WMO

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

NATIONAL GREENHOUSE GAS INVENTORIES PROGRAMME

UNEP

IPCC Expert Group Planning Meeting on the Elaboration of Good Practice Guidance in Land-Use Change and Forestry for the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories

Meeting Report

Geneva, Switzerland
6-8 August 2001

Acknowledgements

This report was prepared by Riitta Pipatti, Leandro Buendia, Kiyoto Tanabe, and Kyoko Miwa, in consultation with the Co-chairs of the Task Force Bureau on National Greenhouse Gas Inventories (TFB) Taka Hiraishi and Buruhani Nyenzi. Additional contributions were received from breakout group (BOG) Co-chairs namely Ian Carruthers, Wojciech Galinski, Thelma Krug, Dina Kruger, Jim Penman, and Mohammad Soltanieh; from BOG rapporteurs Kenneth Byrne, Harry Ganoo, Bo Lim, Audun Rosland, Kristin Rypdal, and Martina van der Merwe; and from plenary rapporteurs Ian Noble and John Stone. We are also grateful to the contributions of the thirty-seven experts from developed and developing countries and from countries with economies in transition; four experts from international organisations; members of the TFB; and representatives of the IPCC Secretariat.

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1. EXECUTIVE SUMMARY

The IPCC Expert Group Planning Meeting (EGPM) on the Elaboration of Good Practice Guidance in Land-Use Change and Forestry for the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories was held on 6-8 August 2001 in Geneva. The meeting aimed to develop a work programme in response to IPCC XVII decision and to the invitation of Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC), in its draft decision at the resumed COP6 in July 2001, to prepare a report on good practice guidance and uncertainty management and to elaborate and develop methods, methodologies, and definitions on specified activities in Land Use, Land-Use Change, and Forestry (LULUCF).

Thirty-seven experts on LULUCF and greenhouse gas (GHG) inventories, from developed and developing countries and from countries with economies in transition, and four experts from international organisations, in addition to the members of the Task Force Bureau on Inventories (TFB) and staff of the National Greenhouse Gas Inventories Programme-Technical Support Unit (NGGIP-TSU), participated in the EGPM. The meeting was organised by having a series of Plenary Sessions and Breakout Group Sessions. Three Breakout Groups worked in parallel to develop the Terms of Reference (TOR), Table of Contents (TOC), and work plan to address the different issues in LULUCF as related to good practice and the inventory reporting requirements of the Parties under the UNFCCC. Three major documents became the basis of breakout group discussions on how to proceed with the work: 1) the Provisional Outline of the Report, which was developed in March 2001 at the TFB Co-chairs Informal Consultations; 2) the IPCC XVII decision in April 2001; and 3) the invitation to IPCC in the resumed COP6 draft decision (FCCC/CP/2001/L/11/Rev.1).

The meeting made significant development to advance the work in Good Practice Guidance for the Land-Use Change and Forestry Sector of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories. It developed draft TOR and TOC for this work including the supplementary method development and good practice guidance work for the relevant Articles of the Kyoto Protocol. It prepared the structure to proceed with the work on good practice guidance and uncertainty management relating to measurement, estimation, assessment of uncertainties, monitoring and reporting of carbon stock changes and GHG emissions and removals. It explored the scope and laid out the work plan to address the issue of definitions for direct human-induced degradation and devegetation of forest and other vegetation types. A scoping paper for the work to factor out direct human-induced changes in carbon stocks and GHG emissions and removals was also developed.

The EGPM also considered issues with inter-linkages to the above methodological work but not directed to the IPCC in the draft decision in document FCCC/CP/2001/L.11/Rev.1. It prepared options assessment papers to address the issue of developing biome-specific forest definitions and issues related to afforestation and reforestation project activities under Article 12 of the Kyoto Protocol. Further guidance on these issues would be needed from the 18th Session of the IPCC and COP7/SBSTA 15.

The Food and Agriculture Organisation announced at the meeting its intention to organise a workshop on forest definitions in late 2001 or early 2002. The close link with the IPCC work and the need for collaboration was recognised.

The draft TOR, TOC, scoping papers, and options assessment papers would be forwarded to the Sixth Session of the TFB, in August 2001, for consideration and improvement prior to presentation/submission to the 18th Session of the IPCC in September 2001.

The EGPM agreed that it was premature to finalise the work plan and to propose a slate of authors for the work described in the 5 draft papers in view of the necessity to call for additional expertise as identified in the discussion. This work plan would be presented and finalised at future meetings of the IPCC (TFB, IPCC Bureau, and Panel).

2. INTRODUCTION

The Expert Group Planning Meeting (EGPM) was organised to respond to the request of IPCC XVII (Nairobi, 4-6 April 2001) to pursue further work on the elaboration of Good Practice Guidance and Uncertainty Management, in order to meet the inventory reporting requirements of the Parties under the UNFCCC in relation to Land-Use Change and Forestry (LUCF). The existing IPCC Report on Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories does not encompass the LUCF sector. At the time the good practice report was being prepared, the IPCC was also preparing a Special Report on Land Use, Land-Use Change, and Forestry (SR LULUCF). The good practice guidance for the LUCF sector was to be prepared after the finalisation of the SR LULUCF. The SR LULUCF was accepted by the IPCC in its Sixteenth Session in May 2000.

IPCC XVII noted that any further decisions or guidance from meetings of the Conference of the Parties (COP) to the UNFCCC would be taken into account in the planning of the work on LULUCF. The resumed COP6 in Bonn, in July 2001, reached a decision on the implementation of the Buenos Aires Plan of Action that includes core elements related to LULUCF. This is contained in Section 4 of FCCC/CP/2001/L.7. The Bonn meeting also forwarded a draft decision for further consideration by COP7 (-/CP.6, document FCCC/CP/2001/L.11/Rev.1) on matters relating to LULUCF. Section 3 of the draft decision -/CP.6 contains an invitation to the IPCC. The EGPM took this invitation into consideration in the planning of the work on LULUCF.

The main objectives of the EGPM were to:

1. Develop a work programme, including the terms of reference, work plan, table of contents for the work;

2. Formulate a proposal, from the list of experts nominated by governments, of a slate of authors (CLAs, LAs, REs) for the report on Good Practice Guidance and the other issues in the UNFCCC request to the IPCC;

3. Prepare a report on conclusions and proposals by the planning meeting for approval by the 6th Session of the Task Force Bureau for the IPCC National Greenhouse Gas Inventories Programme in August 2001 and for consideration by the IPCC Panel at its 18th Session in September 2001.

3. ORGANISATION OF THE PLANNING MEETING

1. Thirty-seven experts on Land-Use Change and Forestry and greenhouse gas inventories from developed and developing countries and from countries with economies in transition, and four experts from international organisations, in addition to the members of the Task Force Bureau on Inventories (TFB) and staff of the NGGIP-Technical Support Unit (NGGIP-TSU), participated in the EGPM.

2. The EGPM was organised into four sessions: 1) Sessions of the “Planning Group” which include the TFB Co-chair and Members, breakout group (BOG) Co-chairs and

Rapporteurs, and Plenary Rapporteurs; 2) Opening Session; 3) series of BOG/Plenary Sessions; and 4) Closing Session.

3. Sessions of the Planning Group were held before the start of each day session. In day one, the first meeting of the group set out the plan for the Opening Session and the work program for the succeeding days. In days two and three, sessions of the group were held to assess the progress of the work and to determine cross-cutting issues that have to be addressed in Plenary Sessions. All meetings of the Planning Group and all Plenary Sessions were chaired by Taka Hiraishi, one of the Co-chairs of the TFB.

