



联合国



气候变化框架公约

Distr.
GENERAL

FCCC/SBSTA/1999/6/Add.1
1 September 1999
CHINESE
Original: ENGLISH

附属科学和技术咨询机构

附属科学和技术咨询机构第十届会议报告
1999年5月31日至6月11日，波恩

附 件

关于公约附件一所列缔约方国家信息通报
编制指南：联合国气候变化框架公约
年度清单报告指南的决定草案

目 录

	<u>段 次</u>	<u>页 次</u>
导 言.....	1 - 4	2
关于《公约》附件一所列缔约方的国家信息通报编制指南， 第一部分：年度清单报告指南的决定草案.....		3
决定草案附件一*：《公约》附件一所列缔约方的国家 信息通报编制指南，第一部分：《公约》年度清单 报告指南.....		5
决定草案附件二：通用报告格式(《公约》年度清单报告 指南的附件).....		17

* 附件只有英文本。

导 言

1. 附属科学和技术咨询机构第十届会议决定向附属履行机构提交“关于公约附件一所列缔约方国家信息通报编制指南：联合国气候变化框架公约年度清单报告指南”的决定草案，以供建议缔约方大会第五届会议通过。附属履行机构第十届会议注意到该结论草案，并同意与附属科学和技术咨询机构一起将该草案推荐给缔约方大会第五届会议供其通过。该决定草案载于本文件中。决定草案的附件一载有联合国气候变化框架公约年度清单报告指南。决定草案的附件二载有这些指南的通用报告格式。

2. 附属科学和技术咨询机构建议附属履行机构从2000年初开始启动一个为期二年的试验期，以评估联合国气候变化框架公约年度清单的报告指南，特别是通用报告格式，以便在第七届缔约方大会上根据缔约方、秘书处和政府间气候变化问题小组的投入，对之进行修订。附属履行机构依照附属科学和技术咨询机构的建议，同意确定该为期二年的试验期。

3. 附属科学和技术咨询机构请各缔约方在1999年7月15日前以电子方式向秘书处提出对通用报告格式的任何进一步的技术性修订，以便指南的文本能在缔约方大会第五届会议前及时完成。

4. 芬兰代表欧共体及其成员国，以及日本、苏丹、瑞士和美利坚合众国按照上文第3段提到的职权，对通用报告格式提出了技术性修正。这些修正并没有改变通用报告格式中各项表格的实质和内容，而是改进了它们的格局、连贯性和清晰性。

决定草案附件一

《公约》附件一所列缔约方的信息通报： 指南和时间安排

缔约方会议，

忆及《联合国气候变化框架公约》的有关规定，尤其是第 4 条、第 10 条第 2 款和第 12 条，

忆及关于《公约》附件一所列缔约方编制和提交国家信息通报的第 3/CP.1 号决定、关于方法问题的第 4/CP.1 号决定、关于《公约》附件一所列缔约方的信息通报：指南、时间安排和审议进程的第 9/CP.2 号决定、关于《公约》附件一所列缔约方国家信息通报的第 11/CP.4 号决定，

确认《蒙特利尔议定书》未予管制的温室气体源的人为排放量和汇的清除量应以透明、一致、可比、完整和准确的方式报告，

注意到第 9/CP.2 号决定所附《公约》附件一所列缔约方国家信息通报编制订正指南需要增补，以提高所报告的国家温室气体清单和其他信息的透明度、一致性、可比性、完整性和精确性，

注意到目前改进对缔约方报告温室气体清单的指导的工作，尤其是气专委关于不确定性和规范的工作，

1. 决定通过本决定所附《公约》附件一所列缔约方国家信息通报编制指南，第一部分：《气候变化框架公约》年度清单报告指南；
2. 决定《公约》附件一所列缔约方应自 2000 年开始使用《气候变化框架公约》年度清单指南，报告须于每年 4 月 15 日之前提交的清单；
3. 请缔约各方于 2001 年 7 月 1 日之前另行向秘书处提交关于在 2000-2001 年使用指南，尤其是通用报告格式的经验资料；

4. 请秘书处参照缔约各方使用指南取得的经验和秘书处处理通用报告格式取得的经验以及气专委提供的投入等等，编写一份关于指南使用情况的报告，供科技咨询机构第十五届会议考虑对指南的可能修订时审议；

5. 决定对指南特别是通用报告格式的修订应由科技咨询机构第十五届会议审议，以期提交一项决定供缔约方会议第七届会议通过。

决定草案的附件一

《公约》附件一所列缔约方国家信息通报编制指南

第一部分：

《气候变化框架公约》年度清单报告指南

A. 目 标

1. 《气候变化框架公约》年度清单报告指南的目标是：
 - (a) 协助附件一缔约方履行在《公约》第 4 和 12 条下承担的义务，并准备履行《京都议定书》第 3、5、7 条之下可能的未来义务；
 - (b) 便利审议年度国家清单和国家信息通报所列国家清单的进程，包括编拟技术分析报告和综合文件；和
 - (c) 便利对清单资料进行核查和技术评估及专家审查进程。

B. 原则和定义

2. 国家温室气体清单(下称清单)应具有透明度、一致性、可比性、完整性和精确性。
3. 如下文第7段所述，清单应采用缔约方会议商定的可比方法，以及今后缔约方会议届会商定的规范¹编写。
4. 在《气候变化框架公约》年度清单报告指南的行文中：

¹ 政府间气候变化专门委员会(气专委)目前正在拟订有关规范指南，作为涉及清单不确定性问题的部分工作。这项指南可能在 2000 年提交科技咨询机构审议。规范指南可包括关于方法选择、排放因素、活动数据和不确定性的建议，以及关于在编写清单期间可能适用的一系列质的评估和质的控制程序的建议。

透明度系指，对于为编制某一清单所采用的假设和方法，应作出清楚的解释，以便通报信息的用户仿制清单。清单的透明度是信息通报和审议信息进程获得成功的根本所在；

一致性系指，一份清单应与其它各年度清单的一切要素保持内在的一致性。如果基准年和其后所有年度均采用了同样的编制方法，使用了一致的数据组估算源和汇的排放量和清除量，这份清单即具备了一致性。在第10和第11段所述的某些情况下，对不同年度使用不同方法的清单，如果参照任何规范以透明的方式重新计算，可视为具有一致性；

可比性系指，缔约方在清单中通报的排放和清除估算量，在各缔约方之间应是可比较的。为此目的，缔约方应使用缔约方会议商定的方法估算和报告清单。不同的源/汇类别应参照1996年政府间气候变化专门委员会国家温室气体清单订正指南，在简表和部门表格一级划定；

完整性系指，一项清单应囊括1996年政府间气候变化专门委员会国家温室气体清单订正指南载列的所有源与汇和所有的气体，乃至其它一些相关的现有源/汇类别，由于后者源/汇属个别国家特有的类别，因此有可能未载入气专委的指南。完整性又指一缔约方源和汇的全部地域覆盖面。²

精确性系指，估算排放或清除量准确性的相对尺度。估算应当准确的含义是，在可对估算值加以判断时，此种数值应始终既不高于也不低于实际排放量或清除量的估算值，应尽实际可能地减少不确定性。为提高清单的精确性，应当采用符合规范指南的适当方法。

C. 范 围

5. 按照第11/CP.4号决定和缔约方会议的其他有关决定的要求，《气候变化框架公约》年度清单报告指南涉及的是年度清单和国家信息通报所载清单的温室气体排放量和清除量的估算和报告。

² 根据一缔约方批准、接受、核准或加入《公约》的文书。

D. 基准年

6. 1990 年应为估计和提出清单报告的基准年。根据《公约》第 4.6 条的规定和第 9/CP.2 和第 11/CP.4 号决定，正处于向市场经济过渡期间的以下附件一缔约方，可采用 1990 年以外的另一年或若干年作为基准，安排如下：

保加利亚：	采用 1988 年
匈牙利：	采用 1985-1987 年的平均数
波兰：	采用 1988 年
罗马尼亚：	采用 1989 年
斯洛文尼亚：	采用 1986 年

E. 方 法

方 法

7. 政府间气候变化专门委员会关于制订各国温室气体清单的指南，以下简称气专委指南，各缔约方应采用 1996 年的修订指南，对《蒙特利尔议定书》未予管制的各种温室气体，提出人为排放源排放量和汇清除量的估计和报告。根据气专委的指南，缔约方可采用指南中列出的不同方法(层次)，根据掌握的材料，对认为可得出最准确估计的办法，给予优先考虑。根据气专委的指南，缔约方还可使用他们认为能够更好地反映本国情况的自己的办法，条件是那些办法必须符合气专委的指南，并且资料齐全。

8. 气专委的指南提出了一套预先设定的方法，包括设定的排放因素，在有些情况下还包括设定的活动数据。由于这些设定的数据、因素和假设并不一定适合具体国家的情况，因此各缔约方在可能的情况下，可采用他们本国的排放因素和活动数据，但那些因素和数据的制定方法必须符合所有“正确做法”，并且应更加准确，对排放和清除的估计提出报告和依据的数据，均应透明。

正确作法

9. 在编制清单过程中，缔约方应采用缔约方会议达成协议的所有“正确作法”，以便提高透明度、一致性、可比性、完整性和准确性。

验算

10. 所有验算的目的，都是为了提高准确性和/完整性。验算必须保证时间系列的一致。一个完整时间系列的清单，包括提出报告的清单采用的基准年和之后各年，应采用同样的方法作出估计，获得和使用基本活动数据和排放因素，方法上也应前后一致。在收集基本活动数据和排放因素的方式方法改变的情况下，缔约方应重新计算基准年和以后各年的清单。

11. 然而，在有些情况下，一些过去年份的活动数据可能已经遗失，包括基准年。在这种情况下，那些年份的排放和清除量，需采用其他方法重新计算。在这类情况下，缔约方应表明时间系列是一致的。使用的其他办法应有清楚透明的文件记录，考虑进所有“正确作法”。

不定因素

12. 缔约方应采用他们可以采用的最佳方法，估计他们清单的不定因素，考虑进所有“正确作法”。

F. 报告

1. 一般指南

排放量和清除量的估计

13. 《公约》第 12 条第 1 款(a)，要求每一缔约方除其他外，通过秘书处向缔约方会议提出一份国家清单，为《蒙特利尔议定书》未予管制的所有温室气体的各种源的人为排放和各种汇的清除情况。清单应至少包括以下六种温室气体的情况：二氧化碳(CO₂)，甲烷(CH₄)，二氧化氮(N₂O)，全氟碳化物(PFCs)，氟化烃(HFCs)，

和六氟化硫(SF₆)。已由气专委确定百年全球升温潜能(GWP)值,并经缔约方会议通过的所有其他温室气体,缔约方也应提出排放量和清除量的报告。缔约方还应提供以下间接温室气体的情况:一氧化碳(CO),氮氧化物(NO_x),和非甲烷挥发性有机碳化物(NMVOCs)。鼓励缔约方提供有关氧化硫(SO_x)的情况。

14. 温室气体的排放量和清除量,应逐项气体分别提出,发生源的排放量与汇的清除量按质量单位分别列出,除非在土地使用、土地使用的改变和森林等领域,在技术上无法将有关发生源和汇的信息加以区分的情况下。对 HFCs 和 PFCs 而言,除非在第 19 段适用的情况下,否则应对各类中每种有关化学物质单独提出排放量的报告。

15. 此外,缔约方应按照第 2/CP.3 决定,报告温室气体排放和清除的总量,以 CO₂ 当量表示列在简明清单中,³ 报告时使用气专委在第二次评估报告中根据 100 年时间范围内温室气体效应提出的全球升温潜能值,以下称 1995 年气专委全球升温潜能值。这些数值列在本文件后面的表 1 中。全球升温潜能值一俟获得缔约方会议通过,将对表 1 加以修正,列入新的温室气体以及它们的 100 年全球升温潜能值。

16. 缔约方应按照第 2/CP.3 号决定,报告 HFCs、PFCs 和 SF₆ 的实际排放量,如有数据,应该按化学(如 HFC-134a)和源的类别提供以质量单位和 CO₂ 当量表示的分项数据。有些源的类别适用潜在排放的概念,缔约方还没有计算实际排放量的必要数据,对此,缔约方应报告分项潜在排放量。为了透明和比较起见,报告实际排放量的缔约方也应报告适用潜在排放概念的源的潜在排放量。

17. 十分鼓励缔约方报告存在 100 年全球升温潜能值、但这些数值有待缔约方会议批准的温室气体的排放量和清除量。这些排放量和清除量应与国家目标分开报告,并应指出全球升温潜能值及其参照。

18. 根据气专委指南,根据出售给从事国际运输的船舶或飞机的燃料计算的国际航空和海运燃料排放量不应该列入国家总量,而应单独报告。缔约方应在清单中的两个单独条目下报告国际航空和海运燃料油的排放量。

19. 应尽可能按每个源/汇分开报告,因为可能需要最低水平的综合来保护商业机密和军事情报。

³ 以 CO₂ 表示的排放量应分项列出,与气专委指南简表 7A 类似。

重新计算

20. 因方法变化, 排放系数和活动数据取得和使用的变化, 以及自基准年以来就存在、但以前未报告的新的源和汇的列入, 以前提交的估计排放量和清除量需要重新计算。报告重新计算数据, 应从基准年开始, 到后来的所有年份, 直到重新计算的年份。重新计算应使清单更加准确和完整, 确保时间序列的连贯。在这方面, 缔约方应报告变更的理由。重新计算所使用的程序资料、计算方法的变更、所使用的排放系数和活动数据, 以及列入的源和汇, 应明确地编成文件, 指出发生变化的每一源和汇类别的有关变化。

