

## **TERMS OF REFERENCE**

### ***Background***

1. The UNFCCC Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) at its seventh session (CMP7), held in December 2011 in Durban, South Africa, invited the IPCC to review and, if necessary, update supplementary methodologies for estimating anthropogenic greenhouse gas emissions by sources and removals by sinks resulting from land use, land-use change and forestry (LULUCF) activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol (KP), related to the annex to 2/CMP.7, on the basis of, inter alia, Chapter 4 of IPCC's 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry (GPG-LULUCF).

2. The need to review and update Chapter 4 of the GPG-LULUCF arises for two reasons. Firstly, the methodologies contained in Chapter 4 provide the link between IPCC's general greenhouse gas inventory guidance, and reporting requirements under the KP. CMP7 agreed rules for LULUCF for the second commitment period under the KP which differ in some respects significantly from the rules agreed for the first commitment period, implying the need to update. Secondly, since Chapter 4 was intended to be used with the latest IPCC LULUCF guidance updating is needed to take account of the decision of the CMP to use the 2006 IPCC Guidelines for the purposes of the second commitment period under the KP.

3. The new rules referred to and agreed by CMP7 on LULUCF contain, amongst other things, new provisions on forest management, emissions and removals associated with natural disturbances in forests, harvested wood products, and wetland drainage and rewetting, which are not covered in the existing Chapter 4.

4. The potential need to update Chapter 4 was considered at the IPCC Scoping Meeting to consider the Invitation from UNFCCC CMP7 that took place in Geneva from 1 to 4 May 2012. The scoping meeting concluded that, whilst much of the structure and the content of Chapter 4 remains relevant and useful, Chapter 4 needs significant updating to take account of the LULUCF decision 2/CMP.7, other relevant decisions by COP and CMP, the 2006 IPCC Guidelines, IPCC's work on wetlands, and other IPCC products. The authors should take account of new scientific literature and methods.

### ***Scope***

5. IPCC will update and augment the existing Chapter 4 of the GPG LULUCF, to take account of the 2006 IPCC Guidelines and other IPCC products, the annex to 2/CMP.7, other relevant decisions of the COP and CMP, new scientific literature and methods, and the outcomes of the scoping meeting held in Geneva on 1 to 4 May 2012.

### ***Aim***

6. The overall aim of this work is to update and augment Chapter 4 of the GPG LULUCF consistent with the scope identified in paragraph 5, intended for publication as a separate report provisionally entitled "2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol". This will ensure continued usefulness of IPCC inventory methods in support of the reporting requirements of the KP during the second commitment period by providing practical guidance to countries in implementing the annex to 2/CMP.7 and any other relevant decisions of the COP or CMP, for example on reporting and accounting.

## ***Approach***

7. The result of this work will be an IPCC Methodology Report using the Table of Contents (below).
8. The update will be consistent with the 2006 IPCC Guidelines and not revise or replace the 2006 IPCC Guidelines.
9. The report will provide methodological guidance on scientific and technical issues covered by the scope indicated in paragraph 5 above, consistent with decisions of the COP and CMP.
10. The report will maintain the structure and content of the existing Chapter 4, replacing references to GPG-LULUCF by those to 2006 Guidelines wherever necessary, and adding additional material to existing sections or adding new sections using the Table of Contents (below).
11. Literature will be considered up to a cut-off date at the start of the Government/Expert Review.
12. There will be a Steering Group appointed by the TFB to ensure consistency with these terms of reference.
13. Table 1 provides the time table for this task.

**Table 1 Work plan**

Action	Revised "Fast Schedule"		
	Start	End	Duration (weeks)
<b>Panel Approval of this proposal</b>	<b>06 Jun 2012</b>	<b>09 Jun 2012</b>	
<i>preparation of letter to Focal Points</i>	09 Jun 2012	18 Jun 2012	1
<b>IPCC requests for nominations</b>	18 Jun 2012	18 Jun 2012	0
<i>Governments establish nomination lists</i>	18 Jun 2012	15 Jul 2012	4
<b>TFB decides Author list</b>	16 Jul 2012	29 Jul 2012	2
<i>Authors prepare writing process</i>	30 Jul 2012	23 Sep 2012	8
<b>LA1</b>	<b>24 Sep 2012</b>	<b>30 Sep 2012</b>	<b>1</b>
<i>Authors prepare 0 Order Draft</i>	01 Oct 2012	11 Nov 2012	6
<b>LA2</b>	<b>12 Nov 2012</b>	<b>18 Nov 2012</b>	<b>1</b>
<i>Authors prepare 1<sup>st</sup> Order Draft</i>	19 Nov 2012	06 Jan 2013	7
<b>Expert Review</b>	<b>07 Jan 2013</b>	<b>03 Feb 2013</b>	<b>4</b>
<i>Authors prepare preliminary 2<sup>nd</sup> Order Draft</i>	04 Feb 2013	03 Mar 2013	4
<b>LA3</b>	04 Mar 2013	10 Mar 2013	1
<i>Authors prepare 2<sup>nd</sup> Order Draft</i>	11 Mar 2013	21 Apr 2013	6
<b>Government/Expert Review</b>	<b>22 Apr 2013</b>	<b>02 Jun 2013</b>	<b>6</b>
<i>Authors prepare preliminary Final Draft</i>	03 Jun 2013	14 Jul 2013	6
<b>LA4</b>	<b>15 Jul 2013</b>	<b>21 Jul 2013</b>	<b>1</b>
<i>Authors prepare Final Draft</i>	22 Jul 2013	01 Sep 2013	6
<b>Government Consideration</b>	<b>02 Sep 2013</b>	<b>29 Sep 2013</b>	<b>4</b>
<i>Authors prepare Draft for Approval</i>	30 Sep 2013	13 Oct 2013	2
<i>IPCC Panel Adoption/Acceptance</i>	14 Oct 2013	20 Oct 2013	1

