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Reducing emissions from deforestation in developing countries

Report on the second workshop on reducing emissions from deforestation in developing countries

Note by the secretariat*

Summary

The secretariat organized a second workshop on reducing emissions from deforestation in developing countries, as requested by the Subsidiary Body for Scientific and Technological Advice (SBSTA) at its twenty-fifth session. The workshop took place in Cairns, Australia, from 7 to 9 March 2007.

The discussions at this workshop focused on ongoing and potential policy approaches and positive incentives, and technical and methodological requirements related to their implementation; the assessment of results and their reliability; and improving the understanding of reducing emissions from deforestation in developing countries. Participants heard technical presentations and updated proposals on potential policy approaches and positive incentives. They exchanged views and discussed in detail issues related to technical and methodological requirements, the establishment of baselines, permanence, leakage, definitions, and emissions from degradation. They also discussed various financing options to support positive incentives, including market-based mechanisms and non-market financial resources. While participants reached agreement on several areas, such as the need for capacity-building and pilot activities, they also identified several issues requiring further consideration. Possible next steps were proposed to advance the work of the SBSTA and of the Conference of the Parties on this issue.

The SBSTA may wish to consider the information in this report and provide guidance on further action.

* This document has been submitted late due to the timing of the workshop.

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I. Introduction

A. Mandate

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its twenty-fifth session,[1] requested the secretariat to organize, subject to the availability of supplementary funding, a second workshop on reducing emissions from deforestation in developing countries before its twenty-sixth session, and to prepare a report on that workshop for consideration by the SBSTA at that session.

2. The SBSTA, at its twenty-fifth session, decided to continue discussing the range of topics considered at the first workshop,[2] including the submissions referred to in paragraph 3 below, and to focus its discussions at the second workshop on:

(a) Ongoing and potential policy approaches and positive incentives, and technical and methodological requirements related to their implementation; assessment of results and their reliability;

(b) Improving the understanding of reducing emissions from deforestation in developing countries.

3. To facilitate discussions at the workshop, the SBSTA, at its twenty-fifth session, invited Parties and accredited observers to submit to the secretariat, by 23 February 2007, their views on the topics referred to in paragraph 2 above. Submissions from Parties are contained in document FCCC/SBSTA/2007/MISC.2 and Add.1, and submissions from intergovernmental organizations are contained in document FCCC/SBSTA/2007/MISC.3.[3]

4. The SBSTA, at its twenty-fifth session, invited Parties not included in Annex I to the Convention (non-Annex I Parties) that are in a position to do so, on a voluntary basis, to submit to the secretariat, by 23 February 2007, any updated information and data additional to those provided in their latest national communications and synthesized in the background paper prepared for the first workshop,[4] on emissions and trends in deforestation, data needs, and policies and programmes in place or being considered to address deforestation and its root causes. In response to a request by the SBSTA, the secretariat made available the information submitted and provided a short presentation at the workshop.[5]

B. Scope of the note

5. This document contains a description of the proceedings and a summary of the discussions, including the main outcomes, on the topics referred to in paragraph 2 above during the workshop held in response to the above mandate. In preparing the summaries of the presentations and the main outcomes of discussions, the secretariat has made every effort to use the specific terminologies used by the speakers and participants.[6] The note also covers issues relating to possible next steps for a process

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[1] FCCC/SBSTA/2006/11, paras. 86–92.

[2] The first workshop on this matter was held in Rome, Italy, from 30 August to 1 September 2006. The report on that workshop is contained in document FCCC/SBSTA/2006/10.

[3] Submissions from accredited non-governmental organizations are available at <http://unfccc.int/parties_and_observers/ngo/items/3689.php>.

[4] The background paper prepared for the first workshop is available at <http://unfccc.int/methods_and_science/lulucf/items/3757.php>.

[5] Submissions by Parties and the presentation are available at <http://unfccc.int/methods_and_science/lulucf/items/3896.php>.

[6] This, however, was not always possible because of the need to summarize the rather complex discussions during the workshop.

forward that were raised during the discussions at the workshop, as well as a proposal by the SBSTA Chair on a possible process for the consideration of this issue prior to the twenty-seventh session of the SBSTA.

C. Possible action by the Subsidiary Body for Scientific and Technological Advice

6. The SBSTA is invited to consider the information in this document and provide additional guidance on further actions to complete the mandate given by the Conference of the Parties (COP) at its eleventh session.[7]

II. Proceedings

7. The workshop took place in Cairns, Australia, from 7 to 9 March 2007 and was co-hosted by the Governments of Australia and New Zealand, with financial support provided by the Governments of Australia, New Zealand and Norway.

8. One hundred and thirty-six representatives of 59 Parties and 18 organizations attended the workshop. Forty-nine representatives from 20 Parties included in Annex I to the Convention (Annex I Parties) and 65 representatives from 39 non-Annex I Parties participated.

9. The SBSTA, at its twenty-fifth session, requested the secretariat to ensure that representatives from relevant accredited observers and experts were invited to the workshop.[8] In response to this request, representatives of ten intergovernmental organizations (IGOs) and eight non-governmental organizations (NGOs) were invited and attended the workshop as observers. The IGOs represented included the secretariats of the Convention on Biological Diversity and of the United Nations Forum on Forests, the United Nations Environment Programme World Conservation Monitoring Centre, the Food and Agriculture Organization of the United Nations (FAO), the Intergovernmental Panel on Climate Change (IPCC), the World Bank, the Center for International Forestry Research, the International Tropical Timber Organization, the secretariat of the Ramsar Convention on Wetlands, and the World Conservation Union. In addition, four resource persons provided technical expertise.

