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**Subsidiary Body for Scientific and Technological Advice**

**Thirty-seventh session**

**Doha, 26 November to 1 December 2012**

Item 12(b) of the provisional agenda

**Methodological issues under the Kyoto Protocol**

**Land use, land-use change and forestry under Article 3, paragraphs 3 and 4, of the Kyoto Protocol and under the clean development mechanism**

**Views on issues relating to a more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from land use, land-use change and forestry, including through a more inclusive activity-based approach or a land-based approach, as referred to in decision 2/CMP.7, paragraph 5**

**Submissions from Parties and admitted observer organizations**

1. The Subsidiary Body for Scientific and Technological Advice invited Parties and admitted observer organizations to submit to the secretariat, by 17 September 2012, their views on issues related to a more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from land use, land-use change and forestry, including through a more inclusive activity-based approach or a land-based approach, as referred to in decision 2/CMP.7, paragraph 5.<sup>1</sup>
2. The secretariat has received three such submissions from Parties.<sup>2</sup> In accordance with the procedure for miscellaneous documents, these submissions are attached and reproduced\* in the language in which they were received and without formal editing.
3. In line with established practice, the one submission received from an intergovernmental organization<sup>3</sup> and the three submissions received from non-governmental organizations<sup>4</sup> have been posted on the UNFCCC website.

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<sup>1</sup> FCCC/SBSTA/2012/2, paragraph 118.

<sup>2</sup> Also available at <<http://unfccc.int/5901>>.

\* These submissions have been electronically imported in order to make them available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

<sup>3</sup> <<http://unfccc.int/3714>>.

<sup>4</sup> <<http://unfccc.int/3689>>.

**FCCC/SBSTA/2012/MISC.19**

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\* This submission is supported by Albania, Bosnia and Herzegovina, Croatia and Serbia.

**Submission under FCCC/SBSTA/2012/L.3 | September 2012**

**Issues related to more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from land use, land use change, and forestry, including through a more inclusive activity-based approach or a land-based approach | SBSTA**

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This submission contains the Australian Government's preliminary views on more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from land use, land-use change and forestry (LULUCF), including through a more inclusive activity-based approach or a land-based approach, as part of the consideration of this issue by the Subsidiary Body on Scientific and Technological Advice (SBSTA), as mandated by Decision 2/CMP.7.

Australia welcomes the opportunity to submit its initial thinking on this important matter. Australia considers that the land sector has a significant contribution to make to the global mitigation challenge. In-principle Australia supports a move toward more comprehensive accounting for LULUCF as key to realising the mitigation potential of the sector: this requires detailed consideration of the rules and principles underlying such accounting.

Australia notes that the work of SBSTA was mandated by the Conference of the Parties serving as the meeting of the parties to the Kyoto Protocol (CMP). However, Australia considers that this work could usefully inform consideration of land sector issues under the UNFCCC more broadly, including as Parties cooperate to develop a post-2020 framework. Given the complexity of the land sector negotiations, it will be important to begin consideration of the issues in a timely manner.

Australia notes that the request by the CMP to consider this matter specifically highlighted two approaches – a more inclusive activity-based approach or a land-based approach. Australia considers that these approaches can usefully define the scope of SBSTA's consideration of the issue. However, Australia cautions against concentrating on specific concepts or terminology at this stage and suggests that Parties should instead focus on the principles underlying these approaches. Australia notes that a land-based approach does not necessarily equate to Parties accounting for more emissions or removals, as the associated rules and modalities will be determining factors.

There may be merit in examining the feasibility of rationalising, harmonising, or combining the current differentiation between UNFCCC reporting categories and Kyoto Protocol accounting activities. Any such examination should comprise a technical analysis, and include an examination of linkages between categories and activities, the sources of differences, and similarities. The distinction between reporting categories and accounting activities adds a layer of complexity to the development of national inventory systems, and consideration could be given to operating a single approach. Any such consideration should

not seek to limit the application of the improved accounting rules agreed in Durban under Decision 2/CMP.7.

