



## **Description of the elements of the review process under Article 8 and synthesis of the information regarding the review of national systems**

### **Note by the secretariat**

#### **I. Introduction**

##### **A. Mandate**

1. At its fourth meeting the enforcement branch noted the importance of ensuring that reviews under Article 8 of the Kyoto Protocol are performed consistently across Parties<sup>1</sup> by each expert review team (ERT) and decided to bring this matter to the attention of the Compliance Committee for inclusion in the agenda of the fifth meeting of the plenary. It requested the secretariat to prepare a background paper as an input to the plenary discussion on consistency of review under Article 8 of the Kyoto Protocol.

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

2. This note responds to the above request and contains a description of the elements of the review process under Article 8 as reflected in decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) that support consistency across Parties as well as a synthesis of the information regarding the review of national systems contained in available reports of ERTs on the initial reports of Annex I Parties.

3. The synthesis provides an overview of the problems identified with respect to national systems during the review process and the extent to which these problems were resolved during the review process. This note also contains three annexes. Annex I contains a number of examples of the issues identified by the ERTs and follow-up actions by Parties; Annex II sets out the general and specific functions of a national system; and Annex III contains a compilation of issues, follow-ups and conclusions for each national system review element by Party.

##### **C. Possible action by the Compliance Committee**

4. The Compliance Committee may wish to consider information contained in this note with a view to reflecting the outcomes of this consideration in its annual report to the CMP.

#### **II. Elements of the review process under Article 8 that support consistency**

5. The objectives of the review under Article 8 of the Kyoto Protocol are:

- (a) To establish a process for a thorough and comprehensive technical assessment of all aspects of the implementation of the Kyoto Protocol by Parties [...];

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<sup>1</sup> In this note references to “Party” or “Parties” indicate Parties included in Annex I to the Convention which are also Parties to the Kyoto Protocol unless indicated otherwise.



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- (b) To promote consistency and transparency in the review of information submitted by Parties [...] under Article 7 of the Kyoto Protocol;
- (c) To assist Parties [...] in improving their reporting of information under Article 7 and the implementation of their commitments under the Kyoto Protocol;
- (d) To provide the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, and the Compliance Committee, with a technical assessment of the implementation of the Kyoto Protocol by Parties [...].<sup>2</sup>

6. Recognizing the importance of achieving the above mentioned objectives and their challenging nature, Parties to the Kyoto Protocol by the same decision established a comprehensive set of guidelines encompassing all aspects of the review, including timing and procedures, ERTs and institutional arrangements, competences of the ERT members and roles and responsibilities of the lead reviewers. Parties to the Kyoto Protocol entrusted ERTs, in which experts serve in their *personal capacity*, with providing them with a thorough and comprehensive technical assessment of information submitted under Article 7 of the Kyoto Protocol and, under its *collective responsibility*, prepare a review report, assessing the implementation of the commitments of the Party and identifying any potential problems in, and factors influencing, the fulfilment of the commitments.

7. It is worth noting that in order to achieve the objective of promoting consistency and transparency in the review of information submitted by Parties under Article 7 of the Kyoto Protocol, a separate decision was adopted by the CMP requesting the secretariat to organize training courses for ERT members.<sup>3</sup> The secretariat implemented that decision by organizing one training seminar under the Convention in 2006 and on-line e-learning courses under the Kyoto Protocol. A total of 164 experts passed the exams and qualified to participate in the initial reviews under the Kyoto Protocol. In 2007–2008 the secretariat, due to lack of financial resources, could only organize on-line training courses.

8. Decision 22/CMP.1 recognizes a special role that lead reviewers play in the review process. Paragraph 37 of the annex to the decision states:

“Lead reviewers should ensure that the reviews in which they participate are performed according to the review guidelines and are performed *consistently*<sup>4</sup> across Parties by each expert review team. They also should ensure the quality and the objectivity of the thorough and comprehensive technical assessments in the reviews and to provide continuity, comparability and timeliness of the review.”

Paragraph 38 of the same decision envisages that additional training may be offered to lead reviewers.

<sup>2</sup> Decision 22/CMP.1, Annex (FCCC/KP/CMP/2005/8/Add.3).

<sup>3</sup> Decision 24/CMP.1 (FCCC/KP/CMP/2005/8/Add.3).

<sup>4</sup> Paragraph 32, annex to decision 22/CMP.1; emphasis added.



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9. The secretariat responded to that decision by organizing meetings of lead reviewers on an annual basis subject to availability of resources. These meetings cover review related matters relevant to both the reviews under the Convention and under the Kyoto Protocol, and in particular the approach for each annual review. Results from these meetings are reflected in the recommendations from the lead reviewers meeting which are available on the UNFCCC website<sup>5</sup> and also in the annual report on inventory review that the secretariat prepares for the Subsidiary Body for Scientific and Technological Advice. In preparing for the review of the reports submitted by Parties pursuant to decision 13/CMP.1, the secretariat organized a lead reviewers meeting in Bonn, Germany, from 4 to 6 October 2006. The next meeting was organized in Dublin, Ireland, from 21 to 22 April 2008.

10. In order to further assist Parties, members of the ERTs and their lead reviewers, and to ensure consistency in approaches, the secretariat has prepared the Kyoto Reference Manual, which presents in a systematic way the procedures for preparing and submitting relevant information and for conducting the reviews. The Kyoto Reference Manual has been posted on the secretariat website in 2006<sup>6</sup> and an updated printed version is being prepared for the fourth session of the CMP.

11. Paragraph 7 of the annex to decision 22/CMP.1 contains specific guidance on how potential problems should be dealt with by the ERTs. It stipulates the following:

“If the expert review team identifies potential problems during the review, it shall put questions to the Party [...] regarding these potential problems and offer advice to the Party on how to correct them. The Party may correct the problem or provide additional information within the time frame of six weeks set out in these guidelines. Subsequently, a draft of each report shall be forwarded to the Party subject to review for comments.”

12. The same decision prescribes that:

“Only if an unresolved problem pertaining to language of a mandatory nature [...] influencing the fulfilment of commitments still exists after the Party [...] has been provided with opportunities to correct the problem [...], shall that problem be listed as a question of implementation in the final review reports. An unresolved problem pertaining to language of non-mandatory nature [...] shall be noted in the final review report, but shall not be listed as a question of implementation.”<sup>7</sup>

13. These procedures, including drawing a clear distinction between problems of mandatory and non-mandatory nature, have been consistently adhered to by all ERTs. In particular, in accordance with provisions of decision 22/CMP.1, the ERTs provided each Party being reviewed with a list of all problems identified, indicating problems of the

<sup>5</sup> See [http://unfccc.int/national\\_reports/annex\\_i\\_ghg\\_inventories/review\\_process/items/2762.php](http://unfccc.int/national_reports/annex_i_ghg_inventories/review_process/items/2762.php)

<sup>6</sup> [http://unfccc.int/files/national\\_reports/accounting\\_reporting\\_and\\_review\\_under\\_the\\_kyoto\\_protocol/application/pdf/rm\\_final.pdf](http://unfccc.int/files/national_reports/accounting_reporting_and_review_under_the_kyoto_protocol/application/pdf/rm_final.pdf)

<sup>7</sup> Paragraph 8, annex.



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national system and inventory problems which if not resolved will lead to adjustments. They also provided each Party with a clear recommendation as to how these problems should be resolved. The ERTs carefully examined Parties' responses and, if necessary, requested further information from the Party concerned.

14. The consistent and timely application of the approaches to the reviews allowed potential problems to be resolved in the vast majority of cases in the course of interactions between ERTs and reviewed Parties and prior to the publication of the final review reports. These reports are thus not a "snapshot" of the views an ERT arrived at during the country visit, but an agreed outcome arrived at after a series of iterative interactions between an ERT and a Party. This is of course true only for those reports that do not contain questions of implementation.

15. Overall, the whole set of CMP 1 decisions<sup>8</sup> relating to reporting and review establishes a reporting framework aimed at ensuring that Parties submit coherent and consistent information allowing the ERTs to conduct reviews in a coherent and consistent way. The review process established by these decisions provides ERTs with significant autonomy and independence: a decision by an ERT to include a question or questions of implementation in its review report is final. Addressing a question or questions of implementation then becomes a prerogative of the Compliance Committee.

### III. Requirements for the national system and review thereof

16. A part of decision 22/CMP.1 is specifically devoted to the review of national systems, which should be established in accordance with decision 19/CMP.1, Guidelines for national systems under Article 5, paragraph 1, of the Kyoto Protocol. Decision 19/CMP.1 defines a national system as a system that:

“includes all institutional, legal and procedural arrangements made within a Party [...] for estimating anthropogenic emissions by sources and removals by sinks of all

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<sup>8</sup> Decision 12/CMP.1, *Guidance relating to registry systems under Article 7, paragraph 4, of the Kyoto Protocol* (FCCC/KP/CMP/2005/8/Add.2); decision 13/CMP.1, *Modalities for the accounting of assigned amount units under Article 7, paragraph 4, of the Kyoto Protocol* (FCCC/KP/CMP/2005/8/Add.2); decision 14/CMP.1, *Standard electronic format for reporting Kyoto Protocol units* (FCCC/KP/CMP/2005/8/Add.2); decision 15/CMP.1, *Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol* (FCCC/KP/CMP/2005/8/Add.2); decision 19/CMP.1, *Guidelines for national systems under Article 5, paragraph 1, of the Kyoto Protocol* (FCCC/KP/CMP/2005/8/Add.3); decision 20/CMP.1, *Good practice guidance and adjustments under Article 5, paragraph 2, of the Kyoto Protocol* (FCCC/KP/CMP/2005/8/Add.3); decision 21/CMP.1, *Issues relating to adjustments under Article 5, paragraph 2, of the Kyoto Protocol* (FCCC/KP/CMP/2005/8/Add.3); decision 22/CMP.1, *Guidelines for review under Article 8 of the Kyoto Protocol* (FCCC/KP/CMP/2005/8/Add.3); decision 23/CMP.1, *Terms of service for lead reviewers* (FCCC/KP/CMP/2005/8/Add.3); decision 24/CMP.1, *Issues relating to the implementation of Article 8 of the Kyoto Protocol – 1* (FCCC/KP/CMP/2005/8/Add.3); and decision 25/CMP.1, *Issues relating to the implementation of Article 8 of the Kyoto Protocol – 2* (FCCC/KP/CMP/2005/8/Add.3).



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greenhouse gases not controlled by the Montreal Protocol, and for reporting and archiving inventory information.”<sup>9</sup>

The decision also states that “[n]ational systems should be designed and operated to ensure the transparency, consistency, comparability, completeness and accuracy of inventories [...]”.<sup>10</sup>

17. The objectives of national systems are defined in paragraph 5 of the annex to decision 19/CMP.1 as follows:

- (a) To enable Parties [...] to estimate anthropogenic GHG emissions by sources and removals by sinks, as required by Article 5, and to report these emissions by sources and removals by sinks in accordance with Article 7, paragraph 1, and relevant decisions of the Conference of the Parties (COP) and/or the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP);
- (b) To assist Parties [...] in meeting their commitments under Articles 3 and 7;
- (c) To facilitate the review of the information submitted under Article 7 by Parties [...], as required by Article 8;
- (d) To assist Parties [...] to ensure and improve the quality of their inventories.

18. To achieve these objectives of the national system, Parties must ensure that their national systems fulfil the general and specific functions elaborated in decision 19/CMP.1 sections V and VI, respectively (see Annex III).

19. In paragraph 1 of the annex to decision 19/CMP.1 there is a recognition that “Parties’ implementation of national system requirements *may differ according to national circumstances*[...]”.<sup>11</sup> It nevertheless requires that a national system shall include all the elements listed in the decision.

20. Paragraph 8 (e) of the annex to decision 13/CMP.1 requires each Party to include in their submission under this decision “[a] description of its national system in accordance with Article 5, paragraph 1, reported in accordance with the guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol.” Paragraph 30 of the annex to decision 15/CMP.1 provides a list of mandatory reporting requirements that corresponds to the substantive requirements for national system outlined in decision 19/CMP.1.

21. Part IV of decision 22/CMP.1 defines the purpose of the review of national systems as follows:

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<sup>9</sup> Paragraph 2, annex to decision 22/CMP.1.

<sup>10</sup> Paragraph 6, annex to decision 22/CMP.1.

<sup>11</sup> Emphasis added.



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- (a) To provide a thorough and comprehensive technical assessment of the capacity of a national system and the adequacy of its institutional, legal and procedural arrangements to produce an inventory of anthropogenic emissions by sources and removals by sinks in conformity with Article 5, paragraph 2;
- (b) To assess the extent to which the guidelines for national systems under Article 5, paragraph 1, have been adhered to, and to assist Parties [...] in meeting their commitments under Article 5, paragraph 1;
- (c) To provide the COP/MOP and the Compliance Committee with reliable information on (d) national systems established under Article 5, paragraph 1.

22. The purpose of the review of the national system provides a clear guidance on the scope and approach to the review, including assessment of all substantive requirements for the national system, thus ensuring consistency of reviews.

### IV. Synthesis of the information regarding the review of national systems

23. Taken together, the provisions of decisions 15/CMP.1, 19/CMP.1 and 22/CMP.1 relating to national systems provide the basis for assessing transparency, consistency, comparability, completeness and accuracy of inventories. In practice, the review of the national system was normally initiated around four weeks prior to the in-country visit as a desk review of the information provided by Parties in their initial reports submitted in accordance with decisions 13/CMP.1. When reviewing national systems ERTs covered both mandatory and non-mandatory requirements for the national system, but paid special attention to mandatory requirements influencing the fulfilment of commitments by Parties.

24. Requirements of mandatory nature include all requirements for the fulfilment of the general functions listed in paragraph 17 above. They also include most of the requirements for fulfilling the mandatory functions (these are shown in italics in Table A below). Therefore, Table A provides a summary of the assessment by the ERTs of each specific function of the national system as reported by Parties. At this stage, it represents only a preliminary assessment based on the information reported by a Party. The information in Table A is taken from the initial review reports that contain such table for each Party.

25. As can be seen from Table A, mandatory elements were reported in the majority of cases, whereas non-mandatory elements were reported to a lesser extent. Reporting on quality assurance/ quality control (QA/QC) plan is a notable exception in this context since eight Parties did not include such plan in their initial report. Conversely, around half of the Parties did not provide or provided incomplete information on non-mandatory elements. Information on "Ways to improve inventory" although not mandatory was provided by all Parties except four. Provision of such information has been a part of the inventory reporting under the Convention.



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**Table A. Summary of reporting on the specific functions of the national system**

Reporting element	Provided (Number of reporting Parties)		
	Yes	Partially	No
<b>Inventory planning</b>			
<i>Designated single national entity</i>	33	0	3
<i>Defined/allocated specific responsibilities for inventory development process</i>	31	3	2
<i>Established process for approving the inventory</i>	34	0	2
<i>Quality assurance/quality control plan</i>	28	0	8
Ways to improve inventory quality	32	1	3
<b>Inventory preparation</b>			
<i>Key category analysis</i>	33	1	2
<i>Estimates prepared in line with the IPCC guidelines and IPCC good practice guidance</i>	34	2	0
<i>Sufficient activity data and emission factor collected to support methodology</i>	31	3	2
<i>Quantitative uncertainty analysis</i>	33	1	2
<i>Recalculations</i>	33	0	3
<i>General QC (tier 1) procedures implemented</i>	33	1	2
Source/sink category-specific QC (tier 2) procedures implemented	18	2	16
Basic review by experts not involved in inventory	24	4	8
Extensive review for key categories	18	2	16
Periodic internal review of inventory preparation	23	3	10
<b>Inventory management</b>			
<i>Archive inventory information</i>	35	0	1
Archive at single location	25	0	11
<i>Provide ERT with access to archived information</i>	36	0	0
<i>Respond to requests for clarifying inventory information during review</i>	36	0	0

\* Items in *italics* are mandatory elements of the national system.



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26. During the in-country visit, the ERTs have usually had in-depth discussions with the Party under review on a number of questions and sought further clarifications on a number of issues relating to the national system, with a view to arriving at conclusions and providing recommendations at the end of the in-country visit. In facilitating these discussions, Parties usually provided additional information that supported and complemented the information provided in the initial report. In most cases this led to an immediate resolution of the issues identified in the preliminary findings.

27. Still, in 20 cases the ERT concluded at the end of the in-country visit that there were still unresolved problems regarding the national system. These problems were listed in a paper presented to a Party on the last day of the in-country visit (informally known as a “Saturday paper”) which provided that Party with a list of still unresolved problems and recommendations on how to solve these problems. Such a list was presented to the Party for which the ERT formulated the question of implementation and whose case had been considered by the Compliance Committee earlier in 2008. For that Party two mandatory requirements were only partly met or not met at the reporting stage: (a) the requirement to define and allocate specific responsibilities for inventory planning, preparation and management, and in accordance with paragraph 12 of the annex to decision 19/CMP.1; and (b) the requirement that sufficient activity data and emission factors were collected to support methodology in accordance with paragraph 14 (c) of the annex to decision 19/CMP.1.

28. Parties then had six weeks to resolve the problems identified by the ERT following their recommendations and to provide the relevant information. There were very few cases when the information provided by the Parties to the ERT was not deemed sufficient by the ERT and they requested follow-up information. In the vast majority of cases Parties promptly followed ERTs recommendations to resolve all problems.

29. It should be noted that reports do not necessarily contain all the information on the exchange of information between the ERT and the Party being reviewed at all steps of the review process. This is true for both requirements of mandatory nature and of non-mandatory nature. In the case of problems with the requirements of non-mandatory nature, the ERTs usually provided recommendations to the Parties to fix these problems and to report these in their next submission. In the case of problems with requirements of mandatory nature, in some instances ERTs needed a few follow-up communications with Parties. They needed to ensure that they had evidence that the problems were sufficiently resolved, taking into account the national circumstances of the Party being reviewed, before the publication of the review report.

30. Once the ERTs ensured that all requirements relating to the specific functions were met, they assessed the general functions of the national system, taking into account the institutional and procedural framework for inventory preparation and importantly the ability of the national system to deliver an inventory that fully meets the guidelines requirements in a timely manner.



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31. In conclusion, in almost all reports the ERTs reflected the successful outcome of the review of the national system indicating that the Party's national system is established in accordance with the guidelines for national systems under Article 5, paragraph 1, of the Kyoto Protocol (decision 19/CMP.1) and can perform the general and specific functions required by these guidelines. The ERT also usually concluded that the national system could fulfil the requirements of the Kyoto Protocol. There was a single case, when the ERT concluded that the potential problem pertaining to language of a mandatory nature related to national system requirements remained unresolved during the review and listed a question of implementation in the final review report.

32. Even when the national system was deemed to sufficiently meet the Kyoto Protocol requirements, the ERTs provided a number of recommendations. These recommendations are aimed at strengthening of the national system and avoiding some potential problems in the future relating to the maintenance of the system. For example, noting that in one of the Parties the team preparing inventory remained the same but was moved from one institution to another, the ERT recommended to consider arrangements for ensuring the continuity of the national system, and to provide a full description of the national system and of changes thereof in the next inventory submission under the Kyoto Protocol, including the legal basis of the institutional arrangements. Many recommendations covered non-mandatory requirements for national systems, which once implemented would enhance the quality of the inventory that the system produces.

33. Some examples of the issues identified by the ERTs and follow-up actions by Parties are provided in Annex I. As can be seen from this Annex, the nature and scope of comments and recommendations by the ERTs, as well as of follow-up actions by Parties, varied widely depending on the national circumstances of Parties. A compilation of the issues identified by the ERTs and follow-up actions by Parties is provided in Annex III. As can be seen from Annex III, the nature and scope of comments and recommendations by the ERTs, as well as of follow-up actions by Parties, varied widely depending on the national circumstances of Parties.



