



**Subsidiary Body for Scientific and Technological Advice**

**Report of the Subsidiary Body for Scientific and  
Technological Advice on its thirty-eighth session, held in  
Bonn from 3 to 14 June 2013**

**Addendum**

**Draft texts for further consideration by the Subsidiary Body  
for Scientific and Technological Advice**

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## Nairobi work programme on impacts, vulnerability and adaptation to climate change

### Draft text

*[The Conference of the Parties,*

*Recalling decisions 2/CP.11, [1/CP.16] and 6/CP.17,*

*[Recognising the need to further enhance the understanding and knowledge of adaptation as a basis for the implementation of decision 1/CP.16,]*

*Recognizing the evolving [information and knowledge] [scientific and technical] needs related to impacts, vulnerability and adaptation to climate change, [including those identified by established bodies under the Convention, [in particular in developing countries, including least developed countries and small island developing States]] [and the scientific, technical, and socio-economic impacts, vulnerability and adaptation to climate change arising from the implementation of the Nairobi work programme, for consideration by other relevant bodies under the Convention],*

*Noting the need to build on the experiences gained, partnerships and knowledge generated during the implementation of the work programme to date,*

1. *Decides to continue the work programme within the framework of the provisions of decision 2/CP.11, with a view to supporting [, inter alia,] [the scientific and technical work of] the Cancun Adaptation Framework [, as appropriate];*

2. *[Agrees to enhance the relevance of the work programme [so that it achieves its expected outcomes], including by:*

(a) *[Developing knowledge outcomes to improve understanding and assessment of impacts, vulnerability and adaptation in response to identified needs [and demands] by Parties and established bodies under the Convention, and supporting their effective dissemination at the regional, national and sub-national levels through existing knowledge networks and fora, inter alia national focal points and relevant work streams under the Convention, [including the SBI] as appropriate;]*

(b) *[Addressing] [Considering] [Adopting] the scope of the work of the Nairobi work programme as agreed in the annex of decision 2/CP.11 through additional cross-cutting issues [, including,*

(i) *Ecosystems;*

(ii) *National adaptation planning;*

(iii) *Food security;*

(iv) *Water management;*

(v) *Urban infrastructure;*

(vi) *Health;*

(vii) *Mountains;]*

(c) *Sequencing activities so that they build on each other and engage adaptation practitioners;*

- (d) Developing linkages with adaptation-related workstreams and bodies under the Convention, including the SBI [and the Adaptation Committee], as appropriate.]
3. *Decides* to follow a country-driven, gender-sensitive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems [that] [and] should be based on and guided by best available science and, as appropriate, [to promote] traditional and indigenous knowledge [and practices];
4. *Encourages* Parties, partner organizations and [other] users to support [effective] implementation of the work programme, including by:
- (a) [*Placeholder for organizations outside the Convention*] [Developing knowledge outcomes to improve understanding and assessment of impacts, vulnerability and adaptation in response to identified needs [and demands] by Parties and established bodies under the Convention and supporting their effective dissemination at the regional, national and sub-national levels through existing knowledge networks and fora, inter alia national focal points and relevant work streams under the Convention, [including the SBI] as appropriate];
- (b) [[Engaging and catalysing] [Encouraging] [concrete] actions from relevant organizations, including those from developing countries, to support the implementation of the work programme;]
- (c) Increasing collaboration with regional centres and networks [including those from developing countries] that provide [and disseminate] information and knowledge at regional and national levels;
5. [Also *agrees* to enhance the effectiveness of the modalities of the work programme, including by:
- (a) [Further developing calls for action, informed by the views of Parties and relevant organizations, based on the submissions referred to in paragraph 8 of the draft conclusions;
- (b) Enhancing efficiency and effectiveness of the Nairobi work programme Focal Point Forum, informed by the views of Parties and relevant organizations, based on the submissions as referred to in paragraph 8 of the draft conclusions;]
- (c) [*placeholder for more modalities*] ]
6. [*Invites* submissions from Parties and relevant organizations by xx to specify concrete activities for consideration by SBSTA 45 in order to decide on the activities under the NWP during the second half (2,5 years) of the 5-year period; these submissions should include the proposals for concrete crosscutting thematic topics with links to specific work areas under the NWP;
7. *Requests* the secretariat to prepare an information document that will collect requests arisen from adaptation relevant work streams under the Convention, in particular under the Cancun Adaptation Framework for consideration by SBSTA 45;]
8. [*Requests* the SBSTA, in accordance with paragraphs 2–5 above:
- (a) [To agree, at its [fortieth] [forty-fifth] session, additional activities under the work programme [based on the submissions referred to in paragraph 6 and the information document referred to in paragraph 7 above];]

(b) [To carry out the following additional activities under the work programme before its forty-first session:

(i) Develop and disseminate as a follow-up to the workshops on ecosystem-based approaches for adaptation to climate change and on water and climate change impacts and adaptation strategies, and in collaboration with the AC and the LEG, recommendations on best practices and on ways to address challenges related to the integration of approaches into adaptation actions contained in abovementioned two workshops;

(ii) [*placeholder for additional activities*]]

(c) [To consider, at its [xx] [forty-fifth] session, the results of the activities referred to in subparagraph (a) above, and to agree, as appropriate, on further activities to be carried out under the work programme;]

(d) [To forward, at its [xx] [forty-fifth] session, advice arising from the implementation of the work programme to [relevant work streams under] the SBI for its consideration;]]

9. [*Requests* the SBSTA to implement the work plan [based on elements described in paragraph 2 above] as contained in the annex, subject to the availability of funds;]

10. [*Urges* Parties included in Annex II to the Convention, and other Parties in a position to do so, to provide financial support for the implementation of the Nairobi work programme;]

11. [*Also requests* the SBSTA to review and report on the work programme to the Conference of the Parties at its [xx] [twenty-fifth] session with a view to further improving the relevance and practicality of the work programme.]

**[Annex****[Work plan referred to in paragraph 9 of the draft text]**

- (a) For the theme of freshwater, marine and terrestrial ecosystems:
  - (i) As part of the socioeconomic work area, develop a technical report on characterizing the socioeconomic benefits of ecosystem-based approaches to adaptation;
  - (ii) As part of the technologies for adaptation work area, hold a workshop on the benefits and costs of green vs. grey infrastructure to help advance understanding of when different approaches are useful; and produce a related technical report that would summarize the content of the workshop and that would make the information accessible for those who could not attend;
  - (iii) As part of the adaptation planning and practices work area, hold a series of webinars that present the results of the technical report and workshop, and highlight best practices and lessons learned to support integrating ecosystem adaptation and ecosystem-based approaches to adaptation into national adaptation planning;
- (b) For the theme of coastal adaptation:
  - (i) As part of the systematic observation work area, hold a workshop on sea level rise, involving scientists and coastal zone managers, that would discuss the systematic observation of and data collection on the impacts of sea level rise and coastal inundation on coastal communities and ecosystems, and how to enhance access to, and the sharing and use of, data to facilitate the assessment and management of sea level rise; and produce a related technical report that would summarize the content of the workshop and that would make the information accessible for those who could not attend;
  - (ii) Under the methods and tools work area, hold a second workshop on how to incorporate such information into risk and vulnerability assessments, including exploring the interactions between slow onset and extreme events;
  - (iii) As part of the adaptation planning and practices work area, develop a set of detailed case studies that build off of select responses to “calls for action” to NWP Partners, and that summarize lessons learned from various communities that are making notable progress in this area.
- (c) For the theme of integrated water resource management:
  - (i) As part of the climate-related risks and extreme events work area, host a series of webinars with water resource managers and climatologists/hydrologists to discuss anticipated and perceived impacts of climate-induced changes in hydrology, particularly droughts and floods, on integrated water resource management;
  - (ii) As part of the methods and tools work area, hold a workshop on early warning systems for droughts and floods and the role they play in adaptation planning and adaptive water management;
  - (iii) As part of the adaptation planning and practices work area, develop two–three detailed case studies that build off of select responses to “calls for action” to NWP Partners, and that summarize lessons learned from adaptive water resource management experiences, including the role played by early warning systems;

- (d) For the theme of urban adaptation:
  - (i) As part of the climate-related risks and extreme events work area, host a series of webinars with water resource managers and climatologists/hydrologists to discuss anticipated and perceived impacts of droughts and floods on water resource management;
  - (ii) As part of the methods and tools work area, produce a technical report on early warning systems for droughts and floods and the role they play in adaptation planning and adaptive water management.]]

## Elements for a possible draft decision on modalities for measuring, reporting and verifying

[ *The Conference of the Parties,*

*Recalling* decisions 2/CP.13, 4/CP.15, 1/CP.16, 2/CP.17 and 12/CP.17,

1. *Decides* that measuring, reporting and verifying anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest-area changes resulting from the implementation of the activities referred to in decision 1/CP.16, paragraph 70, taking into account paragraph 71(b) and (c), is to be consistent with the methodological guidance provided in decision 4/CP.15, and guidance on measuring, reporting and verification of nationally appropriate mitigation actions by developing country Parties as agreed by the Conference of the Parties, and in accordance with any future relevant decisions of the Conference of the Parties;
2. *Recognizes* the need to develop capacities for measuring, reporting and verifying anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest-area changes resulting from the implementation of the activities referred to in decision 1/CP.16, paragraph 70;
3. *Decides* that the data and information used by Parties in the estimation of anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest-area changes, as appropriate to the activities referred to in decision 1/CP.16, paragraph 70, undertaken by Parties, should be transparent, consistent over time and with the established forest reference emission levels and/or forest reference levels in accordance with decision 1/CP.16, paragraph 71(b) and (c) and section II of decision 12/CP.17;
4. *Agrees* that, consistent with decision 12/CP.17, paragraph 7, results from the implementation by Parties of the activities<sup>1</sup> included in decision 1/CP.16, paragraph 70, measured against the forest reference emission levels and/or forest reference levels should be expressed in tonnes of carbon dioxide equivalent per year;
5. *Encourages* Parties to improve data and methodologies over time, while maintaining consistency with the established or, as appropriate, updated, forest reference emission levels and/or forest reference levels in accordance with decision 1/CP.16, paragraph 71(b) and (c);
6. *Recalls* the relevant provisions in decisions 17/CP.8 and 2/CP.17 related to the provision of support for reporting;
7. *Further decides* that, consistent with decision 1/CP.16 and with annex III to decision 2/CP.17, the data and information referred to in paragraph 3 above should be provided through the biennial update reports by Parties, taking into consideration additional flexibility given to least developed countries and small island developing countries;
8. *[[Also decides* that the information reported in accordance with paragraph 7 above will be subject to international consultation and analysis as agreed by the Conference of the Parties;]
9. *[Requests][Encourages]* developing country Parties seeking to obtain and receive results-based finance to, when submitting the data and information referred to in paragraph

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<sup>1</sup> As per decision 1/CP.16, paragraph 70, Parties undertake activities as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances, noting that significant pools and/or activities should not be excluded.

3 above, through the biennial update reports, to supply a technical annex as per paragraph 20 of annex 3 of decision 2/CP.17;

10. *Further decides* that the data and information provided in the technical annex referred to in paragraph 9 above shall be consistent with decisions 4/CP.15 and 12/CP.17 and follow the guidelines provided in the annex to this decision;

11. *Decides* that, upon request of the developing country seeking to obtain and receive payments for results-based actions, [two LULUCF experts from the roster of experts, one each from developing country and developed country Parties]<sup>2</sup> will be included among the members selected for the technical team of experts.

12. *Further decides* that, as part of the technical analysis referred to in paragraph 4 of Annex 4 of decision 2/CP.17, the technical team of experts shall analyse [whether][the extent to which]:

(a) There is methodological consistency between the assessed reference level and the results from the implementation of the activities from paragraph 70 of decision 1/CP.16;

(b) The data and information provided in the technical annex is transparent, consistent, complete<sup>3</sup> and accurate;

(c) Is consistent with the guidelines referred to in paragraph 10 above;

(d) The results are accurate, to the extent possible.

13. *Decides* that the Party that submitted the technical annex may interact with the technical team of experts during the analysis of its technical annex to clarify issues and provide additional information to facilitate the analysis by the technical team of experts;

14. *Also decides* that the technical team of experts may seek clarifications from the Party, and that the Party is to provide clarifications on the issues raised to the technical team of experts, in accordance with the timetable of the international consultation and analysis process described in the annex to decision 2/CP.17, paragraph 4;<sup>4</sup>

15. *Further decides* that if the Party and the technical team of experts are unable to reach a common understanding in relation to the clarifications provided, it shall be noted in the summary report of the technical team of experts;<sup>5</sup>

16. *Decides* that the results of the assessment of the technical annex will be included in the summary report of the technical team of experts, as referred to in the annex to decision 2/CP.17, paragraph 4;}<sup>6</sup>

17. *Agrees* that [activities][results-based actions] that may be eligible to appropriate market-based approaches that could be developed by the Conference of the Parties, as per decision 2/CP.17, paragraph 66, [will][may] be subject to any further specific modalities for verification consistent with any decision of the Conference of the Parties on this matter.]]

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<sup>2</sup> Not intended to prejudge related decisions pending under international consultation and analysis, including those related to the technical team of experts.

<sup>3</sup> Complete means here the provision of information that allows for the reconstruction of the results.

<sup>4</sup> Same as footnote 2.

<sup>5</sup> Same as footnote 2.

<sup>6</sup> Same as footnote 2.



**[Elements for a technical annex**

- A. Summary information from the final report the latest assessed reference levels, including:
- a. The assessed FREL/FRL expressed in tonnes of CO<sub>2</sub>e per year
  - b. The activity(ies) included
  - c. The territorial forest area covered
  - d. Date of the reference level submission and date of final technical assessment report
  - e. The period (years) of the assessed reference levels
- B. Results in tonnes of CO<sub>2</sub>e per year, consistent with the assessed reference levels.
- C. Demonstration that the results in B are methodologically consistent with the assessed reference level, including:
- a. Data sets and approaches used (e.g., remotely sensed data, national forest inventory (or equivalent))
  - b. Information on the methods/models<sup>1</sup> and assumptions used,
  - c. The year(s) under consideration
  - d. The territorial forest area covered
  - e. Pools, gases and activity(ies) included
  - f. Definition of forest used
- D. Consistency of the results in B with the corresponding information provided in the national greenhouse inventory;
- E. Description of the institutional roles and responsibilities for measuring, reporting and verifying the results.
- F. Provide all the necessary information that allows for the reconstruction of the results.
- G. Take into account, as appropriate, paragraphs 1(c) and 1(d) in decision 4/CP.15. (the reference to 1(d) addresses the issue of uncertainty)
- H. [how to reflect uncertainties – we think this is covered under 1(d) from decision 4/CP.15]
- I. PROPOSED LANGUAGE – If applicable, any change that leads to an inconsistency with the assessed reference levels, taking into account that these changes may only refer to a decrease in relation to the result that would be otherwise obtained.]

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<sup>1</sup> Parties should refer to the IPCC Expert Meeting report on Use of Models.

