



## CAN Feb 15 LULUCF Submission

February 23, 2009

The Climate Action Network<sup>1</sup> submits the following in response to paragraph 8(b) of the conclusions on Land use, land-use change and forestry (LULUCF) of the sixth session of the AWG-KP held in Poznan, which invites Parties to submit their views on, *inter alia*, “The definitions, modalities, rules and guidelines for the treatment of land use, land-use change and forestry (LULUCF) in the second commitment period.” CAN respectfully requests that the AWG-KP accept our views along with those of Parties in response to this invitation.

Our submission is focused on incremental changes to definitions, modalities, rules and guidelines for the treatment of LULUCF that are essential to strengthening the environmental integrity of the Kyoto Protocol. The submission lays out several high-level principles before offering comments and recommendations regarding each of the major issues and considerations laid out in the draft Conclusions from the Chair on LULUCF in Accra.<sup>2</sup>

CAN believes that the principles decided as part of the Marrakesh Accords should continue to govern the treatment of LULUCF.<sup>3</sup> We propose additional principles to guide the incremental *changes* to LULUCF proposed in this submission:

- ***That consistent and transparent rules should apply to all Annex 1 Parties***

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<sup>1</sup> WWF is in the process of developing its position on rules for Annex I LULUCF and is therefore not included within this submission

<sup>2</sup> UNFCCC. Land use, land-use change and forestry. Draft conclusions proposed by the Chair. August 27, 2008. FCCC/KP/AWG/2008/L.11. <http://unfccc.int/resource/docs/2008/awg6/eng/111.pdf>

<sup>3</sup> [The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol....]

1. Affirms that the following principles govern the treatment of land use, land-use change and forestry activities:

- (a) That the treatment of these activities be based on sound science
- (b) That consistent methodologies be used over time for the estimation and reporting of these activities
- (c) That the aim stated in Article 3, paragraph 1, of the Kyoto Protocol not be changed by accounting for land use, land-use change and forestry activities
- (d) That the mere presence of carbon stocks be excluded from accounting
- (e) That the implementation of land use, land-use change and forestry activities contributes to the conservation of biodiversity and sustainable use of natural resources
- (f) That accounting for land use, land-use change and forestry does not imply a transfer of commitments to a future commitment period
- (g) That reversal of any removal due to land use, land-use change and forestry activities be accounted for at the appropriate point in time
- (h) That accounting excludes removals resulting from: (i) elevated carbon dioxide concentrations above their pre-industrial level; (ii) indirect nitrogen deposition; and (iii) the dynamic effects of age structure resulting from activities and practices before the reference year; [Document number FCCC/KP/CMP/2005/8/Add.3]

- *That coverage should be broadened to include major sources of emissions not currently included*
- *That Parties should take greater accounting responsibility for LULUCF emissions*
- *That LULUCF credits must not undermine or substitute for significant investments and efforts required to reduce industrial greenhouse gas emissions; significant emissions reductions are required in all sectors.*
- *That the rules should be designed to induce Parties to employ mitigation approaches that are appropriate to their landscape context considering carbon stocks, emissions and biodiversity: They should encourage protection of carbon stocks in primary, intact forests and peatlands; restoration of carbon stocks in degraded landscapes, and reduction of emissions from deforestation, degradation and land use change in landscapes subject to ongoing clearing and degradation.*
- *LULUCF negotiations should aim to create clear and fair accounting of major emissions/removals*
- *Emission reduction commitments for the second commitment period must be based on an understanding of the impact on credits of new LULUCF rules. These impacts will vary between Parties and this should be taken into account.*

### **Forest Landscape Context**

CAN acknowledges the very useful draft report of the Convention on Biological Diversity's Ad-Hoc Technical Expert Group on Biodiversity and Climate Change.<sup>4</sup> The AHTEG draft report is fundamentally germane to LULUCF. Table 2 of the draft AHTEG report illustrates the relative benefits of primary forests, modified natural forests and plantations for their carbon stocks, carbon sequestration potential, biodiversity value and the value of ecosystem services.