4. In the Opening Session, the following topics were presented:

   - Opening Remarks by the TFB Co-chair (Taka Hiraishi) – The TFB Co-chair welcomed the experts/participants and introduced the agenda for adoption.
   - Welcome remarks by the Secretary of the IPCC – N. Sundararaman expressed words of welcome to all participants and invited them to give more attention to the technical issues of LULUCF rather than procedures.
   - Background and Objectives of the Meeting (Leandro Buendia, NGGIP-TSU) – This presentation provided the background and objectives of the EGPM, the expected outcome, and possible activities after the meeting.
   - Introduction to Good Practice Guidance (Dina Kruger, USA) – This presentation introduced the purpose of good practice, its principles, and the importance of practical experience in preparing greenhouse gas inventories. It discussed the structure of the IPCC report on *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* (GPGAUM) which consisted of two major components: 1) source-specific guidance; and 2) cross-cutting guidance. The presentation emphasised that no Kyoto Protocol related issues were included in GPGAUM. Thus, in this presentation, the participants (experts) were challenged to plan and organise this IPCC LUCF Project in a way that leads to addressing the issues covered in GPGAUM as well as those requested by the Parties.
   - The UNFCCC Common Reporting Format for LUCF Sector (Roberto Acosta, UNFCCC) – The topic presented the Common Reporting Format (CRF) for the LUCF sector used by Annex I Parties in reporting their annual inventories to the UNFCCC. An informal paper on "Alternative Formats for Sectoral Background Data Tables 5A-D on Land-Use Change and Forestry of the Common Reporting Format' was prepared by the UNFCCC Secretariat and was distributed to the participants. The paper was prepared on the basis of document FCCC/SBSTA/2001/MISC.4 which can be obtained at the UNFCCC web site - http://www.unfccc.int/resource/docs.html. The UNFCCC Secretariat also prepared an informal paper on "Tables and Other Relevant Parts of the CRF for Reporting LUCF Information" on the basis of document FCCC/CP/1999/7 which can also be acquired from the above-mentioned web site. This topic also included a presentation on the time frame for considering the completion of the report on LULUCF GPG and the implications of a late completion of the report (Attachment 1: Informal Paper #3). Finally, the presentation recalled the decision of COP (3/CP.5) to consider the revision of the reporting guidelines after the trial period by COP7 and the agreement of Parties to the UNFCCC to the use of good practice guidance in preparing their LUCF inventories.

- Provisional Outline of the Report (Jim Penman, UK) – This presentation introduced the Provisional Outline of the Report (Attachment 2) that was developed in March 2001, in Geneva, during the TFB Co-chairs Informal Consultations on LULUCF. The presentation highlighted the five sections of the Provisional Outline namely: 1) Introduction; 2) Good Practice for categories of Chapter 5 of the *Revised 1996 IPCC Guidelines*; 3) Cross-cutting issues; 4) Good practice requirement arising from the decisions of the UNFCCC; and 5) Glossary. The issues under Sections 2 and 3 of the Provisional Outline were expressed in detail, except for Section 4 where details are to be based on the outcomes of the negotiations of the COP to the UNFCCC. It was mentioned that the Fifth Session of the TFB took note of the Provisional Outline and agreed to make it available at the Planning Meeting. In the light of the agreement reached at the resumed COP6, Section 4 of the Provisional Outline was updated during the presentation to include the invitations to IPCC to prepare a report on good practice guidance and uncertainty management and to address other methodological issues related to LULUCF activities under Articles 3.3 and 3.4, and Articles 6 and 12 of the Kyoto Protocol.

- Mandate and Procedural Requirements (Taka Hiraishi) – This presentation recalled the mandate from IPCC XVII which included, among others, the decision to pursue further work on the elaboration of Good Practice Guidance and Uncertainty Management in Land Use Change and Forestry to meet the inventory reporting requirements of the Parties under the UNFCCC (Attachment 3). The presentation also recalled the draft decision at the resumed COP6 which included an invitation to IPCC to prepare a report on good practice guidance and uncertainty management relating to the measurement, estimation, assessment of uncertainties, monitoring and reporting of net carbon stock changes and anthropogenic greenhouse gas emissions by sources and removals by sinks in the land use, land-use change and forestry sector. Other invitations and requests from COP6 which were discussed, and of equal importance, are found in Attachment 4 (FCCCP/CP/2001/L.11/Rev.1) of this report. In terms of the IPCC procedures, the presenter enumerated some of the activities and requirements that may be involved in translating those requests into tangible products. These included the request for government nominations of additional experts, the selection of authors by the TFB under the guidance of the Panel, the review process that will be required, and the procedures for the adoption/acceptance of the final report.

- Expert Consultation Meeting on Forest-Related Definitions (Rene Gommes, FAO, Rome) – The representative of FAO announced the tentative schedule of the joint FAO/IPCC/CIFOR Expert Consultation Meeting on Forest-Related Definitions to be held in FAO, Rome, sometime in December 2001 or early January 2002. The purpose of the meeting is to start a process to review, improve, and harmonise forest related definitions for consideration by the IPCC, SBSTA of the UNFCCC, and other relevant conventions or fora (Attachment 5).

- Breakout Groups (BOGs) Organisation of the Work and Expected Outcome (Riitta Pipatti, NGGIP-TSU) – This was the last part of the Opening Session. Participants were informed of the three breakout groups: BOG1 – Source Specific Issues; BOG2 – Cross-cutting Issues; and BOG3 – Additional Issues Arising from the UNFCCC invitation to IPCC. Attachment 6 provides the list of BOG Co-chairs, rapporteurs, and members, and the rapporteurs for the Plenary Sessions. The list of available meeting documents or materials that the NGGIP-TSU had prepared was presented for use in BOG sessions. Finally, the presenter discussed the expected outputs from BOGs

sessions, which include the following: Terms of Reference (TOR), Table of Contents (TOC), and Work Plan. These outputs would be forwarded for consideration by the 6th Session of the TFB in August 2001 and by the 18th Session of the IPCC in September 2001.

5. BOG/Plenary Sessions – Two BOG sessions and three Plenary Sessions were conducted within the duration of the EGPM. The first BOG session was done immediately after the Opening Session on the first day.

6. The meeting closed at 5:30 P.M., on 8 August 2001 with words of thanks from the TFB Co-chair for the warm support and cooperation of all the expert/participants. In return, an expert/participant, on behalf of all the experts/participants, expressed his appreciation to the work/leadership of the TFB Co-chair.

4. HIGHLIGHTS OF THE PLANNING MEETING

1. Three major documents became the basis of initial BOG discussions on how to proceed with the work: 1) the Provisional Outline of the Report, which was developed in March 2001 at the TFB Co-chairs Informal Consultations; 2) the IPCC XVII decision in April 2001; and 3) the resumed COP6 draft decision (FCCC/CP/2001/L.11/Rev.1).

2. The first round of BOG Sessions resulted in the delineation of topics to be handled by each BOG. The identified topics were as follows: 1) Selecting Reporting Approach; 2) Good Practice Measuring – 1996 Guidelines; 3) Kyoto Protocol related issues; and 4) Cross-cutting issues. Topic 1 covers the issues related to representation of land areas in the inventory. Topic 2 deals with good practice guidance at source level. Topic 3 covers requirements arising from the decisions of the COP to the UNFCCC and Topic 4 deals with cross-cutting issues such as statistical and management methodologies, uncertainty, QA/QC, verification, etc. These four topics were distributed to the BOGs for discussion and further development. BOG1 was tasked to handle Topic 2; BOG2 for Topics 1 and 4; and BOG3 to deal with Topic 3. The BOGs were challenged to list items under each section to clearly see areas of complementation and linkages.

