

IPCC NGGIP-LULUCF Programme

**Fourth Authors/Experts Meeting on Good Practice Guidance
for Land Use, Land-Use Change And Forestry (Task 1)**

and

**Third Authors/Experts Meeting on the issue of “Degradation of
Forests and Devegetation of Other Vegetation Types” (Task 2)**

Meeting Report

**Kuala Lumpur, Malaysia
1 – 3 April 2003**

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SUMMARY

The First Government/Expert review of the draft IPCC report on Good Practice Guidance for Land Use, Land-Use Change and Forestry (Task 1) and the draft IPCC report on the issue of “Degradation of Forests and Devegetation of Other Vegetation Types” (Task 2) was held for the period between 2 December 2002 and 27 January 2003. The draft reports received more than 6,000 comments.

Authors and experts of two reports met at the Fourth Authors/Experts Meeting on Task 1 and the Third Authors/Experts Meeting on Task 2, held on 1-3 April 2003, in Kuala Lumpur, Malaysia, to consider, discuss, and reflect on the comments received from the first governments/experts review in drafting the second-order drafts.

Task1 and Task 2 authors agreed on a time schedule for further drafting and finalising the second order drafts, which are subject to the second government/expert review between 2 May and 27 June 2003.

BACKGROUND AND OBJECTIVES

1. IPCC XVIII, in September 2001, in Wembley, UK, endorsed the Land Use, Land-Use Change, and Forestry (LULUCF) Programme of the National Greenhouse Gas Inventories Programme (NGGIP) of the Intergovernmental Panel on Climate Change (IPCC), which responds to the invitations to the IPCC laid out in the Marrakesh Accords (Decision 11/CP.7, paragraphs 3(a) to (d)). IPCC XVIII also accepted the Terms of Reference (TOR), the Table of Contents (TOC), and the Work Plan for the development of Good Practice Guidance for LULUCF. This activity is also known as Task 1 of the NGGIP LULUCF Programme and responds to the invitation contained in paragraphs 3 (a) and (b) in the decision 11/CP.7.
2. The First Authors/Experts Meeting for Task 1 was held on 12-14 March 2002, in Eisenach, Germany. The Eisenach meeting accomplished substantive work on Chapters 2 to 5 with an accelerated handling of Chapter 2 (Basis for Consistent Representation of Land Areas) to produce an initial draft. The authors discussed the initial draft outline of each chapter of the report, paying special attention to consistency and harmonisation requirements. The availability of scientific and other relevant materials was also explored.
3. The IPCC also responded to the invitation of the COP contained in its decision 11/CP.7 (paragraph 3 (c)) in the Marrakesh Accords) by preparing a work plan to develop definitions for direct human-induced degradation of forests and devegetation of other vegetation types, and methodological options to inventory and report emissions resulting from these activities. The work plan, TOR and TOC for this task were endorsed by IPCC XIX in April 2002. This task is known as Task 2 of the NGGIP LULUCF Programme. The implementation of Task 2 will be synchronised with Task 1 to ensure consistency of methodologies and products.
4. The Second Authors/Experts Meeting for Task 1 and the First Authors/Experts Meeting for Task 2 were held simultaneously on 10-12 July 2002, in Tampere, Finland. The meeting advanced the drafting of all chapters of Task 1 and made considerable progress to prepare a draft outline and elaborated contents of different chapters of Task 2. The two meetings also identified links between the two tasks.
5. The Third Authors/Experts Meeting for Task 1 and the Second Authors/Experts Meeting for Task 2, on 2-4 October 2002, in Rio de Janeiro, Brazil, aimed to produce the first-order draft reports for governments and experts review and to plan for the Fourth and Third Authors/Expert Meetings for Task 1 and Task 2, respectively. Authors and the Technical Support Unit (TSU) of the IPCC NGGIP worked closely to finalise the first-order draft after the meetings.
6. The first combined government/expert review took place from 2 December 2002 to 27 January 2003. A total of twenty-five countries, five intergovernmental organisations and thirty-seven experts participated in the review and more than 6,000 comments on the first-order drafts were received.
7. All comments were compiled in the consolidated lists. Preliminary recommendations on how to reflect these comments in the further drafting were prepared by the TSU. The Steering Group and the TSU prepared a summary of comments to highlight each specific issue for consideration by the authors at the meeting in Kuala Lumpur.

