



**UNITED
NATIONS**



**Framework Convention
on Climate Change**

Distr.
GENERAL

FCCC/SBSTA/2009/INF.2
18 May 2009

Original: ENGLISH

SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

Thirtieth session

Bonn, 1–10 June 2009

Item 7 (a) of the provisional agenda

Methodological issues under the Convention

Review of information on greenhouse gas inventories reported by Parties included in Annex I to the Convention and related training needs

Activities relating to the review of information submitted by Annex I Parties under the Convention on greenhouse gas emission inventories, including the training of review experts, planning and conduct of the reviews, organization of lead reviewers' meetings and further development of the greenhouse gas information system

Note by the secretariat

Summary

This document presents information requested by the Subsidiary Body for Technological and Scientific Advice on the Convention reporting and review activities planned and prioritized for 2010–2011. It covers information on the lead reviewers' meetings, the training programme, how review activities are planned and conducted, and the further development of the greenhouse gas information system. The document also provides an assessment of the commensurate resource requirements for these activities. The information provided for these activities is presented for two options, namely a baseline option and a comprehensive option.

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I. Introduction

A. Mandate

1. The Subsidiary Body for Technological and Scientific Advice (SBSTA), at its twenty-ninth session,¹ discussed the technical review of greenhouse gas (GHG) inventories from Parties included in Annex I to the Convention (Annex I Parties). It acknowledged that managing the reporting and review processes and related activities, which includes training experts, planning and conducting the reviews, organizing meetings of lead reviewers and further development of the GHG information system (GHGIS), including the CRF Reporter software, is placing considerable demand on the secretariat and requires considerable resources.

2. The SBSTA noted the importance of the training for inventory review experts, recalled the training programme referred to in decision 12/CP.9, annex I, and requested the secretariat to update this programme for the period up to 2014 and to prepare, for consideration at its thirtieth session, a draft of this updated programme. The SBSTA also noted with concern that it continues to be difficult for the secretariat to organize reviews with complete expert review teams (ERTs). The SBSTA reiterated its request to Parties to nominate experts to the roster of experts, update the roster at least once a year and make efforts to ensure that invited experts are able to participate in reviews.

3. The SBSTA reiterated the urgent need to give priority to the fundamental activities mentioned in paragraph 1 above and to plan future related activities. It invited Annex I Parties to consider supporting these fundamental activities by providing stable and sufficient funding and to strengthen the coordination capacity of the secretariat. The SBSTA also requested the secretariat to prepare a note describing how these activities are planned and prioritized for 2010–2011, and identifying commensurate resource requirements, for consideration at its thirtieth session.

B. Scope of the note

4. This document presents information requested by the SBSTA on reporting under the Convention and review activities planned and prioritized for 2010–2011. This information is presented in five parts and for two options, namely a **baseline option** and a **comprehensive option**. The first part (chapter II) deals with the lead reviewers' meetings, the second part (chapter III) deals with the training programme, the third part (chapter IV) deals with how review activities are planned and conducted, the fourth part (chapter V) deals with the further development of the GHGIS, including the CRF Reporter software, and the fifth part (chapter VI) provides an assessment of the commensurate resource requirements.

5. The **baseline option** outlines a plan to strengthen the capacity of the secretariat to carry out the following tasks and activities:

- (a) Facilitating the work of the lead reviewers, including by organizing the lead reviewers' meetings;
- (b) Developing and implementing an updated training programme, including by organizing an annual training seminar;
- (c) Managing the reporting and review processes.

6. These activities are considered by Parties and the secretariat to be of the highest priority, as they are essential to the review process. Development and maintenance of the GHGIS, including the ongoing support of CRF Reporter, are also among activities with the highest priority. Some of these activities are described in this document but have not been included in the assessment of the resources required for the

¹ FCCC/SBSTA/2008/13, paragraph 66.

two options (see chapter VI below), as these ongoing activities are managed using existing secretariat resources. Similarly, no cost assessment is provided for the further development of the GHGIS, including CRF Reporter (see para. 30 below).