完整性

21. 清单出现方法或数据差异时, 应清楚地说明这些差异。缔约方应明确地指出其清单中未考虑、但气专委的指南已包括的源和汇, 并说明没有列入的理由。此外, 缔约方填写一份清单的所有表格时应使用下述标准缩写文字。这样做便于评估一份清单的完整性。标准缩写文字如下:

- (a) “NO” (未发生), 指在一个国家没有发生某一气体或源/汇类别的温室气体源排放和汇清除;
- (b) “NE” (未估计), 指对温室气体现有源排放量和汇清除量没有估计。如果在一份清单中对 CO₂、N₂O、CH₄、HFCs、PFCs 或 SF₆ 的排放或清除量填写 “NE”, 缔约方应使用共同报告单的完整性表格, 说明不能进行估计的原因;
- (c) “NA” (不适用), 指某一源/汇类别中的活动不产生具体气体的排放或清除。如果共同报告单中可适用 “NE” 的类别被遮盖, 则不必填写;
- (d) “IE” (列于他处), 指温室气体源排放和汇清除量已作估计, 但列在清单中的其他地点, 而未归入预期的源/汇类别。在清单中填写 “IE” 时, 缔约方应使用共同报告单的完整性表格, 指明移位的源/汇类别的排放和清除量列在清单的哪个部位, 并说明从预期类别移出列在该处的理由;

- (e) “C” (机密), 指温室气体源排放和汇清除量可能导致机密情报的泄露, 以上第 19 段有此规定;
- (f) (“O”), 指温室气体源排放和汇清除量估计不足于清单表中记录所使用的单位的一半, 四舍五入之后, 似乎为零。这一数据仍然需要列入国家总数和有关小计。^{4 5} 在共同报告单的部门背景表中, 如果有办法, 缔约方应尽可能提供详细数据。

22. 如果缔约方估计具体国家未列入气专委指南中包括的源或汇或气体的排放或清除量, 应明确说明是什么源/汇或气体、估计时使用了哪些方法、排放系数和活动数据。

核 实⁶

23. 根据气专委的指导方针, 缔约方应将其对燃料燃烧二氧化碳排放量的国家估计与利用气专委参考办法所得的估计进行比较, 并在年度清单中报告。还鼓励缔约方报告国家就其清单进行的任何同行审查。

不确定因素⁷

24. 在报告温室气体排放和清除清单数据时, 应指出有关这些数据的不确定程度及有关假定。所用估计不确定因素的方法应以透明的方式报告。鼓励缔约方报告现有关于不确定因素的定量资料。

⁴ 适合于非常小的源/汇类别的详细程度, 气专委在“良好行为”工作中正在考虑, 缔约方应使用缔约方会议以后议定的任何指南。

⁵ 利用这一办法, 由于四舍五入, 所有部门表格的总数与简明表格中的总数将稍有不同。

⁶ 科技咨询机构不妨在有更多数据时、或在气专委完成制定关于良好作法指导方针时审议这一问题, 并酌情在随后对指导方针的修订中扩大本节。

⁷ 一旦气专委目前有关这一问题的工作完成, 缔约方会议可能会对报告不确定性提出严格的要求。

调 整

25. 清单的报告应不作有关调整，如气候变异或电力交易模式等调整。此外，如缔约方对清单数据作了此种调整，则应分别以透明的方式加以报告，随后明确说明有关方法。

26. 调整被视为有关监测排放和清除趋势及国家政策和措施作用状况的重要信息。各缔约国除报告未作调整的清单数据外，可选择是否进行调整，若作了调整，则指明所选用的方法。还鼓励缔约方与他人交流进行调整的经验。

2. 通用报告格式

27. 缔约方应通过秘书处，每年向缔约方会议提交这些指南附件所载的通用报告格式之要求提交的信息。根据第 5 段规定，此种信息应每年提交，所提交的信息应是提交年前年的信息。此种信息应以电子方式和硬拷贝方式正式提交。通用报告格式是下文第 3 节提及的国家清单报告的一部分。

28. 通用报告格式是一种标准化格式，用来报告温室气体排放量和清除量估计数以及其他有关信息。该报告格式将由秘书处提供给缔约方，并且还将在《气候变化框架公约》网址上提供。采用通用报告格式，可改进电子资料的处理，便利清单信息的处理和有用的技术分析及综合文件的编制。

29. 通用报告格式由以下几个部分组成：

- (a) 摘要表和部门分类表；
- (b) 部门背景数据表，供报告总的排放因素和活动数据用；
- (c) 气专委计算表 1-1, 载有采用气专委参照办法对燃料消耗产生的二氧化碳排放量所作的估计，还载有一份表格，用来比较这一参照办法之下的估计数和国家估计数，并为任何明显的差别提供解释；
- (d) 供报告二氧化碳排放和移除总当量、重新计算结果、清单的完整性、不确定因素、原料和燃料的非能源性使用、国际舱载燃油和多边作业情况、排放趋势等用的表格，以及一份这些《气候变化框架公约》年度清单报告指南要求通报的主要清单信息的核对清单。

30. 通用报告格式采用气专委部门分类表源/汇类别分列的办法。该报告格式提供了关于方法、总排放因素以及活动数据的起码的一套信息，还提供了支持部门分类表所列出的估计数的有关假设。

31. 采用通用报告格式提供信息，是为了通过便利缔约方之间活动数据和总的排放因素的相互比较，提高清单的可比性和透明度，也是为了易于发现清单可能存在的错误、误解和缺漏。

3. 国家清单报告

32. 缔约方应通过秘书处，向缔约方会议提交国家清单报告，该报告载有关于从基准年至年度清单提交当年的各年份的清单的详细、完整的信息，以确保清单具有透明度。

33. 依照缔约方会议有关决定，应当每年通过秘书处，以硬拷贝方式或电子方式向缔约方会议提供整份国家清单报告，此种报告应每年更新，以反映某些变动。此种报告应包括以下内容：

- (a) 依照第 27 段提交的自基准年⁸至年度清单提交当年的各年份的年度清单信息；
- (b) 关于自基准年至年度清单提交当年各年份的每个部门的详细清单计算的计算表⁹或同等的数据库信息，载有分类国家排放因素和支持估计数的活动数据；
- (c) 各部门采用的具体方法和假设叙述，包括说明难度(气专委等级)；叙述缔约方采用的任何国内方法，以及关于方法的今后预计的改进的情况；
- (d) 与方法、排放因素及活动数据有关的参考资料或信息源，以及选择这些参考资料或信息源的依据；

⁸ 根据《公约》第 4 条第 6 款的规定和第 9/CP.2 及 11/CP.4 号决定，一些转型期经济缔约方可将 1990 年之外的年份作为基准年，具体见上文第 7 段。

⁹ 计算表或同等的数据库信息依据气专委指南、1990 年大气排放物清单或本国方法。

- (e) 关于支持排放量和移除量估计数的假设和常规方法的信息以及选择这些假设和常规方法的依据；
- (f) 关于饲料和舱载燃油的具体信息：
 - (一) 关于可能出现的排放量的重复计算或未予计算问题，缔约方应说明饲料是否已计入清单，如已计入，是如何计入的；
 - (二) 在报告舱载燃料产生的排放量方面，缔约方应作出解释，说明它们是如何区分应列入国家总量的国内海上和空中排放量与国际舱载燃料引起的排放量的；
- (g) 上文第 20 段要求提交的关于先前曾提交的清单数据的任何重新计算的信息；
- (h) 上文第 24 段要求提供的关于不确定因素的信息；
- (i) 已执行的质量保证/质量控制信息；
- (j) 单列一节，清楚说明前几年出现的变动，包括方法、信息源和假定方面的变动，以及应审查进程而作的变动；

34. 缔约方应公布国家清单报告。缔约方可通过将国家清单报告全文存入其国家万维网网址来履行此项义务。

G. 存 档

35. 缔约方应收集并保存每年的所有有关清点信息，包括所有分类排放因素、活动数据和关于为了报告清点信息的目的这些因素和数据如何产生和分类的文件。这种信息应使专家审评小组等能够重新制定清册。清点信息应从基准年开始存档，包括运用的重新计算的相应数据。文件追踪应能用来按照排放和清除估计查寻原始分类排放因素和活动数据。当秘书处每年汇编清册或评估方法问题时，这种信息还应便利及时澄清清点数据的过程。鼓励缔约方在单一国家清点设施中收集这种信息，或者至少尽量减少设施的数量。

H. 系统更新准则

36. 今后关于按照《公约》报告清点信息的有关决定一旦由缔约方会议作出，经适当变通后，即应适用于这些气候变化框架公约清点信息报告准则，而这些准则将作相应更新。

I. 语 文

37. 国家清点报告应以一种联合国正式语文提交。另外还鼓励附件一缔约方视情况提交国家清点报告的英文译文。

表 1: 1995 年气专委根据 100 年时间范围内温室气体效应计算的全球升温潜能值¹⁰

温室气体	化学公式	1995 年气专委全球升温潜能值
二氧化碳	CO ₂	1
甲烷	CH ₄	21
一氧化二氮	N ₂ O	310
氟烷(HFCs)		
HFC-23	CHF ₃	11700
HFC-32	CH ₂ F ₂	650
HFC-41	CH ₃ F	150
HFC-43-10mee	C ₅ H ₂ F ₁₀	1300
HFC-125	C ₂ HF ₅	2800
HFC-134	C ₂ H ₂ F ₄ (CHF ₂ CHF ₂)	1000
HFC-134a	C ₂ H ₂ F ₄ (CH ₂ FCF ₃)	1300
HFC-152a	C ₂ H ₄ F ₂ (CH ₃ CHF ₂)	140
HFC-143	C ₂ H ₃ F ₃ (CHF ₂ CH ₂ F)	300
HFC-143a	C ₂ H ₃ F ₃ (CF ₃ CH ₃)	3800
HFC-227ea	C ₃ HF ₇	2900
HFC-236fa	C ₃ H ₂ F ₆	6300
HFC-245ca	C ₃ H ₃ F ₅	560
全氟化碳		
全氟化甲烷	CF ₄	6500
全氟乙烷	C ₂ F ₆	9200
全氟丙烷	C ₃ F ₈	7000
全氟丁烷	C ₄ F ₁₀	7000
全氟环丁烷	c-C ₄ F ₈	8700
全氟戊烷	C ₅ F ₁₂	7500
全氟己烷	C ₆ F ₁₄	7400
六氟化硫	SF ₆	23900

¹⁰ 按照气专委第二份评估报告的规定。

决定草案附件二

通用报告格式

(联合国气候变化框架公约关于年度清单的报告指南)

关于通用报告格式的说明

1. 这份通用报告格式包括从修订的 1996 年政府间气候变化问题小组为国别温室气体清单制订的指南(IPCC 指南)中摘出的概述、报告和审查表格，加上新近制订的分部门背景表格。使用 IPCC 软件从 CORINAIR 转换为 IPCC 格式软件的用户应注意：从 IPCC 指南摘出的表格有一些微小的补充。

2. 有些分部门背景表格要求计算假设排放系数。这些系数是指缔约方的排放估计数和总计活动数据二者之间的比率。假设排放系数仅仅用于比较。它们不一定是原始排放估计中实际使用的排放系数，除非这仅仅是用于计算假设排放系数时以同样的总计活动数据为基础的简单乘数而已。

3. 与 IPCC 指南相一致，备忘项目，如来自国际海运和航运油舱燃料的排放量估计，应在相应表格中报告，但不计入国别总数。

4. 缔约方应使用分部门背景表格下面提供的文件栏框，以提高清晰度。

5. 缔约方应填写所有征询排放量或清除量估计、活动数据或排放系数的空格。不填入数据时，应使用以下的标准代号：

- (a) “ NO ” (无发生)，指一国内在一特定气体或源/汇范畴内没有发生温室气体的源排放或汇点的清除；
- (b) “ NE ” (无估计)，指温室气体现有的源排放量或汇清除量没有估计。凡在清单中用 “ NE ” 表示 CO₂、CH₄、HFCs、PFCs 或 SF₆ 的排放或清除时，缔约方应使用完全表 9 表明排放量不能估计的原因。
- (c) “ NA ” (不适用)，表示一特定源/汇范畴中的活动不造成某一具体气体的排放或清除。如通用报告格式中有的范畴适用 “ NA ” 而模糊处理者，即无须填写。

- (d) “IE” (另列), 指温室气体的源排放或汇清除有估计但另列在清单的其他地方, 而没有列在源/汇范畴。清单中使用“IE”时, 缔约方应利用完全表 9 说明清单中从变动的源/汇范畴移走的排放量或清除量现另列何处, 缔约方还应说明这样做的理由。
- (e) “C” (保密), 指根据联合国气候变化框架公约关于年度清单报告指南第 19 段的规定, 温室气体的源排放或汇清除可能导致泄露机密情报。
- (f) “O”, 指温室气体的源排放量或汇清除量估计少于记入清单表格所用单位的一半, 经四舍五入为零者。该数量仍应列入有关的小计。在分部门背景表格中, 缔约方应以方法允许的详细程度提供数据。