ORGANISATION OF THE MEETING

8. The Fourth Authors/Experts Meeting for Task 1 and the Third Authors/Experts Meeting for Task 2 were held from 1 to 3 April 2003, in Kuala Lumpur, Malaysia. It was hosted by the Ministry of Science, Technology and Environment of the Government of Malaysia. The Honourable Dato' Haji Zainal bin Dahalan, Deputy Minister, Ministry of Science, Technology and Environment, Malaysia, officiated the opening session. The TSU of the IPCC NGGIP organised these meetings with the support from the Forest Research Institute Malaysia (FRIM). The TSU is grateful for the excellent support from FRIM under Dr Jenny Wong's leadership. Ninety-three experts/authors and review editors participated in the meeting (Attachment A).
9. The aim of these meetings was to consider all comments to be properly reflected to the second-order drafts. The meetings consisted of plenary sessions and breakout group sessions on individual chapters.
10. The two meetings were preceded by a Co-ordinating Lead Authors (CLA) Meeting, with the participation by CLAs, Steering Group members, representatives of the UNFCCC secretariat, and the TSU, which was held on 31 March 2003. The purpose of the CLA Meeting was to discuss the following issues: how to proceed with the two main meetings; identification of issues that could be categorised as general and cross-cutting, apart from the chapter/sector specific issues; discussion on the tasks of each breakout groups; and identification of inter-linkages between chapters of each task, and between Tasks 1 and 2. A CLA meeting was also held before the morning session on the last day of the meeting to assess the progress made and to prepare presentations for the final plenary session.
11. In the first plenary session of the meeting, CLAs highlighted several general and cross-cutting issues. The participants agreed that some of these issues could be solved by reorganising chapters, i.e. by moving individual sections and subsections between chapters and by linking common topics across sections. Details of the discussion of these and of chapter-specific issues are provided in the next sections of this report.
12. In the breakout group sessions of each chapter, the authors considered all substantive comments on Task 1 and Task 2. Most of them were accepted or taken into account in the drafts with modification. Responses from authors indicating how each comment was treated were recorded in the Excel file of comments prepared by the TSU.
13. Review Editors for each chapter of Task 1 and Task 2 were present at the plenary and breakout group discussions to ensure that all substantive comments from governments and experts were appropriately dealt with, to advise authors how to handle contentious/controversial issues, and to ensure that genuine controversies would be adequately addressed in the second-order draft of the document.
14. With the unfortunate situation (war in Iraq and SARS outbreak) many authors made last minute cancellations of their participation in the meeting. On initiative of US authors, telephone conferences with authors gathered in Washington, D.C, at one end, and CLAs and key authors in Kuala Lumpur at the other end, were held each evening to brief the absent authors of the progress and give agreement on a division of tasks to address the comments received and to advance drafting. Some absent authors from other countries contributed in a similar way through email. This ensured efficient allocation of tasks and

work time, and allowed authors of all chapters to make satisfactory progress on the draft document.

ISSUES HIGHLIGHTED BY COMMENTS AND THE DECISION TAKEN BY AUTHORS BASED ON DISCUSSIONS IN PLENARY SESSIONS AND BREAKOUT GROUP SESSIONS

Conclusions and Progress made for Task 1 – General Issues

The length and the nature of the Report: The authors took note of many comments and concerns expressed by the reviewers with regard to the practical length and the target audience of the report. Authors recognise the importance to keep the text as short as possible while focussing on presenting practical guidance and avoiding giving the appearance of the scientific text book, as far as possible. It was agreed that the decision trees in the report would be improved to ensure these characteristics.

Tiers: It was recognised by the authors that the tier 1 methodology in the report should be made very explicit and be checked for its applicability and consistency to always enable parties to report emissions from sources or removals by sinks in the LULUCF sector.

New pools and categories: There were various comments on issues related to harvested wood products (HWP), other new pools and categories including peat, reservoirs and settlements as well as new sources of non-CO₂ emissions. The participants decided to move these sections to an annex to Chapter 3 in view of diverging opinions and/or high uncertainties.

Harmonisation: The participants recognised the importance of a consistent use of terminology.

