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**UPDATE OF METHODOLOGIES ON NATIONAL GREENHOUSE GAS INVENTORIES**

**Refinement of 2006 IPCC Guidelines for National Greenhouse Gas Inventories, including  
production of a Methodology Report(s)**

(Submitted by the Acting Secretary of the IPCC)

# UPDATE OF METHODOLOGIES ON NATIONAL GREENHOUSE GAS INVENTORIES

## Refinement of 2006 IPCC Guidelines for National Greenhouse Gas Inventories, including production of a Methodology Report(s)

(Prepared by the Co-chairs of the Task Force Bureau)

### Background

1. The 26<sup>th</sup> Meeting of Task Force Bureau (TFB) (28 - 29 August 2014, Ottawa) concluded that:
  - The *2006 IPCC Guidelines for National Greenhouse Gas Inventories (2006 IPCC Guidelines)* provide a technically sound methodological basis of national greenhouse gas inventories, and therefore fundamental revision is unnecessary.
  - To maintain the scientific validity of the *2006 IPCC Guidelines*, certain refinements may be required, taking into account scientific and other technical advances that have matured sufficiently since 2006.
2. Following these conclusions by the TFB and approval by the Panel at its 40<sup>th</sup> Session, the Task Force on National Greenhouse Gas Inventories (TFI) started a technical assessment of IPCC Inventory Guidelines through an on-line questionnaire survey and two expert meetings in 2015. The technical assessment revealed that there has been abundant new scientific and empirical knowledge published since 2006 which the IPCC should take into account, particularly with respect to data for emission factor development for some categories and gases. Consequently the necessity and usefulness of *refinement* of the current methodological guidance (e.g. updating default emission factors) has been recognized by TFB.
3. This document responds to comments made by country delegates at the 42<sup>nd</sup> Session of the IPCC (5 - 8 October 2015, Dubrovnik) on this process.
4. Previously the former TFB Co-chairs suggested in their report to the Panel (IPCC-XLII/INF. 9, Corr.2) that refinement of the *2006 IPCC Guidelines* should be undertaken, including production of a Methodology Report by 2019 so that it can be used by Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to report on their national greenhouse gas inventories beyond 2020, presumably under a new climate agreement expected to be adopted at the 21<sup>st</sup> Session of Conference of the Parties to the UNFCCC (COP21) in December 2015.
5. However, the Panel did not conclude consideration on that suggestion at the 42<sup>nd</sup> Session. The Panel agreed to take note of the report (IPCC-XLII/INF. 9, Corr.2); that the comments made by country delegates would be noted and included in the report of the 42<sup>nd</sup> Session of the Panel; and to request the new TFB Co-chairs to take the submissions into consideration when revising the TFI work programme.
6. The comments made by country delegates were considered at the 27<sup>th</sup> Meeting of TFB (TFB27) was held on 16-18 November 2015 in Hayama, Japan. It was the first TFB meeting after the 42<sup>nd</sup> Session of the IPCC. The new TFB Co-chairs and new TFB members elected at the 42<sup>nd</sup> Session of the IPCC considered a proposal on refinement of the *2006 IPCC Guidelines*, and agreed that the production of (a) new Methodology Report(s) must not be a revision of the *2006 IPCC Guidelines*.
7. In December 2015, the COP21 adopted the Paris Agreement which emphasizes the importance of an enhanced transparency framework for action and support, and in that context it requires each Party to regularly provide a national greenhouse gas inventory prepared using good practice methodologies accepted by the IPCC and agreed upon by the COP serving as the meeting of the Parties to the Paris Agreement.

8. In order for the IPCC to be able to assist the Paris process by ensuring that it is supported by the best and latest available science, a refinement of the *2006 IPCC Guidelines* is required as early as possible so that all UNFCCC Parties will be able to use good practice inventory methodologies based on up-to-date scientific knowledge under the Paris Agreement.

