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**Subsidiary Body for Scientific and Technological Advice**

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Item 14 (b) of the provisional agenda

**Reports on other activities**

**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 report describes activities relating to greenhouse gas (GHG) inventory reviews conducted during the period October 2013 to September 2014. It also provides information on the training activities under the Convention and under the Kyoto Protocol, the meeting of inventory lead reviewers, progress made in updating the roster of experts and progress made in the maintenance and development of the GHG information system, including the CRF Reporter.

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## **I. Introduction**

### **A. Mandate**

1. The Conference of the Parties (COP), by decision 12/CP.9, requested the secretariat to prepare an annual report on inventory review activities, including any recommendations resulting from the meetings of lead reviewers participating in the technical review of greenhouse gas (GHG) inventories from 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 the inventory review training programme, in particular on examination procedures and on the 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 made in updating the roster of experts.<sup>1</sup>

### **B. Scope of the note**

3. This report provides information on activities relating to GHG inventory reviews conducted from October 2013 to September 2014. It also provides information on the meeting of inventory lead reviewers, progress made in updating the roster of experts, training activities under the Convention and under the Kyoto Protocol, and progress made in the development and maintenance of the GHG information system.

4. This report focuses on the elements of the review process that are specific to the Convention and should be read in conjunction with the “Annual report on the technical review of greenhouse gas inventories and other information reported by Parties included in Annex I to the Convention that are also Parties to the Kyoto Protocol under Article 7, paragraph 1, of the Kyoto Protocol”<sup>2</sup> prepared by the secretariat in accordance with decision 22/CMP.1. The review under the Kyoto Protocol encompasses the review of GHG inventories under the Convention in accordance with the “Guidelines for review under Article 8 of the Kyoto Protocol” (hereinafter referred to as the Article 8 review guidelines); therefore, the lessons learned and problems encountered in the review process under the Convention have many common elements with those encountered in the reviews under the Kyoto Protocol.

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

5. The SBSTA will be invited to take note of the information contained in this report.

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<sup>1</sup> FCCC/SBSTA/2006/5, paragraph 95.

<sup>2</sup> FCCC/SBSTA/2014/INF.18.

## II. Review activities

6. The “Guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention” (hereinafter referred to as the UNFCCC review guidelines) adopted in 1999 (decision 6/CP.5) and revised in 2002 (decision 19/CP.8) aim 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 UNFCCC review guidelines aim to ensure 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. Following completion of the trial period established in decision 6/CP.5, a technical annual review of the individual national GHG inventory of each Annex I Party has been mandatory since 2003, in accordance with decision 19/CP.8.

8. The GHG inventory review activities – along with some activities for the training of review experts and the organization of lead reviewer meetings – are funded from the UNFCCC secretariat core budget. Some other related activities, such as refresher seminars for experienced reviewers, strengthening of the capacity of the secretariat to support review and training activities, and the development of the GHG information system, continue to be funded through voluntary contributions to supplementary funds.

### A. Individual inventory reviews

#### 1. 2013 annual review cycle

9. In 2013, 11 in-country reviews, 8 centralized reviews (with four Parties reviewed in each centralized review), and 1 desk review (with one Party reviewed), covering 44 Annex I Parties were conducted. The reports of these reviews were published between December 2013 and August 2014. Of the 11 in-country review reports, 1 (Japan) was completed one week after the date established in the Article 8 review guidelines for publication.<sup>3</sup> Three reports (Austria, European Union and Italy) were published three weeks after the publication due date and one report (Sweden) was published nine weeks after that date. Four reports (Liechtenstein, Monaco, Poland and Slovenia) were completed between 11 and 14 weeks after the due date for publication and two reports (Ireland and Latvia) were completed between 17 and 18 weeks after the due date for publication. Of the 11 in-country review reports, 7 (Austria, European Union, Italy, Japan, Liechtenstein, Luxembourg and Sweden) were published within one year after the submission due date.

10. Of the 32 centralized review reports, 1 (Netherlands) was completed three weeks before the date established in the Article 8 review guidelines for publication. One report (Bulgaria) was completed one week prior to that date. Seven reports (Croatia, Estonia, Germany, Iceland, Kazakhstan, Switzerland and Ukraine) were completed between one and five weeks after the due date for publication. Five reports (Finland, Greece, Luxembourg, New Zealand and Turkey) were completed between 6 and 10 weeks after the due date for publication and six reports (Australia, Canada, France, Hungary, Spain and United States of America) were completed between 11 and 16 weeks after that date. Five reports (Belgium,

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<sup>3</sup> Of the 44 Annex I Parties, 39 are also Parties to the Kyoto Protocol; therefore, for these Parties, the timing of the individual inventory review follows the deadlines established under the Article 8 review guidelines with the exception of Belarus, Kazakhstan and Turkey, for which the timing of the individual inventory review follows the deadlines established under the UNFCCC review guidelines.

Cyprus, Denmark, Romania and United Kingdom of Great Britain and Northern Ireland) were completed between 18 and 26 weeks after the due date for publication, eight reports (Belarus, Czech Republic, France, Hungary, Lithuania, Portugal, Russian Federation and Slovakia) were completed between 26 and 28 weeks after that date and one report (Slovakia) was completed 35 weeks after that date. Of the 32 centralized review reports, 15 were published within one year after the submission due date.

11. During the desk review, one Party (Malta) was reviewed and the review report was completed two weeks prior to the due date for publication.

12. It is important to note the delays in the preparation and publication of review reports observed in the 2010, 2011, 2012 and 2013 review cycles.<sup>4</sup> However, the efforts to improve timeliness based on the relevant recommendations from the lead reviewers have started to show effect: in the 2011 cycle, only 8 review reports were published within one year of submission, whereas in 2012 the number of published reports within the one-year timeline increased to 16 and in 2013 to 22. Nevertheless, while the trend is positive, the situation remains unsatisfactory and further efforts are required, as also noted by the lead reviewers (see chapter III below). The reasons for the delays were identified in earlier reports<sup>5</sup> and remain valid, thereby indicating the recurrent nature of this problem. They include:

- (a) Other, non-review related commitments and work obligations of the experts participating in the reviews;
- (b) Lack of availability of experts to participate in a review cycle, despite the large number of experts nominally available in the roster;
- (c) Insufficient availability of funding in Annex I Parties to support participation of their experts in the reviews.<sup>6</sup>

## 2. 2014 annual review cycle

13. In 2014, the secretariat received 44 annual submissions from Annex I Parties (see the table below). In accordance with the UNFCCC review guidelines, 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 assessment aimed at verifying the completeness of the inventory submission and the correctness of its format. Status reports for all 44 submissions were prepared and published on the UNFCCC website by 23 June 2014.<sup>7</sup> Part I of the synthesis and assessment report compiles and compares basic inventory information, such as emission trends, activity data and implied emission factors, across Parties and over time and was published on the UNFCCC website on 23 June 2014.<sup>8</sup> Part II provides a preliminary assessment of the inventory of individual Parties and identifies any potential inventory problems, which are then assessed during the individual review stage. Part II of the synthesis and assessment report is not published, but is provided to the expert review teams (ERTs) for further assessment.

