

# Austria's Initial Report for the Second Commitment Period under the Kyoto Protocol

Report to facilitate the calculation of the  
assigned amount pursuant to Article 3,  
paragraphs 7bis, 8 and 8bis, of the Kyoto Protocol

Federal Ministry of Agriculture and Forestry,  
Environment and Water Management

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## Introduction

According to decision 2/CMP.8 of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, each Annex Party with a quantified emission limitation and reduction commitment inscribed in the third column of Annex B to the Protocol, as contained in annex I to decision 1/CMP.8, shall submit a report to facilitate the calculation of its assigned amount pursuant to Article 3, paragraphs 7bis, 8 and 8bis, of the Kyoto Protocol for the second commitment period and demonstrate its capacity to account for its emissions and assigned amount. (Hereinafter referred to as “CP2 Initial Report”). To this end, the Party shall submit a report containing all information required for this purpose, as defined in Annex I to decision 2/CMP.8 and complemented by paragraph 9 of Decision 3/CMP.11 on accounting and reporting and paragraph 4 of Annex I to that decision. The following information has to be submitted:

- (a) Complete inventories of anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol, recalculated in accordance with decision 4/CMP.7, for all years from 1990, or another approved base year or period under Article 3, paragraph 5, of the Kyoto Protocol, to the most recent year available, and prepared in accordance with Article 5, paragraph 2, and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) and the Conference of the Parties (COP). If the report is submitted at the same time as the submission of the Party’s annual GHG inventories, only one inventory submission should be provided and both reports should be submitted in conjunction;
- (b) The identification of its selected base year for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride in accordance with Article 3, paragraph 8, of the Kyoto Protocol, if the Party included in Annex I did not have a quantified emission limitation and reduction target in the first commitment period, and the identification of its selected base year for nitrogen trifluoride in accordance with Article 3, paragraph 8bis, of the Kyoto Protocol, for all Parties included in Annex I with a quantified emission limitation and reduction target for the second commitment period;
- (c) The agreement under Article 4 for the second commitment period, where the Party has reached such an agreement to fulfil its commitments under Article 3 jointly with other Parties;
- (d) The calculation of its assigned amount pursuant to Article 3, paragraphs 7bis, 8 and 8bis, of the Kyoto Protocol, on the basis of its inventory referred to in paragraph 1(a) above, which is due by 15 April 2015;
- (e) The calculation of its commitment period reserve in accordance with decision 11/CMP.1 or any subsequent revision thereof related to the calculation of the commitment period reserve;
- (f) The identification of its selection of single minimum values for tree crown cover, land area and tree height for use in accounting for its activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, if the Party included in Annex I did not select a definition of forest for the first commitment period, together with a justification of the consistency of those values with the information that has been historically reported to the Food and

Agriculture Organization of the United Nations or other international bodies, and in the case of difference, an explanation of why and how such values were chosen, in accordance with decisions 16/CMP.1 and 2/CMP.7. If the Party included in Annex I selected its forest definition for the first commitment period, the definition for the second commitment period shall be the same;

