

Conclusions and recommendations

Sixteenth meeting of greenhouse gas inventory lead reviewers

13 and 14 March 2019
Bonn, Germany

1. The 16th meeting of greenhouse gas (GHG) inventory lead reviewers (LRs) was held in Bonn, Germany, on 13 and 14 March 2019. A total of 52 experts from Parties not included in Annex I to the Convention (non-Annex I Parties) and 82 experts from Parties included in Annex I to the Convention (Annex I Parties) were invited to the meeting. Of the 74 experts who attended, 36 were from non-Annex I Parties and 38 were from Annex I Parties. In addition, 14 members of the Bureau of the Compliance Committee, 2 representatives of the International Energy Agency (IEA) and 1 representative of the European Commission attended the meeting as observers.

2. The secretariat held a refresher seminar for LRs and experienced reviewers on the morning of 13 March, before the LRs meeting, which was attended by 73 experts (36 from non-Annex I Parties and 37 from Annex I Parties). The refresher seminar focused on the supporting training material for experts of sectors other than land use, land-use change and forestry (LULUCF) for reviewing accounting information on activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol (KP-LULUCF activities); the review of the quality assurance (QA) and quality control (QC) and verification systems of Annex I Parties; and the Review Handbook.

3. In accordance with the annex to decision 13/CP.20, the annex to decision 22/CMP.1 in conjunction with decision 4/CMP.11, and annex II to decision 24/CMP.1, the meeting contributed to facilitating the work of LRs in fulfilling their task to ensure the consistency of reviews across all Parties and the quality and objectivity of the technical examinations of the reviews,¹ and to providing suggestions on how to improve the quality, efficiency and consistency of the reviews.² In addition, the LRs meeting provided guidance on such matters as review tools, materials and templates.³ These conclusions and recommendations will be reported to the Subsidiary Body for Scientific and Technological Advice (SBSTA) at its 51st session (December 2019).⁴ Such reports provide the SBSTA with inputs for providing further guidance to the secretariat on the selection of experts and the coordination of the expert review teams (ERTs) and the expert review process.

4. Furthermore, in accordance with the invitation of the SBSTA at SBSTA 48, the LRs, at their 16th meeting, continued their consideration of the experiences in conducting desk reviews (DRs) and provided suggestions on how to improve the operationalization of the reviews.⁵

5. The LRs noted that the organization during the meeting of the dialogue on the complementary roles of ERTs and the Compliance Committee in facilitating implementation of the Kyoto Protocol proved to be a useful platform for the exchange of views, in particular in enabling a face-to-face discussion with Compliance Committee members that led to a better understanding of the respective mandates and roles, as well as the challenges faced by ERTs in the review process.

¹ Decision 13/CP.20, annex, paragraph 42.

² Decision 13/CP.20, annex, paragraph 44.

³ Decision 13/CP.20, annex, paragraph 48.

⁴ Decision 13/CP.20, annex, paragraph 44 and decision 22/CMP.1, annex, paragraph 40(a).

⁵ FCCC/SBSTA/2018/4, paragraph 90.

I. Coordination and planning of the 2019 review cycle

6. The LRs noted the secretariat's plan to organize the 2019 review cycle, and noted with appreciation that the planning of the reviews has started earlier than in previous years (March in 2019 compared to April in 2018 and May in 2017). The plan covers the review of the submissions of 22 Annex I Parties, in accordance with the budget approved by Parties for the secretariat's work programme for 2018–2019.⁶ The secretariat will expand the plan to cover the review of the submissions of the remaining 22 Annex I Parties, fully in accordance with the mandate to organize the review of all 44 submissions from Annex I Parties, if sufficient resources are available in the Trust Fund for Supplementary Activities in time for the organization of reviews.

7. The LRs reiterated the request to the secretariat to remind Parties in a position to do so of the need to provide support in terms of supplementary funding for projects related to the reviews of the GHG inventories of Annex I Parties by the end of April 2019 at the latest, in order to enable the secretariat to organize the review of all 44 submissions from Annex I Parties and to facilitate the efficient organization of the 2019 review cycle.

