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CUESTIONES METODOLÓGICAS

DIRECTRICES PARA LA PRESENTACIÓN Y EL EXAMEN DE LOS INVENTARIOS DE GASES DE EFECTO INVERNADERO DE LAS PARTES INCLUIDAS EN EL ANEXO I DE LA CONVENCIÓN (APLICACIÓN DE LAS DECISIONES 3/CP.5 Y 6/CP.5)

Informe de una reunión de expertos encargada de evaluar las experiencias en la utilización de las directrices de la Convención Marco para la presentación de informes y el examen

Nota de la secretaría

Adición

PROYECTO DE DIRECTRICES REVISADAS PARA LA PREPARACIÓN DE LAS COMUNICACIONES NACIONALES DE LAS PARTES INCLUIDAS EN EL ANEXO I DE LA CONVENCIÓN, PRIMERA PARTE: DIRECTRICES DE LA CONVENCIÓN MARCO PARA LA PRESENTACIÓN DE INFORMES SOBRE LOS INVENTARIOS ANUALES

ANEXO: CUADROS DEL FORMULARIO COMÚN PARA LOS INFORMES

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ÍNDICE

I. INTRODUCCIÓN

A. Mandato

1. En su decisión 3/CP.5, la Conferencia de las Partes (CP) aprobó las directrices para la preparación de las comunicaciones nacionales de las Partes incluidas en el anexo I de la Convención, primera parte: directrices de la Convención marco sobre los inventarios anuales (en adelante las "directrices para la preparación de comunicaciones").

2. La Conferencia decidió que "el Órgano Subsidiario de Asesoramiento Científico y Tecnológico considerara la revisión de estas directrices, en particular el formulario común, en su 15º período de sesiones, con miras a proponer una decisión a la Conferencia de las Partes en su séptimo período de sesiones" (FCCC/CP/1999/6/Add.1).

3. En la misma decisión, la CP pidió a la secretaría que preparara un informe sobre la utilización de esas directrices, en particular el formulario común, teniendo en cuenta, entre otras cosas, la experiencia adquirida por las Partes en la utilización de las directrices y por la secretaría en el manejo del formulario común, para que el Órgano Subsidiario de Asesoramiento Científico y Tecnológico (OSACT) analizara, en su 15º período de sesiones, la posible revisión de esas directrices. En su 12º período de sesiones, el OSACT pidió a la secretaría, en su informe sobre la utilización de las directrices para la presentación de informes, que considerara si se precisaba introducir alguna modificación a estas directrices que reflejara la orientación sobre las buenas prácticas[1] (FCCC/SBSTA/2000/5, párr. 40 f)).

4. La CP, en su decisión 34/CP.7, decidió postergar el examen de las directrices para la preparación de las comunicaciones nacionales hasta el 16º período de sesiones del OSACT, para que éste propusiera una decisión a la CP en su octavo período de sesiones (FCCC/CP/2001/13/Add.4).

5. En su 15º período de sesiones, el OSACT acogió con satisfacción la organización por la secretaría de una reunión de expertos sobre las cuestiones metodológicas y operacionales relacionadas, entre otras cosas, con el uso de las directrices para la preparación de comunicaciones nacionales, que se celebró en Bonn, del 4 al 6 de diciembre de 2001. Además, el OSACT pidió a la secretaría que preparara el informe de la reunión de expertos para examinarlo en su 16º período de sesiones (FCCC/SBSTA/2001/8, párr. 15 b)).

6. En la reunión de expertos, el Presidente del OSACT propuso que la secretaría, con su orientación, preparara un proyecto de directrices revisadas para la preparación de comunicaciones teniendo en cuenta la experiencia adquirida por las Partes en la utilización de las directrices y por la secretaría en el manejo del formulario común para los informes (FCI) , así como los resultados de la reunión de expertos (FCCC/SBSTA/2002/2) con miras a facilitar el

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[1] La orientación sobre las buenas prácticas remite al informe del Grupo Intergubernamental de Expertos sobre el Cambio Climático (IPCC) titulado *Orientación sobre las Buenas Prácticas y Gestión de las Incertidumbres en los Inventarios Nacionales de Gases de Efecto Invernadero*. En el presente documento se hace referencia a ella como "orientación del IPCC sobre las buenas prácticas".

examen de las directrices revisadas para la preparación de comunicaciones por los órganos subsidiarios en su 16º período de sesiones.

B. Alcance de la presente nota

7. La presente nota se ha preparado atendiendo al mandato mencionado en el párrafo 6 *supra*. Contiene una propuesta de formulario común para los informes revisado, que forma parte integrante de las directrices para la preparación de las comunicaciones. La presente nota se ha preparado para facilitar el examen de este asunto durante el 16º período de sesiones del OSACT. Se la debe leer junto con el informe de la reunión de expertos (FCCC/SBSTA/2002/2) y la propuesta de revisión de las directrices para la preparación de comunicaciones nacionales sobre los inventarios anuales (FCCC/SBSTA/2002/2/Add.2).

8. El proyecto de FCI revisado que figura en el anexo al presente informe se basó en gran medida en el FCI anexo a las directrices para la preparación de comunicaciones adoptado en la decisión 3/CP.5 (FCCC/CP/1999/7). La secretaría tuvo en cuenta la experiencia adquirida por las Partes en la utilización de las directrices para la presentación de informes, incluso del FCI, y por la secretaría en el manejo del FCI y en la coordinación del proceso de examen técnico, como se explica en los documentos FCCC/SBSTA/2001/MISC.4, FCCC/SBST/2001/MISC.5, FCCC/SBSTA/2001/5 y Add.1, así como las recomendaciones de los participantes en la reunión de expertos (véase FCCC/SBSTA/2002/2).

9. El FCI es parte indivisible de las directrices para la preparación de comunicaciones. Por razones técnicas, el proyecto de FCI revisado (cuadros) figura en la presente nota separado de las directrices para la preparación de comunicaciones (FCCC/SBSTA/2002/2/Add.2). El FCI constituye el anexo II del proyecto de directrices para la preparación de comunicaciones[2].

C. Medidas que podría adoptar el OSACT

10. El OSACT tal vez desee tomar en consideración la información contenida en la presente nota y aprobar o modificar los cambios propuestos al FCI. El OSACT tal vez desee remitir el FCI revisado al Órgano Subsidiario de Ejecución para que lo examine y recomiende, si lo estima conveniente, su aprobación por la CP en su octavo período de sesiones.

D. Enfoque

11. El proyecto de directrices revisadas, incluido el FCI que figura en la presente nota, se preparó con la orientación del Presidente del OSACT y con ayuda de los copresidentes de la reunión de expertos (Sr. William Kojo Agyemang-Bonsu (Ghana), Sra. Dina Kruger (Estados Unidos de América), Sr. Newton Paciornik (Brasil) y Sr. Jim Penman

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[2] El proyecto de directrices revisadas para la preparación de comunicaciones consta de dos anexos: anexo I titulado "Estructura propuesta para el informe sobre el inventario nacional (IIN)" y el anexo II titulado "Cuadros del FCI (véase FCCC/SBSTA/2002/2/Add.2, págs. 16 y 22 respectivamente). El texto de las directrices revisadas para la preparación de comunicaciones y los cuadros revisados del CFI se publicarán como documento único después del 16º período de sesiones de los órganos subsidiarios.

(Reino Unido de Gran Bretaña e Irlanda del Norte)). Además, un pequeño número de expertos con mucha experiencia en el examen de inventarios, que hicieron de examinadores principales durante el período de prueba y participaron en la reunión, también aceptó la invitación del Presidente del OSACT para que le ayudaran en la preparación del proyecto de directrices revisadas. Dichos expertos eran: Sr. Ayite-Lo Ajavon (Togo), Sr. Samir Amous (Túnez), Sra Katarina Mareckova (Eslovaquia), Sr. Klaus Radunsky (Austria), Sr. Audun Rosland (Noruega) y Sr. José Villarin (Filipinas).

12. A los efectos de examinar cualquier posible modificación de los cuadros sectoriales del FCI, en la reunión de expertos se crearon tres grupos sectoriales: un grupo sobre energía, otro sobre procesos industriales y la utilización y el desperdicio de disolventes y otros productos y un tercero sobre agricultura, en los que participó un pequeño número de expertos de reconocida experiencia en estos sectores. El resultado de las deliberaciones de cada uno de esos grupos se caracteriza por una gran tecnicidad y una gran minuciosidad. Por falta de tiempo, el grupo de trabajo sobre directrices para la preparación de comunicaciones no examinó en detalle los resultados de cada debate. El Presidente invitó a los expertos a que, a título personal o con el apoyo de sus respectivos Estados Partes, expresaran sus opiniones sobre los resultados de cada grupo sectorial. Tanto los resultados como las opiniones se incorporaron al sitio en la Web de la secretaría (*http://unfccc.int/sessions/workshop/010412/index.html*).

13. En la preparación del proyecto de cuadros del FCI revisado, como se explica en el párrafo 8 *supra*, la secretaría tuvo en cuenta, además, las recomendaciones de los tres grupos sectoriales y la información recibida sobre los resultados de la reunión. Los cambios concretos propuestos al FCI que figuran en la presente nota se explican a continuación en la sección II cuadro por cuadro (véanse los párrafos 18 a 125 *infra*).

14. En lo que se refiere al cambio de uso de la tierra y la silvicultura, los participantes en la reunión recomendaron esperar a contar con los resultados de la labor que está llevando a cabo el IPCC en la elaboración de una orientación sobre las buenas prácticas relativa a este sector antes de sugerir cualquier otra forma de presentación de los cuadros sectoriales de base 5.A a D sobre este sector en el FCI[3].

[3] El OSACT, en su 12º período de sesiones, invitó al IPCC a que incluyera en su plan de trabajo la orientación sobre buenas prácticas para ese sector. En su séptimo período de sesiones, la CP, en su decisión 11/CP.7, invitó al IPCC a que preparara un informe sobre las buenas prácticas y la gestión de la incertidumbre en relación con la medición, estimación, evaluación de las incertidumbres, vigilancia y notificación de las variaciones netas del carbono almacenado y de las emisiones antropógenas de gases de efecto invernadero por las fuentes, así como de la absorción por los sumideros en el sector del uso de la tierra, cambio de uso de la tierra y silvicultura.

II. CAMBIOS PROPUESTOS AL FORMULARIO COMÚN PARA LOS INFORMES

15. No se proponen cambios significativos al proyecto de FCI revisado: las fuentes, los gases y los datos de actividad que se han de notificar, incluido el cálculo de los factores de emisión implícitos (FEI), y el contenido de la mayoría de los cuadros siguen siendo los mismos. A continuación se sugieren algunas modificaciones que facilitarán la preparación de comunicaciones por las Partes, ya que de esa forma el FCI sería compatible en muchos aspectos con la orientación del IPCC sobre las buenas prácticas, lo que haría también más precisa y coherente la preparación de comunicaciones y mejoraría el control de la calidad.

16. En los cambios propuestos al FCI se prevé una mejora de los vínculos entre la información que se ha de presentar en el informe del inventario nacional (IIN) y la que se ha de proporcionar en el FCI. La división entre el IIN y el FCI se basa en el principio de que la finalidad del FCI es comunicar datos de inventario cuantitativos en un formulario normalizado a nivel agregado para facilitar el procesamiento electrónico de datos y las comparaciones entre Partes, mientras que el IIN deberá contener toda la información necesaria para asegurar una transparencia suficiente y permitir el examen de los inventarios. Los demás cambios en el FCI se encaminan a mejorar la estructura de los cuadros y a concertarlos con la orientación del IPCC sobre las buenas prácticas. Los cambios propuestos al FCI permitirán también que éste se pueda incorporar fácilmente en cualquier programa informático de presentación de informes.

17. En las secciones que siguen se explican con más detalle los cambios introducidos en el FCI que se anexa a la presente nota.

A. Cambios comunes a todos los cuadros

1. Información sobre las categorías "*other*"

18. Aplicando el principio de evitar que los datos se consignen dos veces, las actividades comunicadas en relación con las categorías "*other*" sólo deberán especificarse en el nivel mínimo que, para la mayoría de los sectores, son los cuadros sectoriales de base. Cualesquiera categorías "*other*" especificadas se transferirán al correspondiente informe sectorial. Por esa razón, las designaciones de categorías "*other - please specify*" en los informes sectoriales han cambiado a "*other - as specified in table x.y*", que remiten al cuadro sectorial de base correspondiente. Se ha mantenido un renglón en blanco debajo de cada caso de "*other*" para indicar la posibilidad de utilizar renglones para esas categorías.

2. Recuadros sobre documentación información adicional

19. Se ha reducido la cantidad de información que se ha de proporcionar en los recuadros sobre documentación información adicional. En el FCI revisado se mantienen las necesidades de comunicar datos en los recuadros sobre información adicional siempre y cuando la información que se pida se utilice directamente para calcular las emisiones por medio de las metodologías por defecto del IPCC. En el IIN se proporcionará cualquier otra información que sea útil para el examen de los inventarios pero que no se utilice directamente para calcular las emisiones. En un apéndice al anexo I de las directrices para la preparación de comunicaciones (véase el proyecto de estructura del IIN) se resumen todos los requisitos establecidos para la preparación de

comunicaciones que, en el proyecto de FCI revisado se han eliminado de los recuadros sobre documentación información adicional, a fin de garantizar que en el IIN se siga proporcionando información adicional sobre estos elementos a los efectos del examen. En los párrafos 27 a 125 *infra* se indican los cambios específicos de cada sector introducidos en los recuadros sobre documentación información adicional.

3. Recuadros sobre documentación documentación y notas a los cuadros

20. Se han añadido recuadros sobre documentación a todos los cuadros (uno por cada cuadro), incluidos los informes sectoriales y la mayoría de los *summary*[4] y otros cuadros. En cada recuadro se especifica la información que se deberá proporcionar en él.

21. Como norma general, los recuadros sobre documentación contienen una referencia a la sección del IIN correspondiente a ese sector (partiendo del supuesto de que la estructura del IIN sea la que se propone en el documento FCCC/SBSTA/2002/2/Add.2, págs. 16 a 18) donde se deberá consignar toda la información correspondiente al sector de que se trate. Ahora bien, si hiciera falta determinada información para que se pueda entender con facilidad el contenido de un cuadro, las Partes tendrán la oportunidad de utilizar los recuadros sobre documentación para incluir referencias concretas a las secciones del IIN donde se podrá encontrar la información pormenorizada.

22. Las instrucciones correspondientes a cada cuadro, que figuraban en notas en las que se pedía la información que debía consignarse en los recuadros sobre documentación, forman parte ahora de los propios recuadros sobre documentación. Cuando la información solicitada sea tan extensa que no quepa en los recuadros, se proporcionará en el IIN y en el recuadro sobre documentación se indicará la sección en que se encuentra.

23. En cada hoja de un cuadro, si procede, se reiterarán las notas y cualquier indicación relacionada con el cuadro a fin de facilitar su lectura.

4. Sombreado

24. Para simplificar el diseño de los cuadros e indicar con claridad las necesidades concretas de información correspondiente a cada uno de ellos, se han dejado en blanco solamente las casillas en que las Partes deberán proporcionar información. El sombreado claro en las casillas indica que hay que rellenarlas utilizando el programa informático proporcionado por la secretaría (por ejemplo, para calcular los FEI, los subtotales y los totales, etc.)[5]. Sin embargo, las Partes

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[4] No se han añadido recuadros de documentación a los cuadros *Summary 1.A, 1.B* y *2*.

[5] En las versiones electrónicas del actual FCI (CRF V1.01 y CRF V1.2), se han coloreado las casillas en las que el usuario no tiene que asentar datos directamente (porque se rellenan mediante la aplicación del programa Excel), de manera que sólo están en blanco las que requieren la incorporación manual de datos. Esto se hizo para facilitar la incorporación de datos en el FCI. Las casillas coloreadas corresponden a las que aparecen ligeramente sombreadas en el presente documento.

que opten por no utilizar programas informáticos para completar el FCI tendrán que aportar también los datos correspondientes a esas casillas.

