



Emerging activities to combat climate change – use of FAO data and IPCC GHG Inventory Guidelines for Agriculture and Land Use

Report of Joint FAO-IPCC-IFAD Expert Meeting

13-14 November 2014, Rome, ITALY

Task Force on National Greenhouse Gas Inventories



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This meeting report was prepared jointly by the organizers from FAO (Dr. Francesco N.Tubiello and Dr. Till Neeff) and the Technical Support Unit for the IPCC Task Force on National Greenhouse Gas Inventories (Mr. Kiyoto Tanabe, Dr. Baasansuren Jamsranjav and Ms. Maya Fukuda), and subjected to review by the meeting participants.

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IPCC Task Force on National Greenhouse Gas Inventories (TFI)
Technical Support Unit
‰ Institute for Global Environmental Strategies
2108-11, Kamiyamaguchi
Hayama, Kanagawa
JAPAN, 240-0115
E-mail: nggip-ts@iges.or.jp
Fax: +81-46-855-3808
<http://www.ipcc-nggip.iges.or.jp>
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Foreword

The Task Force on National Greenhouse Gas Inventories (TFI) of Intergovernmental Panel on Climate Change (IPCC) has, as part of its mandate, the objective of encouraging users to adopt the IPCC methodological guidelines for estimating national inventories of greenhouse gases. This report is one of a series, developed through expert meetings, which aims to assist users of the guidelines by addressing specific problem areas.

The Expert Meeting on Emerging Activities to Combat Climate Change – Use of FAO Data and IPCC GHG Inventory Guidelines for Agriculture and Land Use was held at the Headquarters of Food and Agriculture Organization of the United Nations (FAO) in Rome, Italy, on 13-14 November 2014. It was jointly organized by the IPCC, FAO and the International Fund for Agricultural Development (IFAD).

This meeting aimed to consider how the information on access and use of the FAO datasets in Agriculture, Forestry, and other Land Use (AFOLU) GHG inventories could be continuously updated and made available to inventory compilers in an efficient and user-friendly way. The outcome of this meeting is expected to help inventory compilers collect data for use in their national GHG inventories. In this context, this meeting was considered as 10th Expert Meeting on Data for the IPCC Emission Factor Database (EFDB) under the IPCC TFI.

The meeting also aimed to identify needs for data and guidance in support of monitoring, reporting and verification of emerging activities in the agriculture and land use sectors, aimed at combating climate change in coming decades.

The Co-chairs of the Task Force Bureau would like to thank all those involved in this meeting, in particular FAO, and IFAD for enabling the expert meeting to take place and all the expert participants of the meeting without whom this report would not be possible.



Thelma Krug

Co-Chair Task Force Bureau



Taka Hiraishi

Co-Chair Task Force Bureau

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The Expert Meeting on Emerging Activities to Combat Climate Change – Use of FAO Data and IPCC GHG Inventory Guidelines for Agriculture and Land Use was a joint effort of Task Force on National Greenhouse Gas Inventories (TFI) of Inter-governmental Panel on Climate Change (IPCC), Food and Agriculture Organization of the United Nations (FAO) and International Fund for Agriculture Development (IFAD). The organisers would like to thank all these bodies for their support and co-operation. Thanks are also due to the experts from many countries, FAO and IFAD who took part in the meeting deliberations and helped in the preparation of the meeting report. The organizers acknowledge support by the Governments of Norway and Germany to the workshop through the Monitoring and Assessment of GHG Emissions in Agriculture Project (MAGHG) and its Team: Francesco N. Tubiello, Till Neeff, Sandro Federici, Mirella Salvatore, Rocio Condor-Golec, Esther Mertens, Paolo Prosperi, Alessandro Ferrara, Alessandro Flammini, Paulina Prasula, Heather Jacobs, Riccardo Biancalani, and Paola Cardenas.

Executive summary

Background on expert exchanges about the use of FAO data for national GHG inventories since 2009

In 2009, a joint [IPCC-FAO-IFAD Expert Meeting on Activity Data for LULUCF/AFOLU](#) identified data gaps and possible solutions aimed at improving the use of FAO datasets for AFOLU national greenhouse gas (GHG) inventories. A meeting report was produced that summarises [Datasets for use in the IPCC Guidelines](#) available at FAO.

FAO data has been significantly enhanced since the 2009 Expert Meeting. In response to its recommendations, the Governments of Germany and Norway funded FAO via the [Monitoring and Assessment of GHG Emissions and Mitigation Potential Project \(MAGHG\)](#) that developed the FAOSTAT Emissions Database, launched in 2012. It contains a global set of tier 1 emission estimates for the agriculture and land use domains, with coverage from 1961-2012 (agriculture) and 1990-2012 (land use) and projections to 2030 and 2050.

In 2014 IPCC, FAO and IFAD jointly organized a follow-up event, the [Expert Meeting on Emerging Activities to Combat Climate Change – Use of FAO Data and IPCC GHG Inventory Guidelines for Agriculture and Land Use](#). It served both as a reflection of progress made since 2009 and as an opportunity to build on lessons learned and address emerging needs for improved statistics for national GHG inventories, mitigation, and adaptation and food security. It was attended by 93 participants from 26 countries, including several authors of IPCC GHG Inventory Guidelines, the Co-chairs and the Technical Support Unit of the IPCC Task Force on National Greenhouse Gas Inventories (TFI), experts from FAO, IFAD and UNFCCC, and other AFOLU experts.

