Recommendations for SBSTA Item 11(a) on Land use, land-use change and forestry under Article 3, paragraphs 3 and 4, of the Kyoto Protocol and under the clean development mechanism

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Carbon Market Watch welcomes the opportunity to provide input to the SBSTA discussions[1] on land use, land-use change and forestry under Article 3, paragraphs 3 and 4, of the Kyoto Protocol and under the Clean Development Mechanism. This item directs SBSTA to continue consideration of work on paragraphs 5, 6, 7, and 10 in 2/CMP.7 that request SBSTA to initiate the following four work programmes:

- To explore more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from LULUCF, including through a more inclusive activity-based approach or a land-based approach, and to report to CMP 9 on the outcomes of this work programme (paragraph 5);
- To consider and, as appropriate, develop and recommend modalities and procedures for possible additional LULUCF activities under the clean development mechanism (CDM), with a view to forwarding a draft decision on this matter to CMP 9 for consideration and adoption (paragraph 6);
- To consider and, as appropriate, develop and recommend modalities and procedures for alternative approaches to addressing the risk of non-permanence under the CDM, with a view to forwarding a draft decision on this matter to CMP 9 for consideration and adoption (paragraph 7);
- To develop and recommend modalities and procedures for applying the concept of additionality, with a view to forwarding a draft decision on this matter to CMP 9 for consideration and adoption (paragraph 10).

The only eligible LULUCF activities under the CDM are afforestation and reforestation activities.[2] Other LULUCF activities are ineligible is because of major uncertainties over how to measure and verify the amounts of sequestered carbon from lands. Concerns also exist over incomplete or inaccurate accounting rules and non-permanence of activities in land sectors. Accordingly, there is no coherent vision or set of rules in relation to land use and carbon markets under the UNFCCC.

[1] SBSTA Agenda. http://unfccc.int/resource/docs/2016/sbsta/eng/03.pdf

[2] Decision 2/CMP.7 Land use, land-use change and forestry. http://unfccc.int/resource/docs/2011/cmp7/eng/10a01.pdf#page=11

To properly address the land use sector under the UNFCCC and increase confidence in the achievement of NDCs, it is essential to ensure that accounting rules are improved, that the land use sector be addressed outside of carbon markets under a framework that equally values all objectives of the sector, including adaptation and protecting local livelihoods. This requires that non-permanence be appropriately addressed with current rules or by excluding non-permanent activities from the CDM. Finally, the concept of additionality must be replaced by more comprehensive and accurate accounting of the land use sector to see a full picture of carbon fluxes that will allow countries to clearly see trends in the overall health of their carbon sinks.

Carbon Market Watch recommendations for SBSTA item 11(a)

Introduce more comprehensive accounting rules

→ **Move to land based reporting for a comprehensive view of emissions and removals**
→ **Gross emissions and removals should be calculated separately**
→ **Remove the carbon neutral status of biomass and account for full life-cycle emissions**
→ **Mitigation outcomes in land use must be comparable between countries and past emissions**
→ **Baselines must be based on historical data and not projected emissions**

Address LULUCF with non-market measures

→ **No additional LULUCF activities should be allowed under the CDM**
→ **LULUCF sectors should be treated under Article 6.8, which more adequately addresses the multiple climate objectives of the sectors**

Ensure permanence of activities in markets

→ **Exclude activities at risk for non-permanence**
→ **For eligible LULUCF activities, full replacement of intentional and unintentional reversals indefinitely or by cancelling the unit**

Move away from the concept of additionality towards comprehensive accounting for land use

→ **Use net-net accounting using a land-based approach, to set more accurate, historical baselines for measurement of NDCs**

More comprehensive accounting (paragraph 5)

Accounting rules for LULUCF in the UNFCCC need to be transparent and comparable across sectors and countries, with special allowance made for countries with the least capacity.

Currently, an activity-based approach is used, which does not account for all emissions and removals. For full transparency of emissions, an activity-based approach should be used where gross emissions and gross removals are accounted for separately. All emissions from harvest of biomass and production of bioenergy or other products, currently considered carbon neutral, must be included in accounting.