25. Al igual que en el actual FCI, las casillas en las que cabe prever que no haya que proporcionar información aparecen con un sombreado más oscuro. Este tipo de sombreado se utiliza fundamentalmente para las categorías de fuentes/sumideros en las que no se habrá de producir emisión/absorción de determinado gas de efecto invernadero o en casillas donde no sería necesario o útil proporcionar información (por ejemplo, FEI con un alto grado de agregación). Por tanto, las Partes no tendrán necesidad de incorporar datos en esas casillas; tampoco habrá que rellenarlas utilizando ningún programa informático proporcionado por la secretaría.

26. En la explicación que se ofrece a continuación cuadro por cuadro se indican los cambios correspondientes al sombreado más oscuro en determinadas categorías de fuente/sumidero.

B. Cambios introducidos en el cuadro *Summary* y en los demás cuadros

27. Se recomienda leer esta sección conjuntamente con el proyecto de cuadros del FCI revisado que figura en el anexo de la presente nota y con los cuadros de la versión actual del FCI.

Summary 1.A - Summary report for national greenhouse gas inventories (IPCC table 7A)

28. En correspondencia con los cambios introducidos en el cuadro sectorial 5 del FCI, se ha eliminado el sombreado que aparece en la casilla correspondiente a las absorciones de dióxido de carbono (CO_2) del renglón *5.B Forest and grassland conversion*.

29. Se ha modificado la tercera oración de la nota 4. En la nueva versión se señala que el recuadro sobre documentación del cuadro 4.D se debe utilizar para explicar cómo se ha calculado el CO_2 que emana de los suelos (en lugar de pedir que las explicaciones se anoten en las casillas correspondientes de los cuadros *Summary 1.A y 1.B*).

30. Se ha añadido a las casillas correspondientes al CO_2 del renglón *4.D Agricultural soils*, la nota 5, que figura en la hoja 2 de este cuadro, en que se indica que sólo se consigne la estimación neta correspondiente al sector cambio de uso de la tierra y silvicultura en la columna "*Emissions"* o en la columna "*Removals*" y se explica cómo utilizar los signos (-/+) en este cuadro.

31. Se ha ampliado la nota 6, que figura en la hoja 2 de este cuadro, para explicar que sólo deberán notificarse en el sector *Waste* las emisiones resultantes de la incineración de desechos sin recuperación de energía y que las emisiones resultantes de la incineración con recuperación de energía se notificarán en el sector *Energy*.

32. Se ha añadido la nueva nota 7 en relación con el sector "*7. Other*" para indicar que la información relacionada con cualquier categoría de fuente notificada en relación con este sector deberá proporcionarse en el IIN.

33. Se ha ampliado la nota 8 (nota 7 en la versión actual del FCI), que figura en la hoja 3 de este cuadro, para explicar la índole de los "*Memo items*".

34. Se ha omitido la nota que figura en la hoja 1 de este cuadro, que hacía referencia a la enumeración de las notas en el FCI.

Summary 2 - CO_2 equivalent emissions

35. Se ha añadido una nota en las columnas "HFCs", "PFCs" y "SF_6"[6] y en la categoría de fuentes "*2.F Consumption of halocarbons and SF_6* ", en la que se especifica que en los totales nacionales se tienen que incluir las emisiones efectivas. Si no hay estimaciones de las emisiones efectivas correspondientes a la categoría de fuente *2.F Consumption of halocarbons and SF_6*, habrá que incluir las emisiones posibles en los totales nacionales.

Summary 3 - Summary report for methods and emission factors used

36. El cuadro mantiene su actual diseño. Se ha añadido un recuadro sobre documentación para que se puedan especificar los métodos (etapas) y los factores de emisión por defecto en las categorías de fuentes en las que es menester proporcionar múltiples datos, en vista de que las Partes utilizan métodos diferentes en relación con las categorías de fuentes del IPCC.

37. Tal como se hizo con el sombreado del cuadro *Summary 1.A*, se han sombreado las casillas correspondientes a las emisiones y absorciones de CO_2 de la categoría de fuentes "*4.G Other*".

Table 7 (a) (nuevo cuadro) - *Overview for key sources*

38. Este cuadro se acaba de crear tomando en consideración la orientación del IPCC sobre las buenas prácticas para que se pueda informar sobre las fuentes principales en el FCI. Dado que las Partes deberán señalar las fuentes principales, desglosadas por categorías, para las que se utilizan métodos de cálculo de las emisiones, es posible que el desglose de las fuentes principales por categorías difiera entre una Parte y otra. De ahí que en el cuadro no se incluyan categorías definidas, lo que permitirá a las Partes informar según su propio criterio de desagregación. Las fuentes principales señaladas deberán clasificarse según su contribución relativa al total nacional.

39. En el proyecto de cuadro 7 a) se pide también información sobre la aplicación o no de los procedimientos sobre GC/CC por cada fuente.

Table 7(b) (nuevo cuadro) - *Uncertainties for key sources*

40. El nuevo cuadro 7 b) sustituye al cuadro 7 (*Overview table*) de la versión actual del FCI. El actual cuadro 7 se ha eliminado del FCI porque se había previsto que sólo se incluyera hasta el momento en que el IPCC completara su labor relativa a la orientación sobre las buenas prácticas y gestión de las incertidumbres.

41. La información cuantitativa y cualitativa sobre las incertidumbres en relación con todas las fuentes se proporcionará fundamentalmente en el IIN. En el cuadro 7 b) del FCI se incluirán también los valores cuantitativos de las incertidumbres en relación con las fuentes principales.

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[6] Hidrofluorocarbonos (HFC), perfluorocarbonos (PCF) y hexafluoruro de azufre (SF_6).

42. La intención del cuadro 7 b) es ayudar a que los esfuerzos para aumentar la precisión en los inventarios nacionales en el futuro tengan la debida prioridad y guiar las decisiones sobre la selección de la metodología. Su finalidad no es comparar valores cuantitativos de las incertidumbres notificadas por las diferentes Partes, porque este tipo de información no admite comparación.

43. Una característica nueva de este cuadro, que concuerda con el cuadro 6.1 de la orientación del IPCC sobre las buenas prácticas, consiste en que se notifican por separado tanto las estimaciones de las incertidumbres en relación con los datos de actividad y los factores de emisión correspondientes a las fuentes principales, como la incertidumbre total correspondiente a cada categoría de fuente.

44. Dado que las incertidumbres se han de determinar a un grado de desagregación en el que se utilizan datos de factores de emisión y de fuentes de actividad diferentes, la lista de categorías de fuentes (fuentes principales) del cuadro 7 b) debe coincidir con la lista de fuentes principales proporcionada en el cuadro 7 a). Ninguno de estos dos cuadros, 7 a) o 7 b), establece un grado definido de desagregación de las categorías.

Table 8 (a) - Recalculations, recalculated data

45. Se han añadido nuevas columnas en cada tipo de gas para indicar, primeramente, la diferencia entre las estimaciones de CO_2 equivalente[7] en gigagramos y, en segundo lugar, el efecto relativo de cualquier diferencia entre las estimaciones del año en curso y de años anteriores que se obtendrían si se volviera a calcular el inventario nacional total (con exclusión del sector cambio de uso de la tierra y silvicultura). Se han añadido las notas correspondientes.

Table 8 (b) - Recalculations, explanatory information

45. Se ha añadido una nueva columna para que se notifiquen las revisiones en los datos debidas a cambios que no tienen que ver con el nuevo cálculo metodológico, por ejemplo, cambios estadísticos o editoriales, corrección de errores.

Table 10, hojas 1 a 3 -- *Emissions trends (CO_2, CH_4, N_2O)*[8]

47. Se han sombreado algunas categorías de fuentes en concordancia con el sombreado del cuadro *Summary 1.A.*

Table 10, hoja 4 - *Emissions trends (HFCs, PFCs and SF_6)*

48. De conformidad con lo dispuesto en relación con la notificación de "*other HFCs*" y "*other PFCs*" en la parte II del cuadro 2, se han incorporado a este cuadro los renglones correspondientes a "*other HFCs*" y "*other PFCs*". Por consiguiente se ha añadido una nota en que se explica la finalidad de esta decisión.

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[7] En la versión actual del FCI, solamente se expresa la diferencia porcentual.

[8] Metano (CH_4), óxido nitroso (N_2O).

49. Se ha añadido al cuadro un recuadro sobre documentación para que las Partes puedan especificar casos en que sólo se notifican en este cuadro las emisiones posibles.

Table 11 - Checklist of reported inventory information

50. El cuadro 11 del FCI se suprimió, porque no aporta información alguna que se pueda utilizar en el proceso de examen; también resulta superfluo en vista de la información que se ha de comunicar en los informes de situación que se están preparando como parte del proceso de examen.

C. Cambios introducidos en los cuadros de informes sectoriales y de datos sectoriales de base

51. Se recomienda leer esta sección conjuntamente con el proyecto de cuadros del FCI revisado que figura en el anexo de la presente nota y con los cuadros de la versión actual del FCI.

1. *Energy*

Table 1 - Sectoral report for energy

52. *1.A.5 Other*: las actividades correspondientes a "*stationary*" y "*mobile*" se especificarán en el renglón a) de la hoja 4 del cuadro 1.A. En la hoja 2 del cuadro 1 sólo se notificarán, en relación con "*stationary*" y "*mobile*", las emisiones totales por gas (CO_2, CH_4, N_2O). Respecto de los gases precursores, sólo se consignarán las estimaciones totales de emisiones en relación con "*stationary*" y "*mobile*".

53. *1.B.2.a. Oil*: se ha eliminado el sombreado en la casilla correspondiente a N_2O.

54. Se ha suprimido la nota 1 de la versión actual del FCI: "*Include military fuel use under this category*". Esa misma nota aparece en el cuadro 1.A a), donde corresponde, ya que los datos se asentarán en los cuadros de datos sectoriales de base.

55. La nota 2 de la versión actual del FCI (nota 1 del FCI revisado) se amplía para explicar la índole de "*Memo items*".

Table 1.A(a)--Sectoral background data table for energy: fuel combustion activities - sectoral approach

56. *1.A(a)*, hoja 1 - *CO_2 from biomass*: se ha sombreado la casilla correspondiente al CO_2 total resultante de la combustión de biomasa. El CO_2 total proveniente de la biomasa se registrará en la hoja 2 del cuadro 1 en "*Memo items*". Se ha añadido una nota en que se explica dónde registrar este valor.

57. *1.A(a)*, hoja 2 - Se ha añadido un renglón debajo de la categoría de fuentes "*f. Other*", en la que deberán indicarse todas las actividades que abarque esta fuente.

58. *1.A(a)*, hoja 3 - *Transport*: en la lista de tipos de combustible se han introducido los siguientes cambios:

a) Los tipos de combustible que utilizan todos los tipos de transporte (1.A.3) se clasifican ahora en: líquidos, sólidos, gaseosos, biomasa y otros combustibles;

b) En 1.A.3.b, *Road transportation*, se han añadido las categorías de combustible "*LPG*" y "*Other liquid fuels - please specify*"; se ha cambiado el nombre a la categoría "Natural gas" por el de "Gaseous fuels";

c) En 1.A.3.c, *Railways*, se ha añadido la categoría "*Gaseous fuels*";

d) En 1.A.3.d, *Navigation*, se han añadido las categorías "*Gasoline*", "*Other liquid fuels - please specify*" y "*Gaseous fuels*"; se ha cambiado el nombre a la categoría "*Coal*" por el de "*Solid fuels*";

e) En 1.A.3.e, *Other transportation*, se han añadido las categorías "*Biomass*" y "*Other fuels*". Además, se ha añadido un renglón en el que se deberán notificar todas las actividades que abarca 1.A.3.e *Other transportation*.

59. *1.A(a)*, hoja 4 - *Other*: las actividades que abarca "*1.A.5 Other*" se deberán especificar en este cuadro en *Stationary* y *Mobile* respectivamente y no en el cuadro 1 (hoja 2) como se pide en la versión actual del FCI.

Table 1.A(b) - Reference approach

60. Se ha añadido un renglón para notificar "*other-please specify*" en cada tipo de combustible, sea líquido, sólido o gaseoso. Se ha añadido también un renglón para los totales del combustible fósil gaseoso.

Table 1.A(c) - Comparison of CO_2 emissions from fuel combustion

61. Se ha cambiado el nombre a la columna denominada actualmente "*National approach"* por el de "*Sectoral approach*".

62. Se ha cambiado el nombre a la subcolumna "*Energy consumption"* en la columna "*Reference approach*" por el de "*Apparent energy consumption*".

63. Se ha suprimido la columna "*Diference*" en que se registraba la diferencia porcentual entre el consumo de energía de las columnas *"Reference approach*" y "*Sectoral approach*"[9].

[9] Algunos expertos consideraron que no era útil comparar los datos sobre el consumo de energía notificados con arreglo a estos dos métodos en forma estandarizada a los efectos de la presentación de informes. Esta omisión no impide el análisis a fondo de la diferencia en el consumo de energía entre ambos métodos, que habrán de realizar equipos de expertos encargados del examen, que tendrán en cuenta todos los factores que contribuyen a las diferencias entre los dos métodos. En las directrices del IPCC sólo se pide una comparación entre las emisiones de CO_2 obtenidas en los dos métodos.

Tabla 1.A.(d) - Feedstocks and non-energy use of fuels

64. En la nota 2 a pie de página del actual FCI se han añadido breves definiciones de "*feedstocks*" y "*non-energy use*".

65. Se han añadido dos renglones al final del cuadro para indicar: 1) las cantidades totales de carbono y de CO_2 derivadas de las materias básicas/uso de combustibles con fines no energéticos que se incluye como CO_2 emitido en la columna "*reference approach*" y 2) las cantidades totales de carbono y de CO_2 derivadas de las materias básicas/uso de combustibles con fines no energéticos que no se emite.

66. En el actual FCI se ha suprimido del cuadro la nota 1, "*Where fuels are used in different industries, please enter in different rows*".

Table 1.B.1 - Solid fuels

67. Se ha suprimido el recuadro "*Additional information*". Sólo se mantiene la solicitud de información acerca de la cantidad de CH_4 drenado (recuperado) y utilizado o quemado (Gg), que se ha incorporado al cuadro principal.

68. En la columna *"Emissions*", la subcolumna correspondiente a "CH_4" se ha subdividido en "*CH_4 - Recovery/flaring*" y "*CH_4 - net emissions*". Se han añadido las notas correspondientes.

69. Los FEI correspondientes al CH_4 se calculan sobre la base de las emisiones brutas de CH_4 (emisiones finales (netas) de CH_4 más CH_4 recuperado/quemado). Los FEI basados en las emisiones brutas permiten una comparación más coherente entre países, así como de los factores de emisión por defecto[10].

Table 1.B.2 - Oil and natural gas

70. Este cuadro se denominará en adelante "*Fugitive Emissions from Oil, Natural Gas and Other Sources*".

71. Mientras que en la versión actual del FCI, los datos de actividad podían registrarse en cualquier unidad que eligiera la Parte, en la versión revisada la unidad de los datos de actividad deberá seleccionarse de una lista definida de unidades. De ahí que se haya modificado la nota 1 para indicar las unidades que las Partes podrán utilizar al comunicar sus datos.

72. *1.B.2.a. Oil*: se ha eliminado el sombreado de las casillas correspondientes a "*Exploration*" y "*Refining/storage*" en las subcolumnas NO_2 de las columnas "*Implied emission factors*" y "*Emissions*".

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[10] Debido a las características de este subsector, por ejemplo las grandes diferencias en las cantidades de determinado gas de efecto invernadero recuperado en diferentes países, y a las variaciones de un año a otro en las cantidades recuperadas en un país, los FIE basados en las "emisiones finales (netas)" limitarían el uso de la comparabilidad como instrumento durante el proceso de examen. Esto no impide analizar a fondo la evaluación de la recuperación hecha por los equipos de expertos encargados del examen.

