



缔约方会议

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审查各项承诺及《公约》其他条款的执行情况

国家信息通报：《公约》附件一所列

缔约方的温室气体清单

《气候公约》报告和审评指南

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导 言

本文件所载是两套与《公约》附件一所列缔约方(附件一缔约方)温室气体清单有关的经修订的指南，这些指南经缔约方会议第八届会议通过，作为附件附于第 18/CP.8 和 19/CP.8 号决定(FCCC/CP/2002/7/Add.2)。

第一套指南题为“《气候公约》附件一所列缔约方国家信息通报编制指南，第一部分：《公约》年度清单报告指南”，在第 18/CP.8 号决定中通过。该决定要求附件一缔约方开始使用这些指南编制应于 2004 年报告的年度清单。关于应于 2003 年提交的清单，该决定规定附件一缔约方继续使用第 3/CP.5 号决定所通过的原有清单报告指南。附件一缔约方的年度清单应于每年 4 月 15 日之前提交。

第二套指南题为“《公约》附件一所列缔约方温室气体清单技术审评指南”，在第 19/CP.8 号决定中通过。该决定要求从 2003 年开始使用这些指南审评温室气体清单。

现将两套指南编入一份文件，以便于附件一缔约方使用。

《公约》附件一所列缔约方国家清单报告编制指南， 第一部分：《气候公约》年度清单报告指南

A. 目 的

1. 《气候公约》年度清单报告指南的目的是：
 - (a) 协助《公约》附件一所列缔约方(附件一缔约方)履行根据《公约》第四条和第十二条承担的义务，并协助《京都议定书》缔约方准备履行根据《京都议定书》第三条、第五条和第七条承担的义务；
 - (b) 便利年度国家清单的审议工作，包括编写技术分析报告与综合文件；
 - (c) 便利清单信息的核实、技术评估和专家审评工作。

B. 原则和定义

2. 国家温室气体清单(以下简称清单)应具有透明度、一致性、可比性、完整性和准确性。
3. 清单的编制应按以下第 9 段所述，采用由缔约方会议商定的可比方法。
4. 在《气候公约》年度清单报告指南的范围内：

透明度是指，对清单使用的假设和方法应作出清楚的解释，以便利清单的用户复验和评估报告的信息。清单的透明度是信息的通报和审议工作成功与否的关键；

一致性是指，一份清单应与其他年份清单的所有内容保持内在一致性。如果对基准年和其后所有年份均采用相同的方法并且采用一致的数据集估算源排放量或汇清除量，则这份清单即具备了一致性。在第 15 和第 16 段所述的某些情况下，对不同年份使用不同方法的清单，如果已按照气候变化专门委员会(气专委)《国家温室气体清单的良好做法指导意见和不确定性的掌握》¹ 以透明方式作了重新计算，可视为具有一致性；

可比性是指，附件一缔约方在清单中报告的排放量和清除量估计数在附件一缔约方之间应是可比较的。为此目的，附件一缔约方应使用缔约方会议同意的方法和格式估算和报告清单。不同的源/汇类别的划定应沿用修订的 1996 年气专委国家温室气体清单编制指南² 简表和部门表格的划分；

完整性是指，一份清单应包括气专委指南中载列的所有源和汇和所有气体，以及因是各个附件一缔约方所特有而可能未纳入气专委指南中的其他现有相关的源/汇的类别。完整性还指一附件一缔约方对源和汇的全部地理覆盖；³

准确性是指，排放量或清除量估计数准确性的相对尺度。估计数应当准确，即，在可判断的前提下估计数应全面保证既不高于也不低于实际排放量或清除量，并尽可能减少不确定性。应遵照气专委良好做法指导意见，采用适当的方法，以便提高清单的准确性。

¹ 本文件下称“气专委良好做法指导意见”。气专委目前正在研订“土地利用、土地利用的变化和林业的良好做法指导意见”。

² 本文件下称“气专委指南”。

³ 视每个附件一缔约方的《公约》批准、接受、核准或加入书而定。

5. 就本指南而言，编制温室气体清单所用的通用术语定义就是气专委良好做法指导意见中的定义。

C. 范 围

6. 按照第 11/CP.4 号决定和缔约方会议的其他有关决定的规定，《气候公约》年度清单报告指南所涉及的范围，包括年度清单和国家信息通报中所载清单的温室气体排放量和清除量的估算和报告。

7. 一次提交的年度清单材料应包含第 38 至 43 段及第 44 至 50 段分别述及的国家清单报告和通用报告格式。

D. 基 准 年

8. 应将 1990 年定为估算和报告清单的基准年。根据《公约》第四条第 6 款的规定和第 9/CP.2 和第 11/CP.4 号决定，允许下列正在向市场经济转型的附件一缔约方采用 1990 年以外的某一年或若干年作为基准年，安排如下：

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

E. 方 法

方法学

9. 附件一缔约方应采用气专委指南，估算和报告《蒙特利尔议定书》未予管制的温室气体人为源排放量和汇清除量。附件一缔约方在编制这类气体的国家清单时，还应采用气专委良好做法指导意见，以便提高透明度、一致性、可比性、完整性和准确性。

10. 根据气专委的指南，附件一缔约方可采用上述指南中列出的不同方法(层级)，对按气专委良好做法指导意见决策构架中可产生较准确估计数的方法给予优先考虑。按照气专委指南，附件一缔约方也可使用其认为能更好地反映本国情况的本国方法，但这些方法应符合气专委指南和气专委的良好做法指导意见，并应保存完好的文件记录和具备科学依据。

11. 对于按照气专委良好做法指导意见确定为关键源类别并按照以下第 13 段规定估算的源类别，附件一缔约方应尽一切努力按照气专委良好做法指导意见中的相应决策构架采用建议的方法。附件一缔约方还应尽一切努力研订和/或选择排放系数，并按照气专委良好做法指导意见收集和选择活动数据。

12. 对于大多数源类别，气专委指南提出了一套预先设定的(缺省)方法，它包括设定的排放系数，在有些情况下还包括设定的活动数据的参考出处。此外，气专委良好做法指导意见为某些源和气体提出了更新的缺省排放系数和缺省活动数据。由于这些缺省数据、系数和方法所隐含的

假设可能并不适合具体国家的情况，因此附件一缔约方在可能的情况下最好采用本国的排放系数和活动数据。然而，这些系数和数据的制定方法必须符合气专委良好做法指导意见，而且应认为更加准确，报告也应透明。如果附件一缔约方因缺少具体国别信息而选用缺省系数或数据，在可能的情况下均应使用气专委良好做法指导意见中所提供的更新的缺省活动数据或排放系数。

关键源类别的确定

13. 附件一缔约方应按照气专委良好做法指导意见中的规定，采用第一级或第二级分析方法和趋势评估办法，确定其基准年的国家关键源类别及最近提交报告的清单年。

不确定性

14. 附件一缔约方应按照气专委良好做法指导意见的规定，至少使用第一级方法对所有源和汇类别所用数据的不确定性作出量化估算。或者，缔约方也可以采用气专委良好做法指导意见中的第二级方法，以避免第一级方法在技术上的局限性。还应在国家清单报告中从质的方面以透明的方式叙述所有源和汇类别所用数据的不确定性，尤其是对于被定为关键源的各个源。

重新计算

15. 一个完整时间序列的清单，包括提出清单报告的基准年和之后各年，应采用同样的方法作出估算，并且应当以一种前后一致的方式获取和使用基本活动数据和排放系数。重新计算应确保时间序列的一致性，重新计算的唯一目的在于提高准确性和/或完整性。凡收集基本活动数据和排放系数的方法或方式发生变化时，附件一缔约方应对基准年和之后各年的清单重新作出计算。附件一缔约方应对照气专委良好做法指导意见中提供的理由，尤其是有关关键源的理由，对是否需要重新计算作出评估。进行重新计算应依照气专委良好做法指导意见和本《气候公约》指南所列一般原则。

16. 在有些情况下，由于可能缺乏直接用于包括基准年在内的某些历史年份排放量估计数计算中的活动数据、排放系数或其他参数，可能无法就所有年份使用相同的方法和一致的数据集。遇有这种情况，可能需要使用第 9 至第 12 段一般未涵盖的替代方法重新计算排放量或清除量。在这类情况下，附件一缔约方应使用气专委良好做法指导意见中提供的办法之一(如：重叠法、替代法、内插法和外推法)确定缺失的数值。在使用这类办法的情况下，附件一缔约方应加以记录并在国家清单报告中证明时间序列是一致的。

质量保证/质量控制

17. 每个附件一缔约方应按照依据气专委良好做法指导意见确定的质量保证/质量控制计划，详细拟订一项清单质量保证/质量控制计划并执行总的清单质量控制程序(第一级)⁴。此外，对于关键源类别和发生重大方法变更和/或数据修改的个别源类别，附件一缔约方应按照气专委良好做法

⁴ 概要见气专委良好做法指导意见表 8.1。

指导意见,应用源类别特定的质量控制程序(第二级)。第二级质量控制与评估数据源不确定性结合进行可能效率更高。另外,附件一缔约方应按照气专委良好做法指导意见通过对清单的专家平级基本审评实施质量保证程序。

F. 报 告

1. 一般指导意见

排放量和清除量估计数

18. 《公约》第十二条第 1 款(a)项要求每一缔约方除其他外,通过秘书处向缔约方会议提交一份关于《蒙特利尔议定书》未予管制的所有温室气体各种源的人为排放量和各种汇的清除量的国家清单。作为一项起码要求,清单应至少包含以下六种温室气体的信息:二氧化碳(CO₂)、甲烷(CH₄)、一氧化二氮(N₂O)、全氟碳化物(PFCs)、氢氟碳化物(HFCs)和六氟化硫(SF₆)。对已由气专委确定其百年全球升温潜能值(GWP)并经缔约方会议通过的所有其他温室气体,附件一缔约方应提出人为排放量和清除量的报告。附件一缔约方还应提供下列间接温室气体的信息:一氧化碳(CO)、氧化氮(NO_x)和非甲烷挥发性有机化合物(NMVOCs),以及氟化硫(SO_x)。

19. 温室气体排放量和清除量应按质量单位逐项气体分别提出,源排放量应与汇清除量分别列出,土地利用、土地利用的变化和林业等领域关于源和汇的信息在技术上无法区分的情况除外。对于氢氟碳化物和全氟碳化物,除非在适用以下第 27 段的情况下,否则应以分列方式就这一类中的每一有关化学物质分别提出排放量报告。

20. 此外,按照第 2/CP.3 号决定,附件一缔约方应在简要清单中按 CO₂ 当量⁵报告温室气体的合计排放量和清除量,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变化的影响提出的全球升温潜能值(以下称为 1995 年气专委全球升温潜能值)。这些数值列在本指南末尾的表 1 中。一旦缔约方会议通过全球升温潜能值,将对表 1 加以修正,列入新的温室气体及其百年全球升温潜能值。

21. 按照第 2/CP.3 号决定,如有数据,附件一缔约方应报告 HFCs、PFCs 和 SF₆ 的实际排放量,按照化学品(如 HFC-134a)和源类别以质量单位和 CO₂ 当量提供分项数据。附件一缔约方应尽最大努力为报告实际排放量开发必要的数据来源。有些源类别符合潜在排放的概念,附件一缔约方尚无计算实际排放量的必要数据,对此附件一缔约方应报告分项潜在排放量。为了透明和可加以比较,报告实际排放量的附件一缔约方对于符合潜在排放量概念的排放源也应报告潜在排放量。

22. 任何同时也是《京都议定书》缔约方的附件一缔约方,凡按照《京都议定书》第三条第 8 款选定将 1995 年用作根据《京都议定书》第三条第 7 款和第 8 款计算 HFCs、PFCs 和 SF₆ 分配数量的基准年的,均应在国家清单报告和通用报告格式相关表格的文件资料框中予以注明。不论为《京都议定书》目的选定哪一年为这些气体的基准年,凡是清单数据,这类附件一缔约方都应按照本指南的规定报告 1990 年以来这些气体的排放量估计数和趋向。

⁵ 应按照类似于通用报告格式简表 1.A 中同一类别分计方式提供 CO₂ 当量的排放量。

23. 大力提倡附件一缔约方报告已算出百年升温潜能值但未经缔约方会议予以通过的其他温室气体的排放量和清除量。这类排放量和清除量应与国家的总量分开报告。应注明全球升温潜能值和参考出处。

24. 根据气专委的指南，国际航空和船用仓载燃料的排放量不应列入国家总量，而应单独报告。附件一缔约方应尽最大努力，按照气专委的良好做法指导意见，采用并报告对国内排放量和国际排放量加以区别的方法。附件一缔约方还应在其清单中作为两个单独的条目报告国际航空和船用仓载燃料的排放量。

25. 附件一缔约方应按照气专委良好做法指导意见在能源或工业加工部门注明清单中如何计入原料以及燃料的非能源使用。

26. 如果附件一缔约方在清单中计入废气的 CO₂ 捕获和随后 CO₂ 贮存的效应，应注明计入此类效应的源类别，并就所用方法及由此而形成的效应提供透明的文件材料。

27. 排放量和清除量应按照每种源/汇类别尽可能细分，同时考虑到为保护商业机密和军事情报而可能需要某种最低限度的合计。

完整性

28. 凡清单中出现方法或数据差缺之处，应以透明方式对这些差缺加以说明。附件一缔约方应明确指出其清单中未与考虑但气专委指南已列入的源和汇并说明没有列入的理由。同样，附件一缔约方应指出清单未涵盖的任何地理区域，并说明未予涵盖的理由。此外，附件一缔约方在填写通用报告格式所有表格的单元格时应使用下列标准标记符号⁶。这样做便于对清单的完整性做出评估。标准标记符号如下：

- (a) “NO” (未发生)，指在一个国家某一源或汇类别中的活动或过程没有发生；
- (b) “NE” (未估算)指对温室气体现有源排放量和汇清除量没有做出估算。如果在一份关于 CO₂、N₂O、CH₄、HFCs、PFCs 和 SF₆ 的排放量或清除量清单中填写“NE”，附件一缔约方应在国家清单报告和通用报告格式完整性表格中说明未估算排放量或清除量的理由；⁷
- (c) “NA” (不适用)，指某一源/汇类别中的活动没有产生特定气体的排放或清除。如果通用报告格式中适用填写“NA”是灰色阴影，则不必填写；
- (d) “IE” (另列)，指对温室气体的源排放量和汇清除量已作出估算，但列在清单中的别处，而未归入预期应填的源/汇类别。在清单中填写“IE”时，附件一缔约方应使用通用报告格式中的完整性表格，指明未列于此处的源/汇类别的排放量或清除量列在清单何处，而且附件一缔约方应当解释从预期应填类别中移去的理由；
- (e) “C” (机密)，指温室气体的源排放量和汇清除量可能导致机密情报的泄露，以上第 27 段对此作出了规定。

⁶ 如国家清单报告中使用时这类标记符号，应与通用报告格式中填报的保持一致。

⁷ 即便排放量被认为微不足道，如已计算，则缔约方仍应加以报告，否则应使用编写字“NE”。

29. 如果附件一缔约方估算并报告了未列入气专委指南中的国家特有源或汇或气体的排放量和清除量，应明确说明它们属于哪种源/汇类别或气体，以及在对它们作出估算时采用了哪些方法，排放系数和活动数据，并提供这些数据的参考出处。

关 键 源

30. 附件一缔约方应在排放水平和排放趋势两方面估算和报告关键源类别排放量在其国家总计各自和累计所占的比例。应采用气专委良好做法指导意见中规定的方法以 CO₂ 当量表示排放量。如以下第 41 和 47 段所示，这一信息应列入通用报告格式表 7 以及国家清单报告，为此应使用按照附件一缔约方用于确定关键源的类别分划层级修改的气专委良好做法指导意见的表 7.A1-7.A3。

核 实

31. 根据气专委指南以及为了核实目的，附件一缔约方应对其燃料燃烧产生的二氧化碳排放量的国家估计数与采用气专委参比办法得出的估计数加以比较，并在通用报告格式和年度清单中加以报告比较的结果。还鼓励附件一缔约方报告其国内对清单的同级审评。

不确定性

32. 附件一缔约方应在国家清单报告中报告以上第 14 段所指估算的不确定性以及所采用的方法和依据的假设，其目的在于确定优先顺序，提高今后国家清单的准确性并指导选择方法的决定。提供这一信息应使用气专委良好做法指导意见表 6.1 和 6.2。此外，附件一缔约方应在这些表格中注明清单中定为关键源的各个源。如果估算不确定性水平所采用的方法不同于气专委良好做法指导意见，应当对这类方法加以说明。

重新计算

33. 如果由于方法的改变排放系数和活动数据获取和使用的方式的改变、或增加自基准年以来就存在但以前未报告的新的源和汇等原因重新计算了以前提交的排放量和清除量的估计数，应报告这种重新计算，报告应涵盖基准年和其后各年，直至作出重新计算的年份为止。

34. 应在国家清单报告和有关的通用报告格式表格中报告经重新计算的数据，并在国家清单报告中附带解释性资料。如果附件一缔约方对估计数未做重新计算而气专委良好做法指导意见规定应做重新计算，则还应做出解释。应报告重新计算时采用的程序、计算方法的变化、使用的排放系数和活动数据以及列入的原先未涵盖的源或汇，并注明发生上述变化的源或汇类别的有关变化。对于关键源，附件一缔约方应按照以下第 41 段的规定将这一信息列入国家清单报告。