6. 缔约方应填写补充资料栏框中的数据。如果由于缔约方所用方法条件与所征询的资料不适合, 则相应的空格应以“NA”填写。

7. 应由缔约方填写表 5(土地使用变化和林业部门报告)。相应的分部门背景表格 5A-D 应遵循 IPCC 指南, 并应由缔约方用 IPCC 补漏方法填写。背景表格列出的物种和生态系统只是举例, 缔约方可以改变以便更好地介绍本国情况。缔约方如果不使用分部门背景表格 5A-D, 则应填写可用的替换格式。

8. 表中各栏目的次序和标题、行次和空格都不得改动, 以免使数据汇编工作复杂化。对现有源/汇范畴分类法的任何补充, 应使用为此提供的备用行和栏。如作任何其他改变, 应用红色字体明确标示, 并应在有改变的格子由所含信息下加线以示强调。

9. 如按 UNFCCC 年度清单报告指南第 10 和 11 段所列理由, 需要对以前提供的数据重新计算时, 缔约方应从基准年度开始的每一年度填写重新计算的表 8a, 并填写表 8b。缔约方还应填写因重新计算引起改变的基准年度通用报告格式中的其他各个表格。

Annex

LIST OF TABLES

	<u>Page</u>
Summary tables	
Summary 1.A	21
Summary 1.B	24
Summary 2	25
Summary 3	26
Energy	
Table 1	28
Table 1.A(a)	30
Table 1.A(b)	34
Table 1.A(c)	35
Table 1.A(d)	36
Table 1.B.1	37
Table 1.B.2	38
Table 1.C	39
Industrial processes	
Table 2(I)	40
Table 2(I).A-G	42
Table 2(II)	44
Table 2(II).C, E	46
Table 2(II).F	47
Solvent and other product use	
Table 3	49
Table 3.A-D	49

Agriculture

Table 4	Sectoral report for agriculture	51
	<i>Sectoral background data for agriculture</i>	
Table 4.A	Enteric fermentation	53
Table 4.B(a)	CH ₄ emissions from manure management	54
Table 4.B(b)	N ₂ O emissions from manure management	55
Table 4.C	Rice cultivation	56
Table 4.D	Agricultural soils	57
Table 4.E	Prescribed burning of savannas	58
Table 4.F	Field burning of agricultural residues	59

Land-use change and forestry

Table 5	Sectoral report for land-use change and forestry	60
	<i>Sectoral background data for land-use change and forestry</i>	
Table 5.A	Changes in forest and other woody biomass stocks	61
Table 5.B	Forest and grassland conversion.	62
Table 5.C	Abandonment of managed lands	63
Table 5.D	CO ₂ emissions and removals from soil	64

Waste

Table 6	Sectoral report for waste	65
	<i>Sectoral background data for waste</i>	
Table 6.A	Solid waste disposal	66
Table 6.C	Waste incineration	66
Table 6.B	Wastewater handling	67

Other tables

Table 7	Overview table for national greenhouse gas inventories	68
Table 8	Recalculation	71
Table 9	Completeness	74
Table 10	Emissions trends	76
Table 11	Check-list of reported inventory information	81

Explanatory note:

In order to avoid changes to the layout of the complex tables of the common reporting format, the tables have not been translated. The common reporting format is a standardized format to be used by Annex I Parties for reporting, electronically, estimates of greenhouse gas emissions and removals and any other relevant information.

SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)
(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ emissions	CO ₂ removals	CH ₄	N ₂ O	HFCs ⁽¹⁾			PFCs ⁽¹⁾			NO _x	CO	NMVOC	SO ₂
					P	A	Λ	P	A	Λ				
Total National Emissions and Removals														
1. Energy														
A. Fuel Combustion														
Reference Approach ⁽²⁾														
Sectoral Approach ⁽²⁾														
1. Energy Industries														
2. Manufacturing Industries and														
3. Transport														
4. Other Sectors														
5. Other														
B. Fugitive Emissions from Fuels														
1. Solid Fuels														
2. Oil and Natural Gas														
2. Industrial Processes														
A. Mineral Products														
B. Chemical Industry														
C. Metal Production														
D. Other Production ⁽³⁾														
E. Production of Halocarbons and SF ₆														
F. Consumption of Halocarbons and SF ₆														
G. Other														

P : Potential emissions based on Tier 1 approach of the IPCC Guidelines.

Λ : Actual emissions based on Tier 2 approach of the IPCC Guidelines.

⁽¹⁾ The emissions of HFCs and PFCs are to be expressed as CO₂ equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(I) of this common reporting format.

⁽²⁾ For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach. Where possible, the calculations using the Sectoral approach should be used for estimating national totals. Do not include the results of both the Reference approach and the Sectoral approach in national totals.

⁽³⁾ Other Production includes Pulp and Paper and Food and Drink Production.

Note: The numbering of footnotes to all tables containing more than one sheet continue to the next sheet. Common footnotes are given only once at the first point of reference.

SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)
(Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ emissions	CO ₂ removals	CH ₄	N ₂ O	HFCs ^(b)				PFCs ^(b)				SF ₆	NO _x	CO	NMVOC	SO ₂
					CO ₂ equivalent (Gg)				CO ₂ equivalent (Gg)								
					P	A	P	A	P	A	P	A					
3. Solvent and Other Product Use																	
4. Agriculture																	
A. Enteric Fermentation																	
B. Manure Management																	
C. Rice Cultivation	(6)	(6)															
D. Agricultural Soils																	
E. Prescribed Burning of Savannas																	
F. Field Burning of Agricultural Residues																	
G. Other	(6)	(6)															
5. Land-Use Change and Forestry																	
A. Changes in Forest and Other Woody Biomass Stocks	(6)	(6)															
B. Forest and Grassland Conversion	(6)	(6)															
C. Abandonment of Managed Lands	(6)	(6)															
D. CO ₂ Emissions and Removals from Soil	(6)	(6)															
E. Other																	
6. Waste																	
A. Solid Waste Disposal on Land	(6)	(6)															
B. Wastewater Handling																	
C. Waste Incineration	(6)	(6)															
D. Other																	
7. Other (please specify)																	

^(b) According to the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.2, 4.87), CO₂ emissions from agricultural soils are to be included under Land-Use Change and Forestry (LUCF). At the same time, the Summary Report 7A (Volume 1, Reporting Instructions, Tables 27) allows for reporting CO₂ emissions or removals from agricultural soils, either in the Agriculture sector, under D. Agricultural Soils or in the Land-Use Change and Forestry sector under D. Emissions and Removals from Soil. Parties may choose either way to report emissions or removals from this source in the common reporting format, but the way they have chosen to report should be clearly indicated, by inserting explanatory footnotes in the corresponding cells of Summary 1.A and Summary 1.B. Double-counting of these emissions or removals should be avoided. Parties should include these emissions or removals consistently in Table 8(a) (Recalculation - Recalculated data) and Table 10 (Emission trends).

^(c) Please do not provide an estimate of both CO₂ emissions and CO₂ removals. "Net" emissions (emissions - removals) of CO₂ should be estimated and a single number placed in either the CO₂ emissions or CO₂ removals column, as appropriate. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

^(d) Note that CO₂ from Waste Disposal and Incineration source categories should only be included if it stems from non-biogenic or inorganic waste streams.

Year :

SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)
 (Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ emissions	CO ₂ removals	CH ₄	N ₂ O	HFC's		PFC's		SF ₆		NO _x	CO	NMVOC	SO ₂
					P	A	P	A	P	A				
CO ₂ equivalent (Gg)														
Memo Items: ⁽¹⁾														
International Bankers														
Aviation														
Marine														
Multilateral Operations														
CO ₂ Emissions from Biomass														

⁽¹⁾ Memo Items are not included in the national totals.

SUMMARY 1.B SHORT SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7B)

Year: _____

(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ emissions	CO ₂ removals	CH ₄	N ₂ O	HFCs ⁽¹⁾		PFCs ⁽¹⁾		SF ₆		NO _x	CO	NMVOC	SO ₂
					P	A	P	A	P	A				
					CO ₂ equivalent (Gg)									
Total National Emissions and Removals														
1. Energy														
A. Fuel Combustion	Reference Approach ⁽²⁾													
B. Fugitive Emissions from Fuels	Sectoral Approach ⁽²⁾													
2. Industrial Processes														
3. Solvent and Other Product Use														
4. Agriculture⁽³⁾														
5. Land-Use Change and Forestry⁽⁴⁾														
6. Waste														
7. Other														
Airports														
International Bunkers														
Aviation														
Marine														
Multilateral Operations														
CO₂ Emissions from Biomass														

P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.

⁽¹⁾ The emissions of HFCs and PFCs are to be expressed as CO₂ equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(1) of this common reporting format.

⁽²⁾ For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach. Where possible, the calculations using the Sectoral approach should be used for estimating national totals. Do not include the results of both the Reference approach and the Sectoral approach in national totals.

⁽³⁾ See footnote 4 to Summary 1.A.

⁽⁴⁾ Please do not provide an estimate of both CO₂ emissions and CO₂ removals. "Net" emissions (emissions - removals) of CO₂ should be estimated and a single number placed in either the CO₂ emissions or CO₂ removals column, as appropriate. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

Year:

SUMMARY 2 SUMMARY REPORT FOR CO₂ EQUIVALENT EMISSIONS

(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ ⁽¹⁾	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	Total
	CO ₂ equivalent (Gg)						
Total (Net Emissions)⁽¹⁾							
1. Energy							
A. Fuel Combustion (Sectoral Approach)							
1. Energy Industries							
2. Manufacturing Industries and Construction							
3. Transport							
4. Other Sectors							
5. Other							
B. Fugitive Emissions from Fuels							
1. Solid Fuels							
2. Oil and Natural Gas							
2. Industrial Processes							
A. Mineral Products							
B. Chemical Industry							
C. Metal Production							
D. Other Production							
E. Production of Halocarbons and SF ₆							
F. Consumption of Halocarbons and SF ₆							
G. Other							
3. Solvent and Other Product Use							
4. Agriculture							
A. Enteric Fermentation							
B. Manure Management							
C. Rice Cultivation							
D. Agricultural Soils ⁽²⁾							
E. Prescribed Burning of Savannas							
F. Field Burning of Agricultural Residues							
G. Other							
5. Land-Use Change and Forestry⁽¹⁾							
6. Waste							
A. Solid Waste Disposal on Land							
B. Wastewater Handling							
C. Waste Incineration							
D. Other							
7. Other (please specify)							
Memo Items:							
International Bunkers							
Aviation							
Marine							
Multilateral Operations							
CO₂ Emissions from Biomass							

⁽¹⁾ For CO₂ emissions from Land-Use Change and Forestry the net emissions are to be reported. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

⁽²⁾ See footnote 4 to Summary 1.A of this common reporting format.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ emissions	CO ₂ removals	Net CO ₂ emissions / removals	CH ₄	N ₂ O	Total emissions
	CO ₂ equivalent (Gg)					
Land-Use Change and Forestry						
A. Changes in Forest and Other Woody Biomass Stocks						
B. Forest and Grassland Conversion						
C. Abandonment of Managed Lands						
D. CO ₂ Emissions and Removals from Soil						
E. Other						
Total CO₂ Equivalent Emissions from Land-Use Change and Forestry						
Total CO₂ Equivalent Emissions without Land-Use Change and Forestry^(a)						
Total CO₂ Equivalent Emissions with Land-Use Change and Forestry^(a)						

^(a) The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report emissions and removals from Land-Use Change and Forestry.

SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED
(Sheet 1 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂		CH ₄		N ₂ O		HFCs		PFCs		SF ₆	
	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)
1. Energy												
A. Fuel Combustion												
1. Energy Industries												
2. Manufacturing Industries and Construction												
3. Transport												
4. Other Sectors												
5. Other												
B. Fugitive Emissions from Fuels												
1. Solid Fuels												
2. Oil and Natural Gas												
2. Industrial Processes												
A. Mineral Products												
B. Chemical Industry												
C. Metal Production												
D. Other Production												
E. Production of Halocarbons and SF ₆												
F. Consumption of Halocarbons and SF ₆												
G. Other												

(1) Use the following notation keys to specify the method applied: D (IPCC default), RA (Reference Approach), T1 (IPCC Tier 1), T1a, T1b, T1c (IPCC Tier 1a, Tier 1b and Tier 1c, respectively), T2 (IPCC Tier 2), T2a, T2b, T2c (IPCC Tier 2), T3 (IPCC Tier 3), C (CORINAIR), CS (Country Specific), M (Model). If using more than one method, enumerate the relevant methods. Explanations of any modifications to the default IPCC methods, as well as information on the proper use of methods per source category where more than one method is indicated, and explanations on the country specific methods, should be provided in the documentation box of the relevant Sectoral background data table.

(2) Use the following notation keys to specify the emission factor used: D (IPCC default), C (CORINAIR), CS (Country Specific), PS (Plant Specific), M (Model). Where a mix of emission factors has been used, use different notations in one and the same cells with further explanation in the documentation box of the relevant Sectoral background data table.

