# INTERGOVERNMENTAL PANEL ON Climate change

## Task Force on National Greenhouse Gas Inventories (TFI)

## TFI Interim Guidance Notes to Experts and Authors (May 2011)

## Part 1 - General Principles

- 1. The IPCC is currently reviewing its procedures with a view to implementing improvements in line with those suggested by the Inter-Academy Council (IAC) 2010 review of the IPCC, "Climate Change Assessments: Review of the Processes and Procedures of the IPCC"<sup>1</sup>. As work on any additional guidance to the 2006 Guidelines is starting before the IPCC has finalised its responses to IAC recommendations, these Guidance Notes (May 2011) are proposed by the Co-chairs of the Task Force Bureau of the IPCC's Task Force on National Greenhouse Gases on an interim basis. These Guidance Notes reflect the decisions taken at the 33<sup>rd</sup> session of the IPCC, 10-13 May 2011, in Abu Dhabi. Part 1 (General Principles) applies to all participants in TFI work, including all the guidelines authors, while Part 2 (Approach to Wetlands Guidance) is proposed as guidance to the guidelines authors. It is expected that when the IPCC procedures are finalised these instructions will be updated accordingly.
- In this document the term "experts" covers Co-Chairs, members of the TFI Bureau, TSU Staff, Coordinating Lead Authors (CLAs), Lead Authors (LAs), and Review Editors (REs) as well as any resource persons or other experts invited to expert meetings, scoping meetings or workshops.

#### Confidentiality

- 3. Expert meetings and workshops, as well as the authors meetings are closed meetings unless otherwise decided. Any discussions are confidential except for any published report of the meeting. This is to ensure that participants can express themselves and discuss issues freely and openly.
- 4. The Panel has decided that the drafts of IPCC Reports and Technical for formal expert and/or government review, the expert and government- review comments, and the author responses to those comments will be made available on the IPCC website as soon as possible after the acceptance by the Panel and the finalization of the report. IPCC considers its draft reports, prior to acceptance, to be pre-decisional, provided in confidence to reviewers, and not for public distribution, quotation or citation..

#### **Conflict of Interest**

- 5. The Panel at its 33<sup>rd</sup> session decided to adopt the "IPCC Conflict of Interest Policy". The Panel also agreed to extend the mandate of the Task Group on Conflict of Interest Policy in order to develop Annexes to the Policy covering Implementation and the Disclosure of Interest Form with a view to adopting a decision at its 34<sup>th</sup> Session;
- 6. The TFI will implement the IPCC Policy by asking all participants in TFI activities to complete the TFI Interim Disclosure of Interest Form (included in Appendix 1).
- 7. The completed forms will be kept confidential (if the IPCC Panel were to agree a public register then experts would be asked to submit that information separately) and will be reviewed by the TFI Co-Chairs.
- 8. When the IPCC Panel agrees its Disclosure of Interest Form and how to implement its policy, these instructions will be amended accordingly.

#### Responsibilities of experts

- 9. The role of experts is to impartially assess all the available literature and to describe the best methodologies available. Authors are required, to consider the range of scientific, technical, and socio-economic views. Authors should be impartial and should review all literature available up to a cut-off date to be decided by the TFB as part of the agreed work plan.
- 10. After drafting the document, authors will be asked to consider all review comments received on the drafts and to adjust and

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<sup>&</sup>lt;sup>1</sup> InterAcademy Council, 2010: Climate Change Assessments, Review of the Processes and Procedures of the IPCC, InterAcademy Council, Amsterdam, The Netherlands. Available at: http://reviewipcc.interacademycouncil.net/

revise the text accordingly. They should document their responses. If they do not accept a comment this should be explained.

11. Responsibilities and duties of authors and other experts are currently explained in more detail in the IPCC Principles available from <a href="http://www.ipcc.ch/organization/organization">http://www.ipcc.ch/organization/organization</a> procedures.shtml, which are subject to future modifications.