10. At the opening of the workshop, Mr. Seth Four Mile, an indigenous landowner, and Mr. Kevin Byrne, the Mayor of Cairns, welcomed participants to Australia and to the city of Cairns. Mr. Howard Bamsey, Deputy Secretary of the Department of the Environment and Water Resources, welcomed participants on behalf of the Government of Australia. The Honourable William Duma, Minister for Environment and Conservation of Papua New Guinea, delivered a statement on behalf of H.E. Sir Michael Somare, Prime Minister of Papua New Guinea. The Chair of the SBSTA, Mr. Kishan Kumarsingh, who chaired the workshop, addressed the participants, thanked the Government of Australia for hosting the workshop and expressed appreciation to all the governments that provided financial support. A representative of the UNFCCC secretariat, delivered a statement on behalf its Executive Secretary, Mr. Yvo de Boer.

11. The UNFCCC secretariat introduced the mandate, goal and scope of the workshop, and the documents prepared. As mandated by the SBSTA, it provided an overview of updated data and information on emissions and trends in deforestation, data needs, and policies and programmes to address deforestation contained in the voluntary submissions by non-Annex I Parties.

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[7] FCCC/CP/2005/5, para. 83.
[8] FCCC/SBSTA/2006/11, para. 87.

12. During the first two days of the workshop, the discussions focused on two main themes:

(a) Improving the understanding of reducing emissions from deforestation in developing countries;

(b) Ongoing and potential policy approaches and positive incentives, and technical and methodological requirements related to their implementation; and the assessment of results and their reliability.

13. Each theme opened with a series of presentations[9] which were followed by general discussions. During the third day of the workshop, participants had the opportunity to have an open exchange of views with the representatives of all IGOs present at the workshop, and ask questions regarding the activities of these organizations on reducing emissions from deforestation in developing countries. The workshop concluded with a brainstorming session on the process forward. After the closing of the workshop, the Chair provided to the participants a preliminary summary of the discussions of the workshop (para. 12 (b) above). Summaries of the presentations and of the discussions are contained in chapters III, IV and V of this note.

III. Improving the understanding of reducing emissions from deforestation in developing countries

14. Ten participants and resource persons presented information to help improve the understanding of reducing emissions from deforestation in developing countries.

15. A representative of the IPCC presented the methodologies and guidance for estimating changes in carbon stocks and greenhouse gas (GHG) emissions contained in the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*, the *IPCC Good Practice Guidance for Land Use, Land-use Change and Forestry* (LULUCF) (hereinafter referred to as the IPCC good practice guidance for LULUCF) and the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the IPCC 2006 Guidelines). The LULUCF categories and the carbon pools and GHGs considered in each of these categories were explained together with the associated methodologies.

16. A representative of the Department of the Environment and Water Resources of Australia gave a presentation on Australia's National Carbon Accounting System (NCAS), its implementation and its benefits. The aim of the NCAS is to provide for complete accounting (in terms of lands, carbon pools, gases and activities) and forecasting human-induced sources and sinks from land-based systems at landscape, country and project levels. It consists of an integrated system (model) that allows spatially explicit national monitoring ("wall-to-wall") based on time-series remote sensing. Given its large land area, remote sensing constitutes a cost-effective solution for Australia.

17. The representative of the FAO made a presentation on the experiences of the FAO in global forest resources assessments (FRAs) since 1946. She provided information on the recently completed FRA 2005 and on the process for FRA 2010. She also highlighted the ways in which FRA 2005 data and the mandated activities for FRA 2010 could support the work under the UNFCCC to reduce emissions from deforestation in developing countries. Participants were also informed that the FAO is undertaking work on degradation, in the context of the efforts for FRA 2010.

18. A resource person from the Unidad Villahermosa of Mexico presented a case study on reducing emissions from deforestation in Chiapas, Mexico. The study identified forest areas that were at risk of deforestation because of access factors or socio-economic pressures. He highlighted that the

[9] All presentations are available at <http://unfccc.int/methods_and_science/lulucf/items/3896.php>.

identification of priority areas for forest conservation needs to be based on several factors such as risk, quantity of carbon that will be lost and social importance.

19. A representative from the German Agency for Technical Cooperation presented some lessons learned from bilateral and multilateral projects on avoided deforestation at project, programme and regional/supranational levels. Lessons were based on experiences from the Noel Kempff Climate Action Project in Bolivia, the Amazonian Protected Areas Programme in Brazil, and the management of state forests in Central Africa by the Forest Commission of Central Africa.

20. A case for defining a global benchmark for avoided deforestation projects was presented by a representative from The Carbon Pool Pty Ltd, a company in Queensland, Australia, that works with landowners to protect lands from being cleared. The projects attempt to meet the Kyoto forest definitions, attempt to address additionality, leakage and permanence, and apply rigorous and transparent carbon accounting methods.

21. A representative of Gabon, on behalf of the countries of the Congo Basin, gave an overview of the state of the forests of the Congo Basin based on a 2006 report on the forests of the region compiled by the Congo Basin Forest Partnership. The report provides information on the types of forest and land use in the region, the human impacts, industrial exploitation of forest resources, pressures on the utilization of forest resources and conservation efforts made. Several short- and long-term priority actions were identified by the report, such as curbing poaching, preventing the illegal and unsustainable exploitation of resources, planning and zoning, harmonizing and enforcing legislation, capacity-building, research and development, and securing sustainable financing. The presentation also highlighted the need for better communication and exchange of information between different economic sectors.