Year :

SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED
(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂		CH ₄		N ₂ O		HFCs		PFCs		SF ₆	
	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)	Method applied (1)	Emission factor (2)
3. Solvent and Other Product Use												
4. Agriculture												
A. Enteric Fermentation												
B. Manure Management												
C. Rice Cultivation												
D. Agricultural Soils												
E. Prescribed Burning of Savannas												
F. Field Burning of Agricultural Residues												
G. Other												
5. Land-Use Change and Forestry												
A. Changes in Forest and Other Woody Biomass Stocks												
B. Forest and Grassland Conversion												
C. Abandonment of Managed Lands												
D. CO ₂ Emissions and Removals from Soil												
E. Other												
6. Waste												
A. Solid Waste Disposal on Land												
B. Wastewater Handling												
C. Waste Incineration												
D. Other												
7. Other (please specify)												

Year :

TABLE 1 SECTORAL REPORT FOR ENERGY

(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂	CH ₄	N ₂ O	NO _x (Gg)	CO	NMVOC	SO ₂
4. Other Sectors							
a. Commercial/Institutional							
b. Residential							
c. Agriculture/forestry/Fisheries							
5. Other (please specify) ^(d)							
a. Stationary							
b. Mobile							
B. Fugitive Emissions from Fuels							
I. Solid Fuels							
a. Coal Mining							
b. Solid Fuel Transformation							
c. Other (please specify)							
2. Oil and Natural Gas							
a. Oil							
b. Natural Gas							
c. Venting and Flaring							
Venting							
Flaring							
Other (please specify)							
Memo Items: ^(e)							
International Bankers							
Aviation							
Marine							
Multilateral Operations							
CO₂ Emissions from Biomass							

^(d) Include military fuel use under this category.

^(e) Please do not include in energy totals.

TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY
Fuel Combustion Activities - Sectoral Approach
(Sheet 1 of 4)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS ^(b)				EMISSIONS		
	Consumption (TJ)	(t)	CO ₂ (t/TJ)	CH ₄ (kg/TJ)	N ₂ O (kg/TJ)	CO ₂ (Gg)	CH ₄ (Gg)	N ₂ O (Gg)	
I.A. FUEL COMBUSTION									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels					(b)				
Biomass									
Other Fuels									
I.A.1. Energy Industries									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels					(b)				
Biomass									
Other Fuels									
a. Public Electricity and Heat Production									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels					(b)				
Biomass									
Other Fuels									
b. Petroleum Refining									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels					(b)				
Biomass									
Other Fuels									
c. Manufacture of Solid Fuels and Other Energy Industries									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels					(b)				
Biomass									
Other Fuels									

^(b) Activity data should be calculated using net calorific values (NCV) as specified by the IPCC Guidelines. If gross calorific values (GCV) were used, please indicate this by placing a "G" in this column.

^(c) Accurate estimation of CH₄ and N₂O emissions depends on combustion conditions, technology, and emission control policy, as well as fuel characteristics. Therefore, caution should be used when comparing the implied emission factors.

^(d) Carbon dioxide emissions from biomass are reported under Memo Items. The content of the cells is not included in the totals.

Note: For the coverage of fuel categories, please refer to the IPCC Guidelines (Volume 1. Reporting Instructions - Common Reporting Framework, section 1.2, p. 1.19). If some derived gases (e.g. gas work gas, coke oven gas, blast gas, oxygen steel furnace gas, etc.) are considered, Parties should provide information on the allocation of these derived gases under the above fuel categories (liquid, solid, gaseous, biomass, other fuels) in the documentation box or using a footnote.

Year :

TABLE I.A(a) SECTORAL BACKGROUND DATA FOR ENERGY
Fuel Combustion Activities - Sectoral Approach
 (Sheet 2 of 4)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS ⁽²⁾				EMISSIONS		
	Consumption (TJ)	(3)	CO ₂ (t/TJ)	CH ₄ (kg/TJ)	N ₂ O (kg/TJ)	CO ₂ (Gg)	CH ₄ (Gg)	N ₂ O (Gg)	
I.A.2 Manufacturing Industries and Construction									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels						(3)			
Biomass									
Other Fuels									
a. Iron and Steel									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels						(3)			
Biomass									
Other Fuels									
b. Non-Ferrous Metals									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels						(3)			
Biomass									
Other Fuels									
c. Chemicals									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels						(3)			
Biomass									
Other Fuels									
d. Pulp, Paper and Print									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels						(3)			
Biomass									
Other Fuels									
e. Food Processing, Beverages and Tobacco									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels						(3)			
Biomass									
Other Fuels									
f. Other (please specify)									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels						(3)			
Biomass									
Other Fuels									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels						(3)			
Biomass									
Other Fuels									

Year :

TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY
Fuel Combustion Activities - Sectoral Approach
 (Sheet 3 of 4)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS ⁽²⁾			EMISSIONS		
	Consumption (TJ)	(1)	CO ₂ (t/TJ)	CH ₄ (kg/TJ)	N ₂ O (kg/TJ)	CO ₂ (Gg)	CH ₄ (Gg)	N ₂ O (Gg)
I.A.3 Transport								
Gasoline								
Diesel								
Natural Gas								
Solid Fuels								
Biomass								
Other Fuels (please specify)								
a. Civil Aviation								
Aviation Gasoline								
Jet Kerosene								
b. Road Transportation								
Gasoline								
Diesel Oil								
Natural Gas								
Biomass								
Other Fuels (please specify)								
c. Railways								
Solid Fuels								
Liquid Fuels								
d. Navigation								
Coal								
Residual Oil								
Gas/Diesel Oil								
Other Fuels (please specify)								
e. Other Transportation								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels								

Year :

TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY
Fuel Combustion Activities - Sectoral Approach
(Sheet 4 of 4)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS ⁽¹⁾			EMISSIONS		
	Consumption (TJ)	⁽²⁾	CO ₂ (t/TJ)	CH ₄ (kg/TJ)	N ₂ O (kg/TJ)	CO ₂ (Gg)	CH ₄ (Gg)	N ₂ O (Gg)
1.A.4 Other Sectors								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels					(3)			
Biomass								
Other Fuels								
a. Commercial/Institutional								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels					(3)			
Biomass								
Other Fuels								
b. Residential								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels					(3)			
Biomass								
Other Fuels								
c. Agriculture/Forestry/Fisheries								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels					(3)			
Biomass								
Other Fuels								
1.A.5 Other (Not elsewhere specified)⁽⁴⁾								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels					(3)			
Biomass								
Other Fuels								

⁽³⁾ Include military fuel use under this category.

Documentation box:

TABLE I.A(b) SECTORAL BACKGROUND DATA FOR ENERGY
CO₂ from Fuel Combustion Activities - Reference Approach (IPCC Worksheet I-1)
(Sheet 1 of 1)

FUEL TYPES		Production	Imports	Exports	International bunkers	Stock change	Apparent consumption	Conversion factor ⁽¹⁾ (TJ/unit)	Apparent consumption (TJ)	Carbon emission factor (t C/TJ)	Carbon content (Gg C)	Carbon stored (Gg C)	Net carbon emissions (Gg C)	Fraction of carbon oxidized	Actual CO ₂ emissions (Gg CO ₂)
Liquid fossil	Primary Fuels	Crude Oil													
	Secondary Fuels	Distillation													
Solid fossil	Primary Fuels	Natural Gas Liquids													
		Gasoline													
		Jet Kerosene													
		Other Kerosene													
		Shale Oil													
		Gas / Diesel Oil													
		Residual Fuel Oil													
		LPG													
		Ethane													
		Naphtha													
		Bitumen													
		Lubricants													
Gaseous fossil	Secondary Fuels	Petroleum Coke													
		Refinery Feedstocks													
		Other Oil													
		Anthracite ⁽²⁾													
		Coking Coal													
		Other Bit. Coal													
		Sub-bit. Coal													
		Lignite													
		Oil Shale													
		Peat													
		BKB & Patent Fuel													
		Coke Oven/Gas Coke													
Biomass total	Gaseous Fossil	Natural Gas (Dry)													
		Solid Biomass													
		Liquid Biomass													
Total	Biomass total	Gas Biomass													

⁽¹⁾ To convert quantities expressed in natural units to energy units, use net calorific values (NCV). If gross calorific values (GCV) are used in this table, please indicate this with a footnote.

⁽²⁾ If Anthracite is not separately available, include with Other Bituminous Coal.

Year :

TABLE I.A(c) COMPARISON OF CO₂ EMISSIONS FROM FUEL COMBUSTION
(Sheet 1 of 1)

FUEL TYPES	Reference approach		National approach ⁽¹⁾		Difference ⁽²⁾	
	Energy consumption (PJ)	CO ₂ emissions (Gg)	Energy consumption (PJ)	CO ₂ emissions (Gg)	Energy consumption (%)	CO ₂ emissions (%)
Liquid Fuels (excluding international bunkers)						
Solid Fuels (excluding international bunkers)						
Gaseous Fuels						
Other ⁽³⁾						
Total ⁽³⁾						

⁽¹⁾ "National approach" is used to indicate the approach (if different from the Reference approach) followed by the Party to estimate its CO₂ emissions from fuel combustion reported in the national GHG inventory.

⁽²⁾ Difference of the Reference approach over the National approach (i.e. difference = 100% x ((RA-NA)/NA), where NA = National approach and RA = Reference approach).

⁽³⁾ Emissions from biomass are not included.

Note: In addition to estimating CO₂ emissions from fuel combustion by sector, Parties should also estimate these emissions using the IPCC Reference approach, as found in the IPCC Guidelines, Worksheet 1-1 (Volume 2, Workbook). The Reference approach is to assist in verifying the sectoral data. Parties should also complete the above tables to compare the alternative estimates, and if the emission estimates lie more than 2 percent apart, should explain the source of this difference in the documentation box provided.

Documentation box:

TABLE 1.A(d) SECTORAL BACKGROUND DATA FOR ENERGY
Feedstocks and Non-Energy Use of Fuels
(Sheet 1 of 1)

Year :

FUEL TYPE ⁽¹⁾	ACTIVITY DATA AND RELATED INFORMATION		IMPLIED EMISSION FACTOR	ESTIMATE	Additional information ^(a)	
	Fuel quantity (TJ)	Fraction of carbon stored			CO ₂ not emitted (Gg CO ₂)	Subtracted from (specify source category)
Naphtha ⁽²⁾			Carbon emission factor (t C/TJ)	of carbon stored in non-energy use of fuels (Gg C)		
Lubricants						
Bitumen						
Coal Oils and Tars (from Coking Coal)						
Natural Gas ⁽²⁾						
Gas/Diesel Oil ⁽²⁾						
Butane ⁽²⁾						
Ethane ⁽²⁾						
Other (please specify)						

⁽¹⁾ Where fuels are used in different industries, please enter in different rows.

⁽²⁾ Enter these fuels when they are used as feedstocks.

Note: The table is consistent with the IPCC Guidelines. Parties that take into account the emissions associated with the use and disposal of these feedstocks could continue to use their methodologies, and provide explanation notes in the documentation box below.

Documentation box: A fraction of energy carriers is stored in such products as plastics or asphalt. The non-stored fraction of the carbon in the energy carrier or product is oxidized, resulting in carbon dioxide emissions, either during the use of the energy carriers in the industrial production (e.g. fertilizer production), or during the use of the products (e.g. solvents, lubricants), or in both (e.g. monomers). To report associated emissions use the above table, filling an extra "Additional information" table, as shown below:

Associated CO ₂ emissions (Gg)	Allocated under (Specify source category) ^(a)
---	--

^(a) e.g. Industrial Processes, Waste Incineration, etc.

^(a) The fuel lines continue from the table to the left.

Year :

TABLE I.B.1 SECTORAL BACKGROUND DATA FOR ENERGY
Fugitive Emissions from Solid Fuels
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA Amount of fuel produced ⁽¹⁾ (Mt)	IMPLIED EMISSION FACTOR		EMISSIONS		Additional information ^(a) Description Value
		CH ₄ (kg/t)	CO ₂ (kg/t)	CH ₄ (Gg)	CO ₂ (Gg)	
I. B. 1. a. Coal Mining and Handling						
i. Underground Mines ⁽²⁾						
Mining Activities						
Post-Mining Activities						
ii. Surface Mines ⁽²⁾						
Mining Activities						
Post-Mining Activities						
I. B. 1. b. Solid Fuel Transformation						
I. B. 1. c. Other (please specify)⁽³⁾						

(a) For underground mines.

⁽¹⁾ Use the documentation box to specify whether the fuel amount is based on the run-of-mine (ROM) production or on the saleable production.

⁽²⁾ Emissions both for Mining Activities and Post-Mining Activities are calculated with the activity data in lines Underground Mines and Surface Mines respectively.

⁽³⁾ Use the "Other" rows to enter any other solid fuel related activities resulting in fugitive emissions, such as emissions from abandoned mines and waste piles.

Note: There are no clear references to the coverage of I.B.1.b. and I.B.1.c. in the IPCC Guidelines. Make sure that the emissions entered here are not reported elsewhere. If they are reported under another source category, indicate this (IE) and make a reference in Table 9 (completeness) and/or in the documentation box.