Annex I

Some examples of the issues identified by ERTs and follow-up actions by Parties

Party A

A. Institutional, legal and procedural arrangements

1. Mandatory specific functions of the national system included and described in the initial report:

*Inventory planning*

Designated single national entity	Yes
Defined/allocated specific responsibilities for inventory development process	Yes
Established process for approving the inventory	Yes

2. Identification of the issue by the ERT:

- Information provided in the initial report was not sufficient to fully assess whether the national system has been prepared in accordance with the guidelines;
- The national system is in place and the arrangements necessary to perform the mandatory functions of the national system have advanced significantly compared to the time when the initial report was prepared;
- Information does not fully reflect the current and ongoing development of legal and procedural arrangements of the national system;
- During the in-country review additional documentation and information were provided showing that the necessary action is under way to formalize the system;
- The supporting legal framework (Kyoto Act on the implementation of the UNFCCC and the Kyoto Protocol and operational decrees/orders) was under discussion at the time of the in-country review;
- The Ministry for Environment (ME) has overall responsibility for the GHG inventory and the national system and is the designated single national entity. Its Climate Change Department supervises all activities related to GHG inventories and the national system, and up to 2007 approved the inventory before its submission to the secretariat.

3. Conclusions/recommendations of the ERT:

- The national system operated (during the in-country review) on the basis of the internal rules on the national system laid down by the ME, but these will be superseded by the regulations set up by the Kyoto Act and its executive orders;



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- Party should strive to keep the May 2007 deadline set by the Party to adopt all the necessary legal instruments (information received during the in-country review);
  - The ERT concluded at the time of the in-country review that Party is in a position to establish all the legal and procedural arrangements in line with Article 5.1 of the Kyoto Protocol in 2007;
  - The ERT requested Party to prepare an updated summary of the information on legal and procedural arrangements foreseen under the Kyoto Act and the related decrees or executive orders in the form of a corrigendum to the initial report.
4. Action by the Party:
- The Kyoto Act was adopted by the Parliament on 29 May 2007 and came into force at the end of June 2007;
  - Party provided the documentation requested (an updated summary on the legal and procedural arrangements) within six weeks after the in-country review;
  - A steering committee of prominent sectoral experts and government representatives was set up in 2007, with the aim to improve data quality and the methodologies, and will consider and approve the national inventory prior to submission to the UNFCCC.
5. Conclusions/follow-up recommendations by the ERT
- The ERT was satisfied with the responses to all the requests it made during the review and with the information provided after the in-country review;
  - Party is reframing its national system and the new structure corresponds to the requirements of Article 5.1 of the Kyoto Protocol;
  - The ERT assumed that this new structure can guarantee the timely compilation of GHG inventories in the near future when Party has set up all the necessary legal instruments as set out in the Kyoto Act (executive orders);
  - The national core inventory team has the potential to further improve its GHG inventory and the ERT recommended that Party continue this process of further improvements.

### B. Inventory planning and preparation

1. Mandatory specific functions of the national system included and described in the initial report:

*Inventory planning*

Quality assurance/quality control plan Yes

*Inventory preparation*

General QC (tier 1) procedures implemented Yes



2. Identification of the issue by the ERT:

- Party has elaborated a QA/QC plan in accordance with the IPCC good practice guidance, including general QC activities (tier 1). Party nominated a quality manager who is responsible for coordination of the QA/QC activities;
- The ERT identified a number of areas where QA/QC procedures were apparently not implemented and this has resulted in mistakes, inconsistencies and non-transparent use of methods and EFs in some sectors;
- The ERT considered that the QA/QC plan was rather general and would not ensure adequate quality of the national GHG inventory estimates; in particular, further improvements are needed to the quality of the data supplied by data providers;
- At the time of the review, an external audit of the inventory compilation process at the GHG Division of the National Meteorological Service was planned for the end of March 2007, and the GHG Division was in the process of accreditation under ISO standard 9001.

3. Conclusions/recommendations of the ERT:

- The ERT acknowledged the improvements that Party has achieved in its QA/QC activities and noted that a framework for QA/QC system is in place;
- The ERT recommended that Party further elaborate the existing QA/QC plan in line with the requirements of the IPCC good practice guidance, in particular regarding the routines for internal/external sectoral cross-checking of inventory submissions. In a similar way the ERT recommended that Party document the QA/QC procedures for activities related to Article 3, paragraphs 3 and 4, activities;
- The ERT recommended that Party develop and document extensive checking procedures (tier 2) for identified key categories and guidance for prioritizing inventory improvements;
- The ERT requested that Party present summary information on the elaborated QA/QC plan in the form of a corrigendum to the initial report.

4. Action by the Party:

- Party provided the ERT with the information requested. The updated QA/QC plan was provided (in national language);
- The GHG Division passed the ISO 9001:2000 audit in March 2007, after the in-country review.

5. Conclusions/follow-up recommendations by the ERT



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- The ERT was satisfied with the information provided after the review and recommended Party to provide detailed information in English in its next inventory submission.

### Party B

#### **A. Institutional, legal and procedural arrangements**

1. Mandatory specific functions of the national system included and described in the initial report:

*Inventory planning*

Designated single national entity

Yes

2. Identification of the issue by the ERT:

- The Agency for the Protection of the Environment (APE) is responsible for all inventory-related activities as specified in the guidelines for national systems under Article 5.1 of the Kyoto Protocol;
- APE performs all the functions of and is functioning as a designated single national entity, however the process of its final designation is not finalized.

3. Conclusions/recommendations of the ERT:

- The ERT recommended that Party expedite the process of formalization of APE as the single national entity and to communicate to the ERT on these arrangements.

4. Action by the Party:

- Party informed the ERT that the formalization of APE as the single national entity had already been launched, and provided the ERT with a draft ministerial directive that will regulate this issue.

5. Conclusions/follow-up recommendations by the ERT

- The ERT encouraged Party to speed up and finalize the ongoing legal proceedings as soon as possible regarding the formalization of APE as the single national entity.

#### **B. Institutional, legal and procedural arrangements**

1. Mandatory specific functions of the national system included and described in the initial report:



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### *Inventory planning*

Defined/allocated specific responsibilities for inventory development process

Yes

#### 2. Identification of the issue by the ERT:

- The overall organization of the national system is effective and reliable. The ERT considers the existing capacities and competence of the technical staff to be of high quality, allowing timely performance of the national system functions;
- However, institutional and procedural arrangements should be further developed to ensure sustainability of existing capacities and competence of technical staff, as well as to ensure future reporting of supplementary information on Article 3.3 and 3.4 activities.

#### 3. Conclusions/recommendations of the ERT:

- The ERT recommended Party to provide information on the measures to ensure sustainability of existing capacities and competence of technical staff through formal long-term arrangements;
- The ERT requested Party to provide information regarding potential institutional arrangements related to Article 3.3 and 3.4 activities and techniques to be adopted for monitoring area changes, and plans for more frequent National Forest Inventories.

#### 4. Action by the Party:

- Party provided information showing that it is taking measures to ensure the maintenance of existing capacities over time. In particular, APE provided a three-year plan to stabilize short-term staffing;
- Party presented detailed information on the institutional arrangements and instruments regarding the implementation of Article 3.3 and 3.4 activities. Also, Party informed that formal procedures to adopt these arrangements are ongoing and a specific work programme is under finalization with a budget of €4 million, which were considered to be satisfactory by the ERT.

#### 5. Conclusions/follow-up recommendations by the ERT

- The ERT encouraged Party to implement the three-year plan to stabilize short-term staffing as soon as is practicable;
- The ERT recommended that Party finalize all procedures in time to comply with all reporting requirements under Article 3.3 and 3.4 activities (mandatory from 2010).



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**C. Institutional, legal and procedural arrangements**

1. Mandatory specific functions of the national system included and described in the initial report:

*Inventory planning*

Established process for approving the inventory Yes

2. Identification of the issue by the ERT:

- The Ministry for the Environment endorses the national inventory after preparation by APE. However, there is no formal process for the official consideration and approval of the inventory prior to its submission.

3. Conclusions/recommendations of the ERT:

- The ERT recommended that Party formalize the process for the official approval of the inventory.

4. Action by the Party:

- Party informed the ERT that the ministerial directive that will formalize APE as the single national entity (draft provided to the ERT) also addresses the process for the inventory approval.

5. Conclusions/follow-up recommendations by the ERT

- The ERT welcomed this information and invited Party to finalize ongoing procedures as soon as possible and report on them in its future inventory submission under the Kyoto Protocol.

**Party C**

**A. Institutional, legal and procedural arrangements**

1. Mandatory specific functions of the national system included and described in the initial report:

*Inventory planning*

Defined/allocated specific responsibilities for inventory development process Yes



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### 2. Identification of the issue by the ERT:

- The initial report identifies the National Emission Agency (NEA) as the designated single national entity and includes information on the roles and responsibilities of various agencies and entities, but not the legal basis for its work or the work of collaborating institutions, including procedural arrangements. Main institutions that are involved in inventory preparation are not formally linked to the national system;
- Since 2000, the NEA has been commissioned by the Ministry of Environment (MoE) to carry out emission inventories of GHGs and air pollutants. A contract on a yearly basis defines the tasks of the NEA for compiling and submitting GHG inventories;
- During the in-country review week Party presented details of the legal basis for the establishment of the Directorate for Environmental Protection (of which the NEA forms part) as administrator of the emission trading.

### 3. Conclusions/recommendations of the ERT:

- The ERT requested that Party provide copies (including translation into English) of formal documents establishing the legal basis (e.g. contracts or existing regulations) specific to the compilation and delivery of the inventory under the UNFCCC.

### 4. Action by the Party:

- Party provided a copy of the contract with the MoE that defines the tasks of the NEA;
- The contents of this contract will be transformed to an Act (Act Supporting the Reduction of GHG Emissions) to further strengthen the legal basis of NEA's work;
- A draft version of this Act was provided to the ERT outlining explicit requirements for the provision of information necessary for reporting to the UNFCCC. The formal link between collaborating institutions and the national system will be established by this Act.

### 5. Conclusion/follow-up recommendation by the ERT

- The ERT concluded that the legal, procedural and institutional arrangements of the existing national system in the Party are sufficient for preparing reliable GHG inventories;
- The ERT noted that the arrangements will become more effective and reliable and ensure timely performance of the functions of the national system once the Act is adopted;



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- The ERT encouraged Party to strengthen its institutional arrangements with a further agreement with the National Statistical Office in order to ensure data availability for complete coverage of all possible emission sources;
- The ERT expected that all relevant arrangements for the national system will be included in the adopted Act and recommended that information on this important legal arrangement be included in Party's next submission under the Kyoto Protocol.

### B. Inventory planning, preparation and management

1. Mandatory specific functions of the national system included and described in the initial report:

*Inventory planning*

Quality assurance/quality control plan No

*Inventory preparation*

Recalculations No

*Inventory management*

Archive inventory information No

2. Identification of the issue by the ERT:

- In the initial report Party reported that it has not yet implemented a formal QA/QC procedure, including a verification plan, for the national GHG inventory. General and sector-specific QC procedures are performed regularly and QA-related activities are performed occasionally under the auspices of the MoE;
- Results of QC checks and reviews are not well documented and archived. The ERT considered the draft QA/QC plan provided during the in-country review too general and insufficient to ensure the quality of the GHG inventory;
- In its 2006 inventory submission, Party provided an entire time series of CRF tables (1990–2004) for the first time. No inventory recalculations were provided in earlier submissions; information on recalculations was thus fairly limited;
- Recalculations reported by Party in its 2006 submission had been undertaken to take into account the recommendations of the 2005 in-country review. During the in-country visit Party provided a qualitative overview of the improvements leading to inventory recalculations, but a sector-by-sector comparison of emission data for 1990 was not provided;
- Party has a centralized archiving system, which includes the archiving and documentation of detailed information of inventory parameters and cross-cutting analysis, but does not include internal documentation on QA/QC procedures, external and internal reviews, and planned inventory improvements. The archiving system did not fully comply with the requirements of the guidelines for national systems.



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### 3. Conclusions/recommendations of the ERT:

- The ERT requested to further elaborate and provide a more detailed QA/QC plan, in line with the IPCC good practice guidance and provide a copy of the revised QA/QC Plan including a summary of the implemented QA/QC activities (translated into English);
- The ERT believes that the national system can ensure that recalculations of previous GHG estimates are prepared in accordance with the IPCC good practice guidance;
- The ERT requested to provide a procedural manual for the management and maintenance of the archiving system, including information on the structure, content of different sections, responsibilities, access rights and other relevant information;
- The ERT also requested to further develop the archiving system security, electronic organization of files, storage of supporting information and a proper indexing system.

### 4. Action by the Party:

- Party provided its National Programme for Quality Assurance and Quality Control, including a letter from the MoE to the Directorate for Environmental Protection with the formal approval of the Party's QA/QC Plan;
- Party provided a summary of implemented QA/QC activities for its 2006 inventory submission;
- No action on recalculations were required;
- Party provided the manual requested. It included all relevant information on the electronic data management system as well as on back-up, the security of data stored, and electronic organization of files, including storage of supporting information.

### 5. Conclusions/follow-up recommendations by the ERT

- The ERT considered the QA/QC programme to be in line with the IPCC good practice guidance and expected that it will be implemented by Party;
- The ERT encouraged Party to document QA/QC activities in the NIRs of its future submissions in accordance with the UNFCCC reporting guidelines; to use review findings to improve the inventory and to archive the findings/results of the QA/QC procedures together with the inventory data;
- The ERT expected that in the future Party will ensure that recalculations are prepared in accordance with the IPCC good practice guidance and will report recalculations in a transparent and comprehensive manner in the CRF tables and in the NIR;
- The ERT considered that the manual for the archiving system includes all the required information on electronic data management with the exception of



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documentation on QA/QC procedures, but does not describe the archiving and indexing of hard copies;

- The ERT recommended to maintain its established electronic archiving system and to use a robust library system for both electronic and hard copies of literature, correspondence, calculation sheets and any other information required to produce the inventory estimates;
- The archiving system shall be extended to include internal documentation on QA/QC procedures, external and internal reviews and planned inventory improvements. The ERT recommends that Party report the information on its archiving system in its next NIR.

### Party D

#### **A. Institutional, legal and procedural arrangements**

1. Mandatory specific functions of the national system included and described in the initial report:

*Inventory planning*

Quality assurance/quality control plan

No

2. Identification of the issue by the ERT:

- Party has not elaborated an inventory QA/QC plan (paragraph 12.d of decision 19/CMP.1).
- The elements of QA/QC activities exist at both the regional and the national level. However, the ERT considers that the absence of a QA/QC plan for the inventory at a national level is a potential problem.

3. Recommendation by the ERT:

- The ERT recommends that the Party prepare and submit to the ERT an “action plan” that specifies a framework to develop a QA/QC plan for the national inventory. The completed QA/QC plan should be submitted in the Party’s next annual submission under the Kyoto Protocol.
- The ERT requires that the QA/AC plan includes all the elements recommended by the IPCC Good Practice Guidelines, including all the procedures relating to inventory planning, preparation and management.
- The ERT encourages the Party to consider in the QA/QC plan any relevant non-mandatory requirement included in the annex to decision 19/CMP.1.



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4. Action by the Party:

- In response, the Party submitted to the ERT an “action plan” for the development and implementation of a QA/QC plan that fully met the ERT recommendations.

5. Conclusions/follow-up recommendations by the ERT

- The ERT considered that the Party’s national system is generally prepared in accordance with the guidelines for national systems under Article 5, paragraph 1, of the Kyoto Protocol (decision 19/CMP.1) and can perform the general and specific functions required by these guidelines.
- The ERT requires that the Party develop and implement before the next inventory submission under the Kyoto Protocol a QA/QC plan and procedures in accordance with the requirements stipulated by decision 19/CMP.1.



**Annex II**

**General functions of the national system according to section V of the annex to decision 19/CMP.1**

- (a) Establish and maintain the institutional, legal and procedural arrangements necessary to perform the functions defined in these guidelines for national systems, as appropriate, between the government agencies and other entities responsible for the performance of all functions defined in these guidelines;
- (b) Ensure sufficient capacity for timely performance of the functions defined in these guidelines for national systems, including data collection for estimating anthropogenic GHG emissions by sources and removals by sinks and arrangements for technical competence of the staff involved in the inventory development process;
- (c) Designate a single national entity with overall responsibility for the national inventory;
- (d) Prepare national annual inventories and supplementary information in a timely manner in accordance with Article 5 and Article 7, paragraphs 1 and 2, and relevant decisions of the COP and/or COP/MOP;
- (e) Provide information necessary to meet the reporting requirements defined in the guidelines under Article 7 in accordance with the relevant decisions of the COP and/or COP/MOP.

**Specific functions of the national system according to section VI of the annex to decision 19/CMP.1**

A. Inventory planning

- 12. As part of its inventory planning, each Party included in Annex I shall:
  - (a) Designate a single national entity with overall responsibility for the national inventory;
  - (b) Make available the postal and electronic addresses of the national entity responsible for the inventory;
  - (c) Define and allocate specific responsibilities in the inventory development process, including those relating to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as



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the institutional, legal and procedural arrangements made to prepare the inventory;

- (d) Elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives;
- (e) Establish processes for the official consideration and approval of the inventory, including any recalculations, prior to its submission and to respond to any issues raised by the inventory review process under Article 8.

13. As part of its inventory planning, each Party included in Annex I should consider ways to improve the quality of activity data, emission factors, methods and other relevant technical elements of inventories. Information obtained from the implementation of the QA/QC programme, the review process under Article 8 and other reviews should be considered in the development and/or revision of the QA/QC plan and the quality objectives.

### B. Inventory preparation

14. As part of its inventory preparation, each Party included in Annex I shall:

- (a) Identify key source categories following the methods described in the IPCC good practice guidance (chapter 7, section 7.2);
- (b) Prepare estimates in accordance with the methods described in the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*, as elaborated by the IPCC good practice guidance, and ensure that appropriate methods are used to estimate emissions from key source categories;
- (c) Collect sufficient activity data, process information and emission factors as are necessary to support the methods selected for estimating anthropogenic GHG emissions by sources and removals by sinks;
- (d) Make a quantitative estimate of inventory uncertainty for each source category and for the inventory in total, following the IPCC good practice guidance;
- (e) Ensure that any recalculations of previously submitted estimates of anthropogenic GHG emissions by sources and removals by sinks are prepared in accordance with the IPCC good practice guidance and relevant decisions of the COP and/or COP/MOP;



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- (f) Compile the national inventory in accordance with Article 7, paragraph 1, and relevant decisions of the COP and/or COP/MOP;
  - (g) Implement general inventory QC procedures (tier 1) in accordance with its QA/QC plan following the IPCC good practice guidance.
15. As part of its inventory preparation, each Party included in Annex I should:
- (a) Apply source-category-specific QC procedures (tier 2) for key source categories and for those individual source categories in which significant methodological and/or data revisions have occurred, in accordance with the IPCC good practice guidance;
  - (b) Provide for a basic review of the inventory by personnel that have not been involved in the inventory development, preferably an independent third party, before the submission of the inventory, in accordance with the planned QA procedures referred to in paragraph 12 (d) above;
  - (c) Provide for a more extensive review of the inventory for key source categories, as well as source categories where significant changes in methods or data have been made;
  - (d) Based on the reviews described in paragraph 15 (b) and (c) above and periodic internal evaluations of the inventory preparation process, re-evaluate the inventory planning process in order to meet the established quality objectives referred to in paragraph 12 (d).
- C. Inventory management
16. As part of its inventory management, each Party included in Annex I shall:
- (a) Archive inventory information for each year in accordance with relevant decisions of the COP and/or COP/MOP. This information shall include all disaggregated emission factors, activity data, and documentation about how these factors and data have been generated and aggregated for the preparation of the inventory. This information shall also include internal documentation on QA/QC procedures, external and internal reviews, documentation on annual key sources and key source identification and planned inventory improvements;
  - (b) Provide review teams under Article 8 with access to all archived information used by the Party to prepare the inventory, in accordance with relevant decisions of the COP and/or COP/MOP;



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- (c) Respond to requests for clarifying inventory information resulting from the different stages of the review process of the inventory information, and information on the national system, in a timely manner in accordance with Article 8.

17. As part of its inventory management, each Party included in Annex I should make the archived information accessible by collecting and gathering it at a single location.