22. Practical experiences of policies and incentives to reduce deforestation in developing countries were presented by a resource person from the Norwegian University of Life Sciences. He outlined the forest transition framework as a basis for understanding the stages of deforestation and policy choice, giving four examples of the impacts of policies on deforestation. He highlighted the difficulties associated with identifying the general or qualitative impact of policies and incentives on deforestation because of its highly country-specific character.

23. A resource person from the World Agroforestry Centre presented some experiences of policies and incentives to reduce deforestation in Africa. He outlined several macroeconomic policies for the development of agriculture in Sub-Saharan Africa and their advantages and disadvantages. He also highlighted the effects of such policies on deforestation, giving emphasis to policies that have been put in place to promote the involvement of local communities in forestry.

24. A representative of the World Bank presented aspects of financing and challenges in implementing payments for reducing emissions from deforestation and degradation. The World Bank has estimated that, to achieve a 10–20 per cent reduction in rates of deforestation, the amount of financing required would be in the range of USD 2–25 billion per year. Several challenges for developing a system for reducing emissions from deforestation and degradation from the seller's and buyer's perspectives were highlighted. The presenter also explained the World Bank proposal on the Forest Carbon Partnership Facility, which includes capacity-building and pilot activities on reducing emissions from deforestation.

IV. Ongoing and potential policy approaches and positive incentives; technical and methodological requirements related to their implementation and assessment of results and their reliability

A. Summary of presentations

25. Nine participants, on behalf of their own countries or groups of countries, presented views and/or proposals on ongoing and potential policy approaches and positive incentives, including information on the main technical and methodological requirements related to the implementation of the approaches and the assessment of results and their reliability. Summaries of these presentations are given below. More information can be found in the actual presentations (available at the UNFCCC website) and in the submissions by Parties contained in document FCCC/SBSTA/2007/MISC.2 and Add.1.

26. A representative of Vanuatu outlined experiences from reducing emissions from deforestation and degradation of the forests there.[10] Vanuatu is currently undertaking a project on Vanuatu Carbon Credits. One of the objectives of the project is to analyse the efficacy of three different positive incentives for reducing emissions from deforestation, namely a "carbon stock approach", a "sectoral crediting baseline approach" and a "direct barter approach". In general, Vanuatu is of the view that any incentive mechanism should be inclusive, be adaptable to both small and large countries, promote collaboration among countries, include degradation, and allow for the participation of countries with low historical rates of deforestation.

27. The representative from Tuvalu proposed a new policy approach called the Forest Retention Incentive Scheme (FRIS)[11] based on projects implemented by local communities. There are three key elements under the FRIS: the establishment of a Community Forest Retention Trust Account that retains funds for the projects; the issuance of forest retention certificates (FRCs) as a result of emissions reductions from the projects; and the establishment of an International Forest Retention Fund under the UNFCCC for the redemption of the FRCs. The advantages and disadvantages of the FRIS were also highlighted.

28. A new proposal on the concept of Compensated Conservation[12] as a policy approach to reducing deforestation was presented by the representative from India. This proposal was based on providing compensation to countries for maintaining and increasing their forests, and consequently their carbon stocks, as a result of effective forest conservation policies and measures. Such an approach would have to be supported by a verifiable monitoring system. For the operationalization of this approach, a new financial mechanism, linked to verifiable carbon stock increments and separate from the clean development mechanism (CDM), would have to be set up.

29. The representative of the Central African Republic, on behalf of a group of countries of the Congo Basin,[13] provided an update on and elaboration of their proposal[14] which was first presented at the first workshop in Rome in 2006. The group supported the establishment of a Reducing Emissions from Deforestation and Degradation (REDD) mechanism which would provide positive incentives to support voluntary policy approaches to reducing emissions from deforestation and degradation. They proposed the establishment of a Stabilization Fund to support developing countries that have low rates of deforestation and want to maintain their existing forests. In addition, they supported the use of an

[10] See also paper no. 19 in FCCC/SBSTA/2007/MISC.2.
[11] See also paper no. 3 in FCCC/SBSTA/2007/MISC.2/Add.1.
[12] See also paper no. 11 in FCCC/SBSTA/2007/MISC.2.
[13] The countries of the Congo Basin supporting this proposal included Cameroon, the Central African Republic, the Republic of the Congo, the Democratic Republic of the Congo, Equatorial Guinea and Gabon.
[14] See also paper no. 9 in FCCC/SBSTA/2007/MISC.2; and FCCC/SBTA/2006/10, para. 36.

Enabling Fund for developing national capacities to participate in the REDD mechanism and/or to stabilize forest stocks, as well as for pilot activities.

30. An overview of European Union perspectives[15] on reducing emissions from deforestation was given by a representative from Germany, on behalf of the European Community and its member States. The European Union proposed the setting up of a preparatory scheme for the period up to 2012 to explore approaches that combine national action and international support. This scheme could also include activities that improve monitoring and reporting capacities and define baselines or reference scenarios. After 2012, the development of concrete policies and actions for reducing emissions from deforestation will depend on the negotiations on an overall post-2012 climate change regime. It was highlighted that an agreement under this process should work synergistically with other international and national processes.