Documentation box:

Year :

TABLE 1.B.2 SECTORAL BACKGROUND DATA FOR ENERGY
Fugitive Emissions from Oil and Natural Gas
 (Sheet 1 of 1)

Additional information	
Description	Value
Pipelines length (km)	
Number of oil wells	
Number of gas wells	
Gas throughput ^(a)	
Oil throughput ^(a)	
Other relevant information (specify)	

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS			EMISSIONS		
	Description ⁽¹⁾	Value	CO ₂ (kg/PJ) ⁽²⁾	CH ₄ (kg/PJ) ⁽²⁾	N ₂ O (kg/PJ) ⁽²⁾	CO ₂ (Gg)	CH ₄ (Gg)	N ₂ O (Gg)
1. B. 2. a. Oil ⁽¹⁾								
i. Exploration	(e.g. number of wells drilled)							
ii. Production ⁽¹⁾	(e.g. PJ of oil produced)							
iii. Transport	(e.g. PJ oil loaded in tankers)							
iv. Refining / Storage	(e.g. PJ oil refined)							
v. Distribution of oil products	(e.g. PJ oil refined)							
vi. Other								
1. B. 2. b. Natural Gas								
Exploration								
i. Production ⁽¹⁾ / Processing	(e.g. PJ gas produced)							
ii. Transmission	(e.g. PJ gas consumed)							
Distribution	(e.g. PJ gas consumed)							
iii. Other leakage	(e.g. PJ gas consumed)							
at industrial plants and power stations in residential and commercial sectors								
1. B. 2. c. Venting ⁽⁵⁾								
i. Oil	(e.g. PJ oil produced)							
ii. Gas	(e.g. PJ gas produced)							
iii. Combined								
Flaring								
i. Oil	(e.g. PJ gas consumption)							
ii. Gas	(e.g. PJ gas consumption)							
iii. Combined								
1.B.2.d. Other (please specify) ⁽⁶⁾								

^(a) In the context of oil and gas production, throughput is a measure of the total production, such as barrels per day of oil, or cubic meters of gas per year. Specify the units of the reported value. Take into account that these values should be consistent with the activity data reported under the production rows of the main table.

⁽¹⁾ Specify the activity data used and fill in the activity data description column, as given in the examples in brackets. Use the document box to specify whether the fuel amount is based on the raw material production or on the saleable production. Note cases where more than one variable is used as activity data.
⁽²⁾ The unit of the implied emission factor depends on the units of the activity data used. The most common unit is given as an example (kg/PJ) but for each case the real unit of the emission factor should be specified.
⁽³⁾ Use the category also to cover emissions from combined oil and gas production fields. Natural gas processing and distribution from these fields should be included under 1.B.2.b.ii and 1.B.2.b.iii, respectively.
⁽⁴⁾ If using default emission factors these categories will include emissions from production other than venting and flaring.
⁽⁵⁾ If using default emission factors, emissions from Venting and Flaring from all oil and gas production should be accounted for here. Parties using the IPCC software could report these emissions together, indicating so in the documentation box.
⁽⁶⁾ For example, fugitive CO₂ emissions from production of geothermal power could be reported here.

Documentation box:

Year :

TABLE 1.C. SECTORAL BACKGROUND DATA FOR ENERGY
International Bunkers and Multiflateral Operations
 (Sheet 1 of 1)

Additional information

	Fuel consumption	Allocation ^(a) (percent)	
		Domestic	International
Marine			
Aviation			

(a) For calculating the allocation of fuel consumption, use the sums of fuel consumption by domestic navigation and aviation (Table 1.A(a)) and by international bunkers (Table 1.C).

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS				EMISSIONS			
		Consumption (TJ)	CO ₂ (t/TJ)	CH ₄ (kg/TJ)	N ₂ O (kg/TJ)	CO ₂ (Gg)	CH ₄ (Gg)	N ₂ O (Gg)	
Marine Bunkers									
Gasoline									
Gas/Diesel Oil									
Residual Fuel Oil									
Lubricants									
Coal									
Other (please specify)									
Aviation Bunkers									
Jet Kerosene									
Gasoline									
Multilateral Operations ⁽¹⁾									

(1) Parties may choose to report or not report the activity data and emission factors for multilateral operation consistent with the principle of confidentiality stated in the UNFCCC reporting guidelines on inventories. In any case, Parties should report the emissions from multilateral operations, where available, under the Memo Items section of the Summary tables and in the Sectoral report table for energy.

Note: In accordance with the IPCC Guidelines, international aviation and marine bunker fuel emissions from fuel sold to ships or aircraft engaged in international transport should be excluded from national totals and reported separately for informational purposes only.

Documentation box: Please explain how the consumption of international marine and aviation bunkers fuels was estimated and separated from the domestic consumption.

TABLE 2(I) SECTORAL REPORT FOR INDUSTRIAL PROCESSES
(Sheet 1 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂	CH ₄	N ₂ O	HFCs ⁽¹⁾			PFCs ⁽¹⁾			SF ₆	NO _x	CO	NMVOC	SO ₂
	(Gg)													
				P	A	P	A	P	A	P	A			
CO ₂ equivalent (Gg)														
Total Industrial Processes														
A. Mineral Products														
1. Cement Production														
2. Lime Production														
3. Limestone and Dolomite Use														
4. Soda Ash Production and Use														
5. Asphalt Roofing														
6. Road Paving with Asphalt														
7. Other (please specify)														
B. Chemical Industry														
1. Ammonia Production														
2. Nitric Acid Production														
3. Adipic Acid Production														
4. Carbide Production														
5. Other (please specify)														
C. Metal Production														
1. Iron and Steel Production														
2. Ferroalloys Production														
3. Aluminium Production														
4. SF ₆ Used in Aluminium and Magnesium Foundries														
5. Other (please specify)														

P = Potential emissions based on Tier 1 approach of the IPCC Guidelines. A = Actual emissions based on Tier 2 approach of the IPCC Guidelines. This only applies in sectors where methods exist for both tiers.

(1) The emissions of HFCs and PFCs are to be expressed as CO₂ equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

Year :

TABLE 2(I) SECTORAL REPORT FOR INDUSTRIAL PROCESSES

(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂	CH ₄	N ₂ O	HFCs ⁽¹⁾			PFCs ⁽¹⁾			SF ₆			NO _x	CO	NMVOG	SO ₂
	(Gg)															
				P	A	P	A	P	A	P	A	P	A			
CO ₂ equivalent (Gg)																
D. Other Production																
1. Pulp and Paper																
2. Food and Drink ⁽²⁾																
E. Production of Halocarbons and SF₆																
1. By-product Emissions																
Production of HCFC-22																
Other																
2. Fugitive Emissions																
3. Other (please specify)																
F. Consumption of Halocarbons and SF₆																
1. Refrigeration and Air Conditioning Equipment																
2. Foam Blowing																
3. Fire Extinguishers																
4. Aerosols/Metered Dose Inhalers																
5. Solvents																
6. Semiconductor Manufacture																
7. Electrical Equipment																
8. Other (please specify)																
G. Other (please specify)																

⁽²⁾ CO₂ from Food and Drink Production (e.g. gasification of water) can be of biogenic or non-biogenic origin. Only information on CO₂ emissions of non-biogenic origin should be reported.

Year :

TABLE 2(H) SECTORAL REPORT FOR INDUSTRIAL PROCESSES - EMISSIONS OF HFCs, PFCs AND SF₆ (Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFC-23	HFC-32	HFC-41	HFC-43-10me	HFC-125	HFC-134	HFC-134a	HFC-152a	HFC-143	HFC-143a	HFC-227ea	HFC-236fa	HFC-245ca	Total HFCs	CF ₄	CF ₂	C ₂ F ₆	C ₂ F ₄	C ₂ F ₂	C ₂ F ₃	C ₂ F ₄	C ₂ F ₆	Total PFCs	SF ₆	
	(b)																								
F(p) Total Potential Emissions of Halocarbons (by chemical) and SF₆ (b)																									
Production ^(b)																									
Import:																									
In bulk																									
In products ^(b)																									
Export:																									
In bulk																									
In products ^(b)																									
Destroyed amount																									
GWP values used	11700	650	150	1300	2800	1000	1300	140	300	3800	2900	6300	560	560	6500	9200	7000	7000	8700	7500	7400	7400	23900		
Total Actual Emissions^(a) (Gg CO₂ eq.)																									
C. Metal Production																									
E. Production of Halocarbons and SF ₆																									
F(a). Consumption of Halocarbons and SF ₆																									
G. Other <i>(please specify)</i>																									
Ratio of Potential/Actual Emissions from Consumption of Halocarbons and SF₆																									
Actual emissions - F(a) (Gg CO ₂ eq.)																									
Potential emissions - F(p) (Gg CO ₂ eq.)																									
Potential/Actual emissions ratio																									

^(a) Potential emissions of each chemical of halocarbons and SF₆ estimated using Tier 1a or Tier 1b of the IPCC Guidelines (Volume 3, Reference Manual, pp. 2.47-2.50). When potential emissions estimates are available in a disaggregated manner corresponding to the subsectors for actual emissions defined on sheet 1 of this table, these should be reported in an annex to sheet 2, using the format of sheet 1, sector F(a). Use Summary 3 of this common reporting format to indicate whether Tier 1a or Tier 1b was used.

^(b) Production refers to production of new chemicals. Recycled substances could be included here, but it should be ensured that double counting of emissions is avoided. Relevant explanations should be provided as a footnote to the table.

^(c) Relevant just for Tier 1b.

^(d) Sums of the actual emissions of each chemical of halocarbons and SF₆ from the source categories given in sheet 1 of the table multiplied by the corresponding GWP values.

^(e) Potential emissions of each chemical of halocarbons and SF₆ taken from row F(p) multiplied by the corresponding GWP values.

Note: As stated in the revised UNFCCC guidelines, Parties should report actual emissions of HFCs, PFCs and SF₆, where data are available, providing disaggregated data by chemical and source category in units of mass and in CO₂ equivalents. Parties reporting actual emissions should also report potential emissions for the sources where the concept of potential emissions applies, for reasons of transparency and comparability.

TABLE 2(H)F. SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES
(Consumption of Halocarbons and SF₆)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIFIED EMISSION FACTORS			EMISSIONS		
	Filled in new manufactured products	In operating systems (average annual stocks)	Remained in products at decommissioning ¹⁾	Product manufacturing factor	Product life factor	Disposal loss factor	From manufacturing	From stocks	From disposal
1. Refrigeration									
Air Conditioning Equipment									
Domestic Refrigeration									
<i>(system chemical)²⁾</i>									
<i>(e.g. HFC-12)</i>									
<i>(e.g. HFC-125)</i>									
<i>(e.g. HFC-134a)</i>									
<i>(e.g. HFC-152a)</i>									
<i>(e.g. HFC-143a)</i>									
Commercial Refrigeration									
Transport Refrigeration									
Industrial Refrigeration									
Stationary Air Conditioning									
Mobile Air Conditioning									
2. Foam Blowing									
Hard Foam									
Soft Foam									

¹⁾ Parties should use the documentation box to provide information on the amount of the chemical recovered (recovery efficiency) and other relevant information used in the emission estimation.
²⁾ Use the rows left empty to specify the chemical consumed, as given in the example. If needed, new rows could be added for reporting the disaggregated chemicals from a source.

Note: Table 2 (H)F provides for reporting of the activity data and emission factors used to calculate actual emissions from consumption of halocarbons and SF₆ using the "bottom-up approach" (based on the total stock of equipment and estimated emission rates from this equipment). Some Parties may prefer to estimate their actual emissions following the alternative "top-down approach" (based on annual sales of equipment and/or gas). These Parties should provide the activity data used in the current format and any other relevant information in the documentation box. Data these Parties should provide includes (1) the amount of fluid used to fill new products, (2) the amount of fluid used to service existing products, (3) the amount of fluid originally used to fill retiring products (the total nameplate capacity of retiring products), (4) the product lifetime, and (5) the growth rate of product sales, if this has been used to calculate the amount of fluid originally used to fill retiring products. Alternatively, Parties may provide alternative formats with equivalent information. These formats may be considered for future versions of the common reporting format after the trial period.

Year :

TABLE 2(H).F. SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES
Consumption of Halocarbons and SF₆

(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIED EMISSION FACTORS			EMISSIONS		
	Filled in new manufactured products	Amount of fluid		Product manufacturing factor	Product life factor (% per annum)	Disposal loss factor	From manufacturing	From stocks	From disposal
		In operating systems (average annual stocks)	Remained in products at decommissioning (1)						
(t)									
3 Fire Extinguishers									
4 Aerosols									
Metered Dose Inhalers									
Other									
5 Solvents									
6 Semiconductors									
7 Electric Equipment									
8 Other (please specify)									

Note: Where the activity data are confidential, the entries should provide aggregate figures, but there should be a note indicating this and explanations in the documentation box.

Documentation box:

TABLE 3.A-D SECTORAL BACKGROUND DATA FOR SOLVENT AND OTHER PRODUCT USE
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS	
	Description	(kt)	CO ₂ (t/t)	N ₂ O (t/t)
A. Paint Application				
B. Degreasing and Dry Cleaning				
C. Chemical Products, Manufacture and Processing				
D. Other (please specify) ⁽¹⁾				
(Use of N ₂ O for Anaesthesia)				
(N ₂ O from Fire Extinguishers)				
(N ₂ O from Aerosol Cans)				
(Other Use of N ₂ O)				

⁽¹⁾ Some probable sources are provided in brackets. Complement the list with other relevant sources. Make sure that the order is the same as in Table 3.

