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REPORTS

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

(Submitted by the Acting Secretary of the IPCC)
(Prepared by the Co-Chairs of the Task Force Bureau)

IPCC Secretariat

c/o WMO • 7bis, Avenue de la Paix • C.P. 2300 • 1211 Geneva 2 • Switzerland
telephone : +41 (0) 22 730 8208 / 54 / 84 • fax : +41 (0) 22 730 8025 / 13 • email : IPCC-Sec@wmo.int • **www.ipcc.ch**

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(Energy, IPPU, Waste Sectors), 29 June -1 July 2015, Geneva, Switzerland

Brief Introduction

In accordance with the IPCC Trust Fund programme and budget for the year 2015 (approved by the IPCC at its 40th Session), the Task Force on National Greenhouse Gas Inventories (TFI) is implementing technical assessment of IPCC Inventory Guidelines. This work is to assess where science and data availability have developed sufficiently since the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (2006 IPCC Guidelines) to support the refinement or development of methodological advice for specific categories and gases, with a view to identifying any specific areas or issues to be prioritized. Another aim is to conduct technical assessments on cross-sectoral issues, including improvement of user-friendliness of other inventory tools of the IPCC with a view to contributing to capacity development programmes. The Expert Meeting for Technical Assessment of IPCC Inventory Guidelines (Energy, Industrial Processes and Product Use (IPPU), Waste Sectors) was held on 29 June - 1 July 2015, in Geneva, Switzerland, as part of this technical assessment. The TFI extends its appreciation to the World Meteorological Organization for the support to hold this meeting.

This meeting was convened in accordance with the conclusion of the 26th meeting of the Task Force Bureau (TFB) held in Ottawa, on 28-29 August 2014 (see IPCC-XL/Doc.6, Rev.1). The meeting programme is in Annex 1, and the list of participants is in Annex 2 to this document.

Meeting Summary

This technical assessment of IPCC Inventory Guidelines is being undertaken through a combination of an on-line questionnaire survey and two expert meetings. The on-line questionnaire survey was conducted from 30 January to 27 February, and 243 experts submitted a total of 987 comments to the Technical Support Unit for the TFI (TFI TSU). About half of these (446) were about the Energy, Industrial Processes and Product Use (IPPU) and Waste Sectors.

The Geneva expert meeting was the first of the two expert meetings following the on-line questionnaire survey. The Geneva meeting covered Energy, IPPU and Waste Sectors. In particular it aimed to:

- assess the maturity of scientific advances and the availability of new data (but not an exact scientific examination of new methodology or data);
- identify any specific areas or issues that should be prioritized in TFI's future work; and
- consider associated cross-sectoral issues identified in the survey.

The meeting considered comments submitted by experts in response to the on-line questionnaire survey, particularly on the issues identified as high priorities through the prior analysis made by the TFI TSU. This was with a view to making recommendations to the TFB on the following:

- Categories for which the science is sufficiently mature and data are available to recommend refinement or development of inventory guidance;
- Where such refinement or development on the basis of this new information would lead to a noticeable improvement of the *2006 IPCC Guidelines* and the *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands* (Wetlands Supplement)[1];

[1] The *Wetlands Supplement* is relevant mainly to Agriculture, Forestry and Other Land Use (AFOLU) Sector which was covered by the second expert meeting held in Sao Paulo, Brazil on 13-16 July 2015, but it is also relevant to Waste Sector which was covered by this Geneva expert meeting.

- Specific type of refinement or updating that is needed for those categories; and
- How these refinements could be made (i.e., suggested possible way(s) to address issues.

The issues were considered and discussed through three break-out groups (on Energy Sector, on IPPU Sector and on Waste Sector), taking significance & prioritization criteria (see Box 1) into account.

Box 1: Significance and prioritization criteria

- Significance of the source/sink and the gas within the sector on a global scale. Sources significant for only a limited number of particular countries currently or in the foreseeable future may not meet this criterion. The adequacy of the existing guidance for a particular category should be considered, as should the likelihood that new information would lead to a definite improvement in the IPCC Guidelines.
- Availability of relevant new scientific results.
- Sufficient data availability and maturity of scientific advances since 2006 to provide a basis for methodological development or refinement, including:
    - Ability to develop new or updated default emission/removal factors
    - Feasibility of obtaining the necessary data to implement the methods
- Emergence of new sources or gases meeting these criteria

Based on the discussion by each break-out group, the meeting participants agreed to forward the recommendations on the future TFI work to the TFB.

