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**AD HOC WORKING GROUP ON FURTHER COMMITMENTS
FOR ANNEX I PARTIES UNDER THE KYOTO PROTOCOL**

Seventh session

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Item 5 (b) of the provisional agenda

**Other issues arising from the implementation of the work programme of the Ad Hoc Working Group on
Further Commitments for Annex I Parties under the Kyoto Protocol**

Land use, land-use change and forestry

**Elaboration on how to address, where applicable, the definitions,
modalities, rules and guidelines for the treatment of
land use, land-use change and forestry**

Note by the Chair

Summary

This note contains further elaboration by the Chair of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) of options, elements and issues regarding the definitions, modalities, rules and guidelines for the future treatment of land use, land-use change and forestry (LULUCF) under the Kyoto Protocol.

The elaboration builds upon annex III to the report of the AWG-KP on the first part of its sixth session, annex IV to the report of the AWG-KP on its resumed fifth session and relevant information submitted by Parties. The note summarizes issues raised by Parties concerning the treatment of LULUCF, proposals for addressing those issues, and options for how these might be translated into definitions, rules and modalities in future commitment periods.

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I. Introduction

A. Mandate

1. The Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP), at its resumed sixth session,¹ recognized the need for further work to be conducted on the definitions, modalities, rules and guidelines for the treatment of land use, land-use change and forestry (LULUCF) in the second commitment period. This work will include in-depth consultations at its seventh session.
2. To facilitate these consultations, the AWG-KP requested its Chair to elaborate, taking into account decision 16/CMP.1, the options, elements and issues contained in:
 - (a) Annex III to the report of the AWG-KP on the first part of its sixth session (“Possible options for consideration relating to land use, land-use change and forestry”);²
 - (b) Annex IV to the report of the AWG-KP on its resumed fifth session (“Options and issues for consideration relating to land use, land-use change and forestry, compiled by the Chair of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol”);³
 - (c) The information submitted on a voluntary and informal basis to the secretariat;⁴
 - (d) Any further information submitted by Parties.⁵

B. Scope of the note

3. This note is not conceived of in terms of a negotiating text. However, the elaboration of the options, elements and issues could enable Parties to move rapidly towards the development of such a negotiating text.

C. Possible action by the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol

4. The AWG-KP may wish to consider the elaboration of the options, elements and issues contained in this note and advance in its work of clarifying how to address, where applicable, the definitions, modalities, rules and guidelines for the treatment of LULUCF, with a view to developing a text for adoption by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its fifth session.

II. Approach to the elaboration

5. The present definitions, rules and modalities for LULUCF, contained in the annex to decision 16/CMP.1, apply only to the first commitment period. The Chair has made every effort to advance all ideas and options in a balanced manner, to the extent possible given the diversity of input that could be drawn upon.
6. To facilitate the work of Parties, the information is presented in two annexes. Annex I provides a comprehensive list of issues raised and proposals suggested by Parties in the documents referred to in paragraph 2 above. In a table, each proposal is linked to the issue that it is intended to

¹ FCCC/KP/AWG/2008/8.

² FCCC/KP/AWG/2008/5.

³ FCCC/KP/AWG/2008/3.

⁴ Such information is posted at <http://unfccc.int/kyoto_protocol/items/4752.php>.

⁵ Twelve submissions have been received. They are contained in document FCCC/KP/AWG/2009/MISC.5.

address. The issues and proposals are also linked in the table to specific concrete options, described in annex II to this note. In addition, annex I provides a textual explanation of the issues and proposals identified.

7. As mentioned in paragraph 6 above, annex II contains packages of specific options identified for the treatment of LULUCF in the second commitment period, with the aim of reflecting the proposals and views provided by Parties in their submissions. It elaborates on the options listed in annex III to the report of the AWG-KP on the first part of its sixth session,⁶ and follows the same structure. Options 1, 2 and 3 in annex III, which presented different ways to address issues related to forest management, are now reformulated as a single option with multiple choices for forest management.

8. The Chair, acknowledging the importance and potential implications of the definitions, rules and modalities for LULUCF for the consideration of future commitments, and recalling the urgent need for progress made in this area to inform other areas of the AWG-KP work programme, urges Parties to progress towards a negotiation text.