It is important to consider the coverage and focus of reporting/accounting systems. The aim of more comprehensive accounting should be to account accurately for all emissions and removals associated with land management practises and changes in land use. One option to achieve this goal is a land sector framework that nests an accounting approach for anthropogenic emissions by sources and removals by sinks within a system of nationwide monitoring and reporting of all land sector emissions and removals utilising remote sensing data.

A nested approach is especially effective for countries with a large land mass and those with extensive areas not subject to active management. Such an approach allows Parties to account for those lands subject to active management while monitoring the remainder for land use change in an internally consistent and cohesive fashion, ensuring completeness and policy efficiency. Accounting on this basis is pragmatic, efficient, and combined with nationwide monitoring, the environmental integrity of the approach is maintained and the risks of leakage, double counting and unbalanced accounting minimised. Such a system may also enable greater and earlier participation by Parties in the process of developing inventory systems.

Australia notes that, in order to inform Parties' views on the various options for a more comprehensive approach to the land sector, it will be necessary for Parties to consider the underlying principles on which accounting would be based. Australia considers that Parties should build on the extensive work undertaken under the Kyoto Protocol negotiations to improve the environmental integrity of the land sector rules. In particular, Australia notes the importance of retaining the natural disturbance provision, the reference level approach for forest management (based on business as usual projections), and improved accounting for harvested wood products.

Australia notes that the extensive negotiations on forest management ultimately led to more comprehensive coverage of the land sector for the second commitment period of the Kyoto Protocol. Australia suggests that there may be merit in a similarly comprehensive examination of the other activities/reporting categories and where appropriate the development of new accounting approaches. For example, Australia notes that there may be merit in an examination of extending the application of existing provisions such as natural disturbance or reference levels to capture other reporting/accounting categories.

Australia suggests that it will be necessary to consider all reporting/accounting categories and the rules/principles related to these categories, and to ensure that Parties account for anthropogenic emissions. Australia considers that it may also be necessary to undertake further consideration of the basis for accounting under various reporting/accounting categories.

**SUBMISSION BY CYPRUS AND THE EUROPEAN COMMISSION ON BEHALF OF THE  
EUROPEAN UNION AND ITS MEMBER STATES**

**This submission is supported by Albania, Bosnia-Herzegovina, Croatia and Serbia**

**Nicosia, 16 / 07 / 2012**

**Subject: Submission on issues related to a 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, as referred to in decision 2/CMP.7, paragraph 5.**

**1. Introduction**

The EU welcomes this opportunity to submit its views on issues related to a more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from land use, land use change and forestry (LULUCF), including through a more inclusive activity-based approach or a land-based approach, as referred to in decision 2/CMP.7, paragraph 5.

The LULUCF accounting rules for the second commitment period of the Kyoto Protocol were agreed in Durban (December, 2011) and the discussions on a more comprehensive accounting framework will not result in rules to be applied during the second commitment period of the Kyoto Protocol. Considering the need for stability on the rules being applied during a commitment period, it is the EU's view that a more comprehensive accounting framework is an issue that needs to be considered in the context of the negotiations of a future post-2020 framework. Options should be explored to ensure that the discussions in this work programme contribute to, and inform the ADP process, and should adequately be considered under the future post 2020 instrument to be developed under the ADP. The EU is of the view that Parties should engage in discussions as soon as possible, in order to ensure a timely valuable outcome to feed ADP negotiations.

The EU welcomes the establishment of this work programme, as we believe that the concept of a "more comprehensive accounting framework" should be clarified and further defined, to inform our discussions on a post 2020 climate change regime.

This EU submission contains some preliminary thoughts on principles that could guide a possible new accounting framework, and a non exhaustive list of options for the approaches to be further explored, with an initial listing of possible advantages and shortcomings, with the intention to feed and facilitate the debate on this topic that we anticipate will take place in the coming years. The EU provides these ideas with a view to initiate and stimulate the debate. They do not represent the EU's

final position, which will be further developed in the future in light of coming discussions and further analysis on this topic.