73. *1.B.2.b. Natural gas*: se ha añadido la numeración continua i) a v) para las subfuentes de esta fuente.

74. *1.B.2.b.iii. Other leakage* (corresponde a 1.B.2.b.v en el FCI revisado, con arreglo a la numeración indicada en el párrafo 73 *supra*): en lo que respecta a las estimaciones de las emisiones (CO_2 y CH_4), este renglón representa la suma de las subfuentes "*at industrial plants and power stations*" y "*in residential and commercial sectors*".

75. Se ha suprimido el recuadro "*Additional information*".

Table 1.C - Bunkers

76. Se ha invertido el orden de *aviation* y *marine* (en el recuadro "*Additional information*" siguiendo el orden del cuadro 1 en "*Memo items*".

77. Se ha añadido la palabra "*implied*" antes de "*emission factors*" en la nota 1 del cuadro.

2. *Industrial processes*

Table 2(I) - Sectoral report for industrial processes

78. *2.B.1. Ammonia production*: se ha eliminado el sombreado en la casilla correspondiente a las emisiones de NO_2 (como en los cuadros 2.A a G).

79. *2.B.4 Carbide production*: se ha eliminado el sombreado en la casilla correspondiente a las emisiones de NO_x.

80. *2.F. Consumption of halocarbons and SF_6*: se ha añadido a esta categoría de fuente la siguiente nueva subfuente, ajustada a la orientación del IPCC sobre las buenas prácticas: "*6. Other applications using ODS substitutes*". La numeración de las subfuentes subsiguientes se ha modificado en consecuencia. La inserción de esta nueva subfuente debe permitir que se informe por separado sobre "*other*" actividades que utilizan productos sustitutivos de las sustancias que agotan la capa de ozono (ODS) y "*other*" actividades sobre las que ha de informarse en "*F.9. Other - as specified in table 2(II)"* (actualmente *F.8. Other - please specify*).

Table 2(I).A-G - Sectoral background data table for industrial processes

81. En el encabezamiento de la columna correspondiente a las emisiones de CO_2, CH_4 y N_2O se ha insertado la palabra "*net*".

82. La expresión "*Adjusted emissions*" que se utiliza en la segunda oración de la nota a pie de página 2 en el actual FCI (nota a pie de página 3 en el FCI revisado) se ha sustituido por las palabras "*Final (net) emissions*".

83. Los *Implied emission factors (IEF)* (factores de emisión implícitos) se calculan sobre la base de las emisiones brutas (emisiones finales (netas) más las cantidades recuperadas, oxidadas, destruidas o transformadas) ya que permiten una comparación más coherente entre países y de los factores de emisión por defecto. Se ha añadido en consecuencia una nota a pie de página.

Table 2(II) - Sectoral report for HFCs, PFCs and SF_6

84. *2.F a). Consumption of halocarbons and SF_6*: se ha añadido en esta categoría de fuente la siguiente nueva subfuente ajustada a la orientación del IPCC sobre las buenas prácticas: "*6. Other applications using ODS substitutes*". La numeración de las subfuentes subsiguientes se ha modificado en consecuencia. La inserción de esta nueva subfuente debe permitir que se informe por separado sobre "*other*" actividades que utilizan productos sustitutivos de las sustancias que agotan la capa de ozono (ODS) y "*other*" actividades sobre las que ha de informarse en "*F.9. Other - please specify*" (véase también el cambio introducido en el cuadro 2(I)).

85. Se han insertado otras dos columnas, tituladas: "*Other HFCs*" y "*Other PFCs*", para que pueda comunicarse, respectivamente, el total de HFC y de PFC, principalmente en casos de confidencialidad. Se ha añadido una nota a pie de página en la que se describe la finalidad de estas columnas.

86. Se han modificado las notas y las notas a pie de página del cuadro y se han vuelto a ordenar con arreglo al criterio general adoptado con respecto a los recuadros sobre documentación (*documentation box*) y las notas a pie de página, y los cambios efectuados en el cuadro.

Table 2(II). C, E - Sectoral background data table (metal production; production of halocarbons and SF_6)

87. Se han reestructurado varios aspectos de este cuadro:

a) El cuadro se ha dividido en otros dos semiindependientes con arreglo a las dos categorías que figuran en el cuadro (*2.C. PFC and SF_6 from metal production*, y *2.E. Production of halocarbons and SF_6*);

b) De acuerdo con la estructura de todos los demás cuadros del FCI, la especificación de los gases se ha trasladado para colocarla en la columna titulada "*Emissions*". Este cambio supone, que en lo que respecta a *2.E. Production of halocarbons and SF_6*, que las actividades pertinentes tendrán que especificarse dentro de las principales subfuentes (por ejemplo, *by-product* y *fugitive emissions*) de esta categoría, al mismo tiempo que el gas correspondiente y su valor tendrán que especificarse en la columna "*HFCs/PFCs*".

Table 2(II). F - Consumption of halocarbons and SF_6

88. Se ha añadido a esta categoría de fuentes la siguiente nueva subfuente para informar acerca de las emisiones reales: "*6. Other applications using ODS substitutes*". La numeración de las subfuentes subsiguientes se ha modificado en consecuencia (este cambio también se refleja en los cuadros 2(I) y 2(II)).

89. La nota de este cuadro se ha modificado de acuerdo con el criterio general descrito *supra* acerca de los recuadros sobre documentación y las notas a pie de página.

3. *Solvents and other products use*

Table 3 - Sectoral report for solvents and other products use

90. Se han introducido las modificaciones siguientes:

a) *3.A. Paint application*: se ha sombreado la celda correspondiente a las emisiones de N_2O;

b) *3.C. Chemical Products, manufacture and processing*: se ha suprimido el sombreado de la celda correspondiente a la información sobre emisiones de *CO_2*;

c) *3.D. Other*: todas las subfuentes relativas a la utilización de NO_2 se han sombreado en lo que se refiere al *CO_2* y los *NMVOC*; y

d) *3.D. Other*: las subfuentes que actualmente se dan como ejemplos se han numerado. Se ha añadido una subfuente: "*5. Other*" para informar acerca de otras fuentes además de las ya enumeradas en *3.D. Other*.

Table 3 A-D - Sectoral background data for solvents and other products use

91. Se han introducido las modificaciones siguientes:

a) *3.A. Paint applications*: se ha sombreado la celda correspondiente al *IEF* del *N_2O*;

b) *3.C. Chemical products, manufacture and processing*: se ha suprimido el sombreado en las celdas correspondientes a *Activity data* y el *IEF* del *CO_2*;

c) *3.D. Other*: se han sombreado los *IEF* correspondientes al *CO_2* de todas las subfuentes relacionadas con la utilización de *N_2O*; y

d) *3.D. Other*: las subfuentes que actualmente se dan como ejemplos se han numerado. Se ha añadido una subfuente: "*5. Other*" para informar acerca de otras fuentes además de las ya enumeradas en *3.D. Other*.

4. *Agriculture*

Cuestión transversal: desglose del ganado vacuno

92. En lo que respecta al desglose del ganado vacuno, se ha mantenido la actual división entre vacas lecheras y ganado vacuno no productor de leche ("*option A*" en el FCI revisado). No obstante, para facilitar la presentación de información en el FCI sobre el número de cabezas de ganado con arreglo al método del nivel 2 de la orientación del IPCC sobre las buenas prácticas, las Partes también podrán elegir la posibilidad de informar sobre el ganado con arreglo al desglose siguiente: *mature dairy cattle*, *mature non-dairy cattle* y *young cattle*, que constituye la "*option B*" en el FCI revisado. Ambas opciones figuran en todos los cuadros del FCI que requieren información desglosada sobre el ganado, teniendo en cuenta que las Partes pueden usar una u otra opción para reunir los datos de actividad correspondientes a esta categoría de fuente.

Table 4 - Sectoral report for agriculture

93. El desglose del número de cabezas de ganado vacuno se han modificado según se explica en el párrafo 92.

94. En lo que se refiere a la categoría de fuente *4.B. Manure management* se ha añadido la categoría "*4.B.10. Other livestock - please specify"*. Por consiguiente, la numeración de las subsiguientes categorías de fuentes (sistemas de *manure management*) se ha modificado en consecuencia (de *4.B.11* a *4.B.13*).

95. *4.D.2*: esta categoría de fuente, que antes se llamaba "*Animal production*" ahora se llama "*Pasture, range and paddock manure*".

96. *4.D.2*: se ha sombreado la casilla de las emisiones de CH_4.

97. *4.D.2*: se ha añadido una nota a pie de página que hace referencia al capítulo 4.4 de la orientación del IPCC sobre las buenas prácticas con el fin de aclarar qué emisiones de N_2O desprendidas del estiércol deben comunicarse en *4.B* y cuáles en *4.D*.

Table 4.A - Enteric fermentation

98. El desglose del número de cabezas de ganado vacuno se han modificado según se explica en el párrafo 92.

99. En lo que respecta a *Activity data and related information*, se ha cambiado la expresión "*average daily feed intake*" por "*average gross energy intake (GE)*" para ajustarse más a las orientaciones del IPCC sobre las buenas prácticas; la unidad correspondiente, "*MJ/day*" ha pasado a ser "*MJ/head/day*".

100. La expresión "*CH_4 conversion*" se ha cambiado por "*Average CH_4 conversion rate (Ym)*" y se ha mantenido la unidad "*%*". Se ha añadido en consecuencia una nota a pie de página.

101. Información adicional. En el encabezamiento del recuadro "*Additional information*" ahora se especifica lo siguiente: "*Only for those livestock types for which the tier 2 was used*", con el fin de garantizar que la información que se proporciona en este recuadro se limita a los tipos de ganado vacuno para los que se utilizó el método del nivel 2, en vez de incluir todos los tipos considerados en "*Enteric fermentation*".

Table 4.B(a) - CH_4 emissions from manure management

102. El desglose del número de cabezas de ganado vacuno se han modificado según se explica en el párrafo 92.

103. De conformidad con el cambio introducido en el cuadro 4, se ha añadido una nueva categoría, titulada: "*Other livestock - please specify*".

104. En lo que respecta a *Activity data and related information*, la unidad correspondiente a *VS daily excretion*, expresada en *kg dm/head/year*, se ha sustituido por *kg dm/head/day*. La

unidad de los *IEF* continúa siendo "por año" (*yr*), según se indica en el encabezamiento de la columna *IEF*.

105. En los encabezamientos "*Typical animal mass*", "*VS daily excretion*" y "*BO*" se ha incluido la palabra "*average*". La nota a pie de página se ha modificado en consecuencia.

106. Recuadro "*Additional information*": la columna "*Solid storage and dry lot*" se ha dividido en dos columnas: "*Solid storage*" y "*Dry lot*".

107. Recuadro "*Additional information*": se ha añadido en este recuadro la posibilidad de informar sobre otros tipos de ganado además de los enumerados en el recuadro.

Table 4.B(b) - N_2O Emissions from manure management

108. El desglose del número de cabezas de ganado vacuno se han modificado según se explica en el párrafo 92.

Table 4.C - Rice cultivation

109. La unidad correspondiente a "*Harvested area*", en "*Activity data*" se ha cambiado por la siguiente: *10^9 m^2/yr*.

Table 4.D - Agricultural soils

110. *4.D.1 - Direct soil emissions*

a) En esta categoría de fuentes se ha incluido la categoría siguiente: "*4.D.1.6. Other direct emissions - please specify*".

b) En lo que respecta a la categoría de fuente *4.D.1.1., "Synthetic fertilizers*", el texto descriptivo de "*Activity data*" se ha cambiado por el siguiente: "*Nitrogen input from application of synthetic fertilizers*".

c) El nombre de la categoría de fuente *4.D.1.2., "Animal wastes applied to soils*", se ha cambiado por: "*Animal manure applied to soils*".

d) En lo que respecta a la categoría de fuente *4.D.1.3., N-fixing crops*, la unidad "*Kg dry biomass/yr*" se ha sustituido por "*kg N/yr*"; el texto descriptivo de *Activity data*, "*Dry pulses and soybeans produced*", se ha cambiado por "*Nitrogen fixed by N-fixing crops cultivated annually*", y se ha modificado en consecuencia la unidad de medida del *IEF*.

e) En lo que respecta a la categoría de fuente *4.D.1.4. Crop residue*, la unidad "*Kg dry biomass/yr*" se ha sustituido por "*kg N/yr*"; el texto descriptivo de *Activity data, "Dry production of other crops*", se ha cambiado por "*Nitrogen in crop residues returned to soils*", y se ha modificado en consecuencia la unidad de medida del *IEF*.

f) Como resultado de los cambios indicados, actualmente todos los *IEF* se expresan en la unidad *kg N_2O-N/kg N*, excepto el correspondiente a "*cultivation of histosols*", lo que elimina la necesidad de especificar para cada categoría de fuente la unidad correspondiente al *IEF*. Por consiguiente, la unidad se especifica en el encabezamiento de los *IEF*, y se incluye una nota a pie de página para indicar la unidad diferente de "*cultivation of histosols*" (*kg N_2O-N/ha*).

111. *4.D.2 - Animal production.*

112. De conformidad con el cambio introducido en el cuadro 4, la categoría *4.D.2. "Animal production*", se denomina ahora "*Pasture, range and paddock manure*".

113. *4.D.3 - Indirect emissions*.

114. La descripción de las dos subfuentes se ha sustituido por "*Volatized N from fertilizers, animal manures and other*" y por "*N from fertilizers, animal manures and other that is lost through leaching and run off*", respectivamente.

115. Recuadro *Additional information*.

116. Se ha añadido en este recuadro una opción que permite comunicar información sobre otros parámetros.

Table 4.F - Field burning of agricultural residues

117. Se han modificado las siguientes expresiones correspondientes a "*Activity data and other related information*":

a) "*Dry matter fraction*" se ha cambiado por *"Dry matter fraction of residue*";

b) Se ha insertado una columna titulada "*Fraction oxidized*";

c) "*Biomass burned*" se ha cambiado por "*Total biomass burned*";

d) "*Nitrogen fraction in biomass of residues*" se ha cambiado por "*N-C ratio in biomass residues*"; y

e) Se ha insertado una columna titulada "*C fraction of residue*".

118. Se ha suprimido la nota a pie de página 1, "*To be used in Table 4.D of this common reporting format*", que figura en el FCI en su versión actual.

5. *Land-use change and forestry*

Table 5 - Sectoral report for LUCF

119. Como se describe en el párrafo 14 del presente documento, hasta ahora no se han sugerido cambios en los "*sectoral background data tables*" *5.A-D* en lo que respecta al *LUCF* (CUTS). No obstante, con respecto al cuadro sectorial del CUTS (cuadro 5 del FCI) se han introducido los

cambios siguientes para facilitar la presentación de información en este cuadro: en las casillas para informar sobre las absorciones de C_2O en la categoría *5.B, Forest and grassland conversion*, se ha suprimido el sombreado. En consecuencia, en las casillas correspondientes a "*net" CO_2 emissions/removals*" de esta categoría de fuente sumidero también se ha suprimido el sombreado. Se ha suprimido la correspondiente nota a pie de página 2 del FCI actual.

6. *Waste*

Tables 6.A & C - Sectoral background data for solid waste disposal and waste incineration

120. Se han introducido los cambios siguientes en el cuadro 6.A. *Solid waste disposal*:

a) *Activity data and related information*: la cantidad degradada de carbono orgánico degradable (*DOC*) se indica como "*%*".

b) La columna titulada "*CH_4 recovery*" se ha trasladado al epígrafe "*Emissions*" (para que concuerde con otros cuadros en los que se informa sobre las recuperaciones, por ejemplo, en los correspondientes a emisiones fugitivas y procesos industriales).

c) Para mayor claridad, la columna "*CH_4*", en "*Emissions*", se ha modificado como sigue: "*CH_4 (net)*".

d) Los *IEF* correspondientes al *CH_4* se calculan basándose en las emisiones brutas de *CH_4* (emisiones finales (netas) de CH_4, más CH_4 recuperado). Esto concuerda con el criterio adoptado en lo que respecta a otros sectores (emisiones fugitivas y procesos industriales, véase los párrafos 69 y 83 y la nota a pie de página 10), en los que pueden registrarse recuperaciones y quemas de gases o adoptarse medidas de otra índole. Se ha añadido en consecuencia una nota a pie de página en la que se explica como se calcula el *FEI* del *CH_4*.

e) Las subfuentes de la categoría "*6.A.2., Unmanaged waste disposal sites*", se han numerado como "*6.A.2.a. Deep*" y "*6.A.2.b. Shallow*", respectivamente.