3. The second round of BOG Sessions produced provisional TORs and TOCs for each assigned topic. A draft TOCs for Good Practice Guidance for LULUCF of the draft decision (L.11/Rev.1) was developed. This draft was presented to the plenary of the meeting. Major discussions during the Plenary Sessions were given to the issue on practicable methodologies that may enable factoring out direct human-induced changes in carbon stocks and GHG emissions and removals from those caused by indirect human-induced and natural effects. Ian Carruthers and Gary Richards (Australia), Dina Kruger (USA), and Jim Penman (UK) were requested to finalise the TOR and TOC taking into consideration the issues and suggestions brought out at the Plenary Session. The final draft of the TOR is in Attachment 7 and the TOC for Good Practice Guidance for LULUCF is found in Attachment 8. The draft TOC has five chapters and an annex. The chapters are:

1) Introduction;

2) Basis for Consistent Representation of Land Areas;

3) LUCF Sector Good Practice Guidance;

4) Supplementary methods and Good Practice arising from the Kyoto Protocol; and

5) Cross-cutting Issues.

An Annex with a proposed elaboration of the TOC developed by BOG3 for Chapter 4 was attached in the TOC.

4. A proposed work plan to complete the work on Good Practice Guidance for LULUCF was presented and discussed in the meeting. The draft workplan was based on the plans developed independently by Taka Hiraishi (TFB Co-Chair) and John Stone (TFB Member). A two-stage sequential review process was recommended in view of the policy relevance of the report. The EGPM agreed that it was premature to finalise the work plan and to propose a slate of authors for the work in view of the necessity to call for additional expertise as identified in the discussion. The meeting decided to forward the issue to TFB6 for further discussion.

5. The meeting agreed that the developed TOC for Good Practice Guidance for LULUCF addressed Sections 3(a) and 3(b) of the draft decision of COP6 in FCCC/CP/2001/L.11/Rev.1 and IPCC XVII decision.

6. The meeting also addressed the issues, in the same draft decision of COP6, in Section 3(c) on degradation and devegetation and Section 3(d) on factoring out of direct human-induced changes in carbon stocks and GHG emissions and removals. The meeting agreed to the request of the TFB Co-chair to form small groups or task forces to conduct parallel sessions to enable the development of a draft Scoping Paper for the two sections. The task of developing a draft scoping paper for Section 3(c) was given to Claudio Forner (UNFCCC) and Audun Rosland (Norway). Developing a draft Scoping Paper for Section 3(d) was given to Thelma Krug (Brazil), Bill Hohenstein (USA), Ian Noble (Australia), and John Stone (Canada).

7. The Chairman of the IPCC, Bob Watson, was informed of the progress made at the EGPM at telephone conferences arranged during the meeting. These telephone conferences were attended by the IPCC Vice-chair Gylvan Meira Filho; TFB Co-chair Taka Hiraishi; the BOG Co-Chairs Jim Penman, Dina Kruger, Thelma Krug and Ian Carruthers; the Plenary Rapporteurs John Stone and Ian Noble; representatives of the IPCC Secretariat Ram Sundararaman and Renate Christ; TSU Head Riitta Pipatti; and Roberto Acosta from the UNFCCC Secretariat.

8. The telephone conference initiated discussions at the EGPM on Sections 2(b) and 2(e) of the above draft decision at the resumed COP6. The issues in the draft decision are not directed to the IPCC but they have inter-linkages with the methodological work. The meeting again agreed to the request of the TFB Co-chair to form small groups or task forces to work on these issues. The task forces were requested to prepare Options Assessment Papers on how these issues could be included in the work of the IPCC, in case a request to the IPCC would be made by the SBSTA at a later stage. For Section 2(b),

Options Assessment Paper to develop biome-specific forest definition, the task was given to Werner Kurz (Canada) and Bernhard Schlamadinger (Austria). The development of Options Assessment Paper for Section 2(e), on issues related to afforestation and reforestation project activities under Article 12 of the Kyoto Protocol, was given to Heikki Granholm (Finland) and Jose Domingo Miguez (Brazil).

9. All the final drafts of the above-mentioned papers were presented and discussed in Plenary Session and were approved for consideration and further discussion by TFB6. The draft Scoping Papers and Options Assessment Papers are found in Attachments 9, 10, 11, and 12 of this report.

5. CONCLUSION

The EGPM made significant development to advance the work on good practice guidance for LULUCF. It developed draft TOR and TOC for this work. It prepared the structure to proceed with the work on good practice guidance and uncertainty management relating to measurement, estimation, assessment of uncertainties, monitoring and reporting of carbon stock changes and GHG emissions and removals. It explored the scope and laid out the work plan to address the issue of definitions for direct human-induced degradation and devegetation of forest and other vegetation types. It developed a Scoping Paper to factor out direct human-induced changes in carbon stocks and GHG emissions and removals. It prepared Options Assessment Papers to address the issue of developing biome-specific forest definitions and issues related to afforestation and reforestation project activities under Article 12 of the Kyoto Protocol.

Overall, the EGPM produced 5 draft papers in response to IPCC XVII decision and to the invitation of the COP to the UNFCCC in its draft decision in document FCCC/CP/2001/L.11/Rev.1. These draft TOR, TOC, scoping papers, and options assessment papers will be forwarded to the Sixth Session of the TFB, in August 2001, for consideration and further development prior to presentation/submission to the 18th Session of the IPCC in September 2001. Further discussions will be needed to finalise the draft Scoping and Options Assessment Papers, to develop a work programme, and to propose a slate of authors for the work. It is expected that future meetings of the IPCC (TFB, IPCC Bureau, and Panel) will concretise the work plan (including TOR and TOC) and will allow more participation of qualified authors or experts to complete the work.

Attachment 1

Informal Paper No. 3 prepared by the UNFCCC secretariat for the IPCC Expert Group Planning Meeting on the Elaboration of Good Practice Guidance in Land-Use Change and Forestry for the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories
6-8 August 2001, Geneva, Switzerland)

Implications of a late completion of the report on GPG on LULUCF

1) The IPCC report on GPG on LULUCF will impact the following activities (as indicated in the Figure 1):

- The review of LUCF greenhouse gas emissions and removals under the Convention;
- The revision of the 1996 IPCC Guidelines;
- The first review of the Protocol (Article 5) and the consideration of commitments for the second commitment period (Article 3.9);
- The development of methodologies for adjustments (Article 5.2), including in LUCF sector;
- The establishment of national systems (Article 5.1, in particular for the estimation of greenhouse gas emissions and removals from LULUCF; and
- The preparation of the report on the establishment of assigned amounts (related to methodological and reporting requirements under Articles 5, 7, and 8 of the Kyoto Protocol) that may be necessary to meet eligibility criteria for participating in mechanisms under the Kyoto Protocol (proposal for guidelines for Article 7 and decision 5./CP.6).

