these countries;

(d) Should additional ICE-CMM(s) be established, assist the host institution(s) in carrying out work of the Centre(s), as requested or needed in accordance with the ICE-CMM(s)' Terms of Reference.

Deliverables:

(a) Plan, organize, and execute in cooperation with ICE-CMM in Poland two seminars within the framework of the School of Underground Mining, subject to availability of extrabudgetary resources and invitation by the event's organizer;

- (b) One capacity-building workshop on best practices for effective methane drainage and use in coal mines, organized jointly by ICE-CMM in Poland and the Group of Experts in a partner country of the Centre, subject to availability of extrabudgetary resources;
- (c) Yearly status report on the activities of ICE-CMM in Poland, to be delivered by ICE-CMM Poland for review and approval of the Group of Experts;
- (d) Yearly status report on the activities of ICE-CMM in China, to be delivered by ICE-CMM China for review and approval of the Group of Experts;
- (e) Should new IEC-CMM(s) be established, initial work plans of each new Centre with a list of deliverables which are to be delivered in coordination with the Group of Experts.

Timeline:

- (a) Seminars within the framework of the School of Underground Mining, at the 2020 and 2021 editions of the event, subject to availability of extrabudgetary resources and invitation by the event's organizer;
- (b) Yearly status reports on the activities of ICE-CMM in Poland to be delivered by ICE-CMM Poland for the Group of Experts' review and approval, at the annual sessions of the Group in 2020 and 2021;
- (c) One capacity-building workshop on best practices for effective methane drainage and use in coal mines, organized jointly by ICE-CMM in Poland and the Group of Experts, by December 2021, subject to availability of extrabudgetary resources;
- (d) Yearly status reports on the activities of ICE-CMM in China to be delivered by ICE-CMM China for the Group of Experts' review and approval, at the annual sessions of the Group in 2020 and 2021;
- (e) Work plans of new ICE-CMM(s), when necessary, as requested by the hosting entities.

C. Collect and disseminate case studies on the application of best practice guidance in specific coal mines in different regions of the world.**Description:**

6. Case studies are needed to demonstrate how the principles outlined in the "Best Practice Guidance for Effective Methane Drainage and Recovery in Coal Mines" and in the "Best Practice Guidance for Effective Methane Recovery and Use from Abandoned Coal Mines" can be implemented at, respectively, active and abandoned coal mines around the world. At its tenth session in 2015, the Group of Experts recommended that a case study library be developed to complement the "Best Practice Guidance for Effective Methane Drainage and Recovery in Coal Mines". A library has been assembled in electronic form on the ECE coal mine methane website. Subject to extrabudgetary resources the case study database could be extended by elaborating concrete, in-depth case studies and analyses that demonstrate the benefits of applying the best practices. Similarly, should additional extrabudgetary resources be secured, a library containing case studies illustrating successful application of principles recommended by the "Best Practice Guidance for Effective Methane Recovery and Use from Abandoned Coal Mines" could be developed and maintained on-line.

Work to be undertaken:

7. Develop, compile and publish on the ECE coal mine methane website case studies on effective methane management in active and/or closed coal mines, subject to availability of extrabudgetary resources.

Deliverables:

8. Case studies on implementation of best practices in effective methane management in active and/or closed coal mines, subject to availability of extrabudgetary resources.

Timeline:

9. Case studies are reviewed and approved as they arrive. This process is an ongoing activity of the Group of Experts.

D. Contribute, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, to the work on integrated methane management in the context of sustainable development.

Description:

10. In January 2015, the Group of Experts offered to participate in the Task Force on Methane Management in Extractive Industries that reports to the Bureau of the Committee on Sustainable Energy. The Group of Experts will continue to contribute, within the scope of its expertise, to the work on methane management in key energy-related extractive industries undertaken jointly by various Groups of Experts operating under the umbrella and leadership of the Committee.

Work to be undertaken:

11. Contribute, within the scope of the Group's expertise, to the work on the cross-cutting issue of methane management along the value chain in key energy-related extractive industries, for the purpose of determining and promoting the most efficient methods of measuring, monitoring, reporting and verifying methane emissions in these industries, and developing best practices for preventing such emissions.

Deliverables:

(a) Coal mining sector-related part of the summary report on the estimated volumes of methane emissions in extractive industries in the ECE region, subject to work on the report being continued and availability of extrabudgetary resources;

(b) Coal mining sector-related part of the summary report on techniques and methods used for measuring, monitoring, reporting and verifying methane emissions in extractive industries in the UNECE region, subject to work on the report being continued and availability of extrabudgetary resources.