121. Se ha introducido el cambio siguiente en el cuadro *6.C Waste incineration*:

a) La subfuente "*Plastics and other non-biogenic waste*", indicada actualmente como ejemplo, se llamará en adelante "*Other (non-biogenic) - please specify*". Se ha añadido una nota a pie de página para explicar que todos los tipos de desechos no biogénicos, tales como plásticos, etc., deben comunicarse y especificarse en esta subfuente. La información acerca de los desechos biogénicos figurará en un renglón aparte para que las emisiones de CO_2 debidas a desechos biogénicos puedan excluirse del total.

b) En la "*Documentation box*" se ha añadido una indicación para especificar si "*Amount of incinerated waste*" se refiere a materia húmeda o seca.

c) Se ha añadido una nota para explicar que en el sector de desechos sólo es preciso informar acerca de las emisiones procedentes de la incineración de desechos sin recuperación de energía, y que en cambio las emisiones procedentes de incineraciones con recuperación de energía deben comunicarse en el sector de la energía.

122. Recuadro "*Additional information*": se ha reducido la cantidad de información que debe comunicarse. Se ha suprimido del FCI la exigencia de facilitar las siguientes informaciones, que se han trasladado al IIN: *fraction of waste incinerated, fraction of waste recycled, number of solid waste disposal sites (SWDS) recovering CH_4* y *composition of landfilled waste*.

Table 6.B - Sectoral background for waste-water handling

123. Se ha reestructurado este cuadro: se ha procedido a trasladar las columnas actualmente tituladas "*Waste water*" y "*Sludge*", y se han insertado en las subcategorías "*Industrial waste water*" y "*Domestic and commercial waste water*" y "*Other*", respectivamente.

124. La columna "*CH_4 recovered and/or flared*" que figura actualmente en "*Activity data*" se ha trasladado a "*Emissions*" (véase también el cambio en el cuadro 6.A). Las dos columnas correspondientes a las emisiones de CH_4 se han denominado "*CH_4 (net)*" y "*CH_4 recovery/flaring*", respectivamente.

125. El *IEF* del *CH_4* se ha calculado sobre la base de las emisiones brutas de CH_4 (emisiones finales (netas) de CH_4, más CH_4 recuperado/quemado). Esto concuerda con el criterio adoptado en lo que respecta a otros sectores (emisiones fugitivas y procesos industriales, véase los párrafos 69 y 83 y la nota a pie de página 10), en los que pueden efectuarse recuperaciones y quema de gases o adoptarse medidas de otra índole que reducen las emisiones finales. Se ha añadido en consecuencia una nota a pie de página en la que se explica como se calcula el *IEF* del *CH_4*.

Anexo

FORMULARIO COMÚN PARA LOS INFORMES[11]

(El presente anexo constituye el anexo II de las directrices para la presentación de informes que figuran en el documento FCCC/SBSTA/2002/2/Add.2)

Notas sobre el formulario común para los informes

1. El formulario común para los informes (FCI) forma parte del informe del inventario nacional (IIN). Tiene por finalidad velar por que las Partes comuniquen datos cuantitativos en un formulario normalizado y facilitar la comparación de los datos de los inventarios entre dichas Partes. Los detalles relativos a cualquier información de carácter no cuantitativo deben proporcionarse en el IIN.

2. Como se indica en el documento FCCC/CP/1999/7, el FCI consta de un resumen y de cuadros de datos sectoriales extraídos de las Directrices del IPCC para realizar los inventarios nacionales de los gases de efecto invernadero, revisadas en 1996 (Directrices del IPCC), además de cuadros de datos sectoriales de base elaborados recientemente y otros cuadros que se ajustan a las Directrices del IPCC y a la orientación del IPCC sobre las buenas prácticas.

3. En algunos cuadros de datos sectoriales de base habrá que calcular los *factores de emisión implícitos (IEF)*. Se trata de coeficientes de niveles máximos a mínimos entre los datos de la estimación de las emisiones y los datos globales de actividad comunicados por la Parte. Los factores de emisión implícitos se calculan exclusivamente con fines de comparación. No tienen que ser necesariamente los factores de emisión que se hayan utilizado realmente en la estimación de las emisiones originales, a menos que se trate, claro está, de una simple multiplicación basada en los mismos datos globales de actividad utilizados para calcular el factor de emisión implícito.

4. En consonancia con las Directrices del IPCC, partidas promemoria, como las estimaciones de las emisiones procedentes de combustibles del transporte aéreo y marítimo internacional, emisiones procedentes de la biomasa y emisiones debidas a operaciones multilaterales se deberán notificar en los cuadros correspondientes, pero no se incluirán en los totales nacionales.

5. Las Partes deberán utilizar los recuadros sobre documentación que figuran al pie de los cuadros a fin de proporcionar referencias específicas para las secciones pertinentes del IIN, en las que deberán facilitarse detalles completos sobre un sector o categoría de fuente determinado.

6. Las Partes deberán llenar todas las casillas en las que se pidan estimaciones de las emisiones o absorciones, datos de actividad o factores de emisión. Cuando no se proporcionen datos, deberán utilizarse las claves de notación que figuran en el párrafo 24 de las directrices para la presentación de informes.

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11 Los cuadros que figuran más adelante no se han editado oficialmente por razones técnicas.

7. En los cuadros sectoriales de base, debajo de la categoría de fuente "*Other*", un renglón sin ninguna indicación significa que pueden añadirse las categorías de fuentes específicas del país. Estas categorías se incluirán automáticamente en los cuadros sectoriales del informe.

8. Las Partes deberán completar los datos en los recuadros de información adicionales. Cuando resulta inconveniente presentar la información solicitada debido a la metodología utilizada por la Parte, se llenarán las casillas correspondientes utilizando el indicador "NA".

9. Las Partes deberán llenar el cuadro 5 (informe sobre el sector cambio del uso de la tierra y silvicultura). Los cuadros 5 A a D de datos sectoriales de base correspondientes siguen las Directrices del IPCC, por lo que las Partes que utilicen los métodos establecidos por el IPCC deberán llenarlos. Se alienta a las Partes que no utilizan los métodos establecidos por el IPCC a que proporcionen en el IIN datos de base y descripciones de las metodologías empleadas para estimar las emisiones/absorciones del sector CUTS, con el fin de aumentar su transparencia. Los formularios sustitutivos de los cuadros 5.A a D se examinarán después de que el IPCC haya desarrollado la orientación sobre las buenas prácticas del sector UTCUTS.

10. Para simplificar la presentación de los cuadros e indicar claramente las informaciones específicas que deben proporcionarse en cada uno de ellos, sólo se han dejado en blanco las casillas que tienen que llenar las Partes. El sombreado tenue de las casillas indica que deberán llenarse mediante el programa informático que proporcionará la secretaría. Sin embargo, las Partes que prefieran no utilizar ningún programa informático para el FCI también tendrán que llenar estas casillas.

11. Al igual que en el actual FCI, se ha utilizado el sombreado oscuro en las casillas que se supone no contendrán ninguna información.

LISTA DE CUADROS

LISTA DE CUADROS (continuación)

Nota explicativa

A fin de evitar que se modifique la estructura de los complejos cuadros del formulario común para los informes (FCI), no se han traducido los cuadros. Debido a limitaciones técnicas, no es posible normalizar la estructura de la versión impresa del FCI en el presente documento (por ejemplo, el tamaño de los cuadros y de los caracteres de imprenta). En el presente documento la lista de cuadros sigue el orden que figura en la versión electrónica del FCI.

El FCI es un formato normalizado que han de utilizar las Partes del anexo I para comunicar por vía electrónica las estimaciones de las emisiones y la absorción de los gases de efecto invernadero y cualquier otra información pertinente.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2	CH_4	N_2O	NO_X	CO	NMVOC	SO_2
	(Gg)						
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)s2)*							
3. Transport							
a. Civil Aviation							
b. Road Transportation							
c. Railways							
d. Navigation							
e. Other Transportation *(as specified in table 1.A(a)s3)*							

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2	CH_4	N_2O	NO_X	CO	NMVOC	SO_2
	(Gg)						
4. Other Sectors							
a. Commercial/Institutional							
b. Residential							
c. Agriculture/Forestry/Fisheries							
5. Other *(as specified in table 1.A(a)s4)* [1]							
a. Stationary							
b. Mobile							
B. Fugitive Emissions from Fuels							
1. Solid Fuels							
a. Coal Mining							
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 Bunkers							
Aviation							
Marine							
Multilateral Operations							
CO_2 Emissions from Biomass							

[1] Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO_2 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 a fuel are included in the total national energy consumption, while CO_2 emissions from the combustion of biomass are accounted for in the land-use change and forestry sector, if the wood has been produced in an unsustainable manner.

Documentation Box:
Detailed explanations on the energy sector can be found in section 5.1 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS [2]				EMISSIONS		
	Consumption		CO_2	CH_4	N_2O		CO_2	CH_4	N_2O
	(TJ)	[1]	(t/TJ)	(kg/TJ)			(Gg)		
1.A. Fuel Combustion		NCV							
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[4]			
Other Fuels									
1.A.1. Energy Industries									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									
a. Public Electricity and Heat Production									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									
b. Petroleum Refining									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									
c. Manufacture of Solid Fuels and Other Energy Industries									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									

[1] Activity data should be calculated using net calorific values (NCV) as specified by the IPCC Guidelines. If gross calorific values (GCV) were used, please indicate this by replacing "NCV" with "GCV" in this column.
[2] Accurate estimation of CH_4 and N_2O emissions depends on combustion conditions, technology, and emission control policy, as well as fuel characteristics. Therefore, caution should be used when comparing the implied emission factors across countries.
[3] Carbon dioxide emissions from biomass are not included in the total CO_2 emissions from fuel combustion.
[4] Carbon dioxide emissions from biomass are not included in the total CO_2 emissions from fuel combustion. The value for total CO_2 from biomass is recorded in Table1s2 under the Memo Items.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS (2)				EMISSIONS		
	Consumption		CO_2	CH_4	N_2O		CO_2	CH_4	N_2O
	(TJ)	(1)	(t/TJ)	(kg/TJ)			(Gg)		
1.A.2 Manufacturing Industries and Construction		NCV							
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						(3)			
Other Fuels									
a. Iron and Steel									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						(3)			
Other Fuels									
b. Non-Ferrous Metals									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						(3)			
Other Fuels									
c. Chemicals									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						(3)			
Other Fuels									
d. Pulp, Paper and Print									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						(3)			
Other Fuels									
e. Food Processing, Beverages and Tobacco									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						(3)			
Other Fuels									
f. Other *(please specify)*									
(this cell is to be used to list all activities covered under "f other".									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						(3)			
Other Fuels									

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS [2]				EMISSIONS		
	Consumption		CO_2	CH_4	N_2O		CO_2	CH_4	N_2O
	(TJ)	[1]	(t/TJ)	(kg/TJ)			(Gg)		
1.A.3 Transport		NCV							
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass									
Other Fuels						[3]			
a. Civil Aviation									
Aviation Gasoline									
Jet Kerosene									
b. Road Transportation									
Gasoline									
Diesel Oil									
LPG									
Other Liquid Fuels (please specify)									
Gaseous Fuels									
Biomass						[3]			
Other Fuels *(please specify)*									
c. Railways									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
d. Navigation									
Residual Oil (Residual fuel oil)									
Gas/Diesel Oil									
Gasoline									
Other Liquid Fuels *(please specify)*									
Solid Fuels									
Gaseous Fuels									
e. Other Transportation (please specify)									
(this cell is to be used to list all activities covered under "e. other")									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass									
Other Fuels									

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS [2]				EMISSIONS		
	Consumption		CO_2	CH_4	N_2O		CO_2	CH_4	N_2O
	(TJ)	[1]	(t/TJ)	(kg/TJ)			(Gg)		
1.A.4 Other Sectors		NCV							
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									
a. Commercial/Institutional									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									
b. Residential									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									
c. Agriculture/Forestry/Fisheries									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									
1.A.5 Other (Not elsewhere specified)[5]									
a. Stationary *(please specify)*									
this cell is to be used to list activities covered under "other-stationary"									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									
b. Mobile *(please specify)*									
this cell is to be used to list all activities covered under "other-mobile"									
Liquid Fuels									
Solid Fuels									
Gaseous Fuels									
Biomass						[3]			
Other Fuels									

[5] Include military fuel use under this category.

Documentation Box:

* Detailed explanations on the fuel combustion sub-sector can be found in section 5.1.1 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant sections of the NIR where further details can be found.

* If estimates are based on GCV, use this documentation box to provide reference to the relevant section of the NIR where the necessary information to allow the calculation of the activity data based on NCV can be found.

* If some derived gases (e.g. gas work gas, coke oven gas, blast gas, oxygen steel furnace gas, etc.) are considered, use this documentation box to provide reference to the relevant section of the NIR where information on the allocation of these derived gases under the above fuel categories (liquid, soild, gaseous, biomass, other fuels) can be found.

TABLE 1.A(b) SECTORAL BACKGROUND DATA FOR ENERGY
CO_2 from Fuel Combustion Activities - Reference Approach (IPCC Worksheet 1-1)
(Sheet 1 of 1)

Country
Year
Submission

FUEL TYPES			Unit	Production	Imports	Exports	International bunkers	Stock change	Apparent consumption	Conversion factor [1] (TJ/Unit)	[1]	Apparent consumption (TJ)	Carbon emission factor (t C/TJ)	Carbon content (Gg C)	Carbon stored (Gg C)	Net carbon emissions (Gg C)	Fraction of carbon oxidized	Actual CO_2 emissions (Gg CO_2)
Liquid Fossil	Primary Fuels	Crude Oil									NCV							
		Orimulsion																
		Natural Gas Liquids																
	Secondary Fuels	Gasoline																
		Jet Kerosene																
		Other Kerosene																
		Shale Oil																
		Gas / Diesel Oil																
		Residual Fuel Oil																
		LPG																
		Ethane																
		Naphtha																
		Bitumen																
		Lubricants																
		Petroleum Coke																
		Refinery Feedstocks																
		Other Oil																
Other Liquid Fossil																		
Liquid Fossil Totals																		
Solid Fossil	Primary Fuels	Anthracite [2]																
		Coking Coal																
		Other Bit. Coal																
		Sub-bit. Coal																
		Lignite																
		Oil Shale																
		Peat																
	Secondary Fuels	BKB & Patent Fuel																
		Coke Oven/Gas Coke																
Other Solid Fossil																		
Solid Fuel Totals																		
Gaseous Fossil		Natural Gas (Dry)																
Other Gaseous Fossil																		
Gaseous Fossil Fuel Totals																		
Total																		
Biomass total																		
		Solid Biomass																
		Liquid Biomass																
		Gas Biomass																

[1] To convert quantities expressed in natural units to energy units, use net calorific values (NCV). If gross calorific values (GCV) are used in this table, please indicate this by replacing "NCV" with "GCV" in this column.
[2] If Anthracite is not separately available, include with Other Bituminous Coal.

Documentation Box:
Detailed explanations on the energy sector, including information related to CO_2 from the Reference Approach, can be found in section 5.1.1 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

TABLE 1.A(c) COMPARISON OF CO_2 EMISSIONS FROM FUEL COMBUSTION
(Sheet 1 of 1)

Country
Year
Submission

FUEL TYPES	Reference approach		Sectoral approach [1]		Difference [2]
	Apparent energy consumption	CO_2 emissions	Energy consumption	CO_2 emissions	CO_2 emissions
	(PJ)	(Gg)	(PJ)	(Gg)	(%)
Liquid Fuels (excluding international bunkers)					
Solid Fuels (excluding international bunkers)					
Gaseous Fuels					
Other [3]					
Total [3]					

[1] "Sectoral approach" is used to indicate the approach (if different from the Reference approach) used by the Party to estimate CO_2 emissions from fuel combustion as reported in table 1.A(a), s1-s4.