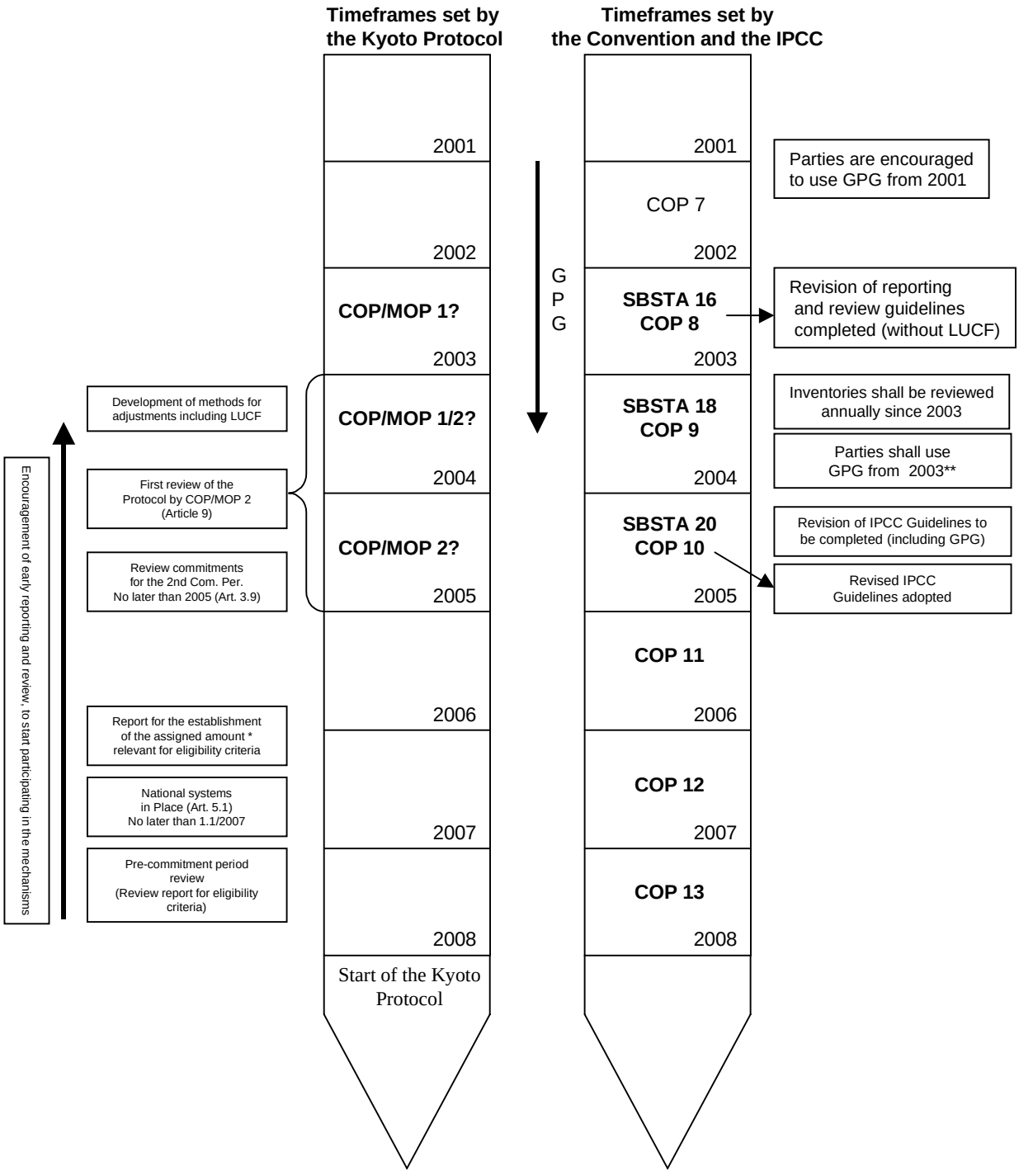
2) Most of these activities are planned to be initiated or completed between 2004 and 2007.

3) The SBSTA or COP may need at least 2 sessions to operationalise in guidelines or modalities text the outcome of the IPCC report on GPG on LULUCF.

4) Parties may require at least two years to implement any COP decision adopted on the basis of the IPCC report on GPG on LULUCF.

Therefore, it is a key element for the successful development of the Convention and/or Kyoto Protocol processes that the IPCC report on GPG on LULUCF or most of the report will be completed by COP 9, under the understanding that this does not undermine its quality.

Figure 1. Timeframes for considering the times for completion of the report on GPG on LULUCF



Attachment 2

PROVISIONAL OUTLINE OF THE REPORT

Note: An outline including chapter headings will be a product of the planning meeting.

1 *Introduction to good practice concept*

Unbiased estimation plus reduction of uncertainties by making best use of resources available.

2 *Good practice for categories of Chapter 5 of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*

Covers organisation and structure of categories, tiered methods, consistent with 96 Guidelines but updating values and correcting any errors and omissions and providing default values and uncertainty ranges. Use layout consistent with existing good practice guidance. Includes linkages to other sectors of the Guidelines (e.g. waste, agriculture), methods for dealing with wood products– that would of course be confined to technical matters pending UNFCCC decision on preferred accounting approach.

3 *Cross cutting issues*

Includes statistical sampling methods (e.g. frequency and stratification), remote sensing, treatment of rotational land uses, land use change matrix methods, field measurements, use of periodic survey data in annual inventories, forest inventory data, updating yield tables, reference plots, size of assessment units, geographical identification, quantification and propagation of uncertainties, methodological choice, recalculation, quality assurance and quality control, verification, data archiving to facilitate review, reporting requirements.

4 R*equirements arising from decisions of the UNFCCC*

Includes:

a) methods to estimate, measure, monitor and report changes in carbon stocks and anthropogenic greenhouse gas emissions by sources and removals by sinks resulting from land use, land use change and forestry activities under Article 3.3 and 3.4, and Articles 6 and 12 of the Kyoto Protocol, consistent with the other sections of this report, the decision FCCC/CP/2001/L.7[1] (taking into account FCCC/CP/2001/L.11/Rev.1), and relevant decisions at COP7.

b) proposed definitions and associated inventory and reporting methods for direct human induced degradation and devegetation emissions, as set out in FCCC/CP/2001/L.11/Rev.1 and relevant decisions at COP7.

5 *Glossary*

[1] Provisional numbering until the report of COP6 bis becomes available.

Attachment 3

IPCC 17 Decision on LULUCF
(Nairobi, 4-6 April 2001)

ITEM (5) B

The Panel concurred the following recommendation submitted by the TFB Co-chairs on behalf of TFB

NATIONAL GREENHOUSE GAS INVENTORIES - LAND USE CHANGE AND FORESTRY

The Panel:

a) noted the previous requests by the Subsidiary Body for Scientific and Technological Advice of the UNFCCC to progress activities related to good practice guidance and uncertainty management for the Land Use Change and Forestry Sector of National Greenhouse Gas Inventories;

b) noted that the report on Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, which had been accepted by the Panel at its XVIth Session, had covered all Inventory Sectors other than Land Use Change and Forestry;

c) decided to pursue further work on the elaboration of Good Practice Guidance and Uncertainty Management to meet the Inventory reporting requirements of the Parties under the UNFCCC related to Land Use Change and Forestry;

d) noted that the IPCC will need to take into account any further decisions or guidance from meetings of the Conference of the Parties to the UNFCCC;

e) requests the Task Force Bureau on National Greenhouse Gas Inventories to organise the work on Good Practice Guidance and Uncertainty Management for the Land Use Change and Forestry Sector, beginning with an Expert Group Planning Meeting to be held in advance of the XVIIIth meeting of the Panel;

f) requests the Secretary of the IPCC to write to governments inviting nominations for participants in the Planning Meeting and nominations for Lead Authors;

g) decides to consider the report of the Planning Meeting and proposed work programme at the XVIIIth session of the Panel.