<sup>4</sup> FCCC/SBSTA/2011/INF.13, paragraphs 9 and 10, FCCC/SBSTA/2012/INF.10, paragraphs 9 and 10, and FCCC/SBSTA/2013/INF.8, paragraphs 9 and 10.

<sup>5</sup> FCCC/SBSTA/2013/INF.8, paragraph 11.

<sup>6</sup> In the preparation for the 2014 review cycle the secretariat received 10 requests for exceptional funding from experts nominated by Annex I Parties, with the rationale that their governments did not have sufficient resources to support the review process.

<sup>7</sup> <[http://unfccc.int/national\\_reports/annex\\_i\\_ghg\\_inventories/inventory\\_review\\_reports/items/8109.php](http://unfccc.int/national_reports/annex_i_ghg_inventories/inventory_review_reports/items/8109.php)>.

<sup>8</sup> <<http://unfccc.int/resource/webdocs/sai/2014.pdf>>.

14. After each stage of the review process, the Party under review has the opportunity to comment on the different draft reports (the status report, the synthesis and assessment report, parts I and II, and the individual review report); the timelines for providing comments are established in the UNFCCC review guidelines and the Article 8 review guidelines.

15. In accordance with the UNFCCC review guidelines, the secretariat coordinates the review of national GHG inventories from Annex I Parties. During the individual review, an international ERT conducts a technical review of each GHG inventory. For 2014, the secretariat coordinated the review of 2 GHG inventory submissions through in-country reviews and the review of 37 GHG inventory submissions through 10 centralized reviews. As at 5 October 2014, individual GHG inventory reviews had been conducted for 39 Annex I Parties, as follows:

(a) In-country reviews were conducted between 8 September and 11 October 2014 for Canada and Turkey. The reports of these reviews are in preparation;

(b) Centralized reviews were organized between 1 September and 4 October 2014 in Bonn, Germany, for: Australia, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Romania, Russian Federation, Slovakia, Spain, Switzerland, Turkey, Ukraine and United Kingdom of Great Britain and Northern Ireland. The reports of these reviews are in preparation.

16. According to decision 27/CP.19<sup>9</sup> the following Parties' 2014 GHG inventories will not be subject to an individual review: Belarus, Cyprus, Kazakhstan, Malta and United States of America. The 2014 GHG inventories of these five Parties were subject to the initial check, resulting in the annual status report, and their national data were included in the synthesis and assessment report, part I. In 2015, the GHG inventories of these five Parties will undergo an individual review. The table below summarizes the status of submissions and reviews for the 2014 review cycle.

**Submission of greenhouse gas inventories in accordance with decision 18/CP.8, review dates and the status of review reports**

<i>Annex I Party</i>	<i>NIR and CRF submission dates</i>	<i>Language of NIR</i>	<i>Status report symbol</i>	<i>Review dates</i>	<i>Status of review report</i>
Australia	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/AUS	1–6 Sept. 2014	In preparation
Austria	NIR – 14 Apr. 2014 CRF – 14 Apr. 2014	English	FCCC/ASR/2014/AUT	8–13 Sept. 2014	In preparation
Belarus <sup>a</sup>	NIR – 21 Apr. 2014 CRF – 15 Apr. 2014	Russian	FCCC/ASR/2014/BLR	Not subject to individual inventory review	NA
Belgium	NIR – 10 Apr. 2014 CRF – 10 Apr. 2014	English	FCCC/ASR/2014/BEL	8–13 Sept. 2014	In preparation
Bulgaria	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/BGR	22–27 Sept. 2014	In preparation
Canada	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/CAN	23–28 Sept. 2014	In preparation

<sup>9</sup> See decision 27/CP.19, paragraph 9.

<i>Annex I Party</i>	<i>NIR and CRF submission dates</i>	<i>Language of NIR</i>	<i>Status report symbol</i>	<i>Review dates</i>	<i>Status of review report</i>
Croatia	NIR – 11 Apr. 2014 CRF – 11 Apr. 2014	English	FCCC/ASR/2014/HRV	22–27 Sept. 2014	In preparation
Cyprus <sup>b</sup>	NIR – 14 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/CYP	Not subject to individual inventory review	NA
Czech Republic	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/CZE	22–27 Sept. 2014	In preparation
Denmark	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/DNK	16–21 Sept. 2014	In preparation
Estonia	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/EST	23–28 Sept. 2014	In preparation
European Union	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/EU	29 Sept.–4 Oct. 2014	In preparation
Finland	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/FIN	1–6 Sept. 2014	In preparation
France	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	French	FCCC/ASR/2014/FRA	22–27 Sept. 2014	In preparation
Germany	NIR – 15 Apr. 2014 CRF – 11 Apr. 2014	English	FCCC/ASR/2014/DEU	8–13 Sept. 2014	In preparation
Greece	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/GRC	15–20 Sept. 2014	In preparation
Hungary	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/HUN	22–27 Sept. 2014	In preparation
Iceland	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/ISL	8–13 Sept. 2014	In preparation
Ireland	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/IRL	8–13 Sept. 2014	In preparation
Italy	NIR – 15 Apr. 2014 CRF – 4 Apr. 2014	English	FCCC/ASR/2014/ITA	15–20 Sept. 2014	In preparation
Japan	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/JPN	29 Sept.–4 Oct. 2014	In preparation
Kazakhstan <sup>c</sup>	NIR – 15 Apr. 2014 CRF – 13 Apr. 2014	Russian	FCCC/ASR/2014/KAZ	Not subject to individual inventory review	NA
Latvia	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/LVA	1–6 Sept. 2014	In preparation
Liechtenstein	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/LIE	15–20 Sept. 2014	In preparation
Lithuania	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/LTU	22–27 Sept. 2014	In preparation