7. The **comprehensive option** includes all elements of the baseline option. In addition, it includes elements that would allow the secretariat to further enhance the support provided for the reporting and review activities. These elements include development of a new tool to facilitate communication among reviewers and access to all information relating to the reviews, and organization of regional training seminars and seminars for experienced reviewers. This option would also enhance the secretariat's capacity to prepare analytical materials on review activities, by using consultants to ensure consistency of the reviews.

C. Possible action by the Subsidiary Body for Scientific and Technological Advice

8. The SBSTA may wish to take note of the information provided in this document with a view to providing additional guidance to Parties and the secretariat on this matter, and to prepare a draft decision for consideration and adoption by the Conference of the Parties (COP) at its fifteenth session, if appropriate.

II. Meetings of lead reviewers

9. The COP, by its decision 12/CP.9, requested the secretariat to organize meetings of lead reviewers participating in the technical reviews of GHG inventories from Annex I Parties. The objective of the meetings is to consider methodological and procedural issues relating to inventory reviews, with a view to developing a common approach to these issues among the expert review teams (ERTs) and making recommendations to the secretariat on ways to improve the effectiveness and efficiency of the technical reviews. In accordance with decision 12/CP.9, conclusions and recommendations arising from these meetings must be included in the annual report of the secretariat to the COP on the technical review of GHG inventories. They are also used as guidance by ERTs.

10. Annual meetings of lead reviewers are very important for ensuring the consistency of the review process, and as such should be given high priority. The secretariat organized six meetings between 2003 and 2009 in accordance with the mandate indicated in paragraph 9 above, and the results of these meetings clearly demonstrated that recommendations of the lead reviewers are instrumental in shaping and strengthening the review process. Due to their importance, organization of annual meetings of the lead reviewers is included in the **baseline option** for 2010–2011. This will involve:

- (a) Organizing meetings of the lead reviewers in 2010 and 2011, with a balanced representation of reviewers from both Annex I Parties and Parties not included in Annex I to the Convention (non-Annex I Parties);²
- (b) Providing basic input for the consideration of methodological and procedural issues at the meetings. Issues considered may relate to the consistency of the review process and opportunities to improve consistency, to the review of higher tier methods and models, and to other methodological and guideline-related matters;
- (c) Inviting experienced experts as observers to the meetings.

² Participation of lead reviewers from non-Annex I Parties and from Annex I Parties with economies in transition is funded in accordance with the general rules of funding for participation of meetings organized under the Convention.

11. At its twenty-ninth session, the SBSTA requested the lead reviewers to discuss, at their next meeting, their experiences with the review of higher tier methodologies and options to assist in and improve the review of these methodologies.³

12. At the same session, the SBSTA also requested the lead reviewers to explore, at their next meeting, ways of improving the consistency of reviews based on the experience of and lessons learned by the ERTs, Parties and the secretariat in the review process. It further requested that the issue of consistency be included as a permanent agenda item for the lead reviewers' meetings.⁴ Emerging issues referred to in paragraph 10 (a) above need to be considered in the context of the objective of achieving greater consistency, and constitute one element of the **baseline option**. They were already included in the agenda for the 2009 meeting,⁵ and will receive greater attention at the next meetings. The secretariat envisages that the lead reviewers will continue to discuss experiences and lessons learned from reviews conducted in 2009 and 2010 on the subject of consistency at the meetings organized in 2010 and 2011 respectively, in accordance with their overall mandate and in line with the request of the SBSTA mentioned above.

13. One of the approaches to ensuring and increasing consistency of the reviews identified by the secretariat is to invite experienced experts who are currently not serving as lead reviewers to attend the lead reviewers' meetings. This will foster a common understanding of issues and recommendations of lead reviewers that relate to consistency and other objectives of the review process. This element is also included in the **baseline option**.