Timeline:

(a) Contribution to the summary report on the actual volumes of methane emissions from extractive activities (to be determined by the progress of work on that matter and the request by the Committee, as well as subject to availability of extrabudgetary resources);

(b) Contribution to the summary report on techniques and methods used for measuring, monitoring, reporting and verifying methane emissions (to be determined by the progress of work on that matter and the request by the Committee, as well as subject to availability of extrabudgetary resources).

E. Further engage, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, in the work on transition of the fossil fuels-based energy sector in the ECE region.

Description:

12. In November 2015, the Committee on Sustainable Energy at its twenty-fourth session mandated the Group of Experts on Coal Mine Methane, to make a proposal on how to expand the current mandate of the Group of Experts to encompass work on the transition of traditional mining companies to become integrated energy providers and service companies and to explore the impact this transition might have on energy for sustainable development. In September 2017, at the twenty-sixth session of the Committee, the Group of Experts presented its proposal and recommendations. In accordance with the recommendations made

to the Committee, the Group of Experts stands ready to further engage in the work on transition of the fossil fuels-based energy sector in the ECE Region.

Work to be undertaken:

13. Explore, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, opportunities for development of a replicable model for transition of legacy industry sites and regions, subject to availability of extrabudgetary resources.

Deliverables:

(a) A set of initial workshops providing theoretical foundations for development of the project on transition of the fossil fuels-based energy sector in the ECE region, subject to availability of extrabudgetary resources;

(b) A summary report outlining theoretical framework for transition of the fossil fuels-based energy sector in the ECE region, subject to availability of extrabudgetary resources;

(c) A white paper analysing practical aspects of the implementation of the theoretical framework for transition of the fossil fuels-based energy sector in the ECE region, subject to availability of extrabudgetary resources;

(d) Selection, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, as well as in cooperation with interested member State and/or site operator located in the ECE region, upon its prior request and subject to availability of extrabudgetary resources, a specific legacy industry site for implementation of a pilot project, serving as a basis for development of a replicable model for transition;

(e) A preliminary assessment, performed in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, of the legacy industry site selected for the pilot project, including examination and evaluation of the profitability and sustainability of the current profile of the site's production, as well as a review of the relevant domestic regulations;

(f) Summary report and presentation, developed in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, on technical, legal and financial measures available for improvement of the selected legacy industry site, subject to availability of extrabudgetary resources.

Timeline:

(a) A set of initial workshops providing theoretical foundations for development of the project on transition of the fossil fuels-based energy sector in the ECE region, in Q1 and Q2 of 2020, subject to availability of extrabudgetary resources;

(b) A summary report outlining theoretical framework for transition of the fossil fuels-based energy sector in the ECE region, in Q3 2020, subject to availability of extrabudgetary resources;

(c) A white paper analysing practical aspects of the implementation of the developed theoretical framework for transition of the fossil fuels-based energy sector in the ECE region, in Q4 2020, subject to availability of extrabudgetary resources;

(d) Selection of the site and conclusion of the agreement with interested State and/or site operator by December 2020, subject to a request by the host entity and to availability of extrabudgetary resources;

(e) Assessment of the industrial site by June 2021, subject to a request by the host entity and to availability of extrabudgetary resources;

(f) Report summarizing project by December 2021, subject to a request by the host entity and to availability of extrabudgetary resources.

F. Contribute to the work of the Expert Group on Resource Management on United Nations Framework Classification for Resources and United Nations Resource Management System specifications and guidelines for Coal Bed Methane Resources.

Description:

14. Contribute, within the scope of the Group's expertise, to the work of the Expert Group on Resource Management on development of documentation allowing the United Nations Framework Classification for Resources (UNFC) and the United Nations Resource Management System (UNRMS) to be applied to and manage co-located coal bed methane resources.

Work to be undertaken:

15. Provide advice, as requested by the Expert Group on Resource Management and within the scope of the Group of Experts' expertise, on developing specifications and guidelines for application of UNFC and UNRMS to coal bed methane resources.

Deliverables:

16. Input to specifications and guidelines for application of UNFC and UNRMS to coal bed methane resources developed by the Expert Group on Resource Management.

Timeline:

17. Input to specifications and guidelines for application of UNFC and UNRMS to coal bed methane resources (to be determined by the progress of work on that matter, upon request by the Expert Group on Resource Management).

G. Contribute, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, to the work on the "Pathways to Sustainable Energy" project.