<i>Annex I Party</i>	<i>NIR and CRF submission dates</i>	<i>Language of NIR</i>	<i>Status report symbol</i>	<i>Review dates</i>	<i>Status of review report</i>
Luxembourg	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/LUX	15–20 Sept. 2014	In preparation
Malta <sup>d</sup>	NIR – 9 Apr. 2014 CRF – 9 Apr. 2014	English	FCCC/ASR/2014/MLT	Not subject to individual inventory review	NA
Monaco	NIR – 30 June 2014 CRF – 15 Apr. 2014	French	FCCC/ASR/2014/MCO	22–27 Sept. 2014	In preparation
Netherlands	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/NLD	15–20 Sept. 2014	In preparation
New Zealand	NIR – 14 Apr. 2014 CRF – 11 Apr. 2014	English	FCCC/ASR/2014/NZL	8–13 Sept. 2014	In preparation
Norway	NIR – 10 Apr. 2014 CRF – 10 Apr. 2014	English	FCCC/ASR/2014/NOR	22–27 Sept. 2014	In preparation
Poland	NIR – 11 Apr. 2014 CRF – 11 Apr. 2014	English	FCCC/ASR/2014/POL	22–27 Sept. 2014	In preparation
Portugal	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/PRT	15–20 Sept. 2014	In preparation
Romania	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/ROU	22–27 Sept. 2014	In preparation
Russian Federation	NIR – 27 May 2014 CRF – 15 Apr. 2014	Russian	FCCC/ASR/2014/RUS	8–13 Sept. 2014	In preparation
Slovakia	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/SVK	22–27 Sept. 2014	In preparation
Slovenia	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/SVN	29 Sept.–4 Oct. 2014	In preparation
Spain	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	Spanish	FCCC/ASR/2014/ESP	15–20 Sept. 2014	In preparation
Sweden	NIR – 11 Apr. 2014 CRF – 11 Apr. 2014	English	FCCC/ASR/2014/SWE	15–20 Sept. 2014	In preparation
Switzerland	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/CHE	1–6 Sept. 2014	In preparation
Turkey <sup>e</sup>	NIR – 15 Apr. 2014 CRF – 12 Apr. 2014	English	FCCC/ASR/2014/TUR	8–13 Sept. 2014	In preparation
Ukraine	NIR – 12 Apr. 2014 CRF – 12 Apr. 2014	Russian	FCCC/ASR/2014/UKR	8–13 Sept. 2014	In preparation
United Kingdom of Great Britain and Northern Ireland	NIR – 15 Apr. 2014 CRF – 15 Apr. 2014	English	FCCC/ASR/2014/GBR	1–6 Sept. 2014	In preparation



<i>Annex I Party</i>	<i>NIR and CRF submission dates</i>	<i>Language of NIR</i>	<i>Status report symbol</i>	<i>Review dates</i>	<i>Status of review report</i>
United States of America	NIR – 12 Apr. 2014 CRF – 12 Apr. 2014	English	FCCC/ASR/2014/USA	Not subject to individual inventory review	NA

*Abbreviations:* CRF = common reporting format, NA = not applicable, NIR = national inventory report.

<sup>a</sup> Belarus has indicated that its 2014 annual submission is made under the Convention.

<sup>b</sup> Cyprus has indicated that its 2014 annual submission is made under the Convention.

<sup>c</sup> Kazakhstan is a Party included in Annex I to the Convention for the purposes of the Kyoto Protocol. Since Kazakhstan does not have a quantified emission limitation or reduction commitment inscribed in Annex B to the Kyoto Protocol, its 2014 annual submission is being treated as a submission under the Convention.

<sup>d</sup> Malta has indicated that its 2014 annual submission is made under the Convention.

<sup>e</sup> Turkey has indicated that its 2014 annual submission is made under both the Convention and the Kyoto Protocol.

17. The secretariat will make every effort to further improve the timeliness of the review reports during the 2014 review cycle while retaining their quality at the level required.

### 3. 2015 annual review cycle

18. As of 15 April 2015, Annex I Parties will report their GHG inventories in accordance with the revised “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 reporting guidelines) contained in decision 24/CP.19, wherein the COP also adopted the revised common reporting format (CRF) tables to implement the use of the Intergovernmental Panel on Climate Change (IPCC) *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the 2006 IPCC Guidelines). The current UNFCCC review guidelines contained in decision 19/CP.8 are in the process of being revised, as necessary, by Parties, and the revised UNFCCC review guidelines are expected to be adopted at COP 20.

19. These changes in the reporting and review requirements have implications for the review process, the secretariat’s supporting systems and review tools, and the reviewers. The secretariat has been working actively to ensure that all systems and processes are ready for the changes (see also chapters III, V and VI below).

## B. Other inventory review procedures

20. 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.

21. 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 Parties’ countries and, thus, the Parties’ own procedures on how to share confidential information with the review teams can be followed. During the 2014 reviews, 14 Parties under centralized review and 1 Party under in-country review submitted to the secretariat information designated as confidential. The review of information declared as confidential remains a particular challenge for the reviewers, in particular during centralized reviews.

22. Decision 12/CP.9 also requires that all members of ERTs sign an agreement for expert review services, which specifies the responsibilities, expected time commitment and

appropriate conduct of ERT 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 the future.

### **III. Meeting of inventory lead reviewers**

23. The UNFCCC review guidelines require that ERTs be led by two experts with substantial inventory review experience, who are nominated as lead reviewers for an individual review process. For each ERT, one lead reviewer should be from a Party not included in Annex I to the Convention (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 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.

24. Lead reviewers have a critical role in the review process, in which they ensure the consistency, quality and objectivity of the reviews in accordance with the requirements of the UNFCCC review guidelines. The annual meetings of the lead reviewers have, to date, helped in fulfilling this role. The most recent meeting of inventory lead reviewers (11<sup>th</sup>) took place in Bonn on 3–5 March 2014. Ninety-five experts, 44 from non-Annex I Parties and 51 from Annex I Parties, were invited to the meeting, which was attended by only 61 experts, 32 from non-Annex I Parties and 29 from Annex I Parties. Additionally, one member of the facilitative branch of the Compliance Committee and one representative of the European Union attended the meeting as observers.

25. In addition, the secretariat organized a half-day refresher seminar for experienced experts on 6 March 2014, after the 11<sup>th</sup> meeting of lead reviewers, with a focus on changes in the reporting and review requirements during the transition from the first to the second commitment period under the Kyoto Protocol. All the experienced experts invited to the 11<sup>th</sup> meeting of lead reviewers were also invited to the refresher seminar, which was attended by 29 experts, 12 from non-Annex I Parties and 17 from Annex I Parties.

26. The 11<sup>th</sup> meeting of lead reviewers addressed both procedural and technical issues relating to the annual review of GHG inventories from Annex I Parties and similar reviews under the Kyoto Protocol. The issues addressed by the lead reviewers relating to reviews under the Convention in accordance with decision 19/CP.8 are presented below.

#### **1. Statistics and follow-up to the 10<sup>th</sup> lead reviewers' meeting**

27. The lead reviewers noted improvements in the timeliness of the publication of the review reports in the 2013 cycle compared to the 2012 cycle, but reiterated the need to further improve the efficiency and timeliness of the review process and to achieve a 100 per cent report completion rate by 14 April of the following year. The lead reviewers noted with concern that as at 5 March 2014 there were only 14 published review reports (32 per cent of all reports) and requested the secretariat to implement further improvements, as presented in the section on "Recommendations for improvements in the 2014 review cycle" below.