Main Meeting Recommendations

The Geneva expert meeting agreed on a number of issues that need to be addressed in the future TFI work, and recommended that:

- Some of the issues need to be addressed by producing a new Methodology Report(s). For example, it is necessary to develop new or additional guidance on sources and/or gases that are not covered by the *2006 IPCC Guidelines* (e.g., greenhouse gas (GHG) emissions from unconventional oil and gas production such as shale gas, shale oil, tight gas, tight oil and coal bed methane, GHG emissions from hydrogen production, N_2O emissions from industrial wastewater treatment process). It is also necessary to update or add default data of emission factors and other parameters for some categories (e.g., fugitive emissions from oil and gas, substitutes for ozone depleting substances used for refrigeration and air conditioning among others, N_2O emissions from nitrification and denitrification at wastewater treatment plants).
- Some other issues can be addressed by utilizing other means (IPCC Supporting Materials) including the Emission Factor Database (EFDB), TFI's webpage on Frequently Asked Questions (FAQs), and issuance of technical bulletins or expert meeting reports after holding relevant expert meetings.
- Refinements by EFDB and FAQs can start as soon as practicable.
- Some issues require further intensive consideration by relevant experts before starting refinements (e.g., identification of unknown sources of perfluorocarbons (PFCs)).
- There are several cross-sectoral issues that need to be considered at an expert meeting next year.

In addition, many participants were of the view that there should be a mechanism to update Tier 1 (default) data of emission factors and other parameters more frequently, expressing concern about the fact that default data can be updated or added only through production of new Methodology Reports that have not taken place for many years for most of the inventory sectors and categories. Details of these recommendations are contained in a TFI Co-chairs' Summary of this meeting that will be published in due course.

Recommendations from the Geneva expert meeting and those from the other expert meeting held in Sao Paulo, Brazil on 13-16 July 2015 (see IPCC-XLII/INF. 8 for agenda item 5.10) were forwarded to the TFB. Taking these recommendations into consideration, the TFB discussed the necessary future TFI work, and came up with a proposal for TFI's work programme and budget for 2016 -2018 contained in the document IPCC-XLII/Doc.2, Rev.1, and further explained in the information document IPCC-XLII/INF. 9 for consideration by the IPCC at this session.

The TFB also took note of the views expressed by many participants in the Geneva expert meeting about the necessity of a mechanism to update Tier 1 (default) data of emission factors and other parameters more frequently. The TFB started discussion on this issue, and has agreed that the discussion should be continued by the new TFB which will be elected at this session of the IPCC.

Annex 1

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

Meeting Programme

Monday 29 June	9:00 - 9:30	Registration
	9:30 - 10:00	Welcome • IPCC TFI Co-Chairs • IPCC Deputy Secretary, Officer in Charge
	10:00 - 12:30	**Plenary session (Presentations followed by Q&A)** • Explanation of the background, objectives and organization of the meeting (***TSU***) • Overview of results of on-line survey (***TSU***) Summary of results of on-line questionnaire survey for technical assessment of IPCC Inventory Guidelines conducted in early 2015 were introduced. The aim of this survey was to collect opinions and relevant information from a wide range of inventory experts with a view to: -assessing where science and data availability have developed sufficiently since the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (2006 IPCC Guidelines) to support the refinement or development of methodological advice for specific categories and gases, with a view to identifying any specific areas or issues to be prioritized; and -conducting technical assessment on cross-sectoral issues, such as those covered in Volume 1 of the 2006 IPCC Guidelines, including improvement of user-friendliness of IPCC inventory tools with a view to contributing to capacity development programmes. **Q & A followed by discussion**
	13:00 - 15:00	*Lunch break*
	15:00 – 18:00	**1st Break-out group (BOG) session** High-priority issues identified through the on-line survey were considered and discussed, based on issue papers prepared by TSU. Several presentations were made at each BOG. BOG1: Energy BOG2: Industrial Processes and Product Use (IPPU) BOG3: Waste
Tuesday 30 June	09:00 - 12:30	**1st BOG session (Continuation)** BOG1: Energy BOG2: Industrial Processes and Product Use (IPPU) BOG3: Waste
	13:00 - 14:30	*Lunch break*
	14:30 - 17:00	**1st BOG session (Continuation)** BOG1: Energy BOG2: Industrial Processes and Product Use (IPPU) BOG3: Waste
	17:00 - 18:00	**Plenary session (if necessary)** • Discussion on cross-sectoral issues that have emerged from 1st BOG session.