35. 附件一缔约方应按照以下第 47 段的说明和本指南附件二的概要解释，使用相应的通用报告格式表报告排放量和清除量估计数中的任何其它变化，不论其幅度如何，并明确说明与以前提交的清单比较作出改变的理由，例如，更正错误、统计或编辑方面的修改或源的重新编排。

质量保证/质量控制

36. 附件一缔约方应在国家清单报告中报告其质量保证/质量控制计划，并提供已经执行或未来将要执行的质量保证/质量控制程序方面的信息。

调 整⁸

37. 报告清单时不报告气候变异或电力贸易方式等方面的调整。如果附件一缔约方另外对清单数据做出这种调整，它们应以透明方式另行报告，并清楚地说明采用的方法。

2. 国家清单报告

38. 附件一缔约方应通过秘书处向缔约方会议提交国家清单报告，该报告载有关于国家清单的详细、完整的信息。国家清单报告应保证具有透明度并载有充分详细的信息以便能够对清单做出审评。这种信息应包含从基准年⁹至最近的清单年的整个时间序列和对以往提交的清单做出的任何更改。

39. 应按照缔约方会议的有关决定，每年通过秘书处以电子方式向缔约方会议提交完整的最新国家清单报告；如附件一缔约方发行国家清单报告的硬拷贝，也希望它们将其交给秘书处。

40. 国家清单报告应包括按照以上第 38 段提交的年度清单信息。

41. 国家清单报告应包括以下内容：

- (a) 具体方法、假设、排放系数和活动数据的说明、参考出处和资料来源，并说明予以选定的理由。此外，还应包括指明采用方法的复杂程度(气专委规定的层级)和说明附件一缔约方使用的任何本国方法，以及预测未来改进方面的信息。对于关键源，如果未采用气专委良好做法指导意见中恰当的决策构架所建议的方法，则应加以解释。此外，应按照气专委良好做法指导意见记录活动数据、排放系数和相关信息。
- (b) 说明第 30 段中所指的国家关键源，¹⁰ 其中包括：
 - (一) 关于通用报告格式中的关键源表位置的说明；
 - (二) 关于使用的源类别分计程度及其理由方面的信息；
 - (三) 为查明关键的排放源而采用的方法学方面的其他信息；
- (c) 关于对排放量可能存在双重计算或漏算问题，应在国家清单报告中的相应部门一节加以说明：
 - (一) 原料及燃料的非能源使用是否已计入清单，如果已计入，它们在能源或工业加工部门是如何计入的；

⁸ 这里所指的调整涉及气候变异或电力贸易的方式等。它们并非指《京都议定书》第五条第 2 款下的调整。

⁹ 按照《公约》第四条第 6 款及第 9/CP.2 号 and 第 11/CP.4 号决定的规定，允许某些经济转型缔约方如以上第 8 段所提到的那样，采用 1990 年以外的年份作为基准年。

¹⁰ 秘书处还将基于气专委良好做法指导意见中的表 7.1 对所有缔约方做出一种标准的关键源判定。如果它与缔约方编制清单的方法相符合，也可以采用这种方法。

- (二) 对农业土壤中的 CO₂ 是否做了估算, 如果做了估算, 是否是在农业部门(4.D 类 — 农业土壤)或土地利用的变化和林业部门(5.D 类 — 土壤中的 CO₂ 排放量和清除量);
- (三) 清单中是否计入了与溶剂使用、采煤以及矿物燃料装卸、洗井和渗漏等非燃烧和非生物源 CO、NMVOCs 及 CH₄ 大气氧化对应的 CO₂ 排放量;
- (四) 关于未计入或可能未计入的源或汇类别的信息, 包括为未来提交报告计算估计数的工作情况;
- (d) 估算土地利用的变化和林业部门排放量和清除量过程中所用的背景数据以提高透明度;¹¹
- (e) 关于废气 CO₂ 捕获及随后 CO₂ 贮存的效应如何计入清单的说明;
- (f) 以上第 32 段要求的关于不确定性的资料;
- (g) 以上第 33 至第 35 段要求的关于对以往提交的清单数据加以重新计算的信息, 包括方法学、信息来源和假设的变化, 以及审评之后按要求进行的重新计算;
- (h) 关于与重新计算无关的、与往年相比的变化, 包括方法学、信息来源和假设的变化, 以及审评之后的变化;
- (i) 以上第 36 段要求的质量保证/质量控制方面的信息, 其中说明内部掌握的关于整个清单及单个源类别、尤其是关键源的质量保证/质量控制计划和质量保证/质量控制活动, 以及在具备的情况下, 由外部做出的审评。应说明输入数据的质量、方法、处理和存档方面的关键调查结果和它们是如何处理的;
- (j) 说明编写清单的体制安排。

42. 如果以上第 41 段(a)至(h)分段要求的信息已详细列入通用报告格式中, 附件一缔约方应在国家清单报告中指明通用报告格式中的何处提供了这一信息。

43. 应按照本指南附件一所列的内容概要报告国家清单报告, 确保以上第 41 段要求的信息全部列入。

3. 通用报告格式

44. 通用报告格式的设计目的在于确保附件一缔约方以一种标准化的格式报告量化数据并便于在附件一缔约方之间比较清单数据和趋势。主要应在国家清单报告中而不是通用报告格式表格中对非量性信息做出解释。这种解释信息应对应注明国家清单报告的具体章节。

45. 附件一缔约方应通过秘书处, 每年向缔约方会议提交本指南附件二所载的通用报告格式要求提交的信息。应按照缔约方会议有关决定通过秘书处每年以电子方式完整地提交这些信息。

46. 通用报告格式是报告温室气体排放量和清除量估计数和其他有关信息的标准化格式。采用通用报告格式, 可改进对电子提交内容的管理, 便于对清单信息的处理和编制有用的技术分析和综合文件。

¹¹ 在气专委完成关于土地利用、土地利用的变化和林业部门良好做法指导意见后, 科学技术咨询机构(科技咨询机构)不妨审议这个问题, 并酌情在本指南今后的修订中扩充这一分段。

47. 通用报告格式由以下部分组成：

- (a) 所有温室气体排放量和清除量的简表、部门表和趋势表；
- (b) 用于报告隐含排放系数¹²和活动数据的部门背景数据表，其中包括：
 - (一) 气专委工作单 1-1，其中载有采用气专委参比办法对燃料燃烧产生的 CO₂ 排放量的估计数，还载有一份表格，用以对采用这一参比办法得出的估计数与部门办法之下的估计数加以比较，并对任何明显的差别作出解释；¹³
 - (二) 报告非能源原料、国际仓载燃料和多边作业的矿物燃料燃烧的表格；
- (c) 主要报告关键源类别、重新计算和清单完整性的表格。

48. 对通用报告格式应按照本指南附件二所列的表格加以报告，确保列入以上第 47 段中所有要求的全部信息。在填写上述表格时附件一缔约方应：

- (a) 就最近清单年份和对任何部门有任何更改的年份提供完整的通用报告格式。对于没有更改的年份，无须重新提交完整的通用报告格式，但在提交清单时应提到最初报告的数据没有变化。附件一缔约方应确保每年提供基准年以来整个时间所列的全套、符合此种序列的通用报告格式表格；
- (b) 仅在一次提交中提供包含完整时间序列的清单年通用报告格式趋势表，即在上一清单年的通用报告格式中提供；
- (c) 如果信息适用于所有年份，应只在一次提交中提供完整性表格。如果上述表格中的信息与每一报告年不同，则必须在每一年的通用报告格式中或者提供表格，或者提供关于具体变化的信息；
- (d) 使用部门报告和背景数据表格下端的文件资料框提供由国家清单报告做出详细解释之处的参考出处或由这些框具体说明的任何其他信息。

49. 附件一缔约方应在补充资料框中提供所要求的信息。凡由于附件一缔约方采用的方法学等级而使所要求的信息显得不适用时，应使用标记符号“NA”填写相应的单元格。遇有这种情况，附件一缔约方应在文件资料框中注明可在国家清单报告中找到对应内容的相关章节之处。

50. 附件一缔约方应在清单的所有表格中使用以上第 28 段中规定的标记符号，填写未直接填报量性数据的单元格。以这种方式使用标记符号便于对清单的完整性做出评估。关于在通用报告格式表格中不要求量化信息之处使用标记符号的情况，对于如何在每一张表中使用标记符号做出了具体的指导。

G. 存 档

51. 附件一缔约方应收集并保存每一年的所有相关的清单信息，其中包括所有分列的排放系数、活动数据及说明这些系数和数据是如何算出的文件资料，其中包括可能会有专家判断，以及如何加以合计并在清单中报告的方式。这种信息可使专家审评小组能够重新推导出清单。应从

¹² 部门背景数据表格的设计，为的是对隐含排放系数作出计算。它们是表中所列合计附件一缔约方排放量估计数和活动数据之间自上而下的比率。隐含排放系数完全是为了用于比较数据。它们并不一定是在最初排放量估计数中实际使用的排放系数，除非是一种基于计算隐含排放系数所用相同合计活动数据的简单乘法运算。

¹³ 详细解释应列入国家清单报告。

基准年开始对清单信息加以存档，并应包括重新计算所采用的相应数据。“文件线索”可包括用于汇集清单数据的电子数据表或数据库，应使排放量和清除量估计数能够追溯到最初的分列排放系数和活动数据。另外，与质量保证/质量控制工作、不确定性评估或关键源分析相关的佐证文件也应存档。这种信息还有助于秘书处在编制年度清单汇编或对方法问题做评估时及时对清单数据做出澄清。鼓励附件一缔约方由一个单一的国家清单设施收集和搜集信息，或至少将设施数目减少到最低程度。

H. 系统更新指南

52. 应按照缔约方会议的相关决定，审查和修订本项《气候公约》报告指南。

I. 语 文

53. 国家清单报告应以联合国的一种正式语文提交。另外，还鼓励附件一缔约方视情况提交国家清单报告的英文译本。

表 1. 1995 年气专委根据 100 年时间内温室气体
效应计算的全球升温潜能值 a/

温室气体	化学分子式	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
氢氟碳化合物 (HFCs)		
HFC-23	CHF ₃	11,700
HFC-32	CH ₂ F ₂	650
HFC-41	CH ₃ F	150
HFC-43-10mee	C ₅ H ₂ F ₁₀	1,300
HFC-125	C ₂ H ₂ F ₅	2,800
HFC-134	C ₂ H ₂ F ₄ (CHF ₂ CHF ₂)	1,000
HFC-134a	C ₂ H ₂ F ₄ (CH ₂ FCF ₃)	1,300
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)	3,800
HFC-227ea	C ₃ HF ₇	2,900
HFC-236fa	C ₃ H ₂ F ₆	6,300
HFC-245ca	C ₃ H ₃ F ₅	560
全氟化碳		
全氟化甲烷	CF ₄	6,500
全氟乙烷	C ₂ F ₆	9,200
全氟丙烷	C ₃ F ₈	7,000
全氟丁烷	C ₄ F ₁₀	7,000
全氟环丁烷	c-C ₄ F ₈	8,700
全氟戊烷	C ₅ F ₁₂	7,500
全氟己烷	C ₆ F ₁₄	7,400
六氟化硫		
六氟化硫	SF ₆	23,900

a/ 按照气专委第二份评估报告的规定。

附 件 一

国家清单报告结构

内容提要

- 内容提要 1. 关于温室气体和气候变化的背景信息(如：联系国情向公众通报情况)
- 内容提要 2. 与趋势有关的国家排放量和清除量概要
- 内容提要 3. 源和汇类别排放量估计数和趋势概览
- 内容提要 4. 其他信息(如：间接温室气体)

第一章：导 言

- 1.1 关于温室气体清单和气候变化的背景信息(如：联系国情向公众通报情况)
- 1.2 关于编制清单的体制安排的说明
- 1.3 关于编制清单的程序(数据收集、数据处理、数据储存)的简要介绍
- 1.4 关于所用方法和数据来源的简要概括介绍
- 1.5 关于关键源类别的简要介绍
- 1.6 关于质量保证/质量控制计划的信息，相关之处包括机密问题的核实和处理
- 1.7 总的不确定性评估，其中包括清单总计数整体不确定性的数据
- 1.8 关于完整性的总体评估(参考国家清单报告结构附件 5)

第二章：温室气体排放量趋势

在本章中提供的信息应助于概览排放趋势，但无需重复在部门章节和通用报告格式趋势表格中提供的信息。

- 2.1 关于温室气体合计排放趋势的说明和解释
- 2.2 关于每种气体排放趋势的说明和解释
- 2.3 关于每种源排放趋势的说明和解释
- 2.4 关于间接温室气体和 SO₂ 排放趋势的说明和解释

第 3-9 章：(例如：部门名称(通用报告格式部门编号))

下列各个部门章节应遵循以下结构。应按照气专委规定的部门报告信息。

- 3.1. 部门概览(如：非量性的概览和说明)
- 3.2. 源类别(通用报告格式源类别编号)

对于气专委所定的每一种源类别(即，通用报告格式简表 1.A，或说明了气专委方法的层次，或附件一缔约方估算了温室气体排放量的层次)，应提供下列信息：

- 3.2.1. 关于源类别的说明(如: 源的特性)
- 3.2.2. 方法学问题(如: 方法/活动数据/排放系数、假设、参数以及排放量和清除量估计数所依据的标示方式的选择——选定这些要素的理由、任何具体的方法学问题(如: 关于本国方法的说明))
- 3.2.3. 不确定性与时间序列的一致性
- 3.2.4. 特定源的质量保证/质量控制和核查(适用情况下)
- 3.2.5. 特定源的重新计算(适用情况下), 包括审评之后相应做的改变
- 3.2.6. 特定源的计划的改进(适用情况下)(如: 方法学、活动数据、排放系数等等), 包括审评之后相应做的改进

附件一缔约方如果使用的同样的方法、活动数据和/或排放系数, 可以合计的方式就某些/一些源类别报告以上所要求的某些信息, 以便信息重复。对于关键源类别, 信息应详细, 以便能够对清单作透彻的审评。

第 3 章: 能源(通用报告格式部门 1)

此外, 能源方面的信息应包括下列各项:

燃料燃烧(通用报告格式部门 1A), 包括下列详细信息:

- 部门办法与参比办法的比较
- 国际舱载燃料
- 原料和燃料的非能源使用
- 废气的 CO₂ 捕获及随后的 CO₂ 贮存
- 特定国家的问题

国际燃料以及石油和天然气的散逸性排放(通用报告格式 1B)

第 4 章: 工业加工(通用报告格式部门 2)

第 5 章: 溶剂和其他产品使用(通用报告格式部门 3)

第 6 章: 农业(通用报告格式部门 4)

第 7 章: 土地利用的变化和林业(通用报告格式部门 5)

第 8 章: 废弃物(通用报告格式部门 6)

第 9 章: 其他(通用报告格式部门 7)(适用情况下)

此外, 原先在试验阶段所用通用报告格式(FCCC/CP/1999/7)补充信息框和文件材料框中提供的信息, 应按照本拟议结构附录的规定在相关之处纳入国家清单报告并予以补充。

第 10 章：重新计算和改进

在本章中提供的信息应有助于概览清单的重新计算和改进，但无需重复在部门章节中提供的信息，特别是应提供的特定源的信息，尤其是，附件一缔约方应注明部门章节中所提供信息的位置。

- 10.1. 关于重新计算的解释和理由
- 10.2. 对于排放水平的影响
- 10.3. 对于排放趋势的影响，包括时间序列的一致性
- 10.4. 重新计算，包括审评之后的相应重新计算，以及计划对清单作的改进(例如：体制安排、清单编制)

参考材料

国家清单报告附件

附件 1：关键源

- 关于用于确定关键源的方法的说明
- 注明关键源表载通用报告格式中的位置
- 关于分划层次的说明
- 气专委良好做法指导意见表 7.A1-7.A3 ¹

附件 2：关于估算矿物燃料燃烧 CO₂ 排放量所用方法和数据的详细叙述

附件 3：关于个别源类别或汇类别(相关情况下)的与方法学有关的其他详细叙述

附件 4：CO₂ 参比办法和与部门办法的比较，以及关于国家能源平衡的有关信息

附件 5：关于完整性和未列入的温室气体(潜在)源和汇排放量的评估

附件 6：作为国家清单报告提交材料(相关情况下)一部分加以考虑的补充信息或其他有用的参考信息

附件 7：气专委良好做法指导意见表 6.1 和 6.2 ²

附件 8：其他附件——(其他有关信息——备选)

¹ 增加此项，以便与本指南第 30 段的规定保持一致。

² 增加此项，以便与本指南第 32 段和第 41(f)段的规定保持一致。

附录 A

关于列入国家清单报告相应章节的 部门报告的额外要求

本附录就附件一缔约方可在国家清单报告中为便利审评清单而提供的额外信息提出指导意见。这不是一份详尽无遗的清单。根据附件一缔约方本国在估算温室气体排放量和清除量方面的办法，额外信息也可在国家信息通报中提供。

能源

燃料燃烧

可提供比通用报告格式表 1.A(a)中所要求的更具体的信息，例如：

- (本单位内)自发电；
- 城市供暖(制造业、商业和住宅部门)。

散逸性燃料的排放

煤矿：

可提供比通用报告格式表 1.B.1 中所要求的更具体的信息，例如：

- 开采中的地下煤矿数量
- 有排水(回收)系统的煤矿数量

石油和天然气

可提供比通用报告格式表 1.B.2 中所要求的更具体的信息，例如：

- 管道长度
- 油井的数量
- 气井的数量
- 天然气生产量¹
- 石油生产量¹

¹ 在石油和天然气生产中，生产量是总产量的一种量度，例如石油的每日桶数或天然气的年立方米数。具体说明报告值的单位。须考虑这些值应与通用报告格式表 1.B.2 生产一栏下所报告的活动数据相一致。