9. This note is not intended to fully develop all aspects of the proposed possible changes to the rules and modalities of decision 16/CMP.1. Instead, the aim is to provide sufficient clarity so that Parties can use the note as a basis for their negotiating text. Although the list of proposals and options provided reflects the views of Parties and the discussions held by the Chair to date, it should not be seen to preclude the possibility of new options or proposals being taken into account if Parties wish to do so.

⁶ FCCC/KP/AWG/2008/5.

Annex I**Issues and proposals**

1. Based on the documents referred to in paragraph 2 of this note, the following is presented in tabular form in this annex (see table below):
 - (a) Issues for consideration and the proposals suggested to address them;
 - (b) The land use, land-use change and forestry (LULUCF) element, and the section of the annex to decision 16/CMP.1, that each proposal corresponds to;
 - (c) An indication of the alternative(s) within the packages of options presented in annex II to this note that would target each of the issues;
 - (d) The implications for continuity and consistency with the provisions contained in decision 16/CMP.1 for rules and modalities for definitions, reporting and reviewing (these may need further consideration).
2. A brief explanation of the issues and the proposals included in the table is also provided in subchapters A and B below.
3. The implications for the promotion of co-benefits, including protection of biodiversity, are not explicitly assessed.

Issues in land use, land-use change and forestry raised by Parties and proposals to address them

Corresponding section in decision 16/CMP.1, annex	LULUCF element(s) (activities and other elements)	Issue (problem to address)^a	Proposal^a	Need for new definition(s)	Implications for present reporting and reviewing provisions	Corresponding option(s) in annex II to this note
A. Definitions	Definition of deforestation	Land-use flexibility	Land-use flexibility fix	Yes	Yes	Option 1.A(b)1
B. Article 3, paragraph 3	Afforestation, reforestation, deforestation	Treatment of harvest (credit and debit rule)	Extend the afforestation/deforestation credit and debit rule	No	No	Option 1.B(c)
			Delete the afforestation/deforestation credit and debit rule	No	Yes	Option 1.B(b)
C. Article 3, paragraph 4	Forest management	Natural disturbances	Forward-looking baseline	No	Yes	Option 1.C.I.2.iii
			Carry-over system	No	Yes	Option 1.G.3(c)
			Global insurance mechanism	No	Yes	Option 1.G.3(c)
			Ex-post adjustment	No	Yes	Option 1.G.3(c)
			Caps	No	Yes	Options 1.C.I.1(b), 1.C.I.2.i(a)/ii(a)/iii(a)
			Discount factors (including symmetrical factors for emissions and removals)	No	Yes	Options 1.C.I.1(c), 1.C.I.2.i(c)/ii(c)/iii(c)
C. Article 3, paragraph 4	Forest management	Inter-annual variability	Temporary exclusion from the accounting of areas subjected to natural disturbances	No	Yes	Option 1.G.3(b)
			Forward-looking baseline	No	Yes	Option 1.C.I.2.iii
			Rolling average	No	Yes	Options 1.C.I.1(e), 1.C.I.2.i(e)/ii(e)/iii(e)
			Base period	Yes	Yes	Option 1.C.I.2.ii

Table (continued)

Corresponding section in decision 16/CMP.1, annex	LULUCF element(s) (activities and other elements)	Issue (problem to address)^a	Proposal^a	Need for new definition(s)	Implications for present reporting and reviewing provisions	Corresponding option(s) in annex II to this note
C. Article 3, paragraph 4	Forest management	Providing incentives for sustainable forest management	Gross-net with no caps	No	Yes	Option 1.C.I.1(b)
			Gross-net with a bar	No	Yes	Option 1.C.I.1(d)
			Gross-net with a discount factor	No	Yes	Option 1.C.I.1(c)
			Net-net approach	No	Yes	Option 1.C.I.2
			Forward-looking baseline	No	Yes	Option 1.C.I.2.iii
			Base period	Yes	Yes	Option 1.C.I.2.ii
C. Article 3, paragraph 4	Forest management	Addressing factoring out	Gross-net with caps (possible changes to caps)	No	No	Option 1.C.I.1(a)
			Gross-net with a discount factor	No	Yes	Option 1.C.I.1(c)
			Gross-net with a bar	No	Yes	Option 1.C.I.1(d)
			Net-net with a discount factor	No	Yes	Options 1.C.I.2.i(c)/ii(c)/iii(c)
			Net-net approach	No	Yes	Option 1.C.I.2
			Forward-looking baseline	No	Yes	Option 1.C.I.2.iii
C. Article 3, paragraph 4	Forest management, cropland management, grassland management, revegetation and any new activities	Enhancing the contribution to mitigation while ensuring inclusion of all anthropogenic emissions	All activities voluntary	No	No	Option 1.G.1(a)
			All activities compulsory	No	No	Option 1.G.1(c)
			Forest management compulsory, all other activities voluntary	No	No	Option 1.G.1(b)