[2] Difference of CO_2 emissions from the Reference approach over the Sectoral approach (i.e. difference = 100% x ((RA-SA)/SA), where SA = Sectoral approach and RA = Reference approach).

[3] Emissions from biomass are not included.

Note: The Reporting Instructions of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories ask that estimates of CO_2 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:

* Detailed explanations on the energy sector, including information related to the comparison of CO_2 emissions calculated using the sectoral approach to the Reference Approach can be found in section 5.1.1 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* If the CO_2 emission estimates from the two approaches differ by more than 2 percent, 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)

Country
Year
Submission

FUEL TYPE	ACTIVITY DATA AND RELATED INFORMATION		IMPLIED EMISSION FACTOR	ESTIMATE	Additional information (a)	
	Fuel quantity (TJ)	Fraction of carbon stored	Carbon emission factor (t C/TJ)	of carbon stored in non-energy use of fuels (Gg C)	CO_2 not emitted ($Gg\ CO_2$)	Subtracted from energy sector *(specify source category)*
Naphtha [1]						
Lubricants						
Bitumen						
Coal Oils and Tars (from Coking Coal)						
Natural Gas[1]						
Gas/Diesel Oil [1]						
LPG [1]						
Ethane [1]						
Other *(please specify)*						
Total						
Total amount of C/CO_2 from feedstocks and non-energy use of fuels that is included as emitted CO_2 in the Reference approach						

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

[a] The fuel lines continue from the table to the left.

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

Associated CO_2 emissions (Gg)	Allocated under *(Specify source category)* [a]

[a] e.g. Industrial Processes, Waste Incineration, etc.

* Detailed explanations on the energy sector, including information related to feedstocks can be found in section 5.1.1 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

* 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 indicate this in this documentation box and provide a reference to the relevant section of the NIR where further explanation can be found.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTOR		EMISSIONS		
	Amount of fuel produced	CH_4 [3]	CO_2	CH_4		CO_2
				Recovery/ Flaring [4]	Net emissions [5]	
	(Mt)	(kg/t)		(Gg)		
1. B. 1. a. Coal Mining and Handling						
i. Underground Mines[1]						
Mining Activities						
Post-Mining Activities						
ii. Surface Mines[1]						
Mining Activities						
Post-Mining Activities						
1. B. 1. b. Solid Fuel Transformation						
1. B. 1. c. Other *(please specify)* [2]						

[1] 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, respectively.

[2] 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.

[3] The CH_4 IEFs are estimated on the basis of gross emissions as follows: (net CH_4 emissions + amounts of CH_4 flared/recovered) / activity data.

[4] Amount of CH_4 drained (recovered) and utilized or flared (Gg).

[5] Final CH_4 emissions after subtracting the amounts of CH_4 utilized or recovered.

Note: There are no clear references to the coverage of 1.B.1.b. and 1.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:

* Detailed explanations on the fugitive emissions from solid fuels can be found in section 5.1.2 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* 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 CH_4 is flared or recovered and provide a reference to the relevant 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.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA (1)			IMPLIED EMISSION FACTORS			EMISSIONS		
	Description [1]	Unit [1]	Value	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
				(kg/unit) [2]			(Gg)		
1. B. 2. a. Oil [3]									
i. Exploration	*(e.g. number of wells drilled)*	PJ							
ii. Production [4]	*(e.g. PJ of oil produced)*	PJ							
iii. Transport	*(e.g. PJ oil loaded in tankers)*	PJ							
iv. Refining / Storage	*(e.g. PJ oil refined)*	PJ							
v. Distribution of oil products	*(e.g. PJ oil refined)*	PJ							
vi. Other		PJ							
1. B. 2. b. Natural Gas									
i. Exploration		PJ							
ii. Production [4] / Processing	*(e.g. PJ gas produced)*	PJ							
iii. Transmission	*(e.g. PJ gas consumed)*	PJ							
iv. Distribution	*(e.g. PJ gas consumed)*	PJ							
v. Other Leakage	*(e.g. PJ gas consumed)*	PJ							
at industrial plants and power stations		PJ							
in residential and commercial sectors		PJ							
1. B. 2. c. Venting [5]									
i. Oil	*(e.g. PJ oil produced)*	PJ							
ii. Gas	*(e.g. PJ gas produced)*	PJ							
iii. Combined		PJ							
Flaring									
i. Oil	*(e.g. PJ gas consumption)*	PJ							
ii. Gas	*(e.g. PJ gas consumption)*	PJ							
iii. Combined		PJ							
1.B.2.d. Other *(please specify)* [6]									

[1] Specify the activity data used by filling in the activity data description column, as given in the examples in parentheses.
Specify the unit of the activity data in the unit column using one of the following units: PJ, Tg, 10^6 m^3, 10^6 bbl/yr , bill_ft^3_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.iii, respectively.
[4] If using default emission factors these categories will include emissions from production other than venting and flaring.
[5] If using default emission factors, emissions from Venting and Flaring from all oil and gas production should be accounted for under Venting.
[6] For example, fugitive CO_2 emissions from production of geothermal power could be reported here.

Documentation box:
* Detailed explanations on the fugitive fuel emissions sub-sector can be found in section 5.1.2 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* Regarding data on the fuel amount produced entered in the above 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.

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	IMPLIED EMISSION FACTORS			EMISSIONS		
	Consumption (TJ)	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
		(t/TJ)			(Gg)		
Aviation Bunkers							
Jet Kerosene							
Gasoline							
Marine Navigation							
Gasoline							
Gas/Diesel Oil							
Residual Fuel Oil							
Lubricants							
Coal							
Other *(please specify)*							
Multilateral Operations [1]							

Additional information

Fuel consumption	Allocation [a] (percent)	
	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 operation 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 informational purposes only.

Documentation box:

* Detailed explanations on the fuel combustion sub-sector, including international bunker fuels, can be found in section 5.1.1 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* 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 relevant 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_2O	$HFCs^{(1)}$		$PFCs^{(1)}$		SF_6		NO_x	CO	NMVOC	SO_2
				P	A	P	A	P	A				
	(Gg)			CO_2 equivalent (Gg)				(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 only applies for source categories where methods exist for both tiers.

(1) The emissions of HFCs and PFCs are to be expressed as CO_2 equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

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_2O	HFCs[1]		PFCs[1]		SF_6		NO_x	CO	NMVOC	SO_2
				P	A	P	A	P	A				
	(Gg)			CO_2 equivalent (Gg)						(Gg)			
D. Other Production													
1. Pulp and Paper													
2. Food and Drink[2]													
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 substitutes													
7. Semiconductor Manufacture													
8. Electrical Equipment													
9. Other *(as specified in table 2(II)*													
G. Other *(please specify)*													

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

[1] The emissions of HFCs and PFCs are to be expressed as CO_2 equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

[2] CO_2 from Food and Drink Production (e.g. gasification of water) can be of biogenic or non-biogenic origin. Only information on CO_2 emissions of non-biogenic origin should be reported.

Documentation box:

Detailed explanations on the industrial processes sector can be found in section 5.2 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

TABLE 2(I).A-G SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES

Country

Emissions of CO_2, CH_4 and N_2O

Year

(Sheet 1 of 2)

Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS [2]			EMISSIONS					
	Production/Consumption quantity		CO_2	CH_4	N_2O	CO_2		CH_4		N_2O	
						(net)[3]	[4]	(net)[3]	[4]	(net)[3]	[4]
	Description [1]	(kt)	(t/t)			(Gg)					
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 [5]											
2. Nitric Acid Production											
3. Adipic Acid Production											
4. Carbide Production											
Silicon Carbide											
Calcium Carbide											
5. Other *(please specify)*											
Carbon Black											
Ethylene											
Dichloroethylene											
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 parentheses) in order to make the choice of emission factor more transparent and to facilitate comparisons of implied emission factors.

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

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

[4] Enter amounts of emission recovery, oxidation, destruction or transformation.

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

TABLE 2(I).A-G SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES

Emissions of CO_2, CH_4 and N_2O

(Sheet 2 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_2O	CO_2		CH_4		N_2O	
						(net)[3]	[4]	(net)[3]	[4]	(net)[3]	[4]
	Description [1]	(kt)	(t/t)			(Gg)					
C. Metal Production											
1. Iron and Steel Production											
Steel											
Pig Iron											
Sinter											
Coke											
Other *(please specify)*											
2. Ferroalloys Production											
3. Aluminium Production											
4. SF_6 Used in Aluminium and Magnesium Foundries											
5. Other *(please specify)*											
D. Other Production											
1. Pulp and Paper											
2. Food and Drink											
G. 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 IEFs are estimated on the basis of gross emissions as follows: IEF = (net emissions + amounts recovered, oxidized, destroyed or transformed) / activity data.

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

[4] Enter amounts of emission recovery, oxidation, destruction or transformation.

Documentation box:

* Detailed explanations on the industrial processes sector can be found in section 5.2 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

* 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: In case of confidentiality of the activity data information, a note indicating whether activity data have been aggregated should be included in this documentation box .

TABLE 2(II) SECTORAL REPORT FOR INDUSTRIAL PROCESSES - EMISSIONS OF HFCs, PFCs AND SF_6
(Sheet 1 of 2)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFC-23	HFC-32	HFC-41	HFC-43-10mee	HFC-125	HFC-134	HFC-134a	HFC-152a	HFC-143	HFC-143a	HFC-227ea	HFC-236fa	HFC-245ca	Other HFCs[1]	Total HFCs[2]	CF_4	C_2F_6	C_3F_8	C_4F_{10}	$c\text{-}C_4F_8$	C_5F_{12}	C_6F_{14}	Other PFCs[1]	Total PFCs[1][2]	SF_6
	(t)[3]													CO_2 equivalent (Gg)		(t)[3]								CO_2 equivalent (Gg)		(t)[3]
Total Actual Emissions of Halocarbons (by chemical) and SF_6																										
C. Metal Production																										
Aluminium Production																										
SF_6 Used in Aluminium Foundries																										
SF_6 Used in Magnesium Foundries																										
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)E)*																										
F(a). 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 substitutes																										
7. Semiconductor Manufacture																										
8. Electrical Equipment																										
9. Other *(as specified in table 2(II)F)*																										
G. Other *(please specify)*																										

[1] In accordance with the UNFCCC reporting 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 column could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for these columns is Gg of CO_2 equivalent. See also reporting instruction in the documentation box to this table.

[2] The columns for total HFCs and total PFCs in sheet 1 are kept for consistency with sheet 2 of the table.

[3] Note that the units used in this table differ from those used in the rest of the Sectoral report tables, i.e. t instead of Gg.

Note: Gases with GWP values not yet agreed upon by the COP should be reported in Table 9 (Completeness), sheet 2.

TABLE 2(II) SECTORAL REPORT FOR INDUSTRIAL PROCESSES - EMISSIONS OF HFCs, PFCs AND SF_6
(Sheet 2 of 2)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFC-23	HFC-32	HFC-41	HFC-43-10mee	HFC-125	HFC-134	HFC-134a	HFC-152a	HFC-143	HFC-143a	HFC-227ea	HFC-236fa	HFC-245ca	Other HFCs[1]	Total HFCs	CF_4	C_2F_6	C_3F_8	C_4F_{10}	$c\text{-}C_4F_8$	C_5F_{12}	C_6F_{14}	Other PFCs[1]	Total PFCs	SF_6
	(t)[3]													CO_2 equivalent (Gg)		(t)[3]							CO_2 equivalent (Gg)		(t)[3]
F(p). Total Potential Emissions of Halocarbons (by chemical) and SF_6 [4]																									
Production[5]																									
Import:																									
In bulk																									
In products[6]																									
Export:																									
In bulk																									
In products[6]																									
Destroyed amount																									
GWP values used	**11700**	**650**	**150**	**1300**	**2800**	**1000**	**1300**	**140**	**300**	**3800**	**2900**	**6300**	**560**			**6500**	**9200**	**7000**	**7000**	**8700**	**7500**	**7400**			**23900**
Total Actual Emissions [7] (CO_2 equivalent (Gg))																									
C. Metal Production																									
E. Production of Halocarbons and SF_6																									
F(a). Consumption of Halocarbons and SF_6																									
G. Other																									
Ratio of Potential/Actual Emissions from Consumption of Halocarbons and SF_6																									
Actual emissions - F(a) (Gg CO_2 eq.)																									
Potential emissions - F(p)[8] (Gg CO_2 eq.)																									
Potential/Actual emissions ratio																									

[4] Potential emissions of each chemical of halocarbons and SF_6 estimated using Tier 1a or Tier 1b of the IPCC Guidelines (Volume 3. Reference Manual, pp. 2.47-2.50). Where potential emission estimates are available in a disaggregated manner for the source categories F.1 to F.9, these should be reported in the NIR and a reference be provided in the documentation box. Use Summary 3 of this common reporting format to indicate whether Tier 1a or Tier 1b was used.

[5] Production refers to production of new chemicals. Recycled substances could be included here, but it should be ensured that double counting of emissions is avoided. Relevant explanations should be provided as a comment to the corresponding cell.

[6] Relevant only for Tier 1b

[7] Total actual emissions equal the sum of the actual emissions of each chemical of halocarbons and SF_6 from the source categories given in sheet 1 of the table multiplied by the corresponding GWP values.

[8] Potential emissions of each chemical of halocarbons and SF_6 taken from row F(p) multiplied by the corresponding GWP values.

Note: As stated in the UNFCCC reporting guidelines, Parties should report actual emissions of HFCs, PFCs and SF_6 where data are available, providing disaggregated data by chemical and source category in units of mass and in CO_2 equivalent. Parties reporting actual emissions should also report potential emissions for the sources where the concept of potential emissions applies, for reasons of transparency and comparability.

Documentation box:

* Detailed explanations on the industrial processes sector can be found in section 5.2 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* Where only aggregate figures are provided, e.g. due to reasons of confidentiality (see footnote 1 to this table), a note indicating this should be provided in this documentation box.

TABLE 2(II). C, E SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES
Metal Production; Production of Halocarbons and SF_6
(Sheet 1 of 1)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS[2]			EMISSIONS					
			CF_4	C_2F_6	SF_6	CF_4		C_2F_6		SF_6	
						(net)[3]	[4]	(net)[3]	[4]	(net)[3]	[4]
	Description[1]	(t)	(kg/t)			(t)					
C. PFCs and SF_6 from Metal Production											
PFCs from Aluminium Production											
SF_6 used in Aluminium and Magnesium Foundries											
Aluminium Foundries	*(SF_6 consumption)*										
Magnesium Foundries	*(SF_6 consumption)*										

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS[2]			EMISSIONS						
			HFC-23	SF_6	HFCs/PFCs (as specified)	HFC-23		SF_6		HFCs/PFCs		
						(net)[3]	[4]	(net)[3]	[4]	(specify chemical)	(net)[3]	[4]
	Description[1]	(t)	(kg/t)			(t)						
E. Production of Halocarbons and SF_6												
1. By-product Emissions												
Production of HCFC-22												
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 IEFs are estimated on the basis of gross emissions as follows: IEF = (net emissions + amounts recovered, oxidized, destroyed or transformed) / activity data.
[3] Final (net) emissions are to be reported (after subtracting the amounts of emission recovery, oxidation, destruction or transformation).
[4] Enter amounts of emission recovery, oxidation, destruction or transformation.

Documentation box:
* Detailed explanations on the industrial processes sector can be found in section 5.2 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* 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 relevant 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 relevant section of the NIR where more detailed information can be found

TABLE 2(II).F SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES

Consumption of Halocarbons and SF_6

(Sheet 1 of 2)

Country

Year

Submission

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

[1] Specify the chemical consumed, by using one row per chemical.