## Annex III - Compilation by Party of issues, follow-ups and conclusions for each national system review element

Table 1 Issues, follow-ups, and ERT conclusions for reporting element 1 (Designated single national entity)

Reporting element	1				
Decision	19/CMP.1				
Paragraph	12 (a)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall designate a single national entity with overall responsibility for the national inventory.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Hungary	<p>The information provided in the initial report was not sufficient to enable the ERT to fully assess whether the national system has been prepared in accordance with the guidelines, and it does not fully reflect the current and ongoing development of legal and procedural arrangements for establishing the national system in Hungary. During the in-country review additional documentation and information were provided to the ERT showing that the necessary action is under way to formalize the system. The national system is in place and the arrangements necessary to perform the mandatory functions of the national system have advanced significantly compared to the time when the initial report was prepared. The supporting legal framework (Act LX of 2007 on the implementation framework of the United Nations Framework Convention on Climate Change and the Kyoto Protocol, governmental decrees and operational decrees) was under discussion at the time of the in-country review. Act LX was adopted by the Hungarian Parliament on 29 May 2007 and came into force at the end of June 2007.</p> <p>Hungary is reframing its national system and the new structure corresponds to the requirements of Article 5.1 of the Kyoto Protocol.</p>	<p>Bearing in mind the deadlines established by Article 5.1 of the Kyoto Protocol, the ERT recommended that Hungary strive to keep the May 2007 deadline set by the Party to adopt all the necessary legal instruments. The ERT requested Hungary to prepare an updated summary of the information on legal and procedural arrangements foreseen under the Kyoto Act and the related decrees in the form of a corrigendum to the initial report. The ERT appreciated Hungary's providing the documentation requested (an updated summary on the legal and procedural arrangements) within six weeks after the in-country review in accordance with decision 22/CMP.1.</p>	<p>The ERT concluded that Hungary is in a position to establish all the legal and procedural arrangements in line with Article 5, paragraph 1 of the Kyoto Protocol in 2007.</p> <p>The ERT assumes that the new national system can guarantee the timely compilation of GHG inventories in the near future when Hungary has set up all the necessary legal instruments as set out in the Act LX of 2007 on the implementation framework of the United Nations Framework Convention on Climate Change and the Kyoto Protocol. The core inventory team at the OMSZ has the potential to further improve Hungary's GHG inventory. The ERT recommends Hungary to continue this process of further improvements.</p>	14, 15, 21	Yes
Ireland	<p>During the in-country visit, Ireland explained the institutional arrangements, as part of the national system, for the preparation of the inventory.</p>	<p>After the in-country visit Ireland informed the ERT that, by its Decision of 3 April 2007, the Government of Ireland has adopted an NAIS which establishes the institutional, legal and procedural arrangements necessary to compile consistent and transparent national GHG inventories, and designates the EPA as the single national entity with overall responsibility for the inventory.</p>	<p>The ERT encourages Ireland to provide details of the relevant aspects of the NAIS in its next inventory submission under the Kyoto Protocol, and to include a summary of the organizational arrangements mandated in the Decision of 3 April (submitted by Ireland to the ERT) on the formalization of the NAIS.</p>	12	No
Italy	<p>The Agency for the Protection of the Environment and for Technical Services (APAT) is functioning as a designated single national entity, since the process of its final designation is not finalized. Although APAT performs all the functions of a single national entity in relation to the national system under the Kyoto Protocol, during the in-country review the process of its official designation by the Ministry for the Environment, Land and Sea as such had not been finalized.</p>	<p>The ERT recommended that Italy expedite the process of formalization of APAT as the single national entity. Italy then informed the ERT that this process had already been launched, and provided the ERT with a draft ministerial directive that will regulate this issue.</p>	<p>The ERT encourages Italy to speed up and finalize the ongoing legal proceedings as soon as possible.</p>	13, 15	Yes



Table 2 Issues, follow-ups, and ERT conclusions for reporting element 1 (Designated single national entity)

Reporting element	1				
Decision	19/CMP.1				
Paragraph	12 (a)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall designate a single national entity with overall responsibility for the national inventory.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Luxembourg	During the in-country visit, Luxembourg outlined the current institutional arrangements, as part of the national system, for preparation of the inventory. The Ministry of Environment was the recognized single national entity but was not formally designated under any specific legal basis (see also paragraph 17). The Environment Agency carries out the role of inventory agency for Luxembourg's emissions inventories in general under that legislation establishing it, and it is in this context that it compiles the inventories of GHG emissions. The Administration des Eaux et Forêts (AEF), which has responsibility for the LULUCF inventory, is the only other body involved directly in the preparation of the inventory.	At the time of the in-country visit, Luxembourg acknowledged the lack of a proper national system and subsequently undertook urgent measures to establish the legal framework necessary for implementation of its national system following the ERT's recommendations. This was achieved by way of a Regulation (Règlement grand-ducal du 1 août 2007 relatif à la mise en place d'un Système d'Inventaire National des émissions de gaz à effet de serre dans le cadre de la Convention cadre de des Nations Unies sur le Changement Climatique. < <a href="http://www.legilux.public.lu/leg/a/archives/2007/1300708/1300708.pdf">http://www.legilux.public.lu/leg/a/archives/2007/1300708/1300708.pdf</a> >.), prepared jointly by the Environment Agency and the Ministry for Environment which was adopted by the Government on 20 July 2007 and which entered into force on 7 August 2007. This Regulation designates the Environment Agency as the single national entity with overall responsibility for the inventory and sets out the roles of the administrations and services that will support the Agency in its task as the national inventory compiler and data coordinator.	The ERT is satisfied that the institutional, legal and procedural arrangements provided for under the Regulation, together with Luxembourg's proposed QA/QC management system mentioned in paragraph 19 below, meet the requirements for national systems as set down in the annex to decision 19/CMP.1.	12, 17	No
Monaco	During the in-country visit, Monaco explained the institutional arrangements, as part of the national system, for preparation of the inventory. The Direction de l'Environnement, de l'Urbanisme et de la Construction is the designated single national entity and is responsible for the inventory planning, preparation and management, and the archiving of information.			11, 12	No



Table 3 Issues, follow-ups, and ERT conclusions for reporting element 2 (Defined/allocated specific responsibilities for inventory development process)

Reporting element	2				
Decision	19/CMP.1				
Paragraph	12 (c)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall define and allocate specific responsibilities in the inventory development process, including those related to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Bulgaria	The ERT was informed that up to 2007 the inventory compiler was a private joint stock company (The Energy Institute), contracted yearly by the MoEW. In 2006, the MoEW and the ExEA decided that from the 2008 submission onwards, the GHG inventory should be prepared by the ExEA. The ERT noted that there are plans to transfer existing knowledge and archives from the institution which currently compiles the inventories to the ExEA, but they are at different stages of implementation and the transfer has not yet been completed. The ERT also noted that the necessary elements of the national system for the transfer of knowledge to the ExEA exist in Bulgaria, but that sufficient capacity for a timely performance of the functions of the national system specified in decision 19/CMP.1 has yet to be ensured.	In response to the ERT's request, Bulgaria provided a capacity assessment, including information on how Bulgaria intends to ensure a timely performance of the functions of the national system described in decision 19/CMP.1. This assessment assures the ERT that in the long term the MoEW and the ExEA will provide no fewer than four experts who will have responsibility for emission inventories (UNFCCC and UNECE/CLRTAP). In the short term (for the 2008 submission), the ExEA will be supported by an expert from the Bulgarian Academy of Science and will also receive additional support from the MoEW through the Air Protection Directorate and the Climate Change Policy Department. Bulgaria, moreover, assured the ERT that the existing knowledge transfer has been completed, following the special training of the ExEA inventory team by the former inventory compiler.	The ERT acknowledged Bulgaria's efforts in preparing the capacity assessment and encouraged Bulgaria to ensure sufficient capacity for timely submission of the GHG inventory.	19, 20	Yes



Table 4 Issues, follow-ups, and ERT conclusions for reporting element 2 (Defined/allocated specific responsibilities for inventory development process)

Reporting element	2				
Decision	19/CMP.1				
Paragraph	12 (c)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall define and allocate specific responsibilities in the inventory development process, including those related to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Greece	<p>According to the guidelines for national systems under Article 5, paragraph 1 (decision 19/CMP.1) of the Kyoto Protocol, each Party included in Annex 1 shall establish and maintain the institutional, legal and procedural arrangements necessary to perform the functions defined in the guidelines for national systems.</p> <p>During the in-country review the ERT was informed that in Greece, the Ministry for the Environment, Physical Planning and Public Works is the designated single national entity with overall responsibility for the national GHG inventory. The Ministry is responsible for the coordination of all supporting ministries and any relevant public or private organization, relating to the implementation of the provisions of the Kyoto Protocol, according to Law no. 3017/2002, by which Greece ratified the Kyoto Protocol.</p> <p>Starting in 2007, the Ministry will also have the technical responsibility for the preparation of the inventory. The technical responsibility for inventory preparation was delegated on a contract basis, ending in 2007, to the National Observatory of Athens (NOA). Other organizations (e.g. the Ministry of Development, the Ministry of Rural Development and Food, the Ministry of Transport and Communications, the National Statistical Service of Greece (NSSG), the Civil Aviation Organisation (CAO), the Public Power Corporation (PPC) and individual industrial installations) are also involved in the preparation of the inventory as data providers. During the in-country review, and after being informed by Greece that the contract with the NOA ends in 2007, the ERT requested Greece to provide the required additional information to determine whether the national system has the capacity to fulfil the mandatory functions set out in the guidelines for national systems, under Article 5, paragraph 1, and the Article 7 guidelines. This includes information on the roles and responsibilities of various agencies and entities in relation to the inventory development process, as well as the institutional, legal and procedural arrangements made to prepare the inventory. The ERT also requested that Greece detail the nature of the institutional and procedural arrangements to demonstrate the continuity of the inventory preparation process. The ERT further requested that Greece describe how it will manage the transfer of the knowledge from the NOA to the next organization for the technical preparation of the national inventory. The ERT requested a meeting with the designated personnel to whom the technical responsibility for inventory preparation had been transferred, but no such meeting took place.</p>	<p>During the in-country review Greece provided additional documentation on the national system. This information broadly addressed the national system as it was at the time when the 2006 inventory submission was prepared, but did not fully address the questions raised by the ERT, in particular the maintenance of the technical capacity to support the development of the national inventory.</p> <p>Following the in-country review, Greece provided additional information in response to the ERT's identification of potential problems on the national system. It reiterated to the ERT that the Ministry for the Environment, Physical Planning and Public Works has always had the responsibility for the national inventory and the national system, according to Law no. 3017/2002. Greece advised that at the end of the contact with the NOA, the technical responsibility for the inventory preparation process will be transferred to the Division of Atmospheric Pollution Control, within the Ministry for the Environment, Physical Planning and Public Works. While Greece also provided information on the organizational structure in place to support the maintenance of the national system, it did not provide information on the maintenance of the institutional and procedural arrangements, the technical competence of the staff involved in the inventory development process, and its capacity for timely performance associated with the functions of its national system. For example, Greece did not provide information on the technical capacity and the process for the transfer of knowledge between the NOA and the Ministry for the Environment, Physical Planning and Public Works. Greece informed the ERT that it was in a transitional period for the inventory preparation. After this period elapses, the Greek authorities would be able to provide the required information to the UNFCCC secretariat.</p>	<p>After the in-country review, the ERT concluded that the information contained in the initial report and the additional information received by the ERT were insufficient to confirm that Greece complies fully with the guidelines for national systems under Article 5, paragraph 1 and the Article 7 guidelines. In particular, the ERT could not confirm the maintenance of the institutional and procedural arrangements, the technical competence of the staff involved in the inventory development process, and its capacity for timely performance associated with the functions of its national system. Also the additional information on the organizational structure provided to the ERT did not provide sufficient detail to adequately address the above issues.</p> <p>The ERT therefore concluded that the national system of Greece is not fully compliant with the guidelines for national systems under Article 5, paragraph 1 of the Kyoto Protocol. The ERT concluded that the maintenance of the institutional and procedural arrangements; the arrangements for the technical competence of the staff; and the capacity for timely performance of Greece's national system is an unresolved problem, and therefore lists it as a question of implementation.</p>	15 - 23	Partially



**Table 5 Issues, follow-ups, and ERT conclusions for reporting element 2 (Defined/allocated specific responsibilities for inventory development process)**

<b>Reporting element</b>	2				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	12 (c)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory planning, each Party included in Annex I shall define and allocate specific responsibilities in the inventory development process, including those related to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Hungary	The GHG Division forms the inventory core team. It must be noted, however, that the 2006–2007 inventory cycle is a period of transition with shared responsibility for inventory preparation of the former (MEW) and the new (OMSZ) teams.	NA	NA	17	Yes
Iceland	The Environment and Food Agency (EFA) is the designated single national entity for preparation of the national inventory. A new law, Act no. 65/2007, on the emission of GHGs was passed by the Icelandic legislature in March 2007. This law was translated and provided to the ERT during the in-country review. The law specifies that the EFA, an agency under the Ministry for the Environment, is the responsible authority for the national inventory. The Agriculture University of Iceland (AUI), the National Energy Authority (NEA) and Statistics Iceland (SI) are also involved in the preparation of the inventory. The AUI together with the Soil Conservation Service of Iceland (SCSI), the Icelandic Forest Service (IFS) and the Icelandic Association of Farmers (IAF) are in charge of preparing the agriculture and LULUCF sectors. The NEA collects information on emissions from geothermal power plants and provides this information to the EFA along with activity data (AD) related to fuel combustion. SI provides general information to the EFA on solvents, fertilizers and imports/exports of fuels. Information is also provided by private companies. The EFA also collects various additional data directly. For example every year a questionnaire is sent out to the industry regarding imports, use of feedstock, and production and process-specific information. Importers of HFCs submit reports on their annual imports to the EFA. The EFA also estimates AD with regard to waste. During the in-country review the ERT noted that while Iceland's national system is broadly in line with the guidelines on national systems under Article 5, paragraph 1, and the requirements under Article 7, a number of the general functions required by decision 19/CMP.1 have not been implemented by Iceland. These include: formal arrangements between the EFA and the necessary collaborating agencies involved in the preparation of the inventory to cover such responsibilities as data collection and methodologies, data delivery timelines and estimation of uncertainty estimates; and developing and implementing a QA/QC plan including the roles and responsibilities for managing QA/QC activities. Iceland has elected to account for Article 3, paragraph 3, activities (afforestation, reforestation and deforestation) over the entire commitment period, and has elected the Article 3, paragraph 4, activity revegetation to be accounted over the entire commitment period. However, the Party does not have a system to identify relevant lands that is consistent with the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance for Land Use, Land-Use Change and Forestry (hereinafter referred to as the IPCC good practice guidance for LULUCF).	<p>During the review the ERT recommended that Iceland establish formal agreements with the necessary organizations involved in the preparation of the inventory; provide a QA/QC plan; [and] identify the roles and responsibilities for the management of the QA/QC programme [...].</p> <p>Following the review, and in response to questions raised by the ERT during the in-country review visit, Iceland provided the ERT with binding guidelines between the EFA, the NEA and the AUI, and agreements between the AUI and the IFS and the SCSI. Iceland further informed the ERT that responsibility to gather required information on emissions from geothermal activities is undertaken by the NEA and not Iceland GeoSurvey (ÍSOR), and advised the ERT that the role of the Agriculture Authority in the preparation of the national inventory is uncertain. Iceland also provided a QA/QC plan, and stated that a QA/QC manager had been assigned and provided details of the coordinating team responsible for the official review of the inventory, including its mandate.</p>	The ERT concludes that the additional information on the national system and the provision of a QA/QC plan submitted to the ERT after the in-country review along with information contained in the initial report is now in accordance with decision 19/CMP.1. The ERT recommends that the information submitted to the ERT after the in-country visit be provided in Iceland's next inventory submission.	13 - 18	Partially



Table 6 Issues, follow-ups, and ERT conclusions for reporting element 1 (Designated single national entity)

Reporting element	2				
Decision	19/CMP.1				
Paragraph	12 (c)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall define and allocate specific responsibilities in the inventory development process, including those related to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Italy	The institutional arrangements regarding future reporting of activities under article 3, paragraphs 3 and 4, of the Kyoto Protocol were not addressed in detail within the initial report.	During the review, the ERT recommended that Italy provide information regarding potential institutional arrangements and remote sensing or other techniques to be adopted in relation to this issue. In response to the suggestions of the ERT, the Italian team has presented information on the institutional arrangements and instruments regarding the implementation of activities under Articles 3.3 (afforestation/reforestation and deforestation) and 3.4 (forest management), which are considered to be satisfactory by the ERT. Italy informed the ERT that formal procedures to adopt the institutional arrangements and instruments regarding the implementation of Articles 3, paragraphs 3 and 4, of the Kyoto Protocol are ongoing and a specific work programme is under finalization with a budget of €4 million.	The ERT recommends that Italy finalize these procedures in time to comply with all reporting requirements under Articles 3, paragraphs 3 and 4, of the Kyoto Protocol.	18	Yes
Latvia	According to Ordinance no. 220 of the Cabinet of Ministers of the Republic of Latvia, dated 6 April 2005, and with the approval of the Climate Change Mitigation Programme 2005-2010, the Latvian Environment, Geology and Meteorology Agency (LEGMA) has been identified as the designated single national entity responsible for the preparation of the annual GHG inventory. Other organizations working with LEGMA in the preparation of the inventory have allocated specific responsibilities for the inventory development process. They include the Central Statistical Bureau (CSB); the Ministry of Agriculture; the Ministry of Transport (Road Traffic Safety Department); industrial companies; and other governmental organizations. Latvia has established a legal framework for the institutional arrangements for the preparation and submission of a national inventory under Article 5, paragraph 2 of the Kyoto Protocol. However, the ERT noted a lack of documentation on a full implementation and maintenance plan for the national system in the following areas: (a) The roles, responsibilities and minimum capacities of all the necessary collaborating entities; (b) The formal agreements for coordination between the different bodies which collaborate in the preparation, planning and maintenance of the inventory, and the single national entity, LEGMA.	During the review the ERT recommended that Latvia provide a plan, including the timeline, for defining the roles, responsibilities and minimum capacities of the necessary collaborating entities, in particular the Road Traffic and Safety Department (RTSD) and the Ministry of Agriculture, and for their coordination with the designated single national entity, LEGMA. After the in-country review and in response to the ERT's recommendations, Latvia provided information on current activities such as the institutions involved in the national system with regard to data collection, completion of the common reporting format (CRF) tables, and supervision of the inventory process. Latvia also provided information on future initiatives planned for the national system, including the introduction of a new law, the Law on the Participation of the Republic of Latvia in the Flexible Mechanisms under the Kyoto Protocol. The law - to be approved by the Latvian Parliament by the end of 2007 - will establish the legal basis, through the adoption of regulations, requirements regarding the national system (including its capacity). The regulations which will be introduced by mid-2008, will address the definition of the roles and responsibilities of the institutions involved in the preparation of the inventory, including the responsibilities for QA/QC procedures.	The ERT acknowledged that the future activities to be implemented will improve the institutional and procedural arrangements needed to perform the functions of the national system.	13, 15 - 17	Partially

**Table 7 Issues, follow-ups, and ERT conclusions for reporting element 2 (Defined/allocated specific responsibilities for inventory development process)**