## **Elements for a possible draft decision on guidelines and procedures for the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels**

*[The Conference of the Parties,*

*Reaffirming* that, in the context of the provision of adequate and predictable support to developing country Parties, Parties should collectively aim to slow, halt and reverse forest cover and carbon loss, in accordance with national circumstances, consistent with the ultimate objective of the Convention, as stated in its Article 2,

*Recognizing* that [in the context of the provision of adequate and predictable support to developing country Parties,] developing country Parties aiming to implement the actions listed in decision 1/CP.16, paragraph 70, are responsible for the establishment of their forest reference emission levels and/or forest reference levels,

*PLACEHOLDER [on training]*

*Recalling* the provisions of decision 12/CP.17,

1. *Decides* that each submission referred to in decision 12/CP.17, paragraph 13, shall be subject to a technical assessment;
2. *[Adopts* the guidelines and procedures for the technical assessment of submissions from Parties on forest reference emission levels and/or forest reference levels contained in the annex to this decision;]
3. *Invites* Parties, in particular developing country Parties, and, as appropriate, intergovernmental organizations to nominate technical experts with the relevant qualifications to the UNFCCC roster of experts;
4. *[Decides* that proposed forest reference emission levels and/or forest reference levels and the outcomes of the technical assessments shall be considered for possible adoption by the Conference of the Parties at its next session.]
5. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat pursuant to paragraphs 1 and 2 above;
6. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

## **Annex Guidelines and procedures for the technical assessment of submissions by Parties on proposed forest reference emission levels and/or forest reference levels**

### **Guidelines for technical assessment**

#### *Objectives*

1. The objectives of the technical assessment are:

#### *Subparagraph (a)*

##### *[Option 1]*

To assess the degree to which Parties have provided transparent, complete, consistent, and accurate information to support the construction of the forest reference emission levels and/or forest reference levels,]

##### *[Option 2]*

To assess the degree to which Parties have provided information in accordance with the guidelines for submissions of information on forest reference emission levels and/or forest reference levels in the annex to decision 12/CP.17 in the construction of the forest reference emission levels and/or forest reference levels,]

#### *Subparagraph (b)*

##### *[Option 1]*

To provide, as appropriate, technical [recommendations][suggestions][guidance] to the developing country Party,]

##### *[Option 2]*

To offer a facilitative, [non-intrusive,] technical exchange of information on the construction of the forest reference emission levels and/or forest reference levels with a view to provide developing country Parties with the capacity for the construction and [continuous] [appropriate future improvement of the forest reference emission levels and/or forest reference levels, subject to national capability and policy][future] improvement of the reference levels [that would be reflected in subsequent submissions of the forest reference emission levels and/or forest reference levels, as appropriate],]

##### *[Option 3]*

To offer a facilitative, [non-intrusive,] technical exchange of information on the construction of the reference level with a view to provide developing country Parties with

[suggestions, as appropriate,] [the capacity] for the improvement [and/or technical adjustment] [, as appropriate,] of the reference levels, taking into account national circumstances,]

(c) To provide a technical assessment [to support consideration by the COP at its subsequent session of the forest reference emission level and/or forest reference level to be used],

[Notes that this technical assessment should be facilitative in nature,]

*[Scope Option A*

2. [A technical assessment of the data, methodologies, assumptions and procedures used in the construction of the forest reference emission level and/or forest reference level of a developing country Party to determine whether it is consistent with the guidelines in the annex to decision 12/CP.17, ]

*Paragraph 3*

*[Option 1*

Taking into consideration the voluntary basis of submissions of forest reference emission levels and/or forest reference levels, the assessment team will assess the following:]

*[Option 2*

Taking into consideration the voluntary nature of the activities referred to in decision 1/CP.16, paragraph 70, the assessment of the submissions by Parties on proposed forest reference emission levels and/or forest reference levels by the assessment team will assess the following:]

(b) The extent to which the Party has identified pools, gases and activities included in the forest reference emission level and/or forest reference level and explained the reasons for omitting a pool, a gas or an activity from the forest reference emission level and/or forest reference level and whether the coverage of pools in the forest reference emission level and/or forest reference level is consistent, and justification of why omitted pools were deemed not significant,

(c) The description of approaches, methods and models used in the construction of forest reference emission levels and/or forest reference levels,

(d) The extent to which the forest reference emission level and/or forest reference level value is consistent with the information and descriptions provided by the Party,

(e) The extent to which the information was provided by the Party in a transparent manner,

(f) Whether a description is provided of domestic policies relevant to the construction of the forest reference emission levels and/or forest reference levels and how these policies were used in the construction of the forest reference emission levels and/or forest reference levels,

(g) [Whether confirmation has been provided that the construction of forest reference emission levels and/or forest reference levels do not include assumptions about changes to domestic policies.]

4. As part of the technical assessment, the review process may provide technical recommendations to the developing country Party on the construction of its forest reference emission levels and/or forest reference levels. This may include the recommendation to make a technical revision to elements used in its construction.

5. The assessment team shall refrain from making any judgment on domestic policies taken into account in the construction of forest reference emission levels and/or forest reference levels. ]

*[Scope Option B*

2. A technical assessment of the data, methodologies and procedures used by the developing country Party in the construction of the reference level(s) in accordance with the guidelines in the Annex to Decision 12/CP.17, covering the following:

(a) The extent to which the information used maintained consistency with anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks as contained in the national greenhouse gas inventories [para 8 decision] and/or with historical data [Annex, (a)];

(b) The extent to which the information provided was transparent, complete (FOOTNOTE), consistent and accurate, including methodological information, description of data sets, approaches, methods, models, if applicable, and assumptions used. [Annex, (b)], and whether the reference levels are national or cover less than its entire national territory of forest area [para 11 Decision].

(c) Whether a description of relevant policies and plans has been provided. [Annex, (b)]

(d) If applicable, whether descriptions of changes from previously submitted reference levels are provided, taking into account the stepwise approach (FOOTNOTE PARAGRAPH 10 OF THE DECISION) [Annex, (b)][paragraph 10 Decision]

(e) Pools and gases, and activities included in the reference levels, and justification of why omitted pools and/or activities were deemed not significant. [Annex, (c)]

(f) Definition of forest used and, if different from the one used in the national GHG inventory or from the one reported to other international organizations, an explanation of why and how the definition used was chosen; [Annex, (d)]

3. The assessment team shall refrain from making any judgment on domestic policies.]

**Procedures for technical assessment**

*General procedures*

6. Each submission will be technically assessed by an assessment team in accordance with the procedures and timeframes established in these guidelines.

7. Each assessment team will conduct a thorough and comprehensive assessment of the forest reference emission level and/or forest reference level and will prepare a report under its collective responsibility.

8. The technical assessment process will be coordinated by the secretariat. The assessment team will be composed by LULUCF experts selected from the UNFCCC roster

of experts. Participating experts will serve in their personal capacity and will be neither nationals of the Party undergoing the technical assessment, nor funded by that Party.

*Composition of the assessment team*

9. The assessment team will be composed of at least [two][three] LULUCF experts. The secretariat shall ensure that at least one expert each from a developing and a developed country will be selected from the roster of LULUCF experts.

*Timing*

10. In order to facilitate the secretariat's work, each Party should confirm to the secretariat, their active experts on the LULUCF roster of experts who will be able to participate in the technical assessment of forest reference emission levels and/or forest reference levels.

11. Assessment sessions will be organized [one] [two] [three] times a year. Submissions received no later than [six] weeks ahead of a session will be assessed at this session. The assessment sessions will take place at a venue designated by the UNFCCC secretariat.

12. The secretariat should forward all relevant information to the assessment team at least [four] weeks before the start of the assessment session.

13. Prior to the assessment session, the assessment team should identify any preliminary issues requiring clarifications from the Party, as appropriate.

14. The Party that submitted the forest reference emission level and/or forest reference level may interact with the assessment team during the assessment session of their submission to clarify issues and provide additional information to facilitate the assessment by the assessment team.

15. The assessment team may seek additional clarifications from the Party no later than [one] week following the assessment session. This may include technical inputs to the Party on the construction of its forest reference emission level and/or forest reference level. The Party is to provide clarifications on the issues raised to the assessment team no later than [five] weeks following the request. As a result of the facilitative process referred above, the Party may modify its submitted forest reference emission level and/or forest reference level in response to the technical inputs of the assessment team.

16. The assessment team will prepare a draft report and make it available to the Party no later than [eight] weeks following the assessment session. The report should include a short summary.

17. The Party will have [three] weeks to respond to the draft report of the assessment team.

18. [If the Party does not agree with the results from the assessment as included in the draft report, in responding to the Party's comments, the assessment team will seek advice from a small group of experienced reviewers to be convened by the secretariat.]

19. The assessment team will prepare a final report within [three] weeks following the Party's response and the report will be sent to the secretariat for publication via the web platform on the UNFCCC website.<sup>1</sup> The final report will contain the technical assessment, technical recommendations, if appropriate, and the responses by the Party and where

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<sup>1</sup> <<http://unfccc.int/redd>>.

provided, the advice of the small group of experienced reviewers convened by the secretariat.

20. The secretariat will prepare a synthesis report of the technical assessment process of the forest reference emission levels and/or forest reference levels [ for consideration by the COP at the next session after the final report referred to in paragraph 18 above]. The synthesis report will be made publicly available via the web platform on the UNFCCC website.]

## **[Elements of general guidelines for domestic measurement, reporting and verification of domestically supported nationally appropriate mitigation actions by developing country Parties**

### **[Principles of Guidelines]**

The Subsidiary Body for Scientific and Technical Advice reiterated its conclusion that the guidelines are to be general, voluntary, pragmatic, non-prescriptive, non-intrusive and country driven, take into account national circumstances and national priorities, respect the diversity of nationally appropriate mitigation actions (NAMAs), build on existing domestic systems and capacities, recognize existing domestic measurement, reporting and verification systems and promote a cost-effective approach.<sup>1</sup>

### **Purpose**

The purpose is to provide general guidelines, for voluntary use by developing country Parties, based on the above-mentioned agreed principles, to describe the domestic measurement, reporting and verification of domestically supported NAMAs.

### **Recognizing, using and reporting on domestic verification of NAMAs**

#### **Option 1**

Developing country Parties are encouraged to utilize existing domestic systems, including domestically available information, methodologies, experts and other aspects.

Where they exist, recognize existing domestic verification systems, if appropriate, and encourage domestic verification processes, thereby enhancing cost-effectiveness, including adverse impacts and costs of mitigation. Otherwise developing country Parties may wish to put into place domestic verification processes, as necessary, for their domestically supported nationally appropriate mitigation actions.

#### **Option 2**

Developing country Parties are encouraged to utilize existing domestic processes, arrangements or systems, including domestically available information, methodologies, experts and other aspects for domestic measurement, reporting and verification. Otherwise, developing country Parties may wish to voluntarily establish domestic processes, arrangements or systems for the domestic measurement, reporting and verification of domestically supported NAMAs and apply these general guidelines for the domestic measurement, reporting and verification of NAMAs.

While describing the domestic measurement, reporting and verification of domestically supported NAMAs developing country Parties may, taking into account national circumstances, capacities and national priorities, indicate the general approach adopted:

- To establish, when appropriate, and/or recognize, where relevant, inter alia, the institutions, entities, arrangements and systems involved in the domestic measurement, reporting and verification of NAMAs;

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<sup>1</sup> FCCC/SBSTA/2012/5, paragraph 89.



- To measure domestically supported NAMAs, including the collection and management of relevant and available [quantitative and/or qualitative] information and the documentation of methodologies;
- To verify domestically supported NAMAs, including the use of domestic experts using domestically developed processes, thereby enhancing cost-effectiveness, including, but not limited to, adverse and/or positive impacts and costs of nationally appropriate mitigation actions.

**Support [capacity-building]**

## Option 1

Decides that, in accordance with Article 4, paragraph 3, of the Convention, developed country Parties [shall] [may] provide enhanced support to interested developing countries, including financial, technical and capacity-building support, and address specific capacity-building needs as determined nationally, including the training of domestic experts and local practitioners in applying the best available approaches.

## Option 2

Enhanced support to interested developing country Parties, including financial, technical and capacity-building support, and address specific capacity-building needs as determined nationally, including the training of domestic experts and local practitioners in applying the best available approaches should be ensured by developed country Parties and developed country Parties included in Annex II to the Convention by means of resources, in accordance with Article 4.3 of the Convention.

## Option 3

Developed country Parties and developed country Parties included in annex II of the Convention provide new and additional financial resources at the agreed full cost in accordance with Article 4 paragraph 3 of the Convention with the view to supporting communication of information on domestic MRV in accordance with decision 2.CP.17. ]

## **Revision of the UNFCCC reporting guidelines on annual inventories for Parties included in Annex I to the Convention**

### **Annex I**

#### **Draft guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories**

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## **I. Introduction**

### **A. Mandate**

1. The Conference of Parties (COP), by decision 15/CP.17, adopted the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories” (UNFCCC Annex I inventory reporting guidelines) and tables of the common reporting format to implement the use of the *2006 IPCC Guidelines for National Greenhouse Gas inventories* (2006 IPCC Guidelines).

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

2. This document contains the complete updated UNFCCC Annex I inventory reporting guidelines for all inventory sectors. The UNFCCC Annex I reporting guidelines on annual greenhouse gas inventories have been updated to reflect the implementation of the use of the 2006 IPCC Guidelines.

## **II. Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories**

### **A. Objectives**

1. The “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories” (hereinafter referred to as the UNFCCC Annex I inventory reporting guidelines) cover the estimation and reporting of anthropogenic<sup>1</sup> greenhouse gas (GHG) emissions and removals in both annual GHG inventories and inventories included in national communications, as specified by decision 11/CP.4 and other relevant decisions of the Conference of the Parties (COP).

2. The objectives of the UNFCCC Annex I inventory reporting guidelines are:

(a) To assist Parties included in Annex I to the Convention (Annex I Parties) in meeting their commitments under Articles 4 and 12 of the Convention;

(b) To contribute to ensuring the transparency of emission reduction commitments;

(c) To facilitate the process of considering annual national inventories, including the preparation of technical analysis and synthesis documentation;

(d) To facilitate the process of verification, technical assessment and expert review of the inventory information;

(e) To assist Annex I Parties in ensuring and/or improving the quality of their annual GHG inventory submissions.

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<sup>1</sup> Any reference to GHG emissions and removals in the guidelines shall be understood as anthropogenic GHG emissions and removals.

## B. Principles and definitions

3. The annual GHG inventory should be transparent, consistent, comparable, complete and accurate.

4. In the context of these UNFCCC Annex I inventory reporting guidelines:

(a) *Transparency* means that the data sources, assumptions and methodologies used for an inventory should be clearly explained, in order to facilitate the replication and assessment of the inventory by users of the reported information. The transparency of inventories is fundamental to the success of the process for the communication and consideration of the information. The use of the common reporting format (CRF) tables and the preparation of a structured national inventory report (NIR) contribute to the transparency of the information and facilitate national and international reviews;

(b) *Consistency* means that an annual GHG inventory should be internally consistent for all reported years in all its elements across sectors, categories and gases. An inventory is consistent if the same methodologies are used for the base and all subsequent years and if consistent data sets are used to estimate emissions or removals from sources or sinks. Under certain circumstances referred to in paragraphs 16 to 18 below, an inventory using different methodologies for different years can be considered to be consistent if it has been recalculated in a transparent manner, in accordance with the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the 2006 IPCC Guidelines);

(c) *Comparability* means that estimates of emissions and removals reported by Annex I Parties in their inventories should be comparable among Annex I Parties. For that purpose, Annex I Parties should use the methodologies and formats agreed by the COP for making estimations and reporting their inventories. The allocation of different source/sink categories should follow the CRF tables provided in annex II to draft decisions 15/CP.17, at the level of the summary and sectoral tables;

(d) *Completeness* means that an annual GHG inventory covers at least all sources and sinks, as well as all gases, for which methodologies are provided in the 2006 IPCC Guidelines or for which supplementary methodologies have been agreed by the COP. Completeness also means the full geographical coverage of the sources and sinks of an Annex I Party;<sup>2</sup>

(e) *Accuracy* means that emission and removal estimates should be accurate in the sense that they are systematically neither over nor under true emissions or removals, as far as can be judged, and that uncertainties are reduced as far as practicable. Appropriate methodologies should be used, in accordance with the 2006 IPCC Guidelines, to promote accuracy in inventories.

5. In the context of these reporting guidelines, the definitions of common terms used in GHG inventory preparation are those provided in the 2006 IPCC Guidelines.

## C. Context

6. The UNFCCC Annex I inventory reporting guidelines also cover the establishment and maintenance of national inventory arrangements for the purpose of the continued preparation of timely, complete, consistent, comparable, accurate and transparent annual GHG inventories.

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<sup>2</sup> According to the instrument of ratification, acceptance, approval or accession to the Convention of each Annex I Party.

7. An annual GHG inventory submission shall consist of an NIR and the CRF tables, as set out in annexes I and II to decision 15/CP.17. The annual submission also comprises information provided by an Annex I Party in addition to its submitted NIR and CRF tables.

#### **D. Base year**

8. The year 1990 should be the base year for the estimation and reporting of inventories. According to the provisions of Article 4, paragraph 6, of the Convention and decisions 9/CP.2, 11/CP.4 and 7/CP.12, the following Annex I Parties that are undergoing the process of transition to a market economy are allowed to use a base year or a period of years other than 1990, or a level of emissions as established by a decision of the COP, as follows:

Bulgaria:	1988
Croatia:	1990 <sup>3</sup>
Hungary:	the average of the years 1985 to 1987
Poland:	1988
Romania:	1989
Slovenia:	1986

#### **E. Methods**

##### Methodology

9. Annex I Parties shall use the methodologies provided in the 2006 IPCC Guidelines, unless stated otherwise in the UNFCCC Annex I inventory reporting guidelines, and any supplementary methodologies agreed by the COP, and other relevant COP decisions to estimate anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol.

10. Annex I Parties may use different methods (tiers) contained in the 2006 IPCC Guidelines, prioritizing these methods in accordance with the 2006 IPCC Guidelines. Annex I Parties may also use national methodologies which they consider better able to reflect their national situation, provided that these methodologies are compatible with the 2006 IPCC Guidelines and are well documented and scientifically based.

11. For categories<sup>4</sup> that are determined to be key categories, in accordance with the 2006 IPCC Guidelines, and estimated in accordance with the provisions in paragraph 14 below, Annex I Parties should make every effort to use a recommended method, in accordance with the corresponding decision trees in the 2006 IPCC Guidelines. Annex I Parties should also make every effort to develop and/or select emission factors (EFs), and collect and select activity data (AD), in accordance with the IPCC good practice. Where national circumstances prohibit the use of a recommended method, then the Annex I Party shall explain in its annual GHG inventory submission the reason(s) as to why it was unable to implement a recommended method in accordance with the decision trees in the 2006 IPCC Guidelines.

<sup>3</sup> In accordance with decision 7/CP.12.

<sup>4</sup> The term "categories" refers to both source and sink categories as set out in the 2006 IPCC Guidelines. The term "key categories" refers to the key categories as addressed in the 2006 IPCC Guidelines.