Wednesday 1 July	09:00 - 12:30	**2nd BOG session** BOG1: Energy BOG2: Industrial Processes and Product Use (IPPU) BOG3: Waste
	13:00 - 14:30	*Lunch break*
	14:30 - 18:00	**Plenary session (Discussion based on reports from BOGs & wrap-up)** • Reports from BOGs • Discussion • Wrap-up discussion to agree on recommendations to Task Force Bureau ➢ What to do: List of issues to be prioritized in the future refinement work ➢ How to do: Supplementary guidance, EFDB, FAQs, etc. • Closing remarks

Annex 2

List of Participants

Algeria
Menouer Boughedaoui
University of Blida 1

Argentina
Laura Elena Dawidowski
National Atomic Energy Commission

Dario Gomez
Comisión Nacional de Energía Atómica
(Atomic Energy Commission of Argentina)

Estela Santalla
UNICEN. Universidad Nacional del Centro de la Provincia de Buenos Aires

Armenia
Martiros Tsarukyan
Consecoard LLC

Australia
Stuart Day
CSIRO

Steven Oliver
Department of the Environment

Austria
Christoph Lampert
Umweltbundesamt

Brazil
Joao Wagner Silva Alves
CETESB - Environment Agency of State of Sao Paulo

Newton Paciornik

Sonia Maria Manso Vieira

Bulgaria
Rayna Angelova
Ministry of Environment and Water

Canada
Chia Ha
Environment Canada

Steve Smyth
Environment Canada

China
Qingxian Gao
Chinese Research Academy of Environmental Sciences (CRAES)

Mingshan Su
National Center for Climate Change Strategy and International Cooperation

Songli Zhu
Energy Research Institute, National Development and Reform Commission, China

Denmark
Ole-Kenneth Nielsen
Aarhus University

Egypt
Samir Tantawi
Egyptian Environmental Affairs Agency

Ethiopia
Henock Hailu Misganaw
National Meteorological Agency of Ethiopia

Finland
Tommi Valtteri Forsberg
Finnish Environment Institute

Riitta Pipatti
Statistics Finland

France
Julien Vincent
CITEPA

Germany
Michael Strogies
Federal Environment Agency

India
Amit Garg
Indian Institute of Management Ahmedabad

Indonesia
Retno Gumilang Dewi
Center for Research on Energy Policy - Institut Teknologi Bandung

Japan
Yoshitaka Ebie
National Institute for Environmental Studies

Elsa Hatanaka
GHG Inventory Office of Japan, National Institute for Environmental Studies

Tomonori Ishigaki
National Institute for Environmental Studies

Takashi Morimoto
Mitsubishi UFJ Research & Consulting Co., Ltd.

Pakistan
Kaleem Anwar Mir
Global Change Impact Studies Centre (GCISC), Ministry of Climate Change

Paraguay
Rodrigo Mussi Buzarquis
National University of Asuncion, Faculty of Chemistry

Romania
Gherghita Nicodim
Ministry of Environment, Waters and Forestry

Russia
Irina Govor
Institute of Global Climate and Ecology under the Federal Service of Russian Federation for Hydrometeorology and Environmental Monitoring and Russian Academy of Sciences

South Africa
Jongikhaya Witi
Deapartment of Environmental Affairs

Spain
Guillermo Martínez López
Spanish Office of Climate Change (Ministry of Agriculture Food and Environment)

Sweden
Tomas Gustafsson
IVL Swedish Environmental Research Institute

Thailand
Bundit Limmeechokchai
Sirindhorn International Insitute of Technology, Thammasat University

UK
Paul Keith Ashford
Anthesis-Caleb
John David Watterson
Ricardo-AEA

USA
Deborah Bartram
Eastern Research Group, Inc.
Fiji George
Southwestern Energy

Leif Hockstad
U.S. Environmental Protection Agency

Deborah Ann Ottinger
U.S. Environmental Protection Agency

Melissa Weitz
U.S. Environmental Protection Agency

Zambia
Francis Davison Yamba
Centre for Energy, Environment and Engineering Zambia (CEEEZ)

European Union (EU)
Spyridoula Ntemiri
European Environment Agency (EEA)

United Nations Framework Convention on Climate Change (UNFCCC)
Lisa Hanle

IPCC Task Force on National Greenhouse Gas Inventories (TFI)
Task Force Bureau (TFB)

Dominique Blain
Environment Canada

Taka Hiraishi (TFI Co-chair)
C/o Institute for Global Environmental Strategies (IGES)

Thelma Krug (TFI Co-chair)
INPE-Instituto Nacional de Pesquisas Espaciais

Emmanuel Jonathan Mpeta
Tanzania Meteorological Agency

Jim Penman
University College London
Office of the UCL Vice-Provost (Research)

Detelina Rumyanova Petrova
Executive Environment Agency

Sirintornthep Towprayoon
Joint Graduate School of Energy and Environment, Center of Excellence on Energy Technology and Environment (JGSEE-CEE)
King Mongkut's University of Technology Thonburi (KMUTT)

Washington Zhakata
Ministry of Environment, Water and Climate

Lingxi Zhou
Chinese Academy of Meteorological Sciences (CAMS),
China Meteorological Administration (CMA)

IPCC TFI Technical Support Unit (TSU)

Kiyoto Tanabe (Head, TSU)

Baasansuren Jamsranjav

Maya Fukuda

Sekai Ngarize

Pavel Shermanau

Eriko Nakamura

Koh Mikuni