#### Literature

- 12. It is important to ensure that the IPCC process for the use of literature is open and transparent. In the assessment process, emphasis is to be placed on the assurance of the quality of all cited literature. Priority should be given to peer-reviewed scientific, technical and socio-economic literature, if available.
- 13. It is recognized that other sources provide crucial information for IPCC Reports. These sources may include reports from governments, industry, and research institutions, international and other organizations, or conference proceedings. Use of this literature brings with it an extra responsibility for the author teams to ensure the quality and validity of cited sources and information<sup>2</sup>. In general, newspapers and magazines are not valid sources of scientific information. Blogs, social networking sites, and broadcast media are not acceptable sources of information for IPCC Reports. Personal communications of scientific results are also not acceptable sources.
- 14. The following additional procedures are specified:
- 15. Responsibilities of Coordinating, Lead and Contributing Authors
  - a. The Coordinating Lead Authors will ensure that all sources are selected and used in accordance with the procedures in this Annex. The author team is required to critically assess information they would like to include from any source. Each chapter team should review the quality and validity of each source before incorporating information into an IPCC Report. Authors who wish to include information that is not publicly or commercially available are required to send the full reference and a copy, preferably electronically, to the TFI Technical Support Unit. For any source written in a language other than English, an executive summary or abstract in English is required.
  - b. These procedures also apply to papers undergoing the publication process in peer-reviewed journals at the time of the government or expert review.
  - c. All sources will be integrated into the reference section of the IPCC Report.
- 16. Responsibilities of the Review Editors
  - a. Role and Responsibilities of the Review Editors are contained in the General Guidance on the Role of Review Editors, as decided at 32nd session of the IPCC.
  - b. The Review Editors will support and provide guidance to the author team in ensuring the consistent application of the procedures.
- 17. Responsibilities of the Working Group/Task Force Bureau Co-Chairs
  - a. For sources that are not publicly or commercially available, the Working Group/Task Force Bureau Co-Chairs coordinating the Report will make these sources available to reviewers who request them during the review process.

#### Part 2 – Approach to Wetlands Guidance

#### Principles of the Guidelines

- 18. In drafting the 2006 IPCC Guidelines, the existing IPCC inventory reports <sup>3</sup> were integrated to improve user-friendliness. Information on each sector was synthesised into single volumes. There are four sectoral volumes: Energy; Industrial Process and Product Use (IPPU); Agriculture, Forests and Other Land Use (AFOLU) and Waste. There is also a volume on cross-cutting issues. The cross-cutting volume includes general guidance on data collection issues; uncertainty assessment; methodological choice and identification of key categories; time series consistency and recalculation; quality assurance/quality control (QA/QC) and verification; and reporting tables. The volumes for each sector are based on individual emission and removal categories. For each category, the guidance includes tiered methodological approaches; decision trees; new and/or updated methods and emission factors, where appropriate; cross-references to avoid double counting or omissions of emissions and removals; sector-specific guidance on uncertainty assessment and QA/QC; methods for sources; and reporting and documentation guidance.
- 19. Guidelines should be understandable and easy to implement. Authors should balance the need to produce a comprehensive selfcontained report with reasonable limits to the length and detail of the guidance. In particular:
  - a. The guidance should follow a cookbook approach by providing clear step by step instructions. It should not try to be a textbook. Detailed background information on emission processes, scientific studies, etc. is generally referenced rather than included.
  - b. Authors should consider all recent scientific developments and national methods used by countries in their inventories.
  - c. Significant changes from previous IPCC inventory reports will have significant implications for all countries. As Parties to the UNFCCC use the IPCC Guidelines to prepare national inventories and national communications, substantial changes should only be introduced if they can be justified on sound scientific and technical grounds.
  - d. Authors should bear in mind that the target audience is a diverse group of readers who are primarily concerned with the elaboration of national inventories. For this reason, the emphasis should be on ensuring clear communication of practical and understandable guidance.
- 20. This work aims to cover several types of wetlands, in particular rewetting and restoration of peatlands. Flooded lands (reservoirs) are specifically excluded as the TFI does not consider the underlying science to be sufficiently developed.
- 21. These guidelines will cover the same greenhouse gases and precursors included in the current guidelines and good practice guidance reports.
- 22. The general structure, approach and definitions used in the 2006 GLs, such as tiered approach and decision trees will be used. Annexes may be used where necessary to contain additional data to support the methodologies, although large numbers of annexes will probably not be necessary. Appendices ("Basis for future methodological development") are not ruled out where scientific knowledge is insufficient for authors to agree, or where advice from UNFCCC is not clear cut, but please avoid as far as possible.
- 23. The general structure of the category-specific methodological guidance will be:
  - a. Methodological Issues
    - i. Choice of Method, including decision trees and definition of tiers.
    - ii. Choice of Emission Factor
    - iii. Choice of Activity Data
    - iv. Completeness
    - v. Developing a Consistent Time Series
  - b. Uncertainty Assessment
    - i. Émission Factor Uncertainties
    - ii. Activity Data Uncertainties
  - c. Quality Assurance/Quality Control, Completeness, Reporting and Documentation

