

#### SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE Twenty-ninth session Poznan, 1–10 December 2008

Item 7 (a) of the provisional agenda

Methodological issues under the Convention Annual report on the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention

# Annual report on the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention

Note by the secretariat

Summary

This document describes activities relating to greenhouse gas inventory reviews conducted during the period December 2007–October 2008, and activities planned for the remainder of 2008 and for 2009. It provides information on the Parties subject to review, the training and participation of experts in the review process, the meeting of inventory lead reviewers and the progress in updating the roster of experts.

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# I. Introduction

## A. Mandate

1. The Conference of the Parties (COP), by its decision 12/CP.9, requested the secretariat to prepare an annual report on inventory review activities, including any recommendation resulting from meetings of lead reviewers participating in the technical review of greenhouse gas (GHG) inventories of Parties included in Annex I to the Convention (Annex I Parties), for consideration by the Subsidiary Body for Scientific and Technological Advice (SBSTA). The COP also requested the secretariat to include in this report information on its inventory review training programme, in particular on examination procedures and on selection of trainees and instructors.

2. In addition, the SBSTA, at its twenty-fourth session, requested the secretariat to continue to prepare annual reports on inventory review activities, pursuant to decision 12/CP.9, for consideration by the SBSTA, and to include in these reports information on progress in updating the roster of experts.<sup>1</sup>

## B. Scope of the note

3. This document provides information on the activities relating to GHG inventory reviews conducted from December 2007 to October 2008 and on planned activities for the remainder of 2008 and for 2009. It also suggests possible future approaches aimed at further improving the effectiveness, efficiency and consistency of the review process, in accordance with the UNFCCC review guidelines,<sup>2</sup> in order to ensure the reliability of information on GHG emissions and trends provided to the COP and its subsidiary bodies.

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

4. The SBSTA may wish to consider the information in this document and, if necessary, provide guidance to the Parties and the secretariat, and recommendations to the COP.

# **II. Review activities**

5. The technical review of national GHG inventories from Annex I Parties started in 2000, in accordance with decision 6/CP.5. Following completion of the trial period established in that decision, annual reviews of the individual inventory of each Annex I Party became mandatory in 2003.

6. The UNFCCC review guidelines adopted in 1999 (decision 6/CP.5) and revised in 2002 (decision 19/CP.8) help to ensure that the COP is provided with objective, consistent, transparent, thorough and comprehensive information and technical assessments of GHG inventories from Annex I Parties, that these inventories are consistent with the agreed reporting guidelines, and that the quality of these inventories improves over time. In addition, the review guidelines help to ensure that that the COP is provided with a technical assessment of the implementation of the commitments of Annex I Parties under Article 4, paragraph 1 (a), and Article 12, paragraph 1 (a), of the Convention.

7. The GHG inventory review activities are funded from the core budget. Some other related activities, such as development of the GHG information system, the training of review experts and the organization of lead reviewers' meetings have continued to be funded through voluntary contributions to supplementary funds.

<sup>&</sup>lt;sup>1</sup> FCCC/SBSTA/2006/5, para. 95.

<sup>&</sup>lt;sup>2</sup> "UNFCCC guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention."

### A. Individual inventory reviews

8. In accordance with decision 19/CP.8, the secretariat coordinates the review of national GHG inventories of Annex I Parties. The conclusions from the twelfth session of the COP requested the secretariat to continue to exercise a certain degree of flexibility with regard to the timing of the review of the 2007 GHG inventory submissions, in accordance with decisions 19/CP.8 and 7/CP.11. In addition, the conclusions from the SBSTA and the Subsidiary Body for Implementation (SBI) at their twenty-seventh sessions noted that for those Parties for which an in-country review of the 2006 inventory submission was conducted in 2007, the review of the 2007 inventory submission should be conducted in conjunction with the review of the 2008 inventory submission, with a focus on the most recent submission. To cover both the 2007 and the 2008 inventory submissions in 2008, seven in-country reviews were organized and 36 Parties were reviewed in centralized reviews in 2008.