Description:

18. The project "Pathways to Sustainable Energy" is an important vehicle for understanding the gaps that exist between the current energy policies and systems, and the energy-related objectives of the 2030 Agenda for Sustainable Development. It allows to identify opportunities to close those gaps and to explore implications that each of the available strategies will have for the ECE region in terms of its energy sustainability.

Work to be undertaken:

19. Contribute, as requested by the Committee on Sustainable Energy and within the scope of the Group of Experts' expertise, to the "Pathways to Sustainable Energy" project, outlining the role of coal mine methane capture and utilization in the process of transition towards the sustainable energy system of the future.

Deliverables:

20. Input to the "Pathways to Sustainable Energy" project on the role of coal mine methane capture and utilization in the process of transition towards the sustainable energy system of the future.

Timeline:

21. Input to the "Pathways to Sustainable Energy" project on the role of coal mine methane capture and utilization in the process of transition towards the sustainable energy system of the future resources (to be determined by the progress of work on that matter, upon request by the Committee on Sustainable Energy).

H. Promote broader inclusiveness of the Group of Experts, giving due attention to gender equality.

Description:

22. In line with the objectives of Sustainable Development Goal 5 “Achieve gender equality and empower all women and girls”, the Group of Experts undertakes necessary steps to assure full inclusiveness in its membership and work and to promote the value of diversity. The Group of Experts gives due attention to gender matters in all of its activities, striving to identify barriers that prevent greater involvement of women in the mining industry, and highlighting the benefits that diversity of staff and the resulting multiplicity of experiences and worldviews can bring to entities operating in the sector.

Work to be undertaken:

23. Continue to promote value of diversity, identify barriers that prevent greater involvement of women in the mining industry, and highlight the benefits that diversity of the staff and the resulting multiplicity of experiences and worldviews can bring to entities operating in the sector.

Deliverables:

24. A segment promoting value of diversity, identifying barriers that prevent greater involvement of women in the mining industry, and highlighting the benefits that diversity of the staff and the resulting multiplicity of experiences and worldviews can bring to entities operating in the sector, which is to be added to a standard training module developed by the Group of Experts.

Timeline:

25. A segment promoting value of diversity, identifying barriers that prevent greater involvement of women in the mining industry, and highlighting the benefits that diversity of the staff and the resulting multiplicity of experiences and worldviews can bring to entities operating in the sector, which is to be added to a standard training module developed by the Group of Experts, by December 2021.

I. Continue to provide advice on coal mine methane related standards to the United Nations Framework Convention on Climate Change (UNFCCC), the International Organization for Standardization (ISO), and other international, national and regional market-based coal mine methane emission reduction mechanisms. Engage and develop robust professional ties with the recognized expert entities operating in the field of fossil-based energy.

Description:

26. In the past the Group of Experts advised UNFCCC on matters related to methane standards and methodologies, namely ACM0008 (Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation). The Group of Experts also provides comments on other international, national and regional market-based coal mine methane emission reduction mechanisms, such as the California Air Resources Board Mine Methane Capture Protocol or the ISO Technical Committee 263 Coalbed methane (CBM). To increase the efficiency and visibility of its work, the Group of Experts seeks to establish professional ties with recognized expert entities operating in the field of fossil-based energy. In order to change the negative and generalized image of the coal industry predominant among multilateral and bilateral financial institutions, which has become a barrier to financing and implementing coal mine methane capture and use projects, the Group of Experts seeks to engage with such institutions in order to educate them on the benefits deriving from efficient coal mine methane management.

Work to be undertaken: Continue to liaise with the above-mentioned and similar organizations and actively solicit the Group of Experts' advice and services. To establish professional ties with the recognized expert entities operating in the field of fossil-based energy. To change the negative and generalized image of the coal industry predominant among multilateral and bilateral financial institutions and educate such institutions on the benefits deriving from efficient coal mine methane management.

Deliverables:

- (a) Advice and comments on coal mine methane related standards;
- (b) Continue efforts to re-establish professional ties with the World Coal Association and the International Energy Agency (IEA) Coal Industry Advisory Board;
- (c) Continue exploring opportunities for engagement with multilateral and bilateral financial institutions, with the goal to change the negative and generalized image of the coal industry, and to raise extrabudgetary funds to support the current and future activities of the Group of Experts.

Timeline:

- (a) To provide advice as requested;
 - (b) Re-engagement with the World Coal Association and the IEA Coal Industry Advisory Board, by December 2021, subject to the interest of the targeted partners;
 - (c) Engagement with multilateral and bilateral financial institutions, by December 2021, subject to the interest of the targeted partners.
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