Attachment 4

COP6 bis draft decision (FCCC/CP/2001/L.11/Rev.1); Sections 2 & 3

The Conference of the Parties,

Recalling its decisions…

Acknowledging with appreciation the scientific advice…

2. *Requests* the Subsidiary Body for Scientific and Technological Advice:

(a) To consider, following the completion of the methodological work by the Intergovernmental Panel on Climate Change (IPCC) as outlined in paragraph 3 (c) below, and adopt methodologies to account for anthropogenic greenhouse gas emissions resulting from direct human-induced degradation and devegetation activities, with a view to the Conference of the Parties at its tenth session recommending a decision for adoption by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session regarding whether such activities should be included in the first commitment period;

(b) To investigate the possible application of biome-specific forest definitions for the second and subsequent commitment periods with a view to the Conference of the Parties at its tenth session recommending a decision for adoption on the use of such biome-specific forest definitions for future commitment periods to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session;

(c) To incorporate the work of the IPCC as outlined in paragraph 3 (d) below, into any revisions of modalities, rules and guidelines prior to the second commitment period, for the accounting of activities under Article 3.4 of the Kyoto Protocol;

(d) To develop at its fifteenth session terms of reference for the work to be conducted under paragraph 2 (e) below;

(e) To develop definitions and modalities for including afforestation and reforestation project activities under Article 12 in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and being guided by the principles in the preamble to decision -/CMP.1 (land use, land-use change and forestry) and the terms of reference referred to in paragraph 2 (d) above, with the aim of adopting a decision on these definitions and modalities at the ninth session of the Conference of the Parties, to be forwarded to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session;

3. *Invites* the Intergovernmental Panel on Climate Change:

(a) To elaborate methods to estimate, measure, monitor, and report changes in carbon stocks and anthropogenic greenhouse gas emissions by sources and removals by sinks resulting from land use, land-use change and forestry activities under Article 3.3 and 3.4, and Articles 6 and 12 of the Kyoto Protocol on the basis of the *Revised 1996 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventorie*s, taking into account the decisions -/CMP.1 and -/CP.6, to be submitted for

consideration and possible adoption to the Conference of the Parties at its ninth session;

(b) To prepare a report on good practice guidance and uncertainty management relating to the measurement, estimation, assessment of uncertainties, monitoring and reporting of net carbon stock changes and anthropogenic greenhouse gas emissions by sources and removals by sinks in the land use, land-use change and forestry sector, taking into consideration decisions -/CMP.1 and -/CP.6, to be submitted for consideration and possible adoption to the Conference of the Parties at its ninth session;

(c) To develop definitions for direct human-induced 'degradation' and 'devegetation' of forests and other vegetation types and methodological options to inventory and report on emissions resulting from these activities, to be submitted for consideration and possible adoption to the Conference of the Parties at its ninth session; and,

(d) To develop practicable methodologies to factor out direct human-induced changes in carbon stocks and greenhouse gas emissions by sources and removals by sinks from changes in carbon stocks and greenhouse gas emissions by sources and removals by sinks due to indirect human-induced and natural effects (such as those from carbon dioxide fertilization and nitrogen deposition), and effects due to past practices in forests (pre-reference year), to be submitted to the Conference of the Parties at its tenth session;

Attachment 5

Expert Consultation on Forest-Related Definitions, Rome, Italy, 3 – 5 December 2001

Sponsors: FAO, IPCC, …

Objective
Forest-related definitions are harmonized

Background
Much global or regional information on forest resources is derived from national data. FAO has therefore developed forest-related definitions for national inputs to globally aggregated forest assessments and outlook studies. The IPCC has developed forest-related definitions for use in monitoring land use related to climate change. Other organizations have developed other definitions for other purposes, such as monitoring biological diversity in forests. There is a need to improve the compatibility and consistency of definitions in order to permit comparability and thus to improve the quality and usefulness of forest information, increase the synergy among organizations, and more effectively use scarce resources for information monitoring, assessment and reporting.

Major uses of forest-relation information at global and regional levels

There is a need for globally- and regionally-aggregated information on forest resources and forest ecosystems to:

- Define the concept of, and monitor progress toward sustainable forest management
- Assess the role of forests in climate change
- Assess the attributes and changes affecting forest biomes with respect to biological diversity
- Analyze the social, economic and environmental roles of forests

The information required differs between uses but with consistent and comparable definitions, it could be exchanged between different users.

Expected outputs

- Identify key forest-related terms whose definitions are critical to international processes
- Where possible, agree on the definitions of these key terms; derive working alternatives or indicate how information using different definitions can be compared
- Develop recommendations for consideration by relevant policy processes with respect to key definitions and their application

Process

- Experts will be invited in a personal capacity, recognizing, however, that many participants will present viewpoints of their respective organization or country
- To facilitate the process, the organizers will distribute background documents and the meeting will include presentations and working group discussions
- The meeting will be held in English; interpretation in other languages will depend on available funding

Participants

Invited experts of key international organizations, NGOs, and national institutions

Venue

FAO Headquarters, Rome Italy

Time

December 3 - 5, 2001

Attachment 6

Breakout Group Co-chairs, Rapporteurs, and Members, and Plenary Rapporteurs

BREAKOUT GROUP I: SOURCE SPECIFIC ISSUES

Co-Chairs:

1. Dina KRUGER (USA/TFB)
2. Wojciech GALINSKI (Poland)

Rapporteurs:

3. Martina van MERWE (South Africa)
4. Kenneth BYRNE (Ireland)

Members:

5. Harald AALDE (Norway)
6. Abdulaziz ALKAHLAN (Saudi Arabia)
7. Rizaldi BOER (Indonesia)
8. David Cruz CHOQUE (Bolivia)
9. Pascal COLLAS (Canada)
10. Albertus Johannes DOLMAN (Netherlands)
11. Juerg FUHRER (Switzerland)
12. Jean-Claude GERMON (France)
13. Hector GINZO (Argentina)
14. Michael GYTARSKY (Russian Federation)
15. John KIMBLE (USA)
16. Antonio LUMICISI (Italy)
17. Mitsuo MATSUMOTO (Japan)
18. Ronald MILNE (UK)
19. Jozef MINDAS (Slovakia)
20. Bangzhong WANG (China)
21. Tom WIRTH (USA)

TFB Member:

22. Mingxing WANG (China)

NGGIP-TSU:

23. Leandro BUENDIA

BREAKOUT GROUP II: CROSS-CUTTING ISSUES

Co-Chairs:

1. Jim PENMAN (UK/TFB)
2. Mohammad SOLTANIEH (Iran)

Rapporteurs:

3. Harry GANOO (Mauritius)
4. Kristin RYPDAL (Norway)

Members:

5. Roberto ACOSTA (UNFCCC)
6. James BARTON (New Zealand)
7. Rene GOMMES (FAO)
8. Bill HOHENSTEIN (USA)
9. Carlos MONREAL (Canada)
10. Ian NOBLE (Australia) – **Plenary Rapporteur**
11. Michael STROGIES (Germany)

TFB Members:

12. Marc GILLET (France)
13. Carlos LOPEZ (Cuba)
14. Igor NAZAROV (Russian Federation)

NGGIP-TSU:

15. Kiyoto TANABE

BREAKOUT GROUP III: ADDITIONAL REQUIREMENTS ARISING FROM THE UNFCC INVITATION TO IPCC

Co-Chairs:

1. Ian CARRUTHERS (Australia/TFB)
2. Thelma KRUG (Brazil)

Rapporteurs:

3. Bo LIM (UK/UNDP)
4. Audun ROSLAND (Norway/TFB)

Members:

5. Lorenzo CICCARESE (Italy)
6. Claudio FORNER (UNFCCC)
7. Heikki GRANHOLM (Finland)
8. Werner KURZ (Canada)
9. Klas OSTERBERG (Sweden)
10. Gary RICHARDS (Australia)
11. Maria SAN SANCHEZ (Spain)
12. Dieter SCHOENE (European Commission)
13. Bernhard SCHLAMADINGER (Austria)

TFB Members:

14. Taka HIRAISHI (Japan) – **Plenary Chair**
15. Jose Domingo MIGUEZ (Brazil)
16. Richard ODINGO (Kenya)
17. John STONE (Canada) - **Plenary Rapporteur**

IPCC Secretariat:

18. N. SUNDARARAMAN
19. Renate CHRIST

NGGIP-TSU:

20. Riitta PIPATTI
21. Kyoko MIWA

Attachment 7

Terms of Reference of IPCC project on Land Use, Land-Use Change, and Forestry (LULUCF)

In response to the decision of IPCC XVII and related decisions and requests from the UNFCCC, the IPCC will develop Good Practice Guidance (GPG) to ensure that country inventories on LULUCF are neither over- nor underestimated as far as can be judged, and uncertainties are reduced as far as practicable and facilitate the best use of available resources, taking different national circumstances into account. The GPG on LULUCF should ensure that countries use of the same criteria as listed in the Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories[2].