Conclusions and Progress made for Task 1 – Cross-Cutting Issues

Consistency among chapters: Many comments pointed out the importance of maintaining cross-references between chapters, as well as the mapping back of categories to those used in the *IPCC Guidelines*. The authors agreed that some re-organising/re-structuring of sections would possibly solve this problem.

Uncertainties: It was recognised that all chapters need to treat the issue of uncertainty in relevant sections. Chapter 2 and Chapter 3 authors worked closely with Chapter 5 authors on the drafting of parts referring to uncertainty. Some items previously contained in Chapter 5 were moved to Chapter 2 or 3.

Sampling and Remote Sensing: Applicable methods/techniques, particularly sampling and remote sensing were referred to in several sections that were prone to be redundant and inconsistent. Appreciating various comments on these issues and also recognising the controversies, in particular with respect to remote sensing, the following reorganization was decided. (1) technical information on **sampling** would be collected from Chapters 2 and 3 and included in a new section on “Sampling” in Chapter 5; and (2) information and guidance on **sampling** contained in other chapters would be related to the specific sources and sinks. Similarly, information on **remote sensing** was moved to a separate section on “Remote Sensing” in the Verification section of Chapter 5, although the specific applications are referred

in their respective chapters. More detailed information on verification approaches was developed as an appendix of Section 5.7.

Reporting Tables: Many comments urged for the development of reporting tables for Chapter 3, some also for refinement of the tables in Chapter 4. It was decided that the TSU would help the authors in developing reporting tables (summary and compilation tables) and worksheets for Chapter 3, to be included in the second-order draft. These should resemble the tables in the *IPCC Guidelines* as much as possible. The authors responsible for the tables in Chapter 4 would follow the development of the Chapter 3 reporting tables to ensure consistency with these and the tables in Chapter 4.

Conclusions and Progress by Chapter

Task 1 - Chapter 1: Introduction

As this chapter was fairly short and already in near to final stage of drafting, there was no need for a breakout group discussion. The authors had prepared their responses to the comments received and a revised draft text for consideration of the review editors ahead of the meeting. The authors and a review editor of this chapter had a discussion on this revised draft during the meeting. The absent review editor received the material by email.

Authors will continue to improve the revised draft text to become the second-order draft of the chapter.

Task 1 - Chapter 2: Basis for Consistent Representation of Land Areas

Six land categories (forest land, cropland, grassland, wetland, settlements, and other land) remain. Approaches for representing land areas using these categories were simplified compared to the first-order draft, in view of the user-friendliness, practicability, and to avoid perception by the users that the approaches were hierarchical. From the first to the second-order draft, the number of approaches decreased from five to three.

Task 1 - Chapter 3: LUCF Sector Good Practice Guidance

The authors addressed about 2,500 comments on Chapter 3 in the form of breakout group sessions. The comments were generally classified as issues related to: coverage of harvested wood products (HWP); consistent handling of carbon pools; clarity and length of discussion on biomass expansion factors (BEF); how to report natural disturbances (e.g. fires) and the issue of managed/unmanaged lands; new pools/sources which include reservoirs, methane oxidation in soils, and settlements; the treatment of deforestation; and matters related to incompleteness of some tables, length of the report, and organization of subsections.

The authors resolved most of the comments in Forest Land section and addressed almost all in the Cropland and Grassland sections. Some comments on Wetland section (including reservoirs) were left unresolved for further discussions by email. Agreement was reached in terms of working definitions for carbon pools to be applied consistently across the report. The sections of HWP, settlements, reservoirs, and non-CO₂ were moved to Annexes. Forest fires subsection was removed from the biomass subsection to the non-CO₂ subsection. The breakout group working on BEF noted some good discussions in Chapter 4 which can be used in Chapter

The group developed practical and simple advice on BEF (default values would be developed after the meeting) to be incorporated in the second-order draft.

The entire chapter was considered to be still far from a handbook text. Some decision trees would need further attention. Some uncertainty ranges/values for default data were still missing and reporting tables (i.e. summary tables, compilation tables, and worksheets) had to be developed for the second-order draft.

Task 1 - Chapter 4: LULUCF Monitoring, Reporting, and Accounting Requirements under the Kyoto Protocol

Authors confirmed when a category is identified as key under Chapter 3 (in accordance with the guidance provided in Chapter 5, Section 5.4), it would also be **key** in Chapter 4. The only exception to this regard is revegetation, which requires a separate "key category" check.