<b>Reporting element</b>	2				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	12 (c)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory planning, each Party included in Annex I shall define and allocate specific responsibilities in the inventory development process, including those related to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Luxembourg	<p>During the in-country visit, Luxembourg outlined the current institutional arrangements, as part of the national system, for preparation of the inventory. The Ministry of Environment was the recognized single national entity but was not formally designated under any specific legal basis (see also paragraph 17). The Environment Agency carries out the role of inventory agency for Luxembourg's emissions inventories in general under that legislation establishing it, and it is in this context that it compiles the inventories of GHG emissions. The Administration des Eaux et Forêts (AEF), which has responsibility for the LULUCF inventory, is the only other body involved directly in the preparation of the inventory. The bulk of the activity data (AD) are taken from publications of the Service Central de la Statistique et des Etudes Economiques du Luxembourg (STATEC), supplemented by information supplied by other ministries and administrations and in some cases by plant operators.</p> <p>There are clear deficiencies in the existing institutional arrangements and there are no documented procedures covering inventory planning, preparation and management. The process of GHG inventory preparation and submission is cumbersome and inefficient, and the completed inventory receives only minimal checking. The final output is prone to error due to the transfer of common reporting format (CRF) files produced initially by the Environment Agency in the CORINAIR system to the Ministry, where they are regenerated for submission using the CRF Reporter. The in-depth review of the inventory showed that lack of resources, insufficient communication and collaboration among institutions and inadequate definition of their roles and responsibilities are the major causes of Luxembourg's poor progress towards inventory reporting to the standard required by the UNFCCC reporting guidelines. These are the key issues to be addressed in the development of the national system. Luxembourg is improving its data management systems and organizational structures under a partnership agreement with the Umweltbundesamt in Austria in order to review and improve Luxembourg's data reporting to the European Environment Agency (EEA). This collaboration extends to issues related to the development of a national inventory system and a quality assurance/quality control (QA/QC) plan for GHG inventories. However, there are no clear terms of reference for this work and no specific deliverables other than an implementation report for reporting in general. The ERT was informed that this report will not define a national system that is appropriate for Luxembourg, nor will it outline a QA/QC plan as an integral part of any such system.</p> <p>The ERT expressed the view that the partnership may not be sufficient to advance the implementation of the overdue national system for Luxembourg. The ERT recommended that the necessary decisions on the basic structure and functionality of the national system be taken as soon as possible in collaboration with all stakeholders and with Umweltbundesamt, so that Luxembourg can move quickly to the implementation of a system that substantially complies with the guidelines for national systems under Article 5, paragraph 1 of the Kyoto Protocol (decision 19/CMP.1).</p>	<p>At the time of the in-country visit, Luxembourg acknowledged the lack of a proper national system and subsequently undertook urgent measures to establish the legal framework necessary for implementation of its national system following the ERT's recommendations. This was achieved by way of a Regulation (Règlement grand-ducal du 1 août 2007 relatif à la mise en place d'un Système d'Inventaire National des émissions de gaz à effet de serre dans le cadre de la Convention cadre de des Nations Unies sur le Changement Climatique. &lt;<a href="http://www.legilux.public.lu/leg/a/archives/2007/1300708/1300708.pdf">http://www.legilux.public.lu/leg/a/archives/2007/1300708/1300708.pdf</a>&gt;), prepared jointly by the Environment Agency and the Ministry for Environment which was adopted by the Government on 20 July 2007 and which entered into force on 7 August 2007. This Regulation designates the Environment Agency as the single national entity with overall responsibility for the inventory and sets out the roles of the administrations and services that will support the Agency in its task as the national inventory compiler and data coordinator. Provision is made for external experts to produce the inventory for the agriculture, LULUCF and waste-water handling sectors, while the Environment Agency will compile the estimates for all other IPCC sectors in accordance with documented rules and procedures.</p>	<p>The ERT is satisfied that the institutional, legal and procedural arrangements provided for under the Regulation, together with Luxembourg's proposed QA/QC management system mentioned in paragraph 19 below, meet the requirements for national systems as set down in the annex to decision 19/CMP.1.</p>	12, 13, 16, 17	No

**Table 8 Issues, follow-ups, and ERT conclusions for reporting element 2 (Defined/allocated specific responsibilities for inventory development process)**

<b>Reporting element</b>	2				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	12 (c)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory planning, each Party included in Annex I shall define and allocate specific responsibilities in the inventory development process, including those related to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Monaco	During the in-country visit, Monaco explained the institutional arrangements, as part of the national system, for preparation of the inventory. The Direction de l'Environnement, de l'Urbanisme et de la Construction is the designated single national entity and is responsible for the inventory planning, preparation and management, and the archiving of information. Other organizations are also involved in the preparation of the inventory mainly through provision of the required data. These include the Société Monégasque d'Assainissement, the Société Monégasque de l'Electricité et du Gaz and the Division de statistiques de la Direction de l'Expansion Economique.		The Direction de l'Environnement, de l'Urbanisme et de la Construction has the necessary expertise to perform its functions but the human resources are limited and the experts have many other responsibilities besides the development of the GHG inventory. The national system would benefit from an increase in manpower capacity as well as the full implementation of the QA/QC plan.	12	No
Romania	The ERT noted that Romania currently does not have the capacity to identify specific areas of land subjected to changes in land use and land management, and recommended that Romania prepare for a timely monitoring of these activities. Revegetation has been selected as one of the activities under Article 3, paragraph 4, of the Kyoto Protocol.	NA	Since this activity requires net-net accounting, the ERT reminded the Party of the need to estimate net GHG emissions, both in the base year and in the commitment period, for those land units encompassing revegetation activity.	15	Yes
Russian Federation	The ERT was informed of a major administrative reform taking place in the Russian Federation, which changes the structures and responsibilities of federal ministries and agencies and those of the regional organizations responsible for statistical data collection. The ICCC, which was previously responsible for the supervision of the inventory, was dissolved along with other acting inter-agency commissions. The administrative reform has not yet been fully implemented and this situation hinders the allocation of specific responsibilities for inventory preparation and improvement, as uncertainties with regard to responsibilities among different ministries and agencies remain. The Russian Federation has a good basis for extending and improving its current national system for estimation of emissions from the LULUCF sector and activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol. However, the development of a reliable system for accurate and transparent reporting under the Kyoto Protocol is pending, in particular regarding development of a consistent land representation, reporting on all the mandatory land conversion categories and application of the IPCC approach 2 for land identification, which is a minimum requirement for reporting on land under the Kyoto Protocol [...].	NA	The ERT encourages the Russian Federation to enhance and further develop its efforts under the national system to cover activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol.	19, 23	Yes



Table 9 Issues, follow-ups, and ERT conclusions for reporting element 2 (Defined/allocated specific responsibilities for inventory development process)

Reporting element	2				
Decision	19/CMP.1				
Paragraph	12 (c)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall define and allocate specific responsibilities in the inventory development process, including those related to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Ukraine	During the in-country visit, Ukraine explained the institutional arrangements and the latest developments, as part of the national system, for preparation of the inventory. [...] [Other institutions] are also involved in the preparation of the inventory, but specific responsibilities for the inventory development process were not defined and allocated sufficiently clearly. During the in-country review, the ERT recommended Ukraine to provide a description of the functional structure of the national system and the institutions involved, including roles and responsibilities.	After the in-country review, and in response to the ERT's recommendations, Ukraine provided information on institutional, legal and procedural arrangements and the structure of the national system in the light of the latest national activities and developments [...].	NA	14, 15	Yes



Table 10 Issues, follow-ups, and ERT conclusions for reporting element 3 (Established process for approving the inventory)

Reporting element	3				
Decision	19/CMP.1				
Paragraph	12 (e)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall establish processes for the official consideration and approval of the inventory, including any recalculations, prior to its submission and to respond to any issues raised by the inventory review process under Article 8.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Hungary	In Hungary there is an established process for the official consideration and approval of the inventory, including recalculations, prior to its submission and for responding to any issues raised by the inventory review. The Ministry for Environment and Water (MEW) has overall responsibility for the Hungarian GHG inventory and the national system and is the designated single national entity. It is responsible for the institutional, legal and procedural arrangements for the national system and for the strategic development of the GHG inventory. The Climate Change and Energy Department of the MEW supervises all national activities related to GHG inventories and the national system, and up to 2007 it approved the inventory before its submission to the secretariat. The Budget Bill specifies the financial provisions for the national system. The national system currently operates on the basis of the internal rules on the national system laid down by the MEW, but these will be superseded by the regulations set up by Act LX on the implementation framework of the United Nations Framework Convention on Climate Change and the Kyoto Protocol and its executive orders. A steering committee of prominent sectoral experts and government representatives is planned to be set up in 2007. This steering committee is dedicated to promoting dialogue in order to improve data quality and the methodology applied in the national system, and will consider and approve the national inventory prior to submission to the UNFCCC.	NA	The procedure for official approval of recalculations should be incorporated into the QA/QC plan.	16, 18, 26	Yes
Iceland	The ERT also noted that a formal process for the official consideration and approval of the inventory was also required.	During the review the ERT recommended that Iceland [...] develop and implement a formal process for the official consideration and approval of the inventory. Following the review, and in response to questions raised by the ERT during the in-country review visit, [...] Iceland also provided a QA/QC plan, and stated that a QA/QC manager had been assigned and provided details of the coordinating team responsible for the official review of the inventory, including its mandate. The coordinating team will have the role of officially approving and reviewing the emission inventory before submission to UNFCCC, as well as formulating proposals on further development and improvement of the national inventory system.	The ERT concludes that the additional information on the national system and the provision of a QA/QC plan submitted to the ERT after the in-country review along with information contained in the initial report is now in accordance with decision 19/CMP.1. The ERT recommends that the information submitted to the ERT after the in-country visit be provided in Iceland's next inventory submission.	14 - 16, 18	No



Table 11 Issues, follow-ups, and ERT conclusions for reporting element 3 (Established process for approving the inventory)

Reporting element	3				
Decision	19/CMP.1				
Paragraph	12 (e)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall establish processes for the official consideration and approval of the inventory, including any recalculations, prior to its submission and to respond to any issues raised by the inventory review process under Article 8.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Italy	The Italian Ministry for the Environment, Land and Sea endorses the national inventory after preparation by APAT. However, there is no formal process in Italy for the official consideration and approval of the inventory, including recalculations, prior to its submission and for responding to any issues raised by the inventory review in accordance with decision 13/CMP.1.	During the review, the ERT recommended that Italy formalize the process for the official approval of the inventory. Italy properly responded to requests for further clarification during the review. Furthermore, Italy informed the ERT that the ministerial directive referred to in paragraph 15 will also address the process for the inventory approval.	Again, the ERT welcomes this information and invites Italy to finalize ongoing procedures as soon as possible and report on them in its future inventory submission under the Kyoto Protocol.	16	Yes
Luxembourg	In Luxembourg there is no established process for the official consideration and approval of the inventory, including recalculations, prior to its submission and for responding to any issues raised by the inventory review.	At the time of the in-country visit, Luxembourg acknowledged the lack of a proper national system and subsequently undertook urgent measures to establish the legal framework necessary for implementation of its national system following the ERT's recommendations. This was achieved by way of a Regulation (Règlement grand-ducal du 1 août 2007 relatif à la mise en place d'un Système d'Inventaire National des émissions de gaz à effet de serre dans le cadre de la Convention cadre de des Nations Unies sur le Changement Climatique. < <a href="http://www.legilux.public.lu/leg/a/archives/2007/1300708/1300708.pdf">http://www.legilux.public.lu/leg/a/archives/2007/1300708/1300708.pdf</a> >.), prepared jointly by the Environment Agency and the Ministry for Environment which was adopted by the Government on 20 July 2007 and which entered into force on 7 August 2007. This Regulation designates the Environment Agency as the single national entity with overall responsibility for the inventory and sets out the roles of the administrations and services that will support the Agency in its task as the national inventory compiler and data coordinator.	The ERT is satisfied that the institutional, legal and procedural arrangements provided for under the Regulation, together with Luxembourg's proposed QA/QC management system mentioned in paragraph 19 below, meet the requirements for national systems as set down in the annex to decision 19/CMP.1.	15, 17	No



Table 12 Issues, follow-ups, and ERT conclusions for reporting element 4 (Quality assurance/quality control plan)

Reporting element	4				
Decision	19/CMP.1				
Paragraph	12 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives,				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Belgium	<p>A number of the general functions required by decision 19/CMP.1 have not been implemented by Belgium. These include [...] developing and implementing a QA/QC plan [...].</p> <p>Belgium has neither elaborated nor implemented a QA/QC plan at the national level.</p> <p>The annex to the initial report provides general QA/QC information at the national and the regional levels.</p>	<p>The ERT recommends that Belgium [...] implement and manage a QA/QC programme for the national and regional inventories [...].</p> <p>The ERT recommends that Belgium develop a national QA/QC plan in accordance with the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance). The ERT commends efforts by the Flemish region to develop an International Organization for Standardization (ISO) 9001 quality management system and considers that the Flemish system will provide a good model for the national plan.</p> <p>During the in-country visit, the ERT was informed that IRCEL-CELINE applies QC procedures when compiling the national inventory.</p>	<p>[...] the ERT considers that much improvement is required regarding implementing and documenting tier 1 and tier 2 QC procedures. The ERT notes that the results of the procedures should directly feed into the national and regional inventory improvement plans.</p>	16, 18, 19	No
Bulgaria	<p>In its initial report, Bulgaria indicated that it has source-specific QC procedures in place, but yet has to elaborate and implement a QA/QC plan that is fully in accordance with the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance), which would include general QC procedures (tier 1) as well as source/sink category-specific procedures (tier 2) for key categories and for those individual categories in which significant methodological and/or data revisions have occurred.</p> <p>The ERT requested Bulgaria to submit an outline of the QA/QC plan for the national inventory, detailing a list of tasks and institutional responsibilities. The outline should cover all the aspects of the national inventory including inventory planning, preparation and management as outlined in the annex to decision 19/CMP.1 and elaborated in the IPCC good practice guidance.</p>	NA	NA	23, 26	Yes
Estonia	<p>According to the textual description of the national system, Estonia has elaborated a QA/QC plan. However, the QA plan is not yet implemented.</p>	NA	NA	16	Yes



COMPLIANCE COMMITTEE

CC/5/2008/2  
1 October 2008

Reporting element	4				
Decision	19/CMP.1				
Paragraph	12 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives,				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Hungary	The QA/QC plan [...] was presented to the ERT during the in-country visit. According to this document the OMSZ has nominated a quality manager who is responsible for coordination of the QA/QC activities. Responsibilities for particular sectoral checks are delegated to sectoral coordinators (staff of the GHG Division). External experts/contractors are responsible for QC of the consistency and completeness of the AD and the emission estimates. The QA/QC plan also includes deadlines for the completion of quality controls, a checking table (document ME 04-16/B01) with detailed records of checking activities, documentation files, records of changes and recalculations, and procedures for the annual updating of the QA/QC plan.	The ERT requested that Hungary present summary information on the QA/QC plan elaborated as outlined above in the form of a corrigendum to the initial report, and after the in-country review Hungary provided the ERT with the information it requested. According to this information the GHG Division passed the ISO 9001:2000 audit in March 2007, after the in-country review. The updated QA/QC plan was provided, but in Hungarian.	<p>The ERT acknowledged the improvements that Hungary has achieved in its QA/QC activities and noted that a framework for a QA/QC system is in place. However, it considered that the QA/QC plan provided to it was rather general and would not ensure adequate quality of the national GHG inventory estimates; in particular, further improvements are needed to the quality of the data supplied by data providers. For instance, only a few data providers can provide factual evidence to prove the reliability of the data they collect. The ERT recommends Hungary to take urgent action to reduce these sources of uncertainty in its next submission.</p> <p>The ERT recommended that Hungary further elaborate the existing QA/QC plan in line with the requirements of the IPCC good practice guidance, in particular regarding the routines for internal/external sectoral cross-checking of all documents related to submissions, such as the CRF tables, reports, background sources and documentation. The ERT recommends that Hungary document the QA/QC procedures for activities related to Article 3, paragraphs 3 and 4, activities in a similar way.</p> <p>The ERT recommends Hungary to provide detailed information in English in its next inventory submission.</p>	24 - 28	Yes



COMPLIANCE COMMITTEE

CC/5/2008/2  
1 October 2008

Reporting element	4				
Decision	19/CMP.1				
Paragraph	12 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives,				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Iceland	<p>During the in-country review the ERT noted that while Iceland's national system is broadly in line with the guidelines on national systems under Article 5, paragraph 1, and the requirements under Article 7, a number of the general functions required by decision 19/CMP.1 have not been implemented by Iceland. These include [...] developing and implementing a QA/QC plan including the roles and responsibilities for managing QA/QC activities.</p> <p>Iceland in its 2006 GHG inventory submission neither elaborated nor implemented a QA/QC plan. The lack of a QA/QC plan was identified in the 2005 review.</p>	<p>During the review the ERT recommended that Iceland [...] provide a QA/QC plan [and] identify the roles and responsibilities for the management of the QA/QC programme.</p> <p>Following the review, and in response to questions raised by the ERT during the in-country review visit, [...] Iceland also provided a QA/QC plan, and stated that a QA/QC manager had been assigned [...].</p>	<p>The ERT concludes that the additional information on the national system and the provision of a QA/QC plan submitted to the ERT after the in-country review along with information contained in the initial report is now in accordance with decision 19/CMP.1. The ERT recommends that the information submitted to the ERT after the in-country visit be provided in Iceland's next inventory submission.</p> <p>The ERT recommends that Iceland implement the QA/QC plan before its next submission in 2008 and that a QA/QC plan consistent with the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance) and pursuant to decision 19/CMP, be submitted in Iceland's next inventory submission for expert review. In particular the plan should include information on the roles and responsibilities for the management of QA/QC procedures, and details of QC activities. Furthermore, for the next inventory submission Iceland should include descriptions of the QA/QC procedures in each sector in the NIR in accordance with the UNFCCC "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories" (hereinafter referred to as the UNFCCC reporting guidelines).</p>	14 - 16, 18, 20, 21	No



COMPLIANCE COMMITTEE

CC/5/2008/2  
1 October 2008

Reporting element	4				
Decision	19/CMP.1				
Paragraph	12 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives,				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Latvia	A QA/QC plan is not provided in Latvia's 2006 GHG inventory submission.	<p>During the in-country review, Latvia explained that several checks are routinely carried out to eliminate potential basic errors and presented a QA/QC plan, approved in April 2007 by the Director of LEGMA. The plan includes only tier 1 QC procedures which will be implemented internally by LEGMA for future inventories, and does not address QA procedures. Latvia further explained that the CSB and the companies involved in the European Union (EU) emissions trading scheme (ETS) have inbuilt, comprehensive QA/QC procedures. No further information was provided to the ERT on the QA/QC procedures in place with all the agencies and entities involved in the national inventory system of Latvia, as required by decision 19/CMP.1.</p> <p>During the in-country review, the ERT recommended that Latvia provide an implementation plan describing the process and timing for the coordination of LEGMA's internal QA/QC plan with the external agencies and entities involved in the development of the inventory (specifically, with the Ministry of Agriculture in developing a QA/QC plan for the LULUCF sector).</p> <p>Following the in-country review, Latvia provided a schedule for the implementation of QA/QC procedures and reported that all issues regarding QA/QC activities will be elaborated in the new regulations which will enter into force on 30 June 2008. The ERT recommends that the QA/QC plan to be implemented with the new regulations, should comply with the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance). The ERT also recommends that Latvia include documentation on verification procedures in its next inventory submission.</p>	The ERT acknowledged that the future activities to be implemented will improve the institutional and procedural arrangements needed to perform the functions of the national system.	17 - 20	No



COMPLIANCE COMMITTEE

CC/5/2008/2  
1 October 2008

Reporting element	4				
Decision	19/CMP.1				
Paragraph	12 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives,				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Lithuania	<p>Responsibility for the coordination of the inventory as well as issues related to compilation of CRF tables and NIR, data management, archiving and general issues (including QA/QC) lies with the Institute of Ecology (IoE).</p> <p>Lithuania did not elaborate a QA/QC plan in accordance with the IPCC good practice guidance in its initial report, but did submit a QA/QC plan to the ERT during the course of the review.</p>	<p>Lithuania did not elaborate a QA/QC plan in accordance with the IPCC good practice guidance in its initial report, but did submit a QA/QC plan to the ERT during the course of the review. The ERT noted that the plan was prepared in accordance with the IPCC good practice guidance. The plan outlines QC procedures and identifies the entities responsible for different QA/QC activities.</p> <p>The ERT noted that tier 1 quality control procedures are performed during the inventory preparation by sector experts. The ERT recommends that these procedures be improved to ensure that the discrepancies identified by the ERT as between the CRF and the NIR are identified by the Party during the compilation of the GHG inventory. Lithuania is also encouraged to develop category-specific tier 2 QC procedures, and to use data from the European Union (EU) emissions trading scheme (ETS) to verify the emission estimates.</p>	<p>The ERT noted that the plan was prepared in accordance with the IPCC good practice guidance.</p> <p>The ERT recommends that these procedures be improved to ensure that the discrepancies identified by the ERT as between the CRF and the NIR are identified by the Party during the compilation of the GHG inventory. Lithuania is also encouraged to develop category-specific tier 2 QC procedures, and to use data from the European Union (EU) emissions trading scheme (ETS) to verify the emission estimates.</p>	13, 18, 19	No
Luxembourg	<p>Luxembourg has not elaborated a QA/QC plan in accordance with the IPCC good practice guidance. The current procedures do not incorporate systematic checking in the context of QC or any form of official review, either internally or externally, before inventory submission. Checking is limited to that provided by the CRF Reporter software at the end of the process and to ad hoc correspondence between the individuals in the Environment Agency and the Ministry who compile and report the inventory, respectively.</p>	<p>Following the ERT's recommendations regarding QA/QC, Luxembourg submitted a description of the quality management system for the GHG inventory that will underpin the national system referred to in paragraph 17 above. Quality management is process-oriented and targets the overall management and control of the inventory. It addresses such issues as the collection of suitable AD, emission factors (EFs) and estimation methods, the identification of key categories, recalculations, specific QA/QC to achieve defined quality objectives and official review of the inventory. The system documentation incorporates a quality management manual, operating procedures including standard forms and internal documentation on implementation.</p>	<p>The ERT concluded that the system as elaborated demonstrates adequate functionality with respect to inventory planning, preparation and management as required by the guidelines in the annex to decision 19/CMP.1.</p>	18, 19	No
Monaco	<p>Monaco has QC procedures in place but they were not clearly described in the NIR as part of its 2006 submission. In addition, Monaco processed an external assessment of the inventory in 2005, conducted by the Centre Interprofessionnel Technique d'Etudes de la Pollution Atmosphérique in France.</p>	<p>As part of its revised submission, after the in-country visit, Monaco provided a QA/QC plan in accordance with the International Panel on Climate Change (IPCC) Good practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance), including actions to be taken to ensure that the methods used, calculations made and the archiving of information is properly conducted.</p>	<p>The national system would benefit from an increase in manpower capacity as well as the full implementation of the QA/QC plan.</p> <p>The ERT recommends that Monaco gain experience with the implementation of the QA/QC plan and further elaborate the specific checks for each category in line with its national circumstances, and implement the procedures for periodic external reviews.</p>	12, 14	No