14. The **comprehensive option** includes further elements, such as organizing consultations among the lead reviewers on complex issues during a review and the possibility for the secretariat to act as the facilitator of such consultations, as recommended by the SBSTA at its twenty-ninth session.⁶ The secretariat would support these consultations using various means, including by developing a "virtual team room" (VTR) (see para. 30 below), maintaining a list of lead reviewers with relevant expertise, and facilitating discussions on matters relating to reporting and review guidelines as well as discussions of precedents set during reviews when dealing with complex issues and issues arising from national circumstances. Some elements of this work are included in the **baseline option**, albeit within a less formal framework (i.e. the secretariat would facilitate exchanges between lead reviewers during a review through e-mail only).

15. The **comprehensive option** also includes provision by the secretariat of enhanced input for the consideration at lead reviewers' meetings of methodological and procedural issues referred to in paragraph 10 (b) above and of other methodological and guideline-related matters. This could involve the preparation by consultants of papers and analytical material on experiences from the previous year's review process, indicating approaches or options to address any identified issues. It could also involve development by consultants of a plan to establish and implement the requirements of the VTR to facilitate consultations among lead reviewers.

16. The elements proposed in paragraph 12 above are particularly relevant for preparing and compiling necessary information on the review of higher tier methods and models resulting from experiences during the 2009 review cycle for consideration by the lead reviewers at their 2010 meeting.

³ FCCC/SBSTA/2008/13, paragraph 63.

⁴ FCCC/SBSTA/2008/13, paragraph 64.

⁵ The 2009 lead reviewers' meeting was held from 16 to 17 March in Bonn, Germany. The lead reviewers prepared conclusions and recommendations, which can be found at <http://unfccc.int/files/national_reports/annex_i_ghg_inventories/review_process/application/pdf/sixth_meeting_of_inventory_lead_reviewers.pdf>.

⁶ FCCC/SBSTA/2008/13, paragraph 65.

III. Training programme

17. Decision 12/CP.9 requested the secretariat to develop and implement a training programme for members of ERTs for the technical review of GHG inventories under the Convention, subject to the availability of resources. Following this request, the secretariat implemented online training courses covering general issues, the UNFCCC review guidelines and procedures, and the general Intergovernmental Panel on Climate Change (IPCC) inventory guidance, as contained in the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC good practice guidance for LULUCF,⁷ as well as specific aspects of the review of each IPCC sector of the inventory.

18. At its twenty-seventh session,⁸ the SBSTA noted that the review process needed further strengthening, in particular through the participation of an increased number of well-trained review experts and with more support from the secretariat, and requested the secretariat to update the training programme to take into account methodological developments in GHG inventories and the experiences gained in the review process. Despite a shortage of resources in 2008, the secretariat initiated the update of the online training courses under the Convention and plans to complete this work by end May 2009.

19. In conjunction with these online training courses, the secretariat as early as 2004 started organizing training seminars for new review experts. These seminars clarified a number of questions raised by the trainees and enabled them to consolidate their knowledge by participating in a model review with real inventory materials and taking final exams. However, these seminars were not held in 2007 or 2008, mainly owing to insufficient funding, which has affected the continuity and quality of the preparations for new review experts.

20. Noting the importance of the training, the SBSTA, at its twenty-ninth session,⁹ requested the secretariat to prepare for consideration at its thirtieth session an update of the training programme for the period up to 2014. It indicated that the programme should provide training courses and seminars for new review experts and possibly new training modules on, for example, the review of higher tier methods and models, as well as activities relating to the training needs of experienced review experts. At the same session,¹⁰ the SBSTA noted with concern that it continues to be difficult for the secretariat to organize reviews with complete ERTs. It reiterated its request to Parties to nominate experts to the UNFCCC roster of experts, update the roster at least once a year and make efforts to ensure that invited experts are able to participate in reviews (e.g. that they are provided with sufficient time to dedicate to this intensive and time-consuming process).