IPCC will base its work, inter alia, on:

1. The Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories

2. The IPCC 2000 Report on Good Practice Guidance and Uncertainty Management

3. Relevant decisions of the COP

4. IPCC Special Report on Land Use, Land-Use Change, and Forestry.

In preparing this Terms of Reference, the IPCC has further been guided by the draft decision (L11/Rev 1), paragraphs 3(a) and 3(b). Consistent with this draft decision, a workplan has been developed that provides for completion of this work by COP9.

The work required has been organised into three technical areas which are briefly summarised below :

- Source-specific good practice guidance on the 1996 IPCC Guidelines for the requirements of the UNFCCC : This work is to be undertaken in response to the request of IPCC XVII and several requests from SBSTA, dating back to SBSTA 8. The proposed work is outlined in Chapter 3 of the attached TOC. This would be consistent with the 1996 Guidelines.

- Elaboration of Methods and Good Practice on Kyoto Protocol Issues : This section has been considered in response to the draft decision FCCC/CP/2001/L.11/Rev1, paragraphs 3(a) and 3(b), and the decision of the IPCC XVII. The approach is outlined in Chapter 4 of the TOC. For eligible land use, land use change and forestry activities under Articles 3.3 and 3.4 of the Kyoto Protocol and for eligible LULUCF project activities under Articles 6 and 12 of the Kyoto Protocol, the IPCC will elaborate (i.e. identify and address additional or supplementary features) methods and develop good practice guidance, to estimate, measure, monitor and report changes in carbon stocks and anthropogenic

[2] These criteria are: transparency, completeness, consistency, comparability, accuracy and verifiability. These should be applied to inventories of changes in carbon stocks and anthropogenic GHG emissions from sources and removals by sinks.

greenhouse gas emissions by sources and removals by sinks required to supplement National Greenhouse Gas Inventory practices for eligible activities.

- Underlying Issues of Good Practice : This section responds to the decision of IPCC XVII, and the previous requests of SBSTA. It addresses two key issues. First, an approach to ensure a consistent representation of land areas for use across the source and sink categories, as outlined in Chapter 2 of the TOC. Second, a number of additional cross-cutting issues – including identification of key sources and sink categories, uncertainty analysis, recalculation, QA/QC, and verification are addressed in Chapter 5 of the TOC.

Attachment 8

Good Practice Guidance for LULUCF[3]

Table of Contents

Chapter 1: Introduction

The report responds to the decision of IPCC XVII (6th April 2001, ITEM(5)B). It provides good practice guidance on how to prepare unbiased LULUCF inventory estimates and reduce uncertainties as far as practicable, while making the best use of resources available. Good practice in LULUCF needs to address characteristic features of the sector, including spatial disaggregation and temporal dynamics, and the requirement to consider carbon stocks as well as greenhouse gas emissions and removals.

(The structure of the report should be summarised in this chapter.)

Chapter 2: Basis for Consistent Representation of Land Areas

The LULUCF inventory needs a consistent representation of land areas for use across source and sink categories considered. Methodological options include the full spectrum from conventional inventory approaches to remote sensing and GIS based systems.

2.1. Decision tree for selecting among the methods available, taking account of national circumstances including geographic and ecological circumstances and inventory history. Representative data collection within the chosen framework including treatment of missing data reconstructed as described in 5.3.

2.2 Good practice in the derivation and application of land use change matrices, including issues such as temporary land cover and rotational land use changes. Good practice in the combination data collected at various time scales such as periodic survey and annual census data and remote sensing data.

2.3 Consistency in disaggregation of spatial and temporal subsets of land areas for reporting under the Convention or the Kyoto Protocol.

Chapter 3: LUCF Sector Good Practice Guidance

3.1 Overview: Provision of good practice guidance for Chapter 5 of the Revised 1996 IPCC Guidelines, sections 5A-5E. Guidance is consistent with the 1996 Guidelines,

[3] In the 1996 Guidelines, the sector is called LUCF (Land-Use Change and Forestry). LUCF and LULUCF are both used. This document adopts LULUCF except where there is a clear reference to the Revised 1996 IPCC Guidelines, without implying any policy judgement thereby.

while clarifying certain issues such as attribution of soil carbon, providing guidance on how to manage interlinkages among the subsectors 5A-5E and with other chapters of the 1996 Guidelines, especially Chapter 1 " Energy" and Chapter 4 "Agriculture", whilst avoiding double counting, taking into consideration the experience gained in using the common reporting format tables of the UNFCCC.

This chapter addresses methodological issues and reporting specifically linked to the Revised 1996 IPCC Guidelines. For the sections listed below, good practice should be prepared following the format of the IPCC 2000 Good Practice Report (including discussion of methodological approaches and choice among them, factors, parameters and activity data; completeness and avoiding double counting; development of consistent time series; uncertainty assessment; reporting and documentation; and QA/QC)[4]. It should be recognised that there is a need for the good practice to clarify the scope and inter-relationships of particular source and sink categories in the LUCF Chapter of the 1996 Guidelines.

3.2 Changes in Forest and Other Woody Biomass Stocks (IPCC 5A):
- 3.2.1 Changes in Biomass[5]
- 3.2.2 Changes in Soil Carbon
- 3.2.3 Harvested Wood[6]

3.3 Forest and Grassland Conversion (IPCC - 5B)
- 3.3.1. Changes in Biomass[7]
- 3.3.2. Changes in Soil Carbon

3.4 Abandonment of Managed Lands (IPCC - 5C): Clarification of the scope and description of this sub-category.
- 3.4.1 Changes in Biomass
- 3.4.2 Changes in Soil Carbon

3.5 CO_2 Emissions and Uptake by Soils (IPCC - 5D)[8]
- 3.5.1 Mineral soils
- 3.5.2 Organic soils
- 3.5.3 Liming

3.6 Others (IPCC - 5E)

[4] See the last sentence in the footnote 1 in the Draft Scoping Paper to Address Request 3(d) outlined in FCCC/CP/2001/L.11/Rev.1.

[5] This section should cover issues related to forests, plantations, and other land-use (i.e. urban, village forests), all relevant carbon pools (i.e., above- and below-ground biomass, litter, and dead wood), CO_2 and non-CO_2 emissions related to fires, other disturbances, and forest management practices, and provision of any data needed for subsequent consideration under Chapter 4 of this report.

[6] Treatment of harvested wood products will be consistent with decisions of the COP.

[7] This section should cover all relevant carbon pools, shifting cultivation, and CO_2 and non-CO_2 emissions, and provide any relevant data for subsequent consideration under Chapter 4 of this report

[8] This section needs to reconsider all land use and land use transitions not covered elsewhere (i.e., sections 5A to 5C), linkages to Chapter 4 of the 1996 Guidelines, treatment of above-ground carbon stocks (if non-negligible) and linkage to other sectors, clarification of scope and definition of sub-categories, and utility of separating mineral and organic soils.

3.6.1 Other non-CO_2 GHG fluxes
3.6.2 GHG fluxes from flooding and wetland drainage[9]

Chapter 4: Requirements arising from decisions of the Kyoto Protocol

4.1 General Overview: This chapter describes the supplementary methods and good practice guidance specifically linked to the Kyoto Protocol and requiring guidance beyond the Revised 1996 IPCC Guidelines. The chapter gives full consideration to the requirements of Article 3.3, as well as choices made related to Articles 3.4, 6 and 12. The planning meeting held in Geneva 6-8 August 2001, discussed the technical approach in extensive detail and these discussions are summarised in Annex 1.

4.1.1 Identification and stratification of relevant land areas
4.1.2 Estimation of C stock changes and non-CO_2 GHG emissions
4.1.3 Specific Requirements of the accounting system required

4.2. Methodological issues related to estimation, measurement, monitoring and reporting of changes in carbon stocks and anthropogenic GHG emissions by sources and removals by sinks resulting from LULUCF activities.