9. The inventory review process is conducted in three stages: initial check; synthesis and assessment (parts I and II); and individual review. The initial check stage provides an immediate quality assurance aimed at verifying completeness of the inventory submission and correctness of its format. Part I of the synthesis and assessment compiles and compares basic inventory information, such as emission trends, activity data and implied emission factors, across Parties and over time. Part II provides a preliminary assessment of the inventory of individual Parties, and identifies any potential inventory problems, which are then explored during the individual review stage.

10. During the individual review, an international team of experts, nominated by Parties, conducts a technical review of each inventory. As at 1 November 2008, individual inventory reviews were conducted for all 41 Annex I Parties, as follows:

- In-country reviews: Australia (April 2008)<sup>3</sup>, United States of America (February 2008)<sup>4</sup>, Greece (September 2008)<sup>5</sup>, Belarus (October 2008)<sup>6</sup>, Croatia (October 2008)<sup>7</sup>, Luxembourg (October 2008)<sup>8</sup> and Turkey (October 2008)<sup>9</sup>;
- (b) Centralized reviews: Australia<sup>10</sup>, Austria, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Estonia, European Community, Finland, France, Germany, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom of Great Britain and Northern Ireland and United States<sup>11</sup> (September 2008).

11. Usually, the majority of the review reports are published within the established deadlines. For the reviews conducted in 2008 it is too early to draw any conclusions on this matter as the review reports are in preparation, although one of the reports was already published well ahead of the established deadlines.

12. After each stage of the review process, the Party under review has an opportunity to comment on the different draft reports (status report, synthesis and assessment parts I and II, and individual review

<sup>&</sup>lt;sup>3</sup> 2007 GHG inventory submission in conjunction with the initial report review.

<sup>&</sup>lt;sup>4</sup> 2007 GHG inventory submission.

<sup>&</sup>lt;sup>5</sup> 2007 and 2008 GHG inventory submissions.

<sup>&</sup>lt;sup>6</sup> 2006, 2007 and 2008 GHG inventory submissions.

<sup>&</sup>lt;sup>7</sup> 2007 and 2008 GHG inventory submissions in conjunction with the initial report review.

<sup>&</sup>lt;sup>8</sup> 2007 and 2008 GHG inventory submissions.

<sup>&</sup>lt;sup>9</sup> 2007 and 2008 GHG inventory submissions.

<sup>&</sup>lt;sup>10</sup> 2008 GHG inventory submission.

<sup>&</sup>lt;sup>11</sup> 2008 GHG inventory submission.

report) and the timelines for providing comments are established in the review guidelines as contained in the annex to decision 19/CP.8. However, Parties do not always respond to the invitation to provide comments or then provide their comments late. This could have an impact on the quality of the review process, the deadlines for the stages in the review process and the publication of the final reports.

13. For 2009 the secretariat is planning to have most submissions from Parties reviewed through centralized reviews, with a limited number of Parties reviewed in country, as at least one in-country review has been conducted for each Party during 2007 and 2008. Reviews of all Parties are being planned for the end of August and during September 2009.

## **B.** Roster of experts

14. Currently, the roster contains 481 GHG inventory experts, 295 from Annex I Parties and 186 from Parties not included in Annex I to the Convention (non-Annex I Parties). From September 2007 to September 2008, 26 new experts were nominated to the roster, 19 from Annex I Parties and seven from non-Annex I Parties.

15. A limited number of experts listed in the roster participate currently in the review process. One of the reasons for this is that only some Parties regularly update the list of experts nominated by them; many of the experts still on the roster had already moved on to other positions and are no longer available to participate in the review process. Another reason is that some experts nominated to the roster have not yet taken the mandatory training courses, or have not passed the relevant examination. This means that the roster from which the secretariat could select experts lists approximately 140 experts who could participate in the reviews.

16. The secretariat has developed an online form to facilitate the nomination of experts to the roster and the updating of the list of nominees by a Party. The secretariat is in a process of reorganizing the web page<sup>12</sup> on the roster of experts to make it more user-friendly. The secretariat also periodically invites Parties to update the roster and to nominate new experts.

## C. Expert review teams

17. During individual inventory reviews, international teams of inventory experts examine the data, methodologies and procedures used in planning, preparing and managing the national inventory. The secretariat selects experts for these teams based on nominations by Parties to the roster of experts. Invitations to experts to participate in the review are copied to the national focal point.