12. The 2006 IPCC Guidelines provide default methodologies which include default EFs and in some cases default AD for the categories to be reported. As the assumptions implicit in these default data, factors and methods may not be appropriate for specific national circumstances, Annex I Parties should use their own national EFs and AD, where available, provided that they are developed in a manner consistent with the 2006 IPCC Guidelines and are considered to be more accurate than the defaults. If Annex I Parties lack country-specific information, they could also use EFs or other parameters provided in the IPCC Emission Factor Database, where available, provided that they can demonstrate that those parameters are appropriate in the specific national circumstances and are more accurate than the default data provided in the 2006 IPCC Guidelines. Annex I Parties shall transparently explain in their annual GHG inventory submissions what data and/or parameters have been used.

13. Parties are encouraged to refine estimates of anthropogenic emissions and removals in the land use, land-use change and forestry (LULUCF) sector through the application of tier 3 methods, provided that they are developed in a manner consistent with the 2006 IPCC Guidelines, and information for transparency is provided in accordance with paragraph 50(a) below.

#### Key category identification

14. Annex I Parties shall identify their key categories for the base year and the latest reported inventory year, using approach 1, level and trend assessment, including and excluding LULUCF. Parties are encouraged to also use approach 2 and to add additional key categories to the result of approach 1.

#### Uncertainties

15. Annex I Parties shall quantitatively estimate the uncertainty of the data used for all source and sink categories using at least approach 1, as provided in the 2006 IPCC Guidelines, and report uncertainties for at least the base year and the latest inventory year and the trend uncertainty between these two years. Annex I Parties are encouraged to use approach 2 or a hybrid of approaches 1 and 2 provided in the 2006 IPCC Guidelines, in order to address technical limitations of approach 1. The uncertainty of the data used for all source and sink categories should also be qualitatively discussed in a transparent manner in the NIR, in particular for categories that were identified as key categories.

#### Recalculations and time-series consistency

16. The inventory for a time series, including the base year and all subsequent years for which the inventory has been reported, should be estimated using the same methodologies, and the underlying AD and EFs should be obtained and used in a consistent manner, ensuring that changes in emission trends are not introduced as a result of changes in estimation methods or assumptions over the time series of estimates.

17. Recalculations should ensure the consistency of the time series and shall be carried out to improve accuracy and/or completeness. Where the methodology or manner in which underlying AD and EFs are gathered has changed, Annex I Parties should recalculate their inventories for the base year and subsequent years of the times series. Annex I Parties should evaluate the need for recalculations relative to the reasons provided in the 2006 IPCC Guidelines, in particular for key categories. Recalculations should be performed in accordance with 2006 IPCC Guidelines and the general principles set down in these reporting guidelines.

18. In some cases it may not be possible to use the same methods and consistent data sets for all years, owing to a possible lack of AD, EFs or other parameters directly used in the calculation of emission estimates for some historical years, including the base year. In such cases, emissions or removals may need to be recalculated using alternative methods

not generally covered by paragraph 9 above. In these instances, Annex I Parties should use one of the techniques provided in the 2006 IPCC Guidelines to estimate the missing values. Annex I Parties should document and report the methodologies used for the entire time series.

#### Quality assurance/quality control

19. Each Annex I Party shall elaborate an inventory quality assurance/quality control (QA/QC) plan and implement general inventory QC procedures in accordance with its QA/QC plan following the 2006 IPCC Guidelines. In addition, Annex I Parties should apply category-specific QC procedures for key categories and for those individual categories in which significant methodological changes and/or data revisions have occurred, in accordance with the 2006 IPCC Guidelines. In addition, Annex I Parties should implement QA procedures by conducting a basic expert peer review of their inventories in accordance with the 2006 IPCC Guidelines.

### **F. National inventory arrangements**

20. Each Annex I Party should implement and maintain national inventory arrangements for the estimation of anthropogenic GHG emissions by sources and removals by sinks. The national inventory arrangements include all institutional, legal and procedural arrangements made within an Annex I Party for estimating anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol, and for reporting and archiving inventory information.

21. National inventory arrangements should be designed and operated:

(a) To ensure the transparency, consistency, comparability, completeness and accuracy of inventories, as defined in paragraphs 3 and 4 above;

(b) To ensure the quality of inventories through the planning, preparation and management of inventory activities. Inventory activities include collecting AD, selecting methods and EFs appropriately, estimating anthropogenic GHG emissions by sources and removals by sinks, implementing uncertainty assessment and QA/QC activities, and carrying out procedures for the verification of the inventory data at the national level, as described in these reporting guidelines.

22. In the implementation of its national inventory arrangements, each Annex I Party should perform the following general functions:

(a) Establish and maintain the institutional, legal and procedural arrangements necessary to perform the functions defined in paragraphs 23 to 27 below, as appropriate, between the government agencies and other entities responsible for the performance of all functions defined in these reporting guidelines;

(b) Ensure sufficient capacity for the timely performance of the functions defined in these reporting guidelines, including data collection for estimating anthropogenic GHG emissions by sources and removals by sinks and arrangements for the 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 GHG inventories in a timely manner in accordance with these reporting guidelines and relevant decisions of the COP, and provide the information necessary to meet the reporting requirements defined in these reporting guidelines and in relevant decisions of the COP;

(e) Undertake specific functions relating to inventory planning, preparation and management.

Inventory planning

23. As part of its inventory planning, each Annex I Party should:

(a) Define and allocate specific responsibilities in the inventory development process, including those relating to choosing methods, data collection, particularly AD and EFs from statistical services and other entities, processing and archiving, and QA/QC. Such definition should specify the roles of, and the 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) Elaborate an inventory QA/QC plan as indicated in paragraph 19 above;

(c) Establish processes for the official consideration and approval of the inventory, including any recalculations, prior to its submission, and for responding to any issues raised in the inventory review process.

24. As part of its inventory planning, each Annex I Party should consider ways to improve the quality of AD, EFs, methods and other relevant technical elements of the inventory. Information obtained from the implementation of the QA/QC programme, the inventory review process and other verification activities should be considered in the development and/or revision of the QA/QC plan and the quality objectives.

Inventory preparation

25. As part of its inventory preparation, each Annex I Party should:

(a) Prepare estimates in accordance with the requirements defined in these reporting guidelines;

(b) Collect sufficient AD, process information and EFs as are necessary to support the methods selected for estimating anthropogenic GHG emissions by sources and removals by sinks;

(c) Make quantitative estimates of uncertainty for each category and for the inventory as a whole, as indicated in paragraph 15 above;

(d) Ensure that any recalculations are prepared in accordance with paragraphs 16–18 above;

(e) Compile the NIR and the CRF tables in accordance with these reporting guidelines;

(f) Implement general inventory QC procedures in accordance with its QA/QC plan, following the 2006 IPCC Guidelines.

26. As part of its inventory preparation, each Annex I Party should:

(a) Apply category-specific QC procedures for key categories and for those individual categories in which significant methodological and/or data revisions have occurred, in accordance with the 2006 IPCC Guidelines;

(b) Provide for a basic review of the inventory by personnel that have not been involved in the inventory development process, preferably an independent third party, before the submission of the inventory, in accordance with the planned QA procedures referred to in paragraph 19 above;



(c) Provide for a more extensive review of the inventory for key categories, as well as for categories where significant changes to methods or data have been made, in accordance with the 2006 IPCC Guidelines;

(d) On the basis of the reviews described in paragraph 26(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 24 above.

#### Inventory management

27. As part of its inventory management, each Annex I Party should:

(a) Archive all relevant inventory information for the reported time series, including all disaggregated EFs and AD, documentation on how these factors and data have been generated and aggregated for the preparation of the inventory, internal documentation on QA/QC procedures, external and internal reviews, and documentation on annual key categories and key category identification and planned inventory improvements;

(b) Provide review teams with access to all archived information used by the Party to prepare the inventory through the single national entity, in accordance with relevant decisions of the COP;

(c) Respond, in a timely manner, to requests for clarifying inventory information resulting from the different stages of the process of review of the inventory information and information on the national inventory arrangements.

## **G. Reporting**

### **1. General guidance**

#### Estimates of emissions and removals

28. Article 12, paragraph 1(a), of the Convention requires that each Party shall communicate to the COP, through the secretariat, inter alia, a national inventory of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol. As a minimum requirement, inventories shall contain information on the following GHGs: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>).

29. In addition, Annex I Parties should provide information on the following precursor gases: carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>) and non-methane volatile organic compounds (NMVOCs), as well as sulphur oxides (SO<sub>x</sub>). Annex I Parties may report indirect CO<sub>2</sub> from the atmospheric oxidation of CH<sub>4</sub>, CO and NMVOCs. Annex I Parties may report as a memo item indirect N<sub>2</sub>O emissions from other than the agriculture and LULUCF sources. These estimates of indirect N<sub>2</sub>O should not be included in national totals. For Parties that decide to report indirect CO<sub>2</sub> the national totals shall be presented with and without indirect CO<sub>2</sub>.

30. GHG emissions and removals should be presented on a gas-by-gas basis in units of mass, with emissions by sources listed separately from removals by sinks, except in cases where it may be technically impossible to separate information on sources and sinks in the area of LULUCF. For HFCs and PFCs, emissions should be reported for each relevant chemical in the category on a disaggregated basis, except in cases where paragraph 36 below applies.

31. Annex I Parties should report aggregate emissions and removals of GHGs, expressed in CO<sub>2</sub> equivalent (CO<sub>2</sub> eq), using the global warming potential values as agreed by decision 15/CP.17 or any subsequent decision by the COP on global warming potentials.

32. Annex I Parties shall report actual emissions of HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>, providing disaggregated data by chemical (e.g. HFC-134a) and category in units of mass and in CO<sub>2</sub> eq, except in cases where paragraph 36 below applies. Annex I Parties should report emission estimates or notation keys in line with paragraph 37 below and trends for these gases for 1990 onwards, in accordance with the provisions of these reporting guidelines.

33. Annex I Parties are strongly encouraged to also report emissions and removals of additional GHGs, such as hydrofluoroethers (HFEs) perfluoropolyethers (PFPEs), and other gases for which 100-year global warming potential values are available from the IPCC but have not yet been adopted by the COP. These emissions and removals should be reported separately from national totals.

34. In accordance with the 2006 IPCC Guidelines, international aviation and marine bunker fuel emissions should not be included in national totals but should be reported separately. Annex I Parties should make every effort to both apply and report according to the method contained in the 2006 IPCC Guidelines for separating domestic and international emissions. Annex I Parties should also report emissions from international aviation and marine bunker fuels as two separate entries in their inventories.

35. Annex I Parties should clearly indicate how feedstocks and non-energy use of fuels have been accounted for in the inventory, under the energy or industrial processes sector, in accordance with the 2006 IPCC Guidelines.

36. Emissions and removals should be reported at the most disaggregated level of each source/sink category, taking into account that a minimum level of aggregation may be required to protect confidential business and military information.

#### Completeness

37. Where methodological or data gaps in inventories exist, information on these gaps should be presented in a transparent manner. Annex I Parties should clearly indicate the sources and sinks which are not considered in their inventories but which are included in the 2006 IPCC Guidelines, and explain the reasons for such exclusion. Similarly, Annex I Parties should indicate the parts of their geographical area, if any, not covered by their inventory and explain the reasons for their exclusion. In addition, Annex I Parties should use the notation keys presented below to fill in the blanks in all the CRF tables.<sup>5</sup> This approach facilitates the assessment of the completeness of an inventory. The notation keys are as follows:

(a) “NO” (not occurring) for categories or processes, including recovery, under a particular source or sink category that do not occur within an Annex I Party;

(b) “NE” (not estimated) for AD and/or emissions by sources and removals by sinks of GHGs which have not been estimated but for which a corresponding activity may occur within a Party.<sup>6</sup> Where “NE” is used in an inventory to report emissions or removals of CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>, the Annex I Party shall indicate in both the NIR and the CRF completeness table why such emissions or removals have not been estimated. Furthermore, a Party may consider that a disproportionate amount of effort

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<sup>5</sup> If notation keys are used in the NIR, they should be consistent with those reported in the CRF tables.

<sup>6</sup> The notation key “NE” could also be used when an activity occurs in the Party but the 2006 IPCC Guidelines do not provide methodologies to estimate the emissions/removals.

would be required to collect data for a gas from a specific category<sup>7</sup> that would be insignificant in terms of the overall level and trend in national emissions and in such cases use the notation key “NE”. The Party should in the NIR provide justifications for exclusion in terms of the likely level of emissions. An emission should only be considered insignificant if the likely level of emissions is below 0.05 per cent of the national total GHG emissions,<sup>8</sup> and does not exceed 500 kt CO<sub>2</sub> eq. The total national aggregate of estimated emissions for all gases and categories considered insignificant shall remain below 0.1 per cent of the national total GHG emissions.<sup>9</sup> Parties should use approximated AD and default IPCC EFs to derive a likely level of emissions for the respective category. Once emissions from a specific category have been reported in a previous submission, emissions from this specific category shall be reported in subsequent GHG inventory submissions;

(c) “NA” (not applicable) for activities under a given source/sink category that do occur within the Party but do not result in emissions or removals of a specific gas. If the cells for categories in the CRF tables for which “NA” is applicable are shaded, they do not need to be filled in;

(d) “IE” (included elsewhere) for emissions by sources and removals by sinks of GHGs estimated but included elsewhere in the inventory instead of under the expected source/sink category. Where “IE” is used in an inventory, the Annex I Party should indicate, in the CRF completeness table, where in the inventory the emissions or removals for the displaced source/sink category have been included, and the Annex I Party should explain such a deviation from the inclusion under the expected category, especially if it is due to confidentiality;

(e) “C” (confidential) for emissions by sources and removals by sinks of GHGs of which the reporting could lead to the disclosure of confidential information, given the provisions of paragraph 36 above.

38. Annex I Parties are encouraged to estimate and report emissions and removals for source or sink categories for which estimation methods are not included in the 2006 IPCC Guidelines. If Annex I Parties estimate and report emissions and removals for country-specific sources or sinks or of gases which are not included in the 2006 IPCC Guidelines, they should explicitly describe what source/sink categories or gases these are, as well as what methodologies, EFs and AD have been used for their estimation, and provide references for these data.

#### Key categories

39. Annex I Parties shall estimate and report the individual and cumulative percentage contributions from key categories to their national total, with respect to both level and trend. The emissions should be expressed in terms of CO<sub>2</sub> eq using the methods provided in the 2006 IPCC Guidelines. As indicated in paragraph 50 below, this information should be included in the NIR using tables 4.2 and 4.3 of the 2006 IPCC Guidelines, adapted to the level of category disaggregation that the Annex I Party used for determining its key categories.<sup>10</sup>

#### Verification

40. For the purposes of verification, Annex I Parties should compare their national estimates of CO<sub>2</sub> emissions from fuel combustion with those estimates obtained using the

<sup>7</sup> Category as defined in the CRF tables.

<sup>8</sup> “National total GHG emissions” refers to the total GHG emissions without LULUCF for the latest reported inventory year.

<sup>9</sup> As footnote 8 above.

<sup>10</sup> Table 4.1 of the 2006 IPCC Guidelines should be used as the basis for preparing the key category analysis but does not need to be reported in the NIR.

IPCC reference approach, as contained in the 2006 IPCC Guidelines, and report the results of this comparison in the NIR.

41. Annex I Parties that prepare their estimates of emissions and/or removals using higher-tier (tier 3) methods and/or models shall provide in the NIR verification information consistent with the 2006 IPCC Guidelines.

#### Uncertainties

42. Annex I Parties shall report, in the NIR, uncertainties estimated as indicated in paragraph 15 above, as well as methods used and underlying assumptions, for the purpose of helping to prioritize efforts to improve the accuracy of national inventories in the future and to guide decisions on methodological choice. This information should be presented using table 3.3 of the 2006 IPCC Guidelines. In addition, Annex I Parties should indicate in that table those categories that have been identified as key categories in their inventory.

#### Recalculations

43. Recalculations of previously submitted estimates of emissions and removals as a result of changes in methodologies, changes in the manner in which EFs and AD are obtained and used, or the inclusion of new sources or sinks which have existed since the base year but were not previously reported, shall be reported for the base year and all subsequent years of the time series up to the year for which the recalculations are made. Further, a discussion on the impact of the recalculations on the trend in emissions should be provided in the NIR at the category, sector and national total level, as appropriate.

44. Recalculations shall be reported in the NIR, with explanatory information and justifications for recalculations. Information on the procedures used for performing the recalculations, changes in the calculation methods, EFs and AD used, and the inclusion of sources or sinks not previously covered should be reported with an indication of the relevant changes in each source or sink category where these changes have taken place.

45. Annex I Parties shall report any other changes in estimates of emissions and removals, and clearly indicate the reason for the changes compared with previously submitted inventories (e.g. error correction, statistical reason or reallocation of categories), in the NIR as indicated in paragraph 50 below and outlined in annex II to decision 15/CP.17. Small differences (e.g. due to the rounding of estimates) should not be considered as recalculations.

#### Quality assurance/quality control

46. Annex I Parties shall report in the NIR on their QA/QC plan and give information on QA/QC procedures already implemented or to be implemented in the future. In addition, Annex I Parties are encouraged to report on any peer review of their inventory, apart from the UNFCCC review.

#### Corrections

47. Inventories shall be reported without corrections relating, for example, to climate variations or trade patterns of electricity.