工业加工

金属生产

可提供比通用报告格式表 2(I).A-G 要求的更具体的信息，例如：原钢和再生钢生产的数据。

卤化碳和 SF₆ 的潜在排放

通用报告格式表 2(II)s2 中报告“生产”是指新的化学品的生产。再生物质可列入该表，但应保障避免对排放量作双重计算。应在国家清单报告中做有关解释。

金属生产/卤化碳和 SF₆ 生产中的 PFCs 和 SF₆

所用活动数据类型将在通用报告格式表 2(II).C-E(“说明”栏)中具体写明。凡采用 1b 级(用于 2.C 金属生产)、2 级(2.E 卤化碳和 SF₆ 的生产)和本国所定具体方法时，应具体说明使用的任何其他有关的活动数据。

HFCs、PFCs 和 SF₆ 的消耗

关于通用报告格式表 2(II).F (“停止使用时产品中的残留液量”)中报告的活动数据，附件一缔约方应在国家清单报告中提供关于回收化学品数量(回收率)和排放量估算中所使用的其他有关的信息。

通用报告格式表 2(II).F 中应填报的是，在采用“自下而上办法”(基于设备总量和这类设备估算的排放率)的情况下，用于计算卤化碳和 SF₆ 消耗过程实际排放量的活动数据和排放系数。某些附件一缔约方可能采用与以上不同的“自上而下办法”(基于设备和/或气体的年销售量)估算其实际排放量。这些附件一缔约方应在国家清单报告中提供通用报告格式表格中所用的活动数据并提供任何其他有关的信息。这些附件一缔约方应提供的数据包括：

- 填充新产品所使用的液量
- 现有产品保养所用的液量
- 填充退役产品最初使用的液量(退役产品名牌标定总容量)
- 产品寿命
- 如果以用于计算填充退役产品原使用的液量，则还应包括产品销售量的增长率。

或者，附件一缔约方也可选用提供同等信息的其他格式

溶剂和其他产品的使用

气专委指南并未提供溶剂和其他产品使用所产生的 N₂O 排放量的计算方法。如果在同样报告格式中报告此种数据，缔约方应在国家清单报告中提供用以作出这类估算的补充信息(活动数据和排放系数)。

农 业

跨部门

附件一缔约方应在通用报告格式表 4.A 中提供牲畜存栏数详细数据。相关情况下,任何按地区和牲畜种类(按照气专委良好做法指导意见建议的分类方法)所作的进一步划分可在国家清单报告中提供。应在相关的通用报告格式表格中使用前后一致的牲畜存栏数统计数据估算肠内发酵产生的 CH_4 排放量、粪肥管理产生的 CH_4 和 N_2O 排放量、由土壤的 N_2O 排放量和与粪肥生产及使用相关的 N_2O 的排放量,以及将畜粪用作燃料产生的排放量和废弃物部门报告的污水有关的排放量。

肠内发酵

可提供比通用报告格式表 4.A 要求的更具体的信息,例如:与应用良好做法指导意见有关的参数。

粪肥管理

可提供比通用报告格式表 4.B(a)和 4.B(b)要求的更具体的信息,例如:与应用良好做法指导意见有关的参数。补充信息表所要求的信息可能无法直接用于为甲烷校正值计算所开发的具有国别针对性的方法。如果无法在补充信息框内提供有关的数据,应在国家清单报告中说明校正值是如何得出的。

水稻种植

可提供比通用报告格式表 4.C 要求的更具体的信息,例如:如果按一国多个地区和/或按生长季节分计,应在国家清单报告中提供关于分计和有关数据的补充信息。在有条件的情况下,在国家清单报告中提供按土壤类型和水稻种植品种的活动数据和衡量系数。

农业土壤

可提供比通用报告格式表 4.D 要求的更具体的信息,例如:

- 气专委指南并未提供计算农业土壤中 CH_4 的排放量清除量的方法。如果报告这类数据,附件一缔约方应在国家清单报告中提供用以作这类估算的补充信息(活动数据和排放系数);
- 对于选择在 4.D 类下说明农业土壤中的 CO_2 排放量和清除量的附件一缔约方,在国家清单报告的农业部门(4.D 农业土壤)一项中应报告关于农业土壤 CO_2 排放量和清除量估计数的背景信息(活动数据,排放系数);
- 除了应在国家清单报告中提供表 4.D 补充信息框中要求的数据外,还应在 FracGRAZ(放牧)一栏中按照牲畜种类提供分计值和 在 FracBURN(燃烧部分)一栏中按照作物类型提供分计值。

稀树草原的限定烧荒和农业残余物的田间焚烧

可提供比通用报告格式表 4.E 和 4.F 要求的更具体的信息，例如：气专委指南并未提供稀树草原烧荒或农业残余物田间焚烧所产生的 CO₂ 排放量的计算方法。如果报告此种数据，附件一缔约方应在国家清单报告中提供用以做这类估算的补充信息(活动数据和排放系数)。

废弃物

固体废弃物的处理和废弃物焚烧

可提供比通用报告格式表 6.A 和 6.C 要求的更具体的信息，例如：

- 如果未列入通用报告格式的补充信息框内，应在国家清单报告中提供用以计算的所有有关资料
- 土地填埋所用废弃物的构成(%)应分为：纸和纸板、食物垃圾和庭院垃圾、塑料、玻璃、纺织品、其它(按照惰性或有机废弃物分别具体说明)
- 废弃物的回收部分
- 废弃物的焚烧部分
- 可回收 CH₄ 的固体废弃物处理厂数目。

废水处理

可提供比通用报告格式表 6.B 要求的更具体的信息，例如：关于在通用报告格式表格 6.B 中报告的废水处理产生的 N₂O 数据，采用其它方法估算人类排泄物或废水处理产生的 N₂O 排放量的附件一缔约方，应在国家清单报告中提供关于使用的方法、活动数据和排放系数的相应信息。

附 件 二

通用报告格式表¹

关于通用报告格式的说明

1. 通用报告格式是国家清单报告的组成部分。设计这个格式，是为了确保附件一缔约方以标准格式报告定量数据，并便利比较附件一缔约方的清单数据。与任何非定量信息有关的细节应在国家清单报告中提供。

2. 通用报告格式中提供的信息目的在于提高清单的可比性和透明度，其途径除其他外包括便利对照比较附件一缔约方的活动数据和隐含排放系数，并易于找出清单中可能存在的差错、误解和缺漏。

3. 如本报告指南所述，通用报告格式包括从修订的 1996 年气专委国家温室气体清单指南(气专委指南)中摘出的概要报告和部门报告表格，加上新近制定的分部门背景数据表格，以及其他符合气专委指南和气专委良好做法指导意见的表格。

4. 有些部门背景表格要求计算隐含排放系数。这些是附件一缔约方排放量估计数和总计活动数据二者之间的自上而下的比率。隐含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，除非这只是用于计算隐含排放系数时以同样的总计活动数据为基础的简单乘法运算。

5. 与气专委指南相一致，备忘项，如来自国际海运和航空舱载燃料的排放量估计数、生物质 CO₂ 排放量和多边作业排放量，应在适当的表格中填报，不列入国别的总数。

6. 在需要提供特定部门/源类别的全面详细资料时，附件一缔约方应使用表格之下的文件资料框具体指明国家清单报告的有关章节。

7. 附件一缔约方应填写所有要求填报排放量或清除量估计数、活动数据或排放系数的单元格。在没有填写数据的情况下，应当使用报告指南第 28 段所述的标记符号。

8. 在源类别“其他”之下的部门背景表格中，可增加一个标明具体国别源类别的空行。这些源类别将被自动纳入部门报告表格。

9. 附件一缔约方应在额外信息框中填入数据。如果所要求的信息由于附件一缔约方所用方法学层级而不适合，应在对应的单元格中填写标记符号“NA”。

10. 附件一缔约方应填写表 5(土地利用的变化和林业的部门报告)。对应的部门背景表格 5.A-D 与气专委指南相符，附件一缔约方应使用气专委缺省方法填写这些表格。如果附件一缔约方不使用气专委缺省方法，最好能在国家清单报告中提供估计土地利用的变化和林业部门时所用方法的背景数据和说明，以提高透明度。在气专委就土地利用、土地利用的变化和林业部门拟出良好做法指导意见之后，将考虑表格 5.A-D 的替代格式。

¹ 载有《气候公约》年度清单报告指南的 FCCC/SBSTA/2002/L.5/Add.1 号文件第 29 至 34 页是关于通用报告格式表格的议定改动的说明文字。完整的表格已经在缔约方会议第八届会议之前作为 FCCC/WEB/SBSTA/2002/1 号文件单独发行。由于经修改后的完整的通用报告格式表格现已编入本文件(第 25 页起)，因此从这个最后文本中删去上述说明文字。

11. 表格的顺序以及栏、行和单元格名称不应改动，否则会造成数据汇编的复杂化。对源和汇类别现有划分的任何增补信息应酌情在“其他”之下提供。

12. 为了简化表格的结构和明确说明每个表格的具体报告要求，只有需要附件一缔约方填写的单元格才留空。浅灰色阴影单元格表示要用秘书处提供的软件填报。然而，选择不使用软件填报通用报告格式的附件一缔约方则需要填写这些单元格。

13. 如同目前版本的通用报告格式一样，不准备包含任何信息的单元格一律使用深灰色阴影。

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TABLE 1 SECTORAL REPORT FOR ENERGY
(Sheet 1 of 2)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CO ₂	CH ₄	N ₂ O	NO _x (Gg)	CO	NMVOC	SO ₂
Total Energy								
A. Fuel Combustion Activities (Sectoral Approach)								
1. Energy Industries								
a.	Public Electricity and Heat Production							
b.	Petroleum Refining							
c.	Manufacture of Solid Fuels and Other Energy Industries							
2. Manufacturing Industries and Construction								
a.	Iron and Steel							
b.	Non-Ferrous Metals							
c.	Chemicals							
d.	Pulp, Paper and Print							
e.	Food Processing, Beverages and Tobacco							
f.	Other (as specified in table 1.A(a) sheet 2)							
3. Transport								
a.	Civil Aviation							
b.	Road Transportation							
c.	Railways							
d.	Navigation							
e.	Other Transportation (as specified in table 1.A(a) sheet 3)							

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	NM VOC	SO ₂
4. Other Sectors								
a. Commercial/Institutional								
b. Residential								
c. Agriculture/Forestry/Fisheries								
5. Other (as specified in table 1.A(i) sheet 4)								
a. Stationary								
b. Mobile								
B. Fugitive Emissions from Fuels								
1. Solid Fuels								
a. Coal Mining and Handling								
b. Solid Fuel Transformation								
c. Other (as specified in table 1.B.1)								
2. Oil and Natural Gas								
a. Oil								
b. Natural Gas								
c. Venting and Flaring								
Venting								
Flaring								
d. Other (as specified in table 1.B.2)								
Memo Items: ⁽¹⁾								
International Bankers								
Aviation								
Marine								
Multilateral Operations								
CO₂ Emissions from Biomass								

⁽¹⁾ Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO₂ emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO₂ emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO₂ emissions are accounted for as a loss of biomass stocks in the land-use change and forestry sector.

Documentation Box:

Parties should provide detailed explanations on the energy sector in Chapter 3: Energy (CRF sector 1) of the NTR. Use this documentation box to provide references to relevant sections of the NTR if any additional information and/or further details are needed to understand the content of this table.

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

Note: All footnotes for this table are given at the end of the table on sheet 4.

Note: For the coverage of fuel categories, refer to the IPCC Guidelines (Volume 1. Reporting Instructions (Volume 1. Reporting Instructions - Common Reporting Framework, section 1.2, p. 1.19). If some derived gases (e.g. gas works, gas, coke oven gas, blast furnace gas) are considered, Parties should provide information on the allocation of these derived gases under the above fuel categories (liquid, solid, gaseous, biomass and other fuels) in the NIR (see also documentation box at the end of sheet 4 of this table).

TABLE 1.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 ^{a)}				EMISSIONS			
	(TJ)	Consumption NCV/GCV ^{d)}	CO ₂ (GtJ)	CH ₄ (kg/TJ)	N ₂ O (kg/TJ)	CO ₂	CH ₄ (Gg)	N ₂ O		
1.A.2 Manufacturing Industries and Construction										
Liquid Fuels										
Solid Fuels										
Gaseous Fuels										
Biomass										
Other Fuels										
a. Iron and Steel										
Liquid Fuels										
Solid Fuels										
Gaseous Fuels										
Biomass										
Other Fuels										
b. Non-Ferrous Metals										
Liquid Fuels										
Solid Fuels										
Gaseous Fuels										
Biomass										
Other Fuels										
c. Chemicals										
Liquid Fuels										
Solid Fuels										
Gaseous Fuels										
Biomass										
Other Fuels										
d. Pulp, Paper and Print										
Liquid Fuels										
Solid Fuels										
Gaseous Fuels										
Biomass										
Other Fuels										
e. Food Processing, Beverages and Tobacco										
Liquid Fuels										
Solid Fuels										
Gaseous Fuels										
Biomass										
Other Fuels										
f. Other (Please specify:)										
Liquid Fuels										
Solid Fuels										
Gaseous Fuels										
Biomass										
Other Fuels										

Note: All footnotes for this table are given at the end of the table on sheet 4.

TABLE 1.A(s) 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 ^{2b}				EMISSIONS		
	Consumption (TJ)	NCV/GCV ^{2b}	CO ₂ (t/TJ)	CH ₄ (kg/TJ)	N ₂ O (kg/TJ)		CO ₂	CH ₄ (Gg)	N ₂ O
1.A.3 Transport									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass									
Other Fuels									
a. Civil Aviation									
Aviation Gasoline									
Jet Kerosene									
b. Road Transportation									
Gasoline									
Diesel Oil									
Liquefied Petroleum Gases (LPG)									
Other Liquid Fuels (please specify)									
Gaseous Fuels									
Biomass									
Other Fuels (please specify)									
c. Railways									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Other Fuels (please specify)									
d. Navigation									
Residual Oil / Residual Fuel (H)									
Gas/Diesel Oil									
Gasoline									
Other Liquid Fuels (please specify)									
Solid Fuels									
Gaseous Fuels									
Other Fuels (please specify)									
e. Other Transportation (please specify)									
^{2b}									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass									
Other Fuels									

Note: All footnotes for this table are given at the end of the table on sheet 4.

TABLE 1A(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 ^(b)			EMISSIONS		
	(TJ)	NCV/GCV ^(c)	CO ₂ (Gt)	CH ₄ (Gt)	N ₂ O (Gt)	CO ₂ (Gt)	CH ₄ (Gt)	N ₂ O (Gt)
1.A.4 Other Sectors								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels								
Biomass								
Other Fuels								
2. Commercial/Industrial								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels								
Biomass								
Other Fuels								
3. Residential								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels								
Biomass								
Other Fuels								
4. Agriculture/Forestry/Fisheries								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels								
Biomass								
Other Fuels								
5. Other								
Liquid Fuels								
Solid Fuels								
Gaseous Fuels								
Biomass								
Other Fuels								

(1) If activity data are calculated using wet calorific values (NCV) as specified by the IPCC Guidelines, write NCV in this column. If gross calorific values (GCV) are used, write GCV in this column.
 (2) Accurate estimation of CO₂ and N₂O emissions depends on combustion conditions, technology and emission control policy, as well as on fuel characteristics. Therefore, caution should be used when comparing the implied emission factors across countries.
 (3) Although carbon dioxide emissions from biomass are reported in this table, they will not be included in the total emissions from fuel combustion. The value for total CO₂ from biomass is recorded in Table 1 sheet 2 under the Memo Items.
 (4) Use this cell to list all activities covered under "1. Other".
 (5) Use this cell to list all activities covered under "2. Other".
 (6) Include military fuel use under this category.
 (7) Use this cell to list activities covered under "1.A.5 a. Other - stationary".
 (8) Use this cell to list activities covered under "1.A.5 b. Other - mobile".

Documentation Box:
 Parties should provide costed explanations on the first combustion sub-sector in the corresponding part of Chapter 1, Annex I, Table 1A(a) of the NTR. Use this documentation box to provide references to relevant information and/or further details are needed to understand the content of this table.
 If countries are based on GCV, use this documentation box to provide references to the relevant section of the NTR where the conversion necessary to allow the calculation of the activity data based on NCV can be found.
 If exact derivation gases (i.e. gas works gas, coke oven gas, blast furnace gas) are considered, use this documentation box to provide a reference to the relevant section of the NTR containing the information on the allocation of these derived gases under the above fuel categories (liquid, solid, gaseous, biomass and other fuels).

