

Evaluation of the effectiveness and impact of UNECE case studies on the application of best practice guidance for coal mine methane management

Terms of reference

I. Background

The Group of Experts on Coal Mine Methane (CMM) is mandated by UNECE to “promote the reduction of greenhouse gas emissions from coal mines by means of activities that may help the recovery and use of methane in order to reduce the risks of explosions in coal mines” (ECE/EX/2016/L.5).

The principal activity of the Group of Experts is to develop, update and disseminate the [Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines](#). This publication is not a technical manual; rather, it is a source of guidance for senior managers and policy makers. It contains recommended principles and standards on CMM capture and use that provide decision-makers with an understanding from which to direct policy and commercial decisions.

The principles outlined in the Best Practice Guidance are illustrated by a number of case studies organized, for comparison purposes, in a common framework (Initial Conditions—Gas Control Problems—Solution). In 2014-15 the Bureau of the Group of Experts reviewed this framework and found it a useful tool to describe various coal mine problems and their solutions. Using this framework, the Group of Experts continued to collect, discuss and disseminate case studies on the application of best practice guidance in specific coal mines in different regions of the world. These case studies were seen as necessary to demonstrate how the principles outlined in the Best Practice Guidance can be implemented and adapted to specific mining circumstances. At its 10th session held on 28 October 2015, the Group of Experts recommended that a case study library be developed to complement the Best Practice Guidance.

More information is available at: <http://www.unece.org/energy/se/cmm.html>. All relevant documentation will be provided to the evaluation consultant.

II. Purpose

The purpose of this evaluation is to assess the *relevance* of the work on CMM case studies to the implementation of UNECE’s sub-programme on sustainable energy, as well as its *effectiveness* in enhancing the capacity of the ECE member States to improve their CMM management. The evaluation will also address the *efficiency* and *sustainability* of these activities, in order to learn how to maintain and possibly replicate their beneficial effects in the future.

The evaluation will assess whether the activity on case studies succeeded in contributing to capacities of participating countries to implement best practices in CMM management. The evaluation should also identify the lessons learned from this activity and challenges that need further attention and that could lead to the revision of working modalities in the future, and develop practical recommendations to the UNECE’s Sustainable Energy Division, coal-dependent ECE member States, other United Nations Member States that rely on coal, coal mine operators, and other partners on how to improve the efficiency and effectiveness of this work in the future.

III. Scope

The context in which this activity is implemented has been defined by the mandate and Terms of Reference of the UNECE Group of Experts on CMM (ECE/EX/2016/L.5). In more general terms, the impact of the activity should also be assessed against the broader framework of UNECE’s work in the field of sustainable energy, in particular its role in the reduction of carbon footprint reduction of the coal mine sector, the attainment of

Sustainable Development Goals, as well as its contribution to the global commitments to combat climate change.

The thematic scope of the evaluation is the effectiveness of the process of developing case studies on the application of best practice guidance for coal mine methane management at operating coal mines around the world. The intent of the evaluation is to explore what could be done differently or better in the future.

The evaluation will provide insights into the organizational contribution of UNECE only, and not of other organizations, over the period from 1 January 2014 to 31 December 2016. The evaluation will exclude other, similar work by the UNECE Sustainable Energy Division.

In the world of coal mine methane and methane management in general, there are other competing projects and initiatives. It is therefore important to be aware of the limitations of this particular activity. Understandably, it will not be easy to establish what its individual impacts might have been, as they might overlap with those of other similar projects.

To make sure the evaluation is focused on specific impacts of the activity, the evaluator will undertake interviews, collecting feedback only from people directly involved in the activity. The evaluation process will thus engage: international and national coal mine methane experts, representatives of coal mine companies and private sector in general, as well as international, governmental and non-governmental organizations involved in, or benefited from, the development of case studies. If direct interviews may not be acceptable to some participants, written questionnaire could be considered.

To the extent possible, the evaluation shall cover gender and human rights aspects, taking into account guidance provided by the United Nations Evaluation Group on the matter, available at: <http://www.uneval.org/document/detail/980> and <http://www.uneval.org/document/detail/1452>).

IV. Issues

The evaluation will seek to report on the *effectiveness* of the activity in achieving its objectives, its *sustainability* and *efficiency*, in particular in how the inputs and resources (funds, staff, time, in-kind contribution by experts) were utilized in achieving the outputs, and its *relevance* to the priorities and needs of its prospective beneficiaries and the consistency with the attainment of its overall objective.

Key questions that the evaluation will seek to answer include:

Effectiveness

1. To what extent the objective of the activity was achieved?
2. How did the activity on case studies strengthen the national capacity of participating countries to enhance the coal mine methane management, improve coal mine safety, and reduce greenhouse gas emissions from coal mines?
3. To what extent the expected accomplishments of the activity were achieved? In particular:
 - 3.1. How did the activity contribute to increasing the understanding of the initial conditions, opportunities and challenges in methane management in different coal mining regions?
 - 3.2. How did the activity increase the capacity of UNECE member States, and other United Nations Member States, to apply internationally recognized best practices in the abatement, recovery, and use of coal mine methane?
4. What were the challenges/obstacles to achieving the expected results?
5. What has prevented to achieve the desired results?