#### **Reporting Tables and worksheets**

24. Worksheets and reporting tables are included in each sectoral volume. Worksheets will reflect the application of tier 1 methods

<sup>&</sup>lt;sup>3</sup> The Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, the IPCC Report on Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (2000), and the Good Practice Guidance on Land Use, Land-Use Change and Forestry

only, due to the varied implementation of higher tier methods by countries. Authors should stress the importance of documentation and archiving particular types of information of relevance to each category, although advice may be given of what needs to be reported for transparency at higher Tiers.

#### Emission factors and methods

- 25. Authors should provide default emission factors. In doing this work, they should draw on the widest possible range of available literature, including the IPCC Emission Factor Database (EFDB), scientific articles and country reports.
- 26. All new default data should be evaluated for scientific and technical appropriateness, and should be clearly referenced. The attached form (Appendix 2) is should be used as the means for documenting data which will also facilitate future integration of the EFDB. Authors should be familiar with the draft cross-cutting guidance on data collection in Volume 1 and the guidance on cross-cutting issues in this note on terms, data types, data demands of methods and stratification requirements. Default data should also meet the EFDB evaluation criteria robustness, documentation, and applicability.
- 27. Single IPCC default factors might not be ideal for any one country, but they can be recommended provided that regional factors are unavailable, and the defaults are representative of typical conditions as far as can be determined. It may be necessary or appropriate to provide a range of default factors along with clear guidance about how countries should select from within the range. Lead authors may also provide multiple default emission factors, disaggregated by region, technology, or another classification scheme (e.g., livestock type),
- 28. It is important to provide more default emission factors that reflect the unique conditions of developing countries.
- 29. Users of the guidelines should be encouraged to develop and use country specific data. Emission factors for higher tiers need not be specified. Default information is included primarily to provide users with a starting point from which they can develop their own national assumptions and data. Indeed, national assumptions and data are always preferred because the default assumptions and data may not always be appropriate for specific national contexts.
- 30. The basic principle concerning national methods will continue to apply countries are encouraged to use national data or methods so long as they are consistent with the IPCC guidelines as developed and indeed it is a function of the 2006 Guidelines to promote consistency via the sectoral and cross-cutting guidance provided