21. The secretariat has prepared a draft of the updated training programme and a plan of activities to implement it up to 2014. These are included in the annex to this document.

22. The **baseline option** for training activities provides for maintaining the e-learning courses under the Convention and organizing an annual final seminar for around 30 participants who will take exams at the end of it. The **comprehensive option** goes beyond the baseline option by including regional training seminars (this means at least one seminar per year in addition to the annual seminar envisaged in the baseline option) and developing new online training courses, including a refresher course for experienced review experts and a course for the review of higher tier methods and models, and seminars for experienced review experts (one seminar per year).

⁷ In full: *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories and Good Practice Guidance for Land Use, Land-Use Change and Forestry.*

⁸ FCCC/SBSTA/2007/16, paragraph 60.

⁹ FCCC/SBSTA/2008/13, paragraph 62.

¹⁰ FCCC/SBSTA/2008/13, paragraphs 60 and 61.

23. The **baseline option** envisages increased secretarial support to the expanded training programme and the lead reviewers' meetings. The **comprehensive option** envisages increased Professional staff support in order to strengthen the secretariat's capacity to coordinate the implementation of the expanded training programme effectively and efficiently. This increased support would also cover liaising with Parties with regard to nomination of experts to the roster, the annual update of this roster and organization of the lead reviewers' meetings, thus responding to the request made by the SBSTA at its twenty-ninth session.

IV. Planning and conducting reviews

24. Decision 19/CP.8 requested the secretariat to coordinate and conduct the review of annual inventory submissions under the Convention. For this purpose and in line with the provisions of decision 19/CP.8, the secretariat plans to organize eight in-country and eight centralized reviews in 2010 and the same number in 2011. If this arrangement is continued in the long term, it will ensure that each Party will have an in-country review of an annual inventory once every five years.

25. The secretariat's role in the review process is to ensure that each review is an objective, thorough, transparent and comprehensive technical assessment of an annual GHG inventory submission under the Convention. Its role is also to facilitate the work of the lead reviewers to ensure that reviews are consistent across Parties. To this end, the secretariat organizes meetings of lead reviewers, convenes ERTs inviting experts from the roster of experts who have completed the required training, plans, coordinates and conducts review activities and reflects the results in the report on reviews prepared annually for the SBSTA sessions.

26. In carrying out this role, the secretariat has had to intensify its efforts in the recent review cycles. This is the direct result of the rigour of the review process and the substantial increase in recent years in the amount of information submitted by Parties in their annual inventory submissions. The latter point is important in that it has placed an extra burden on ERTs. The secretariat has managed to alleviate this to some extent by providing numerous data reports and review tools that synthesize elements of an annual inventory submission. The increased demand on the secretariat relating to review activities and the need to strengthen the capacity of the secretariat to manage these activities was acknowledged by the SBSTA at its twenty-ninth session.¹¹

27. One of the numerous review activities managed by the secretariat is convening the ERTs. It becomes increasingly difficult for the secretariat to find experts that are available to participate in reviews and can address the complexities in the information submitted by Annex I Parties (e.g. complexities related to higher tier methods, models or national circumstances), while achieving a balance in the level of experience and expertise in the teams across the different sectors (e.g. there are very few energy sector experts). This is especially challenging given the requirement of the UNFCCC review guidelines to have ERTs that are balanced in terms of geographical representation and comprise an equal number of Annex I Party and non-Annex I Party review experts (including lead reviewers). A further challenging factor is the task of reviewing higher tier methods and models, particularly for the land use, land-use change and forestry sector, which potentially complicates achieving consistency in the review process. The updated training programme referred to in chapter III above, including the proposed refresher courses and seminars, is vital for ensuring that the number, quality and technical diversity of experts on the roster of experts is sufficiently high to enable the secretariat to convene ERTs that meet the requirements of the UNFCCC review guidelines.