18. In general, each team comprises a generalist who covers cross-cutting inventory issues and one or two experts for each inventory sector: energy; industrial processes; agriculture; land use, land-use change and forestry (LULUCF); and waste. However, for reviews of Parties with smaller economies, an expert may be requested to cover two sectors. Each team is led by two lead reviewers, one from a non-Annex I Party and one from an Annex I Party.

19. For centralized reviews, the secretariat usually invites two review experts to cover a sector, except in the case of the energy sector where three experts are invited as this is the largest sector in the inventories. Owing to the lack of available review experts, in five of the centralized reviews conducted in 2008 there were only two energy sector experts. Lack of experts could influence the quality and the level of detail of the review of the energy sector. Another sector, for which the review is complex and demanding, is the LULUCF sector. The review could benefit from having three experts on this sector,

<sup>&</sup>lt;sup>12</sup> <http://unfccc.int/files/parties\_and\_observers/roster\_of\_experts/application/msword/roster\_nomination\_2006new.doc>.

but the experts available from the roster do not allow for this. As for the in-country reviews, all seven reviews had complete teams of six review experts.

In selecting members of expert review teams (ERTs), the secretariat seeks to ensure an overall 20. balance in the number of experts from Annex I Parties and non-Annex I Parties, and a geographical balance within these two groups. In 2008, a total of 119 individuals from 56 different Parties served as inventory experts on review teams. Of these experts, 16 were from Annex I Parties with economies in transition, 61 were from other Annex I Parties, and 41 were from non-Annex I Parties. In addition, one expert from an international organization, the International Energy Agency, participated. Although the number of reviews in 2008 was lower than that in 2007 (seven in-country reviews and eight centralized reviews in 2008 and 36 in-country and one centralized in 2007), some experts had to participate in more than one review (eight experts from non-Annex I Parties and eight from Annex I Parties, participated in two or more reviews). This puts pressure on the experts and may influence the quality and level of detail of the review.

21. Table 1 provides a breakdown of participation of experts by nominating Party in 2008. It shows that experts from the following Annex I Parties were not involved in the review process in 2008: Belarus, Estonia, France, Greece, Hungary, Iceland, Latvia, Liechtenstein, Luxembourg, Monaco, Poland, Portugal and Turkey. Some of these Parties have participated in the review process in recent years, for example: Hungary, Latvia and Portugal. There are several reasons for non-participation of experts not participating in the reviews: (a) some Parties did not nominate experts, for example Estonia, Luxembourg, Liechtenstein and Monaco; (b) some Parties have nominated experts only recently and these experts did not take the training courses and pass the relevant examinations, for example France and Poland; and (c) one Party did not support the participation of their experts in the review owing to funding problems (Greece). The table also shows that many Parties continue to support strongly the review process with participation of two and more experts therein.

Annex I Parties that are economies in transition		Annex I Parties that are countries with economies in transition	Non-Annex I Parties	
Australia <sup>a</sup>	Netherlands <sup>a</sup>	Bulgaria <sup>a</sup>	Algeria	Kazakhstan
Austria <sup>a</sup>	New Zealand <sup>a</sup>	Croatia	Argentina <sup>a</sup>	Malawi
Belgium <sup>a</sup>	Norway <sup>a</sup>	Czech Republic <sup>a</sup>	Benin	Mexico
Canada <sup>a</sup>	Spain	Lithuania	Bolivia	Mongolia
Denmark	Sweden <sup>a</sup>	Romania	Brazil <sup>a</sup>	Morocco
European Community <sup>a</sup>	Switzerland <sup>a</sup>	Russian Federation <sup>a</sup>	Chile	Peru <sup>a</sup>
Finland <sup>a</sup>	United Kingdom of	Slovakia	China <sup>a</sup>	Philippines <sup>a</sup>
Germany <sup>a</sup>	Great Britain and	Slovenia <sup>a</sup>	Cuba	Republic of Korea
Ireland <sup>a</sup>	Northern Ireland <sup>a</sup>	Ukraine	Egypt <sup>a</sup>	Republic of Moldova <sup>a</sup>
Italy <sup>a</sup>	United States of		Gambia	South Africa
Japan <sup>a</sup>	America <sup>a</sup>		Georgia	Sudan
			Ghana <sup>a</sup>	Thailand
			India <sup>a</sup>	Uruguay <sup>a</sup>
			Indonesia	Zambia

<sup>a</sup> Parties from which two or more experts participated in reviews in 2008.