8. The LRs requested the secretariat to progress swiftly with the remaining steps of the organization of the 2019 review cycle in accordance with the plan to organize the 2019 reviews by enquiring as to the availability of experts as soon as possible and no later than by 30 April 2019, and to send invitations to experts no later than by 31 May 2019.

II. Training and availability of review experts

9. The LRs welcomed the information on training activities undertaken by the secretariat in 2018 and planned training activities in 2019, and recalled the need for new and experienced experts and new LRs to fulfil the mandatory requirements of the relevant training courses under the Convention and its Kyoto Protocol with a view to taking part in the reviews. The LRs also welcomed the organization of the refresher seminar held prior to the 16th meeting on the supporting training material for reviewing accounting information on KP-LULUCF activities, the review of the QA and QC and verification systems of Annex I Parties, and the Review Handbook, and noted the need to explore more opportunities for experienced reviewers to enhance their knowledge and skills for the review of GHG inventories.

10. The LRs noted that the document "Accounting of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol in the second commitment period" and its examination are helpful for LRs whose technical expertise is not in the LULUCF sector.

11. The LRs noted the need for all new experts and new LRs who have not undertaken the relevant courses and examinations to fulfil the mandatory requirements of the updated training programme for members of ERTs participating in annual reviews under Article 8 of the Kyoto Protocol to pass the relevant examinations before the start of the 2019 review cycle.

12. The LRs welcomed the ongoing efforts of the secretariat to improve the user-friendliness of the online courses under the Convention, by making them available for download and accessible throughout the year.

13. The LRs noted the importance of nominating new experts with technical potential and interest to the UNFCCC roster of experts and of updating the information on experts contained in the roster.

14. The LRs noted the need for the secretariat to explore various approaches to increase the number of review experts, in particular experts from non-Annex I Parties, and to report on this matter at the next LRs meeting.

15. The LRs requested the secretariat to enhance the clarity of the questions for the examinations of the training courses and evaluate the possibility of updating or developing 'open book' examinations for the current training courses.

⁶ FCCC/SBI/2017/4, paragraph 50(c).

16. The LRs noted the resource constraints, both human and financial, in the secretariat and encouraged Parties to continue to support the training activities by providing sufficient resources to continue and strengthen the implementation and further enhancement of these key activities, in order to achieve the level of transparency required both now and in the future.

III. Guidance on the development of review tools and materials

A. Review tools and materials

17. The LRs noted the progress made by the secretariat in further developing the GHG data interface. They also noted that the functioning of the GHG data interface, as well as the completion of the work on the remaining two modules,⁷ continue to be affected owing to insufficient funding.

18. The LRs noted that the review tools (the online GHG Locator, the Comparison Tool and the offline version of the GHG Locator) were developed and improved following the recommendations of the 15th meeting of LRs and were widely used during the 2018 review cycle. The LRs also noted that the overall functionality and performance of these tools were enhanced, allowing more experts to use them before, during and after the review week. The LRs expressed support for the enhancement of the Statistical Outlier Detection Tool under a new internal tool to support the preparation of assessment reports in an integrated manner.

19. The LRs noted the secretariat's plan to further enhance the user-friendliness of the review tools based on the feedback received from experts during the 2018 review cycle. The LRs also noted that additional financial resources are needed to implement all planned improvements. The LRs recommended that the secretariat prioritize such improvements.

B. Status report

20. The LRs noted that the secretariat has completed the implementation of changes to the status report following the conclusions of the 15th meeting of LRs, including the new template of the status report which will be used for the generation of status reports for the 2019 review cycle.

C. GHG inventory virtual team room

21. The LRs noted that around 200 users, including LRs, review officers and Party representatives, used the GHG inventory virtual team room (iVTR) during the 2018 review cycle. As a result of a survey conducted in November–December 2018, iVTR users indicated that the iVTR has been enhanced and continues to support the improvement of efficiency in conducting the reviews.