28. The lead reviewers welcomed the increase in the number of experts participating in the 2013 review cycle. Compared with the 2012 review cycle, in which 157 experts participated in the review activities, the number of participating experts increased to 172. However, the lead reviewers also noted that there were still incomplete teams conducting some reviews and that some reviewers participated in more than one review.

29. The lead reviewers further noted that the 34 new experts that participated in the reviews in 2013 constituted one fifth of all participating experts. The lead reviewers recognized that they should provide more support to the new reviewers, but also noted that their dual role as lead reviewers and experts, especially if not acting as generalists, leaves them limited time to coach the new experts.

## 2. Training and availability of review experts

30. The lead reviewers welcomed the information on the training activities undertaken by the secretariat in 2013, and on the ongoing and planned training activities in 2014, including the organization of online courses and an annual training seminar in the second half of 2014, and the possible launch of the process to revise the training programme for GHG inventory review experts.

31. The lead reviewers noted the need to update and revise the training programme for the review of GHG inventories from Annex I Parties, due to the adoption of the revised UNFCCC Annex I reporting guidelines, the use of the 2006 IPCC Guidelines, and the future revised UNFCCC review guidelines, which are to be considered by the SBSTA, with a view to adoption at COP 20. The lead reviewers also noted that the updating and revision of this training programme should address the training needs of both new and experienced experts.

32. The lead reviewers reiterated the need to increase the number of review experts who can actively participate in the review process, in order to ensure the completeness and balance of expertise of the ERTs, in particular by increasing the participation of review experts from non-Annex I Parties. The lead reviewers also noted the need for Parties to regularly update the UNFCCC roster of experts and to nominate, where appropriate, national experts who have a knowledge of GHG inventories, or who are inventory compilers or have a sector-specific technical background. The lead reviewers encouraged Parties to ensure that the nominated experts are fully available during the complete review process and have the required training.

33. The lead reviewers requested the secretariat to expand participation in the refresher seminars to sectoral experts, in order to increase the knowledge and enhance the common understanding among review experts on the methodological and procedural issues required for the GHG inventory review process. The lead reviewers noted that the refresher seminar in 2015 should focus on the issues arising due to the transition to the use of the revised UNFCCC Annex I reporting guidelines and the future revised UNFCCC review guidelines, including the use of the 2006 IPCC Guidelines, the *IPCC 2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol* and the *IPCC 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands*, as well as on issues related to reporting and review under the Kyoto Protocol, in order to ensure that the experienced reviewers share the common knowledge and information required for reviews in the 2015 review cycle and onwards.

## 3. Review tools

34. The lead reviewers welcomed the work undertaken by the secretariat to develop guidance for ERTs on the review tools for the review cycle in 2014. They noted that there is no need to develop new tools for the 2014 review cycle, but that it is important to improve and maintain the existing ones. The lead reviewers agreed that they should facilitate, with the support of the secretariat, the effective use of the review tools throughout the review process.

35. The lead reviewers noted the information provided by the secretariat on the technical issues that may be encountered when using the Locator tool in the future, owing to the large

and increasing size of the database and the ageing software, which is likely to lead to the need to upgrade the Locator tool in the near future. In preparing and implementing the upgrade, the secretariat should:

- (a) Ensure the availability of data for the whole time series;
- (b) Improve the software with respect to its flexibility and user-friendliness;
- (c) Ensure the availability of an offline version, even if an upgrade is implemented as a web-based application;
- (d) Consider the development of two versions of the Locator tool: a 'full' version and a 'light' version that could be downloaded and used offline more easily;
- (e) Provide access to the raw data used in the Locator tool.

#### **4. Virtual team room**

36. The lead reviewers welcomed the ongoing work being undertaken by the secretariat on the development of the inventory virtual team room (I-VTR) to support the review of the information on annual GHG inventories. The lead reviewers also noted the results of testing these components during the 2014 review cycle, which show that the tool could be a valuable resource in supporting the review, management and recording of the information generated in the process, and in increasing the traceability and availability of the review materials. The lead reviewers continued to encourage the secretariat, for subsequent review cycles, to promote the I-VTR as the major repository of information for all reviews.

37. The lead reviewers also encouraged the secretariat to continue to undertake work on the development of the remaining components of the I-VTR, in particular the review issues tracking system, and to test them in a limited number of reviews in the 2014 review cycle.

38. The lead reviewers further encouraged the secretariat to explore the use of the I-VTR in other supporting actions during the review, such as the work of the sectoral groups (e.g. the land use, land-use change and forestry (LULUCF) advisory group), the sharing of experiences from previous reviews when responding to particular review issues, and monitoring of the progress of review activities, for example through the implementation of a 'traffic lights' or 'dashboard' system to allow for an easy, transparent monitoring of the overall progress of the review process by all experts.

#### **5. Development of the new CRF Reporter**

39. The lead reviewers welcomed the update on the development of the upgraded CRF Reporter software and the opportunity offered by the secretariat to Annex I Parties to review and test the software. The lead reviewers urged the secretariat to focus on making the upgraded software available by the end of June 2014 to enable Annex I Parties to submit their inventories by 15 April 2015.<sup>10</sup>

#### **6. Consistency of reviews**

40. The lead reviewers welcomed the information provided by the secretariat on the issues that may have been treated inconsistently during the 2014 review cycle. They recommended that, in order to facilitate future discussions during lead reviewer meetings, the secretariat should distribute such issues to lead reviewers not later than one week prior to the meeting.

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<sup>10</sup> The upgraded version of the CRF Reporter was released on 30 June 2014.

## 7. Planning for the 2014 review cycle

41. The lead reviewers emphasized that the 2014 review cycle will be particularly challenging for the Parties to the Convention, given that it will be the last year of application of the current UNFCCC Annex I reporting guidelines before the change to the revised guidelines adopted through decision 24/CP.19.

42. The lead reviewers agreed that it is important to implement the 2014 review cycle in accordance with the relevant mandates despite the above-mentioned challenge, and, therefore, the 2014 review cycle will need to be both efficient and effective.