4.2.1. Afforestation and reforestation
4.2.2 Deforestation
4.2.3. Forest management
4.2.4 Revegetation
4.2.5. Cropland management
4.2.6. Grazing land management

4.2.7. Article 6: Additional/supplementary methodological issues related to estimation, measurement, monitoring and reporting of changes in carbon stocks and anthropogenic GHG emissions by sources and removals by sinks resulting from LULUCF activities under Art. 6.

4.2.8. Article 12: Methodological issues related to estimation, measurement, monitoring and reporting of changes in carbon stocks and anthropogenic GHG emissions by sources and removals by sinks resulting from LULUCF afforestation and reforestation activities under Art. 12.

Chapter 5: Cross-Cutting Issues

5.1. Identification of key source and sink categories required for reporting and resource prioritisation.

5.2 Uncertainty analysis in the framework of the overall approach chosen.

[9] May be treated here or under other sections (i.e. 3.2 or 3.5)

5.3 Recalculations and reconstruction of missing data using proxy variables for integration into general framework identified under section 2.

5.4 QA/QC including procedures for data collection and archiving taking into account the need for transparency and review.

5.5 Verification Comparison with independent data sources and techniques specific to LULUCF Linkage to international scientific programmes and data sets.

Annex 1: Elaboration of Notes from Planning Meeting, 6-8 August 2001, Breakout Group 3

Part 1 – Overall Framework for estimating, measuring, monitoring and reporting changes of carbon stocks and non-CO2 GHG emissions as requested by the Kyoto Protocol and COP6 L.11 Rev.1

This is the general overview of issues related to the Kyoto Protocol that require guidance beyond the revised 1996 IPCC Guidelines. This section will outline the reporting requirements, resulting data requirements, and available options for a country's design of methods for developing the relevant parts of its National Greenhouse Gas Inventories. The emphasis will be on helping inventory compilers, forest managers and other experts involved in the inventory preparation understand how data and forest inventories can contribute to estimation of C stock changes and non-CO2 GHG emissions and what additional information may be required.

General Introduction

- Additional requirements for the Kyoto Protocol beyond those of national UNFCCC reporting.
- Introduce general steps (identify land areas and conduct C stock change and non-CO2 GHG emission estimation).
- Note that requirements for the first Commitment Period may differ from those in second and subsequent CP, which may have implications for system design.

Identification and stratification of land areas on which C stock changes and non-CO2 GHG emissions will be estimated and reported

- Summary of Land Categories (e.g. forest, managed forest, ARD, Article 6, etc.) as defined in part by the activities that occurred on the land.
- Methods for assignment of land categories (activities, which conditions must be met).
- Cause of changes in land cover and land use (direct/indirect, natural disturbances vs. deforestation).
- Tracking of land areas (including transitions between categories).

Estimation of C stock changes and non-CO2 GHG emissions to meet Kyoto requirements

- Methods for estimating C stock changes (top down e.g., sampling, bottom up e.g. spatial modelling).
- Accounting methods (measurements, default values, modelling, mixtures).
- Differentiation of net-net approach for agricultural activities and gross-net approach for forestry.

Specific Information Requirements that affect the design of national accounting systems

- Information requirements arising from Kyoto Protocol (e.g. Art. 3.3 and FCCC/CP/2001/L.11/Rev.1 Para 19).
- Discuss how a country's choice for inclusion or exclusion of eligible LULUCF activities (e.g. Art. 3.4, 6, [Art. 12]) affects additional information requirements.
- Overview of Good Practice in system design and implementation.

Part 2 – Good Practice Guidance for the estimation, measurement, monitoring and reporting of changes in carbon stocks and anthropogenic GHG emissions by sources and removals by sinks resulting from LULUCF activities

Overview

This part addresses the Good Practice Guidance Issues related to the methodological choices outlined in Part 1. The format is consistent with that of the overall Good Practice Guidance for the Revised 1996 Guidelines, but accommodates additional issues, largely related to spatial and temporal disaggregation required by the Kyoto protocol.

ACTIVITY 1: Afforestation and Reforestation

Methodological Issues

Addressing the choice of methodology (e.g. activity specific decision tree), activity data (e.g. land areas included within the system, timing of the activity), choice of emissions and removal factors (if relevant), conversion and expansion factors by different carbon pools and by non-CO2 gases, completeness and avoiding double accounting and time series consistency, uncertainty assessment.

Reporting and Documentation

Concerning the selection of definitions and classifications, selection of spatial assessment units, identification of land areas included, identification of land areas subject to harvesting, determining of GHG balances of these lands, linkages with national inventory and reporting on LULUCF, (Additional/supplementary requirements related to Art. 6 afforestation and reforestation projects, Additional/supplementary requirements related to Art. 12 afforestation and reforestation projects)

Quality assurance/Quality control (QA/QC) and any other requirements arising from Articles 5, 7, and 8

Establishment of systems for identification of lands (beyond the first commitment period, verification, recalculation,. Etc.)

ACTIVITY 2: Deforestation (See ACTIVITY 1)

ACTIVITY 3: Forest management

Methodological Issues

Address the choice of methodology (e.g. activity specific decision tree), activity data (land areas included within the system, timing of the activity and dynamics of process (e.g. increment, harvesting and other removals), choice of emission and removal factors (if relevant), conversion and expansion factors by different carbon pools and by non-CO2 gases (if relevant), completeness and avoiding double accounting and time series consistency, and uncertainty assessment.

Attachment 9

Draft scoping paper to address request outlined in L.11/Rev.1 COP decision 3(c) on 'degradation' and 'devegetation'

Scope

To develop a short Technical Paper and/or workshop report comprising definitions for direct human induced degradation of forests and devegetation of other vegetation types, and methodological options to inventory and report on emissions resulting from these activities.

The purpose of this Technical Paper and/or workshop report is to respond to the request by Parties to address some concerns that selection of eligible activities under article 3.4 could give rise to an unbalanced accounting if activities such as forest degradation and devegetation are not included. The paper should analyse the implications of different options to include the accounting of these activities under the provisions of article 3.4, including its relation to forest management and revegetation.

Elaboration of the definitions, methodologies for inventorying and reporting requirements should have as a basis:

- The Special Report on LULUCF
- Good Practice Guidance and Uncertainty Management to meet the inventory reporting requirements of the parties under the UN Framework Convention on Climate Change related to Land-Use Change and Forestry and the Kyoto Protocol

WORKPLAN

The Technical Paper and/or workshop report should be presented for its consideration at COP 9. Given the linkages of this paper to the workplan of the Good Practice LULUCF report, the drafting of the present paper can start at a later stage, after the approval of the terms of reference/scoping paper of this report at IPCC XIX.

One 1-2 days expert meeting/workshop will be allocated to draft the paper back to back with an expert meeting of the Good Practice LULUCF report early in 2003. The meeting will comprise 10-20 experts. A zero-order draft paper prepared by e.g. three lead authors could serve as background for the expert meeting/workshop. These authors and the participants to the expert meeting/workshop could be selected from those ones involved in the drafting of the Good Practice LULUCF report.

TIMELINE[10]

- Draft scoping paper to be presented for its consideration at IPCC XVIII
- Terms of reference/scoping paper to be discussed and approved at TFB 7

[10] May be adjusted pending on the workplan for Good Practice on LULUCF

- Approval of terms of reference/scoping paper at IPCC XIX
- Zero-order draft paper two weeks before the expert meeting
- Expert meeting/workshop early in 2003
- Report for governmental/expert review [March 2003]
- Final government distribution [July 2003]
- Approval at IPCC XX in August 2003
- Presented at UNFCCC SBSTA 19/COP 9 in December 2003

Attachment 10

Draft Scoping Paper to Address Request Outlined in FCCC/CP/2001/L.11/Rev.1 Decision CP.6 3d (Direct v. indirect human induced changes …)

Scope of work

Elaboration of the list of indirect effects, including both positive and negative effects on carbon sequestration

Practicable methods that might be used to separate direct from indirect and natural effects, including those that combine the indirect and natural effects.