22. The LRs noted the benefits of continuing the use of the iVTR and welcomed the new features of the iVTR which were made available for the 2018 review cycle, in particular read-only access to historical review materials, the simplified review issues tracking system (RITS) module and integration between the RITS module and the questions and answers module. The LRs also noted the pilot experience with a Party in conducting the assessment report using the questions and answers module of the iVTR.

23. The LRs welcomed the progress made by the secretariat in enhancing the RITS (issues database module) following the conclusions of the 15th meeting of LRs. The LRs requested the secretariat to provide a mock-up version of the enhanced RITS (issues database module) to a small group of LRs, who will provide support to the secretariat in designing the final product. The LRs noted that the enhanced RITS (issues database module) is expected to be available for the 2020 review cycle. The LRs expressed support for further integration of the

⁷ The two remaining modules are: (i) user-defined indicators; and (ii) compilation and accounting data.

iVTR modules and for further improving the user-friendliness of the tool. The LRs noted that additional financial resources are needed to implement all planned improvements.

24. The LRs also noted that the secretariat is working with a view to resolving the connectivity problems when using the iVTR report preparation module with different software platforms.

IV. Improvements to the quality, efficiency and consistency of reviews, in accordance with decisions 13/CP.20 and 4/CMP.11

25. The LRs reaffirmed their role in leading ERTs and the review process, ensuring the quality and consistency of the reviews and supporting new experts taking part in ERTs. The LRs noted that ensuring and improving consistency in the review process is a collective and constant effort by ERTs, LRs and the secretariat. The LRs reiterated their previous conclusions and recommendations for enhancing consistency of the review process, particularly those conclusions and recommendations agreed since the 13th meeting of LRs, where the LRs started the consideration of reviews undertaken pursuant to the latest “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories” (hereinafter referred to as the UNFCCC Annex I inventory reporting guidelines) and the “Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention”. In addition, the LRs encouraged the secretariat to explore opportunities for more active involvement of the sector expert groups⁸ before, during and after the review week (e.g. through electronic fora, and by identifying frequently asked questions, etc.), while recognizing that the final decisions are those of the ERT. The LRs further encouraged experts to carefully consult the Review Handbook prior to the review week. The LRs also requested the secretariat to identify options for including standardized text for more common ERT findings in the annual review report (ARR) template to help improve the structure of the reports and facilitate subsequent reviews.

A. International Energy Agency data comparison

26. The LRs noted with appreciation the work of the group of LRs and energy experts on the further elaboration and development of IEA data comparison following the conclusions of the 15th meeting of LRs. The LRs considered the guidance developed by the group on improving the usefulness of this data comparison⁹ and requested the secretariat and IEA to implement it for the 2020 review cycle, subject to the availability of resources. The LRs emphasized that cooperation and communication of stakeholders regarding energy statistics at the national level was identified as a key factor to improving data consistency between the energy balances used in GHG inventories and reported to IEA.

B. Improving consistency of reviews

27. As a central part of the meeting, the LRs discussed specific ways to improve the consistency and efficiency of the review process based on the experiences from the 2018 review cycle and the background paper on consistency issues identified during the 2018 GHG inventory review cycle prepared by the secretariat. In particular, the LRs recommended that LRs promote the following procedures:

⁸ The LULUCF advisory group was established at the 7th meeting of LRs; other sector expert groups were established by the conclusions and recommendations of the LRs at their 11th meeting.

⁹ The guidance is contained in the background paper on improving the usefulness of IEA data comparison, prepared for the 16th meeting of GHG inventory lead reviewers.

(a) Decision tree on significance threshold: the LRs thanked the small group of LRs and the secretariat for their work to develop a decision tree following the conclusions of the 15th meeting of LRs. In particular, the output of such work clarifies how the threshold defined in paragraph 37(b) of the UNFCCC Annex I inventory reporting guidelines should be applied when considering issues for inclusion in a list of potential problems and further questions raised by the ERT for reviews under the Kyoto Protocol (the Saturday Paper). The LRs requested the secretariat to include the agreed decision tree in the Review Handbook and present it to the ERTs prior to the 2019 review cycle;