#### Decision trees

- 31. Consistent with the format and structure the 2006 IPCC Guidelines, these additional guidelines will contain a decision trees for each sub-category to assist countries in selecting from the IPCC methods. These decision trees link the choice of IPCC methods to national circumstances via specific questions about data availability and status as a key source category<sup>4</sup>.
- 32. To ensure consistency in decision tree logic and format across categories, lead authors should adhere to the following requirements:
  - a. The decision trees should be based on a series of questions with clear yes/no answers, and two subsequent branches along yes/no paths.
  - b. The decision trees should start with assessing data availability for the highest tier method, and then direct countries step-wise towards lower tier methods if activity data, emission factors or other parameters are not available.
  - c. The decision tree should indicate the lowest tier method that is judged to be appropriate for estimating emissions/removals from a key category.
  - d. If data are not available for the method, the 'No' response should direct the reader to the question "Is this a key category?" If the answer to this is 'Yes', the decision tree should recommend that the country collect the necessary data to implement a higher tier method. If the answer is 'No', then the decision tree can recommend a lower tier method. There is no need to deal with the case for a key source where a country does not have the resources to gather additional data needed to implement higher Tier methods. This is dealt with in the cross cutting volume of the 2006 Guidleines.
  - e. The branches of the decision trees should end in 'out-boxes' that correspond to specific tiers identified in the guidance for that category and are labelled by Tier. Lead authors may also recommend out-boxes for hybrids tiers.
  - f. Authors may develop separate decision trees for different sub-categories. Alternatively, they may include decision tree options for selecting different tiers for different sub-categories. This second option is appropriate if it is advantageous to recommend a higher tier method only for significant sub-categories rather than for the entire category. Decision trees that use the 'significance' criterion should include the "25-30% rule" (i.e., a significant sub-category is one that makes

<sup>&</sup>lt;sup>4</sup> The most appropriate choice of estimation method (or tier) may also depend on national circumstances, including the availability of resources and advice on this will be given in the cross-cutting volume.

up more than 25-30% of emissions/removals from a category).

- 33. Additional Formatting Guidelines (see example):
  - a. Decision trees should be drafted in separate Microsoft Word files. The TSU will integrate these files into the main text at a later date.
  - b. Decision trees should NOT ask the question: "Does this source occur in the country?" This is because decision trees will only be used for sources which occur.
  - c. There should be a "START" box.
  - d. "Diamonds" should be used for questions/decisions.
  - e. "Squares" should be used for all other information.
  - f. The out-boxes should be individually numbered.
  - g. The text font should be Times New Roman 10pt.
  - h. Text should be centred within the boxes.

Decision tree to estimate  $CO_2$ -C and  $N_2O$  emissions from Peatlands Remaining Peatlands



1: See Volume 1 Chapter 4, "Methodological Choice and Identification of Key Categories" (noting Section 4.1.2 on limited resources), for discussion of key categories and use of decision trees.

#### IPCC Emission Factor Database (EFDB)

- 34. The EFDB is an important resource for this work, both as a source of emission factors for consideration by the authors and as a repository of emission factors once agreed for use in the guidelines.
- 35. The Guidelines will be self-contained with regard to Tier 1 methods and the corresponding default emission factors (once the guidelines are approved by the IPCC, the default emission factors cannot change). These defaults need to be recorded in to the

EFDB, either because they are already there, or they will have to be entered as a result of the process of developing the guidelines. Preferably the EFDB should be populated with new emission factors as the guidelines are drafted, but if this proves impossible the guideline emission factors should be entered into the EFDB with the underlying documentation information in the property fields as soon as possible, after guidelines completion.

- 36. The evolving information on peer reviewed emission factors in the EFDB will also be a useful source of information for countries to refer to in applying Tier 2 and 3 methods. In applying these methods (Tier 2 and/or 3) it will remain the country's responsibility to ensure that the choice of emission factors properly reflects national circumstances and is consistent with the requirements of the Guidelines, and to document that this is the case. This is because the guidelines go through IPCC reviews. The relationship will be made clear in the cross-cutting volume.
- 37. It should be noted that guidelines go through IPCC reviews, but the EFDB does not. The EFDB is a long(er)-term exercise. The TSU will provide technical advice/information to authors for their consideration.