Note: The table follows the format of the IPCC Sectoral Report for Solvent and Other Product Use, although some of the source categories are not relevant to the direct GHG emissions.

Documentation box:

Year :

TABLE 4 SECTORAL REPORT FOR AGRICULTURE

(Sheet 1 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH ₄	N ₂ O	NO _x (Gg)	CO	NMVOC
Total Agriculture					
A. Enteric Fermentation					
1. Cattle					
Dairy Cattle					
Non-Dairy Cattle					
2. Buffalo					
3. Sheep					
4. Goats					
5. Camels and Llamas					
6. Horses					
7. Mules and Asses					
8. Swine					
9. Poultry					
10. Other (please specify)					
B. Manure Management					
1. Cattle					
Dairy Cattle					
Non-Dairy Cattle					
2. Buffalo					
3. Sheep					
4. Goats					
5. Camels and Llamas					
6. Horses					
7. Mules and Asses					
8. Swine					
9. Poultry					

TABLE 4 SECTORAL REPORT FOR AGRICULTURE
(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH ₄	N ₂ O	NO _x (Gg)	CO	NNVOC
B. Manure Management (continued)					
10. Anaerobic Lagoons					
11. Liquid Systems					
12. Solid Storage and Dry Lot					
13. Other <i>(please specify)</i>					
C. Rice Cultivation					
1. Irrigated					
2. Rainfed					
3. Deep Water					
4. Other <i>(please specify)</i>					
D. Agricultural Soils⁽¹⁾					
1. Direct Soil Emissions					
2. Animal Production					
3. Indirect Emissions					
4. Other <i>(please specify)</i>					
E. Prescribed Burning of Savannas					
F. Field Burning of Agricultural Residues					
1. Cereals					
2. Pulse					
3. Tuber and Root					
4. Sugar Cane					
5. Other <i>(please specify)</i>					
G. Other <i>(please specify)</i>					

⁽¹⁾ See footnote 4 to Summary L.A of this common reporting format. Parties which choose to report CO₂ emissions and removals from agricultural soils under 4.D. Agricultural Soils category of the sector Agriculture should indicate the amount [Gg] of these emissions or removals in the documentation box to Table 4.D. Additional information (activity data, implied emissions factors) should also be provided using the relevant documentation box to Table 4.D. This table is not modified for reporting the CO₂ emissions and removals for the sake of consistency with the IPCC tables (i.e. IPCC Sectoral Report for Agriculture).

Note: The IPCC Guidelines do not provide methodologies for the calculation of CH₄ emissions, CH₄ and N₂O removals from agricultural soils, or CO₂ emissions from savanna burning or agricultural residues burning. If you have reported such data, you should provide additional information (activity data and emission factors) used to make these estimates using the relevant documentation boxes.

Year :

TABLE 4.A SECTORAL BACKGROUND DATA FOR AGRICULTURE

**Enteric Fermentation
(Sheet 1 of 1)**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA ⁽¹⁾ AND OTHER RELATED INFORMATION		IMPLIED EMISSION FACTORS	
	Population size ⁽²⁾ (1000 head)	Average daily feed intake (MJ/day)	CH ₄ conversion (%)	CH ₄ (kg CH ₄ /head/yr)
1. Cattle				
Dairy Cattle ⁽³⁾				
Non-Dairy Cattle				
2. Buffalo				
3. Sheep				
4. Goats				
5. Camels and Llamas				
6. Horses				
7. Mules and Asses				
8. Swine				
9. Poultry				
10. Other (please specify)				

⁽¹⁾ In the documentation boxes to all Sectoral background data tables for Agriculture, Parties should provide information on whether the activity data is one year or a 3-year average.

⁽²⁾ Parties are encouraged to provide detailed livestock population data by animal type and region in a separate table. This consistent set of animal population statistics should be used to estimate CH₄ emissions from enteric fermentation, CH₄ and N₂O from manure management, N₂O direct emissions from soil and N₂O emissions associated with manure production, as well as emissions from the use of manure as fuel, and sewage-related emissions reported in the waste sector.

⁽³⁾ Including data on dairy heifers, if available.

Documentation box:

Additional information (for Tier 2)^(a)

Disaggregated list of animals ^(b)	Dairy Cattle	Non-Dairy Cattle	Other (specify)		
				Weight (kg)	Feeding situation ^(c)
Indicators:					
Weight					
Feeding situation ^(c)					
Milk yield					
Work					
Pregnant					
Digestibility of feed					

^(a) Compare to Tables A-1 and A-2 of the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.3.1-4.3.4). These data are relevant if Parties do not have data on average feed intake.

^(b) Disaggregate to the split actually used. Add columns to the table if necessary.

^(c) Specify feeding situation as pasture, stall fed, confined, open range, etc.

Year:

TABLE 4.B(a) SECTORAL BACKGROUND DATA FOR AGRICULTURE
CH₄ Emissions from Manure Management
 (Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION				IMPLIED EMISSION FACTORS CH ₄ (kg CH ₄ /head/yr)		
	Population size ⁽¹⁾ (1000 head)	Allocation by climate region ⁽²⁾		Typical animal mass (kg)		VS ⁽³⁾ daily excretion (kg dm ³ /head/yr)	CH ₄ producing potential (Bo) ⁽⁴⁾ (CH ₄ m ³ /kg VS)
		Cool	Warm				
1. Cattle							
Dairy Cattle ⁽⁵⁾							
Non-Dairy Cattle							
2. Buffalo							
3. Sheep							
4. Goats							
5. Camels and Llamas							
6. Horses							
7. Mules and Asses							
8. Swine							
9. Poultry							

⁽¹⁾ See footnote 1 to Table 4.A of this common reporting format.

⁽²⁾ Climate regions are defined in terms of annual average temperature as follows: Cool = less than 15°C; Temperate = 15°C to 25°C

inclusive; and Warm = greater than 25°C (see Table 4.2 of the IPCC Guidelines (Volume 3, Reference Manual, p. 4.8)).

⁽³⁾ VS = Volatile Solids; Bo = maximum methane producing capacity for manure (IPCC Guidelines (Volume 3, Reference Manual, p. 4.23 and p. 4.15)).

⁽⁴⁾ Including data on dairy heifers, if available.

Documentation box:

Additional information (for Tier 2)

Animal category ^(a)	Indicator	Climate region	Animal waste management system					
			Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot	Pasture range	Other
Dairy Cattle	Allocation ^(b)	Cool						
		Temperate						
		Warm						
Non-Dairy Cattle	Allocation ^(b)	Cool						
		Temperate						
		Warm						
Swine	Allocation ^(b)	Cool						
		Temperate						
		Warm						

^(a) Copy the above table as many times as necessary.

^(b) MCF = Methane Conversion Factor (IPCC Guidelines, (Volume 3, Reference Manual, p. 4.9)).

^(c) In the case of use of other climate region categorization, please replace the entries in the cells with the climate regions for which the MCFs are specified.

Year :

TABLE 4.D SECTORAL BACKGROUND DATA FOR AGRICULTURE

Agricultural Soils⁽¹⁾
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION		EMISSIONS (Gg N ₂ O)
	Description	Value	
Direct Soil Emissions	N input to soils (kg N/yr)		
Synthetic Fertilizers	Use of synthetic fertilizers (kg N/yr)		
Animal Wastes Applied to Soils	Nitrogen input from manure applied to soils (kg N/yr)		
N-fixing Crops	Dry pulses and soybeans produced (kg dry biomass/yr)		
Crop Residue	Dry production of other crops (kg dry biomass/yr)		
Cultivation of Histosols	Area of cultivated organic soils (ha)		
Animal Production	N excretion on pasture range and paddock (kg N/yr)		
Indirect Emissions			
Atmospheric Deposition	Volatilized N (NH ₃ and NO _x) from fertilizers and animal wastes (kg N/yr)		
Nitrogen Leaching and Run-off	N from fertilizers and animal wastes that is lost through leaching and run off (kg N/yr)		
Other (please specify)			

Additional information

Fraction ^(a)	Description	Value
FracURBN	Fraction of crop residue burned	
FracFUEL	Fraction of livestock N excretion in excrements burned for fuel	
FracGASF	Fraction of synthetic fertilizer N applied to soils that volatilizes as NH ₃ and NO _x	
FracGASM	Fraction of livestock N excretion that volatilizes as NH ₃ and NO _x	
FracGRAZ	Fraction of livestock N excreted and deposited onto soil during grazing	
FracLEACH	Fraction of N input to soils that is lost through leaching and runoff	
FracSCRNF	Fraction of N in non-N-fixing crop	
FracSCRFD	Fraction of N in N-fixing crop	
FracCR	Fraction of crop residue removed from the field as crop	

^(a) Use the fractions as specified in the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.92 - 4.113).

⁽¹⁾ See footnote 4 to Summary 1.A. of this common reporting format. Parties which choose to report CO₂ emissions and removals from agricultural soils under 4.D. Agricultural Soils category should indicate the amount [Gg] of these emissions or removals and relevant additional information (activity data, implied emissions factors) in the documentation box.

⁽²⁾ To convert from N₂O-N to N₂O emissions, multiply by 44/28.

Documentation box:

TABLE 4.E SECTORAL BACKGROUND DATA FOR AGRICULTURE
Prescribed Burning of Savannas
(Sheet 1 of 1)

Year :

GREENHOUSE GAS SOURCE AND SINK CATEGORIES <i>(specify ecological zone)</i>	ACTIVITY DATA AND OTHER RELATED INFORMATION					IMPLIED EMISSION FACTORS		EMISSIONS	
	Area of savanna burned (k ha/yr)	Average aboveground biomass density (t dm/ha)	Fraction of savanna burned	Biomass burned (Gg dm)	Nitrogen fraction in biomass	CH ₄	N ₂ O	CH ₄	N ₂ O

Additional information

	Living	Dead
Fraction of aboveground biomass		
Fraction oxidized		
Carbon fraction		

Documentation box:

TABLE 4.F SECTORAL BACKGROUND DATA FOR AGRICULTURE
Field Burning of Agricultural Residues
(Sheet 1 of 1)

Year :

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION							IMPLIED EMISSION FACTORS		EMISSIONS	
	Crop production (t)	Residue/Crop ratio	Dry matter fraction	Fraction of savanna burned	Biomass burned (Gg dm)	Nitrogen fraction in biomass of residues	CH ₄ (kg/t dm)	N ₂ O (kg/t dm)	CH ₄ (Gg)	N ₂ O (Gg)	
1. Cereals											
Wheat											
Barley											
Maize											
Oats											
Rye											
Rice											
Other (please specify)											
2. Pulse⁽¹⁾											
Dry bean											
Peas											
Soybeans											
Other (please specify)											
3 Tuber and Root											
Potatoes											
Other (please specify)											
4 Sugar Cane											
5 Other (please specify)											

⁽¹⁾ To be used in Table 4.D of this common reporting format.

Documentation box:

TABLE 5 SECTORAL REPORT FOR LAND-USE CHANGE AND FORESTRY
(Sheet 1 of 1)

Year :

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ emissions	CO ₂ removals	Net CO ₂ emissions/ removals	CH ₄	N ₂ O	NO _x	CO
Total Land-Use Change and Forestry							
A. Changes in Forest and Other Woody Biomass Stocks							
1. Tropical Forests							
2. Temperate Forests							
3. Boreal Forests							
4. Grasslands/Tundra							
5. Other <i>(please specify)</i>							
Harvested Wood ⁽¹⁾							
B. Forest and Grassland Conversion⁽²⁾							
1. Tropical Forests							
2. Temperate Forests							
3. Boreal Forests							
4. Grasslands/Tundra							
5. Other <i>(please specify)</i>							
C. Abandonment of Managed Lands							
1. Tropical Forests							
2. Temperate Forests							
3. Boreal Forests							
4. Grasslands/Tundra							
5. Other <i>(please specify)</i>							
D. CO₂ Emissions and Removals from Soil							
Cultivation of Mineral Soils							
Cultivation of Organic Soils							
Liming of Agricultural Soils							
Forest Soils							
Other <i>(please specify)</i> ⁽³⁾							
E. Other <i>(please specify)</i>							

⁽¹⁾ Following the IPCC Guidelines, the harvested wood should be reported under Changes in Forest and Other Woody Biomass Stocks (Volume 3, Reference Manual, p.5.17).

⁽²⁾ Include only the emissions of CO₂ from Forest and Grassland Conversion. Associated removals should be reported under section D.

⁽³⁾ Include emissions from soils not reported under sections A, B and C.

Note: See footnote 4 to Summary 1.A of this common reporting format.