Note: Table 2.(II).F provides for reporting of the activity data and emission factors used to calculate actual emissions from consumption of halocarbons and SF_6 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). These 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 Table2(II)Fs2, including a reference to the relevant section of the NIR where further details can be found. These Parties should provide in the NIR the following data:

(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 SF_6

(Sheet 2 of 2)

Country

Year

Submission

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

Documentation box:

* Detailed explanations on the industrial processes sector can be found in section 5.2 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* 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 relevant section of the NIR 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. In these cases, Parties should, in the NIR, provide alternative formats for reporting equivalent information with a similar level of detail. References to the relevant section of the NIR should be provided in this documentation box.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2	N_2O	NMVOC
	(Gg)		
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_2O for Anaesthesia			
2. N_2O from Fire Extinguishers			
3. N_2O from Aerosol Cans			
4. Other Use of N_2O			
5. Other *(as specified in table 3.A-D)*			

The quantity of carbon released in the form of NMVOCs should be accounted for in both the NMVOC and the CO_2 columns.

Documentation box:

* Detailed explanations on the solvent use sector can be found in section 5.3 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

* The IPCC Guidelines do not provide methodologies for the calculation of emissions of N_2O 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 relevant 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)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS [2]	
	Description	(kt)	CO_2 (t/t)	N_2O (t/t)
A. Paint Application				
B. Degreasing and Dry Cleaning				
C. Chemical Products, Manufacture and Processing				
D. Other *(please specify)*				
1. Use of N_2O for Anaesthesia				
2. N_2O from Fire Extinguishers				
3. N_2O from Aerosol Cans				
4. Other Use of N_2O				
5. Other *(please specify)* [1]				

[1] Some probable sources to be reported under "other" are listed in this table. Complement the list with other relevant sources, as appropriate. The order of categories in this table and table 3 must be the same.
[2] The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 3.

Documentation box:
Detailed explanations on the solvent use sector are can be found in section 5.3 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH_4	N_2O	NO_x	CO	NMVOC
	(Gg)				
Total Agriculture					
A. Enteric Fermentation					
1. Cattle [(1)]					
Option A:					
Dairy Cattle					
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 *(as specified in table 4.A)*					
B. Manure Management					
1. Cattle					
Option A:					
Dairy Cattle					
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 livestock *(as specified in table 4.B(a))*					

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

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH_4	N_2O	NO_x	CO	NMVOC
	(Gg)				
B. Manure Management (continued)					
11. Anaerobic Lagoons					
12. Liquid Systems					
13. Solid Storage and Dry Lot					
14. Other *(please specify)*					
C. Rice Cultivation					
1. Irrigated					
2. Rainfed					
3. Deep Water					
4. Other *(as specified in table 4.C)*					
D. Agricultural Soils [(1)]					
1. Direct Soil Emissions					
2. Pasture, range and paddock manure [(2)]					
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. Pulse					
3 . Tuber and Root					
4 . Sugar Cane					
5 . Other *(as specified in table 4.F)*					
G. Other *(please specify)*					

[(1)] See footnote 4 to Summary 1.A of this common reporting format. Parties which choose to report CO_2 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 CO_2 estimates.

[(2)] Direct N_2O emissions from pasture, range and paddock manure are to be reported in the "4.D Agricultural Soils" category. All other N_2O 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 CH_4 emissions and CH_4 and N_2O removals from agricultural soils, CO_2 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 relevant section of the NIR in the documentation box of the corresponding Sectoral background data tables.

Documentation box:

* Detailed explanations on the agricultural sector can be found in section 5.4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

* Provide reference to the relevant section in the NIR, in particular with regard to:
  (a) background information on precursor gas estimates reported in this table;
  (b) background information on any estimates reported under 4.G Other.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA[1] AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTORS [4]
	Population size [2] (1000 head)	Average gross energy intake (GE) (MJ/head/day)	Average CH_4 conversion rate (Y_m) [5] (%)	CH_4 (kg CH_4/head/yr)
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 Asses				
8. Swine				
9. Poultry				
10. Other *(please specify)*				

Additional information (only for those livestock types for which the tier 2 was used) [a]

Disaggregated list of animals [b] / Indicators:		Dairy Cattle	Non-Dairy Cattle	Other *(specify)*	
Weight	(kg)				
Feeding situation [c]					
Milk yield	(kg/day)				
Work	(hrs/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.

[1] In the documentation boxes to all Sectoral background data tables for Agriculture, Parties should provide information on whether the activity data are one year estimates or a three year average.
[2] 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 CH_4 emissions from enteric fermentation, CH_4 and N_2O from manure management, N_2O direct emissions from soil and N_2O emissions associated with manure production, as well as emissions from the use of manure as fuel, and sewage-related emissions reported in the waste sector.
[3] Including data on dairy heifers, if available.
[4] The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 4.
[5] Y_m refers to the fraction of gross energy in feed converted to methane and should be given in per cent in this table.

Documentation box:
* Detailed explanations on the agricultural sector can be found in section 5.4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* Provide 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);
(b) parameters relevant to the application of IPCC good practice guidance;
(c) information on whether the activity data are one year estimates or a three year average.

TABLE 4.B(a) SECTORAL BACKGROUND DATA FOR AGRICULTURE
CH_4 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
	Population size [1]	Allocation by climate region [2]			Typical animal mass (average)	VS[3] daily excretion (average)	CH_4 producing potential (Bo)[3] (average)	CH_4 [5]
		Cool	Temperate	Warm				
	(1000 head)	(%)			(kg)	(kg dm/head/day)		(kg CH_4/head/yr)
1. Cattle								
Option A:								
Dairy Cattle [4]								
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 livestock (please specify)								

[1] See footnote 1 to Table 4.A of this common reporting format.

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

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

[4] Including data on dairy heifers, if available.

[5] The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table 4.

Additional information (for tier 2)[a]

Animal category	Indicator	Climate region	Animal waste management system						
			Anaerobic lagoon	Liquid system	Daily spread	Solid storage	Dry lot	Pasture range paddock	Other
Dairy Cattle	Allocatio	Cool							
		Temperate							
		Warm							
	MCF[b]	Cool							
		Temperate							
		Warm							
Non-Dairy Cattle	Allocatio	Cool							
		Temperate							
		Warm							
	MCF[b]	Cool							
		Temperate							
		Warm							
Swine	Allocatio	Cool							
		Temperate							
		Warm							
	MCF[b]	Cool							
		Temperate							
		Warm							
other livestock (please specify)	Allocatio	Cool							
		Temperate							
		Warm							
	MCF[b]	Cool							
		Temperate							
		Warm							

[a] 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.

[b] MCF = Methane Conversion Factor (IPCC Guidelines, (Volume 3. Reference Manual, p. 4.9)). In the case of using another climate region categorization, replace the entries in the cells with the climate regions for which the MCFs are specified.

Documentation Box:

* Detailed explanations on the agricultural sector can be found in section 5.4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

* Provide 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);
(b) parameters relevant to the application of IPCC good practice guidance;
(c) information on whether the activity data are one year estimates or a three year average;
(d) information on how the MCF are derived, if relevant data could not be provided in the additional information box.

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

N_2O 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 [3]	
	Population size [1]	Nitrogen excretion	Nitrogen excretion per animal waste management system (kg N/yr)						Emission factor per animal waste management system	
	(1000s)	(kg N/head/yr)	Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot	Pasture range and paddock	Other	(kg N_2O-N/kg N)	
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[2]										

[1] See footnote 1 to Table 4.A of this common reporting format.

[2] AWMS - Animal Waste Management System.

[3] The implied emission factor will not be calculated until the emissions are entered directly into Table 4.

Documentation box:

* Detailed explanations on the agricultural sector can be found in section 5.4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

* Provide 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);

(b) information on whether the activity data are one year estimates or a three year average;

(c) information on other AWMS, if reported.

TABLE 4.C SECTORAL BACKGROUND DATA FOR AGRICULTURE

Country

Rice Cultivation

Year

(Sheet 1 of 1)

Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR [1]	EMISSIONS
		Harvested area [2] (10^9 m^2/yr)	Organic amendments added[3]: type	(t/ha)	CH_4 (g/m^2)	CH_4 (Gg)
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.

[4] These rows are included to allow comparison with international statistics. Upland rice emissions are assumed to be zero.

Documentation box:

* Detailed explanations on the agricultural sector can be found in section 5.4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

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

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
	Description	Value kg N/yr	kg N_2O-N/kg N [2]	(Gg N_2O)
1. Direct Soil Emissions	**N input to soils**			
1. Synthetic Fertilizers	Nitrogen input from application of synthetic fertilizers			
2. Animal Manure Applied to Soils	Nitrogen input from manure applied to soils			
3. N-fixing Crops	Nitrogen fixed by N-fixing crops cultivated annually			
4. Crop Residue	Nitrogen in crop residues returned to soils			
5. Cultivation of Histosols [2]	Area of cultivated organic soils (ha/yr)			
6. Other direct emissions *(please specify)*				
2. Pasture, Range and Paddock Manure	**N excretion on pasture range and paddock**			
3. Indirect Emissions				
1. Atmospheric Deposition	Volatized N from fertilizers, animal manures and other			
2. Nitrogen Leaching and Run-off	N from fertilizers, animal manures and other that is lost through leaching and run off			
4. Other *(please specify)*				

Additional information

Fraction [a]	Description	Value
$Frac_{BURN}$	Fraction of crop residue burned	
$Frac_{FUEL}$	Fraction of livestock N excretion in excrements burned for fuel	
$Frac_{GASF}$	Fraction of synthetic fertilizer N applied to soils that volatilizes as NH_3 and NOx	
$Frac_{GASM}$	Fraction of livestock N excretion that volatilizes as NH_3 and NOx	
$Frac_{GRAZ}$	Fraction of livestock N excreted and deposited onto soil during grazing	
$Frac_{LEACH}$	Fraction of N input to soils that is lost through leaching and runoff	
$Frac_{NCRBF}$	Fraction of total aboveground biomass of N-fixing crop that is N	
$Frac_{NCRO}$	Fraction of residue dry biomass that is N	
$Frac_{R}$	Fraction of total aboveground crop biomass that is removed from the field as crop product	
Other (please specify)		

[a] Use the 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 which choose to report CO_2 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 N_2O-N to N_2O emissions, multiply by 44/28. Note that for cultivation of histosols the unit of the IEF is kg N_2O-N/ha.

Documentation box:

* Detailed explanations on the agricultural sector can be found in section 5.4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

* Provide reference to the relevant section in the NIR, in particular with regard to:
  (a) Background information on CO_2 emissions and removals estimates from agricultural soils, if accounted for under the agriculture sector;
  (b) Background information on CH_4 emissions from agricultural soils, if accounted for under the agriculture sector;
  (c) Disaggregated values for $Frac_{GRAZ}$ according to animal type, and for $Frac_{BURN}$ according to crop types;
  (d) Full list of assumptions and fractions used.

TABLE 4.E SECTORAL BACKGROUND DATA FOR AGRICULTURE

Country

Prescribed Burning of Savannas

Year

(Sheet 1 of 1)

Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION					IMPLIED EMISSION FACTORS		EMISSIONS	
	Area of savanna burned (k ha/yr)	Average aboveground biomass density (t dm/ha)	Fraction of savanna burned	Biomass burned (Gg dm)	Nitrogen fraction in biomass	CH_4	N_2O	CH_4	N_2O
						(kg/t dm)		(Gg)	
(specify ecological zone)									

Additional information

	Living	Dead
Fraction of aboveground biomass		
Fraction oxidized		
Carbon fraction		

Documentation box:

Detailed explanations on the agricultural sector can be found in section 5.4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION								IMPLIED EMISSION FACTORS		EMISSIONS	
	Crop production (t)	Residue/ Crop ratio	Dry matter fraction 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	N_2O	CH_4	N_2O
									(kg/t dm)		(Gg)	
1. Cereals												
Wheat												
Barley												
Maize												
Oats												
Rye												
Rice												
Other *(please specify)*												
2. Pulse												
Dry bean												
Peas												
Soybeans												
Other *(please specify)*												
3 Tuber and Root												
Potatoes												
Other *(please specify)*												
4 Sugar Cane												
5 Other *(please specify)*												

Documentation Box:
Detailed explanations on the agricultural sector can be found in section 5.4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2 emissions	CO_2 removals	Net CO_2 emissions/ removals	CH_4	N_2O	NO_x	CO
	(Gg)						
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 [(1)]							
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. CO_2 Emissions and Removals from Soil							
Cultivation of Mineral Soils							
Cultivation of Organic Soils							
Liming of Agricultural Soils							
Forest Soils							
Other *(please specify)* [(2)]							
E. Other *(please specify)*							

[(1)] Following the IPCC Guidelines, the harvested wood should be reported under Changes in Forest and Other Woody Biomass Stocks (Volume 3. Reference Manual, p.5.17).
[(2)] Include emissions from soils not reported under sections A, B and C.

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

Documentation box:
Detailed explanations on the LUCF sector can be found in section 5.5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

Country

Changes in Forest and Other Woody Biomass Stocks

Year

(Sheet 1 of 1)

Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES			ACTIVITY DATA		IMPLIED EMISSION FACTORS	ESTIMATES
			Area of forest/biomass stocks (kha)	Average annual growth rate (t dm/ha)	Implied carbon uptake factor (t C/ha)	Carbon uptake increment (Gg C)
Tropical	Plantations	*Acacia spp.*				
		Eucalyptus spp.				
		Tectona grandis				
		Pinus spp				
		Pinus caribaea				
		Mixed Hardwoods				
		Mixed Fast-Growing Hardwoods				
		Mixed Softwoods				
	Other Forests	Moist				
		Seasonal				
		Dry				
	Other *(specify)*					
Temperate	Plantations					
	Commercial	Evergreen				
		Deciduous				
	Other *(specify)*					
Boreal						
			Number of trees (1000s of trees)	Annual growth rate (kt dm/1000 trees)	Carbon uptake factor (t C/tree)	Carbon uptake increment (Gg C)
Non-Forest Trees *(specify type)*						
					Total annual growth increment (Gg C)	
					Gg CO_2	

	Amount of biomass removed (kt dm)	Carbon emission factor (t C/t dm)	Carbon release (Gg C)
Total biomass removed in Commercial Harvest			
Traditional Fuelwood Consumed			
Total Other Wood Use			
		Total Biomass Consumption from Stocks [(1)] (Gg C)	
		Other Changes in Carbon Stocks [(2)] (Gg C)	
		Gg CO_2	

Net annual carbon uptake (+) or release (-) (Gg C)	
Net CO_2 emissions (-) or removals (+) (Gg CO_2)	

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

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

Note: Sectoral background data tables on Land-Use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner in the NIR.

Documentation box:
Detailed explanations on the LUCF sector can be found in section 5.5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

Forest and Grassland Conversion

(Sheet 1 of 1)

Country

Year

Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA AND OTHER RELATED INFORMATION							IMPLIED EMISSION FACTORS					EMISSIONS					
		On and off site burning				Decay of above-ground biomass[1]			Burning				Decay	Burning				Decay	
									On site			Off site		On site			Off site		
		Area converted annually	Annual net loss of biomass	Quantity of biomass burned		Average area converted	Average annual net loss of biomass	Average quantity of biomass left to decay	CO_2	CH_4	N_2O	CO_2	CO_2	CO_2	CH_4	N_2O	CO_2	CO_2
				On site	Off site														
Vegetation types		(kha)	(kt dm)	(kt dm)	(kt dm)	(kha)	(t dm/ha)	(kt dm)	(t/ha)					(Gg)					
Tropical	Wet/Very Moist																		
	Moist, short dry season																		
	Moist, long dry season																		
	Dry																		
	Montane Moist																		
	Montane Dry																		
Tropical Savanna/Grasslands																			
Temperate	Coniferous																		
	Broadleaf																		
	Mixed Broadleaf/ Coniferous																		
Grasslands																			
Boreal	Mixed Broadleaf/ Coniferous																		
	Coniferous																		
	Forest-tundra																		
Grasslands/Tundra																			
Other *(please specify)*																			
Total																			

[1] 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.