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

Country
Year
Submission

FUEL TYPES	Unit	Production	Imports	Exports	International balances	Stock change	Apparent consumption	Conversion factor ⁽¹⁾ (TJ/t oil)	NCV/GCV ⁽²⁾	Apparent consumption (TJ)	Carbon emission factor ⁽³⁾ (t C/TJ)	Carbon content (Gg C)	Carbon saved (Gg C)	Net carbon emissions (Gg C)	Fraction of carbon oxidized	Actual CO ₂ emissions (Gg CO ₂)
Liquid Fossil																
Primary Fuels	Crude Oil															
	Orimulsion															
	Natural Gas Liquids															
Secondary Fuels	Gasoline															
	Jet Kerosene															
	Other Kerosene															
	Stills Oil															
	Gas / Diesel Oil															
	Residual Fuel Oil															
	Liquefied Petroleum Gas (LPG)															
	Ethane															
	Naphtma															
	Bitumen															
	Lignite															
	Refinery Feedstocks															
	Other Oil															
Other Liquid Fossil																
Liquid Fossil Totals																
Solid Fossil																
Primary Fuels	Anthracite as															
	Coking Coal															
	Other Bituminous Coal															
	Sub-bituminous Coal															
	Lignite															
	Oil Shale															
	Peat															
Secondary Fuels	BBQ ⁽⁴⁾ and Peat Fuel															
	Coal Oven Gas Coke															
Other Solid Fossil																
Solid Fossil Totals																
Gaseous Fossil	Natural Gas (Dry)															
Other Gaseous Fossil																
Gaseous Fossil Totals																
Total																
Biomass total																
	Solid Biomass															
	Liquid Biomass															
	Gas Biomass															

⁽¹⁾ To convert quantities in previous columns to energy units, use net calorific values (NCV) and write NCV in this column. If gross calorific values (GCV) are used, write GCV in this column.

⁽²⁾ If data for Anthracite are not available separately, include with Other Bituminous Coal.

⁽³⁾ BKB: Brown coal/peat briquettes

Documentation Box:

Parties should provide details, subsectors on the fuel combustion sub-sector, including information related to CO₂ from the Reference Approach, in the corresponding part of Chapter 3: Energy (CRF sub-sector 1.A) of the NIR. Use this documentation box to provide references to relevant sections of the NIR, if any additional information and/or further details are needed to understand the content of this table.

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

Country
Year
Submission

FUEL TYPES	REFERENCE APPROACH		SECTORAL APPROACH ⁽¹⁾		DIFFERENCE ⁽²⁾	
	Apparent energy consumption ⁽³⁾ (PJ)	Apparent energy consumption (excluding non-energy use and feedstocks) ⁽⁴⁾ (PJ)	CO ₂ emissions (Gg)	Energy consumption (PJ)	CO ₂ emissions (Gg)	Energy consumption (%)
Liquid Fuels (excluding international bunkers)						
Solid Fuels (excluding international bunkers) ⁽⁵⁾						
Gaseous Fuels						
Other ⁽³⁾						
Total ⁽⁵⁾						

(1) "Sectoral approach" is used to indicate the approach (if different from the Reference approach) used by the Party to estimate CO₂ emissions from fuel combustion as reported in table 1.A(a), sheets 1-4.

(2) Difference in CO₂ emissions estimated by the Reference approach (RA) and the Sectoral approach (SA) (difference = 100% x ((RA-SA)/SA)). For calculating the difference in energy consumption between the two approaches, data as reported in the column "Apparent energy consumption (excluding non-energy use and feedstocks)" are used for the Reference approach.

(3) Apparent energy consumption data shown in this column are as in table 1.A(b).

(4) For the purposes of comparing apparent energy consumption from the Reference approach with energy consumption from the Sectoral approach, Parties should, in this column, subtract from the apparent energy consumption (Reference approach) the energy content corresponding to the fuel quantities used as feedstocks and/or for non-energy purposes, in accordance with the accounting of energy use in the Sectoral approach.

(5) Emissions from biomass are not included.

Note: The Reporting Instructions of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories require that estimates of CO₂ emissions from fuel combustion, derived using a detailed Sectoral approach, be compared to those from the Reference approach (Worksheet 1-1 of the IPCC Guidelines, Volume 2, Workbook). This comparison is to assist in verifying the Sectoral data.

Documentation Box:

- Parties should provide detailed explanations on the fuel combustion sub-sector, including information related to the comparison of CO₂ emissions calculated using the Sectoral approach with those calculated using the Reference approach, in the corresponding part of Chapter 3 Energy (CRF sub-sector 1.A) of the NIR. Use this documentation box to provide references to the relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table
- If the CO₂ emission estimates from the two approaches differ by more than 2 per cent, Parties should briefly explain the cause of this difference in this documentation box and provide a reference to the relevant section of the NIR where this difference is explained in more detail

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

¹⁾ Enter data for those fuels that are used as feedstocks (fuel used as raw materials for manufacture of products such as plastics or fertilizers) or for other non-energy use (fuels not used as fuel or transformed into another fuel (e.g. bitumen for road construction, lubricants)).

Associated CO ₂ emissions (Gg)	Allocated under (Specify source category, e.g. Waste Incineration)

The above 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 methodology, but should indicate this in this documentation box and provide a reference to the relevant section of the NTR where further explanation can be found

TABLE 1.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 (Mt)	IMPLIED EMISSION FACTORS		EMISSIONS	
		CH ₄ ⁽¹⁾	CO ₂	CH ₄	CO ₂
		(kg/t)		Recovery/Flaring ⁽²⁾	Emissions ⁽³⁾ (Gg)
I. B. 1. a. Coal Mining and Handling					
i. Underground Mines ⁽⁴⁾					
Mining Activities					
Post-Mining Activities					
ii. Surface Mines ⁽⁴⁾					
Mining Activities					
Post-Mining Activities					
I. B. 1. b. Solid Fuel Transformation					
I. B. 1. c. Other (please specify) ⁽⁵⁾					

(1) The IEFs for CH₄ are estimated on the basis of gross emissions as follows: (CH₄ emissions + amounts of CH₄ flared/recovered) / activity data.

(2) Amounts of CH₄ drained (recovered), utilized or flared.

(3) Final CH₄ emissions after subtracting the amounts of CH₄ utilized or recovered.

(4) In accordance with the IPCC Guidelines, emissions from Mining Activities and Post-Mining Activities are calculated using the activity data of the amount of fuel produced for Underground Mines and Surface Mines.

(5) This category is to be used for reporting 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 by using notation key IE and making the necessary reference in Table 9 (completeness).

Documentation box:

- Parties should provide detailed explanations on the fugitive emissions from source category 1.B.1 Solid fuels, in the corresponding part of Chapter 3: Energy (CRF source category 1.B.1) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
- Regarding data on the amount of fuel produced entered in the above table, specify in this documentation box whether the fuel amount is based on the run-of-mine (ROM), production or on the saleable production.
- If entries are made for "Recovery/Flaring", indicate in this documentation box whether CH₄ is flared or recovered and provide a reference to the section in the NIR where further details on recovery/flaring can be found.
- If estimates are reported under 1.B.1.b. and 1.B.1.c., use this documentation box to provide information regarding activities covered under these categories and to provide a reference in the section in the NIR where the background information can be found.

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA ^(a)	Unit ^(b)	Value	IMPLIED EMISSION FACTORS			EMISSIONS		
				CO ₂	CH ₄ ^(c)	N ₂ O	CO ₂	CH ₄ ^(c)	N ₂ O
1. B. 2. a. Oil ^(a)									
i. Exploration	(e.g. number of wells drilled)								
ii. Production ^(a)	(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									
2. B. 2. b. Natural Gas									
i. Exploration									
ii. Production ^(a)	(e.g. PJ gas produced)								
iii. Transmission	(e.g. PJ gas consumed)								
iv. Distribution	(e.g. PJ gas consumed)								
v. Other Leakage	(e.g. PJ gas consumed)								
at industrial plants and power stations in residential and commercial sectors									
3. B. 2. c. Venting ^(a)									
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) ^(a)									

⁽¹⁾ Specify the activity data used in the Description column (see examples). Specify the unit of the activity data in the Unit column using one of the following units: PJ, Tg, 10⁶ m³, 10⁶ bbl/yr, km, number of sources (e.g. wells).

⁽²⁾ The unit of the implied emission factor will depend on the unit of the activity data used, and is therefore not specified in this column.

⁽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.iv, 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 under Venting.

⁽⁶⁾ For example, fugitive CO₂ emissions from production of geothermal power could be reported here.

Documentation box:

* Parties should provide detailed explanations on the fugitive emissions from source category 1.B.2. Oil and natural gas, in the corresponding part of Chapter 3. Energy (CRF source category 1.B.2.) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

* Regarding data on the amount of fuel produced entered in this table, specify in this documentation box whether the fuel amount is based on the raw material production or on the saleable production. Note cases where more than one type of activity data is used to estimate emissions.

* Venting and Flaring: Parties using the IPCC software could report venting and flaring emissions together, indicating this in this documentation box.

* If estimates are reported under "1.B.2.d. Other", use this documentation box to provide information regarding activities covered under this category, and to provide a reference to the section in the NIR where background information can be found.

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

Country
Year
Submission

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

Additional information

Fuel consumption	Distribution ^(a) (per cent)	
	Domestic	International
Aviation		
Marine		

^(a) For calculating the allocation of fuel consumption, the sums of fuel consumption for domestic navigation and aviation (Table 1.A(a)) and for international bunkers (Table 1.C) are used.

⁽¹⁾ Parties may choose to report or not report the activity data and implied emission factors for multilateral operations consistent with the principle of confidentiality stated in the UNFCCC reporting guidelines. 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 information purposes only.

Documentation box:

- Parties should provide detailed explanations on the fuel combustion sub-sector, including international bunker fuels, in the corresponding part of Chapter 3: Energy (CRF sub-sector 1.A) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
- Provide in this documentation box a brief explanation on how the consumption of international marine and aviation bunker fuels was estimated and separated from domestic consumption, and include a reference to the section of the NIR where the explanation is provided in more detail.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂	CH ₄	N ₂ O	HFC _s ⁽¹⁾		PFC _s ⁽¹⁾		SF ₆		NO _x	CO	NM VOC	SO ₂
	(Gg)	(Gg)	(Gg)	P	A	P	A	P	A	(Gg)			
				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 (as specified in table 2(I)A-G)													
B. Chemical Industry													
1. Ammonia Production													
2. Nitric Acid Production													
3. Adipic Acid Production													
4. Carbide Production													
5. Other (as specified in table 2(I)A-G)													
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 (as specified in table 2(I)A-G)													

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 applies only to source categories 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).

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂	CH ₄	N ₂ O	HFCs ⁽¹⁾			PFCs ⁽¹⁾			SF ₆		NO _x	CO	NM VOC	SO ₂
				P	A		P	A		P	A				
	CO ₂ equivalent (Gg)														
	(Gg)														
D. Other Production															
1. Pulp and Paper															
2. Food and Drink ⁽¹⁾															
E. Production of Halocarbons and SF ₆															
1. By-product Emissions															
Production of HCFC-22															
Other															
2. Fugitive Emissions															
3. Other (as specified in table 2(II))															
F. Consumption of Halocarbons and SF ₆															
1. Refrigeration and Air Conditioning Equipment															
2. Foam Blowing															
3. Fire Extinguishers															
4. Aerosols/ Metered Dose Inhalers															
5. Solvents															
6. Other applications using ODS ⁽¹⁾ substitutes															
7. Semiconductor Manufacture															
8. Electrical Equipment															
9. Other (as specified in table 2(II))															
G. Other (as specified in tables 2(II), 4-G and 2(II))															

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 applies only to source categories 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).

⁽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.

⁽³⁾ ODS: ozone-depleting substances.

Documentation box:

Parties should provide detailed explanations on the industrial processes sector in Chapter 4. Industrial processes (CRF sector 2) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table

TABLE 2(D).A-G SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES
Emissions of CO₂, CH₄ and N₂O
(Sheet 1 of 2)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS ⁽²⁾			EMISSIONS			
	Production/Consumption quantity		CO ₂	CH ₄	N ₂ O	(Gg)			
	Description ⁽¹⁾	(kt)		(t/t)		CO ₂	CH ₄	N ₂ O	Recovery ⁽⁴⁾
A. Mineral Products	1. Cement Production	(e.g. cement or clinker production)							
	2. Lime Production								
	3. Limestone and Dolomite Use								
	4. Soda Ash								
	Soda Ash Production								
	Soda Ash Use								
	5. Asphalt Roofing								
	6. Road Paving with Asphalt								
	7. Other (please specify)								
	Glass Production								
B. Chemical Industry	1. Ammonia Production ⁽³⁾								
	2. Nitric Acid Production								
	3. Adipic Acid Production								
	4. Carbide Production								
	Silicon Carbide								
	Calcium Carbide								
	5. Other (please specify)								
	Carbon Black								
	Ethylene								
	Dichloromethylene								
	Styrene								
	Methanol								

(1) Where the IPCC Guidelines provide options for activity data, e.g. cement production or clinker production for estimating the emissions from Cement Production, specify the activity data used (as shown in the example in parenthesis) in order to make the choice of emission factor more transparent and to facilitate comparisons of implied emission factors.

(2) The implied emission factors (IEF) are estimated on the basis of gross emissions as follows: IEF = (emissions plus amounts recovered, oxidized, destroyed or transformed) / activity data.

(3) Final emissions are to be reported (after subtracting the amounts of emission recovery, oxidation, destruction or transformation).

(4) Amounts of emission recovery, oxidation, destruction or transformation.

(5) To avoid double counting, make offsetting deductions for fuel consumption (e.g. natural gas) in Ammonia Production, first for feedstock use of the fuel, and then for a sequestering use of the feedstock.

TABLE 2(I).A-G SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES
Emissions of CO₂, CH₄ and N₂O
(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS ⁽²⁾			EMISSIONS			
						CO ₂		CH ₄	
						Emissions ⁽³⁾	Recovery ⁽⁴⁾	Emissions ⁽³⁾	Recovery ⁽⁴⁾
	Production/consumption quantity	(kt)	CO ₂	CH ₄	N ₂ O	(Gg)			
	Description ⁽¹⁾								
C. Metal Production	1. Iron and Steel Production								
	Steel								
	Pig Iron								
	Sinter								
	Coke								
	Other (please specify)								
D. Other Production	2. Ferroalloys Production								
	Aluminum Production								
	4. SF ₆ Used in Aluminum and Magnesium Foundries								
	5. Other (please specify)								
E. Other Production	1. Pulp and Paper								
	2. Food and Drink								
	Other (please specify)								

(1) Where the IPCC Guidelines provide options for activity data, e.g. cement production or clinker production for estimating the emissions from Cement Production, specify the activity data used (as shown in the example in parenthesis) in order to make the choice of emission factor more transparent and to facilitate comparisons of implied emission factors.

(2) The implied emission factors (IEF) are estimated on the basis of gross emissions as follows: IEF = (emissions + amounts recovered, oxidized, destroyed or transformed) / activity data.

(3) Final emissions are to be reported (after subtracting the amounts of emission recovery, oxidation, destruction or transformation).

(4) Amounts of emission recovery, oxidation, destruction or transformation.

Documentation box:

* Parties should provide detailed explanations on the industrial processes sector in Chapter 4. Industrial processes (CRF sector 2) of the NIR. Use this documentation box to provide references to relevant sections of the NIR, if any additional information and/or further details are needed to understand the content of this table

* In relation to metal production, more specific information (e.g. data on virgin and recycled steel production) could be provided in this documentation box, or in the NIR, together with a reference to the relevant section.

* Confidentiality: Where only aggregate figures for activity data are provided, e.g. due to reasons of confidentiality, a note indicating this should be provided in this documentation box

TABLE 2(M) SECTORAL REPORT FOR INDUSTRIAL PROCESSES - EMISSIONS OF HFCs, PFCs AND SF₆
(Sheet 1 of 2)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	(a) ^(b)												CO ₂ equivalent (t) ^(b)		(c) ^(b)										CO ₂ equivalent (t) ^(b)		(d)	
	HFC-23	HFC-32	HFC-41	HFC-43-100use	HFC-125	HFC-134	HFC-134a	HFC-152a	HFC-143	HFC-143a	HFC-227ea	HFC-236fa	HFC-245ca	Unspecified mix of listed HFCs ⁽¹⁾	Total HFCs	CFC ₁	CFC ₂	CFC ₃	CFC _{11a}	CFC _{12a}	CFC ₁₁₃	CFC ₁₁₄	Unspecified mix of listed PFCs ⁽¹⁾	Total PFCs	SF ₆			
Total Actual Emissions of Halocarbons (by chemical) and SF ₆																												
C. Metal Production																												
Aluminum Production																												
SF ₆ Used in Aluminum Foundries																												
SF ₆ Used in Magnesium Foundries																												
F. Production of Halocarbons and SF ₆																												
By-product Emissions																												
Production of HCFC-22																												
Other																												
2. Fugitive Emissions																												
3. Other (as specified in table 2(III), (C), (E))																												
Final Consumption of Halocarbons and SF ₆																												
(Actual emissions - Tier 2)																												
1. Refrigeration and Air Conditioning Equipment																												
2. Foam Blowing																												
3. Fire Extinguishers																												
4. Aerosols/Metered Dose Inhalers																												
5. Solvents																												
6. Other applications using ODS ⁽¹⁾ substitutes																												
7. Semiconductor Manufacture																												
8. Electrical Equipment																												
9. Other (as specified in table 2(III), F)																												
G. Other (please specify)																												

TABLE 2(II). C, E SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES
Metal Production; Production of Halocarbons and SF₆
(Sheet 1 of 1)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS ^(b)			EMISSIONS					
	Description ⁽¹⁾	(t)	CF ₄	C ₂ F ₆	SF ₆	(t)					
						Emissions ^(a)	Recovery ^(a)	Emissions ^(a)	Recovery ^(a)	Emissions ^(a)	Recovery ^(a)
C: PFCs and SF ₆ from Metal Production											
PFCs from Aluminum Production											
SF ₆ used in Aluminum and Magnesium Foundries											
Aluminum Foundries											
Magnesium Foundries											

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS ^(b)				EMISSIONS			
			HFC-23	SF ₆	HFCs/PFCs (as specified)	HFCs/PFCs				
	Description ^(a)	(t)	(kg/t)	HFC-23		Emissions ⁽³⁾	Recovery ⁽⁴⁾	Emissions ⁽⁵⁾	Recovery ⁽⁶⁾	
				Emissions ⁽⁴⁾	Recovery ⁽⁴⁾					
E. Production of Halocarbons and SF ₆										
1. By-product Emissions										
Production of HFC-23										
Other (specify activity)										
2. Fugitive Emissions (please specify activity)										
3. Other (please specify activity)										

(1) Specify the activity data used as shown in the examples within parentheses.