From 2000, when the individual reviews were first conducted during the trial period, to 2008, 22. 23113 individual experts from 86 different Parties (37 from Annex I Parties and 49 from non-Annex I

<sup>&</sup>lt;sup>13</sup> There were 12 observers who participated in the reviews between 2000 and 2008 and are not included in these totals.

Parties) have participated in GHG review activities. In 2008, 11 new experts who had taken the training courses and successfully passed the examination were involved in the reviews.

23. The limited number of experts available for the reviews makes it difficult to ensure proper geographic balance in the review teams and sufficient number of experts in the teams for the review of inventory of the complex sectors, such as energy and LULUCF. To that end, despite the dedication and commitment of many non-Annex I experts, it was not possible to ensure a proper balance in the review teams between Annex I Party experts and non-Annex I Party experts owing to insufficient non-Annex I Party experts on the roster. It was also not possible to have a sufficient number of experts for the centralized reviews for the energy sector, which are complex and labour intensive. In addition, some review experts were invited to more than one review in order to have complete review teams. This puts additional pressure on the experts and may influence the quality and the level of detail of the review.

## D. Other inventory review procedures

24. In accordance with decision 12/CP.9, the secretariat developed and put in place procedures to implement the code of practice for the treatment of confidential information during the inventory review. These procedures cover submission, processing and handling by the secretariat of any information designated as confidential by an Annex I Party, and the granting of access to such information by experts.

25. During in-country reviews, Parties often provide the review teams with access to confidential information. This is possible as the reviews are conducted in the countries and thus the Parties' own procedures on how to share confidential information with the review teams could be followed.

26. Decision 12/CP.9 further requires that all members of expert review teams sign an agreement for expert review services, which specifies the responsibilities, expected time commitment, and appropriate conduct for expert review team members, in particular with respect to the protection of confidential inventory information. All experts participating in the inventory reviews from 2004 onwards have signed this agreement, and this practice will be continued in future.

## E. Meeting of inventory lead reviewers

27. The UNFCCC review guidelines require that expert teams should be led by two experts with substantial inventory review experience. For each team, one lead reviewer should be from a non-Annex I Party and the other from an Annex I Party. Lead reviewers have a special role in guiding the review teams to ensure the consistency, quality and objectivity of the reviews. Recognizing this role, the COP, by its decision 12/CP.9, requested the secretariat to organize meetings of lead reviewers to promote a common approach by ERTs to methodological and procedural issues encountered in the inventory reviews, and to make recommendations to the secretariat on ways to further improve the effectiveness and efficiency of the review process.

28. During recent years, lead reviewers have established themselves as an important group under the Convention with a critical role in the review process, ensuring the consistency, quality and objectivity of the reviews in accordance with the requirements in the review guidelines. The annual meetings of the lead reviewers helped in fulfilling this role. The most recent, fifth meeting of inventory lead reviewers took place in Dublin, Ireland, on 21–22 April, 2008, with the support of and financial contribution by the Government of Ireland. Originally 44 experts, split evenly between Annex I Parties and non-Annex I Parties, were invited to the meeting. In addition, owing to some early indications of unavailability of experts, the secretariat invited additional experts from non-Annex I Parties and from Annex I Parties. The meeting was attended by 35 experts, 21 from Annex I Parties and 14 from non-Annex I Parties. A number of invited experts from non-Annex I Parties were not available to participate in the meeting. In addition, a representative of the Intergovernmental Panel on Climate Change (IPCC) National Greenhouse Gas Inventories Programme attended the meeting as an observer.

29. The meeting addressed both procedural and technical issues relating to the annual review of greenhouse gas inventories of Annex I Parties under the Convention and similar reviews under the Kyoto Protocol. The issues related to reviews under the Convention are cited below.