## **2. National inventory report**

48. Annex I Parties shall submit to the COP, through the secretariat, an NIR containing detailed and complete information on their inventories. The NIR should ensure transparency and contain sufficiently detailed information to enable the inventory to be reviewed. This information should cover the base year, the most recent 10 years and any previous years since the base year ending with 0 or 5 (1990, 1995, 2000, etc.).

49. Each year, an updated NIR shall be electronically submitted in its entirety to the COP, through the secretariat, in accordance with the relevant decisions of the COP.

50. The NIR shall include:

(a) Descriptions, references and sources of information for the specific methodologies, including higher-tier methods and models, assumptions, EFs and AD, as well as the rationale for their selection. For tier 3 models, additional information for improving transparency;<sup>11</sup>

(b) An indication of the level of complexity (IPCC tier) applied and a description of any national methodology used by the Annex I Party, as well as information on anticipated future improvements;

(c) For key categories, an explanation if the recommended methods from the appropriate decision tree in the 2006 IPCC Guidelines are not used;

(d) A description of the national key categories, as indicated in paragraph 39 above, including:

(i) A summary table with the key categories identified for the latest reporting year (by level and trend);

(ii) Information on the level of category disaggregation used and the rationale for its use;

(iii) Additional information relating to the methodology used for identifying key categories;

(e) Information on how and where feedstocks and non-energy use of fuels have been reported in the inventory;

(f) Assessment of completeness, including information and explanations in relation to categories not estimated or included elsewhere, and information related to the geographical scope;

(g) Information on uncertainties, as requested in paragraph 42 above;

(h) Information on any recalculations relating to previously submitted inventory data, as requested in paragraphs 43 to 45 above, including changes in methodologies, sources of information and assumptions, in particular in relation to recalculations made in response to the review process;

(i) Information on changes in response to the review process;

(j) Information on the national inventory arrangements and changes to the national inventory arrangements, including a description of the institutional arrangements for inventory preparation, as well as information on verification as requested in paragraphs 40 and 41 above and on QA/QC as requested in paragraph 46 above.

51. The NIR should follow the outline and general structure contained in annex I to decision 15/CP.17.

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<sup>11</sup> Parties should, as applicable, report information on: basis and type of model, application and adaptation of the model, main equations/processes, key assumptions, domain of application, how the model parameters were estimated, description of key inputs and outputs, details of calibration and model evaluation, uncertainty and sensitivity analysis, QA/QC procedures adopted and references to peer-reviewed literature.

### 3. Common reporting format tables

52. The CRF tables are designed to ensure that Annex I Parties report quantitative data in a standardized format and to facilitate comparison of inventory data and trends. Explanation of information of a qualitative character should mainly be provided in the NIR rather than in the CRF tables. Such explanatory information should be cross-referenced to the specific chapter of the NIR.

53. Annex I Parties shall submit annually to the COP, through the secretariat, the information required in the CRF tables, as contained in annex II to decision 15/CP.17. This information shall be electronically submitted on an annual basis in its entirety to the COP, through the secretariat, in accordance with the relevant decisions of the COP. Parties should submit their CRF tables, generated by the CRF Reporter software, via the UNFCCC submission portal, with a view to facilitating the processing of the inventory information by the secretariat.

54. The CRF is a standardized format for reporting estimates of GHG emissions and removals and other relevant information. The CRF allows for the improved handling of electronic submissions and facilitates the processing of inventory information and the preparation of useful technical analysis and synthesis documentation.

55. The CRF tables shall be reported in accordance with the tables included in annex II to decision 15/CP.17 and as specified in these reporting guidelines. In completing the CRF tables, Annex I Parties:

(a) Shall provide a full set of CRF tables for the base year and all years from 1990 up to the most recent inventory year;

(b) Should provide completeness tables for the latest inventory year only, if the information applies to all years of the time series. If the information in those tables differs for each reported year, then either the tables or information on the specific changes must be provided for each year in the CRF tables;

(c) Should use the documentation boxes provided at the foot of the sectoral report and background data tables to provide cross references to detailed explanations in the NIR, or any other information, as specified in those boxes.

56. Annex I Parties should provide the information requested in the additional information boxes. Where the information called for is inappropriate because of the methodological tier used by the Annex I Party, the corresponding cells should be completed using the notation key "NA". In such cases, the Annex I Parties should cross-reference in the documentation box the relevant chapter in the NIR where equivalent information can be found.

57. Annex I Parties should use the notation keys, as specified in paragraph 37 above, in all the CRF tables to fill in the cells where no quantitative data are directly entered. Using the notation keys in this way facilitates the assessment of the completeness of an inventory.

## H. Record-keeping

58. Annex I Parties should gather and archive all relevant inventory information for each year of the reported time series, including all disaggregated EFs and AD, and documentation on how those factors and data were generated, including expert judgement where appropriate, and how they have been aggregated for their reporting in the inventory. This information should allow for the reconstruction of the inventory by the expert review teams. Inventory information should be archived from the base year and should include corresponding data on the recalculations applied. The 'paper trail', which can include

spreadsheets or databases used to compile inventory data, should enable estimates of emissions and removals to be traced back to the original disaggregated EFs and AD. Also, relevant supporting documentation related to QA/QC implementation, uncertainty evaluation or key category analyses should be kept on file. This information should facilitate the process of clarifying inventory data in a timely manner when the secretariat prepares annual compilations of inventories or assesses methodological issues.

## **I. Systematic updating of the guidelines**

59. The UNFCCC Annex I inventory reporting guidelines on annual GHG inventories shall be reviewed and revised, as appropriate, in accordance with decisions of the COP on this matter.

## **J. Language**

60. The NIR shall be submitted in one of the official languages of the United Nations. Annex I Parties are encouraged to submit an English translation of the NIR to facilitate its use by the expert review teams.

## Appendix

### **An outline and general structure of the national inventory report**

#### **EXECUTIVE SUMMARY**

- ES.1. Background information on greenhouse gas (GHG) inventories and climate change (e.g. as it pertains to the national context)
- ES.2. Summary of national emission and removal-related trends
- ES.3. Overview of source and sink category emission estimates and trends
- ES.4. Other information (e.g. indirect GHGs)

#### **Chapter 1: Introduction**

- 1.1. Background information on GHG inventories and climate change (e.g. as it pertains to the national context, to provide information to the general public)
- 1.2. A description of the national inventory arrangements
  - 1.2.1. Institutional, legal and procedural arrangements
  - 1.2.2. Overview of inventory planning, preparation and management
  - 1.2.3. Quality assurance, quality control and verification plan
- Indicate:*
  - *Quality assurance/quality control (QA/QC) procedures applied*
  - *QA/QC plan*
  - *Verification activities*
  - *Treatment of confidentiality issues*
- 1.2.4. Changes in the national inventory arrangements since previous annual GHG inventory submission
- 1.3. Inventory preparation, and data collection, processing and storage
- 1.4. Brief general description of methodologies (including tiers used) and data sources used
- 1.5. Brief description of key categories

*Provide a summary table with the key categories identified for the latest reporting year (by level and trend) on the basis of table 4.4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (hereinafter referred to as the 2006 IPCC Guidelines) and provide more detailed information in annex 1. Indicate whether the key category analysis differs from the one included in the common reporting format (CRF) table and, if so, give a short description of the differences.*

- 1.6. General uncertainty evaluation, including data on the overall uncertainty for the inventory totals
- 1.7. General assessment of completeness



*Provide, inter alia, information and explanations in relation to categories not estimated or included elsewhere, and information related to the geographical scope.*

## **Chapter 2: Trends in greenhouse gas emissions**

2.1. Description and interpretation of emission trends for aggregated GHG emissions

2.2. Description and interpretation of emission trends by sector

*Explain, inter alia, significant changes compared with 1990 and the previous year.*

## **Chapter 3: Energy (CRF sector 1)**

3.1. Overview of sector (e.g. quantitative overview and description, including trends and methodological tiers by category)

3.2. Fuel combustion (CRF 1.A), including detailed information on:

3.2.1. Comparison of the sectoral approach with the reference approach

3.2.2. International bunker fuels

3.2.3. Feedstocks and non-energy use of fuels

3.2.4. Category (CRF category number)

3.2.4.1. Category description (e.g. characteristics of sources)

3.2.4.2. Methodological issues (e.g. choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission estimates and the rationale for their selection, information on carbon dioxide (CO<sub>2</sub>) capture, any specific methodological issues (e.g. description of national methods and models))

3.2.4.3. Uncertainties and time-series consistency

3.2.4.4. Category-specific QA/QC and verification, if applicable

3.2.4.5. Category-specific recalculations, if applicable, including changes made in response to the review process and impact on emission trend

3.2.4.6. Category-specific planned improvements, if applicable (e.g. methodologies, activity data, emission factors, etc.), including tracking of those identified in the review process

3.3. Fugitive emissions from solid fuels and oil and natural gas (CRF 1.B)

3.3.1. Category (CRF category number)

3.3.1.1. Category description (e.g. characteristics of sources)

3.3.1.2. Methodological issues (e.g. choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission estimates and the rationale for their selection, any specific methodological issues (e.g. description of national methods and models))

3.3.1.3. Uncertainties and time-series consistency

3.3.1.4. Category-specific QA/QC and verification, if applicable

3.3.1.5. Category-specific recalculations, if applicable, including changes made in response to the review process and impact on emission trend

3.3.1.6. Category-specific planned improvements, if applicable (e.g. methodologies, activity data, emission factors, etc.), including tracking of those identified in the review process

- 3.4. CO<sub>2</sub> transport and storage (CRF 1.C)
  - 3.4.1. Category (CRF category number)
    - 3.4.1.1. Category description (e.g. characteristics of sources)
    - 3.4.1.2. Methodological issues (e.g. choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission estimates and the rationale for their selection, any specific methodological issues (e.g. description of national methods and models))
    - 3.4.1.3. Uncertainties and time-series consistency
    - 3.4.1.4. Category-specific QA/QC and verification, if applicable
    - 3.4.1.5. Category-specific recalculations, if applicable, including changes made in response to the review process and impact on emission trend
    - 3.4.1.6. Category-specific planned improvements, if applicable (e.g. methodologies, activity data, emission factors, etc.), including tracking of those identified in the review process

**Chapter 4: Industrial processes and product use (CRF sector 2)**

- 4.1. Overview of sector (e.g. quantitative overview and description, including trends and methodological tiers by category)
- 4.2. Category (CRF category number)
  - 4.2.1. Category description (e.g. characteristics of sources)
  - 4.2.2. Methodological issues (e.g. choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission estimates and the rationale for their selection, information on CO<sub>2</sub> capture, any specific methodological issues (e.g. description of national methods and models))
  - 4.2.3. Uncertainties and time-series consistency
  - 4.2.4. Category-specific QA/QC and verification, if applicable
  - 4.2.5. Category-specific recalculations, if applicable, including changes made in response to the review process and impact on emission trend
  - 4.2.6. Category-specific planned improvements, if applicable (e.g. methodologies, activity data, emission factors, etc.), including tracking of those identified in the review process

**Chapter 5: Agriculture (CRF sector 3)**

- 5.1. Overview of sector (e.g. quantitative overview and description, including trends and methodological tiers by category)
- 5.2. Category (CRF category number)
  - 5.2.1. Category description (e.g. characteristics of sources)
  - 5.2.2. Methodological issues (e.g. choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission and removal estimates and the rationale for their selection, any specific methodological issues (e.g. description of national methods and models))
  - 5.2.3. Uncertainties and time-series consistency
  - 5.2.4. Category-specific QA/QC and verification, if applicable

5.2.5. Category-specific recalculations, if applicable, including changes made in response to the review process and impact on emission trend

5.2.6. Category-specific planned improvements, if applicable (e.g. methodologies, activity data, emission factors, etc.), including tracking of those identified in the review process

#### **Chapter 6: Land use, land-use change and forestry (CRF sector 4)**

6.1. Overview of sector (e.g. quantitative overview and description, including trends and methodological tiers by category, and coverage of pools)

6.2. Land-use definitions and the classification systems used and their correspondence to the land use, land-use change and forestry categories (e.g. land use and land-use change matrix)

6.3. Information on approaches used for representing land areas and on land-use databases used for the inventory preparation

6.4. Category (CRF category number)

6.4.1. Description (e.g. characteristics of category)

6.4.2. Methodological issues (e.g. choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission and removal estimates and the rationale for their selection, any specific methodological issues (e.g. description of national methods and models))

6.4.3. Uncertainties and time-series consistency

6.4.4. Category-specific QA/QC and verification, if applicable

6.4.5. Category-specific recalculations, if applicable, including changes made in response to the review process and impact on emission trend

6.4.6. Category-specific planned improvements, if applicable (e.g. methodologies, activity data, emission factors, etc.), including those in response to the review process

#### **Chapter 7: Waste (CRF sector 5)**

7.1. Overview of sector (e.g. quantitative overview and description, including trends and methodological tiers by category)

7.2. Category (CRF category number)

7.2.1. Category description (e.g. characteristics of sources)

7.2.2. Methodological issues (e.g. choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission estimates and the rationale for their selection, any specific methodological issues (e.g. description of national methods and models))

7.2.3. Uncertainties and time-series consistency

7.2.4. Category-specific QA/QC and verification, if applicable

7.2.5. Category-specific recalculations, if applicable, including changes made in response to the review process

7.2.6. Category-specific planned improvements, if applicable (e.g. methodologies, activity data, emission factors, etc.), including those in response to the review process

**Chapter 8: Other (CRF sector 6) (if applicable)**

**Chapter 9: Indirect CO<sub>2</sub> and nitrous oxide emissions<sup>12</sup>**

- 9.1. Description of sources of indirect emissions in GHG inventory
- 9.2. Methodological issues (e.g. choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission estimates and the rationale for their selection, any specific methodological issues (e.g. description of national methods and models))
- 9.3. Uncertainties and time-series consistency
- 9.4. Category-specific QA/QC and verification, if applicable
- 9.5. Category-specific recalculations, if applicable, including changes made in response to the review process and impact on emission trend
- 9.6. Category-specific planned improvements, if applicable (e.g. methodologies, activity data, emission factors, etc.), including tracking of those identified in the review process

**Chapter 10: Recalculations and improvements**

- 10.1. Explanations and justifications for recalculations, including in response to the review process
- 10.2. Implications for emission levels
- 10.3. Implications for emission trends, including time-series consistency
- 10.4. Planned improvements, including in response to the review process

**Annexes to the national inventory report**

**Annex 1:** Key categories

- Description of methodology used for identifying key categories, if different from the Intergovernmental Panel on Climate Change (IPCC) tier 1 approach
- Information on the level of disaggregation
- Tables 4.2 and 4.3 of the 2006 IPCC Guidelines, including and excluding land use, land-use change and forestry

**Annex 2:** Assessment of uncertainty

- Description of methodology used for identifying uncertainties
- Table 3.3 of the 2006 IPCC Guidelines

**Annex 3:** Detailed methodological descriptions for individual source or sink categories

A.3.X (sector or category name)

**Annex 4:** The national energy balance for the most recent inventory year

**Annex 5:** Any additional information, as applicable.

**References**

All references used in the national inventory report must be listed in the references list.

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<sup>12</sup> Content of this chapter should be consistent with paragraph 29.

## Annex II

### **Common reporting format tables**

Owing to the complexity of and the importance of colour coding in the common reporting format (CRF) tables, they are not included in this document but can be downloaded from the UNFCCC website at

<[http://unfccc.int/national\\_reports/annex\\_i\\_ghg\\_inventories/reporting\\_requirements/items/5333.php](http://unfccc.int/national_reports/annex_i_ghg_inventories/reporting_requirements/items/5333.php)>.

