INTERGOVERNMENTAL PANEL ON Climate change

Our ref.: 5200-11/IPCC/TFI

Appendices: 4

To designated IPCC Focal Points and Ministries of Foreign Affairs (if no focal point has been designated)

Geneva, 31 May 2011

Sir/Madam,

I am writing to invite nominations from your Government of experts for consideration as Co-ordinating Lead Authors, Lead Authors and Review Editors to contribute to the forthcoming "2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands". Following approval by the 33<sup>rd</sup> Session of the IPCC, the IPCC's Task Force on National Greenhouse Gas Inventories (TFI) will manage this work and aims to complete the work by the end of 2013. This work aims to cover a range of wetland types but will not consider flooded lands (reservoirs).

The 2006 IPCC Guidelines themselves note that the guidance on wetlands is incomplete. When the Wetlands chapter in the 2006 IPCC Guidelines was compiled, there was insufficient scientific information available to complete methodologies for all sub-categories, and so methods are only available for some emissions or removals from flooded lands; harvesting of peatlands and some organic soils.

The UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA) at its 32<sup>nd</sup> Session, as part of its consideration of the use of the 2006 IPCC Guidelines, invited the IPCC "to organize an expert meeting to explore the need and ways to clarify methodological issues related to reporting on harvested wood products, wetlands and nitrous oxide emissions from soils.(FCCC/SBSTA/2010/L.12,paragraph 7).

In response to this invitation, an Expert Meeting on Harvested Wood Products, Wetlands and N<sub>2</sub>O Emissions from Soils was held on 19<sup>th</sup>-21<sup>st</sup> October, 2010 in Geneva, which concluded that:

"The meeting ... in general considered that the methodological advice contained in the 2006 IPCC Guidelines still reflects the latest science... Since the 2006 IPCC Guidelines were completed much new scientific information is now available about various wetlands that enable emissions and removals to be estimated from wetland restoration and rewetting especially for peatlands. The meeting recommended that the IPCC provide additional methodological guidelines for the rewetting and restoration of peatland; emissions from fires, ditches and waterborne carbon; and constructed wetlands for waste water disposal, to fill gaps in the existing guidelines."

The meeting's conclusions were summarised in the Co-Chairs Summary that was presented at the UNFCCC Workshop on the Annex I Reporting Guidelines (3<sup>rd</sup>-4<sup>th</sup> November 2010) and at a side event at the UNFCCC COP 16 Session in Cancun on 30<sup>th</sup> November, 2010.



The UNFCCC SBSTA at its 33<sup>rd</sup> Session held in December 2010 in Cancun invited the IPCC to prepare additional guidance on wetlands, focusing on the rewetting and restoration of peatland. Document FCCC/SBSTA/2010/L.18, paragraph 4 states:

"The SBSTA took note of the summary of the co-chairs of the IPCC expert meeting on harvested wood products, wetlands and  $N_2O$  emissions from soils. Noting that science has developed in some areas with regard to wetlands, the SBSTA invited the IPCC to undertake further methodological work on wetlands, focusing on the rewetting and restoration of peatland, with a view to filling in the gaps in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories ... in these areas and to complete this work for the thirty-ninth session of the SBSTA."

In response to this SBSTA invitation, and utilising the contingency funds in the 2011 budget which allowed for this possibility, the "IPCC Expert Meeting on Scoping Additional Guidance on Wetlands" was held at the WMO in Geneva, Switzerland from 30<sup>th</sup> March to 1<sup>st</sup> April, 2011. This meeting produced a draft Terms of Reference (ToR), including annotated chapter outline.

The IPCC at its 33<sup>rd</sup> Session in Abu Dhabi (10<sup>th</sup>-13<sup>th</sup> May 2011) decided to produce the "2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands". The Terms of Reference, Chapter Outlines and Work Plan are attached to this letter. (Appendix 1, 2 and 3).

Nominations (preferably electronically) should be made using the form (Appendix 4. It is also downloadable from <a href="http://www.ipcc-nggip.iges.or.jp/">http://www.ipcc-nggip.iges.or.jp/</a>), which asks for details of both the experts and their chapters of interest. In addition, please specify if they are willing to act as a Co-ordinating Lead Author.