CAN strongly agrees with the draft AHTEG report's conclusion that the appropriateness of LULUCF mitigation activities should be viewed in light of different forest landscape contexts:

- Largely intact forested landscapes: Avoiding emissions by protecting carbon stocks
- Landscapes in which forests have already been largely cleared and degraded: Growing new carbon stocks
- Forested landscapes subject to ongoing clearing and degradation: reducing emissions from deforestation, degradation and land-use change, including through sustainable forest management

CAN further believes that the emphasis should be focused on protecting carbon stocks in largely intact forested landscapes, wherever this exists. This belief is supported by the Intergovernmental Panel on Climate Change's finding in its Fourth Assessment Report that

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<sup>4</sup> Secretariat of the Convention on Biological Diversity. Draft Findings of the Ad Hoc Technical Expert Group on Biodiversity and Climate Change. <https://www.cbd.int/doc/meetings/cc/ahteg-bdcc-01/other/ahteg-bdcc-01-findings-en.pdf>

“reduced deforestation and degradation is the forest mitigation option with the largest and most immediate carbon stock impact in the short term per ha and per year globally.”<sup>5</sup>

*Recommendations:*

- ***Changes to LULUCF rules should induce Parties to maximize benefits to carbon storage, sequestration potential, biodiversity and ecosystem services by employing the mitigation approaches appropriate to the forest landscape context, while at the same time inducing Parties to avoid the conversion of primary forests to modified natural forests, and the conversion of forests to plantations.***

## Definitions

CAN observes that several definitions are key to the effective functioning of LULUCF under the current rules and with some new added activities. These include ‘forest,’ ‘peatland degradation,’ ‘peatland restoration,’ ‘forest degradation,’ and ‘devegetation.’ CAN proposes that the UNFCCC should request the IPCC to periodically review and update these definitions, using the best available science. CAN acknowledges that land-use decisions are driven by factors that are constantly changing; furthermore, our understanding of the impacts continues to change and improve over time. As a result, CAN feels that the process of review needs to be adaptive, but should be transparent, should use the best available information, and should have the authority to call for new information when necessary. Meanwhile, CAN proposes several new LULUCF definitions and makes recommendations for solving the problems with the current definition of ‘forest’.

*Regarding the Definition of Forest:* There are several problems with the current use of the FAO definition of ‘forest’ within the Kyoto Protocol<sup>6</sup>:

- It does not separate plantations from natural forests
- It explicitly excludes ‘temporarily de-stocked’ forests from accounting without defining ‘temporary’
- It sets the bar for deforestation so low that in many biomes ecosystem collapse will have occurred long before the threshold is reached.
- It cannot be used to address degradation issues.

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<sup>5</sup> Nabuurs, G.J., O. Masera, K. Andrasko, P. Benitez-Ponce, R. Boer, M. Dutschke, E. Elsiddig, J. Ford-Robertson, P. Frumhoff, T. Karjalainen, O. Krankina, W.A. Kurz, M. Matsumoto, W. Oyhantcabal, N.H. Ravindranath, M.J. Sanz Sanchez, X. Zhang, 2007: Forestry. In *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Page 550

<sup>6</sup> “Forests are lands of more than 0.5 hectares, with a tree canopy cover of more than 10 percent, which are not primarily under agricultural or urban land use.” Food and Agriculture Organization of the United Nations. *Terms and Definitions (Final Version)*. 2005. Global forest resources assessment update. <http://www.fao.org/docrep/006/ad665e/ad665e03.htm#TopOfPage>

CAN believes that a new or modified definition of forest is required that separates plantations from natural forests and acknowledges the continuum of land uses.

The problems associated with this definition could also be overcome for accounting purposes by using a finer subset of functional definitions in use by the FAO: primary forests<sup>7</sup>, modified natural forests<sup>8</sup>, and plantations<sup>9</sup>.