Some countries compare emissions to years where little data was available on LULUCF. Mitigation outcomes in the land sector should be comparable between countries and comparable to a robust historical data set of the sectors. This assumes no projected baselines, such as the Forest Management Reference Level (FMRL), to ensure the most accurate measurements of changing forest activity. Historical baselines could be one year or a period to take into account fluctuations but should be consistent with baselines in other sectors in countries' NDC to facilitate comparability.

Recommendations:

- → **Move to land based reporting for a comprehensive view of emissions and removals**
- → **Gross emissions and removals should be calculated separately**
- → **Remove the carbon neutral status of biomass and account for full life-cycle emissions**
- → **Mitigation outcomes in land use must be comparable between countries and past emissions**
- → **Baselines must be based on historical data and not projected emissions**

Treat LULUCF under non-market measures (paragraph 6)

The LULUCF sectors are currently characterized by data uncertainty, incomplete accounting and non-permanence. Accuracy for land use accounting can be improved with more honest accounting rules and complete information, which should be pursued for confidence between states in calculating land use contributions to NDCs that currently show high levels of uncertainty in calculating emissions and removals.[3] However, LULUCF will remain a sector that is difficult to accurately measure, irrespective of national capacity, because of the complexity of measuring landscapes. They are therefore unfit for use in market mechanisms where buyers need certainty that one credit equals one ton of emission reductions.

Actions to reduce emissions from LULUCF must also consider environmental and social impacts unique to the sector. Particularly for AFOLU sectors that are especially vulnerable to the effects of climate change[4,5], adaptation options should be considered for long-term economic and environmental prosperity of local communities and

[3] Quantifying the contribution of the Land Use sector to the Paris Climate Agreement , JRC, 2016 http://publications.jrc.ec.europa.eu/repository/bitstream/JRC98451/jrc%20lulucf-indc%20report.pdf

[4] Climate Impacts on Agriculture and Food Supply, EPA, 2016 https://www.epa.gov/climate-impacts/climate-impacts-agriculture-and-food-supply

[5] Sensitivity of tropical carbon to climate change constrained by carbon dioxide variability, Cox et al., 2013 http://www.nature.com/nature/journal/v494/n7437/abs/nature11882.html

their land. Activities in the sector should be treated under SBSTA item 12(c) “work programme under the framework for non-market approaches referred to in Article 6, paragraph 8, of the Paris Agreement”. Article 6.8 recognizes “the importance of integrated, holistic and balanced” measures to assist parties in achieving their nationally determined contributions and is better tailored to tackle the complex challenges that climate change poses to lands “in the context of sustainable development and poverty eradication”. This way the multiple objective of the sector can be achieved with mitigation co-benefits contributing to NDCs (Article 4.7).

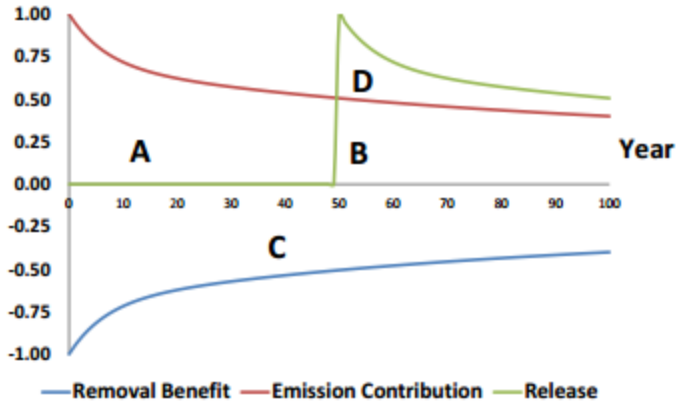
Recommendations:

→ **No additional LULUCF activities should be allowed under the CDM**

→ **LULUCF sectors should be treated under Article 6.8, which more adequately addresses the multiple climate objectives of the sectors**