Table (continued)

Corresponding section in decision 16/CMP.1, annex	LULUCF element(s) (activities and other elements)	Issue (problem to address)^a	Proposal^a	Need for new definition(s)	Implications for present reporting and reviewing provisions	Corresponding option(s) in annex II to this note
C. Article 3, paragraph 4	Adding new eligible activities	Including all anthropogenic emissions and ensuring symmetry in the accounting	Include vegetation management	Yes (replacing revegetation definition)	Yes	Option 1.C.II(c)
			Include wetlands management (restoration and degradation, peatland restoration)	Yes	Yes	Option 1.C.II(c)
			Include forest degradation	Yes	Yes	Option 1.C.II(c)
			Include devegetation	Yes	Yes	Option 1.C.II(c)
D. Article 12 ^b		Non-permanence				
E. General	Ensuring environmental integrity	Ensuring domestic action by Annex I Parties in non-LULUCF sectors	Limit the use of the LULUCF sector and/or LULUCF activities for compliance with commitments under Article 3.1 of the Kyoto Protocol		No	Option 1.E(b)
E. General	Including harvested wood products	Accounting for emissions from harvested wood products when they occur	Emissions to atmosphere approach		Yes	Option 1.G.2(c)
			Production approach		Yes	Option 1.G.2(c)
			Stock-change approach		Yes	Option 1.G.2(c)
			Atmospheric flow approach		Yes	Option 1.G.2(c)
			Applying different treatment than Intergovernmental Panel on Climate Change default to wood from Parties that report harvested wood products, assuming voluntary reporting		Yes	Option 1.G.2(c)
E. General		Complexity of the reporting	Simplification of the reporting	No	Yes	Option 1.G.4(b)
E. General		Activity-based treatment of LULUCF	Land-based approach	Yes	Yes	Option 2

^a The issues and proposals in the table are explained in paragraphs 4–43 of this annex.

^b Proposals and issues raised in relation to LULUCF activities under the clean development mechanism, including issues related to non-permanence, are included in document FCCC/KP/AWG/2009/INF.2.

A. Description of issues raised by Parties

4. **Land-use flexibility:** The current rules are said to limit land-use flexibility for planted production forests insofar as they do not allow for forest plantations to be harvested, converted to another use or “replaced” by an equivalent forest elsewhere without incurring liabilities for deforestation.
5. **Treatment of harvest:** The current “credit and debit” rule avoids accumulation of net debits from harvesting during the commitment period in lands subject to afforestation or reforestation (A/R) since 1990 (where removals on the same land are unaccounted for until the beginning of the commitment period under a gross-net approach).
6. **Natural disturbances:** Disturbances such as pest outbreaks, storms and fire resulting from extreme events leading to sudden or uncontrollable emissions which do not result from direct human-induced activities are to be excluded from LULUCF accounting, in accordance with Article 3, paragraphs 3 and 4, of the Kyoto Protocol.
7. **Inter-annual variability:** Inter-annual fluctuations in emissions and removals are often observed in relation to the LULUCF sector. The use of a single reference year does not allow such fluctuations to be smoothed out; nor does annual reporting.
8. **Providing incentives for sustainable forest management:** The current accounting approach of capping those emissions and removals that can be accounted for as a result of forest management under Article 3, paragraph 4, of the Kyoto Protocol does not provide incentives to improve forest management practices or to decrease emissions or increase removals beyond the pre-established cap.
9. **Addressing factoring out:** In accordance with the principles governing the treatment of LULUCF outlined in decision 16/CMP.1, paragraph 1, the mere presence of carbon stocks shall be excluded from accounting (to ensure additionality); and accounting shall exclude removals resulting from: (1) elevated carbon dioxide concentrations above their pre-industrial level; (2) indirect nitrogen deposition; and (3) the dynamic effects of age structure resulting from activities and practices before the reference year (factoring out indirect and non-anthropogenic effects).
10. **Enhancing the contribution to mitigation while ensuring inclusion of all anthropogenic emissions:** This refers to the need to account for all anthropogenic emissions when using LULUCF activities as a means to fulfill emission reduction commitments.
11. **Including all anthropogenic emissions and ensuring symmetry in the accounting:** Accounting for removals from revegetation, for example, also calls for accounting for emissions from devegetation, in order to balance the election of activities under Article 3, paragraph 4, and ensure symmetry in the accounting.
12. **Non-permanence:** The non-permanent nature of removals from the LULUCF sector is being addressed under the clean development mechanism (CDM) by using temporary units.
13. **Ensuring domestic action by Annex I Parties in non-LULUCF sectors:** This refers to the overall goal of promoting permanent emission reductions through improved technologies that lead to sustainable development decoupled from emissions growth.
14. **Accounting for emissions from harvested wood products (HWPs) when they occur:** Under the current default Intergovernmental Panel on Climate change (IPCC) approach, emissions from the harvesting of wood products are assumed to be instantly oxidized and released into the atmosphere. This may not accurately reflect the reality of wood products or provide incentives for sustainable forest management and timber production, for increasing the stock of HWPs or for producing wood products with a longer life.