Common Reporting Format for the provision of inventory information by Annex I Parties to the UNFCCC

TABLE 5.A SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY

Year:

**Changes in Forest and Other Woody Biomass Stocks
(Sheet 1 of 1)**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES			ACTIVITY DATA		IMPLIED EMISSION FACTORS	ESTIMATES
			Area of forest/biomass stocks (kha)	Average annual growth rate (t dm/ha)	Implied carbon uptake factor (t C/ha)	Carbon uptake increment (Gg C)
Tropical	Plantations	Acacia spp.				
		Eucalyptus spp.				
		Tectona grandis				
		Pinus spp				
		Pinus caribaea				
		Mixed Hardwoods				
		Mixed Fast-Growing Hardwoods				
	Mixed Softwoods					
	Other Forests	Moist				
		Seasonal				
		Dry				
	Other (specify)					
Temperate	Plantations					
	Commercial	Evergreen				
		Deciduous				
	Other (specify)					
Boreal						
Non-Forest Trees (specify type)			Number of trees (1000s of trees)	Annual growth rate (kt dm/1000 trees)	Carbon uptake factor (t C/tree)	Carbon uptake increment (Gg C)
			Total annual growth increment (Gg C)			
			Gg CO ₂			
			Amount of biomass removed (kt dm)	Carbon emission factor (t C/t dm)	Carbon release (Gg C)	
Total biomass removed in Commercial Harvest						
Traditional Fuelwood Consumed						
Total Other Wood Use						
			Total Biomass Consumption from Stocks ⁽¹⁾ (Gg C)			
			Other Changes in Carbon Stocks ⁽²⁾ (Gg C)			
			Gg CO ₂			
			Net annual carbon uptake (+) or release (-) (Gg C)			
			Net CO ₂ emissions (+) or removals (-) (Gg CO ₂)			

⁽¹⁾ Make sure that the quantity of biomass burned off-site is subtracted from this total.

⁽²⁾ The net annual carbon uptake/release is determined by comparing the annual biomass growth versus annual harvest, including the decay of forest products and slash left during harvest. The IPCC Guidelines recommend default assumption that all carbon removed in wood and other biomass from forests is oxidized in the year of removal. The emissions from decay could be included under Other Changes in Carbon Stocks.

Note: Sectoral background data tables on Land-Use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

Documentation box:

Year :

TABLE 5.C SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY
Abandonment of Managed Lands
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION						IMPLIED EMISSION FACTORS		ESTIMATES	
	Total area abandoned and regrowing ⁽¹⁾ (kha)		Annual rate of aboveground biomass growth (t dm/ha)		Carbon fraction of aboveground biomass		Rate of aboveground biomass carbon uptake		Annual carbon uptake in aboveground biomass	
	first 20 years (kha)	>20 years (kha)	first 20 years (t dm/ha)	>20 years (t dm/ha)	first 20 years	>20 years	first 20 years (t C/ha/yr)	>20 years (t C/ha/yr)	first 20 years (Gg C/yr)	>20 years (Gg C/yr)
Original natural ecosystems										
Tropical										
Wet/Very Moist										
Moist, short dry season										
Moist, long dry season										
Dry										
Montane Moist										
Montane Dry										
Tropical Savanna/Grasslands										
Temperate										
Mixed Broadleaf/Coniferous										
Coniferous										
Broadleaf										
Grasslands										
Boreal										
Mixed Broadleaf/Coniferous										
Coniferous										
Forest-tundra										
Grasslands/Tundra										
Other										

Total annual carbon uptake (Gg C)
Total annual CO ₂ removal (Gg CO ₂)

⁽¹⁾ If lands are regenerating to grassland, then the default assumption is that no significant changes in above-ground biomass occur.

Note: Sectoral background data tables on Land-use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner, also providing suggestions for a possible sectoral background data table suitable for their calculation method.

Documentation box:

Year :

TABLE 6 SECTORAL REPORT FOR WASTE
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ ⁽¹⁾	CH ₄	N ₂ O	NO _x (Gg)			CO	NMVOC	SO ₂
Total Waste									
A. Solid Waste Disposal on Land									
1. Managed Waste Disposal on Land									
2. Unmanaged Waste Disposal Sites									
3. Other (please specify)									
B. Wastewater Handling									
1. Industrial Wastewater									
2. Domestic and Commercial Wastewater									
3. Other (please specify)									
C. Waste Incineration									
D. Other (please specify)									

⁽¹⁾ Note that CO₂ from Waste Disposal and Incineration source categories should only be included if it stems from non-biological or inorganic waste sources.

TABLE 6.A SECTORAL BACKGROUND DATA FOR WASTE
Solid Waste Disposal
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR		EMISSIONS ⁽¹⁾	
	Annual MSW at the SWDS (Gg)	MCF	DOC degraded (Gg)	CH ₄ recovery ⁽¹⁾ (Gg)	CH ₄ (1/t MSW)	CO ₂ (1/t MSW)	CO ₂ (Gg)
1 Managed Waste Disposal on Land							
2 Unmanaged Waste Disposal Sites							
- deep (>5 m)							
- shallow (<5 m)							
3 Other (please specify)							

TABLE 6.C SECTORAL BACKGROUND DATA FOR WASTE
Waste Incineration
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA Amount of incinerated wastes (Gg)	IMPLIED EMISSION FACTOR				EMISSIONS		
		CO ₂ (kg/t waste)	CH ₄ (kg/t waste)	N ₂ O (kg/t waste)	CO ₂ ⁽¹⁾ (Gg)	CH ₄ (Gg)	N ₂ O (Gg)	
Waste Incineration (please specify)								
(biogenic) ⁽¹⁾								
(plastics) ⁽²⁾								

MSW - Municipal Solid Waste, SWDS - Solid Waste Disposal Site, MCF - Methane Correction Factor, DOC - Degradable Organic Carbon (IPCC Guidelines (Volume 3, Reference Manual, section 6.2.4)). MSW includes household waste, yard/garden waste, commercial/market waste and organic industrial solid waste. MSW should not include inorganic industrial waste such as construction or demolition materials.

⁽¹⁾ Actual emissions (after recovery).
⁽²⁾ CH₄ recovered and flared or utilized.

⁽³⁾ Under Waste Disposal, CO₂ emissions should be reported only when the disposed wastes are combusted at the disposal site which might constitute a management practice. CO₂ emissions from non-biogenic wastes are included in the totals, while the CO₂ emissions from biogenic wastes are not included in the totals.

Documentation box: All relevant information used in calculation should be provided in the additional information box and in the documentation box. Parties that use country specific models should note this with a brief rationale in the documentation box and fill the relevant cells only.

Year :

Additional information

Description	Value
Total population (1000s) ^(a)	
Urban population (1000s) ^(a)	
Waste generation rate (kg/capita/day)	
Fraction of MSW disposed to SWDS	
Fraction of DOC in MSW	
Fraction of wastes incinerated	
Fraction of wastes recycled	
CH ₄ oxidation factor ^(b)	
CH ₄ fraction in landfill gas	
Number of SWDS recovering CH ₄	
CH ₄ generation rate constant (k) ^(c)	
Time lag considered (yr) ^(c)	
Composition of landfilled waste (%)	
Paper and paperboard	
Food and garden waste	
Plastics	
Glass	
Textiles	
Other (specify)	
other - inert	
other - organic	

^(a) Specify whether total or urban population is used and the rationale for doing so.

^(b) See IPCC Guidelines (Volume 3, Reference Manual, p. 6.9).

^(c) For Parties using Tier 2 methods.

TABLE 6.B SECTORAL BACKGROUND DATA FOR WASTE
Wastewater Handling
 (Sheet 1 of 1)

Year: _____

Additional information		Domestic	Industrial
Total wastewater (m ³):			
Treated wastewater (%):			
Wastewater streams	Wastewater output (m ³)		DC (kgCOD/m ³)
Industrial			
Iron and steel			
Non-ferrous			
Fertilizers			
Food and beverage			
Paper and pulp			
Organic chemicals			
Other (specify)			
Domestic	DC (kg BOD/1000 person/yr)		
Other			

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND RELATED INFORMATION ⁽¹⁾				IMPLIED EMISSION FACTOR				EMISSIONS ⁽²⁾			
	Total organic product		CH ₄ recovered and/or flared		CH ₄		N ₂ O ⁽³⁾		CH ₄		N ₂ O ⁽³⁾	
	Wastewater (Ggr DC ⁽⁴⁾ /yr)	Sludge (Ggr)	Wastewater (kg/kg DC)	Sludge (kg/kg DC)	Wastewater (kg/kg DC)	Sludge (kg/kg DC)	Wastewater (kg/kg DC)	Sludge (kg/kg DC)	Wastewater (Ggr)	Sludge (Ggr)	Wastewater (Ggr)	Sludge (Ggr)
Industrial Wastewater												
Domestic and Commercial Wastewater												
Other (specify ysc, th)												

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR		EMISSIONS	
	Population ⁽¹⁾ (1000s)	Protein consumption (protein in kg/person/yr)	N fraction (kg N/kg protein)	N ₂ O (kg N ₂ O/kg sewage N produced)	N ₂ O (Ggr)	N ₂ O (Ggr)	
N ₂ O from human sewage ⁽²⁾							

⁽¹⁾ DC - degradable organic component DC indicators are COD (Chemical Oxygen Demand) for industrial wastewater and BOD (Biochemical Oxygen Demand) for Domestic/Commercial wastewater/sludge (IPC Guidelines Volume 3: Reference Manual, pp. 6.14, 6.18)

⁽²⁾ Actual emissions (after recovery).

⁽³⁾ Parties using other methods for estimation of N₂O emissions from human sewage or wastewater treatment should provide corresponding information on methods, activity data and emission factors used in the documentation box. Use the table to provide aggregate data.

⁽⁴⁾ Specify whether total or urban population is used in the calculations and the rationale for doing so. Provide explanation in the documentation box.

Handling systems:	Industrial wastewater treated (%)	Ind sludge treated (%)	Domestic wastewater treated (%)	Domestic sludge treated (%)
	Acrobic			
Anaerobic				
Other (specify)				

Documentation box:

TABLE 7 OVERVIEW TABLE⁽¹⁾ FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 8A)

(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂		CH ₄		N ₂ O		HFCs		PFCs		SF ₆		NO _x		CO		NMVOC		SO ₂		
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	
Total National Emissions and Removals																					
1 Energy																					
A. Fuel Combustion Activities																					
Reference Approach																					
Sectoral Approach																					
1. Energy Industries																					
2. Manufacturing Industries and Construction																					
3. Transport																					
4. Other Sectors																					
5. Other																					
B. Fugitive Emissions from Fuels																					
1. Solid Fuels																					
2. Oil and Natural Gas																					
2 Industrial Processes																					
A. Mineral Products																					
B. Chemical Industry																					
C. Metal Production																					
D. Other Production																					
E. Production of Halocarbons and SF ₆																					

⁽¹⁾This table is intended to be used by Parties to summarize their own assessment of completeness (e.g. partial, full estimate, not estimated) and quality (high, medium, low) of major source/sink inventory estimates. The latter could be understood as a quality assessment of the estimates. This table might change once the IPCC completes its work on managing uncertainties of GHG inventories: title of the table was kept for consistency with the current table in the IPCC Guidelines.

Note: To fill in the table use the notation key as given in the IPCC Guidelines (Volume 1. Reporting Instructions, Tables. 37):

TABLE 7 OVERVIEW TABLE FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 8A)
(Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂		CH ₄		N ₂ O		HFCs		PFCs		SF ₆		NO _x		CO		NMVOC		SO ₂		
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	
2 Industrial Processes (continued)																					
F. Consumption of Halocarbons and SF ₆																					
Potential ⁽²⁾																					
Actual ⁽³⁾																					
G. Other																					
3 Solvent and Other Product Use																					
4 Agriculture																					
A. Enteric Fermentation																					
B. Manure Management																					
C. Rice Cultivation																					
D. Agricultural Soils																					
E. Prescribed Burning of Savannas																					
F. Field Burning of Agricultural Residues																					
G. Other																					
5 Land-Use Change and Forestry																					
A. Changes in Forest and Other Woody Biomass Stocks																					
B. Forest and Grassland Conversion																					

⁽²⁾ Potential emissions based on Tier 1 approach of the IPCC Guidelines.

⁽³⁾ Actual emissions based on Tier 2 approach of the IPCC Guidelines.

TABLE 7 OVERVIEW TABLE FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 8A)
(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂		CH ₄		N ₂ O		HFCs		PFCs		SF ₆		NO _x		CO		NMVOC		SO ₂		
	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	Estimate	Quality	
5 Land-Use Change and Forestry (continued)																					
C. Abandonment of Managed Lands																					
D. CO ₂ Emissions and Removals from Soil																					
E. Other																					
6 Waste																					
A. Solid Waste Disposal on Land																					
B. Wastewater Handling																					
C. Waste Incineration																					
D. Other																					
7 Other (please specify)																					
Memo Items:																					
International Bankers																					
Aviation																					
Marine																					
Multilateral Operations																					
CO₂ Emissions from Biomass																					

Year :

TABLE 8(a) RECALCULATION - RECALCULATED DATA

Recalculated year:

(Sheet 1 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂		CH ₄		N ₂ O	
	Previous submission	Latest submission	Previous submission	Latest submission	Previous submission	Latest submission
	(CO ₂ equivalent (Gg))	(Gg)	(CO ₂ equivalent (Gg))	(Gg)	(CO ₂ equivalent (Gg))	(Gg)
	Difference ⁽¹⁾	Difference ⁽¹⁾	Difference ⁽¹⁾	Difference ⁽¹⁾	Difference ⁽¹⁾	Difference ⁽¹⁾
	(%)	(%)	(%)	(%)	(%)	(%)
Total National Emissions and Removals						
1. Energy						
1.A. Fuel Combustion Activities						
1.A.1. Energy Industries						
1.A.2. Manufacturing Industries and Construction						
1.A.3. Transport						
1.A.4. Other Sectors						
1.A.5. Other						
1.B. Fugitive Emissions from Fuels						
1.B.1. Solid fuel						
1.B.2. Oil and Natural Gas						
2. Industrial Processes						
2.A. Mineral Products						
2.B. Chemical Industry						
2.C. Metal Production						
2.D. Other Production						
2.G. Other						
3. Solvent and Other Product Use						
4. Agriculture						
4.A. Enteric Fermentation						
4.B. Manure Management						
4.C. Rice Cultivation						
4.D. Agricultural Soils ⁽²⁾						
4.E. Prescribed Burning of Savannas						
4.F. Field Burning of Agricultural Residues						
4.G. Other						
5. Land-Use Change and Forestry (net)						
5.A. Changes in Forest and Other Woody Biomass Stocks						
5.B. Forest and Grassland Conversion						
5.C. Abandonment of Managed Lands						
5.D. CO ₂ Emissions and Removals from Soil						
5.E. Other						

⁽¹⁾ Estimate the percentage change due to recalculation with respect to the previous submission (Percentage change = $100\% \times [(L.S-PS)/PS]$, where L.S = Latest submission and PS = Previous submission. All cases of recalculation the estimate of the source/sink category, should be addressed and explained in Table 8(b) of this common reporting format.