The 2014 Expert Meeting had the [objective to discuss the use of FAO data and IPCC GHG Inventory Guidelines for AFOLU with a view on emerging activities to combat climate change](#). Specifically, this involved discussing:

- How FAO datasets can help in inventory compilation using the IPCC GHG Inventory Guidelines by providing activity data, emission factors and other parameters and facilitating quality assurance, quality control and verification;
- How the information on international, predominately FAO, datasets could be continuously updated and made available to relevant user-groups for estimating emissions and removals of GHG from the AFOLU sector;
- How the FAO datasets and IPCC GHG Inventory Guidelines could potentially be used for other purposes such as mitigation analysis for agriculture and land use at national and project scale;
- How to effectively develop required capacities to use FAO datasets and IPCC GHG Inventory Guidelines.

This report summarises the discussions and results of the 2014 Expert Meeting. This includes an update to the 2009 publication about datasets for use in the IPCC Guidelines.

The FAO datasets and tools and how they can be used with IPCC GHG Inventory Guidelines

Data collection, storage and analysis is a key function of FAO. FAOSTAT is FAO's corporate data repository. It contains data reported by annual surveys next to dedicated data collection initiatives on areas of particular interest. With its member countries FAO has a range of such data collection initiatives of relevance for GHG inventory compilers. These include the Global Forest Resource Assessment, the GlobAllmeTree and the World Census of Agriculture 2020. There are also various initiatives ongoing at FAO to provide countries with tools that are useful to GHG inventory compilers. Such tools included the OpenForis, the Global Livestock Environmental Accounting Model and the Land Cover Classification System.

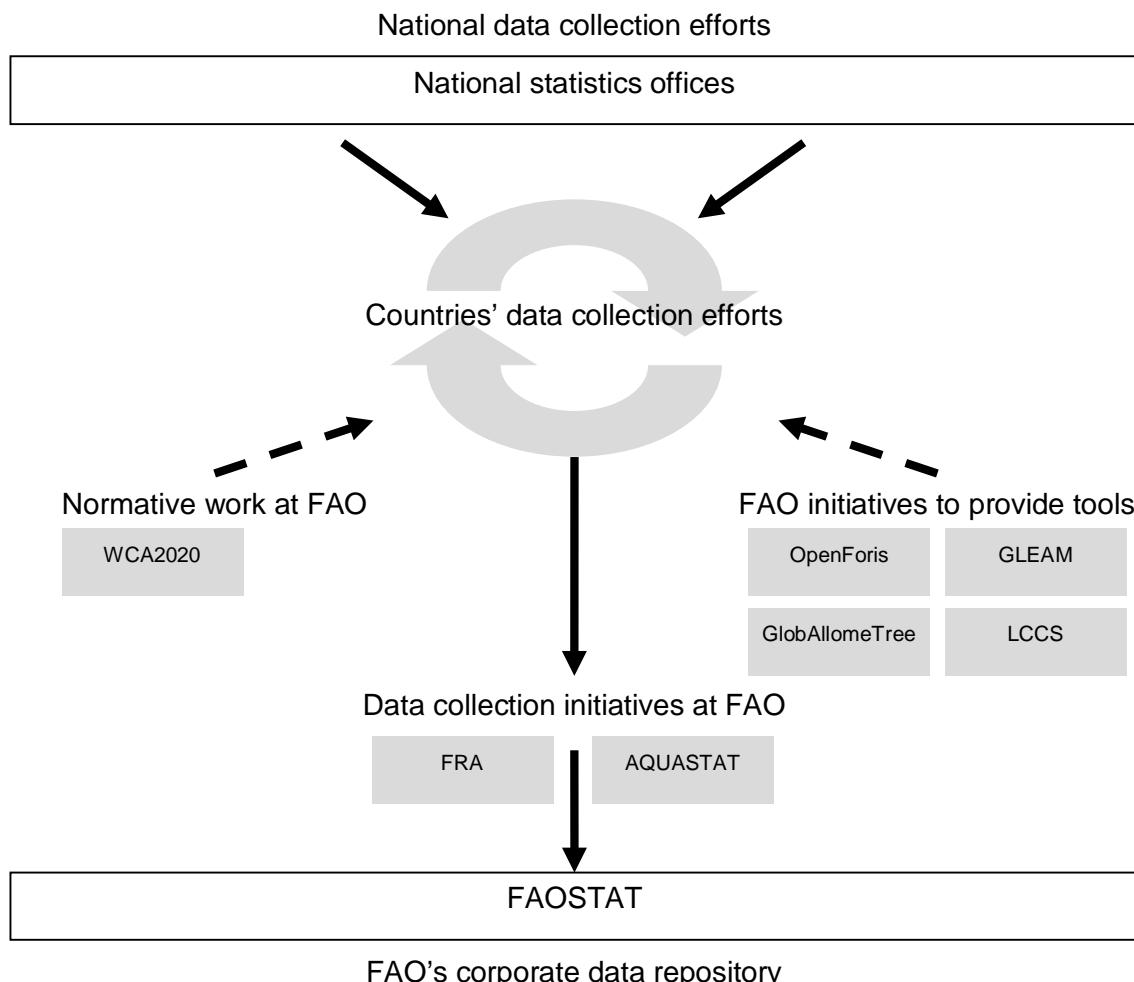


Figure 1: Data collection and tools between FAO and its member countries

An overview of activity data and emission estimates available at FAO are contained in overview tables within this report. Six tables collect information on agriculture: enteric fermentation, manure management, rice, agricultural soils, savannah burning and other data. Another six tables contain information on land use: forest land, grassland, cropland, wetland, other land and settlements. A last table summarises databases with emission and stock factors, where all factors are for estimation of emissions from forest land and grassland.

Conclusions from expert exchange and recommendations for further work at IPCC and FAO

The Expert Meeting collected a set of conclusions and recommendations. Notably, there were discussion sessions

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