In response to comments on the complexity of Chapter 4, it was decided to include a roadmap in its introductory chapter. The first steps would be to apply the relevant definitions in the Marrakesh Accords to national circumstances and the setting up a hierarchy among selected Article 3.4 activities. Step 2 would be identification of lands, step 3 estimation of the carbon stock changes and non-CO₂ emissions on these lands. The structure was also otherwise made user-friendlier. The guidance on land identification was complemented and made more systematic by the inclusion of an additional decision tree. It was decided to add guidance on the use of statistical methods in land identification related to scaling, linear areas (e.g. shelterbelt and linear disturbances, such as pipelines). The decision trees and guidance for afforestation, reforestation, deforestation and forest management were revised taking into account the comments, and the reporting of non-CO₂ emissions (cropland and grazing land management and revegetation) was clarified and made consistent with the *GPG2000*.

In the projects section (Section 4.3) of Chapter 4, the relation between good practices at the project level and at the level of national inventories was strengthened.

A decision matrix for identifying activities that result in emissions of non-CO₂ gases within project boundaries associated to the different types of project under Articles 6 and 12 of the Kyoto Protocol was introduced. A comprehensive table of cross-references to appropriate places in *GPG2000* and the *IPCC Guidelines* was compiled to provide clear guidance on methods for estimating emissions of non-CO₂ gases from project activities.

The set of examples for allometric regression equations to be applied for estimating biomass expansion was expanded and the description of good practice monitoring of the project performance was substantially improved. The terminology on pools was made consistent with those used in the *IPCC Guidelines* and the Marrakesh Accords.

Task 1 - Chapter 5: Cross cutting Issues

Uncertainty section was shortened. Authors working on the uncertainty sections of Chapters 2, 3 and 5 moved specific descriptions and equations examples in Chapter 5 to the relevant sections in other chapters. Example of Tier 1 uncertainty analysis will be added to complete the section of Second-order draft. The Section was also restructured and changed the order of sub-sections to make clearer linkage with other sections in Chapter 5.

There were various comments on **sampling issues** in Chapter 2, 3 and 5, arguing inconsistencies in methods and techniques, and about the implications on uncertainties. Considering these comments, it was agreed to add a section of sampling, following the section of uncertainties in Chapter 5, and redraft it by compiling and correcting relevant parts from all other chapters. Drafting will be continued to be completed as a section of the second-order draft.

Reflecting comments on the concept of **key categories** (vs. key source categories for other sectors than LULUCF), it was agreed to expand the concept of key sources to cover both sources and sinks. For the comments on key category of UNFCCC and Kyoto Protocol activities, text has not been changed, namely, when categories under the UNFCCC inventory will be identified as key, corresponding Kyoto Protocol activities would also potentially be key, and complementing qualitative examination would be a good practice.

QA/QC and Time Series Consistency sections have almost finalised. Authors recognised the need of closer work with authors from other chapters that were dealing with these themes. Recommendations to Chapters 3 and 4 were prepared by Chapter 5 to be reflected in the relevant sections of those chapters.

Verification section received various comments during the review. Some comments were substantial and detailed. Some discussed fundamental issues, such as the merit of including this section in the Good Practice Guidance to users. Considering that verification may not necessarily be done by inventory agencies (which are the main targets of the report), and also the merit to have this section in the report, the text was shortened, focusing more on practical guidance. Some technical background information was moved to Appendix.

Task 2 – General issues

About 350 comments on Task 2 were addressed by the authors in a single breakout group. Most of the comments were constructive and were generally agreed with. However, some comments were contradictory or conflicted with each other. The authors intensively considered and discussed those comments to seek better solutions. Among others, to reflect comments calling for clarification of the mandate of the report, careful considerations were made in revising the text not to exceed the terms of reference for the report. Authors confirmed the need to redraft policy relevant descriptions in more neutral ways.

Authors recognised the need to improve linkages with Task1 and to make better use of the practical methodologies provided in the Task1 report.