All nominations should reach the following contact point no later than **30<sup>th</sup> June 2011** preferably by email at <u>nggip-tsu@iges.or.jp</u>, or

Mr. Simon Eggleston, Head, Technical Support Unit IPCC National Greenhouse Gas Inventories Programme c/o Institute for Global Environmental Strategies 2108-11, Kamiyamaguchi, Hayama, Kanagawa, 240-0115 Japan Email: nggip-tsu@iges.or.jp Fax +81 468 55 3808 Phone +81 468 55 3750

The roles and responsibilities of Co-ordinating Lead Authors, Lead Authors, Contributing Authors, Expert Reviewers and Review Editors are given in Appendix A to the IPCC Principles and Procedures (http://www.ipcc.ch/organization/organization\_procedures.shtml). The IPCC at its 33<sup>rd</sup> Session has agreed some revisions to these principles and procedures and Appendix A will be updated to reflect these changes. All Authors will be asked to abide by the IPCC procedures. The Interim Guidance Notes to the Experts and Authors, including the TFI Interim Disclosure of Interest Form, have been prepared, which will be also updated to reflect these changes. The current version is available from <a href="http://www.ipcc-nggip.iges.or.jp/">http://www.ipcc-nggip.iges.or.jp/</a>.

The task of Co-ordinating Lead Authors and Lead Authors is a demanding one. The Co-ordinating Lead Authors and Lead Authors would attend 4 author meetings and selected authors will also attend the IPCC Plenary where the whole document is approved. They would also be expected to draft text and consider review comments on their own time – a significant effort. The role of Review Editors is being strengthened to ensure all comments are considered. However, the time commitment of Review Editors is less than that for Co-ordinating Lead Authors or Lead Authors, but will include attendance at one Author meeting in 2012 and one Author meeting in 2013 to consider

the comments from the reviews. Contributing Authors are normally not required to attend any of these meetings. Being fully intergovernmental, it has been the practice in IPCC for the Governments in the developed world to support their respective Co-ordinating Lead Authors/Lead Authors/Review Editors for participation in the preparation of the chapters/sections of IPCC reports. Such support extends to the travel and subsistence of Co-ordinating Lead Authors/Lead Authors/Review Editors to attend meetings of Lead Authors and other relevant meetings such as the Sessions of the IPCC Working Groups and of the IPCC. The travel and subsistence of the Co-ordinating Lead Authors/Lead Authors/Review Editors in transition to attend the meetings of Lead Authors and other relevant meetings will be borne out of the IPCC Trust Fund.

Nominations are also being requested from inter-governmental and non-governmental organizations. Irrespective of such requests, your Government may wish to include experts from academia, industry, environmental organizations and other non-governmental organizations in your nomination(s). All nominations will be provided to the Task Force Bureau (TFB) which will select Co-ordinating Lead Authors, Lead Authors and Review Editors. The selection of Contributing Authors will be left to the Co-ordinating Lead Authors and Lead Authors. In the selection process the TFB will consider the nominee's areas of knowledge and expertise, as described in the nomination form. They will aim for a list of authors that will, as far as possible, provide:

- A range of scientific, technical and socio-economic views and expertise;
- Geographical representation (ensuring appropriate representation of experts from developing and developed countries and countries with economies in transition); there should be at least one and normally two or more from developing countries (per chapter);
- A mixture of experts with and without previous experience in IPCC;
- Gender balance.

The TFB will inform the selected authors and their Government Focal Points as soon as possible after selection. The first Author Meeting is currently scheduled to be held late October or early November 2011.

Yours sincerely,

Renate Christ Secretary of the IPCC

Appendices:

- Appendix 1: Terms of Reference
- Appendix 2: Chapter Outlines
- Appendix 3: Work Plan
- Appendix 4: Nomination Form

#### 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands

#### **Terms of Reference**

#### Background

- 1. The UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA) at its 33rd session held in December 2010 in Cancun invited the IPCC to prepare additional methodological guidance on wetlands, focusing on the rewetting and restoration of peatland.
- 2. The 2006 IPCC Guidelines themselves note that the guidance on wetlands is incomplete. When the Wetlands chapter in the 2006 IPCC Guidelines was compiled there was insufficient scientific information available to complete methodologies for all sub-categories, and so methods are only available for some emissions from flooded lands and from peatlands being harvested.
- 3. This was considered at the "IPCC expert meeting on Harvested Wood Products, Wetlands and N2O Emissions from Soils", held in Geneva, 19th-21st October 2010, that concluded,

"Since the 2006 IPCC Guidelines were completed much new scientific information is now available about various wetlands that enable emissions and removals to be estimated from wetland restoration and rewetting especially for peat lands. The meeting recommended that the IPCC provide additional methodological guidelines for the rewetting and restoration of peat land; emissions from fires, ditches and waterborne carbon; and constructed wetlands for waste water disposal, to fill gaps in the existing guidelines."

4. Finally this was considered by the UNFCCC SBSTA at its 33rd session that concluded (Document FCCC/SBSTA/2010/L.18, paragraph 4):

"The SBSTA took note of the summary of the co-chairs of the IPCC expert meeting on harvested wood products, wetlands and N<sub>2</sub>O emissions from soils. Noting that science has developed in some areas with regard to wetlands, the SBSTA invited the IPCC to undertake further methodological work on wetlands, focusing on the rewetting and restoration of peatland, with a view to filling in the gaps in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (hereinafter referred to as the 2006 IPCC Guidelines) in these areas and to complete this work for the thirty-ninth session of the SBSTA."