- (g) The identification of its election of activities under Article 3, paragraph 4, of the Kyoto Protocol for inclusion in its accounting for the second commitment period, in addition to those activities under Article 3, paragraph 4, of the Kyoto Protocol that were elected in the first commitment period, together with information on how its national system under Article 5, paragraph 1, of the Kyoto Protocol will identify land areas associated with all additional elected activities and how the Party ensures that land that was accounted for under activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol in the first commitment period continues to be accounted for in subsequent commitment periods, in accordance with decisions 16/CMP.1 and 2/CMP.7;
- (h) The identification of whether, for each activity under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, it intends to account annually or for the entire commitment period;
- (i) The forest management reference level as inscribed in the appendix to the annex to decision 2/CMP.7, any technical corrections as contained in the inventory report for the first year of the second commitment period and references to those sections in the national inventory report where such information is reported consistent with the requirements of decision 2/CMP.7, annex, paragraph 14 (Parties shall include the submission pursuant to decision 2/CMP.6, paragraph 4, and the corresponding technical assessment report pursuant to decision 2/CMP.6, paragraph 5, as Annexes to the CP2 Initial Report);
- (j) Information on how emissions from harvested wood products originating from forests prior to the start of the second commitment period have been calculated in the reference level in accordance with decision 2/CMP.7, annex, paragraph 16;
- (k) An indication of whether it intends to apply the provisions to exclude emissions from natural disturbances for the accounting for afforestation and reforestation under Article 3, paragraph 3, of the Kyoto Protocol and/or forest management under Article 3, paragraph 4, of the Kyoto Protocol during the second commitment period in accordance with decision 2/CMP.7, annex, paragraph 33, and any relevant supplementary methodological guidance developed by the Intergovernmental Panel on Climate Change and adopted by the CMP and the COP, including:
  - (i) Country-specific information on the background level of emissions associated with annual natural disturbances that have been included in its forest management reference level;
  - (ii) Information on how the background level(s) for afforestation and reforestation under Article 3, paragraph 3, of the Kyoto Protocol and/or forest management under Article 3, paragraph 4, of the Kyoto Protocol have been estimated, and information on how it avoids the expectation of net credits or net debits during the commitment period, including information on how a margin is established, if a margin is needed;
- (l) A description of its national system in accordance with Article 5, paragraph 1, of the Kyoto Protocol, reported in accordance with the "Guidelines for the preparation of the

information required under Article 7 of the Kyoto Protocol”, if the Party included in Annex I did not have a quantified emission limitation and reduction target in the first commitment period;

- (m) A description of its national registry, reported in accordance with the “Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol”, if the Party included in Annex I did not have a quantified emission limitation and reduction target in the first commitment period;
- (n) The calculation of the difference between the assigned amount for the second commitment period and average annual emissions for the first three years of the preceding commitment period multiplied by eight, pursuant to Article 3, paragraph 7ter.

The elements listed above are reported in Part 1 of this report.

Additional reporting elements are required by paragraph 11 of Decision 3/CMP.11 on accounting and reporting for Parties that have reached an agreement to fulfil their commitments under Article 3 of the Kyoto Protocol jointly. These Parties shall clarify in their reports methodologies and, if applicable, any relevant assumptions applied by those Parties for their joint fulfilment in relation to:

- (a) The application of paragraphs 23–26 of decision 1/CMP.8;
- (b) The calculation of base year emissions in accordance with Article 3, paragraphs 5, 7 bis, 8 and 8 bis;
- (c) The calculation of those Parties’ assigned amounts in accordance with Article 3, paragraphs 7 bis, 8 and 8 bis, and the respective emission level allocated to each of the Parties as set out in the agreement pursuant to Article 4, paragraph 1;
- (d) The calculation of those Parties’ commitment period reserves in accordance with decision 11/CMP.1, decision 1/CMP.8, paragraph 18, and this decision;
- (e) The application and calculation pursuant to paragraph 13 in the annex of decision 2/CMP.7.

These elements are reported in Part 2 of this report.

As Austria will fulfil its commitments together with the European Community, the other Member States of the European Union and Iceland, relevant information on the joint fulfilment is contained in the EU’s CP2 Initial Report<sup>1</sup>. Reference to the EU’s CP2 Initial Report are references to the Annex (Staff Working Document) of the Commission Report.

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<sup>1</sup> Report to facilitate the calculation of the assigned amount of the European Union, and the report to facilitate the calculation of the assigned amount of the European Union, its Member States and Iceland pursuant to Article 3(7bis), (8) and (8bis) of the Kyoto Protocol for the second commitment period, as required under Article 3(2) of Council Decision (EU) 2015/1339.

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Annex 1: Greenhouse gas emission time series

Annex 2:

Submission of information on forest management reference levels by Austria pursuant to Decision 2/CMP.6, paragraph 4

and

Technical assessment report pursuant to decision 2/CMP.6, paragraph 5, on the forest management reference level submission of Austria.