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CC/5/2008/2  
1 October 2008

Reporting element	4				
Decision	19/CMP.1				
Paragraph	12 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives,				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Poland	In its initial report, Poland indicates that it has not yet implemented a formal QA/QC procedure, including a verification plan, for the national GHG inventory. In the initial report and the NIR Poland states that general and sector-specific QC procedures are performed regularly and that QA-related activities referred to external reviews are performed occasionally under the auspices of the MoE. The draft inventory data are usually checked by NEC experts and consultations with data providers are undertaken. Before the data are forwarded to the UNFCCC secretariat, the MoE and the Main Inspectorate for Environmental Protection carry out an additional review. However, during the in-country review the ERT noted that the results of QC checks and reviews are not well documented and archived.	<p>The ERT therefore suggested that Poland introduce better documentation of its QC activities at all stages of inventory preparation within the NEC, as well as for the other institutes/experts that contribute to inventory preparation, and in calculation spreadsheets and other supporting documents.</p> <p>At the request of the ERT, Poland provided a draft QA/QC plan during the in-country review. However, the ERT considered this plan to be too general and insufficient to ensure the quality of the GHG inventory. Therefore, the ERT requested Poland to provide a more detailed draft of its QA/QC plan. In reaction to the recommendations made by the ERT after the in-country review, Poland provided the ERT its National Programme for Quality Assurance and Quality Control. After the in-country review (13 December 2007) Poland provided the ERT with a letter from the Ministry of Environment to KASHUE with the formal approval of the Poland's QA/QC Plan. This programme contains all the relevant elements such as general and specific QC procedures, QA procedures, a timetable for inventory preparation and QA/QC, defined responsibilities for inventory preparation and QA/QC, and tier 1 and tier 2 QC checklists. [...] Poland additionally provided a summary of implemented QA/QC activities for its 2006 inventory submission.</p>	<p>The ERT considers the programme to be in line with the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories as the IPCC good practice guidance) and expects that it will be implemented by Poland.</p> <p>The ERT encourages Poland to document QA/QC activities in the NIRs of its future submissions in accordance with the UNFCCC reporting guidelines; to use review findings to improve the inventory and to archive the findings/results of the QA/QC procedures together with the inventory data.</p>	19 - 21	No



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CC/5/2008/2  
1 October 2008

Reporting element	4				
Decision	19/CMP.1				
Paragraph	12 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives,				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Russian Federation	<p>The Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet) is the designated single national entity with overall responsibility for the national inventory. Roshydromet delegated the responsibility for the preparation and the management of the GHG inventory to the Institute of Global Climate and Ecology (IGCE). This includes [...] the development and implementation of QA/QC procedures [and] the development of internal orders for QC and other purposes [...].</p> <p>The Russian Federation has elaborated a QA/QC plan in accordance with the IPCC good practice guidance. The QA/QC plan is part of an internal IGCE order on the "Practice of Quality Assurance and Quality Control for the National GHG Inventory" of 7 March 2007, which among other issues includes a description of specific QA/QC procedures, the plan for the preparation of the national GHG inventory and the templates of the QC checklists. However, the QA/QC plan and procedures have not yet been implemented in a systematic way. Some individual QC procedures were used for the preparation of the 2006 inventory submission.</p> <p>The QA/QC plan includes general QC procedures (tier 1) as well as general source/sink category-specific procedures (tier 2). These have not yet been applied systematically for key categories and for those individual categories in which significant methodological and/or data revisions have occurred. Tier 2 QC procedures are more advanced in the agriculture and forest sectors but have not been specified in detail in the energy sector, where many revisions occurred prior to and during the in country review which were not driven by the procedures of the QA/QC plan.</p>	<p>A more complete implementation [of the QA/QC plan] is envisaged for 2008.</p> <p>During the in-country review, Rosstat informed the ERT that for national statistics a unified system of classification and coding technical, economic and social information has been created in the Russian Federation. An integrated programme for the development and practical implementation of a system of standard indicators and registries has been in place since 2001. Since 2005, the development of statistical parameters has been implemented in accordance with a new All-Russian Registry of Economic Activities, which has been harmonized with the European statistical classification of economic activities (NACE). From 2008, it is planned to introduce a new All-Russian Registry of Economic Activities, which has been harmonized with the classification of products by activity (CPA). QC checks on data are performed at its regional branches and Rosstat uses software checks to detect errors and problems in regional information. Rosstat has the right to make adjustments on the basis of information received indirectly and sends requests back to its regional branches if problems are detected. Rosstat is the most important data provider in the compilation of the inventory. For other data providers, no information was available on QA/QC procedures and the type of activities estimated in the data sources used was sometimes unclear.</p>	<p>The ERT recommends the Russian Federation to fully implement the QA/QC plan and to document the implemented checks and activities in a transparent way in its next inventory submission.</p> <p>The ERT recommends the Russian Federation to include in its next NIR a description of the QA/QC activities conducted by Rosstat on the specific statistics used for the GHG inventory and to add information on the QA/QC activities of other data providers.</p>	13, 25 - 27	No



COMPLIANCE COMMITTEE

CC/5/2008/2  
1 October 2008

Reporting element	4				
Decision	19/CMP.1				
Paragraph	12 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory planning, each Party included in Annex I shall elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives,				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Ukraine	Ukraine has elaborated and partially implemented QA/QC procedures in accordance with the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance). During the in-country review, Ukraine presented its national QA/QC plan for the 2006 inventory submission. This includes general QC procedures (tier 1) as well as some source/sink category-specific QC procedures (tier 2) for key categories. However, this plan lacks documentation on QC procedures for individual sectors and clear and detailed information on implemented QA/QC activities.	The ERT suggested introducing better documentation on QC procedures at all stages of inventory preparation. The ERT recommended Ukraine to clearly define and document in the QA/QC plan the relevant responsibilities of cooperating institutions and experts and their contribution to QA/QC activities, and to present a clear and detailed QA/QC plan to be applied to its inventory development process in the next submission and thereafter.  After the in-country review, Ukraine provided the ERT with the QA/QC plan approved by the MEP on 31 May 2007. This plan contains most of the elements recommended by the ERT.	The ERT encourages Ukraine to implement its QA/QC plan, extend its verification procedures to models, AD and estimates, further develop the plan in line with the recommendations outlined above and document all these actions in its next inventory submission.	18, 20	Yes



Table 13 Issues, follow-ups, and ERT conclusions for reporting element 5 (Ways to improve inventory quality)

Reporting element	5				
Decision	19/CMP.1				
Paragraph	13				
Mandatory element	No				
Decision text	As part of its inventory planning, each Party included in Annex I should consider ways to improve the quality of activity data, emission factors, methods and other relevant technical elements of inventories. Information obtained from the implementation of the QA/QC programme, the review process under Article 8 and other reviews should be considered in the development and/or revision of the QA/QC plan and the quality objectives.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Belgium	Although improvement plans exist at the regional level and information is shared between regions, there is no consistent national inventory improvement planning process or documented inventory improvement plan.	NA	[..] develop a national inventory improvement planning process that integrates and coordinates national and regional inventory improvements.  The ERT notes that the results of the [QA/QC] procedures should directly feed into the national and regional inventory improvement plans.	16, 19	Yes
Luxembourg	The current inventory practice does not include any systematic identification of shortcomings in inventory compilation and reporting or a plan to address them. Improvements are sometimes made on an ad hoc basis, the latest of which were for the purpose of preparing the initial report.	NA	NA	15	No
Monaco	NA	NA	NA	NA	No
Norway	[..] no improvement plan is available yet, although this is planned for autumn 2007.	NA	The ERT recommends Norway to prepare an inventory improvement plan [..]. It also encourages Norway to evaluate after every reporting cycle whether the quality objectives have been met and to use the conclusions from this evaluation when setting the priorities in the inventory improvement plan.	16	Partly
Poland	NA	NA	The ERT encourages Poland to [..] use review findings to improve the inventory.	21	No
Russian Federation	Currently, no systematic evaluation of necessary improvement activities exists.	NA	The ERT recommends that in future years essential improvements should be clearly identified by the IGCE and Roshydromet and that Roshydromet support the IGCE in the collection of data and parameters for these improvement activities. The ERT recommends the Russian Federation to include such information in its next NIRs.	28	Yes



Table 14 Issues, follow-ups, and ERT conclusions for reporting element 6 (Key category analysis)

Reporting element	6				
Decision	19/CMP.1				
Paragraph	14 (a)				
Mandatory element	Yes				
Decision text	As part of its inventory preparation, each Party included in Annex I shall identify key source categories following the methods described in the IPCC good practice guidance (chapter 7, section 7.2).				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Bulgaria	Bulgaria has reported a key category tier 1 and tier 2 analysis and both level and trend assessments as part of its initial report submission. Bulgaria has not included the LULUCF sector in its key category analysis. The secretariat's analysis indicates that forest land remaining forest land and wetlands remaining wetlands are key categories in the base year and 2004. This report follows the secretariat's key category analysis.  The key category analysis performed by the Party and the secretariat produced similar results, but differ due to the fact that Bulgaria has not included the LULUCF sector in its key category analysis and has chosen a higher level of disaggregation in the energy sector.	NA	The ERT encourages Bulgaria to develop a key category analysis including LULUCF, following the IPCC good practice guidance, and report results in its next inventory submission.	32, 33	Partially
Monaco	Monaco did not report a key category analysis as part of its 2006 submission.	However it included key category tier 1 analysis results, both level (base year and most recent year) and trend assessment as part of its revised NIR submitted in November 2007. The key category analysis performed by the Party and the secretariat produced similar results.	The ERT recommends that Monaco include the full key category calculation tables in its next submission and perform a tier 2 key category analysis.	18	No
Russian Federation	The Russian Federation has not reported a key category analysis as part of its initial report.	A tier 1 key category analysis (level and trend) was performed in 2007 for the years 1990, 2004 and 2005 and was provided to the ERT during the in-country review. The Russian Federation has included the LULUCF sector in this key category analysis. As the key category analysis was performed fairly recently, it has not yet been used in a systematic way for the prioritization of inventory improvements and QA/QC activities.	NA	35	No



Table 15 Issues, follow-ups, and ERT conclusions for reporting element 7 (Estimates prepared in line with IPCC guidelines and IPCC good practice guidance)

Reporting element	7				
Decision	19/CMP.1				
Paragraph	14 (b)				
Mandatory element	Yes				
Decision text	As part of its inventory preparation, each Party included in Annex I shall prepare estimates in accordance with the methods described in the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, as elaborated by the IPCC good practice guidance, and ensure that appropriate methods are used to estimate emissions from key source categories.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Luxembourg	Luxembourg continues to rely almost entirely on the CORINAIR methodologies for estimating GHG emissions and has made only limited use of the Revised 1996 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories (hereinafter referred to as the Revised 1996 IPCC guidelines) and the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance).  The inventory of Luxembourg is partially in line with the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry (hereinafter referred to as the IPCC good practice guidance for LULUCF). There are deficiencies, to varying degrees, with respect to all the inventory reporting principles, the majority of which are evidently due to the lack of a proper national system.	NA	The inventory is sufficiently in compliance with Article 7, paragraph 1 of the Kyoto Protocol and decision 15/CMP.1, and Luxembourg demonstrates the capacity to report information in future years in accordance with Article 7, paragraph 1, provided that the major improvements in the inventory preparation process identified by the ERT are made.	12, 27, 28	Partly
Russian Federation	The inventory is mostly in line with the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry (hereinafter referred to as the good practice guidance for LULUCF). Areas where guidance from the IPCC still needs to be fully implemented are the estimation of emissions from fuel combustion, where a tier 1 approach and IPCC default EFs are generally used, emissions from aviation and navigation, in particular the split between international and domestic emissions, the larger use of country-specific methods and EFs for fugitive emissions, and methods and approaches in the LULUCF sector.	Many revisions and improvements were implemented during the course of the review in response to the list of potential problems and further questions raised by the ERT.	The inventory is generally compiled in accordance with Article 7, paragraph 1, and decision 15/CMP.1.  The ERT acknowledges that all [identified] problems were resolved during the review where they related to base year emissions, but that further problems need to be resolved for the more recent years that have not been the focus of this review. The ERT recommends the Russian Federation to reflect these improvements and changes in its next inventory submission.	36, 37	Partly

**Table 16 Issues, follow-ups, and ERT conclusions for reporting element 8 (Sufficient activity data and emission factor collected to support methodology)**

<b>Reporting element</b>	8				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	14 (c)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory preparation, each Party included in Annex I shall collect sufficient activity data, process information, and emission factors as are necessary to support the methods selected for estimating anthropogenic GHG emissions by sources and removals by sinks.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Bulgaria	<p>[...] the ERT noted that Bulgaria has yet to complete the implementation of the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry (hereinafter referred to as the IPCC good practice guidance for LULUCF), as land-use change is not estimated ("NE"). The ERT further noted some cases where the methods and EFs used are not fully in line with the guidelines and guidance mentioned above. These cases are identified in the respective sectoral sections of this report.</p> <p>Due to the lack of available AD Bulgaria does not estimate emissions from the conversion of forest land and grassland to other land use, the conversion of land to forest land, or emissions from solid fuel transformation (1.B.1.b) for the base year. Moreover, actual HFC emissions from the consumption of halocarbons are reported as "NE" for all years except 1995.</p>	<p>Additional information has been provided in response to the ERT request.</p> <p>The information obtained by the ERT during the in-country visit did not fully demonstrate that Bulgaria has in place the required capacity and/or institutional arrangements to provide information required by decision 16/CMP.1 on land areas subject to activities under the Kyoto Protocol Article 3, paragraph 3. In response to the ERT's request to provide a capacity assessment, Bulgaria provided a general description of forest inventory procedures, along with preliminary estimates of carbon (C) stock changes in the cropland and grassland subcategories, which had not been provided in the 2006 submission. However, the new estimates were not transparently documented, nor were they presented as the outcome of an improvement plan. The ERT also understood from the submitted material that forest conversion to other land categories, and land converted to forest land were not occurring ("NO"), although the 2006 submission referred to the lack of activity data (AD) to support the estimation procedure.</p>	<p>The ERT recommends that Bulgaria reflect these improvements in its future inventory submissions.</p> <p>The ERT therefore recommends that Bulgaria further demonstrate its capacity to plan and prioritise improvements and to document estimates in its next inventory submission. This should include a description of planned improvements in order of priority, the existing capacity, planned institutional arrangements and proposed methods to monitor area change, and estimate associated C stocks changes and non-CO<sub>2</sub> emissions for afforestation, reforestation and deforestation under the Kyoto Protocol, article 3 paragraph 3.</p> <p>The ERT encouraged Bulgaria to provide estimates for all categories where emissions occur and to estimate emissions/removals from all LULUCF categories following the IPCC good practice guidance for LULUCF, or to improve documentation of the non-occurrence of some of the LULUCF activities, in particular referred to the reporting under the Kyoto Protocol in 2010.</p>	14, 21, 34, 36	Partially
Greece	<p>The 2006 GHG inventory is generally in line with the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories (hereinafter referred to as the Revised 1996 IPCC Guidelines), the IPCC good practice guidance, and the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry (hereinafter referred to as the IPCC good practice guidance for LULUCF). The ERT identified several cases where the methods, activity data (AD) and emission factors (EFs) used are not fully in line with the guidance indicated above. The ERT identified overestimations in the base year associated with the estimation of emissions from the energy sector. Underestimations were identified in the industrial processes, waste and energy sectors.</p>	<p>The ERT notified Greece on these problems and requested Greece to provide supporting and additional information or revised estimates in line with the ERT's recommendations. Greece responded by providing further information, but did not submit any revised estimates.</p> <p>The ERT reviewed the additional information provided by Greece and concluded that it did not satisfactorily address the ERT's recommendations and therefore calculated and recommended six adjustments to the estimates of GHG emissions for the energy sector. These six adjustment calculations were prepared in consultation with Greece according to the guidance for adjustments under Article 5, paragraph 2 of the Kyoto Protocol (decision 20/CMP.1). The ERT officially notified Greece of these adjustments, in conjunction with the submission of the draft review report (see paragraph 2).</p>	<p>In its response Greece failed to notify the secretariat of its intention to accept or reject the recommended adjustments within the time frame set out in the guidelines for review under Article 8 of the Kyoto Protocol (decision 22/CMP.1). Therefore in accordance with these guidelines, this failure was considered as acceptance by Greece of the adjustments, and the ERT applied the calculated adjustments to the emission estimates of the energy sector.</p>	30, 31	No



**Table 17 Issues, follow-ups, and ERT conclusions for reporting element 8 (Sufficient activity data and emission factor collected to support methodology)**

<b>Reporting element</b>	8				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	14 (c)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory preparation, each Party included in Annex I shall collect sufficient activity data, process information, and emission factors as are necessary to support the methods selected for estimating anthropogenic GHG emissions by sources and removals by sinks.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Luxembourg	The 2006 inventory submission gives full coverage for the years 1990-2004 but the reporting of some source categories in all years, for example, in the agriculture and waste sectors, is very incomplete. The ERT believes that only a modest effort is needed to address this deficiency in reporting.  The estimates for some categories are not comparable with those of other Annex I Parties due to incomplete coverage of sources, the way in which they are aggregated and the use of methodologies and EFs that are not fully in accordance with the Revised 1996 IPCC Guidelines and the IPCC good practice guidance.	During the in-country visit, Luxembourg made a number of presentations to show how estimates can now be provided for the categories that are not included.	The results were submitted to the ERT during the review, and resulted in a satisfactory level of completeness for all years.  The work that Luxembourg undertook to revise its estimates for some categories and to improve completeness following the in-country visit has significantly improved the comparability of the inventory.	29	Partly
Monaco	The inventory submitted is almost complete in terms of years, sectors, source and sink categories and gases. Some small categories are still missing (e.g. fugitive emissions in fuel distribution, asphalt paving, HFC emissions from aerosols, N2O emissions from fertilizer use, etc.), the main reason being the lack of AD.  The emissions time series are consistent overall, but some inconsistencies have been identified, particularly in the industrial processes sector, where AD is estimated through questionnaires. This procedure may lead to fluctuations in information.	[This element was] provided in Monaco's submissions of the update to the initial report and the NIR.	The ERT recommends that Monaco improve the data collection procedure and put in place gap-filling procedures, as appropriate, to ensure time series consistency.	11, 21, 24	No
Russian Federation	The existing legislation does not provide public access to detailed energy balances, but only to some aggregated energy data that are not sufficiently transparent for the purposes of the inventory review. More than 80 per cent of the Russian Federation's emission estimates depend on the data from the national energy balance. The ERT was informed that the resources for the compilation of the federal energy balance on the basis of regional data are extremely scarce (one person who has to perform other tasks in parallel). The energy balance is not part of the mandatory information to be produced under Russian national statistics legislation. Due to this lack of resources, no documentation on methodological changes is available, no revisions of past data after methodological revisions can be performed, not all the parts of the international questionnaires for the International Energy Agency (IEA) with energy statistics that are relevant for inventory preparation are completed and QA/QC activities are not conducted for the compilation of the energy balance (although QA/QC activities for the input data in the balance are performed).	NA	It is recommended that the Russian Federation address this issue and ensure access for ERTs to key energy data during reviews. The ERT strongly recommends the Russian Federation to improve funding and resources for the compilation of the federal energy balance and inclusion of the balance in the list of indicators that has to be prepared annually on a mandatory and a clearly defined methodological basis. Additional information should be collected on fuel consumption by companies, industries, households, the services sector and the transport sector, and used to improve the statistical data on disaggregated energy consumption in the Russian Federation. This may require additional legislative arrangements, but the entities included in the national system should have the power to implement such changes.	21, 22	Partly