(b) Confidentiality: the LRs acknowledged that reporting of information by a Party as confidential is consistent with the UNFCCC Annex I inventory reporting guidelines. Where a Party reports information as confidential, the LRs noted that ERTs should assess whether the Party transparently describes in the common reporting format (CRF) tables and the national inventory report (NIR) where these emissions are reported, and may encourage the Party to provide in the NIR the specific basis for protecting the confidentiality of such information, including any domestic law. Parties should be encouraged to provide, on a confidential basis in response to a request made by the ERT, the confidential data or information on relative indicators or indices or other well-defined alternative means to consider the emission estimates reported by Parties based on the confidential information. The LRs noted the existing “Code of practice on the treatment of confidential information in the technical review of GHG inventories from Parties included in Annex I to the Convention” and the UNFCCC procedures to implement the code of practice;

(c) Reviewing the GHG inventory of the European Union (EU): the LRs noted that the review of the EU submission is unique in that it is the direct sum of emissions and removals from the national inventories compiled by the EU member States as well as Iceland, and that individual member States as well as Iceland are also subject to an inventory review. The LRs further noted that the focus of the EU review should be on ensuring that the EU submission accurately reflects the summation of the emissions and removals of its member States as well as Iceland and that information is transparently reported in the EU NIR, particularly for key categories identified at the level of the EU. Recommendations directed at specific member States as well as Iceland are beyond the scope for inclusion in the ARR of the EU. The LRs encouraged the secretariat to conduct the review of the EU submission after the submissions from individual EU member States and Iceland have been reviewed;

(d) Use of the COPERT model emission factors (EFs): the LRs discussed the issue of the use of EFs from the COPERT model for estimating carbon dioxide (CO₂) emissions from road transportation and concluded that ERTs should recommend that Parties transparently document how any EFs applied are appropriate to the national circumstances, particularly when the category is key, to enable the ERT to assess the accuracy of the inventory. The LRs noted that the carbon content of fuels sold in the country should be used to estimate the CO₂ emissions from road transportation in accordance with the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the 2006 IPCC Guidelines);

(e) Carbon stocks in equilibrium: the LRs recommended that the notation key “NA” (not applicable) is to be used in CRF tables for the tier 1 assumption provided in the 2006 IPCC Guidelines for “carbon stocks in equilibrium” in the LULUCF sector and the notation key “NE” (not estimated) is to be used for reporting carbon pools for which the Party has reported verified information that the pool is “not a net source” under KP-LULUCF activities, in accordance with decision 2/CMP.8, annex II, paragraph 2(e);

(f) Availability of methods in the 2006 IPCC Guidelines: the LRs clarified that, consistent with the 2006 IPCC Guidelines, reporting of all CO₂ emissions related to the non-energy-uses of fuels is required, including fuels used for hydrogen production. The LRs further clarified that the methods provided in the 2006 IPCC Guidelines do not cover reporting of methane (CH₄) and nitrous oxide (N₂O) emissions from home composting under category 5.B.1; therefore, these emissions are not mandatory for reporting. The LRs noted that failure to report indirect N₂O emissions from leaching/run-off in manure management systems does not lead to an underestimate of N₂O emissions, and therefore ERTs do not need to raise this issue as a potential problem.

V. Operationalization of reviews, including desk reviews

A. Operationalization of reviews

28. The LRs noted that one of the main bottlenecks that affects the timeliness of report preparation is the QC and QA processes within the secretariat due to the limited resources available and the coincidence of review activities with other tasks, such as support to sessions of the subsidiary bodies or the Conference of the Parties. The LRs further noted the importance of ensuring that sufficient resources are allocated to the secretariat to undertake QC and QA activities during the review period.

29. The LRs noted that the timeliness of report preparation is dependent on the performance and quality of the results of each stage of the review process. The LRs discussed possible solutions to improve timeliness and quality and requested the secretariat to continue to make efforts to implement them during the 2019 review cycle, including:

- (a) Introducing standardized text in the ARR template (e.g. sample paragraphs for each of the principles of transparency, accuracy, completeness, consistency and comparability);
- (b) Ensuring that LRs encourage peer reviews among relevant review experts and that such peer reviews are performed during the review week;
- (c) Prioritizing the QC process by the LRs and the secretariat by concluding it in the week after the review week with a focus on the main issues identified and ensuring that all issues identified during the QC process are properly addressed;
- (d) Prioritizing the QA process by focusing on checking consistency and avoiding unnecessary editing, recognizing that the timeliness and scope of the QA process is related to the quality of the draft reports prepared by the ERT.