Emissions/Removals	On site	Off site
Immediate carbon release from burning		
Total On site and Off site (Gg C)		
Delayed emissions from decay (Gg C)		
Total annual carbon release (Gg C)		
Total annual CO_2 emissions (Gg CO_2)		

Additional information

Fractions	On site	Off site
Fraction of biomass burned (average)		
Fraction which oxidizes during burning (average)		
Carbon fraction of aboveground biomass (average)		
Fraction left to decay (average)		
Nitrogen-carbon ratio		

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:

Detailed explanations on the LUCF sector can be found in section 5.5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

Country

Abandonment of Managed Lands

Year

(Sheet 1 of 1)

Submission

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

Total annual carbon uptake (Gg C)	
Total annual CO_2 removal (Gg CO_2)	

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

Note: Sectoral background data tables on Land-use Change and Forestry should be filled in only by Parties using the IPCC default methodology. Parties that use country specific methods and models should report information on them in a transparent manner in the NIR.

Documentation box:
Detailed explanations on the LUCF sector can be found in section 5.5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

CO_2 Emissions and Removals from Soil

(Sheet 1 of 1)

Country

Year

Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	ESTIMATES
	Land area (Mha)	Average annual rate of soil carbon uptake/removal (Mg C/ha/yr)	Net change in soil carbon in mineral soils (Tg C over 20 yr)
Cultivation of Mineral Soils [1]			
High Activity Soils			
Low Activity Soils			
Sandy			
Volcanic			
Wetland (Aquic)			
Other *(please specify)*			
	Land area (ha)	**Annual loss rate (Mg C/ha/yr)**	**Carbon emissions from organic soils (Mg C/yr)**
Cultivation of Organic Soils			
Cool Temperate			
Upland Crops			
Pasture/Forest			
Warm Temperate			
Upland Crops			
Pasture/Forest			
Tropical			
Upland Crops			
Pasture/Forest			
	Total annual amount of lime (Mg)	**Carbon conversion factor**	**Carbon emissions from liming (Mg C)**
Liming of Agricultural Soils			
Limestone $Ca(CO_3)$			
Dolomite $CaMg(CO_3)_2$			

Total annual net carbon emissions from agriculturally impacted soils (Gg C)	
Total annual net CO_2 emissions from agriculturally impacted soils (Gg CO_2)	

Additional information

	Year	Climate [a]	land-use/ management system [a]	Soil type					
				High activity soils	Low activity soils	Sandy	Volcanic	Wetland (Aquic)	Organic soil
				percent distribution (%)					
20 years prior		*(e.g. tropical, dry)*	*(e.g. savanna)*						
			(e.g. irrigated cropping)						
inventory year									

[a] These should represent the major types of land management systems per climate regions present in the country as well as ecosystem types which were either converted to agriculture (e.g., forest, savanna, grassland) or have been derived from previous agricultural land-use (e.g., abandoned lands, reforested lands). Systems should also reflect differences in soil carbon stocks that can be related to differences in management (IPCC Guidelines (Volume 2. Workbook, Table 5-9, p. 5.26, and Appendix (pp. 5-31 - 5.38)).

[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:
Detailed explanations on the LUCF sector can be found in section 5.5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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_2O	NO_x	CO	NMVOC	SO_2
	(Gg)						
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. Wastewater Handling							
1. Industrial Wastewater							
2. Domestic and Commercial Wastewater							
3. Other *(as specified in table 6.B)*							
C. Waste Incineration							
D. Other *(please specify)*							

[1] Note that CO_2 emissions from Waste Disposal and Incineration source categories should only be included if they derive from non-biological or inorganic waste sources.

Documentation box:
Detailed explanations on the waste sector can be found in section 5.6 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

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

Country
Year
Submission

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] (t /t MSW)	CO_2 (t /t MSW)	CH_4 (net) [2] (Gg)	CH_4 recovery [3] (Gg)	CO_2 [4] (Gg)
1 Managed Waste Disposal on Land								
2 Unmanaged Waste Disposal Sites								
a. Deep (>5 m)								
b. Shallow (<5 m)								
3 Other *(please specify)*								

Additional information

Description	Value
Total population (1000s) [a]	
Urban population (1000s) [a]	
Waste generation rate (kg/capita/day)	
Fraction of MSW disposed to SWDS	
Fraction of DOC in MSW	
CH_4 oxidation factor [b]	
CH_4 fraction in landfill gas	
CH_4 generation rate constant (k) [c]	
Time lag considered (yr) [c]	

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

[1] The CH_4 IEF is calculated on the basis of gross CH_4 emissions, as follows: IEF = (net CH_4 emissions + CH_4 recovered) / annual MSW at the SWDS.

[2] Actual emissions (after recovery).

[3] CH_4 recovered and flared or utilized.

[4] Under Waste Disposal, CO_2 emissions should be reported only when the disposed waste is combusted at the disposal site as a management practice. CO_2 emissions from non-biogenic wastes are included in the total emissions, while the CO_2 emissions from biogenic wastes are not included in the total emissions.

[a] Specify whether total or urban population is used and the rationale for doing so.

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

[c] Only for Parties using Tier 2 methods.

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTOR			EMISSIONS		
	Amount of incinerated wastes (Gg)	CO_2 (kg/t waste)	CH_4 (kg/t waste)	N_2O (kg/t waste)	CO_2 [1] (Gg)	CH_4 (Gg)	N_2O (Gg)
Waste Incineration *(please specify)*							
a. Biogenic [1]							
b. Other (non-biogenic - please specify) [1], [2]							

[1] Under Waste Disposal, CO_2 emissions should be reported only when the disposed waste is combusted at the disposal site as a management practice. CO_2 emissions from non-biogenic wastes are included in the total emissions, while the CO_2 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:

* Detailed explanations on the waste sector can be found in section 5.6 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

* Parties that use country specific models should provide a reference in the documentation box to the relevant section in the NIR where these models are described, and fill in only the relevant cells of tables 6.A and 6.C.
* Provide reference to the relevant section in the NIR, in particular with regard to:
  (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.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND RELATED INFORMATION[1]	IMPLIED EMISSION FACTOR		EMISSIONS		
				CH_4		N_2O [3]
	Total organic product	CH_4 [2]	N_2O [3]	CH_4 (net) [4]	CH_4 recovered and/or flared [5]	
	(Gg DC[1]/yr)	(kg/kg DC)		(Gg)		
1. Industrial Wastewater						
a. Wastewater						
b. Sludge						
2. Domestic and Commercial Wastewater						
a. Wastewater						
b. Sludge						
3. Other *(please specify)*						
a. Wastewater *(please specify)*						
b. Sludge *(please specify)*						

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR	EMISSIONS
	Population (1000s)	Protein consumption (protein in kg/person/yr)	N fraction (kg N/kg protein)	N_2O (kg N_2O-N/kg sewage N produced)	N_2O (Gg)
N_2O from human sewage [3]					

[1] DC - degradable organic component. DC indicators are COD (Chemical Oxygen Demand) for industrial wastewater and BOD (Biochemical Oxygen Demand) for Domestic/Commercial wastewater/sludge (IPCC Guidelines (Volume 3. Reference Manual, pp. 6.14, 6.18)).
[2] The CH_4 IEF is calculated on the basis of gross CH_4 emissions, as follows: IEF = (net CH_4 emissions + CH_4 recovered or flared) / total organic product.
[3] Parties using methods other than those from the IPCC for estimating N_2O emissions from human sewage or wastewater treatment should provide aggregate data in table 6.B.
[4] Actual emissions (after recovery).
[5] CH_4 recovered and flared or utilized.

Additional information

	Domestic	Industrial
Total wastewater (m^3):		
Treated wastewater (%):		

Wastewater streams:	Wastewater output (m^3)	DC ($kgCOD/m^3$)
Industrial wastewater		
Non-ferrous		
Fertilizers		
Food and beverage		
Paper and pulp		
Organic chemicals		
Other *(specify)*		
DC (kg BOD/1000 person/yr)		
Domestic and Commercial		
Other		

Handling systems:	Industrial wastewater treated (%)	Ind. sludge treated (%)	Domestic wastewater treated (%)	Domestic sludge treated (%)
Aerobic				
Anaerobic				
Other *(specify)*				

Documentation box:
* Detailed explanations on the waste sector can be found in section 5.6 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* Regarding the estimates for N_2O from human sewage, specify whether total or urban population is used in the calculations and the rationale for doing so. Provide explanation in the documentation box.
* Parties using methods other than those from the IPCC for estimating N_2O emissions from human sewage or wastewater treatment should provide, in the NIR, corresponding information on methods, activity data and emission factors used, and should provide a reference to the relevant section of the NIR in this 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_2O	HFCs[1]		PFCs[1]		SF_6		NO_x	CO	NMVOC	SO_2
					P	A	P	A	P	A				
	(Gg)				CO_2 equivalent (Gg)				(Gg)					
Total National Emissions and Removals														
1. Energy														
A. Fuel Combustion — Reference Approach[2]														
A. Fuel Combustion — 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.

[1] The emissions of HFCs and PFCs are to be expressed as CO_2 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 results from the Sectoral approach should be used, where possible.

[3] Other Production includes Pulp and Paper and Food and Drink Production.

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_2O	HFCs [1]		PFCs[1]		SF_6		NO_x	CO	NMVOC	SO_2
							P	A	P	A	P	A				
	(Gg)						CO_2 equivalent (Gg)						(Gg)			
3. Solvent and Other Product Use																
4. Agriculture																
A. Enteric Fermentation																
B. Manure Management																
C. Rice Cultivation																
D. Agricultural Soils	(4), (5)		(4), (5)													
E. Prescribed Burning of Savannas																
F. Field Burning of Agricultural Residues																
G. Other																
5. Land-Use Change and Forestry	(5)		(5)													
A. Changes in Forest and Other Woody Biomass Stoc	(5)		(5)													
B. Forest and Grassland Conversion	(5)		(5)													
C. Abandonment of Managed Lands	(5)		(5)													
D. CO_2 Emissions and Removals from Soil	(5)		(5)													
E. Other	(5)		(5)													
6. Waste																
A. Solid Waste Disposal on Land	(6)															
B. Wastewater Handling																
C. Waste Incineration	(6)															
D. Other																
7. Other *(please specify)* [7]																

[4] According to the IPCC Guidelines (Volume 3. Reference Manual, pp. 4.2, 4.87), CO_2 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 CO_2 emissions or removals from agricultural soils, either in the Agriculture sector, under D. Agricultural Soils or in the Land-Use Change and Forestry sector under D. Emissions and Removals from Soil. Parties may choose either way to report emissions or removals from this source in the common reporting format, but the way they have chosen to report should be clearly indicated, by 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 Table8(a) (Recalculation - Recalculated data) and Table10 (Emission trends).

[5] Please do not provide an estimate of both CO_2 emissions and CO_2 removals. "Net" emissions (emissions - removals) of CO_2 should be estimated and a single number placed in either the CO_2 emissions or CO_2 removals column, as appropriate. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

[6] Note that CO_2 from Waste Disposal and Incineration source categories 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, while 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 are to be provided in section 5 of the NIR.

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_2O	HFCs		PFCs		SF_6		NO_x	CO	NMVOC	SO_2
					P	A	P	A	P	A				
	(Gg)				CO_2 equivalent (Gg)				(Gg)					
Memo Items: [8]														
International Bunkers														
Aviation														
Marine														
Multilateral Operations														
CO_2 Emissions from Biomass														

[8] Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO_2 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 a fuel are included in the total national energy consumption, while CO_2 emissions from the combustion of biomass are accounted for in the land-use change and forestry sector, if the wood has been produced in an unsustainable manner.

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_2O	$HFCs^{(1)}$		$PFCs^{(1)}$		SF_6		NO_x	CO	NMVOC	SO_2
								P	A	P	A	P	A				
		(Gg)						CO_2 equivalent (Gg)						(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]		[4]													
6. Waste																	
7. Other																	
Memo Items:																	
International Bunkers																	
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 CO_2 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] See footnote 4 to Summary 1.A.
[4] Please do not provide an estimate of both CO_2 emissions and CO_2 removals. "Net" emissions (emissions - removals) of CO_2 should be estimated and a single number placed in either the CO_2 emissions or CO_2 removals column, as appropriate. Please note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).

SUMMARY 2 SUMMARY REPORT FOR CO_2 EQUIVALENT EMISSIONS
(Sheet 1 of 1)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2 [1]	CH_4	N_2O	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. Wastewater Handling							
C. Waste Incineration							
D. Other							
7. Other ***(as specified in Summary 1.A)***							

Memo Items:							
International Bunkers							
Aviation							
Marine							
Multilateral Operations							
CO_2 Emissions from Biomass							

[1] For CO_2 emissions from Land-Use Change and Forestry the net emissions are to be reported. Note that for the purposes of reporting, the signs for uptake are always (-) and for emissions (+).
[2] Actual emissions should be included in the national totals. In the case that for category 2.F Consumption of halocarbons and SF_6 no actual emissions were reported, potential emissions should be included.
[3] See footnote 4 to Summary 1.A of this common reporting format.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2 emissions	CO_2 removals	Net CO_2 emissions / removals	CH_4	N_2O	Total emissions
Land-Use Change and Forestry	CO_2 equivalent (Gg)					
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 CO_2 Equivalent Emissions from Land-Use Change and Forestry						

Total CO_2 Equivalent Emissions without Land-Use Change and Forestry [a]	
Total CO_2 Equivalent Emissions with Land-Use Change and Forestry [a]	

[a] The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report emissions and removals from Land-Use Change and Forestry. Note that these totals will differ from the totals reported in Table 10s5 if Parties report non-CO_2 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_2O		HFCs		PFCs		SF_6	
	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]
1. Energy												
A. Fuel Combustion												
1. Energy Industries												
2. Manufacturing Industries and Construction												
3. Transport												
4. Other Sectors												
5. Other												
B. Fugitive Emissions from Fuels												
1. Solid Fuels												
2. Oil and Natural Gas												
2. Industrial Processes												
A. Mineral Products												
B. Chemical Industry												
C. Metal Production												
D. Other Production												
E. Production of Halocarbons and SF_6												
F. Consumption of Halocarbons and SF_6												
G. Other												

[1] Use the following notation keys to specify the method applied:

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

If using more than one method within one source category, enumerate the relevant methods. Explanations regarding country-specific 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.

[2] Use the following notation keys to specify the emission factor used:

D (IPCC default), **CS** (Country Specific),
C (CORINAIR), **PS** (Plant Specific).

Where a mix of emission factors has been used, use different notations in one and the same cells with further explanations in the documentation box.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2		CH_4		N_2O		HFCs		PFCs		SF_6	
	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]	Method applied [1]	Emission factor [2]
3. Solvent and Other Product Use												
4. Agriculture												
A. Enteric Fermentation												
B. Manure Management												
C. Rice Cultivation												
D. Agricultural Soils												
E. Prescribed Burning of Savannas												
F. Field Burning of Agricultural Residues												
G. Other												
5. Land-Use Change and Forestry												
A. Changes in Forest and Other Woody Biomass Stocks												
B. Forest and Grassland Conversion												
C. Abandonment of Managed Lands												
D. CO_2 Emissions and Removals from Soil												
E. Other												
6. Waste												
A. Solid Waste Disposal on Land												
B. Wastewater Handling												
C. Waste Incineration												
D. Other												
7. Other (as specified in Summary 1.A)												

[1] 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), **C** (CORINAIR),
RA (Reference Approach), **T2** (IPCC Tier 2), **CS** (Country Specific).
T1 (IPCC Tier 1), **T3** (IPCC Tier 3),

If using more than one method within one source category, enumerate the relevant methods. Explanations regarding country-specific 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.

[2] Use the following notation keys to specify the emission factor used:

D (IPCC default), **CS** (Country Specific),
C (CORINAIR), **PS** (Plant Specific).