Task 2 – Over view Chapter and Chapter 1:Introduction

It was recognised that the Task 2 report would be classified as an “IPCC methodology report”. Hence, it must contain an overview chapter that will be subjected to a section-by-section approval by the IPCC Panel, in accordance with the IPCC Procedures. Authors agreed to prepare an “Overview” chapter, in addition to the Chapter 1: Introduction¹.

¹ In preparation of the second-order draft after Kuala Lumpur meeting, the Steering Group recommended to merge these two chapters into one. The authors agreed to this recommendation. In the end, therefore, Chapter 1 was rewritten as “Overview”, instead of “Introduction”, in the second-order draft.

As regards Chapter 1 “Introduction”, authors agreed to rewrite it to include texts provided by the Marrakesh Accords and the Terms of Reference for the task in order to clarify the objective and context of this report.

Task 2 – Chapter 2: Definitions for Degradation of Forests and Devegetation of Other Vegetation Types

There were comments proposing alternative definitions and methodological explanations on “degradation” and “devegetation”. Some comments expressed concerns about political descriptions or policy-prescriptive contents, which might be misleading and affect usability of the report. It was agreed that options for definitions would be proposed in the revised text, including those harmonised with other international processes, and to be either specific to carbon related attributes or alternatively related to broader forest/vegetation values.

Task 2 – Chapter 3: Methodological options to inventory emissions from direct human induced activities

In response to many comments calling for clear and practical guidance on methodology to inventory emissions from direct human induced activities defined in Chapter 2, authors agreed to develop a diagram indicating steps to identify cases when forest degradation and devegetation of other vegetation types may not be accounted. Responding to the comments about the lack of referenced to methods provided in the Task 1 report, closer references should be added in the second-order draft. Authors recognised that careful attention on the revised text of Task 1 would be necessary. It was also recognised that the guidance on how to report should be presented in this chapter, taking the discussion on reporting tables for Task 1 into consideration.

Task 2 – Chapter 4: Implications of Different Methodological Options to Accounting under the Provisions of Article 3.4 of the Kyoto Protocol

Authors considered additional texts on implications regarding "balance" as distinct from "complete" or "comprehensive". Authors discussed and agreed to elaborate a section regarding the implications of the different methodologies on costs, scale of application and accuracy. They also agreed to seek some indicators for scale of degradation.

CONCLUSIONS AND GENERAL ISSUES DISCUSSED AT THE LAST PLENARY

Conclusion

Task1 and Task 2 authors agreed on a time schedule for further drafting and finalising the second order drafts, which are subject to the second government/expert review between 2 May and 27 June 2003.

Future Work

Authors will continue drafting to finalise the report to be second-order drafts.

Authors recognise that further refinements are necessary to make the reports more user-friendly handbooks. . Harmonisation of the introductory parts among chapters, sections, and subsections, and cross-referencing still require more attention by authors.

Worksheets to estimate GHGs emissions and removals from each pool under different land-use categories in Chapter 3 will be prepared by the TSU for further consideration and elaboration by CLAs and Las, before the second government/expert review.

Future Planning

The workplan after the meetings in Kuala Lumpur was discussed. Authors agreed with the following timetable.

Due date for posting drafts on the EDG:	Chapter 5 → 18 April
	Other Chapters → 23 April
Second government/expert review:	2 May – 27 June
Consolidation of comments by the TSU:	27 June – 15 July
Authors/Experts meeting for finalisation of drafts:	29 – 31 July 2003, Sydney, Australia

Others

Representing the UNFCCC, Mr Heikki Granholm suggested Task Force on Inventories of the IPCC to prepare a progress report and a side-event for SBSTA-18, to be held in Bonn, Germany, from 4 to 13 June 2003.

Review editors were requested to submit a brief report on how comments were considered in each breakout discussions and reflected in the drafting of the second-order draft reports.

Mr Ruzain Idris, Principal Assistant Director, Conservation and Environmental Management Division, Ministry of Science, Technology and Environment, Malaysia gave a speech in the closing session.

ATTACHMENT A

**List of Participants for
IPCC NGGIP-LULUCF Programme
Fourth Authors/Experts Meeting on Good Practice Guidance
for Land Use, Land-Use Change and Forestry (Task 1)**

AND

**Third Authors/Expert Meeting on the issue of “Degradation of Forest and Devegetation of Other
Vegetation Types” (Task 2)
Kuala Lumpur, Malaysia, 1-3 April 2003**

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