## **2. General considerations**

The EU is of the view that moving to a more comprehensive accounting framework, building upon what we have already achieved and learned under the Kyoto Protocol and the Convention, should have a positive effect on the environmental integrity of the future climate change regime, and on the contribution of this sector to mitigate climate change, allowing also to enhance biodiversity and sustainable development on land management. The different options should be carefully analysed before taking any decision on this regard.

### **A. Lessons learned from the LULUCF process until now**

In the current framework, Annex I Parties have to report to the Convention emissions and removals associated with land uses and land use changes. In addition to this, Annex I Parties that are also Parties to the Kyoto Protocol, have to include, in their National Greenhouse Gas Inventories, the supplementary information requested by the Kyoto Protocol on LULUCF activities.

During the process up to now, Parties have learned a great deal, which should be considered when developing a new accounting framework that could be applicable in the future, i.e.:

- An approach based on eligible activities covers only part of the LULUCF sector, and mandatory activities include only a part of emissions/removals of a Party. This has been improved with forest management becoming mandatory for the second commitment period of the Kyoto Protocol, but there are still large areas of land (and its associated emissions and removals) that can be kept out of the accounting due to the provision that allows voluntary election of some activities. The availability of higher tier data and appropriate national methods for all activities, pools and gases may be a challenge and it needs to be considered while moving forward.
- The LULUCF sector has been treated in a different way with respect to other sectors. In the current accounting framework, different accounting rules apply for different activities. Furthermore, different provisions may apply to the same activity. This makes comparability across the sector difficult and the reporting and accounting system more complex.
- Although uniform treatment of all sectors sounds attractive, the specific characteristics and the relevance of non-anthropogenic emissions and removals of the LULUCF sector may require the maintenance of some special accounting provisions even in the future.
- Data availability including the detailed land use data needed for identifying the different land uses/activities and the uncertainties associated with the estimations of emissions and removals from the LULUCF sector are challenging. Further, the differences between Kyoto and Convention reporting force Parties to design and maintain two parallel reporting systems. It should be explored whether simpler reporting and further integration of accounting rules (i.e., gradually merging Convention and Kyoto reporting systems) could improve transparency in reporting and reduce the burden of both reporting and accounting;.

- Annual net emissions/removals are influenced by inter-annual variations in weather and natural disturbances (which often even counteract the results of policy interventions), leading to significant fluctuations in the annual GHG balance for some countries. Significant progress was made in Durban decision 2/CMP.7 in relation to natural disturbances accounting.
- Terrestrial carbon stocks may increase and decrease without direct human influence and, in particular, events or circumstances which are beyond the control of a Party may cause significant emissions within a single year. The links with emissions caused by natural disturbances, the impacts of inter-annual variations in weather, the impacts of climate change and the need to balance mitigation and adaptation action across the land use sector needs to be better considered.
- Net emissions/removals can be significant in all pools and gases, although the magnitude and rate may vary with pool and/or gas. Reporting and accounting should aim at full coverage of pools and gases and should aim to reflect the correct timing and location of when and where these emissions/removals take place. The accounting of harvested wood products and the addition of a new activity on drainage and rewetting of wetlands, as agreed in 2/CMP.7, were significant steps forward in this respect.
- Short commitment periods do not fit well with long rotation periods in forest management systems especially when age class structure of the forest is not balanced. Where age class structure is skewed, the use of historical base years or base periods artificially create “accounting winners and losers”, that don’t necessarily reflect changes in the quality of forest management. The use of projected reference levels provided a way forward that is worth exploring further.
- Reported annual data are often subject to substantial and frequent recalculations, which make more difficult to predict the impact of policies and measures implemented in the LULUCF sector on the national emissions profile.
- The sector has very significant mitigation potential in terms of reducing emissions, maintaining and enhancing sinks and carbon stocks through the reduction in degradation of agricultural soils as well as sustainable forest and land management, and the sustainable supply of wood material and bioenergy. The dynamics of biological systems provide better opportunities in medium to long term to realize this potential, although opportunities exist for significant emissions reductions already in the short term, in particular, through reduced deforestation. It is therefore essential to design an accounting system that provides incentives for long term climate benefits and avoids contradictory incentives, while at the same time, promoting adaptation measures aimed at increasing forest resilience (keeping in mind the increasing vulnerability of forests and other ecosystems to climate change) and stabilizing forest carbon stocks.
- The importance of agreeing on the LULUCF rules and their implications before Parties agree to commitments has been reiterated. Different accounting options for LULUCF may have a significant impact on Parties’ targets. This has been achieved for the second commitment period under the Kyoto Protocol and we should aim to repeat this for future climate agreements.