30. The LRs also discussed different approaches and options to enhance the quality and efficiency of reviews, including:

- (a) When organizing ERTs, the secretariat should aim to ensure that LULUCF experts do not act as LRs and that at least one LR does not have sectoral responsibilities;
- (b) Ensuring that an earlier invitation is sent to experts to participate in a review (at least three months prior to the review), and that the preparation and distribution of the materials for the review process occurs no later than three weeks prior to the review;
- (c) Developing a checklist per sector based on the Review Handbook, which would be a product/tool that a reviewer has to follow during the review week, noting that this could be a useful mean of training new experts and reducing the work of LRs in supporting new experts;
- (d) Enhancing the role of the RITS by instructing experts to document minor issues only in the RITS and not including them in the ARR, in order to reduce the workload involved in the QA process and editing;
- (e) Assigning time at the end of the review week, if possible, to discuss what worked well and what did not work and lessons learned while memories are still fresh.

B. Desk reviews

31. The LRs discussed different approaches and options to enhance the quality and efficiency of DRs, considering the experience from the 2015, 2016, 2017 and 2018 review cycles. The LRs noted with appreciation that the DRs in 2018 showed improvements in terms of timeliness and that the review reports better reflect the mandated scope for this review

approach as defined in decision 13/CP.20.¹⁰ In part, these improvements stem from the development of a specific template for the ARR for DRs.

32. However, the LRs noted difficulties of extending the DR approach to more Parties during a review cycle. These difficulties include lack of available experts for this approach, competition with other non-review tasks while experts remain in their home country during the review week, and problems with communication (including experts working in different time zones, experts not being available at certain times for discussing review issues, and performance of the iVTR under certain conditions).

33. The LRs discussed several solutions to these difficulties and requested LRs and the secretariat to make the necessary efforts to implement those solutions starting from the 2019 review cycle, including:

(a) When selecting Parties for DRs, the secretariat is to consider criteria such as the number and complexity of issues identified in previous review reports and/or feedback from the previous ERT with respect to the quality of the Party's submission;

(b) The secretariat, when inviting review experts to desk reviews is to communicate, upon request and indication by the expert, the time and effort needed to successfully complete the DR, taking into consideration the option for limited scope of the DR (see para. 31 above);

(c) Ensuring that an earlier invitation is sent to experts to participate in the review (at least three months prior to the review), and that the preparation and distribution of the materials for the review process occurs no later than three weeks prior to the review;

(d) Enhancing the review week practices and plans in order to improve the time efficiency of the review, including considering a reduction in the number of teleconference calls and using more communication via email;

(e) The secretariat is to provide to ERTs a checklist of the actions to be prioritized during the DRs, taking into consideration relevant sections of the Review Handbook.

34. The LRs noted the need for Parties to encourage and facilitate the participation of their experts in DRs, noting that without greater support from Parties it will be very difficult for the secretariat to organize DRs and ensure geographical balance in the ERTs.

35. The LRs noted that the Comparison Tool is able to provide a list of categories recalculated by more than 2 per cent in the tool itself and an Excel file in order to facilitate DRs. The LRs also noted that the Excel file, which contains a list of categories recalculated by more than 2 per cent, does not include numerical information on emissions/removals. The LRs noted that it would be useful for the Excel file generated by the Comparison Tool to include numerical information on emissions/removals, particularly for the base year and for the last but one reported year. The LRs requested the secretariat to investigate the possibility of enhancing the Comparison Tool for generating the above-described Excel file.

¹⁰ Four submissions were reviewed in DRs in 2018. As at 10 March 2019, the review reports of three of those submissions have been published (Austria: 16 January 2019; Denmark: 5 February 2019; and Italy: 29 January 2019).