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**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 of the secretariat relating to greenhouse gas inventory reviews during the period March 2004 to July 2005 and activities planned for the remainder of 2005. It provides information on the Parties subject to review, the training and participation of experts in the review process and the meeting of inventory lead reviewers. This document is provided for information.

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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.

B. Scope of the note

2. This document provides information of the activities of the secretariat relating to GHG inventory reviews undertaken during the period March 2004 to July 2005 and planned for the remainder of 2005. It covers the work by the secretariat to improve the effectiveness, efficiency and consistency of the review process, in accordance with the review guidelines, and thus to help ensure the reliability of information on GHG emissions and trends provided to the COP and its subsidiary bodies.

II. Review activities

3. The technical review of national GHG inventories from Annex I Parties started in 2000, in accordance with decision 3/CP.5. Following completion of the trial period set up in that decision, annual reviews of the individual inventory of each Annex I Party became mandatory in 2003. UNFCCC review guidelines adopted in 1999 (decision 3/CP.5) and revised in 2002 (decision 19/CP.8) help to ensure that reviews are conducted consistently in a technically sound manner.

4. In addition to the GHG inventory review activities funded from the core budget, others are supported by voluntary contributions to supplementary funds. In particular, the secretariat recognizes the generous contributions and/or in-kind support of Australia, Canada, Finland, Japan, Netherlands, New Zealand, Norway, Spain, Switzerland, the United Kingdom of Great Britain and Northern Ireland and the United States of America, which have supported the activities discussed here, mainly those relating to the development of the GHG information system, the training of review experts and the organization of lead reviewers' meetings.

A. Individual inventory reviews

5. In accordance with decision 19/CP.8, the secretariat coordinates the review of national GHG inventories of Annex I Parties. In 2004, the secretariat organized a review for each country that provided a complete inventory submission (i.e. containing the common reporting format and a national inventory report) within six weeks of the submission due date. The secretariat was also able to organize reviews for a few countries that submitted inventories late.

6. The inventory review process is conducted in three stages: initial check, synthesis and assessment, and individual review. The initial check stage provides an immediate quality assurance check to verify that the inventory submission is complete and in the correct 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.

7. During the individual review, an international team of experts, nominated by Parties, conducts a technical review of each inventory. In 2004, individual inventory reviews were conducted for 36 Annex I Parties, as follows:

- **In-country reviews:** Croatia, Germany, Greece, Iceland, Netherlands, Portugal, Slovenia, Switzerland
- **Centralized reviews:** Austria, Australia, Belarus, Denmark, Estonia, European Community, Finland, France, Hungary, Italy, Latvia, Lithuania, Monaco, New Zealand, Norway, Slovakia, Sweden, Ukraine, United Kingdom, United States
- **Desk reviews:** Belgium, Bulgaria, Canada, Czech Republic, Ireland, Japan, Romania, Spain.

8. The national inventories of Liechtenstein, Luxembourg and Poland were not reviewed in 2004 because these Parties did not submit a national inventory report; they submitted only the common reporting format. The Russian Federation and Turkey did not submit an annual inventory in 2004.

9. All 36 inventory review reports were completed on-time, or within one week of the due dates established in the inventory review guidelines.

B. Expert review teams

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

11. 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, waste, and land use, land-use change and forestry (LULUCF). However, for reviews of smaller Parties, experts may be requested to cover two sectors.

12. In selecting members of expert review teams, the secretariat seeks to ensure an overall balance in the number of experts from Annex I Parties and Parties not included in Annex I to the Convention (non-Annex I Parties) participating in the reviews, and a geographical balance among experts within these two groups. In 2004, a total of 114 individuals from 60 different Parties served as inventory experts on review teams. Of these experts, 19 were from Annex I Parties with economies in transition (EIT countries), 51 were from other Annex I Parties, and 44 were from non-Annex I Parties. (Three experts from non-Annex I Parties and three experts from EIT countries participated in two reviews each.) In addition, one expert from an international organization, the International Energy Agency, participated. In accordance with United Nations rules, the secretariat provided funding for travel costs and subsistence allowances for experts from non-Annex I Parties and some EIT countries. Table 1 provides a breakdown of expert participation by nominating Party in 2004.