- National circumstances and the need to create fair accounting rules have resulted in the establishment of some exceptions to the general rules under the Kyoto Protocol in the past. The effects of national circumstances on the accounting approaches needs to be further explored, but special accounting rules should be avoided as much as possible.

**B. Aspects to consider when developing a more comprehensive approach for accounting of anthropogenic emissions by sources and removals by sinks from LULUCF**

The EU believes that any new approach to be adopted for the accounting of LULUCF emissions and removals in the future should:

- Ensure long-term environmental integrity
- Incentivise reduction of emissions and enhancement of removals
- Be inclusive, fair and take into account differences in national circumstances
- Be based on sound science
- Use consistent methodologies over time for the estimation and reporting of emissions and removals
- Exclude the mere presence of carbon stocks from accounting
- Contribute to the conservation of biodiversity and sustainable use of natural resources
- Ensure that reversal of any removal be accounted for at the appropriate point in time
- Exclude 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 past activities and practices;
- Reduce the risk of leakage/displacement of emissions
- Promote long-term sustainable land use and system management and allow the implementation of incentive schemes for mitigation actions aimed to optimize the mitigation potential of this sector, while promoting adaptation measures.
- Aim at achieving the lowest possible level of complexity and the highest robustness of the system
- Ensure comparability, to the extent possible, over time and between Parties
- Avoid double counting of reductions of emissions or increases in removals.
- Account for all pools and gases (including HWP), where robust and accurate data and methodologies are available, and encourage Parties to continuously improve the reporting capacities and, where needed, moving to higher tier methodologies.
- Take into account the possible links with policies and measures in other sectors, in particular the energy sector (i.e. biomass production and use) and the agriculture sector (i.e. crop and livestock production)
- Aim to reflect the actual effect of management on emissions and removals in the land-use sector and include a provision for proper consideration of emissions from natural disturbances



- Ensure cost effectiveness of reporting and accounting

With all the experience gained during years of reporting, and in some cases, accounting, the EU believes that an efficient and more integrated perspective for the LULUCF sector needs to be explored, taking into account the lessons learned and the aspects mentioned above, and taking into consideration technical, methodological, economic and political implications of any possible new accounting framework.

Any future process to deal with the LULUCF accounting in the future needs to be carefully planned, and where possible, be discussed in conjunction with the general negotiations on future climate regime.

### **3. Possible options on a more comprehensive accounting framework for anthropogenic emissions by sources and removals by sinks from the LULUCF sector**

This list of options below is not exhaustive and is provided to stimulate discussions only. Additional options as well as possible advantages and shortcomings for these options presented could be identified later and will need to be considered. The EU is open to explore these, and will also carefully consider submissions and proposals by other Parties.

With respect to the options below, there is the need to highlight that:

- They reflect an understanding of the status of some issues that were discussed formally and informally during the negotiations leading to the Durban Decision, but don't necessarily reflect the EU's preferred options or positions.
- It was our understanding that most Parties do not consider unconstrained gross net accounting as a possible accounting option for the future and, therefore, it has not been included as an option in the submission. However, constrained gross-net (establishing a cap, discount, or other appropriate mechanism) could be explored as an option.
- The natural disturbances voluntary provision (as adopted in Durban or an improvement of it, if needed, with experience gained in the future) is considered as included in all approaches below.
- Harvested wood products are also included as a pool in all approaches considered (as adopted in Durban or an improvement of it, if needed, with experience gained in the future).