## **Part 1 – Information to facilitate the calculation of the assigned amount and to demonstrate the capacity to account for emissions and assigned amount**

### **(a) Greenhouse gas inventory time series**

The Austrian greenhouse gas inventory for the period 1990 to 2014 was compiled according to the UNFCCC reporting guidelines on annual inventories according to Decision 24/CP.19, the guidance for reporting information on activities under Article 3(3) and (4) of the Kyoto Protocol according to Decision 6/CMP.9, the Common Reporting Format (CRF) and the IPCC 2006 Guidelines for National Greenhouse Gas Inventories. The inventory is submitted together with this report.

Total emissions of the greenhouse gases listed in Annex A of the Kyoto Protocol (excluding emissions and removals from land-use, land-use change and forestry) were 78.8 million tonnes of carbon dioxide equivalent in 1990 and 76.3 million tonnes in 2014. Emissions are clearly dominated by CO<sub>2</sub> with a share of 84 % in 2014; the share of CH<sub>4</sub> has been decreasing since 1990 and has reached 9 %. The share of N<sub>2</sub>O has been decreasing by one percentage point to 4 % and that of fluorinated gases has been slightly increasing to about 3 %.

Two third of Austria's GHG emissions result from fuel combustion (CRF sector 1 "energy"). Of all energy subsectors and other sectors, "transport" (1.A.3, 29 %) has the highest share in total emissions in 2014, followed by "industrial processes" (sector 2, 21 %), "manufacturing industries and construction" (1.A.2, 14 %), "energy industries" (1.A.1, 13 %), "other sectors" (1.A.4, 11 %), "agriculture" (sector 3, 9 %) and "waste" (sector 5, 2 %). The increase of emissions from the mid 1990ies to 2005 was mainly driven by the transport sector; in comparison to the transport sector emission growth in industrial processes and product use and manufacturing industries and construction was low. Emissions from waste and "other sectors" decreased significantly

The increase of CO<sub>2</sub> emissions results from the trend in the sector fuel combustion, namely the increasing energy consumption in the transport sector. The increase of transport emissions was to a considerable extent caused by the increase of fuel sold in Austria but consumed abroad. Decreasing CH<sub>4</sub> emissions are a result of the trend in the sectors waste and agriculture, the decrease of N<sub>2</sub>O emissions is mainly due to decreasing N<sub>2</sub>O emissions from industrial processes. Emissions of F-gases exhibit a slight increase, but the share of gases has changed significantly.

Summary information is shown in Table 1 and Figure 1 below, complete inventory information including time series for all gases can be found in Annex 1.