**Table 18 Issues, follow-ups, and ERT conclusions for reporting element 9 (Quantitative uncertainty analysis)**

<b>Reporting element</b>	9				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	14 (d)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory preparation, each Party included in Annex I shall make a quantitative estimate of inventory uncertainty for each source category and for the inventory in total, following the IPCC good practice guidance.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Czech Republic	The information on uncertainties is not yet fully consistent with the requirements of the UNFCCC reporting guidelines.	NA	The ERT suggests that the Czech Republic estimate uncertainties for non-key categories as well as key categories and use more country-specific information on the uncertainties in activity data and emission factors.	34	Yes
Estonia	<p>Estonia has conducted a tier 1 uncertainty analysis for the base year and 2004 that covers all sectors. This analysis was made available to the ERT during the review. The analysis was carried out for all individual source categories in the waste and agricultural sectors, whereas for energy, industrial processes and LULUCF sectors the analysis is less disaggregated. The analysis does not aggregate the level of uncertainty in the base year or the uncertainty in trend. The ERT was therefore unable to fully assess the level of accuracy of the estimates.</p> <p>Estonia has conducted its first uncertainty analysis, which was made available to the ERT during the review period (see paragraph 30). Estonia uses IPCC default uncertainties for waste, agriculture and LULUCF, and country-specific uncertainty values for energy and industrial processes. For energy, the uncertainty is estimated only for four fuels and not for each individual source category. The uncertainty is estimated for three process industries. The ERT was unable to assess the impact at this level of aggregation to the total uncertainty.</p>	NA	<p>The ERT took note of planned efforts to improve the uncertainty estimates for the 2008 submission and encourages the Party to carry out these plans.</p> <p>The ERT encouraged the Party to elaborate the uncertainty analysis by using more country specific uncertainties values and more disaggregated source categories for energy and industrial processes, and to estimate the overall uncertainty in level and trend and include the information in its next NIR.</p>	30, 34	Yes
Luxembourg	<p>The Party has not provided an uncertainty analysis for each source category or for the inventory in total, although such analysis is required by the IPCC good practice guidance.</p> <p>Luxembourg is aware of the need to report on uncertainty and is addressing this issue. However, this is another aspect of the inventory where the provisions under CORINAIR have taken precedence over the UNFCCC reporting requirements.</p>	An evaluation of uncertainty based on CORINAIR qualitative indicators was provided during the in-country visit.	The ERT recommends that the Party redirect its efforts in this area towards quantitative uncertainty assessment according to the IPCC good practice guidance. The ERT pointed out that a modest amount of work on this basis would produce an adequate estimate of uncertainty and that the estimate would be low for Luxembourg's GHG inventory, given the very large contribution of CO <sub>2</sub> from combustion to the total GHG emissions in the country. This outcome would put a positive perspective on the published annual estimates.	36, 37	No



Table 19 Issues, follow-ups, and ERT conclusions for reporting element 9 (Quantitative uncertainty analysis)

Reporting element	9				
Decision	19/CMP.1				
Paragraph	14 (d)				
Mandatory element	Yes				
Decision text	As part of its inventory preparation, each Party included in Annex I shall make a quantitative estimate of inventory uncertainty for each source category and for the inventory in total, following the IPCC good practice guidance.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Monaco	Monaco provided an uncertainty analysis for the level as part of its 2006 submission. However it did not comply with the IPCC good practice guidance and did not cover all categories of the inventory.	Following the in-country visit, Monaco included in its revised NIR submitted in November 2007 an updated uncertainty analysis for both level and trend.	This analysis is in accordance with the IPCC good practice guidance but relies mostly on default values for the EFs and does not include the LULUCF sector. The ERT recommends that Monaco assess and update this data, if possible, in accordance with its national circumstances.	29	No
Romania	The Party did not provide complete uncertainty analysis for each source category and for the inventory in total, following the IPCC good practice guidance. The uncertainty estimates were provided only for a few categories with default parameters from the IPCC good practice guidance. The ERT requested Romania to submit to the secretariat a complete uncertainty analysis within six weeks after the review visit.	The ERT appreciated that Romania provided the secretariat with complete quantitative uncertainty analyses based on the IPCC tier 1 method by 26 November 2007. The ERT noted that most of the values used in analyses are IPCC default or expert judgment values with limited explanation.	The ERT recommended that Romania obtain country-specific uncertainty parameters particularly for significant sources and further improve the uncertainty analyses in line with the provisions in the IPCC good practice guidance. The ERT recommended that Romania also provide tier 1 uncertainty analyses with the next submission.	34, 35	Yes
Russian Federation	The Russian Federation has not provided an uncertainty analysis for each category and for the inventory in total, as specified in the IPCC good practice guidance. Uncertainty analyses were only performed for the agriculture (tier 1 and tier 2) and LULUCF sectors (tier 1).	During the in-country review, Rosstat presented detailed information on the statistical uncertainties of AD.	The ERT recommends that uncertainty estimates for AD within the inventory be elaborated in cooperation with Rosstat. The ERT recommends that the Russian Federation provide in its next NIR a complete uncertainty analysis for all inventory sectors based on the revised estimates discussed during the in country review.	49	Partly



## COMPLIANCE COMMITTEE

CC/5/2008/2  
1 October 2008

Table 20 Issues, follow-ups, and ERT conclusions for reporting element 10 (Recalculations)

Reporting element	10				
Decision	19/CMP.1				
Paragraph	14 (e)				
Mandatory element	Yes				
Decision text	As part of its inventory preparation, each Party included in Annex I shall ensure that any recalculations of previously submitted estimates of anthropogenic GHG emissions by sources and removals by sinks are prepared in accordance with the IPCC good practice guidance and relevant decisions of the COP and/or COP/MOP.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Luxembourg	The 2006 submission is the first from Luxembourg to contain a full time-series of CRF tables. No recalculations are reported in this submission and the NIR does not describe any recalculations. The national system currently cannot ensure that recalculations of previously submitted estimates of GHG emissions by sources and removals by sinks are prepared in accordance with the IPCC good practice guidance. For example, when new information on the EF for glass production was obtained [...] no assessment was made of whether data for earlier years should be recalculated to ensure a consistent time-series.	Following the ERT's recommendations regarding QA/QC, Luxembourg submitted a description of the quality management system for the GHG inventory that will underpin the national system referred to in paragraph 17 above. Quality management is process-oriented and targets the overall management and control of the inventory. It addresses such issues as the collection of suitable AD, emission factors (EFs) and estimation methods, the identification of key categories, recalculations, specific QA/QC to achieve defined quality objectives and official review of the inventory. The system documentation incorporates a quality management manual, operating procedures including standard forms and internal documentation on implementation.	The ERT acknowledges the efforts made by Luxembourg to recalculate its inventories during the review and welcomes the provisions related to future recalculations in the proposed national system.  The ERT concluded that the system as elaborated demonstrates adequate functionality with respect to inventory planning, preparation and management as required by the guidelines in the annex to decision 19/CMP.1.	19, 35	No
Poland	The national system can ensure that recalculations of previously submitted estimates of GHG emissions by sources and removals by sinks are prepared in accordance with the IPCC good practice guidance. The ERT noted that recalculations reported by Poland in its 2006 submission of the time series from 1988 to 2003 had been undertaken to take into account the recommendations of the 2005 in-country review. The recalculations covered all sectors and led to an increase in the national total of between 2.1 and 8.4 percent over the 1988–2003 period. The recalculation of the 1988 emissions between the 2005 and 2006 submissions resulted in an increase of the estimate of total GHG emissions of 4.0 per cent. In its 2006 inventory submission, Poland has provided an entire time series for the CRF tables (1988–2004) for the first time; earlier submissions contained only CRF tables for the latest reporting year. No inventory recalculations were provided in earlier submissions; information on recalculations is thus fairly limited.	The ERT acknowledges that during the in-country visit Poland provided a qualitative overview of the improvements leading to recalculations of the inventory, but a sector-by-sector comparison of emission data for 1988 between the 2005 submission and the 2006 submission was not provided.	The ERT expects that in the future Poland will ensure that any recalculations are prepared in accordance with the IPCC good practice guidance and relevant CMP decisions and that Poland will report recalculations in a transparent manner in the CRF tables. The ERT emphasizes the need to establish a transparent and well documented process with regard to recalculations, and to report the recalculations comprehensively in the NIR.	39 - 41	No
Russian Federation	The Russian Federation did not submit GHG inventories under the UNFCCC in the years prior to 2006 so no recalculations are reported in the 2006 submission.	Many recalculations were made in 2007 [...]. Revised emission estimates for the 2006 submission were submitted and discussed during the in country review and additional revisions were made available to the ERT. These resulted in major changes in the energy sector and smaller revisions in the other sectors. The revisions led to many improvements in the inventory estimates for all sectors.	Many recalculations were made in 2007, leading the ERT to believe that the national system can ensure that recalculations of previously submitted estimates of GHG emissions by sources and removals by sinks are prepared in accordance with the IPCC good practice guidance. In the next inventory submission it is important that the Russian Federation transparently document and describe all changes and improvements in the NIR and in the CRF tables, including explanations of the revised methodologies and the rationales for their use.	47, 48	No



Table 21 Issues, follow-ups, and ERT conclusions for reporting element 11 (General QC (tier 1) procedures implemented)

Reporting element	11				
Decision	19/CMP.1				
Paragraph	14 (g)				
Mandatory element	Yes				
Decision text	As part of its inventory preparation, each Party included in Annex I shall implement general inventory QC procedures (tier 1) in accordance with its QA/QC plan following the IPCC good practice guidance.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Bulgaria	In its initial report, Bulgaria indicated that it has source-specific QC procedures in place, but yet has to elaborate and implement a QA/QC plan that is fully in accordance with the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance), which would include general QC procedures (tier 1) as well as source/sink category-specific procedures (tier 2) for key categories and for those individual categories in which significant methodological and/or data revisions have occurred.	NA	NA	23	Yes
Hungary	Some QC procedures were implemented while the estimates were being calculated by the inventory experts. However, the ERT identified a number of areas where QA/QC procedures were apparently not implemented and this has resulted in mistakes, inconsistencies and non-transparent use of methods and EFs in some sectors.	NA	NA	23	Yes
Luxembourg	Luxembourg has not elaborated a QA/QC plan in accordance with the IPCC good practice guidance. The current procedures do not incorporate systematic checking in the context of QC or any form of official review, either internally or externally, before inventory submission. Checking is limited to that provided by the CRF Reporter software at the end of the process and to ad hoc correspondence between the individuals in the Environment Agency and the Ministry who compile and report the inventory, respectively.	Following the ERT's recommendations regarding QA/QC, Luxembourg submitted a description of the quality management system for the GHG inventory that will underpin the national system referred to in paragraph 17 above. Quality management is process-oriented and targets the overall management and control of the inventory. It addresses such issues as the collection of suitable AD, emission factors (EFs) and estimation methods, the identification of key categories, recalculations, specific QA/QC to achieve defined quality objectives and official review of the inventory. The system documentation incorporates a quality management manual, operating procedures including standard forms and internal documentation on implementation.	The ERT concluded that the system as elaborated demonstrates adequate functionality with respect to inventory planning, preparation and management as required by the guidelines in the annex to decision 19/CMP.1.	18, 19	No



**Table 22 Issues, follow-ups, and ERT conclusions for reporting element 11 (General QC (tier 1) procedures)**

<b>Reporting element</b>	11				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	14 (g)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory preparation, each Party included in Annex I shall implement general inventory QC procedures (tier 1) in accordance with its QA/QC plan following the IPCC good practice guidance.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Russian Federation	<p>The Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet) is the designated single national entity with overall responsibility for the national inventory. Roshydromet delegated the responsibility for the preparation and the management of the GHG inventory to the Institute of Global Climate and Ecology (IGCE). This includes [...] the development and implementation of QA/QC procedures [and] the development of internal orders for QC and other purposes [...].</p> <p>The Russian Federation has elaborated a QA/QC plan in accordance with the IPCC good practice guidance. The QA/QC plan is part of an internal IGCE order on the "Practice of Quality Assurance and Quality Control for the National GHG Inventory" of 7 March 2007, which among other issues includes a description of specific QA/QC procedures, the plan for the preparation of the national GHG inventory and the templates of the QC checklists. However, the QA/QC plan and procedures have not yet been implemented in a systematic way. Some individual QC procedures were used for the preparation of the 2006 inventory submission.</p> <p>The QA/QC plan includes general QC procedures (tier 1) as well as general source/sink category-specific procedures (tier 2). These have not yet been applied systematically for key categories and for those individual categories in which significant methodological and/or data revisions have occurred. Tier 2 QC procedures are more advanced in the agriculture and forest sectors but have not been specified in detail in the energy sector, where many revisions occurred prior to and during the in country review which were not driven by the procedures of the QA/QC plan.</p>	<p>A more complete implementation [of the QA/QC plan] is envisaged for 2008.</p> <p>During the in-country review, Rosstat informed the ERT that for national statistics a unified system of classification and coding technical, economic and social information has been created in the Russian Federation. An integrated programme for the development and practical implementation of a system of standard indicators and registries has been in place since 2001. Since 2005, the development of statistical parameters has been implemented in accordance with a new All-Russian Registry of Economic Activities, which has been harmonized with the European statistical classification of economic activities (NACE). From 2008, it is planned to introduce a new All-Russian Registry of Economic Activities, which has been harmonized with the classification of products by activity (CPA). QC checks on data are performed at its regional branches and Rosstat uses software checks to detect errors and problems in regional information. Rosstat has the right to make adjustments on the basis of information received indirectly and sends requests back to its regional branches if problems are detected. Rosstat is the most important data provider in the compilation of the inventory.</p> <p>For other data providers, no information was available on QA/QC procedures and the type of activities estimated in the data sources used was sometimes unclear.</p>	<p>The ERT recommends the Russian Federation to fully implement the QA/QC plan and to document the implemented checks and activities in a transparent way in its next inventory submission.</p> <p>The ERT recommends the Russian Federation to include in its next NIR a description of the QA/QC activities conducted by Rosstat on the specific statistics used for the GHG inventory and to add information on the QA/QC activities of other data providers.</p>	13, 25 - 27	Partly
Slovakia	<p>According to the revised description of the national system, Slovakia has elaborated a QA/QC plan. However, the ERT noted that the plan is still vague and needs to be more detailed if it is to comply fully with the IPCC good practice guidance. [...] Slovakia has implemented individual QA/QC measures in most sectors. The activity data used in the inventory are compared with data from other sources. Most AD in the energy and industrial processes sectors are based on plant-specific data which are checked by the authorities (district offices) before being entered into the National Emissions Inventory System (NEIS), the database on stationary sources of emissions which is used in inventory preparation as one of the main sources of AD. The data in the system are also compared against the national statistics. The ERT noted that for some source categories no specific QA/QC measures are described.</p>	NA	<p>The ERT recommends that Slovakia develop the plan further and provide a comprehensive QA/QC plan in its next NIR.</p>	22	No



Table 23 Issues, follow-ups, and ERT conclusions for reporting element 12 (Source/sink category-specific QC (tier 2) procedures implemented)

Reporting element	12				
Decision	19/CMP.1				
Paragraph	15 (a)				
Mandatory element	No				
Decision text	As part of its inventory preparation, each Party included in Annex I should apply source-category-specific QC procedures (tier 2) for key source categories and for those individual source categories in which significant methodological and/or data revisions have occurred, in accordance with the IPCC good practice guidance.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Belgium	The annex to the initial report provides general QA/QC information at the national and the regional levels.	During the in-country visit, the ERT was informed that IRCEL-CELINE applies QC procedures when compiling the national inventory.	However, the ERT considers that much improvement is required regarding implementing and documenting tier 1 and tier 2 QC procedures.	19	No
Bulgaria	In its initial report, Bulgaria indicated that it has source-specific QC procedures in place, but yet has to elaborate and implement a QA/QC plan that is fully in accordance with the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance), which would include general QC procedures (tier 1) as well as source/sink category-specific procedures (tier 2) for key categories and for those individual categories in which significant methodological and/or data revisions have occurred. The initial report and the NIR state that source-specific QC procedures are performed regularly by the institutions involved in the GHG inventory preparation. The data are checked by experts and data providers are consulted by the inventory compilers. However, the documentation on quality checks was not available to the ERT. The ExEA is responsible for the drafting and implementation of the QA/QC plan.	NA	The ERT acknowledges that some elements of the QA/QC activities exist in Bulgaria. However, it considers that the absence of an overarching national QA/QC plan compromises the quality of the national GHG inventory and the functionality of the national system.	23, 24	Yes
Canada	Canada has elaborated and implemented a QA/QC plan in accordance with the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance). This includes general QC procedures (tier 1) as well as some source/sink category-specific procedures (tier 2) for key categories and for those individual categories in which significant methodological and/or data revisions have occurred. [...] However, not all elements of the QA/QC plan have yet been implemented by the Party due to resource limitations.	NA	Hence, the ERT concludes that it is important that sufficient resources be allocated in order to maintain and improve the quality of Canada's GHG inventory. The ERT encourages Canada to finalize the implementation of tier 2 category-specific and peer review procedures as soon as possible. In this regard, Canada should consider conducting category-specific QA/QC activities more frequently than over a seven-year cycle. The ERT also recommends Canada to further develop its short- and long-term improvement plans and improve the linkage between the QA/QC plan, uncertainty analysis and key category analysis.	21, 22	Partly
Czech Republic	The Czech Republic is still elaborating a QA/QC plan that would be in accordance with the IPCC good practice guidance. This will include general QC procedures (tier 1) as well as source/sink category-specific procedures (tier 2) for key categories and for those individual categories in which significant methodological and/or data revisions have occurred. The draft inventory data are usually checked by CHMI experts before they are forwarded to the UNFCCC, and an additional review is carried out by the MoE, but these reviews are not well documented.	NA	The ERT feels that the introduction of a QA/QC system at the CHMI under ISO 9001 will also be very helpful for meeting all requirements for the national system, and it welcomed the ISO 9001 certification of this QA/QC. The ERT suggests that the Party introduce better documentation of its quality control at all stages of inventory preparation, within the CHMI as well as for the other institutions/experts that contribute to inventory preparation.	14, 16	No



Table 24 Issues, follow-ups, and ERT conclusions for reporting element 12 (Source/sink category-specific QC (tier 2) procedures implemented)