#### **A. Activity based approach**

Under this approach, more or all activities included under the current accounting system could be considered mandatory from 2020, provided that the existing challenges concerning quality and availability of data and reporting methodologies are solved. Approaches that could be examined further include:

- as adopted in Durban
- reference levels for all/some activities

- net/net for some activities
- gross net with caps/discount factors/other constraining mechanisms for some activities
- other (new) rules to differentiate anthropogenic emissions and removals

For these options it could be considered to merge lands under article 3.3. (afforestation, reforestation and possibly deforestation) and under article 3.4. (forest management), using a common accounting rule for the forests sector.

#### I. Potential advantages

- Accounting under an activity based approach would be a similar system to the current approach that would ensure compatibility and comparability between future and past systems.
- This approach could result in an increase in coverage of areas with respect to the current system, that would be translated into an increase in the coverage of emissions and removals
- Merging Art. 3.3. (afforestation, reforestation and possibly deforestation) and 3.4 forest management would remove the artificial division in the consideration of national forests and simplify reporting, accounting and mitigation policy development and it would simplify or remove some rules currently in place
- Addresses comparability (in the case of reference levels based on projections or representative historical period)

#### II. Potential shortcomings

- Under this approach, the reporting burden, compared with the current situation, is maintained or even increased, as supplementary information is needed to that information provided for the Convention reporting.
- Although coverage of emissions and removals might improve, it might still be incomplete, as it still would not cover the whole territory (therefore, not all anthropogenic emissions and removals from this sector).
- Not all Parties may have data available to report on more or even all individual activities.
- Methodological uncertainties can be significant, in particular for those activities with significant changes in soil carbon stocks.
- Artificial division between forest-related activities, if the differentiation is maintained.
- In the case of the use of reference levels, it could be challenging to define and establish those reference levels for more or all activities. Also, the development of an adequate review process could be challenging
- Merging 3.3 and 3.4 forest management may reduce the level of detail of information provided on emissions and removals associated to forest activities
- In the case of a cap/discount factor/other constraining mechanism, the use of politically negotiated numbers, can reduce incentives for enhancing removals and reducing emissions.

## **B. Land-based approach**

This approach could be based on the information requirements under the Convention, information that Parties submit to the UNFCCC as part of their National Greenhouse Gas Inventories/National Communications, provided the quality of data and reporting methodologies are sufficient.

Under this approach, accounting would be based on the reporting tables submitted in response to reporting requirements under the Convention. There would be no additional reporting requirements except for the mandatory inclusion of the HWP pool and the voluntary exclusion of emissions from natural disturbances. Approaches that could be examined further include:

- base year or a base period
- reference levels for different land use categories
- net/net for some activities
- gross net with caps/discount factors/other constraining mechanisms for some activities
- other (new) rules to differentiate anthropogenic emissions and removals

There is the possibility to have different accounting rules for the different land use categories. There is also the possibility to explore which land use categories should be accounted for on a mandatory basis and which categories might remain electable (i.e., mandatory accounting for the forest related land use and land use change categories only, mandatory accounting for all land use categories, except categories or subcategories where experience with existing methodologies are less developed or there is a lack of data, e.g. wetlands, settlements and other lands; or mandatory accounting for all land use categories).

### I. Potential advantages

- More or all LULUCF anthropogenic emissions and removals in a country would be covered provided that the existing challenges concerning quality and availability of data and reporting methodologies are addressed.
- Reporting burden decreases, as less supplementary information would be necessary to that requested by the Convention
- All managed forests in a Party would be considered together (the artificial division between articles 3.3. and 3.4. would disappear as well as specific rules adopted to address this division)
- Addresses comparability (in the case of reference levels based on projections or a representative historical period)
- This approach could facilitate the comparability of mitigation efforts and results

### II. Potential shortcomings

- Methodological uncertainties can be significant, and there is a need for improving data accuracy for all land uses

- It is challenging to establish reference levels for all land use categories, and the development of review process could also be challenging.
- In the case of a base year/period, there would be arbitrary winners and losers linked to the high inter-annual fluctuations in the sector and the significance of the forest age class distribution.
- In the case of a cap/discount factor/other constraining mechanism, the use of politically negotiated numbers, can reduce incentives for enhancing removals and reducing emissions.