*Proposed Definition of Forest Degradation:* CAN has defined forest degradation as “direct human-induced reduction in the natural carbon carrying capacity<sup>10</sup> and carbon stocks of natural ecosystems.” Degradation is defined in the Chair’s Summary of Key Messages from the Informal Meeting of Experts on Methodological Issues Relating to Reducing Emissions from Forest Degradation in Developing Countries: “In the context of UNFCCC, forest degradation leads to a decline of carbon stocks.”<sup>11</sup>

Although some forest degradation may occur as a result of ‘sustainable forest management’ in modified natural forests, CAN believes it is most important to capture the impacts on carbon stocks and biodiversity from activities in primary forests and the conversion of primary forests and modified natural forests to plantations. In support of this, two new activities could be defined:

- “Forestry in primary forests”
- “Forest conversion to plantations”

*Proposed Definition of Devegetation:* The direct human-induced conversion of other vegetated land to nonvegetated land. (*Deforestation* equivalent).

*Proposed Definition of Peatland degradation:* Any on-site or off-site activity that negatively impacts the peatland’s function as carbon store or ability to sequester carbon and greenhouse gases such as conversion or reclamation to agriculture, agroforestry or forestry that involve enhanced drainage or artificial inundation, removal of natural

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<sup>7</sup> “Forest/Other wooded land of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.” Food and Agriculture Organization of the United Nations. Terms and Definitions (Final Version). 2005. Global forest resources assessment update. [http://www.fao.org/docrep/007/ae156e/AE156E03.htm#P554\\_25807](http://www.fao.org/docrep/007/ae156e/AE156E03.htm#P554_25807)

<sup>8</sup> “Forest/Other wooded land of naturally regenerated native species where there are clearly visible indications of human activities.” Ibid.

<sup>9</sup> “Forest/Other wooded land of introduced species and in some cases native species, established through planting or seeding mainly for production of wood or non wood goods.” Ibid.

<sup>10</sup> Carbon carrying capacity (CCC) is defined as the mass of carbon able to be stored in a forest ecosystem under prevailing environmental conditions and natural disturbance regimes, but excluding anthropogenic disturbance; See Gupta, R.K. & Rao, D.L.N. (1994) Potential of wastelands for sequestering carbon by reforestation. *Current Science*, 66, 378–380.

<sup>11</sup> Informal Meeting of Experts on Methodological Issues relating to Reducing Emissions from Forest Degradation in Developing Countries. Chair’s Summary of Key Messages from the Meeting. 20 – 21 October 2008, Bonn, Germany ([http://unfccc.int/files/methods\\_science/redd/application/pdf/chair\\_summary\\_of\\_meeting.pdf](http://unfccc.int/files/methods_science/redd/application/pdf/chair_summary_of_meeting.pdf))

vegetation, mining, or other activities that impact on the eco-hydrology of the peatland [adapted from the Ramsar Convention on Wetlands (Iran 1972)].

*Proposed Definition of Peatland restoration:* Any on-site or off-site activity that positively impacts the ability of a degraded peatland to function as carbon store or its ability to sequester or capture carbon and greenhouse gases or any other of its natural functions and values [adapted from the Ramsar Convention on Wetlands (Iran 1972)].

Finally, CAN believes that the existing definition of deforestation should not be amended to provide for land-use flexibility. Land-use flexibility represents the type of inconsistency of rules that could lead to gaming of the system.

*Recommendations:*

- ***Replace or modify the current definition of forest to address its significant shortcomings.***
- ***Adopt three definitions of broad forest types to facilitate forest degradation accounting: primary forest, modified natural forest and plantation.***
- ***Adopt new definitions for forest degradation, peatland degradation, peatland restoration and revegetation***
- ***Request the IPCC to periodically review these definitions***
- ***Do not amend the definition of deforestation to account for land-use flexibility***

### **Land-based accounting**

CAN believes that accounting of all carbon fluxes is an appropriate conceptual goal, but one that is not practically achievable at this time. Existing technical shortcomings currently preclude the adoption of fair, transparent and accurate land-based LULUCF accounting in the context of a global carbon framework.