⁽²⁾ See footnote 4 to Summary 1.A of this common reporting format.

Year :

TABLE 8(a) RECALCULATION - RECALCULATED DATA

Recalculated year:

(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂			CH ₄			N ₂ O		
	Previous submission	Latest submission	Difference ⁽¹⁾	Previous submission	Latest submission	Difference ⁽¹⁾	Previous submission	Latest submission	Difference ⁽¹⁾
	CO ₂ equivalent (Gg)	CO ₂ equivalent (Gg)	(%)	CO ₂ equivalent (Gg)	CO ₂ equivalent (Gg)	(%)	CO ₂ equivalent (Gg)	CO ₂ equivalent (Gg)	(%)
6. Waste									
6.A. Solid Waste Disposal on Land									
6.B. Wastewater Handling									
6.C. Waste Incineration									
6.D. Other									
7. Other (please specify)									
Memo Items:									
International Bankers									
Multilateral Operations									
CO ₂ Emissions from Biomass									
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFCs			PFCS			SF₆		
	Previous submission	Latest submission	Difference ⁽¹⁾	Previous submission	Latest submission	Difference ⁽¹⁾	Previous submission	Latest submission	Difference ⁽¹⁾
	CO ₂ equivalent (Gg)	CO ₂ equivalent (Gg)	(%)	CO ₂ equivalent (Gg)	CO ₂ equivalent (Gg)	(%)	CO ₂ equivalent (Gg)	CO ₂ equivalent (Gg)	(%)
Total Actual Emissions									
2.C. Aluminium Production									
2.E. Production of Halocarbons and SF ₆									
2.F. Consumption of Halocarbons and SF ₆									
Other									
Potential Emissions from Consumption of HFCs/PFCs and SF ₆									
	Previous submission			Latest submission			Difference ⁽¹⁾		
	CO ₂ equivalent (Gg)			CO ₂ equivalent (Gg)			(%)		
Total CO ₂ Equivalent Emissions with Land-Use Change and Forestry ⁽¹⁾									
Total CO ₂ Equivalent Emissions without Land-Use Change and Forestry ⁽¹⁾									

⁽¹⁾ The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report emissions and removals from Land-Use Change and Forestry.

TABLE 9 COMPLETENESS
(Sheet 1 of 2)

Sources and sinks not reported (NE) ⁽¹⁾			
GHG	Sector ⁽²⁾	Source/sink category ⁽²⁾	Explanation
CO ₂			
CH ₄			
N ₂ O			
HFCs			
PFCs			
SF ₆			
Sources and sinks reported elsewhere (IE) ⁽³⁾			
GHG	Source/sink category	Allocation as per IPCC Guidelines	Allocation used by the Party
			Explanation

⁽¹⁾ Please, clearly indicate sources and sinks which are considered in the IPCC Guidelines but are not considered in the submitted inventory. Explain the reason for excluding these sources and sinks, in order to avoid arbitrary interpretations. An entry should be made for each source/sink category for which the indicator "NE" is entered in the sectoral tables.
⁽²⁾ Indicate omitted source/sink following the IPCC source/sink category structure (e.g. sector: Waste, source category: Wastewater Handling).
⁽³⁾ Please clearly indicate sources and sinks in the submitted inventory that are allocated to a sector other than that indicated by the IPCC Guidelines. Show the sector indicated in the IPCC Guidelines and the sector to which the source or sink is allocated in the submitted inventory. Explain the reason for reporting these sources and sinks in a different sector. An entry should be made for each source/sink for which the indicator "IE" is used in the sectoral tables.

Year:

TABLE 10 EMISSIONS TRENDS (CO₂)

(Sheet 1 of 5)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Gg)									
1. Energy										
A. Fuel Combustion (Sectoral Approach)										
1. Energy Industries										
2. Manufacturing Industries and Construction										
3. Transport										
4. Other Sectors										
5. Other										
B. Fugitive Emissions from Fuels										
1. Solid Fuels										
2. Oil and Natural Gas										
2. Industrial Processes										
A. Mineral Products										
B. Chemical Industry										
C. Metal Production										
D. Other Production										
E. Production of Halocarbons and SF ₆										
F. Consumption of Halocarbons and SF ₆										
G. Other										
3. Solvent and Other Product Use										
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils ⁽²⁾										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land-Use Change and Forestry⁽³⁾										
A. Changes in Forest and Other Woody Biomass Stocks										
B. Forest and Grassland Conversion										
C. Abandonment of Managed Lands										
D. CO ₂ Emissions and Removals from Soil										
E. Other										
6. Waste										
A. Solid Waste Disposal on Land										
B. Waste-water Handling										
C. Waste Incineration										
D. Other										
7. Other (please specify)										
Total Emissions/Removals with LUCF⁽⁴⁾										
Total Emissions without LUCF⁽⁴⁾										
Memo Items:										
International Bunkers										
Aviation										
Marine										
Multilateral Operations										
CO₂ Emissions from Biomass										

⁽¹⁾ Fill in the base year adopted by the Party under the Convention, if different from 1990.

⁽²⁾ See footnote 4 to Summary 1.A of this common reporting format.

⁽³⁾ Take the net emissions as reported in Summary 1.A of this common reporting format. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

⁽⁴⁾ The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO₂ emissions and removals from Land-Use Change and Forestry.

TABLE 10 EMISSIONS TRENDS (CH₄)
(Sheet 2 of 5)

Year:

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Gg)									
Total Emissions										
1. Energy										
A. Fuel Combustion (Sectoral Approach)										
1. Energy Industries										
2. Manufacturing Industries and Construction										
3. Transport										
4. Other Sectors										
5. Other										
B. Fugitive Emissions from Fuels										
1. Solid Fuels										
2. Oil and Natural Gas										
2. Industrial Processes										
A. Mineral Products										
B. Chemical Industry										
C. Metal Production										
D. Other Production										
E. Production of Halocarbons and SF ₆										
F. Consumption of Halocarbons and SF ₆										
G. Other										
3. Solvent and Other Product Use										
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land-Use Change and Forestry										
A. Changes in Forest and Other Woody Biomass Stocks										
B. Forest and Grassland Conversion										
C. Abandonment of Managed Lands										
D. CO ₂ Emissions and Removals from Soil										
E. Other										
6. Waste										
A. Solid Waste Disposal on Land										
B. Waste-water Handling										
C. Waste Incineration										
D. Other										
7. Other (please specify)										
Memo Items:										
International Bunkers										
Aviation										
Marine										
Multilateral Operations										
CO₂ Emissions from Biomass										

TABLE 10 EMISSIONS TRENDS (N₂O)
(Sheet 3 of 5)

Year:

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Gg)									
Total Emissions										
1. Energy										
A. Fuel Combustion (Sectoral Approach)										
1. Energy Industries										
2. Manufacturing Industries and Construction										
3. Transport										
4. Other Sectors										
5. Other										
B. Fugitive Emissions from Fuels										
1. Solid Fuels										
2. Oil and Natural Gas										
2. Industrial Processes										
A. Mineral Products										
B. Chemical Industry										
C. Metal Production										
D. Other Production										
E. Production of Halocarbons and SF ₆										
F. Consumption of Halocarbons and SF ₆										
G. Other										
3. Solvent and Other Product Use										
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land-Use Change and Forestry										
A. Changes in Forest and Other Woody Biomass Stocks										
B. Forest and Grassland Conversion										
C. Abandonment of Managed Lands										
D. CO ₂ Emissions and Removals from Soil										
E. Other										
6. Waste										
A. Solid Waste Disposal on Land										
B. Waste-water Handling										
C. Waste Incineration										
D. Other										
7. Other (please specify)										
Memo Items:										
International Bunkers										
Aviation										
Marine										
Multilateral Operations										
CO₂ Emissions from Biomass										

TABLE 10 EMISSION TRENDS (HFCs, PFCs and SF₆)
(Sheet 4 of 5)

Year:

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Gg)									
Emissions of HFCs⁽²⁾ - CO₂ equivalent (Gg)										
HFC-23										
HFC-32										
HFC-41										
HFC-43-10mee										
HFC-125										
HFC-134										
HFC-134a										
HFC-152a										
HFC-143										
HFC-143a										
HFC-227ea										
HFC-236fa										
HFC-245ca										
Emissions of PFCs⁽²⁾ - CO₂ equivalent (Gg)										
CF ₄										
C ₂ F ₆										
C ₃ F ₈										
C ₄ F ₁₀										
i-C ₄ F ₈										
C ₅ F ₁₂										
C ₆ F ₁₄										
Emissions of SF₆⁽²⁾ - CO₂ equivalent (Gg)										
SF ₆										

⁽²⁾ Enter information on the actual emissions. Where estimates are only available for the potential emissions, specify this in a footnote. Only in this row the emissions are expressed as CO₂ equivalent emissions in order to facilitate data flow among spreadsheets.

TABLE 10 EMISSION TRENDS (SUMMARY)
(Sheet 5 of 5)

Year:

GREENHOUSE GAS EMISSIONS	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998
	CO ₂ equivalent (Gg)									
Net CO ₂ emissions/removals										
CO ₂ emissions (without LUCF) ⁽⁶⁾										
CH ₄										
N ₂ O										
HFCs										
PFCs										
SF ₆										
Total (with net CO ₂ emissions/removals)										
Total (without CO ₂ from LUCF) ⁽⁶⁾										

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998
	CO ₂ equivalent (Gg)									
1. Energy										
2. Industrial Processes										
3. Solvent and Other Product Use										
4. Agriculture										
5. Land-Use Change and Forestry ⁽⁷⁾										
6. Waste										
7. Other										

⁽⁶⁾ The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO₂ emissions and removals from Land-Use Change and Forestry.

⁽⁷⁾ Net emissions.

TABLE 11 CHECK LIST of REPORTED INVENTORY INFORMATION⁽¹⁾

Party: _____

Year: _____

Contact info:	Focal point for national GHG inventories:					
	Address:					
	Telephone:	Fax:	E-mail:			
	Main institution preparing the inventory:					

General info:	Date of submission:					
	Base years:	PFCs, HFCs, SF ₆ :				
	Year(s) covered in the submission:					
	Gases covered:					
	Omissions in geographic coverage:					

Tables:		Energy	Ind. Processes	Solvent Use	LUCF	Agriculture	Waste
	Sectoral report tables:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Sectoral background data tables:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Summary 1 (IPCC Summary tables):	IPCC Table 7A:		<input type="checkbox"/>	IPCC Table 7B:		<input type="checkbox"/>
	Summary 2 (CO ₂ equivalent emissions):	<input type="checkbox"/>					
	Summary 3 (Methods Emission factors):	<input type="checkbox"/>					
	Uncertainty:	IPCC Table 8A:		<input type="checkbox"/>	National information:		<input type="checkbox"/>
	Recalculation tables:	<input type="checkbox"/>					
	Completeness table:	<input type="checkbox"/>					
	Trend table:	<input type="checkbox"/>					

CO ₂	Comparison of	Worksheet I-1	Percentage of difference	Explanation of differences
	CO ₂ from fuel combustion:	<input type="checkbox"/>	0.0000	<input type="checkbox"/>

Recalculation:		Energy	Ind. Processes	Solvent Use	LUCF	Agriculture	Waste
	CO ₂	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH ₄	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	N ₂ O	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	HFCs, PFCs, SF ₆	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Explanations:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Recalculation tables for all recalculated years:	<input type="checkbox"/>					
Full CRF for the recalculated base year:	<input type="checkbox"/>						

HFCs, PFCs, SF ₆		HFCs		PFCs		SF ₆	
	Disaggregation by species:	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
	Production of Halocarbons/SF ₆ :	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
	Consumption of Halocarbons/SF ₆ :	Actual	Potential	Actual	Potential	Actual	Potential
	Potential/Actual emission ratio:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reference to National Inventory Report and/or national inventory web site:	
--	--

CRF - Common Reporting Format.

LUCF - Land-Use Change and Forestry.

⁽¹⁾ For each omission, give an explanation for the reasons on a separate page attached to the check list.