### **C. A combined approach**

It could also be considered to allow for a stepwise approach to broaden the accounting framework of the LULUCF sector. With this combined approach, Parties could account on a mandatory basis for all land use categories and for all land use changes, except categories where experience with existing methodologies are less developed or there is a lack of data e.g. wetlands and settlements, and other activities not covered by the land uses considered mandatory could remain voluntary or would become mandatory over a period of time. Rules, modalities and methodologies should be elaborated to, i.e., ensure avoidance of double counting.

In this approach, there are a number of possible combinations and the possible advantages or shortcomings associated with this approach, taking into account the different accounting rules that could be applied to different land uses and different activities could be discovered by analysing the different options above.

Using a combination of land use categories and activities, environmental integrity could increase depending of the number of land use categories and activities that become mandatory.

### **4. Future work**

The EU is willing to analyse and engage in discussions about possible a more comprehensive accounting framework for anthropogenic emissions and removals in the LULUCF sector.

The EU believes that this SBSTA work programme could inform the discussions we would need to have about mitigation under the ADP process on the post 2020 agreement. The EU has concerns that this work programme is under the Kyoto Protocol, and will report its results to the CMP, and non-Kyoto Protocol Parties can attend these discussions as observers only. The EU, in view of the broader importance of this issue, would like to find ways to ensure all Parties views are part of the discussion in order to ensure the comprehensiveness and inclusiveness needed for this important issue.

In addition to this, the EU thinks that, to allow the contribution of the outcome of this work programme to the future climate change regime, the discussions should be finalised before COP21/CMP11.

**Initial views on a future post-2020 more comprehensive accounting regime**

Methodological issues under the Kyoto Protocol:

Land use, land-use change and forestry under Article 3, paragraphs 3 and 4 of the Kyoto Protocol and under the clean development mechanism (SBSTA)  
(FCCC/SBSTA/2012/L.3, paragraph 4)

**17 September 2012**

At SBSTA 36 (June 2012), consideration of the issues related to a more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from LULUCF was initiated, including through a more inclusive activity-based approach or a land-based approach. As referred to in decision 2/CMP.7, paragraph 5, Parties and admitted observer organizations were invited to submit to the Secretariat, by 17 September 2012, their views on these issues, for compilation by the Secretariat into a miscellaneous document for consideration by the SBSTA at its thirty-seventh session in Doha.

With this submission Switzerland offers its contribution to discussions specific to future possible systems of LULUCF accounting. Since this discussion takes place within a changing institutional context, our views should thus be interpreted as inputs to an open exchange of ideas on this topic and not as prejudgment of any explicit architecture of a post-2020 agreement.

Whereas we do not prejudge the specificities of a future agreement, we do anticipate general improvement in accounting and reporting systems. Given that more countries possessing a much broader range of capacities will be participating in GHG accounting and reporting, methodologies should strive toward simplicity of application without sacrificing the quality of results. Further, accounting methodology for the land-use sector should be fully compatible with accounting for other sectors and programs within a future reporting context, including i.e. developing country NAMAs, REDD+, and NAPAs.

All Annex I Parties and a growing number of developing countries report GHG emissions and removals on all areas of land under the Convention according to a land-based approach. Simultaneously, all Annex I countries report and account emissions and removals from land-use activities under the Kyoto Protocol according to an activity-based approach.

Emissions and removals of the LULUCF sector reported under the UNFCCC were developed independently of implications for reduction goals, therefore their methodological development was more technical than political, even though now they are in some cases relevant for national

emissions trading systems. All Annex I countries submitted national greenhouse gas inventory reports for the Secretariat of the United Nations Framework Convention on Climate Change in the first commitment period and accounted for the entirety of the LULUCF sector according to a land-based system.