31. A presentation outlining several ongoing projects related to reducing deforestation, supported by bilateral development assistance, was given by a representative of the United States of America. The activities and results of two bilateral projects – the management of protected areas in the Maya Biosphere Reserve, Guatemala, and the control of illegal logging in Indonesia – were presented. Tools and activities relating to data needs for GHG inventories, including the LULUCF sector, and for calculating the carbon benefits of avoided deforestation, were highlighted.

32. A representative of Brazil provided an elaboration and update on the Brazilian proposal[16] for positive incentives to reduce emissions from deforestation that was first presented at the first workshop in Rome in 2006. She reiterated some previous principles and linked the proposal to additional principles, among them robustness, completeness, comprehensiveness, transparency and verifiability. She pointed out that any system of positive incentives should enable the participation of countries that are ready for a prompt start as well as countries that require enhancement of their capacities and technology transfer. She also provided a step-by-step process for the annual quantification of the positive financial incentives contained in the Brazilian proposal.

33. A representative of Costa Rica presented the views and proposals of a group of Latin American countries.[17] He reiterated that any mechanism to reduce emissions from deforestation should be based on a basket of incentives and any financial mechanism supporting this should include both non-market and market instruments. These countries called for "credit for early action" and suggested that any emission reductions generated by participating developing countries should be creditable post-2012. They proposed the setting up of an Avoided Deforestation Carbon Fund to cover specific activities that directly reduce emissions from deforestation and maintain forest cover in countries that have low rates of deforestation. They also supported the establishment of an Enabling Fund that would provide for capacity-building and pilot activities.

34. A representative of Papua New Guinea, on behalf of a group of countries belonging to the Coalition for Rainforest Nations, presented the group's views and proposals[18] for financing and methodologies that were first presented at the first workshop in Rome in 2006. He re-emphasized the importance of considering a basket of instruments that include sustainable financial resources (for which market instruments will be necessary); expanding existing efforts by building capacities and undertaking

[15] See also paper no. 10 in FCCC/SBSTA/2007/MISC.2.
[16] See also paper no. 4 in FCCC/SBSTA/2007/MISC.2; and FCCC/SBSTA/2006/10, para. 48.
[17] See also paper no. 7 in FCCC/SBSTA/2007/MISC.2. This submission was supported by Costa Rica, the Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Panama, Paraguay and Peru.
[18] See also paper no. 3 in FCCC/SBSTA/2007/MISC.2. This submission was supported by Bolivia, the Central African Republic, Costa Rica, the Democratic Republic of the Congo, the Dominican Republic, Fiji, Ghana, Guatemala, Honduras, Kenya, Madagascar, Nicaragua, Panama, Papua New Guinea, Samoa, Solomon Islands and Vanuatu.

national pilot projects; and allowing credits for early action. The group also suggested the establishment of an REDD mechanism and two funds, the Enabling Fund and the Stabilization Fund. Under the REDD mechanism, it was proposed that credits generated must be fully fungible and measured against a national reference scenario.

B. Main outcomes of the discussions

35. This section elaborates further, and is consistent with, the preliminary summary of the Chair mentioned in paragraph 13 above. Issues that were discussed and in principle agreed upon by participants at the first workshop have not been repeated. This applies specifically to paragraphs 24–27, 30, 50, 52, 57, 59, 65 and 67 of the report of the first workshop (FCCC/SBSTA/2006/10).

36. The main outcomes listed in this section of the note relate to all policy approaches and positive incentives presented by participants. Where issues are specific to certain policy approaches or positive incentives, this is clearly indicated.

1. Main areas of general agreement

37. Participants agreed that there is an urgent need to take meaningful action to reduce emissions from deforestation in developing countries, while ensuring the integrity of the international climate change arrangement. Such action, which should be compatible with sustainable forest management, would contribute to the reduction of GHG emissions from a major source, promote several important co-benefits (poverty alleviation, the conservation of biodiversity, etc.), and complement the goals of, and enhance synergies with, other multilateral processes. In addition, the causes of deforestation should be considered, especially as deforestation may be influenced by national policies and measures.

38. It is necessary to build capacities and strengthen the appropriate institutions (e.g. for the preparation of GHG inventories for the forestry sector) in order to ensure that developing countries are in a position to participate in any international arrangement on reducing emissions from deforestation in developing countries. Parties should make use of experiences gained thus far, including through demonstration and pilot projects, any relevant work under the UNFCCC process, bilateral cooperation, activities by other international organizations such as the FAO and the World Bank, and public–private partnerships.

39. Early action to reduce emissions from deforestation – including enabling activities, such as capacity-building, and actions on the ground such as pilot projects – is necessary and for this purpose additional resources would be needed. Governments could work through international organizations (such as the FAO and the World Bank) to implement early action activities in order to facilitate the process of reducing emissions from deforestation as soon as possible. It was noted that the COP, at its thirteenth session, may take a decision on a broad range of activities that could be initiated immediately.

40. There was a shared understanding among participants that there will be no access to the Kyoto carbon credit market for activities to reduce emissions from deforestation during the first commitment period of the Kyoto Protocol. Funding for an early start should draw upon voluntary funds and/or existing funds and not draw upon market mechanisms.

41. Policy approaches and positive incentives for reducing emissions from deforestation need to take into account the national circumstances of different countries and could be used in connection with any international future cooperation that addresses long-term action on climate change. There is a need to identify additional, predictable and sustainable funding to support action to reduce emissions from deforestation. In this regard, the active involvement of the private sector should be ensured, including through the provision of incentives or other means.