13. From 2000, when the individual reviews were first conducted under the trial period, through 2004, 171 individual experts from 78 different Parties (35 Annex I Parties and 43 non-Annex I Parties) have participated in GHG review activities. After the 2005 review cycle, the numbers are expected to increase to more than 190 experts from 82 different Parties (37 Annex I Parties and 45 non-Annex I Parties).

14. In 2004 the secretariat invited 20 new experts, who had not previously participated in inventory reviews and who underwent a training course and examination, to participate as members of expert review teams. In 2005 the secretariat will again seek the participation of experts from Parties which have not previously participated in the review process, in order to further increase the number and the

geographical representation of non-Annex I experts in the inventory reviews (see chapter III below on inventory review training).

Table 1: Inventory review experts in 2004 by nominating Party

Annex I Parties		Annex I Parties with economies in transition			Non-Annex I Parties	
Australia	Switzerland	Belarus	Algeria	Morocco		
Austria	Turkey	Bulgaria	Argentina ^a	Niger		
Canada	United Kingdom	Croatia	Benin	Nigeria		
European Community	United States	Czech Republic ^a	Bolivia	Paraguay		
Finland		Latvia	Brazil	Peru		
Germany		Lithuania	Chile ^a	Philippines		
Greece		Romania	China	Sudan		
Ireland		Russian Federation ^a	Cuba	Tajikistan		
Italy		Slovakia ^a	Ghana ^a	Thailand		
Japan		Slovenia	India	Togo		
Netherlands		Ukraine	Indonesia	United Republic of Tanzania		
New Zealand			Kazakhstan	Uruguay		
Norway			Korea	Zambia		
Portugal			Mexico			
Spain			Republic of Moldova ^a			
Sweden			Mongolia			

^a Parties from which two or more experts were used in 2004.

C. Other inventory review procedures

15. In accordance with decision 12/CP.9 the secretariat developed 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 by expert reviewers to this information. All procedures are now in place; however, the secretariat has not yet received any confidential inventory information from a Party.

16. Decision 12/CP.9 further requires that all members of expert review teams must 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 of the experts participating in the 2004 inventory reviews have signed this agreement. The secretariat will also require all new experts participating in the 2005 review to sign this agreement.

D. Meeting of inventory lead reviewers

17. Under the UNFCCC review guidelines (FCCC/CP/2002/8), expert teams are to be lead by two experts with substantial inventory review experience. For each team, one lead reviewer is to be from a non-Annex I Party and the other from an Annex I Party. These lead reviewers have a special role in guiding the review teams to ensure the quality, consistency and objectivity of the reviews. Recognizing the special role of lead reviewers, the COP requested the secretariat to organize meetings of lead reviewers to promote a common approach by expert review teams 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 inventory reviews.

18. The third meeting of inventory lead reviewers was held in Bonn, Germany, from 13 to 15 April 2005. Thirty-six experts, split evenly between Annex I and non-Annex I Parties, were invited to the meeting, but only 35 were able to attend. In addition, two representatives of the Intergovernmental Panel on Climate Change (IPCC) GHG inventory technical support unit attended the meeting as observers.

19. The meeting addressed both procedural and technical issues relating to the annual review of GHG inventories of Annex I Parties, including the experiences in the review of the inventory of the European Community. The secretariat also presented preliminary information on its planning for the initial reviews under the Kyoto Protocol.

20. During the meeting, the secretariat presented its plans for the 2005 reviews and updated information on the tools developed to facilitate the reviews, such as the outlier detection tool and the review transcripts. These developments were welcomed by the lead reviewers, who supported the continued use of these tools in the review process. The secretariat also reported on the status of the development and planned deployment of the new reporting software for the common reporting format, CRF Reporter (see also chapter IV below).