28. The **baseline option** includes a plan to continue providing ERTs with data reports and review tools to support their reviews, and, when required, to improve these reports and tools based on feedback from ERTs and lead reviewers. By providing these reports and tools, the secretariat will contribute to the

¹¹ FCCC/SBSTA/2008/13, paragraph 66.

enhanced consistency of the review process. In addition, this option includes inviting new review experts to participate as observers in centralized ERTs, with the aim of exposing them to the review process at an earlier stage.

29. To ensure that the secretariat could continue to support the review process efficiently and effectively, including the ERTs, the **comprehensive option** envisages enhanced secretarial support to review activities and a new function of quality assurance of review activities, which is envisaged to be performed by the expanded Professional staff. This would facilitate the work by the lead reviewers of ensuring that the review process is performed by ERTs in a consistent way and in line with the requirements of the review guidelines under the Convention as well as with conclusions and recommendations of meetings of lead reviewers. The key areas of enhanced support would include:

- (a) Managing the task of convening ERTs;
- (b) Preparing, for each submission–review cycle, the annual review report template and its annotations, based on feedback from lead reviewers and the content of the annual review report itself;
- (c) Coordinating editorial activities prior to the publication of annual review reports;
- (d) Facilitating discussions and consultations among lead reviewers during a review (see para. 14 above).

30. Pursuant to the objective of enhancing the consistency of the review process, the **comprehensive option** also envisages the possibility of creation of a VTR for experts during the review process. The VTR would provide a single access point to, inter alia, data reports and analysis tools, tools for tracking, assessing and resolving issues identified during the review, a communication hub for lead reviewers and/or for external communications with the Party being reviewed, annual inventory submissions and the annual review report template.

V. Further development of the greenhouse gas information system, including the CRF Reporter software

31. In 2010 and 2011, the secretariat will continue to improve information systems and processes that support the reporting and review of Annex I Parties' GHG inventory submissions. This includes the ongoing development work on CRF Reporter, support to Parties in its use and preparation of annual reports and tools to support the review process. In addition, the secretariat has begun planning activities relating to the GHGIS to support a post-2012 climate regime. This work includes:

- (a) Assessing options for a new platform (architecture) for CRF Reporter in order to manage an ever-increasing quantity of data that are required to be reported by Annex I Parties;
- (b) Improving the quality of data reports and review tools, based on experiences and lessons learned;
- (c) Enhancing the capacity of the GHGIS in order to support future changes as part of a post-2012 regime to the requirements for reporting and review of GHG inventory submissions, and associated requirements for data reports and review tools.

VI. Assessment of the commensurate resource requirements

32. The secretariat has assessed the commensurate resource requirements for the activities under the two options presented in this document.

33. The requirements include new secretariat staff and financial resources. The assessment does not include resources required for the further development of the GHGIS, including the CRF Reporter software, as the secretariat intends to ensure that any such development is approached in a way that is consistent with the possible requirements stemming from an agreed post-2012 regime. Such an assessment, therefore, could be prepared at a later stage once there is more clarity on these requirements.

34. The **baseline option** entails annual costs of USD 287,000 (to cover, inter alia, the online training courses, an annual meeting of the lead reviewers and an annual training seminar) and enhanced secretarial support. As noted above, the **comprehensive option** would include all the elements of the baseline option, but would require an additional USD 397,000 annually (to cover, inter alia: regional training seminars; seminars for experienced reviewers; development of a refresher course for experienced review experts and a course for the review of higher tier methods and models; and implementation of the VTR, including licences for new software) and the enhanced Professional and secretarial staff support. These resource requirements are reflected in the proposed programme budget for the biennium 2010–2011 (see document FCCC/SBI/2009/2 and Add.1 for the baseline option and document FCCC/SBI/2009/2 and Add.2 for the comprehensive option).