(2) The implied emission factors (IEFs) are estimated on the basis of gross emissions as follows: IEF = (emissions + amounts recovered, oxidized, destroyed or transformed) / activity data.

(3) Final emissions are to be reported (after subtracting the amounts of emission recovery, oxidation, destruction or transformation).

(4) Amounts of emission recovery, oxidation, destruction or transformation.

Documentation box:

- Parties should provide detailed explanations on the industrial processes sector in Chapter 4. Industrial processes (CRF sector 2) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
- Where only aggregate figures for activity data are provided, e.g. due to reasons of confidentiality (see footnote 1 to table 2(II)), a note indicating this should be provided in this documentation box.
- Where applying Tier 1b (for source category 2 C), Tier 2 (for source category 2 E) and country-specific methods, specify any other relevant activity data used in this documentation box, including a reference to the section of the NIR where more detailed information can be found.
- Use this documentation box for providing clarification on emission recovery, oxidation, destruction and/or transformation, and provide a reference to the section of the NIR where more detailed information can be found.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA Amount of fluid		IMPLIED EMISSION FACTORS			EMISSIONS		
	Filled into new manufactured products	In operating systems (average annual stocks)	Remaining in products at decommissioning	Product manufacturing factor	Product life factor (% per annum)	Disposal loss factor	From manufacturing	From stocks
	(t)						(t)	
1. Refrigeration ⁽¹⁾								
Air Conditioning Equipment								
Domestic Refrigeration (Specific chemical) ⁽¹⁾								
Commercial Refrigeration								
Transport Refrigeration								
Industrial Refrigeration								
Stationary Air-Conditioning								
Mobile Air-Conditioning								
2. Foam Blowing ⁽¹⁾								
Hard Foam								
Soft Foam								

⁽¹⁾ Under each of the listed source categories, specify the chemical consumed (e.g. HFC-32) as indicated under category Domestic Refrigeration; use one row per chemical.

Note: This table 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 actual emissions following the alternative "top-down approach" (based on annual sales of equipment and/or gas). Those Parties should provide the activity data used in the current format and any other relevant information needed to understand the content of the table in the documentation box at the end of sheet 2 to this table, including a reference to the section of the NIR where further details can be found. Those Parties should provide the following data in the NIR:

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.

In the NIR, Parties may provide alternative formats for reporting equivalent information with a similar level of detail.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA <i>Amount of fluid</i>			IMPLIED EMISSION FACTORS			EMISSIONS	
	Filled into new manufactured products	In operating systems (average annual stocks)	Remaining in products at decommissioning	Product manufacturing factor	Product life factor (% per annum)	Disposal loss factor	From manufacturing	From disposal
	(t)	(t)	(t)				(t)	(t)
3. Fire Extinguishers <i>Specify chemical⁽¹⁾</i>								
4. Aerosols ⁽¹⁾								
Metered Dose Inhalers								
Other								
5. Solvents ⁽¹⁾								
6. Other applications using ODS ⁽²⁾ substitutes ⁽¹⁾								
7. Semiconductors ⁽¹⁾								
8. Electric Equipment ⁽¹⁾								
9. Other <i>(please specify)⁽²⁾</i>								

(1) Under each of the listed source categories, specify the chemical consumed (e.g. HFC-32) as indicated under category Fire Extinguishers; use one row per chemical.

(2) ODS: ozone-depleting substances.

Documentation box:

- Parties should provide detailed explanations on the industrial processes sector in Chapter 4: Industrial processes (CRF sector 2) of the NTR (Use this documentation box to provide references to relevant sections of the NTR if any additional information and/or further details are needed to understand the content of this table)
- Where only aggregate figures for activity data are provided, e.g. due to reasons of confidentiality (see footnote 1 to table 2(II)), a note indicating this should be provided in this documentation box
- With regard to data on the amounts of fluid that remained in retired products at decommissioning, use this documentation box to provide a reference to the section of the NTR where information on the amount of the chemical recovered (recovery efficiency) and other relevant information used in the emission estimation can be found
- Parties that estimate their actual emissions following the alternative top-down approach might not be able to report emissions using this table. As indicated in the note to sheet 1 of this table, Parties should in these cases, in the NTR, provide alternative formats for reporting equivalent information with a similar level of detail. References to the relevant section of the NTR should be provided in this documentation box.

TABLE 3 SECTORAL REPORT FOR SOLVENT AND OTHER PRODUCT USE
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CO ₂	N ₂ O (Gg)	NM VOC
Total Solvent and Other Product Use				
A. Paint Application				
B. Degreasing and Dry Cleaning				
C. Chemical Products, Manufacture and Processing				
D. Other				
1. Use of N ₂ O for Anaesthesia				
2. N ₂ O from Fire Extinguishers				
3. N ₂ O from Aerosol Cans				
4. Other Use of N ₂ O				
5. Other (as specified in table 3.A-D)				

Note: The quantity of carbon released in the form of NMVOCs should be accounted for in both the NMVOC and the CO₂ columns. Note that these quantities of NMVOCs should be converted into CO₂ equivalent emissions before being added to the CO₂ amounts in the CO₂ column.

Documentation box:

- Parties should provide detailed explanations on the solvent and other product use sector in Chapter 5: Solvent and other product use (CRF sector 3) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
- The IPCC Guidelines do not provide methodologies for the calculation of emissions of N₂O from Solvent and Other Product Use. If reporting such data, Parties should provide additional information (activity data and emission factors) used to derive these estimates in the NIR, and provide in this documentation box a reference to the section of the NIR where this information can be found.

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 ⁽¹⁾		
	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						
1. Use of N ₂ O for Anaesthesia						
2. N ₂ O from Fire Extinguishers						
3. N ₂ O from Aerosol Cans						
4. Other Use of N ₂ O						
5. Other (please specify) ⁽²⁾						

- (1) The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 3.
(2) Some probable sources to be reported under "other" are listed in this table. Complement the list with other relevant sources, as appropriate.

Documentation box:
Parties should provide detailed explanations on the solvent and other product use sector in Chapter 5: Solvent and other product use (CRF sector 3) of the NIR. Use this documentation box to provide references in relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 4 SECTORAL REPORT FOR AGRICULTURE
(Sheet 1 of 2)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CH ₄	N ₂ O	NO _x (Gg)	CO	NMVOG
Total Agriculture						
A. Enteric Fermentation						
1. Cattle ⁽¹⁾						
<i>Option A:</i>						
Dairy Cattle						
Non-Dairy Cattle						
<i>Option B:</i>						
Mature Dairy Cattle						
Mature Non-Dairy Cattle						
Young Cattle						
2. Buffalo						
3. Sheep						
4. Goats						
5. Camels and Llamas						
6. Horses						
7. Mules and Asses						
8. Swine						
9. Poultry						
10. Other (as specified in table 4.A)						
B. Manure Management						
1. Cattle ⁽¹⁾						
<i>Option A:</i>						
Dairy Cattle						
Non-Dairy Cattle						
<i>Option B:</i>						
Mature Dairy Cattle						
Mature Non-Dairy Cattle						
Young Cattle						
2. Buffalo						
3. Sheep						
4. Goats						
5. Camels and Llamas						
6. Horses						
7. Mules and Asses						
8. Swine						
9. Poultry						
10. Other livestock (as specified in table 4.B(a))						

Note: All footnotes for this table are given at the end of the table on sheet 2.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH ₄	N ₂ O	NO _x (Gg)	CO ₂	NMVOC
B. Manure Management (continued)					
1.1. Anaerobic Lagoons					
1.2. Liquid Systems					
1.3. Solid Storage and Dry Lot					
1.4. Other (please specify)					
C. Rice Cultivation					
1. Irrigated					
2. Rainfed					
3. Deep Water					
4. Other (as specified in table 4.C)					
D. Agricultural Soils^(a)					
1. Direct Soil Emissions					
2. Pasture, Range and Paddock Manure ^(b)					
3. Indirect Emissions					
4. Other (as specified in table 4.D)					
E. Prescribed Burning of Savannas					
F. Field Burning of Agricultural Residues					
1. Cereals					
2. Pulses					
3. Tubers and Roots					
4. Sugar Cane					
5. Other (as specified in table 4.F)					
G. Other (please specify)					

(a) The sum for cattle would be calculated on the basis of entries made under either option A (dairy and non-dairy cattle) or option B (mature dairy cattle, mature non-dairy cattle and young cattle).

(b) 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 of the sector Agriculture should report the amount (in Gg) of these emissions or removals in table Summary 1.A of the CRF. References to additional information (activity data, emissions factors) reported in the NIR should be provided in the documentation box to table 4.D. In line with the corresponding table in the IPCC Guidelines (i.e. IPCC Sectoral Report for Agriculture), this table does not include provisions for reporting CO₂ estimates.

(c) Direct N₂O emissions from pasture, range and paddock manure are to be reported in the "4.D Agricultural Soils" category. All other N₂O emissions from animal manure are to be reported in the "4.B Manure Management" category. See also chapter 4.4 of the IPCC good practice guidance report.

Note: The IPCC Guidelines do not provide methodologies for the calculation of CH₄ emissions and CH₄ and N₂O removals from agricultural soils, or CO₂ emissions from prescribed burning of savannas and field burning of agricultural residues. Parties that have estimated such emissions should provide, in the NIR, additional information (activity data and emission factors) used to derive these estimates and include a reference to the section of the NIR in the documentation box of the corresponding Sectoral background data tables.

Documentation box:

- Parties should provide detailed explanations on the agriculture sector in Chapter 6 Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table
- If estimates are reported under "4.G Other" use this documentation box to provide information regarding activities covered under this category; and to provide reference to the section in the NIR where background information can be found.

TABLE 4.A SECTORAL BACKGROUND DATA FOR AGRICULTURE
Enteric Fermentation
(Sheet 1 of 1)

Country
Year
Submission

Additional information (only for those livestock types for which Tier 2 was used) ^(a)

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

^(a) See also Tables A-1 and A-2 of the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.31-4.34). 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.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTORS ^(c)
	Population size ⁽¹⁾ (1000s)	Average gross energy intake (GE) (MJ/head/day)	Average CH ₄ conversion rate (Y _m) (%) ⁽²⁾	
1 Cattle				CH ₄ (kg CH ₄ /head/yr)
Option A				
Dairy Cattle ^(a)				
Non-Dairy Cattle				
Option B				
Mature Dairy Cattle				
Mature Non-Dairy Cattle				
Young 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⁾ Parties are encouraged to provide detailed livestock population data by animal type and region, if available, in the NIR, and provide reference to the relevant section in the documentation box below. Parties should use the same animal population statistics 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.

⁽²⁾ Y_m refers to the fraction of gross energy in feed converted to methane and should be given in per cent in this table.

⁽³⁾ The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 4.

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

Documentation box:

* Parties should provide detailed explanations on the agriculture sector in Chapter 6, Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR. If any additional information and/or further details are needed to understand the content of this table.

* Indicate in this documentation box whether the activity data used are one-year-estimates or a three-year average.

* Provide a reference to the relevant section in the NIR, in particular with regard to:

(a) disaggregation of livestock population (e.g. according to the classification recommended in the IPCC good practice guidance), including information on whether these data are one-year estimates or a three-year average

(b) parameters relevant to the application of IPCC good practice guidance

TABLE 4.B(4) 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 ⁽⁴⁾
	Allocation by climate region ⁽¹⁾			CH ₄ producing potential (Bo) ⁽²⁾ (average) (m ³ CH ₄ /kg VS)	
	Population size (1000s)	Temperature			
		(°C)	(°F)		
1. Cattle					
Option A:					
Dairy Cattle ⁽³⁾					
Non-Dairy Cattle					
Option B:					
Mature Dairy Cattle					
Mature Non-Dairy Cattle					
Young Cattle					
2. Buffalo					
3. Sheep					
4. Goats					
5. Camels and Llamas					
6. Horses					
7. Mules and Asnes					
8. Swine					
9. Poultry					
10. Other livestock, please specify:					

⁽¹⁾ Climate regions are defined in terms of annual average temperature as follows: Cool = less than 15°C, Temperature = 15 - 25°C inclusive, and Warm = greater than 25°C (see Table 4.2 of the IPCC Guidelines (Volume 3, Reference Manual, p. 4.8))

⁽²⁾ VS = Volatile Solids, Bo = maximum methane producing capacity for manure IPCC Guidelines (Volume 3, Reference Manual, p.4.23 and p.4.15); dm = dry matter. Provide average values for VS and Bo where original calculations were made at a more disaggregated level of these livestock categories.

⁽³⁾ Including data on dairy heifers, if available

⁽⁴⁾ The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 4

Additional information (for Tier 2):⁽⁵⁾

Animal category	Indicator	Climate region	Animal waste management system				
Dairy cattle	Allocation (%)	Cool	Anaerobic lagoons	Liquid system	Bedding spread	Solid storage	Dry lot
Non-Dairy cattle	Allocation (%)	Cool					
Swine	Allocation (%)	Cool					
Other livestock (please specify)	Allocation (%)	Cool					
Pasture range paddock	Allocation (%)	Cool					

⁽⁵⁾ The information required in this table may not be directly applicable to country-specific methods developed for MCF calculations. In such cases, information on MCF derivation should be described in the NIR and references to the relevant sections of the NIR should be provided in the documentation box.

⁽⁶⁾ MCF = Methane Conversion Factor (IPCC Guidelines, (Volume 3, Reference Manual, p. 4.9)). If another climate region categorization is used, replace the entries in the cells with the climate regions for which the MCFs are specified

Documentation box:

* Parties should provide detailed explanations on the agriculture sector in Chapter 3, Agriculture (CRF sector 3) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of this table.

* Indicate in this documentation box whether the activity data used are one-year estimates or a three-year average.

* Provide a reference to the relevant section of the NIR, in particular with regard to:

(a) disaggregation of livestock populations (e.g. according to the classification recommended in the IPCC, good practice guidance);

(b) parameters relevant to the application of IPCC good practice guidance;

(c) information on how the MCFs are derived, if relevant data could not be provided in the additional information box.

TABLE 4.B(b) SECTORAL BACKGROUND DATA FOR AGRICULTURE

N₂O Emissions from Manure Management

(Sheet 1 of 1)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION						IMPLIED EMISSION FACTORS ⁽¹⁾	
	Population size (1000s)	Nitrogen excretion (kg N/head/yr)	Nitrogen excretion per animal waste management system (AWMS) (kg N/yr)				Emission factor per animal waste management system (kg N ₂ O-N/kg N)	
			Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot		Pasture range and paddock
Cattle								Anaerobic lagoon
Option A:								Liquid system
Dairy Cattle								Solid storage and dry lot
Non-Dairy Cattle								Other AWMS
Option B:								
Mature Dairy Cattle								
Mature Non-Dairy Cattle								
Young Cattle								
Sheep								
Swine								
Poultry								
Other livestock (please specify)								
Total per AWMS								

(1) The implied emission factor will not be calculated until the emissions are entered directly into Table 4.

Documentation box:

- Parties should provide detailed explanations on the agriculture sector in Chapter 6, Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table
- Indicate in this documentation box whether the activity data used are one-year estimates or a three-year average
- Provide a reference to the relevant section in the NIR, in particular with regard to:
 - (a) disaggregation of livestock population (e.g. according to the classification recommended in the IPCC good practices guidance), including information on whether these data are one-year estimates or a three-year average.
 - (b) information on other AWMS, if reported.

TABLE 4.C SECTORAL BACKGROUND DATA FOR AGRICULTURE
Rice Cultivation
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR ⁽²⁾	EMISSIONS
	Harvested area ⁽²⁾ (10 ⁶ m ² /yr)	Organic amendments added ⁽³⁾			
		Type	(t/ha)		
1. Irrigated	Continuously Flooded				
	Intermittently Flooded				
	Single Aeration				
	Multiple Aeration				
2. Rainfed	Flood Prone				
	Drought Prone				
3. Deep Water	Water Depth 50-100 cm				
	Water Depth > 100 cm				
4. Other (please specify)					
Upland Rice ⁽⁴⁾					
Total ⁽⁴⁾					

⁽¹⁾ The implied emission factor implicitly takes account of all relevant corrections for continuously flooded fields without organic amendment, the correction for the organic amendments and the effect of different soil characteristics, if considered in the calculation of methane emissions.

⁽²⁾ Harvested area is the cultivated area multiplied by the number of cropping seasons per year.

(3) Specify dry weight or wet weight for organic amendments in the documentation box.

⁽⁴⁾ These rows are included to allow comparison with international statistics. Methane emissions from upland rice are assumed to be zero.

Documentation box:

Parties should provide detailed explanations on the agriculture sector in Chapter 6, Agriculture (CRT sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

When disaggregating by more than one region within a country, and/or by growing season, provide additional information on disaggregation and related data in the NTR and provide a reference to the relevant section in the NTR.

* Where available, provide activity data and scaling factors by soil type and rice cultivar in the NTR.