Under the Kyoto activity-based reporting system the only activities which are now mandatory to account for in the second commitment period are in forests: i.e. afforestation, reforestation, deforestation, and forest management. LULUCF activities that potentially produce significant emissions and have important mitigation potential, such as cropland and grazing land management, under the present agreement may be accounted for voluntarily.

Since the activity-based accounting system under the Kyoto Protocol has a direct impact on sectoral mitigation actions and national policies, international mitigation policies have had to find ways to harmonize with national sectoral policies, fundamentally promoting sustainability. This has been the case for forests, where avoiding arbitrary and windfall effects of international policy on national forest sector accounting needed to be ensured. However, different accounting rules for different sectors should be minimized in the future to ensure accounting comparability over time between Parties. In this sense, the implications of land-based accounting on national policies have not yet been discussed; they are essentially a technical reporting system. On the other hand, activity-based accounting has been subject to intensive political and technical scrutiny but comprehensiveness is essentially voluntary.

The comprehensiveness of the accounting system for the land-use sector is directly related to its environmental integrity, i.e., not excluding any possible sources of emissions. In principle a land-based reporting system is comprehensive, including all emissions and removals of GHGs on all areas of land within national borders. However, if this reporting system were to be fused with an accounting system, the rules and modalities applied to it would determine whether all emissions and removals are accounted for.

Switzerland is willing to engage in discussions to streamline and combine reporting and accounting into one system. Since more comprehensive accounting for the LULUCF sector is key to realizing its mitigation potential, a process in which developed and developing country Parties define the future accounting modalities must now begin.

For the purpose of initiating discussion and without favoring a particular concept, if land-based accounting were the basis of the reporting and accounting system used in a post-2020 climate agreement, considerable technical challenges would lie ahead, particularly the improvement of data quality and reporting methodologies. Further, it is likely that incorporating some technical aspects of Kyoto reporting will be necessary.

What might some elements of a future land-based accounting approach that incorporates methodology from the Kyoto Protocol reporting look like?

The rules and modalities for future accounting under the Convention should be the same for all

Parties. However, different accounting rules for different land-use categories are possible. What is mandatory to account for could also be, as in activity-based accounting, an issue. Some elements of a combined approach that would need to be discussed include i.e.:

- Net-net accounting (comparing base year- 1990- emissions and removals to the year being accounted for)
  - Reference level based on a projection (a net-net approach): based on evaluation of experience, reviews and technical adjustments from CP2 until 2020, this approach could be continued post-2020.
- Gross-net: the advantage of a simple, year to year approach, the disadvantage needing to constrain it with discounts, caps, etc.
- One particular advantage of land-based accounting would be that all managed forests would be accounted for in the same way (effectively “merging” Kyoto Protocol Art. 3.3. afforestation, reforestation and deforestation and Art. 3.4 forest management).
- Cropland, grazing land, wetlands, revegetation: net-net 1990, or could also be 2008, or 2020 to allow for Kyoto policies and measures to have been implemented. The methodology for accounting for these activities should be consistent with reporting for forests.
- Natural disturbances: the approach would ostensibly cover all land areas and be voluntary. Areas omitted from accounting would have to qualify under the provisions of this approach based on Decision 2/CMP.7, such as being disturbances with non-anthropogenic causes and where a Party made efforts to prevent them. This methodology could be incorporated in Convention reporting and areas could be omitted in the same way as under Kyoto.
- HWP: in reporting HWP is a pool (removal) and accounting for it would probably be mandatory under the Convention; possible methodological changes to the approach may be integrated in the negotiation process;

Technical capability, data quality, and methodologies would require improvement for the system to be comprehensive and become more so over time. The more land-use activities and categories that would be mandatory to report and account for would increase the environmental integrity of the system.

Switzerland expects the work under this SBSTA item to continue over the coming years and when work under the AWG-KP is completed should feed into the ADP toward a post-2020 accord.

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