Annex

Updated training programme for members of expert review teams for the technical review of greenhouse gas inventories of Parties included in Annex I to the Convention

A. Details of the training programme

1. The courses are intended to train reviewers of greenhouse gas inventories of Parties included in Annex I to the Convention. All training courses will be available online. For trainees without easy access to the Internet, courses will be distributed on CD-ROM; for courses facilitated by an instructor, trainees will communicate with the instructor by e-mail. At the request of a Party, the courses will also be made available to others interested in the review process, provided that this does not require additional resources. All courses, without instructor, will be available to trainees all year round.
2. A final seminar for the basic course of the training programme will be offered annually for around 30 participants (new review experts).
3. Additional regional training seminars for new review experts and a refresher seminar for experienced inventory reviewers may be offered annually, depending on the availability of resources. The refresher seminars may be offered in conjunction with meetings of lead reviewers to complete the training for lead reviewers and other experienced reviewers.
4. All training courses will include an examination. Examination procedures should be standardized, objective and transparent.
5. For courses which have a final seminar, the examination will generally take place during the seminar. In exceptional circumstances, other arrangements for examinations will be made, provided that the examinations take place under the supervision of the secretariat and that this does not require additional resources. For other courses, the examination will take place online.
6. New review experts who successfully complete the relevant requirements of the training programme will be invited to participate in a centralized or in-country review, working alongside experienced inventory reviewers.
7. Experts who do not pass an examination for a course at the first attempt may retake the examination once only, provided that the expert has fulfilled all of the tasks assigned during the course in a timely manner and that the retake does not require the secretariat to incur additional costs.
8. Experts with relevant inventory expertise will be invited to act as instructors for courses of the training programme, ensuring that their collective skills cover the subjects addressed in each course. They will provide advice and support by e-mail or other electronic means. The secretariat will seek to achieve a geographical balance among the instructors participating in the training programme.
9. When selecting new review experts for courses facilitated by instructors, the secretariat will give priority to national inventory experts, nominated to the UNFCCC roster of experts, from Parties that have not participated in review activities before.

B. Courses of the training programme

1. Basic course for the review of greenhouse gas inventories of Annex I Parties

Description: This course covers UNFCCC review guidelines and procedures and general Intergovernmental Panel on Climate Change (IPCC) inventory guidance (the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC good practice guidance for LULUCF)¹ as well as specific aspects of the review of the IPCC sectors energy, fugitive emissions, industrial processes, agriculture, land use, land-use change and forestry, and waste. This course also provides guidance on making review reports substantive, consistent among review teams and reader-friendly

Preparation: 2009

Implementation: 2009–2014

Target audience: New review experts

Type of course: E-learning, facilitated by an instructor, with final seminar

Examination requirements and format: New review experts must pass the examination before participating in expert review teams. In-person examination

2. Review of complex models and higher tier methods

Description: This course provides general guidance and procedures, as well as covering specific aspects of the review of emission estimates performed using complex models and higher tier methods (tier 3 methods)

Preparation: 2010

Implementation: 2011–2014

Target audience: Lead reviewers and all reviewers who participate in reviews, including new review experts

Type of course: E-learning, without instructor

Examination requirements and format: Optional. Self-check electronic examination

3. Refresher course for experienced reviewers

Description: This course provides general guidance on specific aspects of the review of emission estimates. It enables experienced reviewers to strengthen and refresh their knowledge, for both cross-cutting aspects and sector-specific issues

Preparation: 2010

Implementation: 2011–2014

Target audience: Lead reviewers and all experienced inventory reviewers who participate in reviews

Type of course: E-learning, without instructor

Examination requirements and format: Optional. Self-check electronic examination

4. Improving communication and facilitating consensus in expert review teams

Description: This course provides tools to improve the work of expert review teams and facilitate teamwork

Preparation: 2003

Implementation: 2009–2014

Target audience: New review experts and all reviewers as a refresher course

¹ In full: *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories and Good Practice Guidance for Land Use, Land-Use Change and Forestry.*

Type of course: E-learning, without instructor

Examination requirements and format: Optional. Self-check electronic examination