21. Lead reviewers also considered the appropriate treatment by expert review teams of comments received from Parties. They recommended that the secretariat encourage Parties to provide their comments in a more structured and focused manner. Lead reviewers also agreed that expert review teams should consider all comments received from Parties and provide a brief written response to the Party on how these comments were addressed.

22. Lead reviewers also discussed technical issues that have arisen in the review of GHG inventories, including review of a GHG inventory that is compiled from different national inventories, and the assessment of the choice of methods used in the preparation of an inventory estimate. Lead reviewers concluded that these issues should not be considered departures from the IPCC *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*, provided that the principles of this good practice guidance are applied correctly and are consistent with national circumstances.

23. Lead reviewers gave particular consideration to the review of the LULUCF sector. Because of the recent adoption of new reporting requirements for LULUCF¹ and the fact that in 2005 Parties will be reporting using these guidelines for the first time, this sector is expected to pose particular challenges for review in 2005. To facilitate a common approach to the reviews, the lead reviewers recommended that the secretariat develop the review handbook for this sector for use by expert review teams.

24. The lead reviewers also considered the results from the 2004 reviews of the process to gain experience in the calculation of adjustments, requested by decision 20/CP.9. They agreed that this adjustment exercise was useful and should continue during the 2005 reviews, with the consent of Parties concerned. They recommended that, to the extent possible, all expert review teams be involved and that the adjustment exercise focus on the base year. Lead reviewers also provided additional guidance for use by expert review teams during the adjustment process in 2005.

25. The full text of the conclusions of the lead reviewers' meeting is available on the UNFCCC web site.²

¹ See decision 13/CP.9 in document FCCC/CP/2003/6/Add.1.

² <http://unfccc.int/files/national_reports/annex_i_ghg_inventories/review_process/application/pdf/final_conclusions_and_recommendations.pdf>.

III. Inventory review training

26. Decision 12/CP. 9 called for the secretariat to establish a training programme, comprising both technical and skill-building courses, for new members of expert review teams. As of 2004 only experts who have successfully passed the examination for the training programme can participate in an inventory review. Development of the basic course, covering the general and cross-cutting issues and all inventory sectors except LULUCF, was completed in 2004. This course was offered online for the first time in 2004, with a final seminar held in Bonn in June. The secretariat extended 41 invitations to national focal points for inventory experts to participate in this training. Of the 25 experts who then participated in course, 23 successfully passed the examination. All of these 23 experts were successfully integrated in expert review teams in the 2004 and/or 2005 review cycle.

27. The basic course was offered again in 2005, and with the support of the Government of Japan a final seminar was hosted in Tsukuba, Japan, from 14 to 16 March 2005. The Government of Japan also provided funding for the experts from non-Annex I Parties and EIT countries. The secretariat extended 39 invitations to national focal points for inventory experts. Of the 25 experts who took the course and seminar, 20 successfully passed the examination³ in 2005 and have been invited to participate in an inventory review.

28. In addition, the secretariat completed the training course on review of the LULUCF sector and offered it online for experts in early 2005. With the support of the Government of Spain, a final seminar for the course was held in Valencia, Spain. Ten new and 19 experienced review experts participated in the course and attended the seminar. Of these, 8 new and 18 experienced reviewers passed the LULUCF examination.

29. In addition to the official course, the secretariat makes the inventory training courses available for inventory experts year-round and provides access for new trainees upon the request of a Party. Four new experts completed the online courses without instructor. Several experts have opted to study the courses this way, and to make separate arrangements to take the examinations under the supervision of the secretariat. As a notable example, 17 experts from New Zealand and Japan took the inventory review course online, and took an examination in Wellington, New Zealand. The Government of New Zealand covered all secretariat expenses for this arrangement.