Where a mix of emission factors has been used, use different notations in one and the same cells with further explanations in the documentation box.

Documentation box:

* The full information on methodological issues, such as methods and emission factors used, can be found in the relevant sector sections of chapter 5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* 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 (see also footnotes 1 and 2 to this table).

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

Country
Year
Submission

Year: latest reported inventory year

GREENHOUSE GAS SOURCE AND SINK CATEGORIES: KEY SOURCES	GAS	Criteria used for key source identification (e.g. tier) [1]	Level assessment (%) [2]	Cumulative total of level assessment (%)[3]	Contribution to trend (%) [4]	Method applied to estimate emissions [5]	Output box [6]	Type of emission factor [7]	Is source specific QA/QC implemented (Yes/No) [8]	Comments
Specify key sources according to the national level of disaggregation used: ***For example:***										
Stationary - coal	CO_2									
Stationary - oil	CO_2									
Mobile: Road vehicles	CO_2									
Mobile: Road vehicles	N_2O									

[1] **L1**= Level using Tier 1 method, **L2**= Level using Tier 2 method , **T1** = Trend using Tier 1 method, **T2** = Trend using Tier 2 method.
Q1 = mitigation techniques and technology applied to the source,
Q2 = High expected emission growth,
Q3 = High uncertainty,
Q4 = Unexpectedly high or low emission

[2] Level assessment refers to the emission level of a given source category calculated as described in the IPCC good practice guidance (table 7.2).

[3] Rank identified key sources according to their relative contribution to the national total emissions

[4] As calculated following the IPCC good practice guidance (table 7.3)

[5] 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), **C** (CORINAIR),
RA (Reference Approach), **T2** (IPCC Tier 2), **CS** (Country Specific).
T1 (IPCC Tier 1), **T3** (IPCC Tier 3),

If using more than one method within one source category, enumerate the relevant methods. Explanations regarding country-specific 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.

[6] Reference is made to figure (decision tree) and output box in IPCC good practice guidance in the format x.y-z; for example: output box 3 in figure 2.1 will be noted 2.1-3

[7] Use the following notation keys to specify the emission factor used

D (IPCC default), **CS** (Country Specific),
C (CORINAIR), **PS** (Plant Specific).

Where a mix of emission factors has been used, use different notations in one and the same cells with further explanations in the documentation box.

[8] As specified in sectoral good practice guidance

Documentation box:
* The full information on methodological issues, such as methods and emission factors used, can be found in the relevant sector sections of chapter 5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* 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 (see also footnotes 5 and 7 to this table).

TABLE 7(b) UNCERTAINTIES FOR KEY SOURCES [1]
(Sheet 1 of 1)

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Gas	Activity data uncertainty [2] %	Emission factor uncertainty [2] %	Source category uncertainty %	Specific reference to NIR [3]	Comment
Specify key sources according to the national level of disaggregation used [4] :						
For example:						
Stationary - coal	CO_2					
Stationary - oil	CO_2					
Mobile: Road vehicles	CO_2					
Mobile: Road vehicles	N_2O					

[1] For non-key sources, information on uncertainties can be found in the NIR.
[2] If the uncertainty value is based on analysis of direct measurement of the emissions, the notation "M" should be filled in in the relevant cells for activity data and emission factor uncertainty, respectively.
[3] Provide specific reference to the NIR, where for the respective source category further details on how the uncertainty estimates were derived, including methods used and underlying assumptions or any departures from the IPCC good practice guidance, can be found.
[4] The level of category disaggregation should follow the national source categorization (e.g. when using tier 2 or other methodologies in addition to IPCC tier 1) and should be the same as reported in Table 7(a).

Documentation box:
* The full information on uncertainties for key sources and non-key sources can be found in the relevant sector sections of chapter 5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* References to the NIR as indicated in footnote 3 to this table, should also be provided in this documentation box, as appropriate.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CO_2					CH_4					N_2O				
		Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4][5]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4][5]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4][5]
		CO_2 equivalent (Gg)			(%)	(%)	CO_2 equivalent (Gg)			(%)	(%)	CO_2 equivalent (Gg)			(%)	(%)
Total National Emissions and Removals																
1. Energy																
1.A.	Fuel Combustion Activities															
1.A.1.	Energy Industries															
1.A.2.	Manufacturing Industries and Construction															
1.A.3.	Transport															
1.A.4.	Other Sectors															
1.A.5.	Other															
1.B.	Fugitive Emissions from Fuels															
1.B.1.	Solid fuel															
1.B.2.	Oil and Natural Gas															
2. Industrial Processes																
2.A.	Mineral Products															
2.B.	Chemical Industry															
2.C.	Metal Production															
2.D.	Other Production															
2.G.	Other															
3. Solvent and Other Product Use																
4. Agriculture																
4.A.	Enteric Fermentation															
4.B.	Manure Management															
4.C.	Rice Cultivation															
4.D.	Agricultural Soils [2]															
4.E.	Prescribed Burning of Savannas															
4.F.	Field Burning of Agricultural Residues															
4.G.	Other															
5. Land-Use Change and Forestry (net) [3]																
5.A.	Changes in Forest and Other Woody Biomass Stocks															
5.B.	Forest and Grassland Conversion															
5.C.	Abandonment of Managed Lands															
5.D.	CO_2 Emissions and Removals from Soil															
5.E.	Other															

[1] Estimate the percentage change due to recalculation with respect to the previous submission (Percentage change = 100% x [(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) of this common reporting format.
[2] See footnote 4 to Summary 1.A of this common reporting format.
[3] Net CO_2 emissions/removals to be reported.
[4] Total emissions refer to total aggregate GHG emissions expressed in terms of CO_2 equivalent, excluding GHGs from the LUCF sector. The impact of the recalculation on the total emissions is calculated as follows: impact of recalculation (%) = 100% x [(source (LS) - source (PS))/total emissions (LS)], where LS = Latest submission, PS = Previous submission.
[5] 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.

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

Country
Year
Submission

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2					CH_4					N_2O				
	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4]
	CO_2 equivalent (Gg)			(%)	(%)	CO_2 equivalent (Gg)			(%)	(%)	CO_2 equivalent (Gg)			(%)	(%)
6. Waste															
6.A. Solid Waste Disposal on Land															
6.B. Wastewater Handling															
6.C. Waste Incineration															
6.D. Other															
7. Other ***(as specified in Summary 1.A)***															
Memo Items:															
International Bunkers															
Multilateral Operations															
CO_2 Emissions from Biomass															

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFCs					PFCs					SF_6				
	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions [4]
	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															

	Previous submission	Latest submission	Difference	Difference[1]
	CO_2 equivalent (Gg)			(%)
Total CO_2 Equivalent Emissions with Land-Use Change and Forestry[6]				
Total CO_2 Equivalent Emissions without Land-Use Change and Forestry[6]				

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

Documentation box:
Detailed information on recalculations can be found in section 4 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.

TABLE 8(b) RECALCULATION - EXPLANATORY INFORMATION
(Sheet 1 of 1)

Country
Year
Submission

Specify the sector and source/sink category[1] where changes in estimates have occurred:		GHG	RECALCULATION DUE TO				
			CHANGES IN:			Addition/removal/ replacement of source/sink categories	Other changes in data (e.g. statistical or editorial changes, correction of errors)
			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. Entries in columns A and B should match those used in Table 8(a).

[2] 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 relevant changes in the assumptions and coefficients under the "Methods" column.

Documentation box:

The full information on recalculations can be found in the relevant sector sections of chapter 5 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found. References should particularly point to the relevant sections of the NIR in which justifications of the changes as to improvements in the accuracy, completeness and consistency of the inventory are reported.

TABLE 9 COMPLETENESS - INFORMATION ON NOTATION KEYS
(Sheet 1 of 2)

Country
Year
Submission

Sources and sinks not reported (NE)[1]			
GHG	**Sector[2]**	**Source/sink category [2]**	**Explanation**
CO_2			
CH_4			
N_2O			
HFCs			
PFCs			
SF_6			

Sources and sinks reported elsewhere (IE)[3]				
GHG	**Source/sink category**	**Allocation as per IPCC Guidelines**	**Allocation used by the Party**	**Explanation**
CO_2				
CH_4				
N_2O				
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 indicator "NE" is entered in the sectoral tables.

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

[3] Clearly indicate sources and sinks in the submitted inventory that are allocated to a sector other than that indicated by the IPCC Guidelines. Show the sector indicated in the IPCC Guidelines and the sector to which the source or sink is allocated in the submitted inventory. Explain the reason for reporting these sources and sinks in a different sector. An entry should be made for each source/sink for which the indicator "IE" is used in the sectoral tables.

TABLE 9 COMPLETENESS
(Sheet 2 of 2)

Country
Year
Submission

Additional GHG emissions reported[4]						
GHG	**Source category**	**Emissions (Gg)**	**Estimated GWP value (100-year horizon)**	**Emissions CO_2 equivalent (Gg)**	**Reference to the source of GWP value**	**Explanation**

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

Documentation box:
Detailed information regarding completeness of the inventory should be provided the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant sections of the NIR where further details can be found.

TABLE 10 EMISSIONS TRENDS (CO_2)
(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
	(Gg)											
1. Energy												
A. Fuel Combustion (Sectoral Approach)												
1. Energy Industries												
2. Manufacturing Industries and Construction												
3. Transport												
4. Other Sectors												
5. Other												
B. Fugitive Emissions from Fuels												
1. Solid Fuels												
2. Oil and Natural Gas												
2. Industrial Processes												
A. Mineral Products												
B. Chemical Industry												
C. Metal Production												
D. Other Production												
E. Production of Halocarbons and SF_6												
F. Consumption of Halocarbons and SF_6												
G. Other												
3. Solvent and Other Product Use												
4. Agriculture												
A. Enteric Fermentation												
B. Manure Management												
C. Rice Cultivation												
D. Agricultural Soils[2]												
E. Prescribed Burning of Savannas												
F. Field Burning of Agricultural Residues												
G. Other												
5. Land-Use Change and Forestry[3]												
A. Changes in Forest and Other Woody Biomass Stocks												
B. Forest and Grassland Conversion												
C. Abandonment of Managed Lands												
D. CO_2 Emissions and Removals from Soil												
E. Other												
6. Waste												
A. Solid Waste Disposal on Land												
B. Waste-water Handling												
C. Waste Incineration												
D. Other												
7. Other ***(as specified in Summary 1.A)***												
Total Emissions/Removals with LUCF[4]												
Total Emissions without LUCF[4]												
Memo Items:												
International Bunkers												
Aviation												
Marine												
Multilateral Operations												
CO_2 Emissions from Biomass												

[1] This column 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.

[2] See footnote 4 to Summary 1.A of this common reporting format.

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

[4] The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO_2 emissions and removals from Land-Use Change and Forestry.

TABLE 10 EMISSIONS TRENDS (CH_4)
(Sheet 2 of 5)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year[1]	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	(Gg)											
Total Emissions												
1. Energy												
A. Fuel Combustion (Sectoral Approach)												
1. Energy Industries												
2. Manufacturing Industries and Construction												
3. Transport												
4. Other Sectors												
5. Other												
B. Fugitive Emissions from Fuels												
1. Solid Fuels												
2. Oil and Natural Gas												
2. Industrial Processes												
A. Mineral Products												
B. Chemical Industry												
C. Metal Production												
D. Other Production												
E. Production of Halocarbons and SF_6												
F. Consumption of Halocarbons and SF_6												
G. Other												
3. Solvent and Other Product Use												
4. Agriculture												
A. Enteric Fermentation												
B. Manure Management												
C. Rice Cultivation												
D. Agricultural Soils												
E. Prescribed Burning of Savannas												
F. Field Burning of Agricultural Residues												
G. Other												
5. Land-Use Change and Forestry												
A. Changes in Forest and Other Woody Biomass Stocks												
B. Forest and Grassland Conversion												
C. Abandonment of Managed Lands												
D. CO_2 Emissions and Removals from Soil												
E. Other												
6. Waste												
A. Solid Waste Disposal on Land												
B. Waste-water Handling												
C. Waste Incineration												
D. Other												
7. Other ***(as specified in Summary 1.A)***												
Memo Items:												
International Bunkers												
Aviation												
Marine												
Multilateral Operations												
CO_2 Emissions from Biomass												

TABLE 10 EMISSIONS TRENDS (N_2O)
(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
	(Gg)											
Total Emissions												
1. Energy												
A. Fuel Combustion (Sectoral Approach)												
1. Energy Industries												
2. Manufacturing Industries and Construction												
3. Transport												
4. Other Sectors												
5. Other												
B. Fugitive Emissions from Fuels												
1. Solid Fuels												
2. Oil and Natural Gas												
2. Industrial Processes												
A. Mineral Products												
B. Chemical Industry												
C. Metal Production												
D. Other Production												
E. Production of Halocarbons and SF_6												
F. Consumption of Halocarbons and SF_6												
G. Other												
3. Solvent and Other Product Use												
4. Agriculture												
A. Enteric Fermentation												
B. Manure Management												
C. Rice Cultivation												
D. Agricultural Soils												
E. Prescribed Burning of Savannas												
F. Field Burning of Agricultural Residues												
G. Other												
5. Land-Use Change and Forestry												
A. Changes in Forest and Other Woody Biomass Stocks												
B. Forest and Grassland Conversion												
C. Abandonment of Managed Lands												
D. CO_2 Emissions and Removals from Soil												
E. Other												
6. Waste												
A. Solid Waste Disposal on Land												
B. Waste-water Handling												
C. Waste Incineration												
D. Other												
7. Other ***(as specified in Summary 1.A)***												
Memo Items:												
International Bunkers												
Aviation												
Marine												
Multilateral Operations												
CO_2 Emissions from Biomass												

TABLE 10 EMISSION TRENDS (HFCs, PFCs and SF_6)
(Sheet 4 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
	(Gg)											
Emissions of HFCs[5] - Gg CO_2 equivalent												
HFC-23												
HFC-32												
HFC-41												
HFC-43-10mee												
HFC-125												
HFC-134												
HFC-134a												
HFC-152a												
HFC-143												
HFC-143a												
HFC-227ea												
HFC-236fa												
HFC-245ca												
Other HFCs [6] - Gg CO_2 equivalent												
Emissions of PFCs[5] - Gg CO_2 equivalent												
CF_4												
C_2F_6												
C_3F_8												
C_4F_{10}												
c-C_4F_8												
C_5F_{12}												
C_6F_{14}												
Other PFCs [6] - Gg CO_2 equivalent												
Emissions of SF_6[5] - Gg CO_2 equivalent												
SF_6												

Chemical	GWP
HFCs	
HFC-23	11700
HFC-32	650
HFC-41	150
HFC-43-10mee	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_2F_6	9200
C_3F_8	7000
C_4F_{10}	7000
c-C_4F_8	8700
C_5F_{12}	7500
C_6F_{14}	7400
SF_6	23900

[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 CO_2 equivalent emissions.

[6] In accordance with the UNFCCC reporting 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 CO_2 equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

Documentation box:

* Detailed explanations on emissions trends can be found in section 2 of the NIR. If any additional information is needed to understand the content of this table, use this documentation box to provide references to the relevant section of the NIR where further details can be found.
* Use the documentation box to provide explanations, if potential emissions are reported.

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
	CO_2 equivalent (Gg)											
Net CO_2 emissions/removals												
CO_2 emissions (without LUCF)[7]												
CH_4												
N_2O												
HFCs												
PFCs												
SF_6												
Total (with net CO_2 emissions/removals)												
Total (without CO_2 from LUCF)[7]												

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year[1]	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	CO_2 equivalent (Gg)											
1. Energy												
2. Industrial Processes												
3. Solvent and Other Product Use												
4. Agriculture												
5. Land-Use Change and Forestry[8]												
6. Waste												
7. Other												

[7] The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO_2 emissions and removals from Land-Use Change and Forestry. Note that these totals will differ from the totals reported in Table Summary 2 if Parties report non-CO_2 emissions from LUCF.

[8] Net (CO_2) emissions.