43. The lead reviewers requested the secretariat, when planning for the 2014 reviews, to consider conducting more than two centralized reviews during the same week in order to facilitate communication among the review experts and increase consistency among the reviews. The lead reviewers also requested the secretariat to consider starting the review weeks not later than the last week of August.<sup>11</sup>

44. The lead reviewers requested the secretariat to consult with Parties with a view to agreeing to the dates of the 2014 review by the end of April 2014.<sup>12</sup>

45. The lead reviewers requested that the secretariat, in forming the ERTs, aim to ensure that LULUCF experts do not act as lead reviewers, and that at least one lead reviewer does not have sectoral responsibilities. In addition, the lead reviewers encouraged the secretariat to strive to ensure that each LULUCF expert has no more than two Parties to review. More broadly, the lead reviewers encouraged the secretariat to compile teams with a view to ensuring that a sufficient number of experienced experts are available, particularly for the energy and LULUCF sectors.<sup>13</sup>

46. The lead reviewers recalled the conclusion from the 10<sup>th</sup> meeting of lead reviewers<sup>14</sup> on the need to improve communication with the Parties undergoing centralized reviews by informing them of the provisional main findings and recommendations at the end of the review week. They concluded that the table on the provisional main findings produced during the 2014 review cycle was beneficial to both the ERT and the Party being reviewed. Although this table may be of more limited use in 2014 due to the methodological changes that will be introduced in the 2015 review cycle following the introduction and use of the revised UNFCCC Annex I reporting guidelines, the lead reviewers agreed that this table should continue to be produced for future centralized reviews as an informal communication tool for the Parties concerned.

## 8. Recommendations for improvements in the 2014 review cycle

### *Annual review report template*

47. The lead reviewers welcomed the efforts by a small group of lead reviewers and the secretariat to improve the annual review report (ARR) template for the 2014 review cycle, including through the use of checklists and more tables, and agreed that these changes contributed to efficiency improvements during the 2014 review cycle.

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<sup>11</sup> By the time this document was prepared, this request had been fulfilled by the secretariat.

<sup>12</sup> As footnote 11 above.

<sup>13</sup> As footnote 11 above.

<sup>14</sup> See paragraph 11 of the “Conclusions and recommendations of the 10<sup>th</sup> meeting of inventory lead reviewers”. Available at [http://unfccc.int/files/national\\_reports/annex\\_i\\_ghg\\_inventories/review\\_process/application/pdf/10thmeeting\\_conclusionsrecommendations.pdf](http://unfccc.int/files/national_reports/annex_i_ghg_inventories/review_process/application/pdf/10thmeeting_conclusionsrecommendations.pdf).

48. The lead reviewers recommended that the secretariat refine the ARR template, as necessary, based on the experience of the 2014 review cycle, but not make major changes to the structure of the template. In particular, the lead reviewers recommended that the secretariat provide additional guidance on the ARR tables, including with regard to the use of the terminology to present the ERT's assessment of issues such as time-series consistency, quality assurance/quality control, transparency, and the final conclusions and recommendations of the ERT. The lead reviewers requested the secretariat to reconvene the small group of lead reviewers to consider terminology and guidance with respect to the ARR template tables, including on how to address recalculations, taking into account the recommendation of the lead reviewers to remove the recalculations table from the template.<sup>15</sup>

49. To further improve the efficiency of the review process, the lead reviewers recommended that the secretariat complete the factual information in the ARR for review by the ERTs (e.g. data in tables 1 and 2 and in the compilation and accounting tables; information on the tiers used for the key categories and uncertainty analyses; information regarding the difference between the reference approach and the sectoral approach; and information in the sectoral overview section of the ARR regarding emissions and removals).<sup>16</sup>

50. The lead reviewers encouraged the secretariat, in preparation for the 12<sup>th</sup> meeting of the lead reviewers, to explore whether there is a need to make further revisions to the ARR template for the reviews starting in 2015 based on any decisions adopted at COP 20 or at the tenth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) on the revision of the UNFCCC review guidelines under the Convention and the Kyoto Protocol. They requested the secretariat to present suggestions thereon, if any, at the next annual lead reviewer meeting and to communicate these suggestions to the lead reviewers not later than one week before the meeting.

#### *The review process*

51. The lead reviewers stressed that reviews should be initiated as early as possible. For that purpose, they requested the secretariat to initiate and conclude the formation of the ERT as early as possible, preferably by the end of May.<sup>17</sup> The lead reviewers also agreed to start the review process as early as possible, including the consideration of materials, the discussion of issues within the ERT (including conference calls) and the communication of questions and answers with Parties. The lead reviewers requested the secretariat to inform Parties in advance of the review week with regard to when to expect communications from the ERT.<sup>18</sup>

52. For the purpose of ensuring that experts have sufficient information in a timely manner, the lead reviewers requested the secretariat to deliver to ERTs the ARR template and the schedule for the review as early as possible, preferably by the end of June, and the review tools, preferably by the end of July. The lead reviewers also requested the secretariat to ask Parties for permission to make available to the ERT, at the request of the ERT, information from previous reviews, including questions and answers, and the draft ARR, if still unpublished.<sup>19</sup>

53. The lead reviewers agreed that it is important that the schedule for the review should ensure that timeliness is achieved and stressed the importance of agreeing on an appropriate

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<sup>15</sup> By the time this document was prepared, these requests had been fulfilled by the secretariat.

<sup>16</sup> As footnote 15 above.

<sup>17</sup> By the time this document was prepared, this request had been fulfilled by the secretariat.

<sup>18</sup> As footnote 17 above.

<sup>19</sup> As footnote 17 above.

schedule within the ERT, continuously monitoring progress and keeping the ERT informed of remaining actions.

54. The lead reviewers concluded that it is important to enhance communication within the ERT and the collective consideration of findings and recommendations during the review week. For that purpose, the lead reviewers agreed that ERTs should prepare a list of key issues prior to the review week for consideration and discussion by the ERT during the review week and to have a complete 'zero order' draft ready by the end of the review week. With the same objective, the lead reviewers requested the secretariat to ensure that quality control actions are completed at the end of the review week or immediately thereafter.

55. The lead reviewers agreed with regard to the importance of providing clear and consistent guidance on the review process from the start, and requested the secretariat to prepare and use a common introductory e-mail to all ERTs, and also requested the secretariat to assist lead reviewers in the preparation of the common introductory e-mail.<sup>20</sup>

56. Noting the role of lead reviewers defined in the UNFCCC review guidelines, the lead reviewers stressed that they should focus on: the coordination of ERTs and the planning of their work; monitoring the progress of the review; communication with the Party concerned; and ensuring consistency.

57. The lead reviewers requested the secretariat to inform the national focal points, on a frequent basis, of the progress of the review.

#### **9. Financial implications**

58. The lead reviewers noted that supplementary funding is needed for some of the secretariat's activities to support the review process, and emphasized the importance of Parties supporting such work with financial resources. This relates to:

- (a) The training of review experts, including the organization of the refresher seminars;
- (b) I-VTR development;
- (c) CRF Reporter development;
- (d) Work on the preparation of systems and tools for supporting the review processes in 2015.