TABLE 4.D. SECTORAL BACKGROUND DATA FOR AGRICULTURE
Agricultural Soils⁽¹⁾
(Sheet 1 of 1)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION		IMPLIED EMISSION FACTORS	EMISSIONS N ₂ O (Gg)
	Description	Value kg N/yr		
1. Direct Soil Emissions	N input to soils			
2. Synthetic Fertilizers	Nitrogen input from application of synthetic fertilizers			
3. Animal Manure Applied to Soils	Nitrogen input from manure applied to soils			
4. N-fertilizing Crops	Nitrogen fixed by N-fertilizing crops			
5. Crop Residue	Nitrogen in crop residues returned to soils			
6. Cultivation of Histosols ⁽²⁾	Area of cultivated organic soils (ha/yr)			
7. Other direct emissions (please specify)				
8. Pasture, Range and Paddock Manure	N excretion on pasture range and paddock			
9. Indirect Emissions				
10. Atmospheric Deposition	Volatilized N from fertilizers, animal manures and other			
11. Nitrogen Leaching and Run-off	N from fertilizers, animal manures and other that is lost through leaching and run-off			
12. Other (please specify)				

Additional information

Fraction ^(a)	Description	Value
Frac _{fuel}	Fraction of crop residue burned	
Frac _{feces}	Fraction of livestock N excretion in excrements burned for fuel	
Frac _{syn}	Fraction of synthetic fertilizer N applied to soils that volatilizes as NH ₃ and NO _x	
Frac _{syn}	Fraction of livestock N excretion that volatilizes as NH ₃ and NO _x	
Frac _{soil}	Fraction of livestock N excreted and deposited onto soil during grazing	
Frac _{soil}	Fraction of N input to soils that is lost through leaching and run-off	
Frac _{soil}	Fraction of total above-ground biomass of N-fertilizing crops that is N	
Frac _{soil}	Fraction of residue dry biomass that is N	
Frac _{soil}	Fraction of total above-ground crop biomass that is removed from the field as a crop product	
Other fractions (please specify):		

^(a) Use the definitions for fractions as specified in the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.92 - 4.113) as elaborated by the IPCC good practice guidance (pp. 4.54 - 4.74).

- (1) See footnote 4 to Summary 1.A. of this common reporting format. Parties that choose to report CO₂ emissions and removals from agricultural soils under 4.D. Agricultural Soils category should indicate the amount (in 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. Note that for cultivation of Histosols the unit of the IEF is kg N₂O-N/ha.

Documentation box:

- * Parties should provide detailed explanations on the agriculture sector in Chapter 5: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references in relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
- * Provide a reference to the relevant section in the NIR, in particular with regard to:
- (a) Background information on CO₂ emissions and removals estimates from agricultural soils, if accounted for under the agriculture sector.
- (b) Background information on CH₄ emissions from agricultural soils, if accounted for under the agriculture sector.
- (c) Disaggregated values for Frac_{soil} according to animal type, and for Frac_{syn} according to crop type.
- (d) Full list of assumptions and fractions used.

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

Additional information

	Living Biomass	Dead Biomass
Fraction of above-ground biomass		
Fraction oxidized		
Carbon fraction		

Documentation box:

Parties should provide detailed explanations on the agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION							IMPLIED EMISSION FACTORS			EMISSIONS		
	Crop production (t)	Residue/crop ratio	Dry matter (dm) fraction of residue	Fraction burned in fields	Fraction oxidized	Total biomass burned (Gg dm)	C fraction of residue	N:C ratio in biomass residues	CH ₄ (kg/dm)	N ₂ O	CH ₄	N ₂ O	(Gg)
1. Cereals													
Wheat													
Barley													
Millets													
Oats													
Rye													
Rice													
Other (please specify)													
2. Pulses													
Dry bean													
Peanut													
Soybeans													
Other (please specify)													
3. Tubers and Roots													
Potatoes													
Other (please specify)													
4. Sugar Cane													
5. Other (please specify)													

Documentation box:

Parties should provide detailed explanations on the agriculture sector in Chapter 6, Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ emissions ⁽¹⁾	CO ₂ removal ⁽¹⁾	Net CO ₂ emissions/ removals ⁽¹⁾	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 (please specify): Harvested Wood ⁽²⁾							
B. Forest and Grassland Conversion							
1. Tropical Forests							
2. Temperate Forests							
3. Boreal Forests							
4. Grasslands/Tundra							
5. Other (please specify):							
C. Abandonment of Managed Lands							
1. Tropical Forests							
2. Temperate Forests							
3. Boreal Forests							
4. Grasslands/Tundra							
5. Other (please specify):							
D. CO₂ Emissions and Removals from Soil							
Cultivation of Mineral Soils							
Cultivation of Organic Soils							
Liming of Agricultural Soils							
Forest Soils							
Other (please specify) ⁽³⁾							
E. Other (please specify):							

(1) Note that according to the IPCC Guidelines, for purposes of reporting, the signs for removals are always (-) and for emissions (+). Net CO₂ emissions/removals are calculated as follows: net CO₂ = CO₂ emissions + CO₂ removals. Note that this result is to be reported in table Summary 1.A, where a single number is to be placed in either the CO₂ emissions or the CO₂ removals column, as appropriate.

(2) 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).

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

Note: 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 2.7) allows for reporting CO₂ emissions or removals from agricultural soils either in the Agriculture sector, under 4.D Agricultural soils or in the Land-use change and forestry sector under 5.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 providing a brief explanation in the documentation boxes to Table 4D of the agriculture sector. 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).

Documentation box:

- Parties should provide detailed explanations on the land-use change and forestry sector in Chapter 7, Land-use change and forestry (CRF sector 5), of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table
- If estimates are reported under "E. Other" use this documentation box to provide information regarding activities covered under this category and to provide reference to the section in the NIR where background information can be found

Country	Year	Submission
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(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.

Documentation box Parties should provide detailed explanations on the land-use change and forestry sector in Chapter 7: Land-use change and forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
--

Activity data are by default 10-year averages. Specify the average decay time which is appropriate for the local conditions, if other than 10 years.

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 in the NIR.

parties should provide detailed explanations on the land-use change and forestry (LUCF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table

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

(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 in the NIR.

Parties should provide detailed explanations on the land-use change and forestry sector in Chapter 7. Land-use change and forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5.D. SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY
CO₂ Emissions and Removals from Soil
(Sheet 1 of 1)

(1) The information to be reported under Cultivation of Mineral Soils aggregates data per soil type over all land-use/management systems. This refers to land area data and to the emission estimates and implied emissions factors accordingly.

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 in the NIR.

Documentation box: Parties should provide detailed explanations on the land-use change and forestry sector in Chapter 7. Land-use change and forestry (LUCF) sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 6 SECTORAL REPORT FOR WASTE

(Sheet 1 of 1)

Country
Year
Submission

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 (as specified in table 6.A)							
B. Waste Water Handling							
1. Industrial Wastewater							
2. Domestic and Commercial Waste Water							
3. Other (as specified in table 6.B)							
C. Waste Incineration							
D. Other (please specify):							

⁽¹⁾ CO₂ emissions from source categories Solid waste disposal on land and Waste incineration should only be included if they derive from non-biological or inorganic waste sources.

Documentation box:

- Parties should provide detailed explanations on the waste sector in Chapter 8: Waste (CRF sector 6) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
- If estimates are reported under "6.D. Other", use this documentation box to provide information regarding activities covered under this category and to provide reference to the section in the NIR where background information can be found.

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		
	Annual MSW at the SWDS (Gg)	MCF	DOC degraded %	CH ₄ ⁽¹⁾	CO ₂	CH ₄	CO ₂	CO ₂ ⁽²⁾
1. Managed Waste Disposal on Land								
2. Unmanaged Waste Disposal Sites								
a. Deep (>5 m)								
b. Shallow (<5 m)								
3. Other (please specify)								

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/markets waste and organic industrial solid waste. MSW should not include inorganic industrial waste such as construction or demolition materials.

(1) The CH₄ implied emission factor (IEF) is calculated on the basis of gross CH₄ emissions, as follows: IEF = (CH₄ emissions + CH₄ recovered)/annual MSW at the SWDS.

(2) Actual emissions (after recovery)

(3) CH₄ recovered and flared or utilized.

(4) Under Solid Waste Disposal, CO₂ emissions should be reported only when the disposed waste is combusted at the disposal site as a management practice. GHG emissions from non-biogenic wastes are included in the total emissions, whereas the CO₂ emissions from biogenic wastes are not included in the total emissions.

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	CH ₄	N ₂ O	CD ₄ ⁽¹⁾	CH ₄	CD ₄	N ₂ O	
Waste Incineration									
a. Biogenic ⁽²⁾									
b. Other (non-biogenic - please specify: (1), (2))									

(1) Under Solid Waste Disposal, CO₂ emissions should be reported only when the disposed waste is combusted at the disposal site as a management practice. GHG emissions from non-biogenic wastes are included in the total emissions, while the CO₂ emissions from biogenic wastes are not included in the total emissions.

(2) Enter under this source category all types of non-biogenic wastes, such as plastics.

Note: Only emissions from waste incineration without energy recovery are to be reported in the waste sector. Emissions from incineration with energy recovery are to be reported in the energy sector, as other fuels (see IPCC good practice guidance, page 5.23).

Documentation box:

* Parties should provide detailed explanations on the waste sector in Chapter 8, Waste (CRF sector 2) of the NTR. Use this documentation box to provide references to relevant sections of the NTR if any additional information and/or further details are needed to understand the content of this table.

* Parties that use country-specific models should provide a reference in the documentation box to the relevant section in the NTR where these models are described, and fill in only the relevant cells of tables 6.A and 6.C.

* Provide a reference in the relevant section in the NTR, in particular with regard to:

(a) A population size (total or urban population) used in the calculations and the rationale for doing so.

(b) The composition of landfilled waste.

(c) In relation to the amount of incinerated wastes: specify whether the reported data relate to wet or dry matter.

Additional information

Description	Value
Total population (1000s) ⁽¹⁾	
Urban population (1000s) ⁽²⁾	
Waste generation rate (kg/capita/day)	
Fraction of MSW disposed to SWDS	
Fraction of DOC in MSW	
CH ₄ oxidation factor ⁽³⁾	
CH ₄ fraction in landfill gas	
CH ₄ generation rate constant (K) ⁽⁴⁾	
Time lag considered (yr) ⁽⁵⁾	

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

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

(3) Only for Parties using Tier 2 methods.

TABLE 6.B SECTORAL BACKGROUND DATA FOR WASTE

Waste Water Handling

(Sheet 1 of 1)

Additional information	
Domestic	Industrial
1962 waste water (m ³)	
Treated waste water (%)	

Waste-water stream:	Waste-water output (m ³)	DC (kgCOD/m ³)
Industrial waste water		
Non-domestics		
Fertilizers		
Food and beverage		
Paper and pulp		
Hydraulic chemicals		
Other (specify)		
DC (kg BOD/1000 persons/yr)		
Domestic and Commercial		
Other		

Handling system:	Industrial waste water treated (%)	Industrial sludge treated (%)	Domestic waste water treated (%)	Domestic sludge treated (%)
Aerobic				
Anaerobic				
Other (specify)				

⁽²⁾ The CH₄ implied emission factor (IEF) is calculated on the basis of gross CH₄ emissions, as follows: IEF = (CH₄ emissions + CH₄ recovered or flared) / total organic product.

(4) Actual emissions (after recovery).

⁽⁵⁾ CH₄ recovered and flared or utilized.

⁽⁶⁾ Use these cells to specify each activity covered under "6.B.3 Other". Note that under each reported activity, data for waste water and sludge are to be reported separately.

Documentation box:

Parties should provide detailed explanations for the waste sector in Chapter 8, Volume 4 of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to underpin the content of this table. Provide explanations for doing so. Regarding the estimates for N₂ from human sewage, specify whether total or urban population is used in the calculations and the rationale for doing so. Parties using methods other than those from the IPCC for estimating N₂ emissions from human sewage or waste-water treatment should provide a reference in the relevant section of the NIR to the documentation box.

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

Country
Year
Submission

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 _x
		(Gg)				P	A		P	A		P	A	(Gg)			
Total National Emissions and Removals																	
1. Energy																	
A. Fuel Combustion	Reference Approach ⁽²⁾																
	Sectoral Approach ⁽²⁾																
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 ⁽³⁾																	
E. Production of Halocarbons and SF ₆																	
F. Consumption of Halocarbons and SF ₆																	
G. Other																	

A = Actual emissions based on Tier 2 approach of the IPCC Guidelines.
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

Note: All footnotes for this table are given at the end of the table on sheet 3.

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

Country
Year
Submission

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	A	P	A	A	P	A						
													(Gg)					
CO ₂ equivalent (Gg)																		
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) ⁽²⁾																		

Note: All footnotes for this table are given at the end of the table on sheet 3.

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

Country
Year
Submission

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

- (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(H) 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 in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.
- (3) Other Production includes Pulp and Paper and Food and Drink Production.
- (4) According to the IPCC Guidelines (Volume 3, Reference Manual, pp. 4.2, 4.87), CQ 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 2.7) allows for reporting CQ emissions or removals from agricultural soils either in the Agriculture sector, under 4.D Agricultural soils or in the Land-use change and forestry sector under 5.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 providing a brief explanation in the documentation box to Table 4.D of the agriculture sector. 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).
- (5) 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 CQ emissions or CO₂ removals column, as appropriate. Note that for the purposes of reporting, the signs for removals are always (-) and for emissions (+).
- (6) Note that CO₂ from source categories Solid waste disposal on land and Waste incineration should only be included if it stems from non-biogenic or inorganic waste streams. Note that only emissions from waste incineration without energy recovery are to be reported in the waste sector, whereas emissions from incineration with energy recovery are to be reported in the energy sector.
- (7) If reporting any country-specific source category under sector "7. Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.
- (8) Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CQ emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CQ emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CQ emissions are accounted for as a loss of biomass stocks in the land-use change and forestry sector.

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

Country
Year
Submission

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
					CO ₂ equivalent (Gg)						CO ₂ equivalent (Gg)										
					A		P		A		P		A		P						
					(Gg)																
Total National Emissions and Removals																					
1. Energy																					
A. Fuel Combustion	Reference Approach ⁽²⁾																				
	Sectoral Approach ⁽²⁾																				
B. Fugitive Emissions from Fuels																					
2. Industrial Processes																					
3. Solvent and Other Product Use																					
4. Agriculture ⁽³⁾																					
5. Land-Use Change and Forestry		(4)																			
6. Waste																					
7. Other																					
Memo Items: (5)																					
International Bankers																					
Aviation																					
Marine																					
Multilateral Operations																					
CO ₂ Emissions from Biomass																					

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

P = Potential emissions based on Tier 1 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(II) 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 in the documentation box to Table 1.A.(c). For estimating national total emissions, the result from the Sectoral approach should be used, where possible.

⁽³⁾ 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 4.D Agricultural soils or in the Land-use change and forestry sector under 5.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 providing a brief explanation in the documentation box to Table 4.D of the agriculture sector. 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).

⁽⁴⁾ 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. Note that for the purposes of reporting, the signs for removals are always (-) and for emissions (+).

⁽⁵⁾ Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO₂ emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO₂ emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO₂ emissions are accounted for as a loss of biomass stocks in the land-use change and forestry sector.

SUMMARY 2 SUMMARY REPORT FOR CO₂ EQUIVALENT EMISSIONS
(Sheet 1 of 1)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ ⁽¹⁾	CH ₄	N ₂ O	HFCs ⁽²⁾	PFCs ⁽²⁾	SF ₆ ⁽²⁾	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 ⁽²⁾							
G. Other							
3. Solvent and Other Product Use							
4. Agriculture							
A. Enteric Fermentation							
B. Manure Management							
C. Rice Cultivation							
D. Agricultural Soils ⁽³⁾							
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. Waste-water Handling							
C. Waste Incineration							
D. Other							
7. Other (as specified in Summary I.A)							
Memo Items:⁽⁴⁾							
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. Note that for the purposes of reporting, the signs for removals are always (-) and for emissions (+).

⁽²⁾ Actual emissions should be included in the national totals. If no actual emissions were reported, potential emissions should be included.

⁽³⁾ See footnote 4 to table Summary I.A.

⁽⁴⁾ See footnote 8 to table Summary I.A.

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, because Parties differ in the way they report emissions and removals from Land-Use Change and Forestry. Note that these totals will differ from the totals reported in Table 10, sheet 5 if Parties report non-CO₂ emissions from LUCF.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CO ₂		CH ₄		N ₂ O		HFC's		PFC's		SF ₆	
		Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor
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													

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),
T3 (IPCC Tier 3),
CR (CORINAIR),
CS (Country Specific),
OTH (Other)

If using more than one method within one source category, list all the relevant methods. Explanations regarding country-specific methods, other methods or any modifications to the default IPCC methods, as well as information regarding the use of different methods per source category where more than one method is indicated, should be provided in the documentation box. Also use the documentation box to explain the use of notation OTH.

Use the following notation keys to specify the emission factor used:

D (IPCC default),
CR (CORINAIR),
CS (Country Specific),
PS (Plant Specific),
OTH (Other)

Where a mix of emission factors has been used, list all the methods in the relevant cells and give further explanations in the documentation box. Also use the documentation box to explain the use of notation OTH.

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	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor
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 (as specified in Summary 1.A)												

Use the following notation keys to specify the method applied:

D (IPCC default), T1a, T1b, T1c (IPCC Tier 1a, Tier 1b and Tier 1c, respectively), CR (CORINAIR),
RA (Reference Approach), T2 (IPCC Tier 2), CS (Country Specific),
T1 (IPCC Tier 1), T3 (IPCC Tier 3), OTH (Other)

If using more than one method within one source category, list all the relevant methods. Explanations regarding country-specific methods, other methods or any modifications to the default IPCC methods, as well as information regarding the use of different methods per source category where more than one method is indicated, should be provided in the documentation box. Also use the documentation box to explain the use of notation OTH.