30. In inviting new experts for the training course, the secretariat continues to give priority to experts from non-Annex I Parties and, in particular, has sought experts from countries that have not previously been involved in the review process. As a result, experts from Denmark, Egypt, Iceland and South Africa are expected to participate in an inventory review in 2005. This is in addition to experts from Algeria, Benin, Niger, Republic of Korea, Slovenia, Sudan, Tajikistan, Turkey and the United Republic of Tanzania who joined review teams for the first time in 2004.

31. A separate course "Improving communication and building consensus in expert review teams," which covers cross-cultural communication and conflict avoidance, is also available online for all inventory review experts. This course provides tools to improve the work of expert review teams and facilitate teamwork.

32. No separate training course has been developed on procedures for protection of confidential information. Instead, the secretariat will directly instruct expert review teams on these procedures.

³ Two of the experts who did not pass opted to retake the examination. Decision 12/CP.9 states that participants may have one opportunity to retake the examination, provided that the secretariat does not incur any cost. Accordingly, the secretariat has allowed participants to retake the examination at the offices of the secretariat, or at any workshop or meeting where the secretariat is in attendance.

33. Additional information on the inventory review training activities can be found on the UNFCCC web site.⁴

34. Decision 12/CP.9 also requested the secretariat to develop training courses on national systems for estimation of GHG emissions of Annex I Parties, on adjustments under Article 5, paragraph 2, of the Kyoto Protocol, and on modalities for accounting for assigned amounts under Article 7, paragraph 4 of the Kyoto Protocol. All three courses are currently under development. Subject to availability of resources,⁵ the secretariat plans to offer the courses online in the first half of 2006.

IV. Provision of greenhouse gas inventory information for the Conference of the Parties

35. The foundation for the UNFCCC inventory review process is the GHG information system (GHGIS), which comprises a database and related software tools developed by the secretariat to import, quality control, process, store, analyse and facilitate the review and the publication of GHG inventory information provided by Parties. The GHGIS is vital to producing authoritative GHG information for the COP and ensuring that the large number of annual inventories can be processed in a cost-effective, timely and rigorous manner. The development, maintenance and upgrade of the GHGIS continues to be resource intensive (human and financial). The main source of funding is the core Convention budget, but the generous contributions of Parties to the Trust Fund for Supplementary Activities have been crucial for much of this work.

36. The major task relating to the GHG information system in 2004 and 2005 has been the development of the CRF Reporter. The secretariat initiated the development of this software, as requested by decision 18/CP.8, in the second half of 2003, when supplementary funds became available. A first version of the software, which did not cover the LULUCF sector, was deployed in December 2004. Four Parties submitted their 2004 national inventory using this software, but most Parties continued to use the spreadsheet-based software because of the late availability of the CRF Reporter.

37. Following extensive testing and feedback from Parties, the software has been further improved and a second version, which also covers the LULUCF sector, was made available in August 2005 for use by Annex I Parties in preparing inventory submissions due in 2006. To facilitate the use of the CRF Reporter by all Annex I Parties in 2006, the secretariat and several Annex I Parties are organizing hands-on training workshops in September and October 2005.

38. The use of the CRF Reporter is aimed at eliminating the inconsistencies, redundancies and difficulties in reporting and processing the inventory information that are inherent in the current reporting software based on a spreadsheet application. Ensuring the reliability of inventory data to be used in the inventory review process under the Convention and under Article 8 of the Kyoto Protocol is a high priority. Use by all Annex I Parties of the CRF Reporter for 2006 and future inventory submissions will facilitate the handling of data by the secretariat and greatly enhance the reliability of GHG information.

⁴ <http://unfccc.int/national_reports/annex_i_ghg_inventories/inventory_review_training/items/2763.php>.

⁵ Funding for training courses relating to the Kyoto Protocol will come from specific contributions by Parties for this purpose and will be kept separate from contributions provided for training under the Convention.