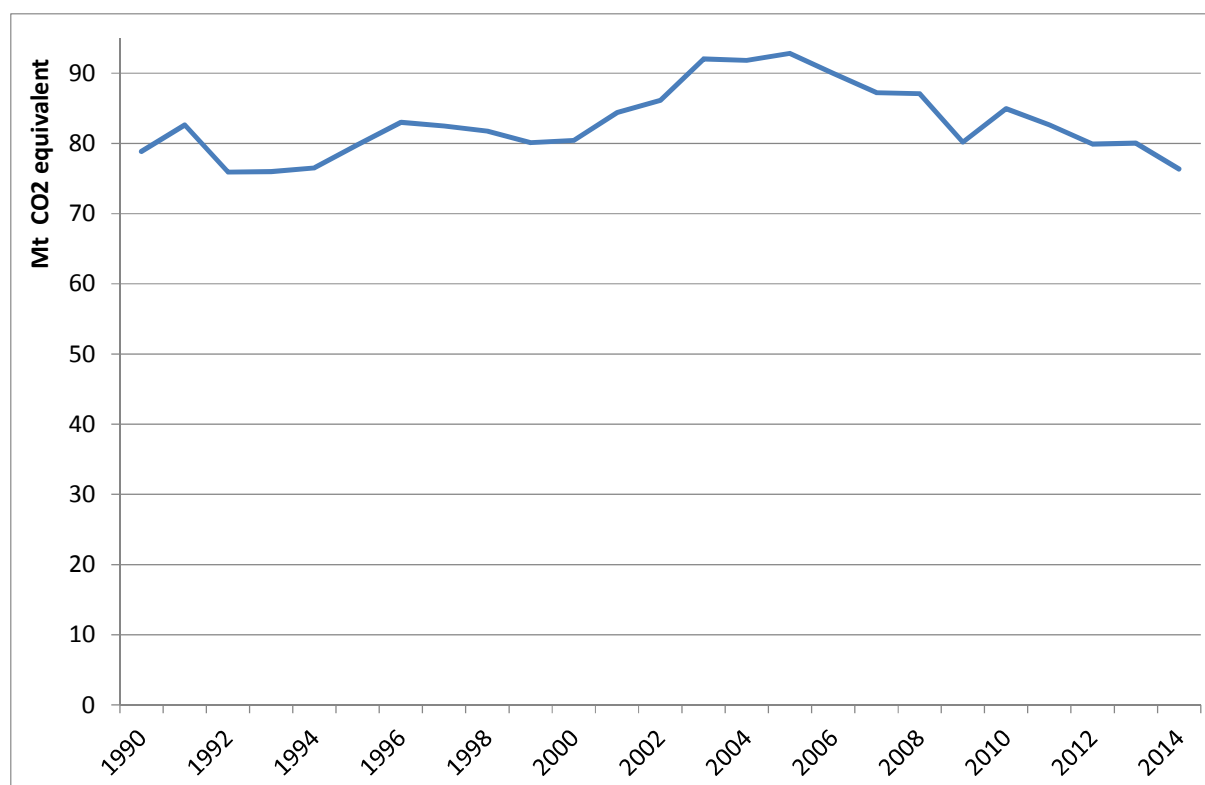


Figure 1.1: Austria's GHG emission trend 1990–2014 (without LULUCF)

Table 1.1: Austrian GHG emissions 1990 and 2014, in kt CO<sub>2</sub> equivalent

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1990					2014				
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	F-Gas.	Total	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	F-Gas.	Total
<b>Total without LULUCF</b>	<b>62 297</b>	<b>10 599</b>	<b>4 293</b>	<b>1 656</b>	<b>78 845</b>	<b>64 263</b>	<b>6 623</b>	<b>3 427</b>	<b>2 019</b>	<b>76 333</b>
<b>Total with LULUCF</b>	<b>49 429</b>	<b>10 599</b>	<b>4 308</b>	<b>1 656</b>	<b>65 992</b>	<b>58 685</b>	<b>6 623</b>	<b>3 446</b>	<b>2 019</b>	<b>70 774</b>
<b>1. Energy</b>	51 304	1 140	473		52 917	50 323	510	584		51 418
A. Fuel Combustion	51 202	541	473		52 215	50 102	241	584		50 928
1. Energy Industries	13 792	6	44		13 842	9 555	13	93		9 661
2. Manufacturing Ind.	9 813	8	70		9 892	10 401	14	128		10 543
3. Transport	13 777	65	133		13 976	21 976	9	195		22 181
4. Other Sectors	13 784	461	225		14 470	8 121	205	168		8 494
5. Other	35	0	1		36	49	0	1		50
B. Fugitive Emiss. from Fuels	102	600	NA,NO,IE		702	221	269	NA,NO,IE		491
<b>2. Ind. Processes, Prod. Use</b>	10 872	35	1 100	1 656	13 663	13 826	47	184	2 019	16 076
<b>3. Agriculture</b>	94	5 409	2 601		8 104	111	4 558	2 404		7 074
<b>4. Land Use, LUC and Forestry</b>	-12 868	0	15		-12 853	-5 577	0	19		-5 558
<b>5. Waste</b>	27	4 014	119		4 160	2	1 508	255		1 765
<b>6. Other</b>										

<b>Memo Items:</b>										
<b>International Bunkers</b>	935	0	14		950	2 041	1	25		2 067
Aviation	886	0	9		896	1 977	1	20		1 998
Marine	49	0	5		55	64	0	5		69
<b>Multilateral Operations</b>	NO	NO	NO		NO	NO	NO	NO		NO
<b>CO<sub>2</sub> Emissions from Biomass</b>	9 928				9 928	23 353				23 353

## **(b) Base year for HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>**

The base year for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride has already been determined for the first commitment period.