Use the following notation keys to specify the emission factor used:

D (IPCC default), CS (Country Specific),
CR (CORINAIR), PS (Plant Specific),
OTH (Other)

Where a mix of emission factors has been used, list all the methods in the relevant cells and give further explanations in the documentation box. Also use the documentation box to explain the use of notation OTH.

Documentation box:

- Parties should provide the full information on methodological issues, such as methods and emission factors used, in the relevant sections of Chapters 3 to 9 (see section 2.2 of each of Chapters 3 to 9) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of this table.
- Where a mix of methods/emission factors has been used within one source category, use this documentation box to specify those methods/emission factors for the various sub-sources where they have been applied.
- Where the notation OTH (Other) has been entered in this table, use this documentation box to specify those other methods/emission factors.

TABLE 7 SUMMARY OVERVIEW FOR KEY SOURCES
(Sheet 1 of 1)

KEY SOURCES	GAS	CRITERIA USED FOR KEY SOURCE IDENTIFICATION			COMMENTS
		L	T	Q	
Specify key sources according to the national level of disaggregation used:					
For example: 4 B Mature management	CH ₄	X			

Note: L = Level assessment; T = Trend assessment; Q = Qualitative assessment.

For estimating key sources Parties may choose the disaggregation level presented as an example in Table 7.1 of the IPCC good practice guidance (page 7.6), the level used in Summary 1A of the CRF or any other disaggregation level that the Party used to determine its key sources.

Documentation box:

Parties should provide the full information on methodologies used for identifying key sources and the quantitative results from the level and trend assessments (according to tables 7.A1 – 7.A3 of the IPCC good practice guidance) in Annex 1 to the NIR.

TABLE 8(a) RECALCULATION - RECALCULATED DATA
(Sheet 1 of 2)
Recalculated year:

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂			CH ₄			N ₂ O		
	Previous submission	Latest submission	Difference (Gg)	Difference (%)	Impact of recalculation on total emissions (Gg)	Difference (%)	Latest submission	Difference (Gg)	Impact of recalculation on total emissions (%)
Total National Emissions and Removals	CO ₂ equivalent (Gg)	CO ₂ equivalent (Gg)					CO ₂ equivalent (Gg)		
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 ⁽¹⁾									
4.E. Prescribed Burning of Savannas									
4.F. Field Burning of Agricultural Residues									
4.G. Other									
5. Land-Use Change and Forestry (net) ⁽²⁾									
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									

Note: All footnotes for this table are given at the end of the table on sheet 2.

TABLE 8(a) RECALCULATION - RECALCULATED DATA
(Sheet 2 of 2)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂			CH ₄			N ₂ O		
	Previous submission	Latest submission	Difference	Previous submission	Latest submission	Difference	Previous submission	Latest submission	Difference
	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 Waste-water Handling									
6.C Waste Incineration									
6.D Other									
7. Other (as specified in Summary 1.A)									
Memo Item:									
International Bankers									
Multilateral Operations									
CO ₂ Emissions from Biomass									
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFCs			PFCs			SF ₆		
	Previous submission	Latest submission	Difference	Previous submission	Latest submission	Difference	Previous submission	Latest submission	Difference
	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.3 Aluminium Production									
2.E Production of Halocarbons and SF ₆									
2.F Consumption of Halocarbons and SF ₆									
2.G Other									
Potential Emissions from Consumption of HFCs/PFCs and SF ₆									
Total CO ₂ Equivalent Emissions with Land-Use Change and Forestry ^(a)									
Total CO ₂ Equivalent Emissions without Land-Use Change and Forestry ^(a)									

(a) Estimate the percentage change due to recalculation with respect to the previous submission (Percentage change = $100 \times \frac{(LS-PS)}{PS}$), where LS = Latest submission and PS = Previous submission. All cases of recalculation of the estimate of the source/sink category should be addressed and explained in Table 8(b).

(b) Total emissions refer to total aggregate GHG emissions expressed in terms of CO₂ equivalent, excluding GHGs from the LUCF sector. The impact of the recalculation on the total emissions is calculated as follows:

Impact of recalculation (%) = $100 \times \frac{(source (LS) - source (PS))}{total emissions (LS)}$, where LS = Latest submission, PS = Previous submission.

(c) The relative impact of recalculations of the LUCF sector is not considered in this table, until the IPCC completes its work on good practices for this sector and methods for estimating key sources from this sector are available.

(d) 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 2.7) allows for reporting CO₂ emissions or removals from agricultural soils either in the Agriculture sector, under 4.D Agricultural soils or in the Land-use change and forestry sector under 5.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 providing a brief explanation in the documentation boxes to Table 4D of the agriculture sector. Double-counting of these emissions or removals should be avoided. Parties should include these emissions or removals consistently in Table 4(a) (Recalculation - Recalculated data) and Table 10 (Emission trends).

(e) Net CO₂ emissions/removals to be reported.

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

Documentation box:

Parties should provide detailed information on recalculations in Chapter 10: Recalculations and improvements, and in the relevant sections of Chapters 3 to 9 of the NIR. Use this documentation box to provide references to relevant sections of the NIR, if any additional information and further details are needed to understand the content of this table.

Specify the sector and source/sink category ⁽¹⁾ where changes in estimates have occurred:	GHG	RECALCULATION DUE TO				Other changes in data (e.g. statistical or editorial changes, correction of errors)
		CHANGES IN:			Addition/removal/ reallocation of source/sink categories	
		Methods ⁽²⁾	Emission factors ⁽²⁾	Activity data ⁽²⁾		

¹⁾ Enter the identification code of the source/sink category (e.g. 1.B.1) in the first column and the name of the category (e.g. Fugitive Emissions from Solid Fuels) in the second column of the table. Note that the source categories entered in this table should match those used in Table 8(a).

²¹ Explain changes in methods, emission factors and activity data that have resulted in recalculation of the estimate of the source/sink as indicated in Table 8(a). Include changes in the assumptions and coefficients in the "Methods" column.

Documentation box:

Parties should provide the full information on recalculations in Chapter 10: Recalculations and improvements, and in the relevant sections of Chapters 3 to 9 (see section 2.5 of each of chapters 3 to 9) of the NTR. Use this documentation box to provide references to relevant sections of the NTR if any additional information and further details are needed to understand the content of this table. References should particularly point to the sections of the NTR in which justifications of the changes as to improvements in the accuracy, completeness and consistency of the inventory are reported.

TABLE 9(a) COMPLETENESS - INFORMATION ON NOTATION KEYS
(Sheet 1 of 1)

Country
Year
Submission

Sources and sinks not estimated (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
CO ₂			
CH ₄			
N ₂ O			
HFCs			
PFCs			
SF ₆			

(1) 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 notation key NE (not estimated) is entered in the sectoral tables.

(2) Indicate omitted source/sink following the IPCC source/sink category structure (e.g. sector: Waste, source category: Waste-water Handling).

(3) 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 notation key IE (included elsewhere) is used in the sectoral tables.

TABLE 9(b) COMPLETENESS - INFORMATION ON ADDITIONAL GREENHOUSE GASES
(Sheet 1 of 1)

Country
Year
Submission

Additional GHG emissions reported ⁽¹⁾						
GHG	Source category	Emissions (Gg)	Estimated GWP value (100-year horizon)	Emissions CO ₂ equivalent (Gg)	Reference to the source of GWP value	Explanation

⁽¹⁾ Parties are encouraged to provide information on emissions of greenhouse gases whose GWP values have not yet been agreed upon by the COP. Include such gases in this table if they are considered in the submitted inventory. Provide additional information on the estimation methods used.

Documentation box:

Parties should provide detailed information regarding completeness of the inventory in the NIR (Chapter 1.8: General assessment of the completeness, and Annex 5). Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of this table.

TABLE 10 EMISSIONS TRENDS (CO₂)
(Sheet 1 of 5)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change from 1990 ⁽²⁾ to latest reported year (%)
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 ⁽³⁾															
E. Prescribed Burning of Savannas															
F. Field Burning of Agricultural Residues															
G. Other															
5. Land-Use Change and Forestry ⁽⁴⁾															
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 Disposed on Land															
B. Waste-water Handling															
C. Waste Incineration															
D. Other															
7. Other (as specified in Summary L4)															
Total CO ₂ emissions including net CO ₂ from LUCF ⁽⁵⁾															
Total CO ₂ emissions excluding net CO ₂ from LUCF ⁽⁶⁾															
Notes:															
International Bankers															
Aviation															
Marine															
Multilateral Operations															
CO ₂ Emissions from Biomass															

Note: All footnotes for this table are given at the end of the table on sheet 5.

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change from 1990 ⁽¹⁾ to latest reported year (%)
Total CH₄ 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 (as specified in Summary I-4)															
Notes:															
International Bankers															
Aviation															
Marine															
Multilateral Operations															
CO₂ Emissions from Biomass															

Note: All footnotes for this table are given at the end of the table on sheet 5

TABLE 10 EMISSIONS TRENDS (NO)
(Sheet 3 of 5)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change from 1990 ⁽¹⁾ to latest reported year
Total N ₂ O 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 (as specified in Summary 1.A)															
Memo Items:															
International Bankers															
Aviation															
Marine															
Multilateral Operations															
CO ₂ Emissions from Biomass															

Note: All footnotes for this table are given at the end of the table on sheet 5

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change from 1990 ⁽¹⁾ to latest reported year
(Gg)															
Emissions of HFCs ⁽²⁾ - (Gg CO ₂ equivalent)															
HFC-23															
HFC-32															
HFC-41															
HFC-43-10mce															
HFC-125															
HFC-134															
HFC-134a															
HFC-152a															
HFC-143															
HFC-143a															
HFC-227ea															
HFC-236fa															
HFC-245ca															
Unspecified mix of listed HFCs (⁽³⁾ - (Gg CO ₂ equivalent))															
Emissions of PFCs ⁽²⁾ - (Gg CO ₂ equivalent)															
CF ₄															
C ₂ F ₆															
C ₃ F ₈															
CF ₃ I															
C ₂ F ₄															
C ₃ F ₇															
C ₃ F ₁₀															
C ₄ F ₁₀															
C ₄ F ₈															
C ₄ F ₁₂															
C ₄ F ₁₄															
Unspecified mix of listed PFCs (⁽³⁾ - (Gg CO ₂ equivalent))															
Emissions of SF ₆ ⁽²⁾ - (Gg CO ₂ equivalent)															
SF ₆															

Note: All footnotes for this table are given at the end of the table on sheet 5.

Chemical	GWP
HFCs	
HFC-23	11700
HFC-32	650
HFC-41	150
HFC-43-10mce	1300
HFC-125	2800
HFC-134	1000
HFC-134a	1300
HFC-152a	140
HFC-143	300
HFC-143a	3800
HFC-227ea	2900
HFC-236fa	6300
HFC-245ca	560
PFCs	
CF ₄	6500
C ₂ F ₆	9200
C ₃ F ₈	7000
C ₂ F ₄	7000
C ₃ F ₁₀	8700
C ₄ F ₁₀	7500
C ₄ F ₈	7400
SF ₆	23900

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

Country
Year
Submission

GREENHOUSE GAS EMISSIONS	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change from 1990 ⁽²⁾ to latest reported year (%)
CO ₂ emissions including net CO ₂ from LUCF ⁽³⁾															
CO ₂ emissions excluding net CO ₂ from LUCF ⁽³⁾															
CH ₄															
N ₂ O															
HFCs															
PFCs															
SF ₆															
Total (including net CO ₂ from LUCF) ⁽⁴⁾															
Total (excluding net CO ₂ from LUCF) ⁽⁵⁾															

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ⁽¹⁾	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Change from 1990 ⁽²⁾ to latest reported year (%)
1. Energy															
2. Industrial Processes															
3. Solvent and Other Product Use															
4. Agriculture															
5. Land-Use Change and Forestry ⁽⁶⁾															
6. Waste															
7. Other															
Total (including LUCF) ⁽⁶⁾															

(1) The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the COP. For those Parties, this different base year is used to calculate the percentage change in the final column of this table.
(2) 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 4.D Agricultural soils or in the Land-use change and forestry sector under 5.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 providing a brief explanation in the documentation box to Table 4.D of the agriculture sector. Double-counting of these emissions or removals should be avoided. Parties should include these emissions or removals consistently in Table 4(a) (Recalculation - Recalculated data) and Table 6 (Emission trends).

(3) If net emissions as reported in table Summary 1 A. Please note that for the purposes of reporting, the signs for removals are always (-) and for emissions (+).

(4) The information in these rows is requested to facilitate comparison of data, because Parties differ in the way they report CO₂ emissions and removals from land-use change and forestry.

(5) Enter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this be provided in the documentation box. Note that only in these rows the emissions are expressed as CO₂-equivalent emissions.

(6) In accordance with the UNFCCC resource guidelines, HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is Gg of CO₂ equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

(7) These totals will differ from the totals reported in table Summary 2 if Parties report non-CO₂ emissions from LUCF.

(8) Includes net CO₂, CH₄ and N₂O from LUCF.

Documentation box:

- Parties should provide detailed explanations on emissions trends in Chapter 2: Trends in greenhouse gas emissions and, as appropriate, in the corresponding Chapters 3, 9 of the NTR. Use this documentation box to provide references to relevant sections of the NTR if any additional information and further details are needed to understand the content of this table.
- Use the documentation box to provide explanations if potential emissions are reported.

《公约》附件一所列缔约方温室气体 清单技术审评指南

A. 目 的

1. 本指南的目标是促进《公约》附件一所列缔约方(附件一缔约方)温室气体清单审评工作的连贯一致，制定对国家清单进行透彻和全面的技术审评程序。

B. 温室气体清单技术审评的宗旨

2. 对附件一所列缔约方提交的温室气体清单进行技术审评的宗旨是：
- (a) 确保缔约方会议具备关于《蒙特利尔议定书》未予管制的温室气体人为源排放量和汇清除量年度清单和排放趋势的充分和可靠的信息；
 - (b) 向缔约方会议提供关于附件一所列缔约方所提交的定量和定性信息的客观、一致、透明、透彻和全面的技术评估，以及对附件一所列缔约方根据《公约》第四条第1款(a)项和第十二条1款(a)项所作承诺履行情况的技术评估；
 - (c) 以简易和公开的方式审查按照“《公约》附件一所列缔约方国家信息通报编制指南，第一部分：《气候公约》年度清单报告指南”¹、和气候变化专门委员会(气专委)题为“国家温室气体清单良好做法指导意见和不确定性的掌握”的报告²进一步阐述的“修订的1996年气专委国家温室气体清单指南”³报告的清单信息；
 - (d) 协助附件一所列缔约方提高其温室气体清单的质量。

C. 一般方法

3. 所有附件一所列缔约方提交的温室气体清单都将进行年度技术审评。如本指南所述，温室气体清单技术审评包括三个阶段，审议清单的不同方面，要在工作结束之时实现上文所述的各项宗旨。这三个阶段是：

- (a) 年度清单的初步核对；
- (b) 年度清单的综合与评估；
- (c) 单项年度清单的审评。

¹ 本文件中称为“报告指南”。

² 本文件中称为“气专委良好做法指导意见”。

³ 本文件中称为“气专委指南”。

4. 技术审评过程的各个阶段相辅相成，总的说来，对每一个缔约方而言，都是在完成了一个阶段之后再进入下一个阶段。

5. 在清单审评过程的所有阶段，接受审评的单个附件一缔约方将有机会澄清问题或提供补充信息。秘书处将向这些附件一缔约方发送状况报告草稿、汇编和评估报告及对缔约方各自清单的初步分析的。在印发某一份报告之前将尽量与有关缔约方就内容达成一致。如果缔约方与专家组无法就某个问题达成一致意见，缔约方可提交解释性说明，将其列为报告的一个单独的部分。

D. 年度清单的初步核对

1. 范 围

6. 秘书处将每年对附件一缔约方提交的年度温室气体清单进行初步核对，以迅速确定所提交的信息是否完备、其格式是否正确，以使其后的审评阶段得以进行。

7. 初步核对的对象包括提交的国家清单，尤其是使用通用报告格式以电子方式提交的数据，并将确定：

- (a) 是否报告了气专委良好做法指导意见所详述的气专委指南中所列的所有源、汇和气体；
- (b) 是否填写了通用报告格式的所有表格，是否采用标记符号(诸如 NE、NA、NO、IE、C)⁴ 在通用报告格式中解释了任何缺漏，是否频繁使用这些标记符号；
- (c) 是否根据缔约方会议有关决定，使用气专委全球升温潜能值，以质量单位和CO₂当量载列了总计和分列的各类源的估计数；
- (d) 是否提供了所有要求年度(从基准年到提交现期报告的最近年度)的排放量估计数；⁵
- (e) 是否在通用报告格式中使用标记符号记述了有关方法；
- (f) 除了使用国别方法以外，是否还使用气专委的参比办法报告了矿物燃料燃烧所排放的CO₂估计数；
- (g) 是否按个别的化学种类报告了氢氟碳化合物、全氟碳化物和六氟化硫的实际和潜在的排放量估计数；
- (h) 是否报告了整个时间序列的任何重新计算，在通用报告格式中是否提供了有关这些重新计算的解释性资料；