15. **Complexity of the reporting:** Kyoto Protocol requirements for the provision of information on geographical identification of lands subject to LULUCF activities are resource-demanding. Furthermore, requirements to report deforestation may result in inaccurate reporting of annual changes in land use, since lands must be reported as deforested even if the land use changed during the commitment period.

16. **Activity-based treatment of LULUCF:** The activity-based approach to LULUCF under the Kyoto Protocol is said to result in complex rulings, accounting and monitoring requirements. The fact that reporting of greenhouse gas inventories under the Convention for this sector requires a different approach from the accounting under the Kyoto Protocol increases the burden on Annex I Parties.

17. In addition, there are two issues that need to be considered when assessing the proposals presented in this annex and the options presented in annex II to this note: the **continuity and consistency with the first commitment period definitions, rules and modalities**; and the **promotion of co-benefits**.

B. Description of Parties' proposals to address the issues raised

18. **No changes:** This would mean applying the provisions in decision 16/CMP.1 in the second and subsequent commitment periods. This proposal is not included in the table above, but is considered in the discussion of options in annex II to this note.

19. **Land-use flexibility fix:** This would allow conversion of planted production forests to non-forest land as long as an "equivalent forest" established elsewhere results in the same carbon stock over the same period; limited to planted production forests established on land not credited under Article 3, paragraph 3, of the Kyoto Protocol.

20. **Extend or delete the afforestation/deforestation credit and debit rule:** If extended, the rule would continue to be applied until most of any forests established after 31 December 1989 had been harvested once. If the rule were deleted, Parties would have to account for net debits resulting from harvesting during the commitment period, even though the credits for the carbon that had accumulated since the establishment of the forest and until the beginning of the commitment period as a result of A/R since 1990 on that unit of land would not be accounted for.

21. **Forward-looking baseline:** Emissions and removals that occurred in the commitment period, minus the effects of natural disturbances, would be compared with a previously established or approved business-as-usual baseline, incorporating information on age-class structure, growth rates, expected management, policies, forecasts, history, and so forth.

22. **Temporary exclusion from the accounting of areas subjected to natural disturbances:** Land areas affected by natural disturbances would be temporarily excluded from accounting – excluding both emissions and subsequent removals. A variation of the proposal suggested is to allow Parties to choose whether to include or exclude in their accounts emissions and subsequent removals on lands subject to a major natural disturbance event.

23. **Ex-post adjustment:** Emissions due to natural disturbances would be deducted, and the LULUCF emissions and removals balance of a Party would be adjusted accordingly at the end of the commitment period. Areas subject to natural disturbances would be identified, and subsequent removals from those lands would be accounted for only when adjustment had been compensated.

24. **Carry-over system:** Instead of exempting emissions from natural disturbances from their accounting, Parties could spread them over several accounting years and/or commitment periods.