## Annex III

Global warming potential values<sup>a</sup>

<i>Greenhouse gas</i>	<i>Chemical formula</i>	<i>Global warming potentials</i>
Carbon dioxide	CO <sub>2</sub>	1
Methane	CH <sub>4</sub>	25
Nitrous oxide	N <sub>2</sub> O	298
<b>Hydrofluorocarbons (HFCs)</b>		
HFC-23	CHF <sub>3</sub>	14 800
HFC-32	CH <sub>2</sub> F <sub>2</sub>	675
HFC-41	CH <sub>3</sub> F	92
HFC-43-10mee	CF <sub>3</sub> CHFCHFCF <sub>2</sub> CF <sub>3</sub>	1 640
HFC-125	C <sub>2</sub> HF <sub>5</sub>	3 500
HFC-134	C <sub>2</sub> H <sub>2</sub> F <sub>4</sub> (CHF <sub>2</sub> CHF <sub>2</sub> )	1 100
HFC-134a	C <sub>2</sub> H <sub>2</sub> F <sub>4</sub> (CH <sub>2</sub> FCF <sub>3</sub> )	1 430
HFC-143	C <sub>2</sub> H <sub>3</sub> F <sub>3</sub> (CHF <sub>2</sub> CH <sub>2</sub> F)	353
HFC-143a	C <sub>2</sub> H <sub>3</sub> F <sub>3</sub> (CF <sub>3</sub> CH <sub>3</sub> )	4 470
HFC-152	CH <sub>2</sub> FCH <sub>2</sub> F	53
HFC-152a	C <sub>2</sub> H <sub>4</sub> F <sub>2</sub> (CH <sub>3</sub> CHF <sub>2</sub> )	124
HFC-161	CH <sub>3</sub> CH <sub>2</sub> F	12
HFC-227ea	C <sub>3</sub> HF <sub>7</sub>	3 220
HFC-236cb	CH <sub>2</sub> FCF <sub>2</sub> CF <sub>3</sub>	1 340
HFC-236ea	CHF <sub>2</sub> CHF <sub>2</sub> CF <sub>3</sub>	1 370
HFC-236fa	C <sub>3</sub> H <sub>2</sub> F <sub>6</sub>	9 810
HFC-245ca	C <sub>3</sub> H <sub>3</sub> F <sub>5</sub>	693
HFC-245fa	CHF <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>	1 030
HFC-365mfc	CH <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>	794
<b>Perfluorocarbons</b>		
Perfluoromethane – PFC-14	CF <sub>4</sub>	7 390
Perfluoroethane – PFC-116	C <sub>2</sub> F <sub>6</sub>	12 200
Perfluoropropane – PFC-218	C <sub>3</sub> F <sub>8</sub>	8 830
Perfluorobutane – PFC-3-1-10	C <sub>4</sub> F <sub>10</sub>	8 860
Perfluorocyclobutane – PFC-318	c-C <sub>4</sub> F <sub>8</sub>	10 300
Perfluoropentane – PFC-4-1-12	C <sub>5</sub> F <sub>12</sub>	9 160
Perfluorohexane – PFC-5-1-14	C <sub>6</sub> F <sub>14</sub>	9 300
Perfluorodecalin – PFC-9-1-18 <sup>b</sup>	C <sub>10</sub> F <sub>18</sub>	>7 500
Perfluorocyclopropane <sup>c</sup>	c-C <sub>3</sub> F <sub>6</sub>	>17 340
<b>Sulphur hexafluoride (SF<sub>6</sub>)</b>		
Sulphur hexafluoride	SF <sub>6</sub>	22 800
<b>Nitrogen trifluoride (NF<sub>3</sub>)</b>		
Nitrogen trifluoride	NF <sub>3</sub>	17 200
<b>Fluorinated ethers</b>		
HFE-125	CHF <sub>2</sub> OCF <sub>3</sub>	14 900

<i>Greenhouse gas</i>	<i>Chemical formula</i>	<i>Global warming potentials</i>
HFE-134	CHF <sub>2</sub> OCHF <sub>2</sub>	6 320
HFE-143a	CH <sub>3</sub> OCF <sub>3</sub>	756
HCFE-235da2	CHF <sub>2</sub> OCHClCF <sub>3</sub>	350
HFE-245cb2	CH <sub>3</sub> OCF <sub>2</sub> CF <sub>3</sub>	708
HFE-245fa2	CHF <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>	659
HFE-254cb2	CH <sub>3</sub> OCF <sub>2</sub> CHF <sub>2</sub>	359
HFE-347mcc3	CH <sub>3</sub> OCF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>	575
HFE-347pcf2	CHF <sub>2</sub> CF <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>	580
HFE-356pcc3	CH <sub>3</sub> OCF <sub>2</sub> CF <sub>2</sub> CHF <sub>2</sub>	110
HFE-449sl (HFE-7100)	C <sub>4</sub> F <sub>9</sub> OCH <sub>3</sub>	297
HFE-569sf2 (HFE-7200)	C <sub>4</sub> F <sub>9</sub> OC <sub>2</sub> H <sub>5</sub>	59
HFE-43-10pccc124 (H-Galden 1040x)	CHF <sub>2</sub> OCF <sub>2</sub> OC <sub>2</sub> F <sub>4</sub> OCHF <sub>2</sub>	1 870
HFE-236ca12 (HG-10)	CHF <sub>2</sub> OCF <sub>2</sub> OCHF <sub>2</sub>	2 800
HFE-338pcc13 (HG-01)	CHF <sub>2</sub> OCF <sub>2</sub> CF <sub>2</sub> OCHF <sub>2</sub>	1 500
	(CF <sub>3</sub> ) <sub>2</sub> CFOCH <sub>3</sub>	343
	CF <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> OH	42
	(CF <sub>3</sub> ) <sub>2</sub> CHOH	195
HFE-227ea	CF <sub>3</sub> CHFOCF <sub>3</sub>	1 540
HFE-236ea2	CHF <sub>2</sub> OCHF <sub>2</sub> CF <sub>3</sub>	989
HFE-236fa	CF <sub>3</sub> CH <sub>2</sub> OCF <sub>3</sub>	487
HFE-245fa1	CHF <sub>2</sub> CH <sub>2</sub> OCF <sub>3</sub>	286
HFE-263fb2	CF <sub>3</sub> CH <sub>2</sub> OCH <sub>3</sub>	11
HFE-329mcc2	CHF <sub>2</sub> CF <sub>2</sub> OCF <sub>2</sub> CF <sub>3</sub>	919
HFE-338mcf2	CF <sub>3</sub> CH <sub>2</sub> OCF <sub>2</sub> CF <sub>3</sub>	552
HFE-347mcf2	CHF <sub>2</sub> CH <sub>2</sub> OCF <sub>2</sub> CF <sub>3</sub>	374
HFE-356mec3	CH <sub>3</sub> OCF <sub>2</sub> CHF <sub>2</sub> CF <sub>3</sub>	101
HFE-356pcf2	CHF <sub>2</sub> CH <sub>2</sub> OCF <sub>2</sub> CHF <sub>2</sub>	265
HFE-356pcf3	CHF <sub>2</sub> OCH <sub>2</sub> CF <sub>2</sub> CHF <sub>2</sub>	502
HFE-365mcf11 t3	CF <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> OCH <sub>3</sub>	11
HFE-374pc2	CHF <sub>2</sub> CF <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	557
	– (CF <sub>2</sub> ) <sub>4</sub> CH (OH) –	73
	(CF <sub>3</sub> ) <sub>2</sub> CHOCHF <sub>2</sub>	380
	(CF <sub>3</sub> ) <sub>2</sub> CHOCH <sub>3</sub>	27
<b>Perfluoropolyethers</b>		
PFPME	CF <sub>3</sub> OCF(CF <sub>3</sub> )CF <sub>2</sub> OCF <sub>2</sub> OCF <sub>3</sub>	10 300
<b>Trifluoromethyl sulphur pentafluoride (SF<sub>5</sub>CF<sub>3</sub>)</b>		
Trifluoromethyl sulphur pentafluoride	SF <sub>5</sub> CF <sub>3</sub>	17 700

<sup>a</sup> As listed in the column entitled “Global warming potential for given time horizon” in table 2.14 of the errata to the contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, based on the effects of greenhouse gases over a 100-year time horizon.

<sup>b</sup> The CRF Reporter will use the value of 7,500 for perfluorodecalin.

<sup>c</sup> The CRF Reporter will use the value of 17,340 for perfluorocyclopropane.

**Implications of the implementation of decisions 2/CMP.7 to 4/CMP.7 and 1/CMP.8 on the previous decisions on methodological issues related to the Kyoto Protocol, including those relating to Articles 5, 7 and 8 of the Kyoto Protocol**

**Texts received from Parties and in-session discussion texts**

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## I. Text audit – consequential changes (text received from Australia)

- Read references to CP1 as CP2.
  - o *5/CMP.1; title, paragraph 2*
  - o *6/CMP.1; title, paragraph 2*
  - o *13/CMP.1, paragraph 5), 25, 31, 52(b)*
  - o *17/CMP.1; paragraph 1, 2*
  - o *20/CMP.1 footnote 3*
  - o *22/CMP.1 paragraph 2, 11, 13, 19, footnote 3, 92*
  - o *27/CMP.1 Part IV:6*
- Read references to 16/CMP.1 as references 2/CMP.7.
  - o *5/CMP.1 Annex paragraph 1*
  - o *13/CMP.1 Annex paragraph 11, 25, 28, 30, 31, 32, 42, 55*
  - o *14/CMP.1; Annex paragraph 4*
  - o *17/CMP.1 paragraph 1*
  - o *20/CMP.1 paragraph 67*
  - o *22/CMP.1 paragraph 88*
- Read references to ‘paragraph 14 of the annex to decision 16/CMP.1’ as ‘paragraph 19 to decision 2/CMP.7’.
  - o *5/CMP.1 paragraph 51*
  - o *13/CMP.1 paragraph 31*
- Read reference to Paragraph 21 of 16/CMP.1 as reference to paragraph 26 of 2/CMP.7.
  - o *20/CMP.1 paragraph 21*
  - o *5/CMP.1 annex paragraph 1(a)*
- Read references to ‘Good Practice Guidance for LULUCF’ – as ‘[relevant supplementary and good practice guidance] of the IPCC adopted by the CMP, and any subsequent clarifications agreed by the CMP for the second commitment period.’
  - o *6/CMP.1; footnote 1*
  - o *15/CMP.1, paragraph 3*
  - o *16/CMP.1, paragraph 3(b)*
  - o *17/CMP.1; footnote 1*
  - o *20/CMP.1; Annex paragraph 4, 43, 44, 46, 68, footnote 3*
  - o *22/cmp.1; paragraph 9, 50, 58, 60, 65, 69, 79, 105, 154*
  - o *23-25/CMP.1*
- Read reference to 1996 Guidelines as reference to ‘2006 IPCC Guidelines for National Greenhouse Gas Inventories’
  - o *19/CMP.1; paragraphs 3, 9, 14*
  - o *20/CMP.1; paragraphs 1, 2, 3, 6 Annex paragraphs 4, 20, 27, 34(a), 38, 42, fn8*
  - o *22/CMP.1 paragraph 9; 50(a); 58; 60(b), (h); 65; 69(b); 79; 105; 154*
  - o *24/CMP.1 Annex II paragraph 1(e)ii*
- Read ‘an activity under Article 3, paragraph 3, or an elected activities under Article 3, paragraph 4,’ as ‘an activity under Article 3, paragraph 3, or **mandatory** or elected activities under Article 3, paragraph 4’
  - o *13/CMP.1; paragraph 11, 12, 25, 26, 32, 55*
  - o *15/CMP.1, paragraph 38 et al*
  - o *Annex 17/CMP.1; paragraph 1*
  - o *Annex 18/CMP.1; paragraphs 1, 2*
  - o *Annex 20/CMP.1, paragraphs 18, 20(b), 21, appendix II, 5(i)*
- Read ‘and/or wetland drainage and rewetting’ after ‘elect cropland management and/or grazing land management and/or revegetation’

- *Annex 15/CMP.1 paragraphs 9(b)*
- *Annex 20/CMP.1 paragraphs 13(c), 18, 69*
- Include 'wetland drainage and rewetting' in table 2(a), column 1, row 3 of *14/CMP.1*
  - *20/CMP.1 paragraph 13, 18, 69*
- Update references to Kyoto Protocol Article 3 paragraph 1 to Article 3 paragraph 1bis
  - *2/CMP.1 paragraphs 1, 6*
  - *Annex 3/CMP.1 paragraph 31, Appendix D Paragraph 8*
  - *Annex 13/CMP.1 paragraphs 12(e), 13, 14, 33, 34, 35, 37, 42(d), 43(b), 47(h), 50, 53, 58(h)*
  - *Annex 15/CMP.1 paragraphs 11(j), 16, 23, 33*
  - *Annex 27/CMP.1 Part IV paragraph 6(a), Part V paragraphs 4(a), 6, Part XI paragraph 1, Part XIII, Part XV paragraph 5*
  - *31/CMP.1 paragraphs 2, 3, 5*
- Update references to Kyoto Protocol Article 3 paragraphs 7 and 9 to Article 3 paragraph 7bis, 8 and 8bis
  - *13/CMP.1 paragraph 2, 4. Annex: headings B, C, D, paragraphs 5, 6, 9, 10, 11, 12, 15(a), (b), 47(b), 50, 52(a), 59(a)*
  - *Annex 14/CMP.1 paragraph 31(a)*
  - *Annex 15/CMP.1 paragraph 11(b)*
  - *20/CMP.1 paragraph 8. Annex: paragraph 10*
  - *Annex 22/CMP.1 title Part III, paragraphs 12(b), 15(b)(ii), 84(a), (b), 85, 85(a), 86(a), 87(b), 92*

#### **Decision Annex**

##### **Reporting**

- 13/CMP.1: Modalities for the accounting of assigned amounts under Article 7, para 4 of the Kyoto Protocol
  - *paragraph 11(e); 12(d) and 25 → update to reflect FMRL in the calculation of RMUs*
- 14/CMP.1: SEF for reporting KP units
  - *paragraph 14: update to 2/CMP.7*
  - *paragraph 39: Update references to Kyoto Protocol Article 3 paragraph 1 to Article 3 paragraph 1bis*
  - *Table 2(a): add WDR*
  - *Tables 5(a), (b), (c): update reporting years*
- 6/CMP.3
  - *this decision needs replacing with a new decision adopting updated CRF tables*

##### **Adjustments**

- 18/CMP.1: Criteria for cases of failure to submit information relating to estimates of GHG emissions by sources and removals by sinks under Art 3.3 and 3.4 of the KP
  - *This decision may require more comprehensive updates to reflect possible adjustments to the FMRL; and implications of urea and liming now being included in agriculture*
- 20/CMP.1: GPG and adjustments under Article 5(2)
  - *Para 11 requires updating to read 2020;*
  - *Para 51 – 74 and appendix III: Conservativeness factors require update*

##### **Review**

- 22/CMP.1: Guidelines for review under Article 8 of the Kyoto Protocol
  - *This decisions is concerned with guidelines for ERTs for review of national inventories, initial reports and national communications;*
  - *Para 2, 3, 4, 5, 6, Annex para 1, fn 3, 13, 92, 123(b) et al – multiple changes to reflect timing of initial and periodic review*
  - *Para 54 – timing for review (and adjustment) of base inventory – 'in conjunction with first annual review'*
  - *Para 71 – remove chapter reference; refer to supplementary guidance;*

## II. References to “Parties” in Annex I in decision 13/CMP.1 (text received from New Zealand)

### 13/CMP.1 – Modalities for the accounting of assigned amounts under Article 7, paragraph 4 of the Kyoto Protocol

Location	Reference	Relating to	Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?	Notes
(2)	Each Party included in Annex I with a commitment inscribed in Annex B	Submit report to facilitate the calculation of the assigned amount (cf annex, paragraph 6), record final calculation of assigned amount in database		
(3)	Each Party included in Annex I with a commitment inscribed in Annex B	Shall submit report upon expiration of the additional period for fulfilling commitments (cf annex, paragraph 49)		

### 13/CMP.1 – Annex

Location	Reference	Relating to	Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?	Notes
5	Each Party included in Annex I with a commitment inscribed in Annex B to the Kyoto Protocol <sup>1*</sup>	Calculation of assigned amount		
6.	Each Party included in Annex I*	Submission of report to facilitate calculation of assigned amount		Note decision 2/CMP.8 paras 2, 3
7.	The Party/Parties	Part 1 of the report identified in para 6. Calculation of assigned amount (including complete inventories of anthropogenic gases (7a))		Note decision 2/CMP.8, annex I

Location	Reference	Relating to	Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?	Notes
8.	No specific reference to Parties – by association with para 6.	Part 2 of the report identified in para 6, including <ul style="list-style-type: none"> <li>• Calculation of commitment period reserve</li> <li>• Identification of single minimum values for tree crown cover, land area and tree height for use in accounting under 3.3 and 3.4</li> <li>• Identification of its election of activities under Article 3.4, for inclusion in its accounting</li> <li>• Identification of annual or end-of-period accounting</li> <li>• Description of its national system</li> <li>• Description of its national registry</li> </ul>		
9.	Each Party	After review, calculation of assigned amount shall be recorded in database (para 50)		
10.	Each Party	Final figure for assigned amount shall remain fixed		
11.	A Party	Additions to assigned amount of a Party, including: <ul style="list-style-type: none"> <li>• Transfer/ acquisition of Kyoto units</li> <li>• Issuance by the party of RMUs for Article 3.3 and 3.4 activities</li> <li>• Carry-over of Kyoto units, in accordance with para 15</li> </ul>		
12.	A Party	Subtractions to assigned amount of a Party, including: <ul style="list-style-type: none"> <li>• Transfer/ acquisition of Kyoto units</li> <li>• Cancellation of units for Article 3.3 and 3.4 activities</li> <li>• Any other cancellation of Kyoto units</li> </ul>		
13.	Each Party included in Annex I*	Retire units for compliance		
14.	A Party included in Annex I*	Assessment of compliance		
15.	The Party	May carry over units		
17.	Each Party included in Annex I*	Shall establish and maintain a national registry		
18.	Each Party	Shall designate registry administrator		
21.	The Party	Various accounts that must exist in the national registry		
22.	The Party	Party identifier and unique number		