### **IV. Roster of experts and availability of nominated experts**

59. As at 29 August 2014, the roster of experts contained 1,015 GHG inventory experts, 521 from non-Annex I Parties and 494 from Annex I Parties. From 13 September 2013 to 29 August 2014, 151 new experts were nominated to the roster, 104 from non-Annex I Parties and 47 from Annex I Parties. During this period, some Parties updated their part of the roster and deleted obsolete records; however, the roster still contains a great deal of unrevised data. For example, in total the roster of experts contains 203 non-updated records that are 10 years old or more. In conclusion, the roster from which the secretariat could select eligible experts to participate in GHG inventory reviews contains potentially only 411 experts.

60. As a result, a limited number of experts listed on the roster currently participate in the review process. In 2014, a total of 161 individuals from 68 different Parties served as

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<sup>20</sup> By the time this document was prepared, this request had been fulfilled by the secretariat.

inventory experts on ERTs. Of these experts, 77 were from non-Annex I Parties, 25 were from Annex I Parties with economies in transition and 59 were from other Annex I Parties. Owing to the unavailability of experts to participate in a review, one expert had to participate in two reviews. One of the main reasons for the significant discrepancy between the number of nominated experts and the number of those participating in reviews is that only a few Parties regularly update the list of experts nominated by them to reflect, *inter alia*, the fact that many experts on the roster have moved to other positions or have retired and are no longer available to participate in the review process. However, another important reason is the significant workload of the nominated experts at their respective offices added to their participation in international climate change negotiations and related activities, thereby not allowing most of them to devote time to the annual review activities. This problem has been exacerbated in recent years and seems unlikely to be resolved with the continuing increase in climate change negotiations and activities. Another reason is that some experts nominated to the roster have not yet taken the mandatory training courses, or have not passed all the relevant examinations, both for the training programme under the Convention and the training programme under the Kyoto Protocol (see paras. 70–76 and 77–80 below). Therefore, only a limited number of experts listed on the roster may currently participate in the review process.

61. In 2014, the secretariat sent 189 letters of invitation to participate in reviews to 182 experts in total; of these, 19 experts declined to participate, informing the secretariat of their unavailability owing to previous commitments, heavy workloads, lack of financial resources or other reasons. In addition, nine experts informed the secretariat of their availability on dates different to the scheduled review dates to which they had been invited or indicated their availability to participate only on particular dates, making it necessary to change their participation to other reviews, both in-country and centralized, and to find experts for those reviews willing and available to facilitate such changes. In addition, some experts declined to participate in the reviews at very short notice. Some of these experts agreed to perform their tasks as desk reviewers. Overall, these issues negatively affected, and increased the difficulty of, the planning and conformity of ERTs by the secretariat for the 2014 review cycle.

62. At the same time, these issues impacted the completeness of the ERTs and their proper geographical balance. For example, for one centralized review, the secretariat invited 19 experts in total; of these, 4 declined and 1 informed the secretariat of their willingness to participate in reviews on different dates. It is important that experts are available and respond positively to the secretariat's invitations in a timely manner, and that Parties pay more attention to this issue, possibly taking further action, such as ensuring that nominated experts are fully available for reviews and receive the necessary support from their governments and institutions.

63. For centralized reviews, the secretariat usually invites two review experts to cover each sector and two generalists to cover cross-cutting issues, except in the case of the energy sector, for which three experts are usually invited to conduct the review as this is the largest sector and one of the most complex in the GHG inventories. In order to incorporate new reviewers to the ERT, the secretariat invited four energy experts to each centralized review. This worked for 4 of the 10 centralized reviews, for which four energy-sector experts participated. The review of the LULUCF sector is also complex and demanding. In accordance with the conclusions of the 11<sup>th</sup> meeting of lead reviewers, the secretariat ensured that, during the ERT planning phase in 2014, no LULUCF expert acted as a lead reviewer. In addition, the number of LULUCF experts per team increased: three LULUCF experts participated in eight centralized reviews and four participated in two centralized reviews. At the same time, the practice of having only one LULUCF expert per in-country review was retained.



64. The secretariat continues to reinforce ERTs for centralized reviews with new review experts. In 2014, 30 new experts, who had taken the training courses and passed the examinations, participated in all 10 centralized reviews, in most cases assuming full responsibility as reviewers.

65. In accordance with the UNFCCC Annex I reporting guidelines, Parties may submit their national inventory report (NIR) in any of the official languages of the United Nations. The UNFCCC Annex I reporting guidelines also encourage Parties to submit, where relevant, an English translation of their NIR. Submitting NIRs in a language other than English limits the transparency of Parties' reporting and puts an additional burden on the secretariat to process the information provided and find review experts with knowledge of that language, in addition to English, which is the working language of the secretariat. Given the limited number of review experts, especially those with sufficient knowledge of languages other than English, selecting a team capable of working in a language other than English is a major challenge, which the secretariat faced again, as in previous years, when inviting experts to participate in the 2014 review cycle. The review becomes limited if the ERT does not have knowledge of the language in which the NIR is submitted, as it cannot review the information submitted in depth, including any additional information provided in the language of the Party under review. In addition, many experts have to review the same Parties' submissions year after year because of their language skills, reducing the valuable perspective and expertise gained if the inventory is reviewed by different experts in successive years, and limiting to a certain extent the scope and focus of the review activities. Further, these experts are not able to use their experience and contribute to the review of other Parties' submissions. These issues are especially relevant in the case of centralized reviews.

66. The secretariat continued to make an online form available on the UNFCCC website<sup>21</sup> to facilitate the nomination of experts to the roster and the updating of the list of nominees by a Party. At the same time, it continued to process the nominations of experts received via e-mail and fax to further facilitate nominations by Parties. The secretariat also continued to invite Parties to update the roster and to nominate new experts periodically, and has improved the accessibility and user-friendliness of the information on the training programmes on the UNFCCC website.<sup>22</sup> In 2013 and 2014, through individual letters, the secretariat invited Parties to update the roster and to nominate new experts in connection with the organizing of training courses for new review experts of GHG inventories, ensuring that all Parties without experts participating in the review process were invited.

67. At the beginning of September 2013, in accordance with the request of SBSTA 38,<sup>23</sup> the secretariat revised and updated the nomination form for the UNFCCC roster of experts to enable the nomination of experts for participation in the various review processes conducted by the secretariat, which informed all Parties of these changes and invited Parties to update and expand the UNFCCC roster of experts, including a request to nominate experts for the new process of reviews of biennial reports, and to remove those experts who are no longer available for participation in the review activities organized by the secretariat, by September 2013. However, more importantly, on 9 July 2014, the Executive Secretary of the UNFCCC, in a message to Parties, invited Parties to nominate new experts to the UNFCCC roster of experts, including those for the technical analysis of biennial update reports from non-Annex I Parties and/or reviews of GHG inventories and supplementary information under the Kyoto Protocol, biennial reports and national communications from

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<sup>21</sup> <[http://unfccc.int/files/parties\\_and\\_observers/roster\\_of\\_experts/application/msword/new\\_form\\_as\\_of\\_19\\_may\\_2014\\_clean\\_version\\_for\\_the\\_web\\_doxc.doc](http://unfccc.int/files/parties_and_observers/roster_of_experts/application/msword/new_form_as_of_19_may_2014_clean_version_for_the_web_doxc.doc)>.