Practicable methods for separating out the effects of past practices in forests pre-reference year

Feasibility of applying these methods given the range of potential LULUCF management actions

Application at various scales

Costs of implementing these approaches

Implications of separating direct from indirect and natural including

- Interactions between direct and indirect factors
- Practicability of separation across multiple time periods
- Relationship to inventory accounting

Links to good practice guidance

Latest evidence of the scale of potential indirect effects and the effects of past practices (a review of literature)

Output

Given the need to incorporate the latest scientific information as well as drawing on existing IPCC reports, we recommend that this issue be addressed through a special report

Expertise required to address request

Governments and other bodies should be requested to nominate authors in line with the scope of the Report, including those working outside the field of inventory development, such as those involved in the IPCC Assessment Reports and the Special Report on Land Use, Land-use Change and Forestry.

Interaction with SBSTA

Process for dialogue with SBSTA to resolve questions and to refine request including the consistency between request 3d and the principle outlined in -/CMP.1 1.h and specifically (i) the implication of a pre-industrial CO_2 baseline.

Timeline

- Draft scoping paper to be considered by TFB 6 and IPCC XVIII (Sept 2001)
- Input from SBSTA on draft scope of work (Nov. 2001)

- Planning meeting December / January to develop final scoping paper
- Final scoping paper considered by IPCC XIX (February / March 2002)
- Request for authors (sent March)
- Initial technical workshop to further develop the scientific content of the Special Report (May/June 2002)
- Feedback from SBSTA (June 2002)[11]
- Series of technical workshops
- Production of Expert, Expert and Government review drafts
- Preparation of Special Report for consideration at COP-10

[11] A decision could be made after this meeting by IPCC whether it is feasible to complete the report by CoP9 in late 2003. In addition, an initial assessment of the elements that may enable factoring out direct human-induced changes in carbon stocks and GHG emissions and removals from those caused by indirect human-induced and natural effects, including the potential relationship to Good Practice Guidance, will be provided to the SBSTA. This assessment will also be forwarded to the LULUCF Good Practice Guidance Working Group.

Attachment 11

OPTIONS ASSESSMENT PAPER

Development of Biome-specific Forest Definitions

Background

Paragraph 2(b) of FCCC/CP/2001/L.11/Rev.1 calls for the investigation of "the possible application of biome-specific forest definitions for the second and subsequent commitment periods". The use of biome-specific definitions[12] was considered in the IPCC Special Report on LULUCF as a means to address differences in the ecological forest conditions and the inventory data describing these forests. Biome-specific forest definitions, in combination with the definitions of activities covered under Articles 3.3. and 3.4 of the Kyoto Protocol, may be an alternative to a single definition of forests that is applied globally. Here we assess the possible contribution IPCC could make to addressing paragraph 2(b) of the COP-6.2 request.

Scope

Biome-specific forest definitions were considered in the IPCC Special Report to account for carbon stock changes that may not be captured by a single definition of forests with respect to afforestation, reforestation and deforestation (ARD).

The work would analyse the implications of different options for the choice of definition for forest with regard to ARD activities, including its relation to the definitions of aggradation and degradation, revegetation and devegetation, and its relation to the estimation of carbon stock changes resulting from activities covered under Article 3.4 (work according to 3(c) in L.11/Rev.1).

This could include the following steps:

- To outline criteria for the choice of biome-specific definitions (ecological, existing inventories, other national circumstances) and criteria for selection of biomes.
- To outline available options for the biome-specific definitions.
- To compile a draft list of possible biome types and their possible definitions of forest cover and tree height.
- To elaborate methodologies for inventorying and reporting requirements for each option.
- To assess implications of each option (comprehensiveness, symmetry of stock change counting, relationship to Article 3.4), including implications for Article 12.

This work would build on:

- the IPCC Special Report on LULUCF,

[12] "Forest is an area of land that has A% cover of woody vegetation with > B metres in height, or would contain at maturity of existing vegetation with continuation of current land use. For each biome, a minimum crown cover and tree height would have to be established to determine what would qualify as a forest. Determination of biome types would have to be carried out systematically through the use of common criteria." (IPCC SR p. 142, Table 3-4)

- any available draft of the Good Practice Guidance and Uncertainty Management related to LULUCF, and
- draft decision FCCC/CP/2001/L.11/Rev.1 and subsequent COP decisions,

and would be carried out in close collaboration with other IPCC expert groups, and with other international organisations, in particular the Food and Agriculture Organization (FAO), dealing with forest definitions.

Process

As a minimum, there would be consideration of the above issues by two groups of experts. Group one would address the implications of current definitions, group two would address possible biome-specific definitions. Experts, with broad geographical representation, should combine expertise in the UNFCCC and Kyoto Protocol, and in existing vegetation inventories and ecological characteristics of biome types. The output of this work would include a written report addressing the issues identified under “Scope”.

Attachment 12

OPTION ASSESSMENT PAPER
on issues related to afforestation and reforestation project activities under Art. 12 of Kyoto Protocol (§2(e))[13]

Scope

According to paragraphs 2(d) and 2(e) of the Draft decision -/CP.6 on land-use, land-use change and forestry, the COP requests the SBSTA:

(d) To develop at its fifteenth session terms of reference for the work to be conducted under paragraph 2(e) below;

(e) To develop definitions and modalities for including afforestation and reforestation project activities under Article 12 in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and being guided by the terms of reference referred to in paragraph 2(d) above, with the aim of adopting a decision on these definitions and modalities at the ninth session of the Conference of Parties, to be forwarded to the Conference of Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session;

At the moment, there is no request/invitation from the COP or SBSTA to IPCC to address issues arising from paragraph 2(e). However, paragraph 3(a) (and indirectly 3(b)) refers also to Article 12. Moreover, there is scientific and technical expertise within IPCC that may facilitate the consideration of scientific issues related to Art. 12.

Alternative ways forward

There are a number of approaches how the expertise of IPCC may contribute to the process, e.g.

1. IPCC will wait for a formal invitation of the COP or SBSTA to begin the formal consideration of work. An invitation would be possible at the beginning of the SBSTA consideration (e.g. SBSTA15), or after the completion of the SBSTA consideration (COP-9/SBSTA-19).

2. IPCC will focus on strictly scientific/socio-economic issues concerning non-permanence and uncertainties based on invitation of the draft decisions (§3(a)). This work issues related to estimation, measurement, monitoring and reporting of changes in carbon stocks and anthropogenic GHG emissions by sources and removals by sinks resulting from afforestation and reforestation activities under Art. 12. This work would be based, to the extent possible, on the GPG on LULUCF to avoid duplication.

[13] Refer to document FCCC/CP/2001/L.11/Rev.1

3. Upon request IPCC could also contribute to SBSTA consideration of wider socio-economic and environmental issues related to Art 12, including cooperation with other international organisations such as CBD and CCD, as appropriate.

Substantial/scientific issues

A key issue is to determine issues that scientific/socio-economic work could focus on. The field covers non-permanence, uncertainties and leakage. Relationships with estimation, measurement, monitoring, and reporting on LULUCF may need further clarification (See §3(a)). Issues related to socio-economic and environmental impacts, including impacts to biodiversity and natural ecosystems may also be addressed (e.g. these issues could also be tackled through a joint working group to be established by the UNFCCC, CBD and CCD).

LIST OF PARTICIPANTS

IPCC Expert Group Planning Meeting
Elaboration of Good Practice Guidance in Land-Use Change and Forestry for the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories
6 – 8 August 2001
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