<b>Location</b>	<b>Reference</b>	<b>Relating to</b>	<b>Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?</b>	<b>Notes</b>
23.	Each Party included in Annex I*	Shall issue AAUs		Note decision 1/CMP.8, para 19
24.	The Party	Party identifiers for AAUs		
25.	Each Party included in Annex I*	Shall issue RMUs; decision on period accounting		
26.	A Party	Questions of implementation and RMU issuance		
27.	The Party	Party identifiers for RMUs		
28.	Each Party included in Annex I*	Shall ensure that quantity of RMUs does not exceed limits for that Party		
29.	Each Party	Process for issuing/ transferring ERUs		
31.	Each Party included in Annex I*	Shall ensure that acquisitions of CERs from forestry shall not exceed limits		
32.	Each Party included in Annex I*/ each Party	Shall cancel Kyoto units for Article 3.3 and 3.4 activities		
33.	Each Party included in Annex I*	May cancel Kyoto units		
34.	Each Party included in Annex I*	Process for retiring units for compliance		
35.	A Party	Units cancelled cannot be used for compliance		
36.	Each Party included in Annex I*	May carry over units to the subsequent commitment period. Units not carried over shall be cancelled		
37.	The Party	In event of non-compliance, the Party shall transfer units		
39.	Each Party included in Annex I*	Initiating issuance of AAUs, CERs, RMUs, ERUs		
40.	Each Party included in Annex I*	Initiating transfer of AAUs, CERs, RMUs, ERUs		
41.	The Party	On initiation of any issuance, transfer between registries, cancellation or retirement of ERUs, CERs, AAUs or RMUs, unique transaction number and records proposed transactions		
42.	The Party	ITL checks in the case of transfers between registries and retirement of CERs		
43.	The Party	ITL notifications to the initiating and other registries		
44.		Each national registry shall make non-confidential information publicly available		
45.	The Party	What information publicly available for each account number		

<b>Location</b>	<b>Reference</b>	<b>Relating to</b>	<b>Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?</b>	<b>Notes</b>
46.	The Party	Party identification for issuance of ERUs from JI projects		
47.	The Party	Holding and transaction information relevant to the national registry – determination by the Compliance Committee that the Party is not in compliance with its commitment under Article 3.1		
48.	The Party	Legal entities authorized by the Party		
49.	Each Party included in Annex I*	Standard Electronic Formats for units retired		
50.	Each Party included in Annex I*	Secretariat shall establish database to facilitate assessment of compliance		
51.	Each Party included in Annex I*	Separate record for each commitment period		
52.	Each Party included in Annex I*	Secretariat shall record assigned amount and max RMUs from Article 3.4 and limits on net acquisitions of Article 3.3 and 3.4 CERs		
53.	Each Party included in Annex I*	Secretariat to record eligibility to transfer/ acquire units and to use CERs to contribute to compliance		
54.	Each Party included in Annex I*	Secretariat to record information relating to emissions		
55.	Each Party included in Annex I*	Secretariat to record information relating to net emissions and removals from Articles 3.3 and 3.4 activities		
56.	A Party	Recalculated estimates of emissions and removals		
57.	Each Party included in Annex I*	Secretariat shall record and update commitment period reserve		
58.	Each Party included in Annex I*	Secretariat shall record transactions of units		
59.	Each Party included in Annex I*	Secretariat shall report additions to or subtractions from assigned amount for purpose of compliance, also quantity of units in retirement account		
60.	The party	For last year of commitment period, Secretariat shall report total emissions for the Party		
61.	Each Party included in Annex I*	Secretariat shall publish annual compilation and accounting report		
62.	Each Party included in Annex I*	After commitment period, Secretariat shall publish final annual compilation and accounting report		

<sup>1</sup>\* Hereinafter referred to as a “Party included in Annex I”.

### III. References to “Parties” in Annex I in decision 15/CMP.1 (text received from New Zealand)

#### 15/CMP.1 – Guidelines for preparation of information required under Article 7 of the Kyoto Protocol

Location	Reference	Relating to	Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?	Notes
(2)	Each Party included in Annex I	Reporting information in inventory submission (Article 7.1)		
(3)	A Party included in Annex I	Criteria for failing to meet Article 7.1 methodological and reporting requirements		
(4)	Parties/Parties included in Annex I	Secretariat to prepare a report (paragraph 4 of section VI.1 of the annex to decision 5/CP.6)		

#### 15/CMP.1 – Annex

Location	Reference	Relating to	Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?	Notes
1.	Each Party included in Annex I which is also a Party to the Kyoto Protocol	Applicability		
2.	Each Party included in Annex I	Shall include information from these guidelines in order to ensure compliance with Article 3. A Party included in Annex I need not separately submit an inventory under the Convention		
3.	Parties included in Annex I	Lists objectives of guidelines		
4.	Each Party included in Annex I	Shall describe improvements in areas that were previously adjusted		
5., 6., 7., 8., 9.	Each Party included in Annex I	Shall include in GG inventory information on emissions from Article 3.3 and 3.4 activities; following paras specify which information in particular shall be included		Note decision 2/CMP.8, para 4 and annex: may need to cross reference?

<b>Location</b>	<b>Reference</b>	<b>Relating to</b>	<b>Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?</b>	<b>Notes</b>
10.	Each Party included in Annex I that is considered to have met the requirements to participate in the mechanisms	Intro para – these Parties will report this information as set out below		
11.	Each Party included in Annex I	Specific guidelines on reporting this information follow		
12.	Each Party included in Annex I	Shall report on any discrepancies identified by the transaction log (paragraph 43 of the annex to decision 13/CMP.1)		
13.	Each Party included in Annex I	Shall report on any notification it has received from the CDM Executive Board of the CDM directing to replace ICERs (paragraph 49 of the annex to decision 5/CMP.1)		
14.	Each Party included in Annex I	Shall report on any notification it has received from the Executive Board of the CDM directing the Party to replace ICERs (paragraph 50 of the annex to decision 5/CMP.1)		
15.	Each Party included in Annex I	Shall report on any record of non-replacement identified by the transaction log (paragraph 56 of the annex to decision 5/CMP.1)		
16.	Each Party included in Annex I	Shall report the serial numbers and quantities of units in national registry not valid for use towards compliance with Art 3 commitments (paragraph 43 (b) of the annex to decision 13/CMP.1).		
17.	Each Party included in Annex I	Actions to correct any problem that caused a discrepancies to occur		
18.	Each Party included in Annex I	Report the calculation of its commitment period reserve (annex to decision 18/CP.7).		
19.	Each Party included in Annex I	On request ERTs, information in registry on holding accounts (paragraph 21 (b) of the annex to decision 13/CMP.1)		



<b>Location</b>	<b>Reference</b>	<b>Relating to</b>	<b>Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?</b>	<b>Notes</b>
20.	Each Party included in Annex I	Report supplementary information relating to the accounting of assigned amounts for that commitment period, with the report upon expiration of the additional period for fulfilling commitments (paragraph 49, annex to decision 13/CMP.1)		
21.	Each Party included in Annex I	Shall include information on changes in national system		
22.	Each Party included in Annex I with a commitment inscribed in Annex B	Shall include information on any changes in its national registry		
23.	Each Party included in Annex I	Shall provide information to indicate how it is striving to implement its commitments under Article 3.14		
24.	Parties included in Annex II, and other Parties included in Annex I that are in a position to do so	Shall indicate how they give priority to actions (paragraph 11, decision 31/CMP.1)		
25.	The Party included in Annex I	If info in paragraphs 23 and 24 above already provided in earlier submissions, only need to detail any changes		
27.	Each Party included in Annex I which is also a Party to the Kyoto Protocol	Applicability		
28.	Each Party included in Annex I	Shall include information from these guidelines in order to demonstrate compliance with its commitments under the Protocol . A Party included in Annex I need not separately submit an inventory under the Convention		
29.	Parties included in Annex I	Lists objectives of guidelines		
30.	Each Party included in Annex I	Shall provide description of how it is performing in respect of guidelines for national systems under Article 5. 1		
31.	The Party included in Annex I	Explain which functions in national system were not performed		
32.	Each Party included in Annex I	Shall provide description of how its national registry performs functions defined in decision 13/CMP.1		

Location	Reference	Relating to	Applies to Annex I Parties without a commitment inscribed in the third column of Annex B for CP2?	Notes
33.	Each Party included in Annex I	Shall provide information on how its use of the mechanisms is supplementary to domestic action		
34.	Each Party included in Annex I	Information on policies and measures, in achieving its quantified emission limitation and reduction commitment under Article 3, in order to promote sustainable development.		
35.	Each Party included in Annex I	Policies and measures with respect to aviation and marine bunker fuels, in pursuit of Article 2.2		
36.	Each Party included in Annex I	How it strives to implement policies and measures under Article 2 in such a way as to minimize adverse effects.		
37., 38.	Each Party included in Annex I	Information on domestic and regional legislative arrangements according to national circumstances, including the implementation of activities under Article 3.3 and Article 3.4.		
39., 40.	Each Party included in Annex I	Information relating to Party's commitments under Article 10		
41.43.	Each Party included in Annex II, any Party included in Annex I	Information on implementation of Article 11		
44.	Parties included in Annex I	Are encouraged to submit a translation of the information under Article 7.1, in English		

#### IV. References to “assigned amount” (in-session discussion text)

Decision and paragraph	Original reference to:	Reference required for CP2	Notes
<b>Decision 13/CMP.1</b>			
Paras. 2, 4	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
Annex ,titles of Sections B, C, D	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
Annex, paras. 5, 6, 7 (d), 9 9 (2 references), 10, 11, 12, 15 (a) and (b), 47 (b), 50 (2 references), 51 (a), 59 (a)	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
Annex, para. 23	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	No change required	Para.23 does not apply to CP2 (para. 19, decision 1/CMP.8)
<b>Decision 14/CMP.1</b>			
Annex, para. 31 (a)	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
<b>Decision 15/CMP.1</b>			
Annex, para. 11(b)	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
<b>Decision 20/CMP.1</b>			
Para. 8 (2 references)	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
Annex, para. 10	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
Appendix III, titles of Tables 3(a) and 3 (b)	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
<b>Decision 22/CMP.1</b>			
Annex, paras. 12 (b), 15 (b)(ii), 84 (a), 84 (b), 85 (chapeau), 85 (a), 86 (a), 87 (b), 92 (2 references)	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8
Title of Part III	Assigned amount calculated pursuant to Article 3, paragraphs 7 and 8	Assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis	Doha amendments and decision 1/CMP.8

V. References to “commitment period” (in-session discussion text)

Decision and paragraph	Original reference to:	Issue / relating to	Reference required for CP2
<b>13/CMP.1</b>			
Annex, 5	The assigned amount pursuant to Article 3, paragraphs 7 and 8, for the <b><u>first commitment period, from 2008 to 2012</u></b> , for each Party included in Annex I with a commitment inscribed in Annex B to the Kyoto Protocol <sup>2</sup> shall be equal to the percentage inscribed for it in Annex B of its aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases, and from the sources, listed in Annex A to the Kyoto Protocol in the base year, <b><u>multiplied by five</u></b> , taking into account the following:	Reference to CP2 is required to enable the calculation of the assigned amount for CP2	Refer to “the second commitment period, from 2013 to 2020” Other changes to the paragraph may also be required
Annex, 8(c)	Identification of its election of activities under Article 3, paragraph 4, for inclusion in its accounting <b><u>for the first commitment period</u></b> , together with information on how its national system under Article 5, paragraph 1, will identify land areas associated with the activities, in accordance with decision 16/CMP.1	Already addressed in Annex I to decision 2/CMP.8, para. 1(g)	No action necessary
Annex, 25	[...]Each Party shall elect for each activity, <b><u>prior to the start of the commitment period</u></b> , to issue such RMUs annually or for the entire commitment period. The decision of a Party shall remain fixed <b><u>for the first commitment period</u></b> .	Already addressed in Annex I to decision 2/CMP.8, para. 1(h)	No action necessary
Annex, 31	Each Party included in Annex I shall ensure that its net acquisitions of CERs from afforestation and reforestation activities under Article 12 <b><u>for the first commitment period</u></b> do not exceed the limits established for that Party as set out in decision 16/CMP.1.	The limit for CP2 was set in decision 2/CMP.7, Annex, para. 19	Refer to “for the second commitment period” and refer to “2/CMP.7” instead of to “16/CMP.1”
Annex, 52(b)	52. The secretariat shall record in the database for each Party included in Annex I the following information: (b) <b><u>For the first commitment period</u></b> , the total allowable issuances of RMUs resulting from forest management activities under Article 3, paragraph 4, and limits on net acquisitions of CERs from afforestation and reforestation activities under Article 12 pursuant to decision 16/CMP.1.	Need to specify what compilation and accounting database need to register for CP2	Refer to “For the second commitment period” and refer to “2/CMP.7” instead of to “16/CMP.1”
<b>14/CMP.1</b>			
****	(New draft SEF tables and guidance)		

Decision and paragraph	Original reference to:	Issue / relating to	Reference required for CP2
<b>15/CMP.1</b> <sup>(1)</sup>			
3(e)	An adjustment for any key source category (as defined in chapter 7 of the IPCC good practice guidance) of the Party concerned that accounted for 2 per cent or more of the Party's aggregate emissions of the gases from the sources listed in Annex A was calculated during the inventory review in three subsequent years, unless the Party has requested assistance from the facilitative branch of the Compliance Committee in addressing this problem, <b>prior to the beginning of the first commitment period</b> , and the assistance is being provided;	Could potentially be extended to consider the case of Annex I Parties who did not have a QELRCs in CP1 but have a QELRC in CP2, since the deadline has passed	No change is required unless decided to set a similar rule to CP2
<b>16/CMP.1</b>			
<b>Annex, 1(c)</b>	"Reforestation" is the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land. <b>For the first commitment period</b> , reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1989	The definition of reforestation for CP2 may need clarification	The scope of the application of this definition to CP2 needs to be clarified
<b>17/CMP.1</b>			
<b>1</b>	Decides that <b>for the first commitment period</b> Parties included in Annex I to the Convention that have ratified the Kyoto Protocol shall apply the good practice guidance for land use, land-use change and forestry, as developed by the Intergovernmental Panel on Climate Change, in a manner consistent with the Kyoto Protocol, with decision 16/CMP.1 and with the annexes to this decision,1 for the purpose of providing information on anthropogenic greenhouse gas emissions by sources and removals by sinks from land use, land-use change and forestry activities under Article 3, paragraph 3, and, if any, elected activities under Article 3, paragraph 4, in accordance with Article 5, paragraph 2, of the Kyoto Protocol;	Already addressed in decision 4/CMP.7, para. 16	Potentially to be addressed in decision under this item related to reporting on KP LULUCF tables
<b>2</b>	Decides to use, for reporting information supplementary to annual greenhouse gas inventory information <b>in the first commitment period</b> , in addition to the elements specified in paragraphs 5–9 of the annex to decision 15/CMP.1, supplementary information to be included in an annex to the national inventory report, contained in annex I to this decision, as well as the tables of the common reporting format <sup>2</sup> for activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, contained in annex II to this decision;	The first part (paras. 5-9) is addressed in Annex II to decision 2/CMP.8. The second part, KP-LULUCF CRF tables, should be specified for CP2	To be addressed as part of a decision related to KP-LULUCF tables for CP2
<b>18/CMP.1</b>			
<b>(none)</b>			

Decision and paragraph	Original reference to:	Issue / relating to	Reference required for CP2
<b>19/CMP.1</b>			
<b>Preamble</b>	Recalling Article 5, paragraph 1, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change, in particular its provision that each Party included in Annex I shall have in place, <b><u>no later than one year prior to the start of the first commitment period</u></b> , a national system for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol,	No change required	No action necessary
<b>20/CMP.1</b>			
11	Decides that an Annex I Party may submit a revised estimate for a part of its inventory of a year of the commitment period to which an adjustment was previously applied, provided that the revised estimate is submitted, at the latest, <b><u>in conjunction with the inventory for the year 2012</u></b> ...	The provision applies only to CP1. A new provision for CP2 is necessary	Refer to “in conjunction with the inventory for the last year of the CP”
<b>21/CMP.1</b>			
(none)			
<b>22/CMP.1</b>			
2	Decides that for each Party included in Annex I the <b><u>review prior to the first commitment period</u></b> shall be initiated upon receipt of the report as mentioned in paragraph 6 of the annex to decision 13/CMP.1. The <b><u>review prior to the commitment period</u></b> for each Party, including the procedures for adjustments under Article 5, paragraph 2, between the expert review team and the Party, shall be completed within 12 months of the initiation of the review and a report shall be forwarded expeditiously to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Compliance Committee. [...]	The need to establish procedures for the review of the report to facilitate the calculation of the assigned amount for CP2 was identified as an essential issue in the workshop report (fccc/sbsta/2013/inf.3)	To be addressed when deciding on the review procedures for the report to facilitate the calculation of the assigned amount for CP2
Annex, 11	Each Party included in Annex I shall be subject to review <b><u>prior to the first commitment period</u></b> or within one year after the entry into force of the Kyoto Protocol for that Party, whichever is later.	Provision applies only to CP1	No action required
Annex, 13	The first national communication due under the Convention after the Kyoto Protocol has entered into force for that Party will be reviewed <b><u>prior to the first commitment period</u></b> in accordance with the provisions of paragraph 19 below.	Provision applies only to CP1	No action required
Annex, 81	A Party included in Annex I may submit a revised estimate for a part of its inventory for a year of the commitment period to which an adjustment was previously applied, provided that the revised estimate is submitted, at the latest, <b><u>in conjunction with the inventory for the year 2012</u></b> .	The provision applies only to CP1. A new provision for CP2 is necessary	Refer to “in conjunction with the inventory for the last year of the CP”

Decision and paragraph	Original reference to:	Issue / relating to	Reference required for CP2
Annex, 97(a)	A thorough review of the national system, as part of the review <b>prior to the commitment period</b> and its in-country visit	The provision cannot be applied for CP2 because CP2 has already started	Change may not be necessary as the review of national systems is part of annual inventory review
<b>23/CMP.1</b>			
(none)			
<b>24/CMP.1</b>			
(none)			
<b>25/CMP.1</b>			
(none)			
<b>26/CMP.1</b>			
(none)			
<b>27/CMP.1</b>			
*****	(the Compliance Committee has launched work on this decision)		
<b>6/CMP.3</b>			
1	Decides that Parties shall use, for reporting information supplementary to annual greenhouse gas inventory information <b>in the first commitment period</b> , in addition to the elements specified in paragraphs 5–9 of the annex to decision 15/CMP.1, tables to be included in an annex to the national inventory report, as well as the tables of the common reporting format for the purpose of submission of information on anthropogenic greenhouse gas emissions by sources and removals by sinks from land use, land-use change and forestry activities under Article 3, paragraph 3, and, if any, elected activities under Article 3, paragraph 4, in accordance with Article 5, paragraph 2, of the Kyoto Protocol <b>due in 2010 and thereafter</b> ; these tables are contained in the annex to this decision;	Part of the mandate for this agenda item in decision 2/CMP.8	Potentially to be addressed in decision under this item related to reporting on KP LULUCF tables

*Abbreviations:* CP1 = first commitment period to the Kyoto Protocol, CP2 = second commitment period to the Kyoto Protocol, KP = Kyoto Protocol, LULUCF = land use, land-use change and forestry, QELRC = quantified emission or limitation reduction commitment

<sup>1</sup> Decision 2/CMP.8, Annex II, decides on the information on KP-LULUCF that shall be submitted for CP2. Decision 15/CMP.1, annex, paras. 5-9 decide on similar matters for a CP in general and has not been explicitly superseded for CP2.