According to Article 3 paragraph 8bis of the Kyoto Protocol, any Party included in Annex I may use 1995 or 2000 as its base year for nitrogen trifluoride (NF<sub>3</sub>) for the purposes of the calculation referred to in paragraph 7 bis. Austria has decided to use the year **2000** as its **base year for nitrogen trifluoride**.

The base year emissions of NF<sub>3</sub> are 10 509 tonnes carbon dioxide equivalent. (Total base year emissions are 78 855 136 tonnes carbon dioxide equivalent.)

## **(c) Agreement under Article 4**

The Kyoto Protocol, under Article 4, provides the option for Parties to fulfil their commitments under Article 3 jointly, acting in the framework of and together with a regional economic integration organisation.

The European Union and its Member States made use of this option during the first commitment period of the Protocol. 15 Parties, which were Member States of the EU at the time the Kyoto Protocol was ratified, fulfilled their commitments under Article 3 paragraph 1 of the Protocol jointly.

For the second commitment period, upon adoption of the Doha amendment to the Kyoto Protocol, the European Union, its Member States and Iceland stated that the European Union and its 28 Member States intend to fulfil their reduction targets under the second commitment period jointly. The ratification decision (Council Decision (EU) 2015/1339) sets out the terms of the joint fulfilment between the Union and its Member States and Iceland.

**Austria will therefore fulfil its commitments together with the European Community, the other Member States of the European Union and Iceland.** The following States are at present Member States of the European Union: the Kingdom of Belgium, the Republic of Bulgaria, the Czech Republic, the Kingdom of Denmark, the Federal Republic of Germany, the Republic of Estonia, Ireland, the Hellenic Republic, the Kingdom of Spain, the French Republic, the Republic of Croatia, the Italian Republic, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Grand Duchy of Luxembourg, Hungary, the Republic of Malta, the Kingdom of the Netherlands, the Republic of Austria, the Republic of Poland, the Portuguese Republic, Romania, the Republic of Slovenia, the Slovak Republic, the Republic of Finland, the Kingdom of Sweden, the United Kingdom of Great Britain and Northern Ireland.



Details on the terms of the joint fulfilment and Council Decision (EU) 2015/1339 can be found in Section 2.3 of the CP2 Initial Report of the European Union.

### **(d) Calculation of the assigned amount**

The assigned amounts of the Member States are determined in accordance with the terms of the joint fulfilment. The emission level for an individual Member State is equal to the sum of each Member State's Annual Emissions Allocation under Decision No 406/2009/EC on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020 (Effort Sharing Decision) for the years 2013 to 2020.

For Austria this is an **assigned amount of 405 712 317 tonnes CO<sub>2</sub> equivalent**.

### **(e) Calculation of the commitment period reserve**

According to Decision 11/CMP.1 and Decision 1/CMP.8, paragraph 18, each Party shall maintain, in its national registry, a commitment period reserve which should not drop below 90 per cent of the Party's assigned amount calculated pursuant to Article 3, paragraphs 7bis, 8 and 8bis, of the Kyoto Protocol, or 100 per cent of its most recently reviewed inventory multiplied by eight, whichever is lowest.

Calculated as 90 per cent of the assigned amount the commitment period reserve is **365 141 085 tonnes** carbon dioxide equivalent.

(The calculation based on the most recently reviewed inventory would result in a higher value of  $76\,332\,619 \times 8 = 610\,660\,949$  tonnes. Austria has interpreted the 'most recently reviewed inventory' as the year 2014, which will be reviewed by October 2016.)

### **(f) Tree crown cover, land area and tree height**

Austria has selected its forest definition for the first commitment period; the definition for the second commitment period shall be the same.

The decision from the first commitment period was to select

- as **minimum value for tree crown cover** [between 10 and 30 percent]: **30%**
- as **minimum land area** [between 0,05 and 1 hectare]: **0,05 hectare**
- as **minimum tree height** [between 2 and 5 metres]: **2 metres**

With regard to the identification of forest areas, Austria defines a **minimum forest width of 10 metres**.

### **(g) Election of activities under Article 3 paragraph 4**

Austria did not elect any activities under Article 3 paragraph 4 for the first commitment period.