30. As indicated in paragraph 8 above, the SBSTA and SBI conclusions from their twenty-seventh sessions provided some flexibility in conducting the reviews in 2008. During the meeting the secretariat presented the approach for conducting the reviews of the 2007 and 2008 GHG inventory submissions, under both the Convention and the Kyoto Protocol, and the lead reviewers acknowledged that the integrity of the review process will not be compromised as ERTs will have available all standard review tools for review of both the 2007 and the 2008 inventory submissions. Lead reviewers noted that the updated review report templates adequately cover the 2007 and 2008 inventories reviews with a focus on the 2008 inventory and offers a pragmatic solution for reflecting the outcome of the two reviews being conducted together. The lead reviewers endorsed this approach.

31. The lead reviewers recognized the substantial effort undertaken by experts, Parties and the secretariat to finalize the in-country reviews conducted in 2007 of the initial reports and the 2006 GHG inventory submissions in a timely, consistent and transparent manner, despite the insufficient number of experts needed for the review process and the complexity of the tasks involved. The experience gained and lessons learned from these reviews provide a solid basis for future reviews under both the Convention and its Kyoto Protocol.

32. Lead reviewers noted with concern that to implement the review process effectively and efficiently, more than 40 new review experts are needed and requested the secretariat to explore further options to identify new review experts, in particular from non-Annex I Parties.

33. Lead reviewers encouraged the secretariat to raise awareness of the importance of the review process and the work of the expert reviewers by informing decision makers and relevant institutions at the national level.

34. For the review of GHG inventories, the lead reviewers reiterated that both the Convention and the Kyoto Protocol require reporting Parties to continue to improve these GHG inventories as part of the established quality assurance and quality control system and to continue to work on the implementation of the recommendations for improvements arising from the inventory review. The ERTs should ascertain that methodological changes are carried out only to improve accuracy, completeness and/or time-series consistency and should be well justified and documented, in accordance with the UNFCCC reporting guidelines.

35. Lead reviewers recommended that ERTs, when reviewing possible methodological changes in inventories, should ascertain that recalculations are performed with the view to having consistent time series.

36. The full text of the conclusions of the lead reviewers' meeting is available on the UNFCCC website.<sup>14</sup>

# **III.** Training of experts

37. Decision 12/CP.9 called for the secretariat to establish a training programme under the Convention, comprising both technical and skill-building courses, for new ERT members. Development of the basic course, covering the general and cross-cutting issues and all inventory sectors except LULUCF, was completed in 2004, and since then only experts who have successfully passed the examination can participate in an inventory review. The course for the LULUCF sector was completed

 $<sup>^{14} &</sup>lt; http://unfccc.int/files/national_reports/annex_i_ghg_inventories/review_process/application/pdf/con_rec5.pdf>.$ 

in 2005. The basic course is offered with an instructor once a year, resources permitting, or as a non-instructed online course throughout the year.

38. The SBSTA, at its twenty-fifth session, requested the secretariat to continue to offer the training programme online, to make instructors available for the online training programme, and to organize a seminar relating to the programme, subject to the availability of resources. The secretariat was not able to implement the request to have an instructed course in 2008 owing to insufficient funds and the need to update the training programme (see paragraph 39 below). In 2008, 11 experts completed the non-instructed online course and made relevant arrangements to take the examinations under the supervision of the secretariat, without incurring additional costs.

39. The basic training course developed in 2003 and 2004 is now outdated owing to recent developments in the GHG inventories and experience gained in the review process. Following the request by SBSTA at its twenty-seventh session<sup>15</sup>, the secretariat is in the process of updating the training programme, to take into account, for example, the IPCC *Good Practice Guidance for Land Use, Land-Use Change and Forestry*, and update the self tests incorporated in the online training and the final exams. The updated training courses will be offered online in 2009 and, depending on available funds, the secretariat is planning an instructed training programme with a final seminar during the same year.

40. The training activities are of crucial importance for ensuring the required quality and consistency of the review process. This is particularly true for experts from non-Annex I Parties, as they usually do not work on inventories on a daily basis.