CAN believes that a transition away from an activities-based approach to a 'land-based approach' would be dependent on a number of conditions that do not currently exist, for example:

- A clear proposal of how this approach would work
- Experience in using the approach
- Demonstration that it would not destabilize accounting or compliance
- Completeness of data and accuracy of models

It is not possible to meet these conditions for the second commitment period. In the meantime, the fragmentation and asymmetries in the current system that lead to imbalanced accounting need to be fixed. Increased coverage of the LULUCF sector should be achieved through the incremental addition of the new activities put forward in the next section of this submission.

Should the necessary conditions for scientifically credible land-based accounting become available, the issue could be revisited in the future and a more informed decision can be made.

*Recommendations:*

- ***An incremental increase in the coverage of LULUCF accounting should be achieved for the second commitment period by adding the new activities proposed in this submission.***
- ***The land-base approach must be fully tested and refined before it can be considered.***

### **New Activities**

Current LULUCF accounting under Articles 3.3 and 3.4 entirely misses significant sources of emissions, for example, the 930 Mt of annual CO<sub>2</sub> emissions from peat resulting from drainage in Annex 1 countries.<sup>12</sup>

CAN proposes that increased LULUCF coverage can be achieved by the incremental addition of the following new activities that either represent significant emissions or are required to balance asymmetries in the current accounting approach.

#### **Peatland degradation**

Peatland degradation is a significant source of emissions that is only partially captured by current accounting approaches. Substantial accounting of emissions from peatland degradation on lands covered by existing activities (deforestation, afforestation, reforestation, forest management, cropland management and grazing land management) could be accomplished by using the 2006 IPCC good practice guidelines for accounting changes in soil carbon stocks.

However, the 2006 IPCC guidelines do not address several emissions sources:

- Emissions from fires resulting from drainage
- Emissions and removals from wetland restoration
- Emissions from peat extracted for non-energy purposes
- Emissions from non-drainage impacts such as the hydrological impacts resulting from forest management.<sup>13</sup>

Approaches should be developed to estimate emissions from these sources.

Emissions from wetlands that are not converted to other land uses would still not be captured under the augmented accounting approach described above. An additional category of activity

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<sup>12</sup> Prof. H. Joosten, University of Greifswald, 2009, personal communication.

<sup>13</sup> C. Henschel, M. Ward, S. Rueter, R. Ashton, N. Bird, D. Frieden, A. Lehtonen, B. Schlamadinger, M. Silvius, A. Tuerk, G. Zanchi. Options for improving the treatment of LULUCF in a Copenhagen agreement: forest and wetland degradation, factoring out, harvested wood products, and approaches for fuller accounting. ClimateStrategies Working Paper, August 18, 2008.

should therefore be created for emissions from peatland degradation in wetlands that remain wetlands.

CAN is promoting a narrower focus on peatlands rather than wetlands because it is our impression that fluxes are most significant and best understood for this class of wetland.

*Recommendations:*

- ***Accounting for peatland degradation in forests, croplands and grasslands should be achieved by using Tier 3 methodologies described in the 2006 IPCC Good Practice Guidelines for carbon stock changes, including organic soils.***
- ***Accounting for peatland degradation in wetlands remaining wetlands should be added as an additional activity.***
- ***Approaches should be developed to estimate emissions from sources for which the 2006 IPCC Good Practice Guidelines have not provided methodologies.***

### **Peatland Restoration**

While peatland restoration can be used to sequester carbon in organic peat soils, the principle purpose of peatland restoration is to stem continued significant emissions from drained peatlands. Inclusion of peatland restoration could be accomplished in the same way as peatland degradation. However, it should be noted that peatland restoration is one of the activities for which the 2006 IPCC Guidelines do not provide methodologies.

*Recommendations:*

- ***Peatland restoration should be added as a new activity.***
- ***Approaches should be developed to estimate emissions/removals from peatland restoration.***

### **Forest Degradation**

Forest degradation is common in at least some Annex 1 Parties. A consequence of some forest management and other activities, emissions from forest degradation are only captured by Parties that have elected to account for this activity.