Austria has decided **not to elect any of the additional activities under Article 3 paragraph 4** of the Kyoto Protocol for the second commitment period (i.e. none of: Revegetation, cropland management, grazing land management, wetland drainage and rewetting).

### **(h) Accounting for activities under Article 3, paragraphs 3 and 4**

Austria has decided to **account for each activity under Article 3 paragraph 3 and for Article 3 paragraph 4 “Forest Management” at the end of the second commitment period**.

### **(i) Forest management reference level**

In the Appendix to the Annex to decision 2/CMP.7 the following reference levels were adopted for Austria for the second commitment period:

- -2 121 Mt CO<sub>2</sub> eq/year with HWP on basis of instantaneous oxidation
- -6 516 Mt CO<sub>2</sub> eq/year with HWP on the basis of delayed emissions (applying first order decay function)

In accordance with the conclusions and recommendations of the „Report of the technical assessment of the forest management reference level (FMRL) submission of Austria submitted in 2011” (FCCC/TAR/2011/AUT), the improvements and updates in the forest land remaining forest land category have impacts on accounting for Forest Management in the second commitment period which require following adjustments:

1) Inclusion of the litter and soil pools:

According to Paragraph 30 of the „Report of the technical assessment of the forest management reference level submission of Austria submitted in 2011” Austria indicated to make a technical correction to its FMRL as soon as national estimates for the litter and soil pools are available. The most recent estimates for the 4.A.1 litter and soil C pool changes represent an increase in emissions of about 2 600 Gg CO<sub>2</sub> per year, which requires a technical correction to ensure consistency in the treatment of pools between the FMRL and the national reporting of the Austrian GHG inventory under the UNFCCC and Kyoto Protocol.

2) Updated expansion ratios:

The expansion ratios from stemwood to total tree biomass have been improved

resulting in following changes. The expansion ratios for increment decreased by around 8%, those for harvest by around 2%. As a result of these new expansion ratios the net removals of the historic time series decreased significantly in comparison to previous submissions. This adjustment leads to a decrease in FMRL removals of around 2 400 Gg CO<sub>2</sub> which requires a technical correction to ensure methodological consistency between the FMRL and the national reporting of the Austrian GHG inventory under the UNFCCC and Kyoto Protocol.

3) Updated data on 'drain':

Austria already indicated in the course of the technical assessment of its FMRL, that a certain „inconsistency” arises from the fact, that the projections used to calculate the FMRL only cover emissions resulting from the harvest of „useable” trees, whereas the National Forest Inventory (NFI) and subsequently the reporting under the UNFCCC covers all biomass drain, including biomass losses due to mortality, which were around 10% of the total biomass drain in the forests in yield according to the latest NFI.

The ERT concluded that the FMRL should in principle take account of the most recent data available at the time of estimation and suggested that Austria should assess whether including the NFI 2007–2009 data would make a significant difference to the FMRL. The losses due to mortality represent an increase in emissions of around 2 200 Gg CO<sub>2</sub>, which requires a technical correction to ensure methodological consistency between the FMRL and the national reporting of the Austrian GHG inventory under the UNFCCC and Kyoto Protocol.

4) Updated dead wood pool:

The gains in the dead wood pool have been recalculated on the basis of the new NFI results. The annual removals in this pool changed from approx. 600 to 800 Gg CO<sub>2</sub>. The changes in the dead wood pool represent an increase in removals of around 200 Gg CO<sub>2</sub>, which requires a technical correction to ensure methodological consistency between the FMRL and the national reporting of the Austrian GHG inventory under the UNFCCC and Kyoto Protocol.

5) Corrections in the calculations of the 'increment'

As indicated in the „Report of the technical assessment of the forest management reference level submission of Austria submitted in 2011” Austria assumed a constant stemwood increment of 29.8 Mio. m<sup>3</sup> o.b. per year, based on the weighted average of the last NFIs available at the time of compiling the FMRL submission. An error occurred in this estimate, which requires a correction. In addition results of the new NFI 2007/09 were taken up in the calculation of the weighted average. This correction results in a change of the projected annual stemwood increment from 29.9 to 30.1 Mio m<sup>3</sup> o.b. This change represents an increase in removals of around 200 Gg CO<sub>2</sub> which requires a technical correction to ensure methodological consistency in the calculations of the FMRL and the national forest inventory.