42. Methodologies and tools are available for estimating emissions from deforestation. A robust system for reporting, monitoring and verification of emission reductions is required.

Principles

43. It was recognized that any action on reducing emissions from deforestation in developing countries should be guided by commonly agreed principles. Such principles, as suggested by Parties in their submissions[19] thus far, could include robustness; completeness in terms of space, time and forest type; and effectiveness, efficiency and appropriateness. Any action would need to be cost-effective, result in real benefits for the climate system, promote sustainable development, and enhance forest ecosystem services as a capital resource.

44. The treatment of deforestation within the climate change process would need to be simple and consistent with the treatment of other LULUCF issues. Any action would need to take into consideration the common but differentiated responsibilities of Parties, the "polluter pays" principle, respect for state sovereignty, and the inter-generational responsibility of Parties, as well as the principles of equity and fairness. Furthermore, there is a need to act quickly while protecting the integrity of existing mechanisms under the Convention and its Kyoto Protocol.

2. Main issues for further consideration

45. Varying views were expressed on several issues, which would need to be addressed in the consideration of specific options on policy approaches and positive incentives and, possibly, as part of the negotiations on future international cooperation on climate change. These issues are primarily linked to the financing options discussed in paragraphs 73–86. In particular, the key questions are:

(a) Whether credits from reducing emissions from deforestation can be used by Annex I Parties in meeting their reduction commitments;

(b) Whether market-based mechanisms should be used to provide positive incentives (as stand-alone mechanisms or in combination with non-market-based financial resources) and whether they can ensure real and sustainable financing of actions to reduce emissions from deforestation in developing countries;

(c) Whether any future arrangement on reducing emissions from deforestation in developing countries should also compensate countries that have made efforts to conserve and stabilize their forests and carbon stocks;

(d) Whether any carbon savings as a result of early action projects could be used under a future market or other related mechanism.

46. Other issues on which additional work could be undertaken include the following:

(a) Methodologies for the estimation, monitoring and verification of emissions from deforestation (paras. 47–50 and 63–65);

(b) The question whether any arrangement on reducing emissions from deforestation in developing countries should cover gross or net emissions (paras. 51–52);

(c) The question whether non-carbon dioxide (CO_2) greenhouse gases should be covered in any arrangement on reducing emissions from deforestation in developing countries (para. 53);

[19] FCCC/SBSTA/2007/MISC.2 and Add.1.

(d) Establishment of a reference baseline (paras. 54–57);

(e) Scale of implementation (paras. 58–61);

(f) Definitional issues (para. 62);

(g) Emissions from forest degradation (paras. 66–70);

(h) Permanence and leakage (paras. 71–72).

3. Technical and methodological requirements

Methodologies for estimation of emissions from deforestation

47. Implementation of the proposed policy approaches and positive incentives requires robust and reliable methods to estimate emissions from deforestation. This entails, inter alia, the development of forest inventories; the determination of rates of deforestation; the identification of forested area or forest cover, including their rates of change; and the estimation of carbon stocks by type of forest or biome, as well as changes in those carbon stocks. Such methods need to be applied consistently over time. In addition, data availability should improve in order to enable a better understanding of the actual rates of deforestation on the national and global scales.

48. As during the first workshop, participants generally agreed that the available methods and tools are robust enough to allow for emissions from deforestation to be estimated with an acceptable level of certainty. The IPCC good practice guidance for LULUCF and the IPCC 2006 Guidelines provide a reasonable basis for estimating GHG emissions from deforestation and their reductions at the national level and on an annual basis, and should therefore be used as a methodological basis for this purpose. This would allow all Parties to start promptly with the preparation of the necessary emission estimates.

49. However, the IPCC methodologies include tiers of varying complexity (tier 1, tier 2, tier 3). Higher tiers produce more accurate results but require more country-specific data. It was noted that, at a minimum, a tier 2 approach would be preferred as this would allow for emission reductions to be assessed on the basis of national data instead of default data. However, further consideration needs to be given to the selection of tiers. Some participants highlighted that non-availability of data for the use of higher tiers or for the estimation of carbon stocks in all pools should not be an impediment for any country wishing to participate in any arrangement on reducing emissions from deforestation in developing countries, so long as estimates for emission reductions are "conservative". Although a conservative approach would imply considerably fewer data requirements compared to an approach based on high accuracy, it is expected that efforts will be made to improve the accuracy of estimates over time.

50. One participant emphasized that, if the IPCC methodologies form the basis for estimating emissions from deforestation, in the context of any arrangement on reducing emissions from deforestation in developing countries, further consideration needs to be given to the current classification of managed and unmanaged lands.

Gross or net emissions

51. Some participants proposed that whatever methodological approach is selected (see paras. 48 and 49) it should ensure that only the carbon losses from deforestation are taken into account in the estimation of emissions and not any potential carbon gains resulting from subsequent land uses, as is the case in the IPCC 2006 Guidelines for land conversion categories, which focus on the changes in carbon stocks.

52. It was also noted that, depending on the overall approach taken for an arrangement on reducing emissions from deforestation in developing countries, any possible double-counting of carbon sequestered as a result of afforestation/reforestation projects under the CDM must be avoided.

Coverage of GHGs

53. Most proposed approaches are based on the estimation of all GHGs in order to achieve comprehensive coverage of emissions from deforestation that would not leave out potentially significant emission sources (e.g. methane (CH_4) emissions from peatlands). Other approaches cover only reductions in CO_2 emissions since reductions of non-CO_2 gases could also be achieved by merely changing management practices for the new land use after deforestation has taken place.