Although many forest management practices may lead to long term decreases in forest carbon stocks, CAN is most concerned about the large emissions and significant biodiversity impacts that result when primary forests are converted to modified natural forests or when either of these forest types are converted to plantations. Forest degradation could therefore largely be captured by adding two new activities that would be accounted separately from the existing forest management activity:

- “Forestry in primary forests”
- “Forest conversion to plantations”

The FAO has defined each of these terms (primary forests, modified natural forests, plantations) and Parties should be able to operationalize their use to measure and account for carbon stock changes resulting from these activities.

Another idea worthy of consideration is the separation of forest management emissions from forest management removals. This would result in greater transparency of emissions and therefore greater incentive to reduce them. Forest management could be split into the activities of ‘forest management emissions’ and ‘forest management removals’.

CAN notes that one of the challenges to accurately capturing emissions from forest degradation is the use of lower tier methodologies for forest management reporting. It should be a requirement that Tier 3 methodologies be used by Parties to account for emissions from forest degradation and/or emissions/removals from forest management.

*Recommendations:*

- ***Separate “forestry in primary forests” and “forest conversion to plantations” from “forest management” as new activities under Article 3.4.***
- ***The use of Tier 3 methodologies should be required for ‘forestry in primary forests,’ ‘forest conversion to plantations’ and forest management.***

### **Devegetation**

CAN supports the addition of this new activity to balance the existing activity of revegetation.

*Recommendations:*

- ***Add devegetation as a new activity.***

### **Voluntary versus mandatory accounting**

Voluntary accounting allows for windfall credits to accrue to some Parties while allowing other Parties to opt out of provisions that are inconvenient for them, and for these reasons it would be highly advantageous to devise an accounting system that could provide for participation from all Parties, without providing unreasonable advantages or disadvantages to any Party.

CAN believes that accounting should be mandatory for all LULUCF activities giving rise to significant emissions, particularly when such activities result in significant negative impacts to biodiversity and reduce the resiliency of ecosystems in the face of climate change.

Therefore, the following new activities proposed in this submission should be mandatory:

- Peatland degradation
- Forest degradation (“forestry in primary forests” and “forest conversion to plantations”)

- Devegetation if revegetation is accounted

One way to make emissions accounting from these activities mandatory would be to include them in a Party's aggregate anthropogenic greenhouse gas emissions (Annex A).

It is CAN's view that mandatory accounting of forest management is an appropriate conceptual goal, but would only be supportable if several issues are satisfactorily resolved, such as factoring out natural disturbances, indirect climate effects and age class effects (see full discussion of factoring out below). Some of the solutions to factoring out proposed by Parties would be undesirable and the system would be weakened by mandatory forest management achieved at the cost of implementing such solutions.

Another challenge to the acceptance of mandatory forest management accounting is the effect of new rules on Party compliance. The split in support between net-net and gross-net accounting strongly suggests that some Parties will benefit more from one approach and some more from the other. This also applies more broadly: the relative benefit/cost of many rule changes will vary between Parties. It is important that all Parties are mindful of these effects. The best way to overcome this problem is to ensure that emission reduction commitments for the second commitment period are based on an understanding of the impact on credits of new LULUCF rules. The relative impact of the agreed rules for LULUCF should be reflected in the targets expected of each Party.

*Recommendations:*

- ***Accounting of emissions from the new activities of "forestry in primary forests," "forest conversion to plantations," [forest degradation] and peatland degradation should be mandatory***
- ***Accounting of emissions from the new activity of devegetation should be mandatory if revegetation is elected***
- ***Mandatory accounting could be achieved by listing emissions from mandatory activities in Annex A of the Kyoto Protocol***
- ***Further investigation on outstanding issues associated with accounting forest management should be undertaken to ensure the environmental integrity of the system is maintained or improved.***
- ***Emission reduction commitments for the second commitment period must be based on an understanding of the impact on credits of new LULUCF rules. These impacts will vary between Parties and this should be taken into account.***

### **Factoring out and natural disturbances**

CAN acknowledges three distinct factoring out issues: dynamic effects of age structure resulting from activities and practices before the reference year, indirect climate effects (e.g. CO<sub>2</sub> fertilization, nitrogen deposition, etc) and natural disturbances. While factoring out of natural disturbances may be methodologically possible, factoring out of age class effects and indirect

climate effects would be more difficult. Whereas natural disturbances could perhaps be directly factored out, indirect climate effects, for example, may require recourse to a proxy measure such as the current cap or a discount.