6) Update of harvested wood products:'

Due to the availability of FAO data the time series from 1900 to 1960 was gap-filled by calculating a mean value of the data from the early 60ies. To be in line with the 2006 IPCC Guidelines this methodology has been updated accordingly. Pre-1960

values have been estimated by a degression which reflects the development of economic growth for this period. This change represents an increase in removals of around 900 Gg CO<sub>2</sub> which requires a technical correction to ensure methodological consistency in the calculations of the FMRL and the national forest inventory.

The sum of all the technical corrections result in a 'calculatory' difference between the FMRLs adopted for Austria pursuant to Decision 2/CMP.7 and the national reporting of the Austrian GHG inventory under the UNFCCC and Kyoto Protocol of 6 759 Gg CO<sub>2</sub> p.a (with HWP on basis of instantaneous oxidation) and 5 823 Gg CO<sub>2</sub> p.a (with HWP on the basis of delayed emissions).

The application of these technical corrections led to a **revision of the FMRL from –2 121 to 4 638 Gg CO<sub>2</sub> eq/year (with HWP on basis of instantaneous oxidation), and from –6 516 to –693 Gg CO<sub>2</sub> eq/year (with HWP on the basis of delayed emissions).**

These technical corrections are furthermore in line with the provisions of Paragraph 14 of the Annex to decision 2/CMP.7 which requires parties to demonstrate methodological consistency between the FMRL and reporting for forest management.

## **(j) Information on calculation of emissions from harvested wood products**

**Austria accounts for emissions/removals from HWPs** which stem from domestically harvested wood. **Emissions from HWP have been calculated** in accordance with the methodology provided in the KP supplement (IPCC 2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol) **based on the first-order decay function and using default half-lives** for the wood products (see also Austria's National Inventory Report 2015, chapter 6.8.2., p. 413).

## **(k) Information on emissions associated with natural disturbances**

Austria **intends to apply the provisions to exclude emissions from natural disturbances for the accounting for forest management (FM) under Article 3, paragraph 4**, of the Kyoto Protocol during the second commitment period in accordance with Paragraph 33 of the Annex to decision 2/CMP.7.

The background level for forest management is 0.147 t CO<sub>2</sub> eq/ha, including the margin it amounts to 0.171 t CO<sub>2</sub>eq/ha.

National forest statistics (Dokumentation der Waldschädigungsfaktoren – DWF) provide annual data for natural disturbances (ND) in Austrian forests- This information is complemented with data provided by the National Forest Inventory.

The background level was determined in line with the provisions given in Annex E to decision 2/CMP.7. All ND are considered in this calculation for which the emission time series has been established from 1990 to 2009. The chosen Tier 3 method applies a decay model for emissions from all ND except for forest fires whose methodology is described in Austria's National Inventory Report 2015 (chapter 6.2.4.1.4). The YASSO model calculates annual emissions from the biomass decay of all ND biomass remaining at site which is not associated with salvage logging. For Austria this implies that only wood and biomass which is non-merchantable or lying on remote and heavy accessible areas is considered for the background level calculation. In addition, deadwood which is not a result of the ND event was not included.

The background level and the margin have been determined by applying the IPCC default method, which is twice the standard deviation of the mean of the emission time series (1990–2009). Outliers which were above twice the standard deviation were removed until no outliers occur anymore. Finally, to obtain the final margin and background level, a new mean value (background level) and standard deviation (margin) are calculated.

It is not expected that net credits or debits occur due to the provisions explained above. In addition, it is ensured by the monitoring system of all ND sites that removals due to re-growth on these areas will not be accounted.

## **(l) National system in accordance with Art. 5 paragraph 1**

Austria had a quantified emission limitation and reduction target in the first commitment period. Austria has reported a description of its national system in accordance with Article 5, paragraph 1, of the Kyoto Protocol, in its Initial Report for the first commitment period and has reported on updates of its national system in its national inventory reports in accordance with the “Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol”.