Sustainability

6. Could the results be further sustained? In particular:
 - 6.1. To what extent will the benefits of the activity continue after its completion, without overburdening recipient countries and stakeholders?
 - 6.2. How is the stakeholders' engagement likely to continue, be scaled up, replicated or institutionalized?

- 6.3. To what extent do the partners and beneficiaries ‘own’ the outcomes of the work?
- 6.4. How has the activity built in resilience to future risks?
- 6.5. What were the major factors which influence the achievement or non-achievement of sustainability of the activity?
- 6.6. How will the activity pave the way for future work on the reduction in explosion risks and greenhouse gas emissions through recovery and use of methane in coal mines?

Efficiency

7. Were the resources sufficient for achieving the results? Were the results commensurate with the resources?
8. Were the results achieved on time?
9. Were all activities organized efficiently and on time?
10. To what extent the resources were used economically? How could the use of resources been improved?
11. Where there any alternatives to achieve the same results? If yes, which ones?
12. Was the activity implemented in the most efficient way compared to alternatives? In particular, how do the costs and use of resources compare with other similar projects (within UNECE, other regional commissions, other UN agencies, or other organizations and initiatives)?
13. How was the difference between planned and actual expenditure justified (if any)?

Relevance

14. To what extent did the activity respond to the priorities and needs of the coal-dependent UNECE member States? How relevant was it to their needs and priorities?
15. How relevant is it to other regions that face challenges in coal mine methane management?
16. What is the relevance of the activity for the broader work of UNECE?
17. To what extent are the objectives of the activity still valid? How can the activity be replicated in the UNECE region? Or in other regions?
18. To what extent are the outputs consistent with and relevant to the overall objective and expected accomplishments?
19. To what extent are the outputs consistent with and relevant to the intended impacts and effects?

V. Methodology

The evaluation will be carried out using a questionnaire, followed by targeted interviews to further elaborate the findings of the survey. An extensive desk review of existing documents will also be carried out.

A **questionnaire** will be sent to all participants in capacity-building workshops and seminars, consultants, as well as relevant UNECE staff involved in the project. It will include open and closed questions (in English and Russian). To ensure objective approach, the questionnaire will be prepared by the evaluation consultant, and will be reviewed by the UNECE project manager. It will search to reply to the questions listed in section IV, formulated in a way the evaluation consultant finds best according to his/her previous evaluation experience and expertise in the region.

The **interviews** will take place via phone or other communication platform (e.g., Skype or Whatsapp). The UNECE project manager will provide the list with contact details. It is anticipated that the evaluator will make one visit to Geneva during the evaluation to meet with UNECE staff and stakeholders in Geneva.

The **desk review** will be based on progress reports and material available including the:

- Activity progress reports (presented at the Group of Expert’s sessions)
- Case study presented at the Group of Expert’s sessions and/or capacity-building workshops and seminars
- Other documents that the evaluator deems necessary for this exercise.

The UNECE project manager will provide support and further explanation to the evaluation consultant when needed.

The evaluation consultant will write a **report** on the results of the evaluation based on these terms of reference.

VI. Evaluation Schedule

Develop a timetable for the following phases of the evaluation:

A. Preliminary research: March 2017 (by evaluation consultant)

B. Data Collection: March-April 2017 progress reports, session reports, case studies, workshop evaluations (by UNECE project manager); questionnaire and interviews (by evaluation consultant); May-June 2017.

C. Data Analysis: July 2017 (by evaluation consultant)

D. Draft Report (include timing for peer review): August 2017 (by evaluation consultant)

E. Final Report: October 2017 (by evaluation consultant)

VII. Resources

An external evaluation consultant identified through the UNECE evaluation roster will be hired and receive support from the UNECE project manager. The UNECE Programme Management Unit will provide guidance on the process for the preparation of the evaluation.

VIII. Intended Use/Next Steps

The evaluation will be consistent with the UNECE evaluation policy. The results will be used in the planning and implementation of new sustainable energy capacity building projects in and beyond the UNECE region.

IX. Criteria for Evaluators

The evaluator should have:

- An advanced university degree or equivalent background, with specialized training in evaluation, project management, statistics, advanced statistical research and analysis.
- Good knowledge of and experience in energy-related capacity building projects, preferably with a specific knowledge of coal mine methane management
- Relevant professional experience in design and management of evaluation processes with multiple stakeholders, survey design and implementation, and project planning, monitoring and management.
- Demonstrated methodological knowledge of evaluations, including quantitative and qualitative data collection and analysis for end-of-cycle project evaluations.
- Working languages (written and spoken proficiency): English and Russian.