CAN agrees with the view expressed by some Parties that it is not all natural disturbances, but *extreme* disturbances that require a factoring out solution. CAN accepts that the volatility, unpredictability, and magnitude of emissions associated with extreme natural disturbances would make compliance unfairly difficult for some Parties under forest management accounting. Having said that, CAN notes that it is the *compliance risk* that is the issue and not the accounting of the emissions per se. The climate and the climate regime will benefit from a more inclusive coverage of emissions.

A robust approach to factoring out natural disturbances should have a number of important characteristics including, *inter alia*, the following:

- A solution would most appropriately focus on decreasing compliance risk rather than removing emissions from accounting
- Only extreme natural disturbances that could not have been predicted *ex-ante* should be eligible for factoring out
- Extreme natural disturbances should be factored out *ex-poste*, based on actual data and measurement
- Effective governance and independent oversight and verification is required
- Factoring out should only be available to Parties using Tier 3 methodologies
- Factoring out must be transparent and the approach consistent across Parties

Unfortunately none of the proposals that had been circulated as of Poznan – including the use of caps, temporary removals and forward-looking baselines with withdrawals – have all of these important characteristics.

*Recommendations:*

- ***Focus a factoring out solution for natural disturbances on extreme events that could not have been predicted ex-ante.***
- ***Focus a factoring out solution for natural disturbances on decreasing compliance risk, rather than on excluding emissions from accounting.***
- ***A natural disturbance factoring out approach should have a number of additional characteristics such as consistency, transparency, effective governance and independent oversight, the use of Tier 3 methodologies, and a reliance on actual data to factor out disturbances ex-poste.***

## Gross-net versus net-net accounting

It is clear from the Secretariat's technical paper<sup>14</sup> and from the European Union's two previous submissions<sup>15</sup> that gross-net and net-net accounting can be made more or less equivalent in their effect on overall emissions of Annex 1 Parties (for example through application of a cap or an 85% discount). It is less clear that contriving equivalence in this way creates effective incentives for mitigation in the forest management sector.

The relative incentive of these two systems probably depends in part on the starting forest conditions, as does the likely mitigation approaches that each system would preferentially promote. One approach is not clearly superior to the other. On the question of incentives, CAN would like to point out that LULUCF rules do not have to create credits in order to provide incentives for mitigation; reducing debits can be an equally strong incentive.

The gross-net approach has the unattractive feature of awarding windfall credits (credits not resulting from any change in behaviour), for example resulting from the recovery of past deforestation. On the other hand, it can be argued that the gross-net approach rewards high carbon stocks and a history of sustainable forest management.

Net-net accounting has the advantage of being more similar to the treatment given to other sectors. It would also partially resolve the issue of factoring out of age class effects, nitrogen deposition and indirect climate effects. On the other hand, this approach is more vulnerable to natural disturbance effects. CAN acknowledges that a base period for Article 3.4 would help deal with the problem of inter-annual variability and also make the approach more accurate.