⁴ NE=未估算，NA=不适用，NO=未发生，IE=另列，C=机密。

⁵ 根据报告指南，如果先前提交的清单没有变化，国家清单报告应当提到其他年份构成时间序列的提交的清单。

- (i) 是否报告的所有排放量都未就气候变异或电力贸易方式等作过调整；
- (j) 是否将国际运输所用燃料的排放量与国家排放总量分开报告；
- (k) 是否按照报告指南的要求在通用报告格式中对关键源做出了报告；
- (l) 是否按照报告指南的要求报告了不确定性表；
- (m) 是否提交了国家清单报告。

2. 状况报告

8. 每个附件一缔约方初步核对的结果将作为状况报告在《气候公约》网站上公布，主要采用表格的形式。状况报告除其他外将：

- (a) 注明秘书处的收件日期；
- (b) 注明是否提交了国家清单报告和通用报告格式；
- (c) 确定是否按报告指南所要求的正确格式提交清单信息；
- (d) 确定提交的资料是否完整并注明报告的数据中是否存在任何缺漏，是否涵盖了以上第 7 段所列的要素。

3. 时间安排

9. 应在秘书处收到所交材料之日起 7 周之内完成对每个附件一缔约方的初步核对，并在《气候公约》网站上公布状况报告。一般而言，初步核对的时间表应符合：

- (a) 秘书处应在 3 周之内进行初步核对，编写一份状况报告草稿，并将其发给缔约方供提出意见；
- (b) 每个缔约方应在 3 周之内就状况报告草稿提出意见。

E. 年度清单的综合与评估

1. 范 围

10. 秘书处将对附件一缔约方温室气体清单进行综合与评估，以便利审议清单的数据和附件一缔约方都需提交的其他信息，并查明需要在单项清单审评期间进一步审议的问题。

11. 综合与评估将涵盖各国提交的清单和先前提交的有关国家清单，将包括下列一套标准化的数据比较：

- (a) 隐含排放系数和各附件一所列缔约方都需提交的其他清单数据，以查明任何不规则和不一致之处，
- (b) 排放量和清除量估计数、活动数据、隐含排放系数和对先前提交数据的任何重新计算，以查明任何不正常和不一致之处；

- (c) 如果可行，每个附件一缔约方的活动数据应附有相关的外部权威数据来源，以查明有重大差异的情况。

12. 为便利分析清单数据，秘书处将应用气专委良好做法指导意见中所述第一级评估方法，确定并审议每个附件一缔约方在绝对水平上和趋势评估方面都属于关键源的各种源。此外，秘书处还将审议其他各种源(如舱载燃料的排放，土地利用的变化和林业的排放量和清除量⁶等)，并根据对具体部门或整个温室气体清单的重要性，审议已查明存在异常或不一致的非关键源。

2. 综合与评估报告

13. 综合与评估由两部分组成：第一部分和第二部分，它们分别在以下第 14 段和第 15 段中介绍。第一部分的结果将作为综合与评估报告，在《气候公约》网站上公布。第二部分载有对单个附件一所列缔约方清单的初步分析，它将发送给各自的缔约方发表意见。第二部分的结果连同各缔约方发表的评论将提交给相应的专家审评组作为单个审查的素材。

第一部分

14. 综合与评估报告(第一部分)将提供可在附件一缔约方之间进行比较的信息，并说明共同的方法问题。这种报告将以表格形式、并酌情以图表格式汇编和比较附件一缔约方之间的信息，包括：

- (a) 关于关键源和其他选定的源，根据秘书处所用的方法：
 - (一) 用于编制清单的方法；
 - (二) 气专委良好做法指导意见详细阐述的并由气专委指南所载列的隐含排放系数、设定缺省值和数值范围；
 - (三) 若有可能，报告的活动数据和外部权威来源的数据；
 - (四) 在通用报告格式各种表格中提供的其他信息；
- (b) 使用气专委参比办法得出的燃料燃烧所产生的 CO₂ 排放量估计数，与由国家(部门)办法得出的燃料燃烧所产生的 CO₂ 排放量估计数的对比；
- (c) 氢氟碳化合物、全氟碳化物和六氟化硫的实际及潜在排放量的估计数，以及实际排放量和潜在排放量的比率；
- (d) 清单数值的重新计算。

⁶ 关于土地利用的变化和林业，尚未详细拟订良好做法指导意见。

第二部分

15. 对单个附件一缔约方清单的初步分析(第二部分)将基于综合与评估报告所载的信息, 并就每一单独的清单:

- (a) 指出需要在单项审评阶段进一步审议或澄清的源或汇类别中的问题;
- (b) 指出提交报告时经常出现的问题;
- (c) 审查清单数值的重新计算和时间序列的连贯一致问题;
- (d) 评估是否具备下列方面的文件材料:
 - (一) 国家自行核查程序或技术审评中的独立审评;
 - (二) 气专委良好做法指导意见的应用, 包括不确定性的估计;
- (e) 评估通用报告格式中涉及方法和排放系数的信息与国家清单报告中有关信息是否一致。

3. 时间安排

16. 综合与评估将每年进行, 一般应遵循以下时间表:

- (a) 自规定提交之日起 10 周之内完成综合与评估报告(第一部分), 其中载有以上第 14 段中的内容。⁷ 秘书处将对自规定提交之日起 6 周之内收到的附件一缔约方提交的所有文件和其为回应状况报告而重新提交的任何文件加以汇编。附件一缔约方应于收到综合与评估报告草稿 3 周之内提出意见。若有可能, 秘书处应完成对该日期之后提交的温室气体清单的评估, 并应作为单独的文件公布这些评估(作为综合与评估报告增编), 前提是不至拖延对其他附件一缔约方的审评工作。;
- (b) 对单个附件一所列缔约方清单的初步分析(综合与评估报告的第二部分), 其中载有以上第 15 段中的内容, 将最迟于对有关缔约方预定做个别审评的 4 周之前完成。秘书处将最迟于对有关缔约方预定做个别审评的 7 周之前将初步分析草稿发送给该缔约方。该缔约方将在 3 周之内发表意见。初步分析和该缔约方的意见将转交专家评审小组作进一步审议。

⁷ 按照第 3/CP.5 号决定, 附件一缔约方温室气体清单的规定提交日期为每年的 4 月 15 日。

F. 单项年度清单审评

1. 范 围

17. 专家审评组将在秘书处的协调下对单项温室气体清单进行审评，以便评估缔约方会议是否具备关于年度温室气体清单的充分可靠的信息。通过单项审评可对清单估计数、编写清单所用程序和方法进行详细的审查，涵盖每一个附件一缔约方国家清单，缔约方提交的补充材料，并酌情包括先前提交的清单。审评工作这一阶段的结果将通报各附件一缔约方。

18. 假定资源齐备，在技术审评这一阶段可使用三种业务方法，即书面材料审评、集中审评和国内审评。在书面材料审评期间，附件一缔约方的清单资料将发给专家，专家在各自国家内进行审评。在集中审评期间，专家将集中在一个地点，审评附件一缔约方的清单资料。在国内审评期间，专家将访问一个附件一缔约方，审评该缔约方的清单资料。

19. 大多数附件一所列缔约方单项清单的审评将每年通过书面材料审评或集中审评的方式进行。此外，每个附件一缔约方的温室气体清单每五年将由一个专家审评组进行一次国内审评。在国内审评年份不对缔约方的温室气体清单进行书面材料或集中审评。国内访问应在被审评缔约方同意、并密切配合的情况下加以安排、计划和进行。一般而言，一次集中审评应审评 8 份温室气体清单；一次书面材料审评应审评 5 份温室气体清单。

20. 专家审评组应特别注意清单中在以前的审评或审评阶段中曾找到问题或缔约方报告发生变化的领域。在遇有未提供国家清单报告的情况，专家审评组不应安排单项审评。

21. 每个专家审评组将：

- (a) 审查报告指南和气专委良好做法指导意见进一步阐述的气专委指南各项要求的适用情况，并查明任何偏离这些要求的情况；
- (b) 审查是否应用气专委良好做法指导意见并记录了应用情况，特别要注意确定关键源类别、方法和假定的选择和使用、排放系数的研讨和选择、活动数据的收集和选择、报告重新计算和一致的时间序列，报告与清单估计数有关的不确定性、估计这些不确定性所用的方法及质量保证和质量控制程序、并查明任何不一致之处；
- (c) 将附件一缔约方的排放和清除估算、活动数据、隐含排放系数及任何重新计算与其以前提交文件中的数据加以比较，以找出任何不规则和不一致之处；
- (d) 查明任何遗漏的源并审查未将它们列入温室气体清单的任何解释性资料；
- (e) 查明缔约方和秘书处关键源确定之间的差异的原因；
- (f) 评估通用报告格式与国家清单报告信息是否一致；
- (g) 评估对年度清单的综合与评估中提出的问题与专家审评组先前报告中提出的问题多大程度上得到处理和解决；

(h) 查明需要进一步改进的清单领域，并指出改进估计和报告清单信息的可能方法。

22. 除了上文第 21 段所述的任务之外，进行国内审评的专家审评组将审议清单中从数据收集到报告的排放量估计数中的“文件线索”，并审查清单研拟和管理，包括质量保证和质量控制、记录保存和文献编目在内的程序和体制安排。在随后的书面材料审评或集中审评期间，专家审评组将根据附件一缔约方国家清单报告中所提供的信息，查明这些程序和体制安排中可能出现的任何变动。

23. 专家审评组在审评工作中可使用有关的技术信息，如各国际组织的信息。

2. 专家审评组

一般程序

24. 提交的每一项温室气体清单将交给一个专家审评组，该专家审评组负责按照本指南所确定的程序和时间范围开展审评。附件一缔约方提交的清单不得连续两年由人员相同的专家审评组审评。

25. 每个专家审评组将对提交的温室气体信息进行透彻和全面的技术评估，将集体负责根据本指南的规定编写审评报告。

26. 专家审评组将由秘书处协调，秘书处将提供行政支助，并酌情提供技术和方法方面的援助以及使用报告指南和本审评指南方面的援助。

27. 专家审评组将由临时从《气候公约》专家名册中挑选的专家组成，其中将包括主任评审员。专家将由《公约》缔约方、并酌情由国际组织根据缔约方会议为此提供的指导意见提名后列入专家名册。专家将以个人身份参加工作，专家不得为被审评缔约方的国民，也不得由该缔约方提名或资助。

28. 在审评中，专家审评组将遵循本指南，按照缔约方会议通过的有关决定，在既定并公布的程序基础上开展工作，包括执行质量保证和控制及保密规定。

29. 秘书处应通知附件一缔约方即将开展的书面材料审评和集中审评，并请附件一缔约方指明负责接受询问的联络人。专家审评组与被审评缔约方之间的联系应通过主任评审员和该缔约方指定的联络人进行。专家审评组其他成员仅可在缔约方同意的情况下，同参与温室气体清单编写工作的国内专家直接联系。由此获得的信息应提供给该审评组的其他成员。

30. 参加工作的非《公约》附件一所列缔约方(非附件一缔约方)和附件一所列经济转型期国家缔约方的专家将根据参加《气候公约》活动的现行程序得到资助。其他附件一缔约方的专家将由其政府资助。

专家审评组的组成

31. 参加工作的专家应具有温室气体清单方面的一般经验和/或具体部门(能源、工业加工、溶剂和其他产品使用、农业、土地利用的变化和林业及废弃物)的经验。

32. 专家审评组的规模和组成可以不同，要考虑到被审评缔约方的国情和所需的不同专门知识。一般而言，专家审评组的通常规模应是：

(a) 国内访问：6 位专家(每个清单部门 1 位专家⁸，外加 1 位通才⁹)；

(b) 书面材料审评和集中审评：12 位专家(每个清单部门 2 位专家⁸，外加 1 位通才⁹)。

33. 秘书处将挑选审评组成员，其方式将保证审评组的集体技能涵盖以上第 31 段所述各个领域，保证专家审评组大多数专家具有审评工作所需的经验。秘书处将挑选在审评工作方面经验有限或没有经验的国家清单专家，并邀请其中一位专家参加每一次国内审评，最多可有 5 位专家参加每次集中审评。这些在审评工作方面经验有限或没有经验的专家将同在审评工作方面有经验的一位专家一道从事气专委所定一个具体部门的工作。书面材料审评将仅由有经验的专家进行。

34. 秘书处将挑选专家审评组成员，以便在专家审评组总的构成中实现附件一缔约方和非附件一缔约方专家之间的平衡，而又不降低以上第 31 段所述的选择标准。秘书处将尽一切努力确保在从非附件一缔约方和从附件一缔约方挑选的专家之间实现地域平衡。

35. 在不损害以上第 31 至 34 段所述标准的情况下，专家审评组的组成应尽可能确保至少有一位成员能够流利地使用被审评缔约方的语文。

主任审评员

36. 每一个专家审评组将由两名具有丰富清单审评经验的清单专家担任主任审评员。一位主任审评员来自非附件一缔约方，另一位来自附件一缔约方。

37. 主任审评员应当确保其所参与的审评按照本指南进行，并保持与该专家审评组就所有附件一缔约方开展的审评工作保持一致。他们还应当确保审评中技术评估的质量和客观性。

⁸ 有关工业加工部门的专家还应当负责溶剂和其他产品使用部门，该部门一般而言，并不构成主要温室气体排放源。

⁹ “通才”在本指南中用以指在清单工作的所有领域具有广泛知识的专家。

38. 在秘书处的支持下，主任审评员将：

- (a) 编写审评活动简要工作计划；
- (b) 核实专家拥有秘书处在审评活动之前提供的的所有必要信息；
- (c) 监督审评活动的进展；
- (d) 确保专家审评组内部联系顺畅；
- (e) 协调专家审评组对缔约方的询问并协调将答复列入审评报告中；
- (f) 如果需要，为临时专家提供技术咨询；
- (g) 确保按照本指南进行审评和编写审评报告；和
- (h) 确认审评组按照本指南在审评中优先考虑单项源类别。

3. 单项审评报告

39. 专家审评组将集体负责，就以上第 21 段所列任务的结果编写一份单项清单审评报告，供在《气候公约》网站上以电子形式公布。审评报告应包括客观评估清单信息是否遵循了报告指南、以及是否遵循了缔约方会议有关决定规定，其中不应含有任何政治判断。

40. 国内审评报告的篇幅一律不应超过 25 至 30 页，包括 2 至 3 页的提要。书面材料审评报告和集中审评报告不应超过 10 页，应突出特定的强项和所指出的问题，总体评价清单的质量和可靠性、排放趋势、实际排放系数和活动数据，以及遵循报告指南和气专委良好做法指导意见的程度。这两类审评报告都应尽可能含有标准化的表格，以提高通报效率。

4. 时间安排

41. 秘书处应在审评活动开始一个月之前将所有有关信息发给专家审评组成员。书面材料审评或集中审评应分别于 20 周和 25 周¹⁰之内完成，国内审评应在 14 周之内完成。一般而言，假定资源齐备，单项审评活动的时间安排应符合：

- (a) 书面材料审评：每个专家审评组在 7 周之内进行单项审评并编写审评报告草稿(单项审评 3 周，编写报告 4 周)。秘书处编辑报告并编排其格式，将其分别发给附件一缔约方提出意见。附件一缔约方在 4 周之内做出答复。专家审评组在 4 周之内将缔约方的意见编入报告，并将修订的报告发给秘书处。最后报告在 2 周之内在《气候公约》网站上公布。

¹⁰ 按照本指南的原先版本(见 FCCC/SBSTA/2002/L.5/Add.2)，为完成集中审评规定的时间共计 22 周。然而，这段时间中不包括秘书处按照第 41(b)段要求对审评报告进行编辑和编排格式所需要的时间。因此，现将为审评规定的合计时间从 22 周增加到 25 周，使之与书面材料审评和国内审评的时间规定保持一致。

- (b) 集中审评：每个专家审评组在 10 周之内进行单项审评并编写审评报告草稿(单项审评可用 8 个工作日，编写报告可用 9 周)。秘书处编辑报告并编排其格式，将其分别发给附件一缔约方供提出意见。附件一缔约方在 4 周之内作出答复。专家审评组在 6 周之内将附件一缔约方的意见编入报告，并将修订的报告发给秘书处。最后报告在 2 周之内在《气候公约》网站上公布。
- (c) 国内审评：每个专家审评组在 1 周之内进行单项审评，在 3 周之内编写报告草稿。秘书处编辑报告并编排其格式，将其分别发给附件一缔约方供提出意见。缔约方在 4 周之内作出答复。专家审评组在 3 周之内将附件一缔约方的意见编入报告，并将修订的报告发给秘书处。最后报告在 1 周之内在《气候公约》网站上公布。

G. 温室气体排放量和趋势年度报告

42. 作为年度温室气体清单技术审评的一部分，秘书处还将在一份有待在《气候公约》网站上以电子形式公布的文件中，汇编关于温室气体源排放量和汇清除量的总的信息，以及任何其他清单信息，并将其列入表格。这份文件的信息将取自现有最新的所有附件一缔约方提交的温室气体清单，将为缔约方会议提供关于所有附件一缔约方的温室气体源排放量和汇清除量及其趋势的总的信息。这份文件还可被用作对技术审评工作第三阶段的一个投入。

43. 以上第 42 段所述文件的摘要将以书面和电子形式公布，供缔约方会议和两个附属机构审议¹¹。这份摘要将包括温室气体源排放量和汇清除量趋势，并评估所报清单信息遵循报告指南的情况、以及遵循缔约方会议有关决定规定情况，除其他外，包括关于任何拖延提交年度清单信息的资料。

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¹¹ 为了确保列入摘要的信息的质量和及时性，秘书处将编出此报告供《公约》机构在每年计划的第二会期内审议。