25. **Global insurance mechanism:** All Parties selecting to account for forest management under Article 3, paragraph 4, of the Kyoto Protocol would set aside part of the removals from this activity in a global pool. Parties suffering from an extreme event would be eligible for credits from this pool as

partial or total compensation for the exceptional emissions. Unused credits at the end of the commitment period would be returned to Parties or carried over to the following commitment period.

26. **Base period:** Instead of a single base year, the average annual emissions or removals from a period of five or 10 years, for example, would be used as the reference or baseline. This would smooth out the effect of inter-annual fluctuations and disturbances.
27. **Rolling average:** Instead of actual year estimates, this approach would allow Parties that estimate emissions and removals using annual climate data to account for them using a rolling or moving average. A rolling average could be used for any activity (not only forest management).
28. **Gross-net with no caps:** This would remove any predetermined limit to the emissions and removals from forest management that can be accounted for in the commitment period.
29. **Gross-net with caps (possible changes to caps):** This retains the capped approach to the removals and emissions that each Annex I Party may account for as a result of forest management in the commitment period. However, the caps could be updated or reviewed.
30. **Gross-net with a discount factor:** Emissions and removals from forest management would be discounted at the end of the commitment period by a predetermined factor to address age-class structure and indirect effects. This is distinct from a cap, in that it would provide incentives for improved management as accounting is not capped.
31. **Gross-net with a bar:** A pre-established bar would determine the minimum net removals a Party must attain, but all net removals beyond the bar would be creditable. Efforts leading to higher removals would result in more credits, thus providing incentives to improved management.
32. **Net-net approach:** Emissions and removals would be accounted for both in the base year or period and during the commitment period.
33. **All activities voluntary:** This would retain the current approach, whereby each Party may decide which of the activities under Article 3, paragraph 4, of the Kyoto Protocol to account for – if any (with the exception of those activities already accounted for in the first commitment period).
34. **All activities compulsory:** All emissions and removals from activities under Article 3, paragraph 4, would be accounted for.
35. **Forest management compulsory, all other activities voluntary:** Forest management would become mandatory, while additional activities would remain voluntary under Article 3, paragraph 4.
36. **Include wetlands management:** This would provide incentives for increasing removals and decreasing emissions through wetlands restoration, for example (with side-benefits such as increased biodiversity). Wetlands degradation would be included alongside restoration under wetlands management to ensure symmetry in the accounting.
37. **Include forest degradation:** When the land area reported under forest management is smaller than the total area of managed forest, degradation of forests could be omitted from the accounting. Including it as an additional activity under Article 3, paragraph 4, alongside forest management would remove the potential for imbalance.
38. **Include devegetation (vegetation management):** This would provide balance and symmetry in the accounting when included alongside revegetation under Article 3, paragraph 4 (for the same reasons for including forest degradation).
39. **Simplification of the reporting:** The existing provisions to specify the geographical location of a LULUCF activity could be replaced by criteria or indicators, which could serve as proof of the

implementation of specific types of human activities in the LULUCF sector, and reflect land-use change when it occurs.

40. **Limit the use of the LULUCF sector and/or LULUCF activities for compliance with commitments under Article 3, paragraph 1, of the Kyoto Protocol:** There would be a limit on the number of credits generated from LULUCF activities that are fungible for compliance with commitments under the Kyoto Protocol.

41. **Ways to address non-permanence under the CDM:** Proposals and issues raised in relation to LULUCF activities under the CDM related to non-permanence are included in document FCCC/KP/AWG/2009/INF.2.

42. Other than extending the application of the IPCC default approach by which all carbon from biomass harvested is oxidized in the removal year (see para. 14 above), proposals to address emissions from HWPs include:

- (a) **Production approach:** This would estimate the net changes in carbon stocks in the forest(s) and in the wood-products pool due to harvesting, and attribute both to the producing country. Stock changes would be accounted for when, but not where, they occurred. A variant of the production approach is the so-called simple-decay approach, which uses emission factors to account for the decomposition of carbon in HWPs;
- (b) **Stock-change approach:** This would also estimate the net changes in carbon stocks in the forest(s) and in the wood-products pool. However, changes in carbon stock in forests would be accounted for in the country where the wood was produced, while changes in the products pool would be accounted for in the country where the products were used. These stock changes would be accounted for within national boundaries, where and when they occurred;
- (c) **Atmospheric flow approach:** This would account for the net emissions or removals of carbon to and from the atmosphere within national boundaries, where and when emissions and removals occurred. Removals of carbon from the atmosphere due to forest growth would be accounted for in the producing country, and emissions of carbon to the atmosphere from oxidation of wood products would be accounted for in the consuming country;
- (d) **Emissions to atmosphere approach:** Where reliable data existed, Parties could account for emissions resulting from harvesting of their forests on the basis of estimates of when emissions occurred. The responsibility for emissions would remain with the wood-producing country, regardless of whether the harvested wood was exported (carbon in the exported wood could be transferred to a harvested wood products pool to be accounted for by the Party producing the wood);
- (e) **Applying different treatment than IPCC default to wood from Parties that report HWPs, assuming voluntary reporting:** Any approach to address emissions from HWPs could be restricted to Parties reporting such emissions as part of their voluntary reporting, while the IPCC default approach would remain for other Parties.

43. **Land-based approach:** Instead of specific activities being defined, LULUCF would be treated like other sectors in Annex A to the Kyoto Protocol. All emissions and removals would be accounted as reported in Parties' national greenhouse gas inventories.

Annex II

Further elaboration of options

1. This annex provides two sets of choices for the future definitions, rules and modalities for land use, land-use change and forestry (LULUCF), in order to resolve the issues identified in annex I to this note. Option 1 presents an activity-based approach with multiple alternatives reflecting the different proposals outlined in annex I; Option 2 presents a land-based approach, based on reporting under the Convention.
2. Under both options, the principles contained in decision 16/CMP.1, paragraph 1, would be retained with or without revisions. Sections, paragraphs and the appendix mentioned in the options refer to the annex to decision 16/CMP.1.
3. Both options require choices to be made; most of the choices can be seen as mutually exclusive.

Option 1

A. Definitions

- a) No changes;
- b) Definitions remain as in the annex to decision 16/CMP.1:
 1. Except for the definition of deforestation, which is amended to provide for land-use flexibility;
 2. Other definitions added to accommodate additional activities under Article 3.4¹ as required (options proposed for consideration are: wetlands degradation and restoration; forest degradation or amending the definition of forest management; and devegetation). If this option is chosen, section C below will need to be amended accordingly.

B. Article 3, paragraph 3

- a) No changes;
- b) No changes except deleting the afforestation and reforestation (A/R) credit and debit rule;
- c) No changes except extending the A/R credit and debit rule.

C. Article 3, paragraph 4

I. Forest management

1. Gross-net

- a) No changes;
- b) Amend to remove references to “the appendix” (i.e. remove the caps);
- c) Amend to remove references to “the appendix” and replace the appendix with a discount factor/discount factors;
- d) Amend to remove references to “the appendix” and replace the appendix with a bar/bars;

¹ In this annex, “Article 3.4” refers to Article 3, paragraph 4, of the Kyoto Protocol.

- e) Amend to remove references to “the appendix” and insert provisions for using a rolling average.

2. Net-net

i. With base year:

Amend current paragraph 9 to include forest management and:

- a) Leave caps in place (current para. 11);
- b) Amend to remove references to “the appendix” (i.e. remove the caps);
- c) Amend to remove references to “the appendix” and replace the appendix with a discount factor/discount factors;
- d) Amend to remove references to “the appendix” and replace the appendix with a bar/bars;
- e) Amend to remove references to “the appendix” and insert provisions for using a rolling average.

ii. With base period:

Amend to include provisions for how a Party is to establish a base period for forest management in which anthropogenic emissions and removals will be assessed, and for how anthropogenic emissions and removals from forest management during the subsequent commitment period will be assessed against the base period, and:

- a) Leave caps in place (current para. 11);
- b) Amend to remove references to “the appendix” (i.e. remove the caps);
- c) Amend to remove references to “the appendix” but replace the appendix with a discount factor/factors);
- d) Amend to remove references to “the appendix” and replace the appendix with a bar/bars;
- e) Amend to remove references to “the appendix” and insert provisions for using a rolling average.

iii. With forward-looking baseline:

Amend to include provisions for how a Party is to establish a forward-looking baseline for forest management to assess emissions and removals, and how anthropogenic emissions and removals from forest management during the subsequent commitment period will be assessed against the baseline. Amend to establish how the baseline or the emissions and removals in the commitment period will be revised in response to “natural disturbances” and how any such revisions will be monitored and treated in future accounting periods, and:

- a) Leave caps in place (current para. 11);
- b) Amend to remove references to “the appendix” (i.e. remove the caps);
- c) Amend to remove references to “the appendix” and replace the appendix with a discount factor/factors;
- d) Amend to remove references to “the appendix” and replace the appendix with a bar/bars;

e) Amend to remove references to “the appendix” and insert provisions for using a rolling average.

II. Other activities (existing activities are cropland management, grassland management and revegetation):

a) No changes;

b) Net-net approach for cropland management, grassland management and revegetation with base period;

c) Inclusion of new activities (wetlands management, devegetation, vegetation management or forest degradation):

i. With a base year;

ii. With a base period.

D. Article 12

1. Activities:

a) No changes;

b) Inclusion of other activities (forest management, cropland management, grassland management, revegetation and/or agricultural soil management).

2. Non-permanence:

a) No change (use of temporary units);

b) Other ways to address non-permanence than temporary units (liability assumed by host country, buffers, insurance, credit reserves, permanence for low-risk activities, etc.)

E. General

a) No changes;

b) Limit the fungibility of removal units with assigned amount units.

F. APPENDIX

a) No changes;

b) Change the figures in the appendix;

c) Delete the appendix;

d) Delete the appendix and replace it with a discount factor/discount factors;

e) Delete the appendix and replace it with a bar/bars.

G. OTHER ISSUES

1. Voluntary versus compulsory:

a) Clarify that all activities under Article 3.4 remain voluntary (except where a Party has accounted for an activity in the first commitment period);

- b) Clarify that accounting for forest management shall be compulsory but other activities under Article 3.4 remain voluntary (except where a Party has accounted for an activity in the first commitment period);
 - c) Clarify that accounting for all activities under Article 3.4 shall be compulsory.
2. Harvested wood products (HWPs) or emissions from wood removed from an area of forest:
- a) Do not account for;
 - b) Amend section E of this option to allow a delay in the accounting of emissions from wood removed from an area of forest subject to accounting under Articles 3.3 or 3.4;
 - c) Create provisions for including carbon stock changes from HWPs in the accounting. Possible approaches include: the stock-change approach, the production approach, the atmospheric flow approach and the emissions to atmosphere approach. These approaches could be restricted to Parties reporting emissions from HWPs as part of their voluntary reporting, while the Intergovernmental Panel on Climate Change default approach would remain for other Parties.
3. Natural disturbances:
- a) No additional measures to address natural disturbances;
 - b) Temporary exclusion from the accounting of areas subjected to natural disturbances;
 - c) Consider options for addressing natural disturbances and implement as appropriate (e.g. carry-over system, global insurance mechanism or ex-post adjustment).
4. Simplification of reporting:
- a) No changes;
 - b) Consider changes such as replacing existing provisions for reporting on geographical location with criteria or indicators which can serve as proof of the implementation of specific human activities in the LULUCF sector and reflect land use when it occurs.

Option 2

A. Definitions

Delete.

B. Article 3, paragraph 3

Delete.

C. Article 3, paragraph 4

Delete.

D. Article 12

Same as Option 1, and definitions would need to be created for any LULUCF activities available under Article 12.

E. General

Delete.

APPENDIX

Delete.

OTHER ISSUES

Article 3.3 of the Kyoto Protocol

Delete.

Article 3.4 of the Kyoto Protocol

Delete.

Article 3.7 of the Kyoto Protocol

Amend to provide for how land-based accounting will be incorporated into the establishment of assigned amount.

Annex A to the Kyoto Protocol

Amend to incorporate land-based accounting.

Decision by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol

Include provisions for the treatment of land-based emissions and removals being incorporated into Annex A to the Kyoto Protocol.

Amend other decisions dealing with reporting of LULUCF activities, including decision 17/CMP.1.

Harvested wood products or emissions from wood removed from an area of forest

Same as Option 1.

Natural disturbances

Same as Option 1.