#### Definitions

- 38. The following terms will be used throughout the guidelines, and it is essential that all authors have a common understanding of their meaning and relevance:
- 39. <u>Tier</u> A Tier refers to a description of the overall complexity of a methodology and its data requirements. Higher tier methods are generally more complex and data-intensive than lower tier methods. The guidance for each category should contain at least a Tier 1 method, and in many cases there will be a Tier 2 and Tier 3. The general expectation is that Tier 2 and Tier 3 methods will both be consistent with good practice guidance for key sources, although in some cases Tier 3 will be preferred, for example with methane from coal mines where Tier 1 is a global default value, Tier 2 basin specific and Tier 3 mine specific.
- 40. <u>Tier 1</u> approaches are simple methods that can be applied by all countries in all circumstances. Default values for the emission factors and any other parameters needed must be supplied (see below for documentation needed). They should be similar to the methodological approach in the IPCC 2006 Guidelines and the Tier 1 methods in GPG 2000 and 2003.
- 41. <u>Tier 2</u> methods should follow the same methodological approach as Tier 1, but allow for higher resolution country specific emissions factors and activity data. These methods should better replicate the parameters affecting the emissions. Country specific emission factors are needed and possibly more parameters will also be needed.
- 42. <u>Tier 3</u> methods give flexibility either for country specific methods including modelling or direct measurement approaches, or for a higher level of disaggregation, or both. This is a more complex method, often involving a model. This will replicate many features of nation emissions and require specific parameters for each country.
- 43. <u>Default information</u> is data that is appropriate for use where there is no better detailed, country specific information. If appropriate, authors may specify regional default data. Users of the guidelines should be encouraged to try to find better country specific data. Default data are appropriate for Tier 1 methods and the guidelines should contain all the default values needed. Emission factors for higher tiers need not be specified because it is a function of higher tier methods to find data reflecting national circumstances. The cross cutting volume will suggest that the EFDB may help identify data reflecting national circumstances, but reference to the EFDB should in not case be used as a device for evading the necessity of finding data for default methods. Default information is included primarily to provide users with a starting point from which they can develop their own national assumptions and data. Indeed, national assumptions and data are always preferred because the default assumptions and data should be used only when national assumptions and data are not available.
- 44. Decision Trees. A decision tree is a graphical tool to assist countries in selecting from the IPCC methods.
- 45. <u>Sector</u> refers to the four sectors of the guidelines (Energy; Industrial Process and Product Use (IPPU); Agriculture, Forests and Other Land Use (AFOLU) and Waste) These are divided into source/sink categories and sub categories.
  - a. Sector 1
  - b. Category 1.A
  - c. Sub-category 1st order 1.A.1
  - d. Sub-category 2nd order 1.A.1.a
  - e. Sub-category 3rd order, 1.A.1.a.i,
- 46. <u>Worksheets</u>. These will be printed versions of spreadsheet tables, that, when filled in, enable to user to perform the emission estimation. They should contain all the calculations and written text with any formulae. Additional worksheets may be required to compile the results of the worksheets into the reporting tables.
- 47. <u>Reporting Tables</u> are tables that present the calculated emission inventory and sufficient detail of other data used to prepare the inventories for others to understand the emission estimates.
- 48. Usage:

- a. <u>Good Practice</u>, is defined as a set of procedures intended to ensure that greenhouse gas inventories are accurate in the sense that they are systematically neither over nor underestimates so far as can be judged, and that uncertainties are reduced so far as possible. Inventories consistent with good practice as those which contain neither over- nor under-estimates so far as can be judged, and in which uncertainties are reduced as far as is practicable. To say that "It is Good Practice to do x" implies x is part of the good practice procedures.
- b. "<u>Shall</u>" should not be used. Either say "Good Practice is..." or say what needs to be done or what should be done. These all indicate what needs to be done to comply with Good Practice.
- c. "Be encouraged to" indicates a step or activity that will lead to higher quality inventory, but are not required for ensuring consistency with the IPCC Guidelines.
- d. "<u>Recommend</u>" should not be used. In the GPG2000, the word "recommend" was avoided and "suggested" was used instead.
- e. "<u>Inventory agency</u>" is the body responsible for actually compiling the inventory, perhaps from contributions from a number of other bodies while "<u>inventory compiler</u>" is the person actually compiling the inventory,