<sup>22</sup> <[http://unfccc.int/national\\_reports/annex\\_i\\_ghg\\_inventories/inventory\\_review\\_training/items/2763.php](http://unfccc.int/national_reports/annex_i_ghg_inventories/inventory_review_training/items/2763.php)>.

<sup>23</sup> FCCC/SBSTA/2013/3, paragraph 98.

Annex I Parties, and for the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels. In addition, Parties were invited to regularly check and, where necessary, update the information on experts already nominated to the roster and to remove from the roster those experts who are no longer available to participate in these activities organized by the secretariat.

## V. Training of experts

68. 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, who need to further strengthen their expertise as they usually do not work on GHG inventories on a daily basis. In addition, they are not involved in activities of Annex I Parties regarding the reporting of supplementary information under Article 7, paragraph 1, of the Kyoto Protocol, related for example to emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, information on accounting of Kyoto Protocol units, the national systems and the national registries and their changes, and information on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol, which are subject to annual reviews. One of the positive impacts of the training programmes is that experts, both from non-Annex I and Annex I Parties, participating in training activities and subsequent reviews could use the experience gained in these activities to improve the quality of their national inventories.

69. The secretariat continues to strongly encourage and invite all available experts listed in the UNFCCC roster of experts nominated for inventory review activities to take the relevant Convention and Kyoto Protocol training courses and examinations, because only experts that pass these examinations are able to participate in the reviews under the Convention and its Kyoto Protocol. The secretariat also facilitates the process of access by experts to the relevant training programmes, periodically invites Parties to nominate new experts for the training programmes (see paras. 66 and 67), and provides relevant information and updates on the organization of the training courses on the UNFCCC website<sup>24</sup> and through other electronic means, such as the secretariat's newsletter.

### A. Training programme for greenhouse gas inventory review experts for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention

70. The basic training course, developed and offered since 2003 in accordance with decision 12/CP.9, was completed in 2005 with a LULUCF sector module and later in 2009 was updated to take into account the methodological developments in GHG inventories and experience gained in the review process. By decision 10/CP.15, the COP requested the secretariat to develop and implement the updated training programme for GHG inventory review experts for the technical review of GHG inventories from Annex I Parties, including the examination of experts, and giving priority to the organization of an annual seminar for the basic course. It also encouraged Annex I Parties that are in a position to do so to provide financial support to enhance the training programme. In accordance with this decision, the updated training programme has been formally offered online since 2010 and consists of: the updated basic course, covering the general and cross-cutting review issues

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<sup>24</sup> See  
<[http://unfccc.int/national\\_reports/annex\\_i\\_ghg\\_inventories/inventory\\_review\\_training/items/2763.php](http://unfccc.int/national_reports/annex_i_ghg_inventories/inventory_review_training/items/2763.php)>.

and general IPCC methodological guidance, as well as the courses on the review of all IPCC inventory sectors; the course on improving communication and in facilitating consensus in ERTs; the course on the review of complex models and higher-tier methods (offered since 2012); and an annual refresher seminar for experienced GHG inventory review experts, subject to the availability of resources, which was offered annually from 2010 to 2014.

71. Regarding the future development of the training programme for GHG inventory review experts, in June 2014, SBSTA 40 recognized the need to update, revise and complete the materials for a training programme for the review of GHG inventories from Annex I Parties due to the adoption by the COP<sup>25</sup> of the revised UNFCCC Annex I reporting guidelines, which incorporated the 2006 IPCC Guidelines, and to take into account the UNFCCC review guidelines under current consideration by the SBSTA. It requested the secretariat to develop a formal training programme for the review of GHG inventories from Annex I Parties for consideration at SBSTA 41 in December 2014.

72. In 2014, the secretariat held only one round of instructed online courses with a training seminar in October due to the heavy workload of secretariat staff involved in different review processes under the Convention and the Kyoto Protocol throughout the year and the support provided to the negotiation processes. These instructed courses were offered online during September and October 2014, with three instructors available to provide guidance and to respond to questions from the trainees, and concluded with a three-day training seminar with final examinations. The final seminar took place in Bonn from 21 to 23 October 2014. During the training seminar, the trainees participated in the simulation of a centralized review using real annual GHG inventory submissions over two and a half days, and on the last half day they sat the corresponding examinations. The secretariat invited as instructors three highly experienced and capable GHG inventory review experts from non-Annex I Parties, including one instructor participating in these training activities for the first time. All instructors were identified from the pool of lead reviewers based on their recognized capabilities and all are on the UNFCCC roster of consultants.<sup>26</sup>

73. In 2014, a total of 98 invitations were sent to new nominated experts to the roster and 42 experts have indicated their intention to participate in the online training and in the final seminar. These instructed courses will focus on the training of experts from African countries. A total of 19 experts from African countries have confirmed their participation in the training. The results of the examination will be available in November 2014.

74. In addition to the instructed courses, the secretariat makes the inventory training courses available online for inventory experts throughout the year and provides access for new trainees upon request by a Party. In 2014 (as at 12 September), 14 experts completed the non-instructed online courses and made relevant arrangements to take the examinations under the supervision of the secretariat, without incurring additional costs to the secretariat. All of them passed one or more examinations.

75. Since June 2012, the secretariat has offered the new course on the review of complex models and higher-tier methods online. This course aims to facilitate the review of emission estimates calculated using these methods (tier 3 methods), addressing the difficulties occurring during the reviews in relation to the use of complex models and higher tiers, and providing additional guidance for ERTs on the specific preparation required for their review. At the beginning of 2012, the secretariat invited more than 300 experienced and new experts to take this course. Of these, 119 experts have been registered and have requested access to the course. In addition, since 2012, experts participating in the

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<sup>25</sup> Decision 24/CP.19.

<sup>26</sup> <<https://unfccc.int/secretariat/employment/consultancy.html>>.

online training courses have also been invited to take this course on an optional basis and are provided with access to the course. To date, 23 experts have passed the optional examination.

76. In 2014, the secretariat organized a half-day refresher seminar in conjunction with the 11<sup>th</sup> meeting of lead reviewers on “Moving from commitment period 1 to commitment period 2” of the Kyoto Protocol, in which 29 experienced experts participated, including lead reviewers. The main objective of this seminar was to refresh the knowledge of review experts on good practices and approaches for the different steps of the review process and to enhance their common understanding on the different approaches to the reviews, which became more complex and resource-intensive in recent years, including the performance of particular aspects of the review cycle, such as the identification of potential problems, the assessment of underestimations of emissions or overestimations of removals during the review week, the preparation of the review reports, including the use of the review transcripts, and interaction with the Party. Therefore, reviewers benefited from a refresher seminar that addressed these issues and difficulties as presented during the reviews, and provided additional guidance for review experts on good practice specific steps to follow and aspects to be considered during the review cycle.