**VI. SEF tables (in-session discussion text)**

All tables are considered to be between square brackets

Party  
Submission year  
Reported year  
Commitment period

**Table 1. Total quantities of Kyoto Protocol units by account type at beginning of reported year**

	Account type	Unit type					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs
1	Party holding accounts						
2	Entity holding accounts						
3	Retirement account						
4	Previous period surplus reserve account						
5	Article 3.3/3.4 net source cancellation accounts						
6	Non-compliance cancellation account						
7	Voluntary cancellation account						
8	Cancellation account for outstanding units after carry-over						
9	Article 3.1 [bis.] ter and quater ambition increase cancellation account						
10	Article 3.7ter cancellation account						
11	tCER cancellation account for expiry						
12	ICER cancellation account for expiry						
13	ICER cancellation account for reversal of storage						
14	ICER cancellation account for non-submission of certification report						
15	tCER replacement account for expiry						
16	ICER replacement account for expiry						
17	ICER replacement account for reversal of storage						
18	ICER replacement account for non-submission of certification report						
19	<b>Total</b>						

Changes to the current SEF tables (input from RSA Forum working group)

Changes made at SBSTA 38



Party  
 Submission year  
 Reported year  
 Commitment period

Table 2 (a). Annual internal transactions

Transaction type		Additions						Subtractions					
		Unit type						Unit type					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
<b>Article 6 issuance and conversion</b>													
1	Party-verified projects												
2	Independently verified projects												
<b>Article 3.3 and 3.4 issuance or cancellation</b>													
3	3.3 Afforestation and reforestation												
4	3.3 Deforestation												
5	3.4 Forest management												
6	3.4 Cropland management												
7	3.4 Grazing land management												
8	3.4 Revegetation												
9	3.4 Wetlands drainage and rewetting												
<b>Article 12 afforestation and reforestation</b>													
10	Replacement of expired tCERs												
11	Replacement of expired ICERs												
12	Replacement for reversal of storage												
13	Cancellation for reversal of storage												
14	Replacement for non-submission of certification report												
15	Cancellation for non-submission of certification report												
<b>Other cancellation</b>													
16	Voluntary cancellation												
17	Cancellation of outstanding units after carry-over												
18	Article 3.1 [bis] [ter and quarter] ambition increase cancellation												
19	Article 3.7ter cancellation												
20	<b>Sub-total</b>												

Transaction type		Retirement					
		Unit type					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs
21	Retirement						

Party  
 Submission year  
 Reported year  
 Commitment period

Table 2 (b). Annual external transactions

		Additions						Subtractions					
		Unit type						Unit type					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
<b>Transfers and acquisitions</b>													
1	[Registry name]												
2	[Registry name]												
3	[Registry name]												
...	[Registry name]												
...	<b>Sub-total</b>												
Share of proceeds - Adaptation Fund (1)													
997	Assigned amount units												
998	ERUs from Party-verified projects												
999	Independently verified ERUs												

(1) See paragraphs 20-22 of decision 1/CMP.8. The quantity of units reported is also included under 'Transfers and acquisitions' above.

## Share of proceeds - Adaptation Fund (1)

		Amount transferred or converted						Amount contributed as SoP to the Adaptation Fund					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
1	First international transfers of AAUs [(footnote 2)]												
2	Conversion of ERUs from Party-verified projects												
3	Conversion of independently verified ERUs												

(1) See paragraphs 20-22 of decision 1/CMP.8. The quantity of units reported is also included under 'Transfers and acquisitions' above.

[(2) Total quantity of AAUs transferred [in accordance with decision 1/CMP.8, paragraphs 21] for the first time [from one registry to [an account in] another registry tracked by their serial numbers] during the reported year]

## Additional information

1	Independently verified ERUs (1)												
	[(1) Cumulative values??]												

Table 2 (c). Total annual transactions

1	<b>Total (Sum of sub-totals in tables 2a and table 2b)</b>												
---	--	--	--	--	--	--	--	--	--	--	--	--	--

Party  
 Submission year  
 Reported year  
 Commitment period

**Table 3. Annual expiry, cancellation and replacement**

Transaction or event type	Requirement to replace or cancel			Replacement						Cancellation					
	Unit type			Unit type						Unit type					
	tCERs	ICERs	CERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
<b>Temporary CERs</b>															
1	Expired in retirement and replacement accounts														
2	Expired in holding accounts														
<b>Long-term CERs</b>															
3	Expired in retirement and replacement accounts														
4	Expired in holding accounts														
5	Subject to reversal of storage														
6	Subject to non-submission of certification report														
<b>Carbon Capture and Storage CERs</b>															
7	Subject to net reversal of storage (1)														
8	Subject to non-submission of certification report (2)														
9	<b>Total</b>														

(1) See paragraph 24 (b) of the annex to decision 10/CMP.7.

(2) See paragraph 27 of the annex to decision 10/CMP.7.

Party  
 Submission year  
 Reported year  
 Commitment period

**Table 4. Total quantities of Kyoto Protocol units by account type at end of reported year**

	Account type	Unit type					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs
1	Party holding accounts						
2	Entity holding accounts						
3	Retirement account						
4	Previous period surplus reserve account						
5	Article 3.3/3.4 net source cancellation accounts						
6	Non-compliance cancellation account						
7	Voluntary cancellation account						
8	Cancellation account for outstanding units after carry-over						
9	Article 3.1 [bis,] ter and quater ambition increase cancellation account						
10	Article 3.7ter cancellation account						
11	tCER cancellation account for expiry						
12	ICER cancellation account for expiry						
13	ICER cancellation account for reversal of storage						
14	ICER cancellation account for non-submission of certification report						
15	tCER replacement account for expiry						
16	ICER replacement account for expiry						
17	ICER replacement account for reversal of storage						
18	ICER replacement account for non-submission of certification report						
19	<b>Total</b>						

Submission year  
Reported year  
Commitment period

Table 5 (a). Summary information on additions and subtractions

	Starting values	Additions						Subtractions						
		Unit type						Unit type						
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	
1	Assigned amount for the commitment period (1)													
1bis	[Article 3, paragraph 7 ter, cancellation (1bis)]													
1ter	[Cancellation following increase in ambitions (1ter)]													
2	Non-compliance cancellation													
3	Carry-over (2)													
4	<b>Sub-total</b>													
<b>Annual transactions</b>														
5	Year 1 (2013)													
6	Year 2 (2014)													
7	Year 3 (2015)													
8	Year 4 (2016)													
9	Year 5 (2017)													
10	Year 6 (2018)													
11	Year 7 (2019)													
12	Year 8 (2020)													
13	[[Year 9 [True-up period:] (2021) (footnote 3)]]													
14	[Year 10 (2022)]													
15	[Year 11 (2023)]													
...	...													
...	<b>Sub-total</b>													
...	<b>Total</b>													

(1) Under 'Additions', the amount of AAUs issued for the commitment period [, including any increase in ambition that occurred before ..... ]. Under 'Subtractions', the amount of AAUs cancelled, if any, pursuant to paragraph 8 of decision 1/CMP.8 [and Article 3, paragraphs 1 ter and 1 quater] [, and the amount of AAUs cancelled, if any, pursuant to Article 3, paragraph 7 ter].  
 [(1bis) The amount of AAUs cancelled, if any, pursuant to Article 3, paragraph 7 ter.]  
 [(1ter) The amount of AAUs cancelled, if any, pursuant to paragraph 8 of decision 1/CMP.8 [and Article 3, paragraphs 1 ter and 1 quater] ].  
 (2) Carry-over of units from the first to the second commitment period. AAUs are carried-over [directly] to the previous period surplus reserve account in accordance with paragraph 24 of decision 1/CMP.8.  
 [footnote 3: years of the additional period for fulfilling commitments. ]

Table 5 (b). Summary information on expiry, cancellation and replacement

	Year	Requirement to replace or cancel			Replacement						Cancellation					
		Unit type			Unit type						Unit type					
		tCERs	ICERs	CERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
1	Year 1 (2013)															
2	Year 2 (2014)															
3	Year 3 (2015)															
4	Year 4 (2016)															
5	Year 5 (2017)															
6	Year 6 (2018)															
7	Year 7 (2019)															
8	Year 8 (2020)															
9	[[Year 9 [True-up period:] (2021) (footnote 1)]]															
10	[Year 10 (2022)]															
11	[Year 11 (2023)]															
...	...															
...	<b>Total</b>															

[footnote 1: years of the additional period for fulfilling commitments. ]

Table 5 (c). Summary information on retirement

	Year	Retirement					
		Unit type					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs
1	Year 1 (2013)						
2	Year 2 (2014)						
3	Year 3 (2015)						
4	Year 4 (2016)						
5	Year 5 (2017)						
6	Year 6 (2018)						
7	Year 7 (2019)						
8	Year 8 (2020)						
9	[[Year 9 [True-up period:] (2021) (footnote 1)]]						
10	[Year 10 (2022)]						
11	[Year 11 (2023)]						
...	...						
...	<b>Total</b>						

[footnote 1: years of the additional period for fulfilling commitments. ]

Party  
 Submission year  
 Reported year  
 Commitment period

**Table 6 (a). Memo item: Corrective transactions relating to additions and subtractions**

		Additions						Subtractions					
		Unit type						Unit type					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs
1	Transactions												

**Table 6 (b). Memo item: Corrective transactions relating to replacement**

		Requirement for replacement		Replacement						
		Unit type		Unit type						
		tCERs	ICERs	AAUs	ERUs	RMUs	CERs	tCERs	ICERs	
1	Transactions									

**Table 6 (c). Memo item: Corrective transactions relating to retirement**

		Retirement					
		Unit type					
		AAUs	ERUs	RMUs	CERs	tCERs	ICERs
1	Transactions						

**VII. Instructions on SEF tables (in-session discussion text)**

The entire text is considered to be between square brackets

**[Guidance for reporting of SEF tables]****[Instructions on individual tables]**

*Version of 12 June 2013, 18:00*

**A. Table 1. Total quantities of Kyoto Protocol units by account type at beginning of reported year**

1. In table 1, each Annex I Party shall provide information on the total quantities of Kyoto Protocol units contained in its national registry, by account type and by unit type, as of 1 January of the reported year.
2. [Each Annex I Party] shall report on the total quantities of Kyoto Protocol units, by unit type, held in each of the following account types:
  - (a) ‘Party holding accounts’ (decision 13/CMP.1, annex, paragraph 21 (a));
  - (b) ‘Entity holding accounts’ (decision 13/CMP.1, annex, paragraph 21 (b));
  - (c) ‘Retirement account’ (decision 13/CMP.1, annex, paragraph 21 (f));
  - (d) [‘Previous period surplus reserve account’] (decision 1/CMP.8, paragraph 23);
  - (e) [‘Article 3.3/3.4 net source cancellation accounts’], for cancellation of Kyoto Protocol units as a result of emissions from activities under Article 3.3 and 3.4 of the Kyoto Protocol (decision 13/CMP.1, annex, paragraph 21 (c) and decision 2/CMP.7);
  - (f) ‘Non-compliance cancellation account’, for cancellation of Kyoto Protocol units following a determination by the Compliance Committee that the Annex I Party is not in compliance with its commitment under [Article 3.1] (decision 13/CMP.1, annex, paragraph 21 (d));
  - (g) ‘Voluntary cancellation account’, for voluntary cancellations (decision 13/CMP.1, annex, paragraph 21 (e));
  - (h) ‘Cancellation account for ~~outstanding-remaining~~ units after carry-over’, to cancel units that are ~~outstanding-remaining~~ after expiration of the additional period for fulfilling commitments and carry-overs, if any, have been undertaken (decision 13/CMP.1, annex, paragraph 36);
  - (i) [‘Article 3.1 [bis] [ter and quater] ambition increase cancellation account’], for cancellations pursuant to paragraph 8 of decision 1/CMP.8;
  - (j) [‘Article 3.7ter cancellation account’], for cancellations pursuant to Article 3.7ter;
  - (k) ‘tCER cancellation account for expiry’, to cancel tCERs after their expiry (decision 5/CMP.1, annex, paragraph 53);
  - (l) ‘ICER cancellation account for expiry’, to cancel ICERs after their expiry (decision 5/CMP.1, annex, paragraph 53);
  - (m) ‘ICER cancellation account for reversal in storage’, to cancel ICERs held in holding accounts where there has been a reversal of removals by sinks for the project activity concerned (decision 5/CMP.1, annex, paragraph 49 and appendix D, paragraph 3);
  - (n) ‘ICER cancellation account for non-submission of certification report’, to cancel ICERs held in holding accounts where a certification report for the project activity concerned has not been provided (decision 5/CMP.1, annex, paragraph 50 and appendix D, paragraph 3);

3. In addition, each Annex I Party shall report on the total quantities of Kyoto Protocol units, by type, held in each of the replacement account types specified in the following paragraphs of the annex to decision 5/CMP.1:

- (a) ‘tCER replacement account for expiry’, to cancel AAUs, CERs, ERUs, RMUs and/or tCERs for the purpose of replacing tCERs prior to expiry (paragraph 43);
- (b) ‘ICER replacement account for expiry’, to cancel AAUs, CERs, ERUs and/or RMUs for the purpose of replacing ICERs ~~prior to~~before expiry (paragraph 47 (a));
- (c) ‘ICER replacement account for reversal in storage’, to cancel AAUs, CERs, ERUs, RMUs and/or ICERs from the same project activity for the purpose of replacing ICERs where there has been a reversal of removals by sinks (paragraph 47 (b));
- (d) ‘ICER replacement account for non-submission of certification report’, to cancel AAUs, CERs, ERUs, RMUs and/or ICERs from the same project activity for the purpose of replacing ICERs where a certification report has not been provided (paragraph 47 (c)).

**B. Table 2 (a). Annual internal transactions**

4. In table 2 (a), Annex I Parties shall report information on the total quantities of Kyoto Protocol units involved in internal transactions (those that did not involve another registry) that occurred between 1 January and 31 December of the reported year, as described below, including any corrective transactions.

5. Under the ‘Article 6 issuance and conversion’ section, Annex I Parties shall report information relating to joint implementation projects under the Kyoto Protocol in accordance with the following paragraphs of the annex to decision 9/CMP.1:

- (a) For ‘Party-verified projects’ (also referred to as ‘track one’ projects) Annex I Parties shall report information pertaining to projects where emission reductions or enhancement of removals have been verified by the host Party in accordance with paragraph 23 of the annex to decision 9/CMP.1:
  - (i) Each Annex I Party shall report under ‘Additions’ the total quantity of ERUs issued pursuant to paragraph 29 of the annex to decision 13/CMP.1;
  - (ii) The Party shall report under ‘Subtractions’ the corresponding quantity of AAUs converted, or, in the case of land use, land-use change and forestry (LULUCF) projects, the corresponding quantity of RMUs converted, pursuant to paragraph 29 of the annex to decision 13/CMP.1;
- (b) For ‘Independently verified projects’ (also referred to as ‘track two’ projects), Annex I Parties shall report information pertaining to projects where emission reductions or enhancement of removals have been verified through the procedure under the Article 6 Supervisory Committee in accordance with paragraphs 30–45 of the annex to decision 9/CMP.1:
  - (i) Each Annex I Party shall report under ‘Additions’ the total quantity of ERUs issued pursuant to paragraph 29 of the annex to decision 13/CMP.1;
  - (ii) The Party shall report under ‘Subtractions’ the corresponding quantity of AAUs converted, or, in the case of LULUCF projects, the corresponding quantity of RMUs converted, pursuant to paragraph 29 of the annex to decision 13/CMP.1.