Reporting element	12				
Decision	19/CMP.1				
Paragraph	15 (a)				
Mandatory element	No				
Decision text	As part of its inventory preparation, each Party included in Annex I should apply source-category-specific QC procedures (tier 2) for key source categories and for those individual source categories in which significant methodological and/or data revisions have occurred, in accordance with the IPCC good practice guidance.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Denmark	Denmark is in the process of developing a quality assurance/quality control (QA/QC) plan, which currently is mainly limited to NERI activities. NERI is preparing a quality management manual according to International Organization for Standardization (ISO) standard 9000. QC in NERI is supported by information technology (IT) procedures and includes general QC procedures (tier 1 and tier 2), but has not yet been implemented for all categories. Some inventory partners, most notably the Danish Energy Authority, have their own QA/QC systems which improve the quality of the input data.	NA	NA	17	No
Estonia	A tier 1 QC is performed for all sector categories. A Tier 2 QC is planned to be developed for the key categories. The NIR states that the documentation on QC is under preparation.	NA	The ERT recommended the Party to include in its next NIR a list of the QC checks that are carried out by the ministry prior to submission. The ERT recommended Estonia to institutionalize system level checks, such as cross checking activity data (AD) available from different sources (SoE, the European Union (EU) emissions trading scheme (ETS), the EU Large Combustion Plant Directive, the EU IPPC Directive and the European Pollutant Emission Register), to minimize the risks of missing plants/data in future submissions. These QC checks could include having an independent sectoral expert review of AD to explain the reasons for large inter-annual variations for emissions from key sources (both level and trend basis).	16, 18	No
Greece	Source and sink category-specific procedures (tier 2) for key categories, and for individual categories in which significant methodological and/or data revisions have occurred, have not yet been developed.	NA	The ERT recommends Greece to focus on the implementation of the QA/QC plan, particularly by sector, as well as the implementation of tier 2 procedures in its next national inventory report (NIR).	24	No
Hungary	Hungary has elaborated a QA/QC plan in accordance with the IPCC good practice guidance. This includes general QC activities (tier 1).	NA	[...] the ERT recommended that Hungary develop and document extensive checking procedures (tier 2) for identified key categories and guidance for prioritizing inventory improvements.	22, 26	No
Iceland	Iceland has performed standard tier 1 QC procedures for several key categories [...].	NA	The Party is also recommended to develop and implement source-specific tier 2 QC procedures with a primary focus on key categories and/or categories which have been through a significant methodological and/or data revision.	20, 22	No

**Table 25 Issues, follow-ups, and ERT conclusions for reporting element 12 (Source/sink category-specific QC (tier 2) procedures implemented)**

Reporting element	12				
Decision	19/CMP.1				
Paragraph	15 (a)				
Mandatory element	No				
Decision text	As part of its inventory preparation, each Party included in Annex I should apply source-category-specific QC procedures (tier 2) for key source categories and for those individual source categories in which significant methodological and/or data revisions have occurred, in accordance with the IPCC good practice guidance.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Italy	QC procedures included in the manual are comprehensive, including both tier 1 and tier 2 QC procedures. However, only tier 1 procedures are applied at present.	NA	The ERT recommends that Italy apply source-specific QC procedures for its next submission.	19	No
Latvia	A QA/QC plan is not provided in Latvia's 2006 GHG inventory submission.	During the in-country review, Latvia explained that several checks are routinely carried out to eliminate potential basic errors and presented a QA/QC plan, approved in April 2007 by the Director of LEGMA. The plan includes only tier 1 QC procedures which will be implemented internally by LEGMA for future inventories, and does not address QA procedures. [...] No further information was provided to the ERT on the QA/QC procedures in place with all the agencies and entities involved in the national inventory system of Latvia, as required by decision 19/CMP.1.	NA	18	No
Liechtenstein	In its initial report, Liechtenstein had not provided a formal QA/QC plan in accordance with the IPCC good practice guidance.	However, in the course of the review the ERT learned that Liechtenstein has developed and implemented an informal system of QC procedures (tier 1) which covers: (1) an annual GHG inventory preparation plan; (2) cross-checking of the NIR and the CRF by sectoral experts reviewing the NIR and NIR authors reviewing the GHG emission estimates; (3) consistency checking of all AD against the AD in the inventories from previous years; and (4) internal procedures (periodic surveys and censuses) to check the data collected by the Governmental Offices that provide official statistical data.	The ERT recommends that Liechtenstein review the checklists of the AD quality control systems of private companies and describe this procedure in the NIR of its next GHG inventory submission.	14	No
Lithuania	Lithuania did not elaborate a QA/QC plan in accordance with the IPCC good practice guidance in its initial report, but did submit a QA/QC plan to the ERT during the course of the review.	Lithuania did not elaborate a QA/QC plan in accordance with the IPCC good practice guidance in its initial report, but did submit a QA/QC plan to the ERT during the course of the review. The ERT noted that tier 1 quality control procedures are performed during the inventory preparation by sector experts.	The ERT recommends that these procedures be improved to ensure that the discrepancies identified by the ERT as between the CRF and the NIR are identified by the Party during the compilation of the GHG inventory. Lithuania is also encouraged to develop category-specific tier 2 QC procedures, and to use data from the European Union (EU) emissions trading scheme (ETS) to verify the emission estimates.	18, 19	No
Luxembourg	Luxembourg has not elaborated a QA/QC plan in accordance with the IPCC good practice guidance. The current procedures do not incorporate systematic checking in the context of QC or any form of official review, either internally or externally, before inventory submission. Checking is limited to that provided by the CRF Reporter software at the end of the process and to ad hoc correspondence between the individuals in the Environment Agency and the Ministry who compile and report the inventory, respectively.	Following the ERT's recommendations regarding QA/QC, Luxembourg submitted a description of the quality management system for the GHG inventory that will underpin the national system referred to in paragraph 17 above. Quality management is process-oriented and targets the overall management and control of the inventory. It addresses such issues as the collection of suitable AD, emission factors (EFs) and estimation methods, the identification of key categories, recalculations, specific QA/QC to achieve defined quality objectives and official review of the inventory. The system documentation incorporates a quality management manual, operating procedures including standard forms and internal documentation on implementation.	The ERT concluded that the system as elaborated demonstrates adequate functionality with respect to inventory planning, preparation and management as required by the guidelines in the annex to decision 19/CMP.1.	18, 19	No



Table 26 Issues, follow-ups, and ERT conclusions for reporting element 12 (Source/sink category-specific QC (tier 2) procedures implemented)

Reporting element	12				
Decision	19/CMP.1				
Paragraph	15 (a)				
Mandatory element	No				
Decision text	As part of its inventory preparation, each Party included in Annex I should apply source-category-specific QC procedures (tier 2) for key source categories and for those individual source categories in which significant methodological and/or data revisions have occurred, in accordance with the IPCC good practice guidance.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Monaco	NA	NA	NA	NA	No
Romania	Romania has elaborated and partly implemented a quality assurance/quality control (QA/QC) plan in accordance with the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance). This plan includes general QC procedures (tier 1) as well as source/sink category-specific procedures (tier 2) for a few key categories in industrial processes.  Basic QC procedures are in place and are to some extent described in the 2006 NIR.	NA	The ERT recommended that the Party improve QC by better linking data collection, data processing and emissions estimation, and document QA/QC procedures in more detail in its next submissions.  The ERT also recommended that the Party consider system level checks, such as cross-checking activity data (AD) available from different sources (National Institute of Statistics (NIS), the European Union (EU) emissions trading scheme (ETS), the EU Large Combustion Plant Directive, the EU IPPC Directive and the European Pollutant Emission Register), to minimize the risks of missing plants/data in future submissions. These QC checks could include an independent sectoral expert review of AD to explain the reasons for large inter-annual variations for emissions from key sources (both level and trend basis). The ERT recommended that the Party include in its next NIR a list of the QC checks that are carried out prior to submission.	16, 17	No
Russian Federation	The QA/QC plan includes general QC procedures (tier 1) as well as general source/sink category-specific procedures (tier 2). These have not yet been applied systematically for key categories and for those individual categories in which significant methodological and/or data revisions have occurred. Tier 2 QC procedures are more advanced in the agriculture and forest sectors but have not been specified in detail in the energy sector, where many revisions occurred prior to and during the in-country review which were not driven by the procedures of the QA/QC plan.	NA	NA	26	Partly
Slovakia	NA	NA	NA	NA	No
Slovenia	NA	NA	NA	NA	No



Table 27 Issues, follow-ups, and ERT conclusions for reporting element 13 (Basic review by experts not involved in the inventory)

<b>Reporting element</b>	13				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	15 (b)				
<b>Mandatory element</b>	No				
<b>Decision text</b>	As part of its inventory preparation, each Party included in Annex I should provide for a basic review of the inventory by personnel that have not been involved in the inventory development, preferably an independent third party, before the submission of the inventory, in accordance with the planned QA procedures referred to in paragraph 12 (d) above.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Belgium	NA	NA	NA	NA	No
Estonia	The ERT noted that the Party has not conducted any QA of the inventory by staff not directly involved in the inventory compilation and therefore recommended the Party to assess the quality of its inventory before the next submission.	NA	The ERT noted that the Party has not conducted any QA of the inventory by staff not directly involved in the inventory compilation and therefore recommended the Party to assess the quality of its inventory before the next submission.	17	No
France	France has not implemented a process of independent review of the inventory as part of its QA, as required in the IPCC good practice guidance.	NA	The ERT recommends France to arrange for such a review before submission and suggests that France should consider whether independent review procedures similar to those set up in other EU member States could also be used in France.	17	No
Greece	No domestic review [...] was undertaken by independent experts.	NA	The ERT recommends Greece to improve its QA by carrying out a review of the inventory by independent national experts for its next inventory submission.	25	No
Iceland	[...] no formal QA by independent experts has been undertaken due to a lack of resources.	NA	NA	20	No
Italy	Although no full independent review of the inventory is applied before submission of the inventory, Italy carries out several QA activities in different contexts: presenting the inventory to the technical committee on emissions; involving national expert panels (road transportation, land use, land-use change and forestry, and energy production) in inventory preparation; and applying voluntary European Community reviews.	NA	The ERT encourages Italy to make arrangements for an independent review of the inventory.	21	Partially
Lithuania	NA	NA	NA	NA	No



Table 28 Issues, follow-ups, and ERT conclusions for reporting element 13 (Basic review by experts not involved in the inventory)

Reporting element	13				
Decision	19/CMP.1				
Paragraph	15 (b)				
Mandatory element	No				
Decision text	As part of its inventory preparation, each Party included in Annex I should provide for a basic review of the inventory by personnel that have not been involved in the inventory development, preferably an independent third party, before the submission of the inventory, in accordance with the planned QA procedures referred to in paragraph 12 (d) above.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Luxembourg	The current procedures do not incorporate systematic checking in the context of QC or any form of official review, either internally or externally, before inventory submission.	Following the ERT's recommendations regarding QA/QC, Luxembourg submitted a description of the quality management system for the GHG inventory that will underpin the national system referred to in paragraph 17 above. Quality management is process-oriented and targets the overall management and control of the inventory. It addresses such issues as the collection of suitable AD, emission factors (EFs) and estimation methods, the identification of key categories, recalculations, specific QA/QC to achieve defined quality objectives and official review of the inventory.	The ERT concluded that the system as elaborated demonstrates adequate functionality with respect to inventory planning, preparation and management as required by the guidelines in the annex to decision 19/CMP.1.	18, 19	No
Monaco	[..] Monaco processed an external assessment of the inventory in 2005, conducted by the Centre Interprofessionnel Technique d'Etudes de la Pollution Atmosphérique in France.	NA	The ERT recommends that Monaco gain experience with the implementation of the QA/QC plan and further elaborate the specific checks for each category in line with its national circumstances, and implement the procedures for periodic external reviews.	14	Partially
Norway	The ERT noted that some review procedures are carried out by staff who have not been involved with the inventory preparation process (e.g. cross-checks between the institutions), which is in line with the IPCC good practice guidance. In 2007, an invitation for public review of the GHG inventory was placed on the web. However, no further procedures for peer reviews are in place and no improvement plan is available yet, although this is planned for autumn 2007.	NA	The ERT recommends Norway to [..] be more proactive in setting-up independent peer reviews. [..] In addition, the ERT encourages Norway to ask industrial associations and relevant research institutions to review the NIR.	16	Partly
Romania	The Party has conducted rather limited QA of the inventory by staff not directly involved in the inventory compilation and the ERT therefore recommended that the Party perform inventory checks by external experts before its next submission.	NA	The Party has conducted rather limited QA of the inventory by staff not directly involved in the inventory compilation and the ERT therefore recommended that the Party perform inventory checks by external experts before its next submission.	17	Partly
Russian Federation	NA	NA	NA	NA	No



Table 29 Issues, follow-ups, and ERT conclusions for reporting element 14 (Extensive review for key categories)

Reporting element	14				
Decision	19/CMP.1				
Paragraph	15 (c)				
Mandatory element	No				
Decision text	As part of its inventory preparation, each Party included in Annex I should provide for a more extensive review of the inventory for key source categories, as well as source categories where significant changes in methods or data have been made.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Belgium	NA	NA	NA	NA	No
Canada	The ERT has also noted that review procedures are carried out by staff who have not been involved in the inventory preparation process, which is in line with the IPCC good practice guidance.	NA	The ERT encourages Canada to finalize the implementation of tier 2 category-specific and peer review procedures as soon as possible. In this regard, Canada should consider conducting category-specific QA/QC activities more frequently than over a seven-year cycle.	21, 22	Partly
Estonia	The ERT noted that the Party has not conducted any QA of the inventory by staff not directly involved in the inventory compilation and therefore recommended the Party to assess the quality of its inventory before the next submission.	NA	The ERT noted that the Party has not conducted any QA of the inventory by staff not directly involved in the inventory compilation and therefore recommended the Party to assess the quality of its inventory before the next submission.	17	No
European Community	The programme includes procedures for review by experts who have not been involved with the preparation process, procedures for pre- and post-submission review, and QA procedures including sector-specific workshops to address major problems/follow-up activities to improve inventory quality.  In addition, the EC conducts internal reviews and EU workshops to improve the quality of the EC and member State inventories.	NA	The ERT commends the EC on these activities [...].  The ERT concludes that the QA/QC plan is comprehensive and in line with the IPCC good practice guidance, but it does not explicitly include specific review procedures for key categories or procedures to be undertaken where significant changes have occurred. The ERT encourages the EC to build such specific procedures into the QA/QC plan.	21 - 23	No
Germany	The plan or "QSE Manual" includes specific task such as [...] procedures for external reviews [...]. Verification activities, such as comparisons with other countries such as Finland, and comparisons of CO <sub>2</sub> emissions from other data sets (e.g. EUROSTAT, the International Energy Agency (IEA) and the Bundesländer) are good and in line with the IPCC good practice guidance. Currently, independent external reviews consist of United Nations reviews and reviews occurring as part of periodic workshops and ad hoc reviews with industry and outside experts.	NA	The ERT recommends that additional category-specific analyses such as those prepared for the in-country review be incorporated into QA/QC activities (e.g. analyses of trends and underlying drivers as well as additional reviews, such as peer reviews, as part of QA). [...] While not mandatory, the ERT recommends that a more formal, annual external peer review process be established as a means of improving the inventory, and notes that this is something that could be undertaken by the coordination committee proposed in the policy paper.	17, 19	No
Greece	No domestic review [...] was undertaken by independent experts.	NA	The ERT recommends Greece to improve its QA by carrying out a review of the inventory by independent national experts for its next inventory submission.	25	No
Hungary	NA	NA	NA	NA	No
Iceland	[...] no formal QA by independent experts has been undertaken due to a lack of resources.	NA	NA	20	No

**Table 30 Issues, follow-ups, and ERT conclusions for reporting element 14 (Extensive review for key categories)**

Reporting element	14				
Decision	19/CMP.1				
Paragraph	15 (c)				
Mandatory element	No				
Decision text	As part of its inventory preparation, each Party included in Annex I should provide for a more extensive review of the inventory for key source categories, as well as source categories where significant changes in methods or data have been made.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Italy	Although no full independent review of the inventory is applied before submission of the inventory, Italy carries out several QA activities in different contexts: presenting the inventory to the technical committee on emissions; involving national expert panels (road transportation, land use, land-use change and forestry, and energy production) in inventory preparation; and applying voluntary European Community reviews.	NA	The ERT encourages Italy to make arrangements for an independent review of the inventory.	21	Partially
Liechtenstein	NA	NA	NA	NA	No
Luxembourg	The current procedures do not incorporate systematic checking in the context of QC or any form of official review, either internally or externally, before inventory submission.	Following the ERT's recommendations regarding QA/QC, Luxembourg submitted a description of the quality management system for the GHG inventory that will underpin the national system referred to in paragraph 17 above. Quality management is process-oriented and targets the overall management and control of the inventory. It addresses such issues as the collection of suitable AD, emission factors (EFs) and estimation methods, the identification of key categories, recalculations, specific QA/QC to achieve defined quality objectives and official review of the inventory.	The ERT concluded that the system as elaborated demonstrates adequate functionality with respect to inventory planning, preparation and management as required by the guidelines in the annex to decision 19/CMP.1.	18, 19	No
Monaco	NA	NA	NA	NA	No
Norway	NA	NA	NA	NA	No
Portugal	The NIR presents a procedure for internal review of the inventory before submission; however, the ERT noted that QA by independent national experts was only documented for one case.	NA	The ERT recommends the Party to [...] develop a plan for domestic review by independent experts.	11, 15, 16	No
Romania	The Party has conducted rather limited QA of the inventory by staff not directly involved in the inventory compilation and the ERT therefore recommended that the Party perform inventory checks by external experts before its next submission.	NA	The Party has conducted rather limited QA of the inventory by staff not directly involved in the inventory compilation and the ERT therefore recommended that the Party perform inventory checks by external experts before its next submission.	17	No
Russian Federation	NA	NA	NA	NA	No
Slovakia	Slovakia and the Czech Republic collaborate continuously in reviewing each other's GHG emission inventories. However, the details of this collaboration are not described in the NIR.	NA	The ERT recommends that Slovakia provide in its next NIR more information on how this external review is carried out and how the results are used in the inventory preparation process.	23	No
Slovenia	NA	NA	NA	NA	No



Table 31 Issues, follow-ups, and ERT conclusions for reporting element 15 (Periodic internal review of inventory preparation)

<b>Reporting element</b>	15				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	15 (d)				
<b>Mandatory element</b>	No				
<b>Decision text</b>	As part of its inventory preparation, each Party included in Annex I should, based on the reviews described in paragraphs 15 (b) and 15 (c) above and periodic internal evaluations of the inventory preparation process, re-evaluate the inventory planning process in order to meet the established quality objectives referred to in paragraph 12 (d).				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Belgium	NA	NA	NA	NA	No
Canada	NA	NA	The ERT also recommends Canada to further develop its short- and long-term improvement plans and improve the linkage between the QA/QC plan, uncertainty analysis and key category analysis.	22	Partly
Denmark	NA	NA	NA	NA	No
Estonia	NA	NA	NA	NA	No
Iceland	NA	NA	NA	NA	No
Italy	NA	NA	NA	NA	Partially
Luxembourg	NA	NA	NA	NA	No
Monaco	NA	NA	NA	NA	No
Norway	NA	NA	It also encourages Norway to evaluate after every reporting cycle whether the quality objectives have been met and to use the conclusions from this evaluation when setting the priorities in the inventory improvement plan.	16	No
Poland	NA	NA	NA	NA	No
Russian Federation	NA	NA	NA	NA	Partly
Slovakia	NA	NA	NA	NA	No
Slovenia	NA	NA	NA	NA	No



Table 32 Issues, follow-ups, and ERT conclusions for reporting element 16 (Archive inventory information)

Reporting element	16				
Decision	19/CMP.1				
Paragraph	16 (a)				
Mandatory element	Yes				
Decision text	As part of its inventory management, each Party included in Annex I shall archive inventory information for each year in accordance with relevant decisions of the COP and/or COP/MOP. This information shall include all disaggregated emission factors, activity data, and documentation about how these factors and data have been generated and aggregated for the preparation of the inventory. This information shall also include internal documentation on QA/QC procedures, external and internal reviews, documentation on annual key sources and key source identification and planned inventory improvements.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Estonia	The Climate and Ozone Bureau at the EEIC within the MoE is responsible for the archiving of the reports submitted to UNFCCC. At the time of the review, the archive did not include all GHG emission inventories submitted by the Party.	NA	NA	19	Yes
Hungary	Hungary has an archiving system. During the review visit the ERT was provided with the additional archived information it requested. It noted that an electronic centralized archiving system was established in October 2006 at the OMSZ and currently contains all inventory information starting with the 2007 inventory submission and some information related to the 2006 submission. Historical data are archived by the organizations contracted to perform sectoral calculations and at the MEW. Currently the archive contains either electronic files or hard copies. Hungary plans gradually to move all relevant data to the centralized archiving system established at the OMSZ. This newly developed archiving system contains information on methods used, AD and EFs, calculations, background information, QA/QC information, documentation on annual key categories and key category identification, XML files and databases for the submission of inventory information, reports, literature, related legislation, contracts and guidelines. Technical maintenance and a twice-weekly backup of the system are performed by the information technology department of the OMSZ, which is accredited by ISO 9001. The system seems to be fully adequate for the future maintenance and archiving of inventory documentation. However, the current management of the system does not guarantee the full protection of the information stored.	NA	The ERT recommended that Hungary nominate one of the inventory experts in the GHG Division of the OMSZ as archive manager with exclusive access and administrative rights to make changes in the archive. The ERT also recommended that Hungary prepare a procedural manual for the management and maintenance of the archiving system, including information on its structure, the content of different sections, responsibilities, access rights and other relevant information.  The ERT was satisfied with the additional information provided after the review on the structure and operation of the current inventory management set-up, and acknowledged the efforts being made by Hungary to make it fully compliant with the provisions of decision 19/CMP.1. It recommends that Hungary continue to transfer all the relevant inventory information into the centralized archiving system at the OMSZ giving priority to the base year and the most recent year. It also recommends Hungary to make every effort to expedite the completion of its archiving system, to provide updated information in its next inventory report under the Kyoto Protocol, and to ensure that it archives the supplementary information related to Article 3, paragraphs 3 and 4, in a similar way.	29 - 31	Yes
Iceland	Iceland archives disaggregated emission factors (EFs) and AD, including additional background documentation on emission calculations. The EFA is responsible for managing this archiving system, and archived information is stored in an Excel file. Data and information on agriculture and LULUCF are archived in the AUI. The responsibility to gather required information about emissions from geothermal activities lies with the NEA, based on information provided by ISOR. Information on QC procedures, external and internal reviews, documentation on key category identification, uncertainty of the estimates and planned inventory improvements, however, are not archived. During the review, the ERT was provided with access to the archived information (electronic and hard copies) stored in the EFA's database.	NA	The ERT recommends that Iceland improve the archiving system by establishing a centralised system, which also includes the storage of documentation on the planning and preparation of the inventory.	23	Yes



