
INTRODUCTION TO THE REPORTING INSTRUCTIONS

1 Using the Reporting Instructions

If you are engaged in preparing a national inventory you should read the *Reporting Instructions*. Even if you have already made an inventory, or have started to do so, and are simply reporting existing data to IPCC, you should still read them. These instructions provide the primary means of ensuring that all reports are consistent, transparent and comparable. The remaining chapters in this book are as follows:

Chapter 1: *Understanding the Common Reporting Framework* contains a listing of the categories you should use when reporting emissions and removals. Each of the categories is further broken down into sub-categories and given a definition if necessary. It also contains a listing of the basic fuel categories, some standard equivalents and unit definitions, and descriptions of the Sectoral Report Tables and Summary Report Tables used for reporting an inventory in IPCC format.

Chapter 2: *Reporting the National Inventory* contains step-by-step instructions for completing the Sectoral Report Tables and Summary Report Tables that are used to bring together and make a record of the estimates which have been made in your own inventory.

Tables: You will use these tables to assemble data from your national greenhouse gas inventory and present them in the IPCC reporting format. Finally, having completed the Sectoral Report Tables and the Summary Report Tables, you can assess the quality and completeness of the inventory by completing the Overview Table which provides a synoptic view of the results of the IPCC Greenhouse Gas Inventory.

Annex 1: *Managing Uncertainties* provides guidance on the theoretical considerations involved in taking account of uncertainties in creating an inventory.

Annex 2: *IPCC and CORINAIR Source Categories* looks at the ways in which data assembled for the CORINAIR inventory conducted by the European Union (EU) member countries as well as by the United Nations Economic Commission for Europe (UNECE) and IPCC data relate to each other.

Glossary: A glossary containing definitions of terms used in the *Guidelines* can be found at the end of this book.

2 Underlying Principles

The *Revised 1996 IPCC Guidelines* allow for the use of a range of methods at different levels of detail, including methods which are appropriate to national conditions. Default methods and assumptions are provided for calculating the major emissions and removals of greenhouse gases at the minimum acceptable level of detail. The IPCC default methods have been developed with efficiency in mind. They build on data that are readily available and should be easily applicable to all countries of the world. More detailed methods are also discussed in the *Guidelines* and national experts are encouraged to use them wherever this is possible and likely to produce more accurate national estimates. In some cases, national experts may choose to use an entirely different methodology if they believe this better reflects their national situation. Common reporting instructions are therefore needed to accommodate inventories developed at different levels of detail and (potentially) with different methods. The objective of the instructions is to establish minimum requirements for reporting data which allow for comparison and identification of differences in inventory construction (transparency). For this reason the IPCC recommends that all users of the *Guidelines* follow the *Reporting Instructions* explicitly when they communicate their national inventories to the IPCC or other international bodies.

Several main principles underlie the *Revised 1996 IPCC Reporting Instructions*:

- Common Reporting Framework

The core of the reporting system is the establishment and use of a standard table format using common source/sink categories and common fuel categories. Common definitions of pollutants, units, and time intervals are necessary. Ultimately, all countries should be working toward complete greenhouse gas inventories within each, and across all, greenhouse gases.

Emission inventory results should be transmitted using the Sectoral and Summary Report Tables. Use of these reporting conventions will not only enhance the comparability of data, it will facilitate the speed with which inventories can be processed, made available in summary form, aggregated and reviewed internationally.

- Documentation Standards

Documentation standards are necessary to ensure transparency of national inventories and hence to allow the inventory to be reviewed. By providing the necessary documentation, the comparability of national inventories can also be evaluated. Therefore, along with Sectoral and Summary Report Tables, countries should provide the worksheets used to develop the national inventory, containing at least

all major assumptions activity data and emission factors. The IPCC also recommends that, countries submit a description of the method used, any definitions, as well as other relevant assumptions that cannot be summarised in table form. Enough data should be provided to allow a third party to reconstruct the inventory from national activity data and assumptions (the working definition of *transparency*).

To limit the volume of data to be provided, written documentation should focus on describing fully any differences in method and assumptions from the IPCC default methods.

- Verification and Uncertainty Assessment

To improve the quality of inventory data and to help assess the uncertainty surrounding estimates, the *Revised 1996 IPCC Reporting Instructions* recommend that inventories be verified through the use of a set of simple checks for completeness and accuracy of submissions. These checks can be performed centrally, although it is preferable for the countries to do as much as possible themselves. Finally, an uncertainty assessment should also be conducted as far as possible and summarised for each major part of the inventory. Conceptual guidance for the assessment of the uncertainty of emission estimates are provided in Annex 1 *Managing Uncertainties*. Other approaches to describing uncertainty associated with point estimates of emissions and removals are also possible. Whether you use one of the approaches provided by the IPCC or another approach, you should include an uncertainty discussion in your inventory submission.

Each of these three principles is addressed in more detail in the following chapters.

3 Basic Information to Help Work with the IPCC Guidelines

Prefixes and multiplication factors

The following multiplication factors are used throughout the *Guidelines*:

Multiplication Factor	Abbreviation	Prefix	Symbol
1 000 000 000 000 000	10 ¹⁵	peta	P
1 000 000 000 000	10 ¹²	tera	T
1 000 000 000	10 ⁹	giga	G
1 000 000	10 ⁶	mega	M
1 000	10 ³	kilo	k
100	10 ²	hecto	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

Abbreviations for chemical compounds

The following abbreviations are used in the *Guidelines*:

CH ₄	Methane
N ₂ O	Nitrous Oxide
CO ₂	Carbon Dioxide
CO	Carbon Monoxide
NO _x	Nitrogen Oxides
NMVOC	Non-Methane Volatile Organic Compound
NH ₃	Ammonia
CFCs	Chlorofluorocarbons
HFCs	Hydrofluorocarbons
PFCs	Perfluorocarbons
SO ₂	Sulphur Dioxide
SF ₆	Sulphur hexafluoride
CCl ₄	Carbon tetrachloride
C ₂ F ₆	Hexafluoroethane

Standard equivalents

1 tonne of oil equivalent (toe)	1 x 10 ¹⁰ 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 kilogram	2.2046 lbs
1 hectare	10 ⁴ m ²
1 calorie _{IT}	4.1868 Joules
1 atmosphere	101.325 kPa

Units¹ and abbreviations

The following abbreviations are used in the *Guidelines*:

cubic metre	m ³
hectare	ha
gram	g
tonne	t
joule	J
degree Celsius	°C
calorie	cal
year	yr
capita	cap
gallon	gal
dry matter	dm

¹ For decimal prefixes see previous page.