6. **I**Under the section ‘Article 3.3 and 3.4 issuance or cancellation’, each Annex I Party shall report information on its LULUCF activities, by individual activity, in accordance with the annex to decision 16/CMP.1 and decision 2/CMP.7, and with its election of activities pursuant to paragraph 8 (c) and (d) of the annex to decision 13/CMP.1 and paragraphs 7 and 8 of the annex to decision 2/CMP.7:



- (a) For any activity that resulted in a net removal, each Annex I Party shall report under ‘Additions’ the total quantity of RMUs issued pursuant to paragraph 25 of the annex to decision 13/CMP.1 and decision 2/CMP.7;
- (b) For any activity resulting in net emissions, each Party shall report under ‘Subtractions’ the total quantities of AAUs, ERUs, RMUs and/or CERs cancelled pursuant to paragraph 32 of the annex to decision 13/CMP.1 [and decision 2/CMP.7.](#)]

7. Under the section ‘Article 12 afforestation and reforestation’, each Annex I Party shall report information relating to afforestation and reforestation project activities under the CDM specified in the following paragraphs of the annex to decision 5/CMP.1:<sup>1</sup>

- (a) ‘Replacement of expired tCERs’, the total quantities of AAUs, CERs, ERUs, RMUs and/or tCERs that were transferred to the tCER replacement account (paragraph 44);
- (b) ‘Replacement of expired ICERs’, the total quantities of AAUs, CERs, ERUs and/or RMUs that were transferred to the ICER replacement account for expiry (paragraph 47 (a));
- (c) ‘Replacement for reversal of storage’, the total quantities of AAUs, CERs, ERUs, RMUs and/or ICERs that were transferred to the ICER replacement account for reversal of storage (paragraph 47 (b));
- (d) ‘Cancellation for reversal of storage’, the total quantities of ICERs that were cancelled following a reversal of storage (paragraph 49 and appendix D, paragraph 3);
- (e) ‘Replacement for non-submission of certification report’, the total quantities of AAUs, CERs, ERUs, RMUs and/or ICERs that were transferred to the ICER replacement account for non-submission of certification report (paragraph 50 and appendix D, paragraph 3);
- (f) ‘Cancellation for non-submission of certification report’, the total quantities of ICERs that were cancelled following a non-submission of certification report (paragraph 47 (c)).

8. Under ‘Other cancellation’, each Annex I Party shall report the total quantities of Kyoto Protocol units, by type, that were cancelled for the following reasons<sup>2</sup>:

- (a) ‘Voluntary cancellation’, for voluntary cancellations (decision 13/CMP.1, annex, paragraph 21 (e));
- (b) ‘Cancellation of ~~outstanding-remaining~~ units after carry-over’, to cancel units that are ~~outstanding remaining~~ after expiration of the additional period for fulfilling commitments and carry-overs, if any, have been undertaken (decision 13/CMP.1, annex, paragraph 36);
- (c) ‘Article 3.1 [\[bis\] \[ter and quater\]](#) ambition increase cancellation’, for cancellations pursuant to paragraph 8 of decision 1/CMP.8;<sup>3</sup>
- (d) ‘Article 3.7ter cancellation’, for cancellations pursuant to Article 3.7ter.

9. Each Annex I Party shall sum the quantities of Kyoto Protocol units in each column and report these under ‘Sub-total’.

10. In the box ‘Retirement’, each Annex I Party shall report under ‘Retirement’ the total quantities of Kyoto Protocol units, by type, that were transferred to the retirement account. These values shall not be included in the main body of table 2 (a).

<sup>1</sup> Additional information relating to afforestation and reforestation project activities is reported in table 3.

<sup>2</sup> Cancellations following determination of non-compliance are reported in table 5(a).

<sup>3</sup> Cancellations to increase ambition in accordance with paragraph 8 of decision 1/CMP.8 are also reported in table 5(a), under the heading ‘Subtractions’ of the line ‘Assigned amount for the commitment period’.

### C. Table 2 (b). Annual external transactions

11. In table 2 (b), Annex I Parties shall report information on the total quantities of Kyoto Protocol units involved in external transactions (those that involved another registry) that occurred between 1 January and 31 December of the reported year, including any corrective transactions.
12. Each Annex I Party shall include a separate row for each registry (Party or CDM registry) to which it transferred, from which it acquired or from which it was forwarded, Kyoto Protocol units during the previous year:
- (a) Each Party shall report the quantities of all Kyoto Protocol units acquired from a registry, including any units transferred from the Adaptation Fund account or forwarded from the CDM registry, by type, under ‘Additions’;
  - (b) Each Party shall report the total quantities of Kyoto Protocol units transferred to that registry, including transfers to the share of proceeds pursuant to paragraph 21 of decision 1/CMP.8, cancellations for excess issuance of a CDM project activity<sup>4</sup> and cancellations of units following a reversal of storage<sup>5</sup> or non-submission of certification report<sup>6</sup> for a CCS project activity, under ‘Subtractions’ on the same line.
13. Each Annex I Party shall sum the quantities of Kyoto Protocol units in each column and report these under ‘Sub-total’.

### D. Table “Share of Proceeds – Adaptation Fund”

14. [The contribution of AAUs as a share of Proceeds shall be executed taking into account environmental integrity issue in the most transparent manner at international level.]
15. [The term ‘first international transfer’ refers to the first transfer between different registries of each individual AAU tracked by their serial numbers. Transfers between Parties that fulfil their commitments jointly, as defined in Art. 4 of the KP, are international transfers. The existence of a registry of a group of Parties fulfilling their commitments jointly does not influence this.]
16. Each Annex I Party shall report the quantity of units transferred from its registry to other Parties that generates a share of proceeds and the quantity of units it has contributed as a share of proceeds in accordance with paragraph 21 of decision 1/CMP.8 as follows:
- (a) Under ‘First international transfers of AAUs’, ‘Amount transferred or converted’, each party shall report the total quantity of AAUs transferred for the first time from its registry to another registry tracked by serial number. Under ‘First international transfers of AAUs’, ‘Amount contributed as Share of Proceeds (SoP) to the Adaptation Fund’, each Party shall report the total quantity of AAUs contributed to the Adaptation Fund. [These quantities shall also be included in the ‘Transfers and acquisitions’ section of table 2 (b)];
  - (b) Under ‘ERUs from Party-verified projects’, ‘Amount transferred or converted’, each Party shall report the total quantity of ERUs relating to projects where emissions reductions or enhancements of removals has been verified by the host Party in accordance with paragraph 23 of the annex to decision 9/CMP.1. Under ‘ERUs from Party-verified projects’, ‘Amount contributed as SoP to the Adaptation Fund’, each Party shall report the total quantity of ERUs relating to projects where emissions reductions or enhancements of removals has been verified by the host Party in accordance with paragraph 23 of the annex to decision 9/CMP.1 and contributed to the Adaptation Fund. [The quantities reported under ‘Amount contributed as SoP to the Adaptation Fund’ shall also be reported under the ‘Transfers and acquisitions’ section of table 2 (b)];

<sup>4</sup> Paragraph 52 of the annex to decision 5/CMP.1.

<sup>5</sup> Paragraph 24(b) of the annex to decision 10/CMP.7.

<sup>6</sup> Paragraph 27 of the annex to decision 10/CMP.7.

- (c) Under ‘Independently verified ERUs’, ‘Amount transferred or converted’, each Party shall report the total quantity of ERUs that had been independently verified by the Article 6 Supervisory Committee: Under ‘Independently verified ERUs’, ‘Amount contributed as SoP to the Adaptation Fund’, each Party shall report the total quantity of ERUs that were independently verified by the Article 6 Supervisory Committee and contributed to the Adaptation Fund. [The quantities reported under ‘Amount contributed as SoP to the Adaptation Fund’ shall also be reported under the ‘Transfers and acquisitions’ section of table 2 (b)];]

#### **E. Table 2 (b). Additional information**

17. If an Annex I Party has transferred for the first time ERUs that were independently verified by the Article 6 supervisory committee, it shall indicate the total quantity of these ERUs in the ‘Additional information’ box. This quantity shall also be included in the in the ‘Transfers and acquisitions’ section of table 2 (b).

#### **F. Table 2 (c). Total annual transactions**

18. Each Annex I Party shall add the sub-totals of table 2 (a) and table 2 (b) and report the corresponding quantities under ‘Total’ in table 2 (c).

#### **G. Table 3. Expiry, cancellation and replacement**

19. In table 3, Annex I Parties shall report information on the expiry, cancellation and replacement of tCERs, ICERs and CERs from CCS project activity in accordance with the modalities and procedures for afforestation and reforestation project activities under the CDM specified in the annex to decision 5/CMP.1 and the modalities and procedures for carbon dioxide capture and storage in geological formations as CDM project activities (specified in decision 10/CMP.7). Annex I Parties shall include all transactions that occurred between 1 January and 31 December of the reported year, including any corrective transactions.

20. Each Annex I Party shall report the following information under the section ‘Temporary CERs (tCERs)’:

- (a) ‘Expired in retirement and replacement accounts’, the quantity of tCERs that expired in the reported year in the retirement and tCER replacement account for the previous commitment period and the quantity of units that were used to replace those. These tCERs will have been valid for the previous commitment period and will expire in the final year of the commitment period;
- (b) ‘Expired in holding accounts’, the quantity of tCERs that expired in the reported year in all Party and entity holding accounts for the previous commitment period and the quantity of units that were cancelled as a result.

21. Each Annex I Party shall report the following information under the section ‘Long-term CERs (ICERs)’:

- (a) ‘Expired in retirement and replacement accounts’, the quantity of ICERs that expired in the reported year in the retirement and ICER replacement account for previous commitment periods and the quantity of units that were used to replace those. These ICERs will have been valid for a previous commitment period;
- (b) ‘Expired in holding accounts’, the quantity of ICERs that expired in all Party and entity holding accounts and the quantity of units that were cancelled as a result. These ICERs will have been valid for a previous commitment period;
- (c) ‘Subject to replacement for reversal of storage’, in the event that the Party has received notification(s) of a reversal of removals from a project activity from the Executive Board of the CDM, the quantity of ICERs that the Party is required to replace pursuant to that notification and the quantity of units that the Annex I Party used for replacement or cancellation as a result of these notifications;
- (d) ‘Subject to replacement for non-submission of certification report’, in the event that the Annex I Party has received a notification(s) of non-submission of certification report from the Executive Board of

the CDM, the quantity of ICERs that the Annex I Party is required to replace pursuant to that notification and the quantity of units that the Annex I Party used for replacement or cancellation as a result of these notifications.

22. Each Annex I Party shall report the following information under the section ‘Carbon Capture and Storage CERs’:
- (a) ‘Subject to net reversal of storage’, in the event that the Party has received notification(s) of a net reversal of storage of a CCS project activity from the Executive Board of the CDM, the quantity of units that the Annex I Party is required to cancel pursuant to that notification and the quantity of units that the Annex I Party used for cancellation as a result of these notifications. The units used to meet this requirement are transferred to the CDM registry and are therefore not reported in table 2(a). These units shall also be reported in table 2(b).
  - (b) ‘Subject to replacement for non-submission of certification report’, in the event that the Annex I Party has received a notification(s) of non-submission of certification report for a CCS project activity from the Executive Board of the CDM, the quantity of units that the Annex I Party is required to replace pursuant to that notification and the quantity of units that the Annex I Party used for cancellation as a result of these notifications. The units used to meet this requirement are transferred to the CDM registry and are therefore not reported in table 2(a). These units shall also be reported in table 2(b).
23. Annex I Parties shall sum the quantities of Kyoto Protocol units in each column and report these under ‘Total’.

#### **H. Table 4. Total quantities of Kyoto Protocol units by account type at end of reported year**

24. In table 4, Annex I Parties shall include information on the total quantities of Kyoto Protocol units in each account type, by unit type, in the national registry as of 31 December of the reported year.
25. The structure of table 4 follows the structure of table 1.

#### **I. Table 5 (a). Summary information on additions and subtractions**

26. In table 5 (a), Annex I Parties shall report cumulative information for the reported year and previously reported years to facilitate the recording of information for the commitment period in the compilation and accounting database in accordance with the annex to decision 13/CMP.1.
27. Under ‘Starting values’ each Annex I Party shall report:
- (a) ‘Assigned amount for the commitment period’, under ‘Additions’, as the total quantity of AAUs issued on the basis of their assigned amount under Article 3 [ paragraphs 7 bis, 8 and 8 bis ]; under ‘Subtractions’ [ the sum of ] the total quantity of AAUs cancelled as a result of an increase in ambition in accordance with paragraph 8 of decision 1/CMP.8, in the event that the Party increases its ambition after the issuance of its assigned amount [ and the total quantity of AAUs pursuant to Article 3, paragraph 7 ter ];  
  
[ Placeholder for line 1 bis ];  
  
[ Placeholder for line 1 ter ];
  - (b) ‘Non-compliance cancellation’, if applicable, the quantities of Kyoto Protocol units, by type, that the Party cancelled pursuant to a determination by the Compliance Committee that the Party is not in compliance with its commitment under Article 3.1 for the previous commitment period pursuant to paragraph 37 of the annex to decision 13/CMP.1<sup>7</sup>;

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<sup>7</sup> This information will not be available until completion of the compliance assessment for the previous commitment period, following the expiration of the additional period for fulfilment of commitments.

- (c) ‘Carry-over’, under ‘Additions’ and if applicable, the total quantities of AAUs, ERUs and/or CERs that were carried over from the previous commitment period and, under ‘Subtractions’, and if applicable, the total quantities of AAUs, ERUs and/or CERs that were carried over to the subsequent commitment period. AAUs are carried-over [directly] to the previous period surplus reserve account, in accordance with paragraph 24 of decision 1/CMP.8.

28. Under the ‘Annual transactions’ section, each Annex I Party shall provide summary information on the transactions for the reported year and previously reported years for the commitment period:

- (a) For the reported year, each Party shall report the total quantities of Kyoto Protocol units, by type, from table 2 (c);
- (b) For all years prior to the reported year, the Party shall report the total quantities of Kyoto Protocol units, as reported in table 5 (a) in the previous SEF tables;
- (c) Under ‘Total’, each Party shall report the sum to date of all transactions.

#### **J. Table 5 (b). Summary information on expiry, cancellation and replacement**

29. In table 5 (b), Annex I Parties shall provide summary information relating to the replacement and cancellations of tCERs, ICERs and CERs from CCS project activity for each reported year for the commitment period.

30. For the reported year, each Annex I Party shall report:

- (a) Under ‘Requirement to replace or cancel’, the total quantities of tCERs, ICERs or CERs from CCS project activity that expired, were subject to a reversal of storage or to a non-submission of certification report in that year;
- (b) Under ‘Replacement’, the total quantities of Kyoto Protocol units, by type, cancelled to replace tCERs or ICERs. These quantities should match those reported under ‘Total’ in table 3;
- (c) Under ‘Cancellation’, the total quantities of Kyoto Protocol units, by type, cancelled to replace tCERs, ICERs or to respond to a reversal of storage or non-submission of certification report for a CCS project activity. These quantities should match those reported under ‘Total’ in table 3.

31. For all years prior to the reported year, the Annex I Party shall repeat the information under ‘Requirement to replace or cancel’ and under ‘Replacement’ and ‘Cancellation’ as reported in the previous SEF.

32. Under ‘Total’, each Annex I Party shall report the sum of each column. At the end of the commitment period, the total quantities of tCERs, ICERs and CERs from CCS project activity should match the total quantities of Kyoto Protocol units under ‘Replacement’ and ‘Cancellation’.

#### **K. Table 5 (c). Summary information on retirement**

33. In table 5 (c), Annex I Parties shall provide summary information on retirement to facilitate the compliance assessment at the end of the additional period for fulfilling commitments.

34. For the reported year, each Annex I Party shall report under ‘Retirement’, the total quantities of Kyoto Protocol units, by type, retired in that year for the purpose of demonstrating its compliance with its commitment under Article 3, paragraph 1, of the Kyoto Protocol. These quantities should match those reported under ‘Retirement’ in table 2 (a).

35. For all years prior to the reported year, the Annex I Party shall repeat the information as reported in the previous SEF.

36. Under ‘Total’, each Annex I Party shall report the sum of each column.

**L. Table 6. Memo item: Corrective transactions undertaken in the reported year**

37. In tables 6 (a) to (c), Annex I Parties shall report any corrective transactions undertaken in the reported year relating to previously reported years, including transactions to address a correction to the compilation and accounting database applied by the compliance committee, pursuant to paragraph 5 (b) in chapter V of the annex to decision 27/CMP.1. Note that quantities of Kyoto Protocol units reported here are included in the annual transactions reported in tables 2 and 3 and are reported in tables 6 (a) to (c) as a memo item for the purpose of transparency. Parties shall provide explanations for these transactions in accompanying text, as required by paragraph 8 of section E of the guidelines for reporting under Article 7 of the Kyoto Protocol.

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