Establishment of a reference baseline[20]

54. There are different approaches to establishing a reference baseline against which to measure emission reductions. In general, they can be categorized as follows:

(a) Reference baselines based on historical deforestation rates. These could be based on a certain historical time period (e.g. 10 years) from which a certain number of representative years would be chosen to establish a reference rate. Alternatively, a reference rate could be based on a historical reference period for which a minimum number of years (e.g. five) would be selected. Such approaches would ensure that baselines are not based on hypothetical assumptions or future developments. On the other hand, such baselines also pose some challenges, such as the fact that they are based purely on past drivers of deforestation without taking into account any potential emission reductions in the future, including ongoing and/or future forest conservation efforts and other measures to reduce deforestation that would also occur without any arrangement on reducing emissions from deforestation in developing countries. In addition, baselines based on purely historical deforestation rates may make the participation of countries with historically low rates of deforestation difficult.

(b) Reference baselines based on projections. These would take into account possible future trends, including any policies that may be implemented in the future. Baselines established on this basis would benefit from the improved knowledge about the drivers of deforestation and improved capabilities to make predictions, and might also allow present and future responses to the drivers of deforestation to be taken into account. Projected baselines would also give greater possibilities for Parties with low deforestation rates to participate in any arrangement on reducing emissions from deforestation in developing countries. However, concerns were expressed with regard to the hypothetical character and the possible risk of such projected baselines being "inflated".

55. Other options for developing reference baselines, which would need further consideration, were also identified. They could include a combination of historical deforestation rates and projections, flat baselines, or baselines in the context of a carbon stock approach.

56. Some participants proposed the use of a "development adjustment factor" as part of the establishment of the reference baseline to take into account national circumstances and the principle of

[20] Different terminologies were used by participants in this context, such as "baselines", "reference scenarios", "reference emission rates", etc. For the sake of summarizing, the term "reference baseline" is used here. This does not prejudge the terminology that might be chosen in the context of any future arrangement on reducing emissions from deforestation in developing countries.

common but differentiated responsibilities. Defining such a factor would be the subject of future consideration.

57. Other issues relating to the establishment of reference baselines include how to take into account any recent efforts taken by Parties to reduce emissions from deforestation ("early action") in the reference baseline; how to distinguish between the end of the baseline and the start of early action; and how to treat Parties with historically low deforestation rates. Similarly, once an arrangement on reducing emissions from deforestation in developing countries is in place, a revision of the reference baseline may be required in order to take into account any reductions that have taken place as a result of this arrangement (as with the provisions in the CDM).

The scale of implementation

58. Actions to reduce emissions from deforestation, the estimating and reporting of emissions and the establishment of reference baselines could be undertaken either at the national or at the project level. Some participants were of the view that a national-level approach would ensure complete and comprehensive coverage and reduce the potential for leakage within the country. It was also suggested that a national approach would still allow for activities to be implemented at project level, but to be accounted for at the national level, that is, employing a "nested approach".

59. Other participants saw merits in using a project- or community-based approach, for reasons of flexibility and because results obtained on this basis would be easier to verify and trace. This may also overcome possible barriers in participating in any arrangement on reducing emissions from deforestation in developing countries, in particular for those countries that face difficulties in preparing their national GHG inventories in line with the IPCC guidelines (particularly if higher tiers were required).

60. Some participants suggested that a project approach might also increase the possible engagement of the private sector and allow for greater participation of local communities wishing to undertake activities to reduce emissions from deforestation. Such an approach could avoid possible challenges associated with the implementation of actions to reduce emissions from deforestation at the national level in countries with weak governance structures. However, a project-based approach would require further elaboration of how to address leakage at the national level.

61. Participants also discussed the issue of the frequency of the accounting or assessment of emissions from deforestation. Some suggested annual accounting, while others proposed less frequent accounting.

Definitional issues

62. Participants discussed whether common or country-specific definitions would be needed. The use of common definitions would improve consistency and comparability among countries. It was also suggested to use national definitions for forests and deforestation consistent with current and earlier practices for the preparation of national inventories (as reported to the UNFCCC bodies and/or to the FAO) as this would enable Parties to include or exclude various elements in their approach for estimating reduced emissions from deforestation, such as degradation and non-CO_2 gases, depending, as appropriate, on previous approaches used.

Monitoring and verification

63. Any international arrangement for reducing emissions from deforestation in developing countries would require rigorous, solid and reliable monitoring and verification procedures if the results achieved by efforts to reduce emissions from deforestation are to be assessed. Some participants noted that such

procedures should be transparent, be as accurate as possible, and should allow for the replication of results and consistency in monitoring.

64. While remote sensing is viewed as an important and verifiable method for monitoring forest area and forest cover and their changes, some participants highlighted the fact that remote sensing cannot provide carbon stock data and pointed out the need to couple this method with ground-truthing and reliable carbon stock inventories. In particular for ground-truthing, the high costs of sampling were noted.

65. As regards verification, some participants proposed periodic and independent reviews coordinated by the UNFCCC secretariat or independent inspections. Such reviews would cover the reported emissions reductions over specific time periods. Some participants also suggested a periodic review and revision of the reference baseline (e.g. every three years).

Emissions from forest degradation

66. There is common recognition of the importance of forest degradation, of the significance of the rates of degradation (even in countries with low rates of deforestation) and of the fact that forest degradation, although it does not represent a change in land use, can lead to significant amounts of emissions. Therefore, it was generally recognized that there is a need to consider forest degradation together with deforestation. One participant noted that forest degradation may lead to deforestation, but may not always constitute a precursor of deforestation.