Table 33 Issues, follow-ups, and ERT conclusions for reporting element 16 (Archive inventory information)

Reporting element	16				
Decision	19/CMP.1				
Paragraph	16 (a)				
Mandatory element	Yes				
Decision text	As part of its inventory management, each Party included in Annex I shall archive inventory information for each year in accordance with relevant decisions of the COP and/or COP/MOP. This information shall include all disaggregated emission factors, activity data, and documentation about how these factors and data have been generated and aggregated for the preparation of the inventory. This information shall also include internal documentation on QA/QC procedures, external and internal reviews, documentation on annual key sources and key source identification and planned inventory improvements.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Luxembourg	The system does not archive disaggregated EFs, AD or other inputs as distinct elements on a time-series basis. There are no clear links to the sources of AD, such as national energy balances or other national statistics, and the GHG inventory calculations can only be viewed by examination of individual year database compilations using the CollectER II software underpinning the CORINAIR approach. Only one person currently has full knowledge of the archive system, its content and its functionality. There is no documented procedure covering the overall application of the system or the steps that are involved in annual inventory preparation for Luxembourg. The archived information contains no internal documentation on QA/QC procedures, external and internal reviews, documentation on annual key categories and key category identification, or planned inventory improvements. Nevertheless, there is knowledge of where key documentation is and the ERT recognizes that all items of legislation, referenced documents and various national reports which it requested during the in-country visit were quickly and efficiently supplied by Luxembourg.	NA	<p>The ERT recommended that the archive system be developed to include all AD, EFs and emission estimates as separate elements. It should contain the original and recalculated GHG estimates in clearly labelled file versions to preserve the scope and chronology of recalculations. The archive should accommodate the inputs to and outputs from the CORINAIR/CollectER II calculation system and the correspondence and links between this system and the CRF Reporter software, which is needed for the review of GHG inventories. The ERT also recommended that Luxembourg prepare a user manual to describe the content, structure, management and maintenance of the archiving system. The user manual should describe responsibilities, access rights and other relevant information for the inventory core experts who contribute to inventory compilation. This recommendation has been taken into account in the supplementary information related to QA/QC and inventory management (see paragraph 19) which the Party submitted after the in-country visit. The ERT encouraged Luxembourg to reconsider its dependence on the CORINAIR system as the basis for estimating the GHG emissions in some categories, such as agriculture.</p> <p>The ERT suggested that it would be more efficient and more transparent in the context of review if a simple external calculation system were used for this category based on the methods and equations given in the IPCC good practice guidance. Such a system may be linked to the essential statistical data needed as input, which are readily available. During the review, Luxembourg presented new estimates in the agriculture sector which are precisely in line with this suggestion. The ERT welcomes this development as a way of resolving the issues around transparency, completeness and comparability in this sector. The ERT recommends that Luxembourg further develop this simple approach and to apply it where appropriate for the industrial processes and waste sectors, for which some new estimates were also submitted during the review.</p>	20 - 22	Yes



Table 34 Issues, follow-ups, and ERT conclusions for reporting element 16 (Archive inventory information)

Reporting element	16				
Decision	19/CMP.1				
Paragraph	16 (a)				
Mandatory element	Yes				
Decision text	As part of its inventory management, each Party included in Annex I shall archive inventory information for each year in accordance with relevant decisions of the COP and/or COP/MOP. This information shall include all disaggregated emission factors, activity data, and documentation about how these factors and data have been generated and aggregated for the preparation of the inventory. This information shall also include internal documentation on QA/QC procedures, external and internal reviews, documentation on annual key sources and key source identification and planned inventory improvements.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Poland	Poland has a centralized archiving system that is located at the NEC, which includes the archiving of disaggregated EFs, AD, and documentation on how these EFs and AD have been generated and aggregated for the preparation of the inventory. The archived information also includes documentation on annual key categories, key category identification and uncertainties, but does not include internal documentation on QA/QC procedures, external and internal reviews, and planned inventory improvements.	During the in-country review, the ERT was provided with the additional archived information it requested. However, the ERT noted that the archiving system did not fully comply with the requirements of the guidelines for national systems under Article 5, paragraph 1, of the Kyoto Protocol. Poland put a lot of effort into improving the archiving system following the recommendations of the ERT. During the in-country review, the ERT requested Poland to provide a procedural manual for the management and maintenance of the archiving system, including information on the structure, the content of different sections, responsibilities, access rights and other relevant information. The ERT also requested that Poland further develop its archiving system in relation to security, electronic organization of files, storage of supporting information and a proper indexing system. After the in-country review, the manual requested was provided to the ERT. It included all relevant information on the electronic data management system as well as on back-up, the security of data stored, and electronic organization of files, including storage of supporting information.	The ERT considers that the manual includes all the required information on electronic data management with the exception of documentation on QA/QC procedures, but does not describe the archiving and indexing of hard copies.  The ERT recommends Poland to maintain its established electronic archiving system and to use a robust library system for both electronic and hard copies of literature, correspondence, calculation sheets and any other information required to produce the national emission inventory estimates. The archiving system shall be extended to include internal documentation on QA/QC procedures, external and internal reviews and planned inventory improvements. The ERT recommends that Poland report the information on its archiving system in its next NIR.	22, 23	No
Portugal					Yes
Romania					Yes
Russian Federation	The Russian Federation has recently implemented a centralized electronic archiving system at the IGCE, which includes the archiving of disaggregated emission factors (EFs), AD, and documentation on how such factors and data have been generated and aggregated for the preparation of the inventory. In addition, this information is stored in hard copies at the IGCE. A special software program (APK MIPG) was developed and implemented for the purpose of inventory preparation, which stores and checks AD, calculates emissions and removals, prepares CRF tables with the CRF reporter software and stores inventory submissions. The software is available to the inventory compilers and training has been provided, but data entry has not been completed yet. The software is currently not linked to the Excel files containing the emissions calculations.  The archived information does not yet include internal documentation on QA/QC procedures, external and internal reviews, documentation on annual key category analysis and key category identification and planned inventory improvements, but this is planned for the future. During the in-country review, the ERT was provided with the additional archived information it requested.	NA	The ERT recommends the Russian Federation to fill the software with the relevant data and to link the AD and EFs with the files of emissions calculations. Otherwise, the archive provides a potential source of additional errors and mistakes.  The ERT recommends that the electronic documentation and archiving system be further developed and implemented as planned, and checked during the next in-country review of the GHG inventory.	29, 30	Yes



Table 35 Issues, follow-ups, and ERT conclusions for reporting element 17 (Archive at single location)

Reporting element	17				
Decision	19/CMP.1				
Paragraph	17				
Mandatory element	No				
Decision text	As part of its inventory management, each Party included in Annex I should make the archived information accessible by collecting and gathering it at a single location.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Belgium	Belgium does not have a centralized archiving system where all information used in the compilation of the inventory is stored at a single location. The ERT noted that the regions archive all information relevant to a regional inventory; however, only the regional and national common reporting format (CRF) tables are archived at IRCEL-CELINE.	NA	The ERT recommends that Belgium develop a centralized archive for all information, with restricted access for confidential data, used to compile regional and national inventories. The archive should include sufficient detail to regenerate the national inventory and associated supporting documentation.	21	No
Bulgaria	In its initial report, Bulgaria has not described its inventory archiving system.	<p>During the review Bulgaria explained that all data are archived in the institutions that prepare and supply the information. Until 2007, the ExEA archived only the background data which it had provided to the inventory compiler, including disaggregated emission factors (EFs), AD, and documentation on how these factors and data have been generated and aggregated for the preparation of the inventory.</p> <p>During the review, the ERT could not ascertain whether the archived information also includes internal documentation on the QA/QC procedures, external and internal reviews, documentation on annual key categories and key category identification, and planned inventory improvements. The ERT therefore requested that the outline for the QA/QC plan also include details on the archiving system.</p> <p>In response to the ERT's request to provide an outline of the QA/QC plan, Bulgaria submitted a comprehensive outline for the preparation of a QA/QC plan, including a timeline for data gathering and defining the experts responsible for quality checks. This outline also includes a plan to set up an archiving system ensures that all background data will be stored on a central network server.</p>	The ERT acknowledged the effort made in preparing an outline of the QA/QC plan and encouraged Bulgaria to implement it as planned.	27 - 29	No
Czech Republic	The Czech Republic does not have a centralized archiving system. Although some documentation (such as calculation spreadsheets and all final inventory data) is archived at the CHMI, most of the relevant background material is archived at those institutions that are in charge for a given sector [..].	NA	The ERT suggests that the Czech Republic strengthen the archiving function of the CHMI in order to create a more centralized archiving system, so that not only final data in the CRF format but also all underlying calculation sheets, as well as all the literature cited, are archived at the CHMI.	17	No
Estonia	Estonia currently has a decentralized archiving system [..] but is planning to have a centralized archiving system.	NA	The ERT encouraged the Party to elaborate the archive at the EEIC and to include all inventory data from the inventory experts, in order to allow access to all inventory information at a single location.	19	No

**Table 36 Issues, follow-ups, and ERT conclusions for reporting element 17 (Archive at single location)**

<b>Reporting element</b>	17				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	17				
<b>Mandatory element</b>	No				
<b>Decision text</b>	As part of its inventory management, each Party included in Annex I should make the archived information accessible by collecting and gathering it at a single location.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Finland	Finland does not have a centralized archiving system. The respective institutes that contribute to the inventory are responsible for archiving the data they collect and the estimates they calculate with any associated methodology documentation and internal documentation on QA/QC. Statistics Finland archives its own work, documentation on QA/QC procedures and planned inventory improvements, external and internal review reports, annual key category analyses data, and the main results from the respective institutes. During the review, the ERT noted that Finland was able to provide the archived documents requested by the ERT, including confidential data, according to national procedures. All the relevant input and output files are archived at Statistics Finland. There is a well developed system for archiving submissions and the data sources used (passive archiving). However, the archiving of the working files (active archiving) is the responsibility of the sectoral experts and differs widely between the sectors.	NA	The ERT encourages Finland to improve the archiving of the working files and their links to e-mail correspondence in order to facilitate tracking of the information flow.	19	No
Germany	As is noted above, Germany has a detailed centralized archiving system, which is linked to a number of other archives held by other institutions involved in the development of the inventory. The centralized system includes the archiving of disaggregated emission factors (EFs), activity data (AD) and documentation on how these factors and data have been generated and aggregated for the preparation of the inventory. The archived information also includes internal documentation on QA/QC procedures, and external and internal reviews, as well as documentation on annual key categories and key category identification and planned inventory improvements. The archive is maintained by the UBA. FAL and the Federal Research Centre for Forestry and Forest Products (BFH) are responsible for archiving information on agriculture and LULUCF, respectively. The UBA is responsible for archiving detailed information on all categories, with the exception of agriculture and LULUCF. Some components of the archive that are not available electronically, such as scientific papers and industry correspondence, are also kept in hard copy format at the UBA.	NA	The ERT notes that Germany was able to provide the archived documents requested by the ERT during the review, and that the system is extremely detailed and well documented.	20	No
Iceland	Iceland archives disaggregated emission factors (EFs) and AD, including additional background documentation on emission calculations. The EFA is responsible for managing this archiving system, and archived information is stored in an Excel file. Data and information on agriculture and LULUCF are archived in the AUI. The responsibility to gather required information about emissions from geothermal activities lies with the NEA, based on information provided by ÍSOR. Information on QC procedures, external and internal reviews, documentation on key category identification, uncertainty of the estimates and planned inventory improvements, however, are not archived. During the review, the ERT was provided with access to the archived information (electronic and hard copies) stored in the EFA's database.	NA	The ERT recommends that Iceland improve the archiving system by establishing a centralised system, which also includes the storage of documentation on the planning and preparation of the inventory.	23	Yes



COMPLIANCE COMMITTEE

CC/5/2008/2  
1 October 2008

<b>Reporting element</b>	17				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	17				
<b>Mandatory element</b>	No				
<b>Decision text</b>	As part of its inventory management, each Party included in Annex I should make the archived information accessible by collecting and gathering it at a single location.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Netherlands	The Netherlands has established an archiving system, but it is not yet fully centralized. A database system has been developed for the archiving of all inventory results as well as all the references to all documentation used in inventory preparation. The Emissions Registration project is responsible for maintaining the database. Uploading of the data is the responsibility of the institutions involved in inventory preparation. SenterNovem is responsible for the archiving of all documents that are not confidential referred to in the inventory as well as for making them available to the review teams. However, the basic data used in inventory preparation, as well as the intermediate calculations, are kept at the institutions responsible for the calculations.	NA	The ERT recommends that the database be improved to provide for these data to be archived centrally.	18	No
Norway	Norway does not have a centralized archiving system. The SFT, the SSB and the Norwegian Forest and Landscape Institute are responsible for archiving disaggregated emission factors (EFs), activity data (AD), and documentation on how these factors and data have been generated and aggregated for the preparation of the inventory. The information archived also includes internal documentation on QA/QC procedures and documentation on annual key categories and key category identification. The SFT will build up a library with the most important methodology reports. During the review the ERT noted that Norway was able to provide most of the archived documents requested by the ERT, including confidential data. In addition, during the review the ERT had access to the electronic archives of the SSB and SFT containing the relevant input and output files. However, not all staff seem to be aware of the archiving structure and procedures. In addition, the archiving of email correspondence with links to the relevant documents (in order to make it easier to trace the information flow) may need improvement.	NA	The ERT recommends that all staff involved in the preparation of the GHG inventory should be familiar with the structure of the archives and that the documentation of links between email correspondence and the relevant documents should be improved.	17	No
Poland	NA	NA	NA	NA	No
Slovenia	Slovenia stores all data from external institutions on a network server at the ARSO. The ERT noted that complete data since the base year are not stored, that data are not well enough protected against overwriting and that hard copies are not systematically archived. Although some documentation (such as all final inventory data) is archived at the ARSO, some of the relevant background material (disaggregated emission factors (EFs), AD, and documentation on how these factors and data have been generated and aggregated for the preparation of the inventory) is archived at the institutions that are in charge of a particular sector [...].	NA	The ERT suggests that Slovenia strengthen the archiving function of the ARSO in order to create a more centralized archiving system, so that not only final data in the CRF format but also all underlying calculation sheets, as well as all the literature cited, are archived in a well protected and easily manageable location at the ARSO.	17	No



Table 37 Issues, follow-ups, and ERT conclusions for reporting element 17 (Archive at single location)

Reporting element	17				
Decision	19/CMP.1				
Paragraph	17				
Mandatory element	No				
Decision text	As part of its inventory management, each Party included in Annex I should make the archived information accessible by collecting and gathering it at a single location.				
Party	Issue	Follow-up	ERT conclusion	Reference paragraphs IRR	Provided (Table 4, IRR)
Ukraine	Ukraine has a partially implemented centralized archiving system. During the in-country review, the ERT noted the efforts of Ukraine to establish a centralized archiving system, such as the centralized inventory electronic database in the MEP, which includes the archiving of disaggregated emission factors (EFs), AD, CRF tables and some documentation in particular for the 2006 inventory submission. Hard copies of relevant documentation are stored in the MEP and in the URHI, where electronic copies of most of the sources for AD, EFs and background documentation used in the inventory compilation are also available. During the in-country review, the ERT was provided with the additional archived information it requested. The ERT recommended Ukraine to finalize the establishment, as a matter of priority, of its centralized inventory archiving system, which shall contain all the information required by the guidelines for national systems (decision 19/CMP.1), and to provide the relevant documentation on the archiving system's structure and operation.	After the in-country review, Ukraine provided the ERT with information on the inventory centralized archiving system and its structure and operation. The information provided also indicates that, in accordance with the ERT's recommendations and the requirements for the archiving of inventory information under the guidelines for national systems (decision 19/CMP.1), Ukraine made the necessary changes in archiving hard copies of background documentation and the electronic database.	The ERT encourages Ukraine to enhance and maintain its centralized archiving system and to document all these actions in its next inventory submission.	21, 22	No

**Table 38 Issues, follow-ups, and ERT conclusions for reporting element 18 (Provide ERT with access to archived information)**

<b>Reporting element</b>	18				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	16 (b)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory management, each Party included in Annex I shall provide review teams under Article 8 with access to all archived information used by the Party to prepare the inventory, in accordance with relevant decisions of the COP and/or COP/MOP.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Australia					NA
Austria					Yes
Belarus					NA
Belgium					Yes
Bulgaria					Yes
Canada					Yes
Croatia					NA
Czech Republic					Yes
Denmark					Yes
Estonia					Yes
European Community					Yes
Finland					Yes
France					Yes
Germany					Yes
Greece					Yes
Hungary					Yes
Iceland					Yes
Ireland					Yes
Italy					Yes
Japan					Yes
Latvia					Yes
Liechtenstein					Yes
Lithuania					Yes
Luxembourg					Yes
Monaco					Yes
Netherlands					Yes
New Zealand					Yes
Norway					Yes
Poland					Yes
Portugal					Yes
Romania					Yes
Russian Federation					Yes
Slovakia					Yes
Slovenia					Yes
Spain					Yes
Sweden					Yes
Switzerland					Yes
Ukraine					Yes
United Kingdom					Yes

**Table 39 Issues, follow-ups, and ERT conclusions for reporting element 19 (Respond to requests for clarifying inventory information during review)**

<b>Reporting element</b>	19				
<b>Decision</b>	19/CMP.1				
<b>Paragraph</b>	16 (c)				
<b>Mandatory element</b>	Yes				
<b>Decision text</b>	As part of its inventory management, each Party included in Annex I shall respond to requests for clarifying inventory information resulting from the different stages of the review process of the inventory information, and information on the national system, in a timely manner in accordance with Article 8.				
<b>Party</b>	<b>Issue</b>	<b>Follow-up</b>	<b>ERT conclusion</b>	<b>Reference paragraphs IRR</b>	<b>Provided (Table 4, IRR)</b>
Australia					NA
Austria					Yes
Belarus					NA
Belgium					Yes
Bulgaria					Yes
Canada					Yes
Croatia					NA
Czech Republic					Yes
Denmark					Yes
Estonia					Yes
European Community					Yes
Finland					Yes
France					Yes
Germany					Yes
Greece					Yes
Hungary					Yes
Iceland					Yes
Ireland					Yes
Italy					Yes
Japan					Yes
Latvia					Yes
Liechtenstein					Yes
Lithuania					Yes
Luxembourg					Yes
Monaco					Yes
Netherlands					Yes
New Zealand					Yes
Norway					Yes
Poland					Yes
Portugal					Yes
Romania					Yes
Russian Federation					Yes
Slovakia					Yes
Slovenia					Yes
Spain					Yes
Sweden					Yes
Switzerland					Yes
Ukraine					Yes
United Kingdom					Yes