#### Units

- 49. SI units shall be used throughout: in text, equations, worksheets and tables. Emissions have to be expressed in mass units and units have to be used consistently within the each sector. When similar activity data is used for different sectors same units need to be used (CLAs have to take care about such harmonisation). Conversion factors have to be provided (for example to estimate N<sub>2</sub>O from N). Where input data available may not be in SI units conversions should be provided.
- 50. Standard abbreviations for units and chemical compounds are given in Appendix 3. (See also a complete discussion available at <a href="http://www.bipm.org/utils/common/pdf/si\_brochure\_8\_en.pdf">http://www.bipm.org/utils/common/pdf/si\_brochure\_8\_en.pdf</a>)
- 51. For the purpose of reporting, the sign convention is positive (+) for emissions, and negative (-) for removals (uptake). Where needed, for estimation of removals and carbon stock increases are counted positive, and the sign reversed for reporting purposes. This is consistent with the 1996 Guidelines, the Good Practice Guidance reports and the 2006 Guidelines.

# Appendix 1 IPCC Conflict of Interest Policy

Purpose of the Policy

- The role of the IPCC as stated in paragraph 2 of the Principles Governing IPCC Work is to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation. IPCC reports should be neutral with respect to policy, although they may need to deal objectively with scientific, technical and socio-economic factors relevant to the application of particular policies.
- 2. The role of the IPCC demands that it pay special attention to issues of independence and bias in order to maintain the integrity of, and public confidence in, its products and processes. It is essential that the work of IPCC is not compromised by any conflict of interest for those who execute it.
- 3. The overall purpose of this policy is to protect the legitimacy, integrity, trust, and credibility of the IPCC and of those directly involved in the preparation of reports, and its activities. This policy is principles-based and does not provide an exhaustive list of criteria for the identification of such conflicts. The Panel recognizes the commitment and dedication of those who participate in IPCC activities. The policy should maintain the balance between the need to minimise the reporting burden, and to ensure the integrity of the IPCC process. In this way, it seeks to encourage participation and to ensure that the representativeness and geographic balance of the Panel is not impaired whilst continuing to build and maintain public trust.
- 4. The IPCC's conflict of interest policy is designed to ensure that conflicts of interest are identified, communicated to the relevant parties, and managed to avoid any adverse impact on IPCC's balance, products and processes, thereby protecting the individual, the IPCC, and the public interest. The individual and the IPCC should not be placed in a situation that could lead a reasonable person to question, and perhaps discount or dismiss, the work of the IPCC simply because of the existence of a conflict of interest.
- 5. Identifying a potential conflict of interest does not automatically mean that a conflict of interest exists the purpose of the policy is to enable individuals to provide the relevant information necessary for each particular situation to be evaluated.

## Scope of the Policy

- 6. This policy applies to senior IPCC leadership (the IPCC Chair, Vice Chairs, Working Group and Task Force Cochairs), other members of the IPCC Bureau and members of the Task Force Bureau, authors with responsibilities for report content (Coordinating Lead Authors, Lead Authors), Review Editors and the staff of the Technical Support Units (TSUs).
- 7. The policy applies to the development of all IPCC products including but not limited to: assessment reports; special reports; methodology reports and technical papers:
- 8. The professional staff members of the IPCC Secretariat are employees of WMO and/or UNEP and are subject to their disclosure and ethics policies, which include conflict of interest.
- 9. The policy will be executed to reflect the various roles, responsibilities and levels of authority, of participants in the IPCC process. In particular, consideration should be given to whether responsibility is held at an individual level or shared within a team; to the level of influence held over the content of IPCC products.
- 10. The application of the conflict of interest policy to those elected to positions within the IPCC should reflect their specific responsibilities.

## Conflict of Interest

11. A "conflict of interest" refers to any current professional, financial or other interest which could: i) significantly impair the individual's objectivity in carrying out his or her duties and responsibilities for the IPCC, or ii) create an unfair advantage for any person or organization. For the purposes of this policy, circumstances that could lead a reasonable person to question an individual's objectivity, or whether an unfair advantage has been created, constitute a potential conflict of interest. These potential conflicts are subject to disclosure.