## **B. Training programme for members of expert review teams participating in annual reviews under Article 8 of the Kyoto Protocol**

77. Decision 24/CMP.1 requested the secretariat, subject to the availability of resources, to develop and implement the training programme for members of ERTs participating in the initial reviews under Article 8 of the Kyoto Protocol, including the testing of experts and final seminars for the courses, subject to the availability of resources. The courses covered important aspects for the review of the initial reports, such as national systems, the application of adjustments and modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol. These courses have been offered online to experts since 2006. The majority of experienced experts at that time completed the training courses and passed the mandatory examination online in 2006.

78. By decision 8/CMP.5, the CMP requested the secretariat to develop and implement the updated training programme for members of ERTs participating in annual reviews under Article 8 of the Kyoto Protocol, including the examination of experts. The training programme is intended to train members of ERTs for the review of information submitted under Article 7 of the Kyoto Protocol. All training courses are designed to be offered online, in some cases with the support of an instructor, subject to the availability of resources, and in the case of the course on the application of adjustments, the support of an instructor is always required. The courses and examinations were offered online three to four times a year until 2011, but since 2011 they have been offered twice a year due to the small number of participants. All courses are available, without an instructor, to trainees throughout the year.

79. This training programme was developed on the basis of the existing courses implemented in accordance with decision 24/CMP.1; some are mandatory for all reviewers, while some are mandatory for lead reviewers and some other experts qualified for the review of particular aspects of the information submitted under Article 7 of the Kyoto Protocol. The training programme consists of a course on each of the following aspects: national systems, application of adjustments, modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol, review of national registries and information on assigned amounts, and review of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol.

80. During the period 2010–2012, 340 experts participated in the online training courses and 270 experts passed one or more examinations. In 2013, 56 experts participated in the online training courses and 49 experts passed one or more examinations. In May–June 2014, the secretariat organized a first round of online training courses and examinations with the participation of 23 experts and 19 passed two or more examinations. As at 12 September 2014, 426 experts had passed two or more examinations and are qualified to be members of ERTs participating in annual reviews under Article 8 of the Kyoto Protocol. The secretariat plans to organize a second round of online training courses and examinations in November–December 2014 inviting the new experts who have passed the examinations on the training programme for GHG inventory review experts held in October. For the period 2010–2014, two highly experienced experts and lead reviewers from non-Annex I Parties were invited, one each year, to be the instructor for the course on the application of adjustments.

## VI. Greenhouse gas information system

81. Support to the reporting and review processes requires a number of information technology systems, which differ in purpose, scope, size and degree of support. These systems vary from extensive, complex databases, such as the compilation and accounting database (CAD) or the Locator tool, to smaller, focused ‘review tools’ serving particular analytical purposes of the review process. This report uses the term “greenhouse gas information system” to describe the status and current developments of these systems.

82. In 2014, Annex I Parties continued their annual reporting on GHG inventories and all Annex I Parties continued to make use of the CRF Reporter software successfully in preparing and submitting their GHG inventories. No major issues were identified in the reporting and submission process. However, the number of records per submission by Party is constantly increasing due to the increase in the time series of years covered by the GHG inventory and, for Kyoto Protocol Parties, because of the high volume of information reported for activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol. To this end, the secretariat continued to monitor and adjust its internal systems in order to accommodate the increased data volume.

83. At the date of publication of this report, in 2014 Annex I Parties made 99 submissions of their GHG emission inventories using the CRF Reporter (82 submissions were accepted by the secretariat) and 51 submissions of their standard electronic format data via the UNFCCC submission portal. These include both original submissions and resubmissions in the lead-up to, during and as a result of the annual review process. All of these submissions have been imported into the GHG information system, which is maintained by the secretariat and each of them has been assessed for completeness and internal consistency.

84. The secretariat continued to ensure during 2014 that the data provided through the GHG data interface are regularly updated in order to make the latest GHG inventory data available for inventory review teams and external users, including for the negotiations held during the sessions of the subsidiary bodies to the Convention. To this end, the secretariat supported releases in March and June 2014 of GHG inventory data through the GHG data interface. Another release is planned for the end of October 2014.

85. The secretariat continued the support and improvement process of the CAD. The CAD continues to perform its important tasks as record-keeper of the information reported by Annex I Parties on GHG emissions and assigned amounts, the results from the review process and of decisions by the Compliance Committee, and as the conduit for the information and processes to the international transaction log. In addition to the continued

support for the CAD, the secretariat started to develop the required changes/additions to the CAD for the second commitment period of the Kyoto Protocol, the development of required changes/additions for the true-up period after the first commitment period of the Kyoto Protocol, and it will add the possibility of caching selected GHG data imported from the CAD.

86. To support the current and upcoming review cycles, the secretariat is developing the I-VTR. The I-VTR software is composed of three modules. Modules 1 and 2 have already been delivered for the use of ERTs and were used in the 2014 cycle, while module 3 is still in development. Module 1 (reference library) is a site which allows the organization, storage and maintenance of reference materials and documentation associated with an annual review. Module 2 (ERT workspace) is a site that provides an efficient, secure and transparent collaboration system for managing documents and communications, including questions raised by ERT members and answers received from Parties during an annual review. Module 3 (review issues tracking system) is a web-based database system used to create, track and manage review findings, including their structuring, and provides links to the questions and answers. Overall, the development of the I-VTR has proceeded well, but it had to be “frozen” in the second half of 2014 because of the insufficient funding. The experience has shown that the I-VTR system needs to mature, taking on board the experience from use at real reviews, in order to become fully functional and user-friendly. The familiarity of the review experts with the system is also a significant factor: some users switch easily to a SharePoint-based system, whereas others require some time. The secretariat will continue to work on increasing the user-friendliness of the system and on the improvement of its performance parameters.

87. The secretariat is continuing to support the CRF Reporter software and the expert review process by maintaining and generating reports and tools that underpin the process. The secretariat also continues to maintain and support the other parts of the GHG information system, such as the GHG data warehouse and business intelligence components of the system, in order to ensure quality and to address some of the issues identified by Parties and review experts during the reporting and review process.

88. The upgraded version of the CRF Reporter was released on 30 June 2014 and another release was made on 22 September 2014, expanding the functional capabilities of the software. In the fourth quarter of 2014, the secretariat will make available a further release of the CRF Reporter software, taking on board the feedback from experience with the earlier versions.

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