# **IV. Inventory submissions from Parties**

41. The annual inventory submission comprises the national inventory report (NIR) and the common reporting format (CRF) tables. The submission due date is 15 April. The majority of Parties submit their inventories on time, or within six weeks of the submission due date. Parties that had not made their 2008 inventory submission within six weeks of the submission due date are: Australia, Luxembourg (NIR), Monaco (NIR) and Turkey. Late submissions by Parties can delay the review process and the GHG data of such Parties may not be included in reports prepared by the secretariat.

42. In 2008, all 41 Annex I Parties submitted a GHG inventory using the CRF Reporter software. This significantly facilitated the review process and the provision of information on emission trends by the secretariat for various UNFCCC documents.

43. In accordance with the UNFCCC reporting guidelines<sup>16</sup> Parties can submit their NIRs in one of the official languages of the United Nations. The UNFCCC reporting guidelines also encourage Parties to submit, where relevant, an English translation of the NIR. NIRs submitted in a language other than English limits the transparency of Parties' reporting and puts additional burden on the secretariat to find review experts with knowledge of that language, in addition to English, which is the working language of the secretariat. With the limited number of review experts, especially those with sufficient knowledge of languages other than English, selecting a team capable of working in that other language is a huge challenge. The review becomes limited if the entire review team is not knowledgeable in the language used in the submission as it cannot review the information submitted in depth. This is especially true for centralized and desk reviews but also for in-country reviews.

<sup>&</sup>lt;sup>15</sup> FCCC/SBSTA/2007/16, paragraph 62.

<sup>&</sup>lt;sup>16</sup> "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories".

# V. Greenhouse gas information system

44. The inventory review process is supported by a GHG information system (GHGIS), comprising CRF Reporter as well as a database and related software tools developed by the secretariat. The objective of the GHGIS is to import, ensure quality control, process, store and analyse the submitted inventory data, as well as to facilitate the review and the publication of GHG inventory information provided by Parties. The GHGIS is key to producing authoritative GHG information for the COP and its subsidiary bodies and for ensuring that the large number of annual inventories can be processed in a cost-effective, timely and rigorous manner. The development, maintenance and improvement of the GHGIS continues to be resource intensive (both in human and financial terms).

45. A major component of the GHGIS is the CRF Reporter software. The secretariat continues to work on this software to improve its utility and role within the reporting process. Two updates of the software were released for Parties to prepare and report their 2008 GHG inventory. In addition to software maintenance, the secretariat also supports Parties in the use of CRF Reporter and organizes training for Parties, with the last training session organized and hosted by the secretariat in December 2007. One of the results of this effort is that in 2008, all 41 Annex I Parties submitted a GHG inventory using the CRF Reporter software.

46. Further improvements have also been made to all components of the GHGIS other than the CRF Reporter software. This includes fully automated import of data from CRF Reporter into the database; the data definition and structure of the database; extract, transform and load processes; and the online analytical processing database and review tools produced by the secretariat. This also includes development and further improvement of the software tools that support the work of the secretariat in the first two stages of the review process (see paragraph 9).

47. In its report on the review process to the twenty-seventh session of the SBSTA last year, the secretariat announced its plan (subject to the availability of resources) to hold CRF Reporter workshops in 2008 and 2009 to establish the priorities for further development of the software, taking into account the experiences of Parties. Owing to the lack of available resources, no workshop was organized in 2008.

# VI. Challenges and possible future approaches

48. The review process established under the Convention works, but with each passing year it is becoming increasingly difficult to have complete expert review teams. This is especially true for centralized reviews. That the review process still works is thanks mainly to the outstanding dedication and commitment of a number of government-nominated experts and of a number of Parties. Without the admirable efforts of these Parties and experts, supported by the secretariat, it would not have been possible to conduct in 2008 all the planned review activities under the Convention, including the review of the 2007 and 2008 submissions. Parties anticipate that concluding negotiations on decision 1/CP.13 (the Bali Action Plan) will add further pressure on reviewers and the review process. The measurable, reportable and verifiable aspects of paragraphs 1 (b) (i) and 1 (b) (ii) of that decision will necessitate greater requirements for Parties in the context of the reporting and review process. This should be factored into future timetables, budgets and training. Ways of overcoming the current and foreseen future problems relating to the review process are clearly linked to the nominations to the roster of a sufficient number of experts; training of new experts and refresher courses for experienced reviewers; Parties' support for participation of experts in the review process; and strengthening of the secretariat's resources to deal with the review process.