Addressing non-permanence (Paragraph 7)

Permanent emissions reductions avoid units whose permanence hinges on future policy decisions. Below is a graph from the Galik et al. (2016) article showing the negative effects of reversal at the end of a time-bound permanence provision:



Emissions are merely deferred to the next generation and future policy decisions instead of solving the problem permanently. For programs using finite time periods to define permanence the article notes "this implicitly creates a societal obligation to deal with the accumulated terrestrial carbon reservoirs whenever the current policy period ends"[6]

[6] Galik, C.S., Murray, B.C., Mitchell, S. et al. (2016). Alternative approaches for addressing non-permanence in carbon projects: an application to afforestation and reforestation under the Clean Development Mechanism Mitigation and Adaptation Strategies for Global Change 21: 101. doi:10.1007/s11027-014-9573-4. http://link.springer.com/article/10.1007/s11027-014-9573-4.

To avoid this type of delay and ensure real, permanent credits, there are two potential options: exclusion of non-permanent activities from compliance use or full replacement for both intentional and unintentional reversals, either with replacement units (tCERs and lCERs indefinitely or replacement with a permanent CER) or by relinquishing permits, irrespective of an arbitrary time frame.

Recommendations:

→ **Exclude activities at risk for non-permanence**

→ **Full replacement of intentional and unintentional reversals indefinitely or by cancelling the unit**

Additionality (Paragraph 10)

The concept of additionality in land use refers to being able to distinguish the human-induced benefit of activities that increase sequestration from nature's ability to absorb carbon. In sustainable forest management, how much sequestration do we attribute to human intervention and how much do we attribute to the natural growth of the forest? The OECD notes "the flows of emissions and removals through ecological systems are complex and it is difficult to identify causality".[7]

There is no methodology to separate man-made and natural effects. The IPCC uses approximate measures by dividing land into managed and unmanaged lands which adds an extra level of uncertainty to the process. As only emissions and removals of managed lands are counted, this leads to an incomplete view of emissions as is in contradiction with more comprehensive accounting requested in paragraph 5.

Additionality is also conceived as reductions under a baseline. Other accounting shortcuts set the baseline at a level that over generates credits and is thus non-additional:

- **Gross-net accounting**: the carbon removals from planting trees (afforestation measures) are not compared to a base year. Gross-net accounting credits all the carbon removals of trees planted since 1990. This means that countries can get credits for forests that were planted over 25 years ago. What is not counted is how the size of the forest sink compares to the historical sink. As the majority of states are almost guaranteed to produce a sink, they will thus be credited for the totality of the carbon absorbed by forests, instead of comparing the size of their forest sink to the size of the sink in 1990. States could be heavily credited, while the overall size of the sink, and the benefit to the climate, has declined.
- **Forest Management Reference Levels**: Forest management is currently accounted for by comparing the real emissions of forests with an estimated baseline, so-called forest management reference levels

[7] Planting the Foundations of a Post-2020 Land Sector Reporting and Accounting Framework. http://www.oecd.org/env/cc/(2014)6%20Planting%20the%20Foundations-rev-FINAL.pdf

(FMRL). Under the FMRL, countries project the future emissions of their forests based on its age and on future harvesting rates. The flaw in this method is that the reference level can be overestimated. Credits can be obtained by emitting less than the projected harvesting rates. This potentially allows Members States to hide emissions by assuming exaggerated harvests in their reference level (easily justified by the increasing demand in the EU for bioenergy), continue business-as-usual harvests and consequently profit from unearned credits underneath it.

Accounting should compare net emission and removals in a historical base period with net emissions and removals in the accounting year. This is known as **net-net accounting** and would provide a more complete view of activities in the land sector. This will be important for mutual trust of parties' accounting for NDCs, but measurement uncertainty remains an obstacle for accurate crediting under market mechanisms.

Recommendations:

→ **Use net-net accounting using a land-based approach, to set more accurate, historical baselines for measurement of NDCs**

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