5. This task aims to fulfil this invitation by filling gaps in the 2006 IPCC Guidelines.

#### Scope

- 6. In response to the decision of IPCC XX and the invitation from the SBSTA at its 33rd session, the IPCC will provide a Supplement to the 2006 IPCC Guidelines as an IPCC Methodology Report, as outlined in the Table of Contents.
- 7. The overall aim of this work is:

# To develop additional national-level inventory methodological guidance, including default emission factor values, on wetlands to address the gaps identified in the 2006 IPCC Guidelines.

- 8. This 2013 Supplement:
  - does not revise or replace the 2006 IPCC Guidelines, but provides a reference that complements and is consistent with these Guidelines.
  - will be completed before the 39<sup>th</sup> session of SBSTA in 2013, as noted in the work plan (table 1).
  - will be consistent with the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (2000), and the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry (2003) as well as the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Recent advances in science will be taken into account.
  - will contain the methodological guidance to fill the gaps identified in the 2006 IPCC Guidelines in the subcategories of peatland rewetting and restoration as well as anthropogenic emissions and removals from additional coastal and freshwater wetland types.
  - does not cover flooded lands (such as reservoirs).

#### Approach

- 9. The result of this work will be an IPCC Methodology Report "2013 Supplement to 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands."
- 10. The authors will follow guidelines (TFI Interim Guidance Notes to Experts and Authors) to ensure compatibility with the 2006 IPCC Guidelines. Key elements of the work will be:
  - *Structure*: This 2013 Supplement will contain methodological guidance in a consistent structure with that for other categories in the 2006 IPCC Guidelines. Specific references or citation will be made to related chapters and guidance in the 2006 IPCC Guidelines. As applicable, reporting tables for the new sub-categories will be provided.
  - *Content of guidance*: This 2013 Supplement will include tiered methodological approaches; decision trees; new and/or updated methods and default emission factors, where appropriate; cross-references as necessary to avoid double counting or omissions of emissions and removals; and reporting and documentation guidance. The elements for cross-cutting issues will generally rely on the general guidance on Volume 1 of the 2006 IPCC Guidelines, and only additional guidance specifically relevant to the issues contained in this 2013 Supplement will be provided.
  - Coverage: The 2013 Supplement will cover the same greenhouse gases included in the 2006 IPCC Guidelines.

11. Literature will be considered up to a cut-off date at the start of the Government/Expert Review.

# 2013 Supplement to 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands.

# Table of contents

#### **OVERVIEW CHAPTER**

- Background request from UNFCCC
- This supplementary guidance addresses gaps identified in the 2006 IPCC Guidelines as far as possible. It
  focuses on those human activities and management that give rise to anthropogenic emissions or removals by
  wetlands
- Policy Relevance
- Summary

# Chapter 1- INTRODUCTION

- Coherence and compatibility with 2006 Guidelines.
- What is covered by the 2006 Guidelines and what are the gaps it identifies?
- Definitions & Coverage (coastal wetlands, peatlands and other freshwater wetlands) and
  - o Definition and delineation of wetlands taking into account the RAMSAR definitions
    - o Completeness and potential overlaps
    - o Roles and functions of constructed wetlands
    - o Flooded lands are NOT covered (such as reservoirs)
- Significance of human activities on wetlands emissions and removals.
  - o (Estimation of anthropogenic emissions and removals. Annex could include examples)
- · Assessment of data available (current and historical) for wetland types of the world

# Chapter 2 - CROSS-CUTTING GUIDANCE ON ORGANIC SOILS

(Supplemental guidance to Chapter  $2^{1}$  on Generic methods relating to organic soils)

- Introduction (generic guidance for all systems with organic soils)
- Relationships to other chapters
- Methodologies<sup>2</sup>:
  - o Drainage. (Water table drainage classes, Ditches and Water-borne carbon)
  - Land use and land use intensity changes on organic soils
  - o Fires (both wildfires on drained peatlands and managed fires)
- Use of these additional generic methods Forestlands, Croplands, Grasslands, Settlements and Wetlands

# Chapter 3 – REWETTING AND RESTORATION OF PEATLANDS

(Supplemental Guidance to Chapter 7<sup>1</sup>)

- Introduction
- Methodologies<sup>2</sup>:
  - o Rewetting (reversal of drainage)
  - o Restoration/rehabilitation
  - o Restored/rewetted peatlands remaining restored/rewetted peatlands

<sup>&</sup>lt;sup>1</sup> These chapter references are to Volume 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories

<sup>&</sup>lt;sup>2</sup> Throughout this chapter outline "Methodologies" includes tiered methodologies, choice of methodology, default Emission Factors, Activity Data, uncertainty assessment and other category specific good practice issues. All GHGs as applicable would be considered. See the "Instructions for Authors" for more details

#### Chapter 4 – COASTAL WETLANDS

(Coastal wetlands are those that are tidally influenced and include mangroves, saltmarsh, seagrass and tidal freshwater systems. Supplemental Guidance to Chapters  $2\&7^1$ )

- Introduction,
- Relationships to other chapters e.g. Constructed wetlands and wastewater treatments, prevention of doublecounting
- Important and unique characteristics of these wetland types (e.g. Soil- organic vs mineral; Hydrology and water quality; and Vegetation types)
- Methodologies<sup>2</sup>:
  - Activities<sup>3</sup>, Management practices and how these effect emissions (use 5 IPCC pools)
  - o Restoration, Creation, and recovery of coastal wetlands sequestration and changes in emissions

# Chapter 5 - OTHER FRESHWATER WETLANDS

(Covers inter alia, Seasonally Flooded Wetlands, Riparian, Swamps, marshes etc, Supplemental Guidance to Chapters 2 &  $7^1$ )

- Introduction
- Relationships to other chapters e.g. Constructed wetlands and wastewater treatments, prevention of doublecounting
- Important and unique characteristics of these wetland types (e.g. Soil- organic vs mineral; Hydrology and water quality; and Vegetation types)
- Methodologies<sup>2</sup>:
  - o Activities<sup>3</sup>, management practices and land uses and how these affect emissions (use 5 IPCC pools)
  - Restoration, Creation, and recovery of wetlands sequestration and changes in emissions

# Chapter 6 - CONSTRUCTED WETLANDS – Wastewater Treatment

(Supplemental Guidance to Volume 5 Chapter 6)

- Introduction
- Relationships to other chapters e.g. wastewater treatments, prevention of double-counting and discussion on natural wetlands that are used as wastewater treatments
- Types of constructed wetlands for waste water disposal
  - Surface-flow constructed wetlands; Subsurface –flow wetlands (Vertical and horizontal flows)
  - Main Parameters that affects GHG emissions e.g. Inputs such as Nutrient loading (e.g., N loading, P loading); Hydrological regime and species of plant (macrophytes)
- Methodologies<sup>2</sup>:
  - o emissions and removals from constructed wetlands

# Chapter 7 – GOOD PRACTICE AND IMPLICATIONS FOR REPORTING

- General Good Practice Issues
  - o Quality and quantity of data
  - o Completeness, Time Series consistency, QA/QC
- Completeness, Time-series consistency, QA/QC for wetlands as a whole
- Need for, and how to, maintain 2006 Reporting Approaches
- Reporting according to the 2006 Guidelines
- Mapping Wetlands emissions into 2006 Guidelines reporting
- Areas for further work
- Worksheet

<sup>&</sup>lt;sup>3</sup> Activities that may be significant for individual categories of wetlands include clearance (followed by biomass combustion, filling, drainage, aquaculture, conversion to agriculture); changes in hydrology; application of waste water; restoration and fires. The impacts of these need specific methodologies particularly for soils.

# 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands

Date	Action	Comment
May 2011	IPCC 33	Plenary approves ToR, Chapter outline and this work plan, guidance to authors
June – Aug 2011	Call for Nomination of Authors	IPCC invites nominations for authors and Review Editors from Governments and International Organisations.
Aug 2011	TFB select Authors	Selection by TFB considering expertise and geographical coverage, (The IPCC Bureau will be informed.).
Nov 2011	1 <sup>st</sup> Author Meeting	To develop zero order draft
Feb 2012	2 <sup>nd</sup> Author Meeting	To develop first order draft for review
Apr – May 2012	1 <sup>st</sup> Expert Review	8 weeks review by experts
July 2012	3 <sup>rd</sup> Author Meeting	To consider comments and produce second order draft for review
Oct 2012	Literature cut-off date	Only papers published before this date will be considered
Oct – Nov 2012	2 <sup>nd</sup> Expert & Government Review	8 weeks review by experts and governments
Feb 2013	4 <sup>th</sup> Author Meeting	To consider comments and produce final draft
April – May 2013	Government Consideration	Distribute to governments for their consideration prior to approval (at least 4 weeks prior to the Panel)
2013 (tbc)	Adoption/acceptance by IPCC 36	Final draft submitted to IPCC Panel for adoption/acceptance
Oct 2013	Distribute Guidelines	Distribute document to governments and Parties to UNFCCC (before SBSTA39 in December 2013)

# Work Plan for 2013 Supplement