49. In order to continue with the rigorous review procedures established by the UNFCCC review guidelines, the process needs further strengthening. A prerequisite is to have a sufficient number of

review experts with the required qualifications to help overcome problems mentioned in paragraphs 19–21 and 23 above relating to proper balance in the review teams and a sufficient number of experts in the teams for the review of complex sectors. To this end, Parties are encouraged to continuously (every six months) update the roster of experts by nominating new experts where necessary and to remove experts who are no longer available. Another way of ensuring that a certain number of experts from Annex I Parties is available could be to request them to commit a minimum number of national experts and make them available for the review process. The secretariat intends to send reminders to Parties on the need to update the roster of experts.

50. Participation in the reviews is a time-intensive process. A number of experts invited to participate in the reviews declined, citing priorities in their regular jobs. Parties are encouraged to ensure that nominated experts are provided with incentives to spend sufficient time on the review and receive sufficient support from their national governments, given that such experts temporarily perform duties essential for the proper functioning of the international process established by the COP. It can hardly be considered normal practice when experts from some Parties participated in more than one review whereas experts from other Parties did not participate in a single review (see table 1).

51. To help raise awareness of the importance of the review process and the work of the experts, the secretariat could inform decision makers and relevant institutions at the national level by providing, for example, a letter of recognition of the expert's work during the review, as suggested in paragraph 33 above.

52. Training is recognized as a prerequisite for ensuring that the reviews are conducted in a rigorous and consistent manner and to provide Parties with confidence in the review process and its reports. The basic course under the Convention needs to be regularly updated, new courses need to be prepared, refresher courses are required even for experienced reviewers, and meetings of lead reviewers help to ensure consistency in review approaches. Parties are also encouraged to nominate the experts from the roster for training activities.

53. It is worth noting that experts participating in other similar UNFCCC activities (e.g. the clean development mechanism) receive remuneration. Parties may wish to consider whether remuneration could be introduced for experts participating in the GHG review process in recognition of the roles and responsibilities of these experts in implementing the rigorous review process under the Convention are commensurate with those of other instituted bodies.

54. If the situation as regards availability and training of experts does not improve, the secretariat may be forced to defer the reviews of some Parties. A potential impact is that the COP would not have adequate and reliable information on annual inventories and emission trends of GHGs, and it would not have a technical assessment of the implementation of the commitments of Annex I Parties under Article 4, paragraph 1 (a), and Article 12, paragraph 1 (a), of the Convention.

55. The workload of the secretariat to prepare and coordinate 41 reviews annually is considerable. It is increasingly difficult to manage the workload with the number of secretariat staff currently available. This workload could be eased by either increasing the number of secretariat staff or by involving consultants temporarily located at the secretariat and assisting in the preparation of the reviews and publication of the reports. For example, some skilled experts from Annex I Parties and non-Annex I Parties could be invited to serve as consultants.

56. In recognizing the critical role of the lead reviewers in the review process, ensuring the consistency, quality and objectivity of the reviews in accordance with the requirements in the review guidelines the SBSTA at its twenty-eighth session requested the secretariat to continue organizing these meetings. It is important for the review process that the secretariat continue to organize these meetings.

57. A number of activities relating to Parties' reporting and the review process (including: further development of the CRF Reporter software and review tools; CRF Reporter workshops; training activities such as updating the current courses, development of new courses and instructed courses once a year; and meetings of lead reviewers) are subject to supplementary funding. Progress on some of these activities was limited because they are subject to supplementary funding. Notwithstanding the contribution in 2008 by Ireland, Japan, Australia, Belgium, Romania and Sweden and the carry-over of some funds from the previous biennium, with contributions from Belgium, Finland, Romania and Switzerland, overall funds available for these activities were far from sufficient to allow for sufficient progress to be made. This affects the review process negatively. Parties may wish to consider providing support for these activities from the core budget.

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