- 12. Conflict of interest policies in scientific assessment bodies typically make a distinction between "conflict of interest" and "bias" which refers to a point of view or perspective that is strongly held regarding a particular issue or set of issues. In the case of author and review teams, bias can and should be managed through the selection of a balance of perspectives. For example, it is expected that IPCC author teams will include individuals with different perspectives and affiliations. Those involved in selecting authors will need to strive for an author team composition that reflects a balance of expertise and perspectives, such that IPCC products are comprehensive, objective, and neutral with respect to policy. In selecting these individuals, care must be taken to ensure that biases can be balanced where they exist. In contrast, conflict of interest exists where an individual could secure a direct and material gain through outcomes in an IPCC product. Holding a view that one believes to be correct but that one does not stand to gain from personally is not a conflict of interest.
- 13. The conflict of interest requirements in this policy are not designed to include an assessment of one's behaviour or character or one's ability to act objectively despite the conflict of interest.
- 14. This policy applies only to current conflicts of interest. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behaviour. Nor does it apply to possible interests that may arise in the future but that do not currently exist, as such interests are inherently speculative and uncertain. For example, a pending application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is not a current interest.
- 15. Only significant and relevant professional and other non-financial interests need to be disclosed. If in doubt about whether an interest should be disclosed, individuals are encouraged to seek advice from the Secretariat or relevant Working Group/TFI TSU. Significant and relevant interests may include, but are not limited to, senior editorial roles, advisory committees associated with private sector organizations, and memberships on boards of non-profit or advocacy groups. However, not all such associations necessarily constitute a conflict of interest.
- 16. Only significant and relevant financial interests need to be disclosed. If in doubt about whether an interest should be disclosed, individuals are encouraged to seek advice from the Secretariat or relevant Working Group/TFI TSU. These may include, but are not limited to, the following kinds of financial interests: employment relationships; consulting relationships; financial investments; intellectual property interests; and commercial interests and sources of private-sector research support. Individuals should also disclose significant and relevant financial interests of any person with whom the individual has a substantial business or shared financial relationship.
- 17. To prevent situations in which a conflict of interest may arise, individuals directly involved in or leading the preparation of IPCC reports should avoid being in a position to approve, adopt, or accept on behalf of his/her government text in which he/she was directly involved.

## Appendix 1. IPCC TFI Interim Disclosure of Relevant Interests Form

**NOTE:** The IPCC is not asking for comprehensive lists of activities under each heading below, only those that are significant and relevant to the expert's role within the IPCC. Please read the "Conflict of Interest – IPCC Policy" before completing this form. The disclosure of an interest on this form does not automatically mean that a conflict is present or that an individual will be unable to properly perform their designated role with the IPCC. If in doubt about whether an interest should be disclosed, individuals are encouraged to seek advice from TFI TSU.

Name		
Role in IPCC		
		Does this
		constitute
		a conflict
		of
		interest?
RELEVANT ORGANIZATIONAL		Yes ( )/
AFFILIATIONS (please list		No ( )
remunerated and voluntary current and		
recent affiliations, which may include,		
eg. employment, relationships with for-		
profit organizations, re	lationships with	
not-for-profit organizati	ions)	
SIGNIFICANT AND R		Yes ()/
PROFESSIONAL AND	J UTHER NUN-	NO()
FINANCIAL INTERES	15 hitorial roloc	
advisory committoes a	speciated with	
nrivato soctor organiza	socialed with	
membershins on hoard	ts of non-profit or	
advocacy groups. How	vever, not all such	
associations necessari	ly constitute a	
conflict of interest		
SIGNIFICANT AND R	ELEVANT	Yes ()/
FINANCIAL INTERES	TS	No()
For example: employm	nent relationships;	
consulting relationship	s; financial	
investments; intellectua	al property	
interests; and commer	cial interests and	
sources of private-sect	tor research	
support. Individuals sh	ould also	
disclose significant and	d relevant	
financial interests of ar	ny person with	
whom the individual has a substantial		
pusiness of shared financial		
		Voc ( )/
other current relevant interest not		No()
disclosed elsewhere)		

I will send updates to this list to the TFI Co-Chairs as my interests change. I understand that information about my interests as outlined above will be held and used by the TFI Co-Chairs to prevent conflicts of interest.