67. Some participants highlighted the importance of considering forest degradation in any arrangement on reducing emissions from deforestation in developing countries as this would contribute to the completeness and comprehensiveness of the arrangement and facilitate broader participation by Parties, including those with low deforestation rates. In addition, consideration of forest degradation in any arrangement on reducing emissions from deforestation in developing countries would be relevant for addressing the conversion of primary forest to secondary forest or plantations.

68. It was also highlighted that consideration of forest degradation is important to ensure that any arrangement does not create perverse incentives that would allow forests to degrade to just below the deforestation threshold, thereby allowing Parties to gain benefits from not deforesting.

69. However, some participants cautioned that estimating and verifying emissions from forest degradation is complex and presents many challenges, for example, in terms of definitions, methodologies and monitoring, and in estimating historical reference rates. The need to consider definitional issues was expressed; here assistance from the IPCC could be sought. At the same time it was noted that consideration of definitional issues may not be required, depending on the methodological approaches used. For example, methodological approaches that focus on the estimation of carbon stocks across a certain area of land over time, which would directly estimate the decreases or increases of carbon stocks over time, may not depend on precise definitions.

70. In the light of the challenges identified, participants saw a need to explore the technical and methodological aspects of monitoring forest degradation, including the assessment of cost-effectiveness, and to further develop monitoring technologies. They also proposed the possibility of inviting the IPCC to undertake further methodological work and to provide guidelines on the monitoring and estimation of emissions.

Permanence and leakage

71. The issues of permanence (see also para. 84) and leakage need to be further explored and addressed. Different policy approaches and positive incentives have different implications with regard to the potential for leakage and permanence.

72. Participants noted that the potential for leakage may be minimized through approaches that focus on the national level (as compared with project-based approaches), and through wide coverage of forest areas, the broad participation of Parties and a broader definition of deforestation. In addition, leakage may be less significant in any arrangement on reducing emissions from deforestation in developing countries that is not linked to the carbon market.

4. Financing options to support positive incentives

73. Participants proposed that new funds or financial mechanisms could be established in order to help developing countries reduce emissions from deforestation. There are several different potential sources of funds to finance activities to reduce emissions from deforestation. They can be broadly grouped into two main categories: market-based mechanisms and non-market-based financial resources.

74. Market-based mechanisms could include the following:

(a) Trading of carbon credits;

(b) Project-based, programmatic and/or sectoral CDM;

(c) Barter transaction (similar to existing market approaches but credits could be paid by using currency other than money, e.g. debt cancellation, trading opportunities, employment, etc.);

(d) Payment for ecosystem services;

(e) Levies on emission reductions units issued or assigned amounts units first traded on the carbon market. The complexity of discussing and agreeing upon such levies was highlighted.

75. Non-market-based financial resources could include the following:

(a) Overseas development assistance;

(b) Voluntary contributions from governments and NGOs;

(c) Private sector sponsorship/donations;

(d) Potential new and additional financial resources under the Convention;

(e) Funds created under the Convention and its Kyoto Protocol (e.g. the Special Climate Change Fund, the Adaptation Fund) and the Trust Fund of the Global Environment Facility (GEF);

(f) Taxes on carbon-intensive commodities and services. The complexity of discussing and agreeing upon such taxes was highlighted.

76. Participants agreed that funding should be provided for real and demonstrable emission reductions in existing forests on a national basis and/or specific projects depending on the choice of policy approach. Other funded activities could include capacity-building, technology transfer and pilot activities.

77. There was general agreement on the use of non-market financial resources, except for those mentioned in paragraph 75 (f). However, participants cautioned that funding from non-market sources will generally be limited. For the case of the GEF Trust Fund (para. 75 (e)), some participants noted that additional guidance to the GEF would be needed. It was also highlighted that it is important to have a clear understanding of what is meant by a non-market-based approach and a market-based approach, as well as how to use market mechanisms. Participants provided views on the relative advantages and disadvantages of each financing option.

78. Participants supporting the development of market-based approaches in which credits generated from the reduction of emissions from deforestation in developing countries are used for meeting the commitments of Annex I Parties under a future regime noted the following:

(a) As traditional sources of funding have not been available on a sufficient scale, it would be necessary to ensure that the financial resources for addressing the reduction of emissions from deforestation in the long term were sustainable;

(b) Non-market financing options (e.g. voluntary contributions, trust funds) suffer from lack of market access, thereby making them unattractive to investors. Any voluntary fund risks being under-resourced because of other competing priorities of governments;

(c) Market-based approaches could facilitate the engagement of the private sector and ensure its participation in project-based, national and regional approaches;

(d) Market options would require robust carbon accounting systems. If such accounting systems were put in place, it is likely that they would increase the credibility of emission reductions and lead to higher value for the ensuing credits.

79. Participants who did not support the use of credits generated from the reduction of emissions from deforestation in developing countries to meet the commitments of Annex I Parties noted that non-market-based approaches:

(a) Do not devalue the price of existing tradable carbon;

(b) Do not divert financial resources from major sources of GHG emissions (energy and transport) that are the main sources of GHG emissions and need to be reduced to achieve the long-term objectives of the Convention;

(c) Do not reopen the discussions on the Marrakesh Accords;

(d) As they are not linked to the CDM, they reduce pressure on Annex I Parties to significantly increase their targets based on offsets against credits gained from reducing emissions from deforestation.