## Table of Contents

### OVERVIEW

#### 1. INTRODUCTION

- 1.1. Overview of Steps to Estimating and Reporting Supplementary Information for Activities under Articles 3.3 and 3.4
- 1.2. General Rules for Categorisation of Land Areas under Articles 3.3 and 3.4
  - New categorization of natural disturbance
  - New activities (wetlands drainage and rewetting)
  - Issues related to reporting conversion (e.g., conversion of natural forest and carbon equivalent forest)
- 1.3. Relationship between Annex I Parties' National Inventories and Article 6 LULUCF Projects

#### 2. METHODS FOR ESTIMATION, MEASUREMENT, MONITORING AND REPORTING OF LULUCF ACTIVITIES UNDER ARTICLES 3.3 AND 3.4

- 2.1. Relationship between UNFCCC Land-Use Categories and Kyoto Protocol (Articles 3.3 and 3.4) Land-Use Categories
- 2.2. Generic Methodologies for Area Identification, Stratification and Reporting
  - Reporting requirements
  - Reporting Methods for lands subject to Article 3.3 and Article 3.4 activities.
  - Relationship between Approaches in Chapter 2 and Reporting Methods in Chapter 4
  - Choice of Reporting Method
- 2.3. Generic Methodological Issues for Estimating Carbon Stock Changes and Non-CO<sub>2</sub> Greenhouse Gas Emissions
  - Pools to be reported
  - Years for which to estimate carbon stock changes and non-CO<sub>2</sub> greenhouse gas emissions
  - Reporting and measurement intervals
  - Choice of method
  - Factoring out indirect, natural and pre-1990 effects.
  - Disturbances
  - Interannual variability
- 2.4. Other Generic Methodological Issues
  - Developing a consistent time series
  - Uncertainty assessment
  - Reporting and documentation
  - Quality assurance and quality control
  - Verification
- 2.5. Afforestation and Reforestation
  - Definitional issues and reporting requirements
  - Choice of methods for identifying units of land subject to direct human-induced afforestation/ reforestation
  - Choice of methods for estimating carbon stock changes and non-CO<sub>2</sub> emissions
  - Methods to address natural disturbance
- 2.6. Deforestation
  - Definitional issues and reporting requirements
  - Choice of methods for identifying units of land subject to direct human-induced deforestation
  - Choice of methods for estimating carbon stock-changes and non-CO<sub>2</sub> greenhouse gas emissions

## 2.7. Forest Management

- Definitional issues and reporting requirements
- Choice of methods for identifying lands subject to forest management
- Choice of methods for estimating carbon stock changes and non-CO2 greenhouse gas emissions
- Methods to address natural disturbance
- Forest Management Reference Levels
- Technical Corrections
- Carbon equivalent forest

## 2.8. Cropland Management

- Definitional issues and reporting requirements
- Choice of methods for identifying lands
- Choice of methods for estimating carbon stock changes and non-CO2 greenhouse gas emissions

## 2.9. Grazing Land management

- Definitional issues and reporting requirements
- Choice of methods for identifying lands
- Choice of methods for estimating carbon stock changes and non-CO2 greenhouse gas emissions

## 2.10. Revegetation

- Definitional issues and reporting requirements
- Choice of methods for identifying lands
- Choice of methods for estimating carbon stock changes and non-CO2 greenhouse gas emissions

## 2.11. Wetland drainage and rewetting

- Definitional issues and reporting requirements
- Choice of methods for identifying lands
- Choice of methods for estimating carbon stock changes and non-CO2 greenhouse gas emissions

Annex A.1 Tool for estimation of changes in soil carbon stocks associated with management changes in croplands and grazing lands based on IPCC default data

Annex A.2 Examples of allometric equations for estimating aboveground biomass and below ground biomass of trees.