I understand that these forms will be kept confidential and will be reviewed by the TFI Co-Chairs.

Signature:

Date:

# Appendix 2. 2006 Data Documentation

This form should be used to document all data used in the 2006 Guidelines. This gives the minimum information that should be considered by the authors.

Author <sup>1</sup>					
IPCC Source/Sink Category					
Fuel <sup>2</sup> (applicable only in the Energy Sector):					
Gas <sup>3</sup> :	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O		
Value:					
Unit:					
Uncertainty (as +/% or 2.5 and 97.5 percentiles) <sup>4</sup>					
<b>Applicability</b> <sup>5</sup> – fill in as necessary if data not generally applicable. Describe appropriate					
Technologies, Practices, Abatement Technologies, Region, and/or Regional Conditions					
	Measurement - Scientific Literature				
	Other Measurement				
Source of data (chose one)	National Inventory Report				
	Calculated				
	Based on fuel quality				
	Expert Judgement				
Reference <sup>6</sup>					

Note:

The author is the LA/CA/CLA who writes the relevant section and proposes the data.

Fuels as defined in the Energy volume

Add additional gases as required

As defined by cross-cutting volume

Only to be completed where it is necessary to specify the applicability of the data

As reference to document, report, calculation or if expert judgement to those involved (Names or group e.g. "Waste BOG on Solid Waste Disposal Sites")

# **Appendix 3 Units and Abbreviations**

$CH_4$	Methane
N <sub>2</sub> O	Nitrous oxide <sup>5</sup>
CO <sub>2</sub>	Carbon dioxide
СО	Carbon monoxide
NO <sub>X</sub>	Nitrogen oxides
NMVOCs	Non-methane volatile organic compounds
NH <sub>3</sub>	Ammonia
CFCs	Chlorofluorocarbons
HFCs	Hydrofluorocarbons
PFCs	Perfluorocarbons
SF <sub>6</sub>	Sulphur hexafluoride
CCl <sub>4</sub>	Carbon tetrachloride
C <sub>2</sub> F <sub>6</sub>	Hexafluoroethane
CF <sub>4</sub>	Tetrafluoromethane
S	Sulphur

Abbreviations of, and how to Spell, Chemical Compounds

## Units and abbreviations

cubic metre	m <sup>3</sup>
hectare	На
gram	G
gigagram	Gg
tonne	Т
gigatonne	Gt
joule	J
degree Celsius	°C
calorie	Cal
year	Yr
capita	Cap
gallon	Gal
dry matter	Dm

 $<sup>^{5}</sup>$  In the IUPCA N<sub>2</sub>O is officially named "Dinitrogen Oxide". However, "nitrous oxide" is widely used and understood in the emission inventory community and by the UNFCCC and so, to avoid confusion, will be used.

		D (*	a
Multiplication Factor	Abbreviation	Prefix	Symbol
1 000 000 000 000 000	10 <sup>15</sup>	peta	Р
1 000 000 000 000	10 <sup>12</sup>	tera	Т
1 000 000 000	10 <sup>9</sup>	giga	G
1 000 000	10 <sup>6</sup>	mega	М
1 000	$10^{3}$	kilo	k
100	10 <sup>2</sup>	hector	h
10	$10^{1}$	deca	da
0.1	10-1	deci	d
0.01	10-2	centi	c
0.001	10-3	milli	m
0.000 001	10-6	micro	μ

# Prefixes and multiplication factors

# Standard equivalents

1 tonne of oil equivalent (toe)	1 x 10 <sup>10</sup> calories
$10^3$ toe	41.868 TJ
1 short ton	0.9072 tonne
1 tonne	1.1023 short tons
1 tonne	1 megagram
1 kilotonne	1 gigagram
1 megatonne	1 teragram
1 gigatonne	1 petagram
1 kilogram	2.2046 lbs
1 hectare	$10^4 \text{ m}^2$
1 calorie <sub>IT</sub>	4.1868 joule
1 atmosphere	101.325 kPa