80. There were differences of view as to whether funding should cover the maintenance and stabilization of existing forest areas on a national basis and the maintenance and increase of baseline forest carbon stocks through conservation polices and activities.

81. Participants proposing that policy approaches and positive incentives should cover only reducing emissions from deforestation noted that compensating for conservation efforts is not a part of the mandate to discuss policy approaches and positive incentives for reducing emissions from deforestation, and could divert resources away from the actual issue, that is, the reduction of current GHG emissions. They also stated that the mandate to consider positive incentives for reducing emissions from deforestation does not cover stabilization of emissions (through a Stabilization Fund) or afforestation and

reforestation activities (covered under the CDM); instead it is based on the effective reduction of emissions from deforestation.

82. Participants proposing that positive incentives should also compensate for the stabilization of existing stocks and for the conservation and increase of forest cover as a way to reduce emissions noted that a focus on reducing emissions from deforestation provides incentives only for countries with high rates of deforestation. Such an approach would fail to recognize those countries that have made efforts to increase their forest cover and carbon stocks. In this regard, compensation for the stabilization and conservation of existing stocks would act as an insurance against any perverse incentive to gain benefits by reducing forests and carbon stocks. These participants were of the view that slowing rates of deforestation is equivalent to deferring emissions until later, without a net reduction in emissions. Hence they were also of the view that countries that have implemented strong conservation measures should also be suitably compensated for their carbon conservation initiatives.

83. There was a shared understanding that with the use of carbon market approaches for providing positive incentives to reduce emissions from deforestation, a new supply of credits must be met by new demand. New demand could be created by deeper reduction commitments by Annex I Parties. Some participants proposed that under the principle of proportionality it is equitable for international mitigation policies to dedicate a share of available revenues to address this emissions source that is proportional to the share of emissions from deforestation in global emissions.

84. The details of the funding mechanism under any arrangement on reducing emissions from deforestation in developing countries are also linked to the question of how to ensure permanence. Several ways of addressing permanence were proposed in this regard, including trust structures; the use of experiences with projects under the Kyoto Protocol (such as afforestation and reforestation projects under the CDM); banking mechanisms; a reference period carry-over; and temporary credits.

85. Several participants referred to the Stern Review on the economics of climate change, which stated that reducing emissions from deforestation could be a very cheap option and may even save money as compared with other GHG abatement options.[21] One participant, however, pointed out that reducing emissions from deforestation may not be the cheapest and easiest option available. In addition, he stressed that it is important that discussions on this issue should not divert the focus from discussions on other sectors and policies, such as energy and the adoption of clean energy technologies that reduce emissions permanently.

86. On the subject of the provisions of other Conventions and work by other multilateral organizations (e.g. the World Trade Organization), one participant expressed her country's views on the need to take into account the conceptual difference between the terms "payment for ecosystem services" and "payment for environmental services".

V. Possible next steps for a process forward

A. Relevant issues

87. There was general agreement on the following issues:

(a) The SBSTA should substantially advance its work during its twenty-sixth session. In this regard, it was considered important not to introduce any new key elements for consideration at or after SBSTA 26 in order to fulfil the mandate given by the COP at its eleventh session;

[21] Available at <http://www.hm-treasury.gov.uk/media/8F1/6C/ch9.pdf>.

(b) Reducing emissions from deforestation in developing countries in the context of the UNFCCC process could be promoted through policy approaches and policy incentives, and through the engagement of a broad range of stakeholders within and outside the process. In doing so, attention should be given to the need to ensure the widest possible participation of developing countries while acknowledging the diverse national circumstances of these countries;

(c) Early initiation of capacity-building activities and pilot projects to facilitate actions to reduce emissions from deforestation under the UNFCCC would be necessary for implementing any option(s) that Parties may agree upon.

B. Possible process for consideration of issues prior to the twenty-seventh session of the Subsidiary Body for Scientific and Technological Advice

88. At its twenty-sixth session, the SBSTA could prepare a draft decision that would be forwarded to the COP for adoption at its thirteenth session. Such a decision could include the following elements:

(a) Initiate enabling activities on reducing emissions from deforestation for a period of about three to five years (to be adjusted as necessary depending on any further decision by the COP). They would include activities and pilot projects to assist developing countries in building the necessary capacities, and in gaining experience with projects on reducing emissions from deforestation. These activities should build upon ongoing activities carried out by international organizations, such as the FAO and the World Bank, as well as on relevant initiatives resulting from bilateral and multilateral cooperation. To the extent possible, these activities should support the potential implementation of the broad range of policy approaches and positive incentives that have been proposed by Parties. The secretariat, under the guidance of the SBSTA Chair, could report regularly to the subsidiary bodies and the COP on the progress of these activities on the basis, as appropriate, of information submitted by Parties and relevant organizations. Bilateral and multilateral cooperation involving Parties and a broad range of organizations to implement these activities should be encouraged;

(b) Decide to return to the matter at a future session in order to consider a range of policy approaches and positive incentives, including potential financing options as well as technical tools and methodologies available and needed for their implementation. The COP would also need to consider how these issues should be addressed in the context of any discussions on future international cooperation on climate change;

(c) Recommend further technical and methodological work to be undertaken by the SBSTA;

(d) Request the IPCC to undertake work on methodologies for estimating emissions from deforestation and forest degradation in developing countries and present it to the SBSTA at a future session.

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