CAN is concerned that a move to a net-net approach would raise some problems that would need to be resolved before its adoption:

- Increased need for factoring out natural disturbances: net-net accounting would increase the need for factoring out approaches. As with the option of mandatory forest management accounting, CAN believes that net-net accounting should only be chosen if a rigorous factoring out approach with environmental integrity can first be agreed upon.
- Gaming of the base year / base period: Moving to a net-net approach would provide an incentive for Parties to advocate for a base year or period that best

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<sup>14</sup> UNFCCC. Analysis of possible means to reach emission reduction targets and of relevant methodological issues. Technical paper. FCCC/TP/2008/2. August 6, 2008.  
<http://unfccc.int/resource/docs/2008/tp/02.pdf>

<sup>15</sup> Submission by France on Behalf of the European Community and its Member States. July 30, 2008.  
[http://unfccc.int/files/kyoto\\_protocol/application/pdf/lulucf\\_eu.pdf](http://unfccc.int/files/kyoto_protocol/application/pdf/lulucf_eu.pdf)

Submission by France on Behalf of the European Community and its Member States. November 9, 2008.  
[http://unfccc.int/files/kyoto\\_protocol/application/pdf/france\\_on\\_behalf\\_of\\_the\\_european\\_community\\_and\\_its\\_member\\_states.pdf](http://unfccc.int/files/kyoto_protocol/application/pdf/france_on_behalf_of_the_european_community_and_its_member_states.pdf)

suits its national circumstances. This should be strenuously avoided; a common base year of 1990 should continue to be used, as it should for Article 3.3 as well. This would also ensure consistency with other sectors. If a base period is chosen for Article 3.4, a period of fixed duration should also be fixed to the 1990 base year.

Finally, as mentioned above, the relative benefit of gross-net and net-net approaches varies between Parties. It is important that all Parties are mindful of these effects. The best way to overcome this problem is to ensure that emission reduction commitments for the second commitment period are based on an understanding of the impact on credits of new LULUCF rules. The relative impact of the agreed rules for LULUCF should be reflected in the targets expected of each Party.

*Recommendations:*

- ***Both gross-net and net-net accounting approaches have challenges associated with them and will affect Parties differently. Emission reduction commitments for the second commitment period must be based on an understanding of the impact on credits of new LULUCF rules. These impacts will vary between Parties and this should be taken into account.***
- ***Some prerequisites would have to be satisfied before using a net-net approach, including the use of 1990 as a base year and a natural disturbance factoring out approach that has the characteristics laid out in this submission.***
- ***If a base period is chosen for Article 3.4, a period of fixed duration should also be fixed to the 1990 base year.***

### **Forward-Looking Baseline**

CAN acknowledges that the forward-looking baseline is an attempt to factor out the effects of age structure, natural disturbances and indirect climate effects. However, it is CAN's view that the proposal introduces shortcomings that make the approach unsuitable for adoption.

CAN agrees with the view that a forward-looking baseline would disconnect the accounting mechanism from reality and is inconsistent with the approach taken in all other sectors. CAN is further concerned that baselines calculated in this manner would be open to manipulation and impossible to verify.

CAN is also troubled by the observation that, due to the scale of projected removals compared to management effects, the uncertainties associated with the baseline could affect accounting more than activities and is further concerned that there is no internationally agreed methodologies exist for this approach.

Of particular concern to CAN, the approach involves putting all business-as-usual activities into the baseline and only accounting for activities deliberately designed to reduce emissions. If applied more generally to other emission sectors, this approach would ensure emission reductions were recorded in all sectors irrespective of what actually occurred. This particular short-coming could be overcome by building in a projected emission reduction into the baseline, *ex-ante*.

*Recommendations:*

- ***The forward-looking baseline should not be used for forest management accounting.***

### **Caps and discount factors**

CAN does not share the view that only the gross-net approach would be subject to caps or discounts.