### Objectives and Outputs

9. The refinement of the current available guidance is necessary in order to provide an updated and sound scientific basis for future international climate actions, particularly those under the Paris Agreement.
10. The refinement work **will not** revise the *2006 IPCC Guidelines*, but will provide an update, supplement and/or elaboration of the *2006 IPCC Guidelines* where gaps or out-of-date science are identified by the scoping meeting and agreed by the Panel. The outcome of this refinement work will not replace the *2006 IPCC Guidelines*, but would be used in conjunction with the *2006 IPCC Guidelines*.
11. Refinements to the IPCC's understanding of the latest science may be communicated through a suite of products, including preparation of an IPCC Methodology Report(s), issuance of expert meeting reports, internet Frequently Asked Questions (FAQs) and/or technical bulletins, addition of new emission factors and parameters in the IPCC Emission Factor Database (EFDB).
12. Of the possible products mentioned in paragraph 11 above, only a Methodology Report(s) can have the same legal status as *IPCC Guidelines* which are adopted and accepted by the Panel prior to a COP decision for agreement for use by Parties to the UNFCCC. In this context, it must be noted that default emission factors in the *IPCC Guidelines* can be updated only by producing a Methodology Report(s). It must be also noted that methodological guidance to supplement the *IPCC Guidelines* can also be provided only by producing a Methodology Report(s)<sup>1</sup>.
13. It is proposed that a Methodology Report(s) as an output(s) of this refinement work be produced to address the following three needs while avoiding a fundamental revision of the *2006 IPCC Guidelines*.
- Providing supplementary methodologies for sources or sinks of greenhouse gases only where currently there are gaps or where new technologies and production processes have emerged requiring elaborated methodologies or for sources or sinks that are not well covered by the *2006 IPCC Guidelines*;
  - Providing updated default values of emission factors and other parameters based on the latest available science only where significant differences from currently adopted factors are identified;
  - Providing additional or alternative up-to-date information and guidance, where possible, as clarification or elaboration of existing guidance in the *2006 IPCC Guidelines*.
14. Regarding the format of the Methodology Report(s) referred to in paragraph 13 above, there are some possible options. The options will be considered by the TFB during the scoping meeting mentioned in paragraph 15 below, before consideration and final decision by the Panel. The options include, but are not limited to:
- (a) A single Methodology Report which covers multiple sectors/categories/issues<sup>2</sup>
  - (b) A set of multiple Methodology Reports, each of them addressing a particular category/issue

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<sup>1</sup> For example, the *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands* is a Methodology Report adopted and accepted by the Panel at its 37<sup>th</sup> Session in 2013.

<sup>2</sup> This will be similar to the *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* published in 2000 as an elaboration of the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*.

## Work Planning

15. It is proposed to hold a scoping meeting before 44<sup>th</sup> Session of the IPCC in 2016 for the preparation of the Methodology Report(s) mentioned in paragraph 13 above, in order to consider the scope and format of the report(s). Draft terms of reference, draft table of contents and draft work plan for the proposed Methodology Report(s) will be prepared at this scoping meeting, and will be submitted to the 44<sup>th</sup> Session of the IPCC for its consideration and approval in 2016.
16. The TFB and the TFI Technical Support Unit (TSU) as appropriate will ensure that the scoping meeting takes full account of issues identified by the technical assessment expert meetings held in Geneva<sup>3</sup> and Sao Paulo<sup>4</sup> in 2015 and by the technical assessment expert meetings to be held in Wollongong, Australia on 25-29 April 2016<sup>5</sup>.
17. In accordance with Section 4.1 of Appendix A to the Principles Governing IPCC Work, based on the report of the scoping meeting, the Panel will decide whether to prepare a report and agree on its scope, outline, and the work plan including schedule and budget, and format of the final product(s).
18. Pending the Panel's approval, governments' nomination of authors will be solicited. Without prejudging any decision that the 43<sup>rd</sup> and 44<sup>th</sup> Sessions of the IPCC may take on the matter of Methodology Reports, paragraph 19 below indicates one possible schedule for the production of a Methodology Report which is provided for information only.
19. Activities in 2017 might include, in addition to regular activities of Inventory Software and Emission Factor Database (EFDB), (including "Japan meeting"), two sectoral (Energy, IPPU & Waste Sectors and AFOLU Sector) first lead authors meetings (LAM 1-a and 1-b) and the second lead authors meeting (LAM-2). In line with the IPCC Procedures, they will be followed by an expert review of the first-order draft (FOD), the third lead authors meeting (LAM-3) in early 2018, a government and expert review of the second-order draft (SOD), the fourth lead authors meeting (LAM-4) in 2018. Final government consideration of the final draft will take place from late 2018 and early 2019, and the acceptance and adoption of a Methodology Report will be at a Panel session in 2019. It is likely that one or two focused science meetings will be required, one expected in 2017 and the other in 2018.

## The Final Products

20. The Methodology Report(s) will be (a) major product(s) of the refinement work, pending the Panel's approval. The format of the Methodology Report(s) would be decided by the Panel as mentioned in paragraph 14 above.
21. The refinement work, if decided by the Panel, will also allow the production of various supporting materials such as web-site FAQs - the production of which will be decided and managed by the TFB in consultation with relevant experts and with the support of the TFI TSU.
22. Population of EFDB will need to be accelerated throughout this period so that new scientific information can be reflected as it becomes available.
23. Proposals to deliver this work are included in the document IPCC-XLIII/Doc.2.

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<sup>3</sup> Expert Meeting for Technical Assessment of IPCC Inventory Guidelines (Energy, IPPU, Waste Sectors), 29 June - 1 July 2015, Geneva, Switzerland

<sup>4</sup> Expert Meeting for Technical Assessment of IPCC Inventory Guidelines (AFOLU Sector) 13-16 July 2015, São Paulo, Brazil

<sup>5</sup> Expert meeting for Technical Assessment of IPCC Inventory Guidelines: follow-up on specified issues from the 2015 expert meetings 25-26 April 2016, Sydney, Australia; and Expert meeting for Technical Assessment of IPCC Inventory Guidelines (Cross-sectoral issues) 27-29 April 2016, Sydney, Australia