The current cap on forest management was designed as a method of factoring out natural removals/emissions and to limit the effect of previously implemented activities and activities that would have been undertaken under business-as-usual conditions. There are other potential applications for caps and discounts:

1. Ensuring that LULUCF credits do not undermine or substitute for significant investments and efforts required to reduce industrial greenhouse gas emissions;
2. Some form of discount on LULUCF credits could be used to create an expectation of emissions reductions as with all other sectors – this is similar to the idea of only crediting emissions reductions / increased removals beyond a certain pre-determined level, or ‘bar’.<sup>16</sup>

There are several factors that need to be carefully considered regarding the contribution of LULUCF to overall compliance:

- The relative certainty/uncertainty of LULUCF emissions
- The current asymmetry in LULUCF accounting that favours accounting of sinks
- The supply of available LULUCF credits and the relative cost of LULUCF emissions reductions / removals compared to mitigation in other sectors
- The possibility of LULUCF emissions reductions substituting for significant reductions in fossil fuel emissions

Caps or discounts to limit the contribution of LULUCF to overall compliance would be appropriate if any of these factors appear to pose a threat to achieving significant reductions in fossil fuel emissions. Any discounts or caps on LULUCF would also have to be designed to provide incentive for changes in management of forests that reduce emissions from LULUCF

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<sup>16</sup> As suggested in the submission by the Czech Republic on behalf of the European Community and its Member States. Prague, 12 February, 2009.

sector. CAN agrees with the view expressed by some Parties that if a discount is used, it should be a single discount applied symmetrically to emissions and removals and to all Parties.

An alternative to addressing some of the factors listed above is raising the level of national emission reduction commitments (for example to address a large projected supply of cheap LULUCF credits). Hence it is imperative that emission reduction commitments for the second commitment period must be based on an understanding of the impact on credits of new LULUCF rules.

*Recommendations:*

- *Caps and discounts could be considered for both gross-net and net-net accounting*
- *Caps and discounts could be used to limit the contribution of LULUCF credits to overall compliance*
- *A discount could be applied to LULUCF credits that would be analogous to the emission reduction commitment applied to all other sectors.*
- *The need for caps and discounts should be based on a consideration of the effect of several factors on overall compliance: certainty/uncertainty of measurements, asymmetry of accounting, and the supply and cost of LULUCF credits.*
- *National emission reduction commitments could be raised as an alternative strategy to address the supply and cost of LULUCF credits.*

### **Land-use Flexibility**

CAN does not support the proposal to allow for an area of planted forest established prior to 1990 to be harvested and replanted on another area of land without accounting for the temporary carbon stock changes. This is antithetical to our desire to ensure that all major sources of emissions are accounted for when they occur.

*Recommendations:*

- *Land use flexibility should not be introduced into the LULUCF system.*

### **Afforestation and Reforestation Credit and Debit Rule**

CAN appreciates that some Parties see that the purpose of the A/R Debit Rule in the first commitment period was to ensure that activities that increased carbon stocks between 1990 and the start of the first commitment period are not counted as debits under Article 3.3. However, CAN is concerned that this rule provides no incentive to reduce harvest emissions and agrees with the caution that this provision will become increasingly difficult to administer in future commitment periods.

## Harvested wood products

CAN acknowledges that accounting for harvest wood products under the LULUCF sector could create an incentive to reduce emissions from this carbon pool, possibly result in a marginal increase in the incentive to substitute wood for more emission-intensive products such as concrete and steel and would improve the calculation of the carbon cost/benefit of burning woody biomass for energy production.

However, CAN is concerned that including wood product carbon in LULUCF accounting would decrease the incentive to maintain forest carbon stocks and also therefore the incentive for management approaches that also protect biodiversity. For example, accounting for carbon in wood products would reduce the carbon cost of choosing forest production over forest protection in intact, primary forests. This would oppose the direction recommended by the CBD's Ad-hoc Technical Expert Group on Biodiversity and Climate Change for the sake of an emission that is merely delayed, not avoided.

CAN does regard as helpful proposals that tie wood product carbon accounting to forest management accounting, but ultimately believes that it is more appropriate to not change the current conservative approach of assuming an immediate emission upon harvest.

Accounting for harvested wood products is also a technically and politically difficult task. CAN believes that efforts would be more valuable if directed at addressing more significant sources of mitigation potential. CAN notes that the vast majority of the benefit to be derived from product substitution is completely independent of harvested wood product accounting.

### *Recommendations:*

- ***The current default method, which assumes immediate emissions from forest harvest, should continue to be applied to harvested wood product accounting.***