## **(m) National registry**

Austria had a quantified emission limitation and reduction target in the first commitment period. Austria has reported a description of its national registry in the Initial Report for the first commitment period and has reported on updates of its national registry in its national inventory reports in accordance with the “Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol”.

## **(n) Difference between the assigned amount for the second commitment period and average annual emissions for the first three years of the first commitment period**

According to Article 3 paragraph 7ter of the Kyoto Protocol, any positive difference between the assigned amount of the second commitment period and the average annual emissions for the first three years of the preceding commitment period multiplied by eight shall be transferred to the cancellation account.

In line with the terms of the joint fulfilment of the European Union, its Member States and Iceland under Article 3 of the Kyoto Protocol, Article 3 paragraph 7ter is applied to the joint assigned amount of the second commitment period. As the joint assigned amount for the second commitment period is lower than average annual emissions for the period 2008–2010 multiplied by eight, no positive difference occurs and no cancellation needs to be performed.

Section 2.6 of the EU's CP2 Initial Report provides detailed information on the application of Article 3 paragraph 7ter of the Kyoto Protocol with respect to the joint fulfilment.

## **Part 2 – Clarification of methodologies and assumptions applied for the joint fulfilment in relation to:**

### **(a) Application of paragraphs 23–26 of decision 1/CMP.8**

Based on paragraph 23 of decision 1/CMP.8, the European Union, each Member State and Iceland establish previous period surplus reserve accounts in their respective registries.

Based on paragraph 24 (a) of decision 1/CMP.8, the European Union, each Member State and Iceland may carry over any remaining ERUs and CERs that have not been retired or cancelled for the first commitment period in their respective registries to the second commitment period. The 2.5 per cent limit in paragraph 24 (a) of decision 1/CMP.8 will be calculated based on the assigned amounts of the Member States, Iceland and the European Union calculated pursuant to Article 3 paragraphs 7 and 8 for the first commitment period.

Based on paragraph 24 (b) of decision 1/CMP.8, the European Union, each Member State and Iceland may carry over any remaining AAUs that have not been retired or cancelled for the first commitment period in their respective registries to their respective previous period surplus reserve accounts.

Based on paragraph 25 of decision 1/CMP.8, the European Union, each Member State and Iceland may use units in their previous period surplus reserve account for retirement during the additional period for fulfilling commitments of the second commitment period individually.

Based on paragraph 26 of decision 1/CMP.8, the European Union, each Member State and Iceland may transfer and acquire units individually between their previous period surplus reserve accounts.

Section 2.7 of the EU's CP2 Initial Report provides detailed information on the application of paragraphs 23–26 of decision 1/CMP.8 with respect to the joint fulfilment.

### **(b) Calculation of base year emissions**

The joint inventory of the EU and Iceland reflects the base years as chosen by the Member States and Iceland in their national inventories. The combined base year emissions of the members to the joint fulfilment equal the sum of emissions in the respective base years applicable to each Member State and Iceland.

Section 2.2 of the EU's CP2 Initial Report provides detailed information on the choices of the Member States and Iceland regarding the individual base years for the greenhouse gases.

### **(c) The calculation of assigned amounts and emission level allocated to each of the Parties**

The joint assigned amount is calculated pursuant to the quantified emission limitation and reduction commitment listed in the third column of the table contained in Annex B to the Kyoto Protocol and in accordance with the provisions of Article 3 thereof. The assigned amounts of the members are determined in accordance with the terms of the joint fulfilment.

If land-use change and forestry constituted a net source of greenhouse gas emissions in 1990 for any Member State or Iceland, that member shall, pursuant to Article 3(7bis) of the Kyoto Protocol, include in its emissions base year or period the aggregate anthropogenic carbon dioxide equivalent emissions by sources minus removals by sinks in the base year or period from land-use change (deforestation) for the purpose of calculating the joint assigned amount of the members determined in accordance with Article 3 (7bis), (8) and (8bis) of the Kyoto Protocol.

The calculation pursuant to Article 3(7ter) of the Kyoto Protocol shall apply to the joint assigned amount of the second commitment period determined in accordance with Article 3 (7bis), (8) and (8bis) of the Protocol and the sum of the average annual emissions of the members for the first three years of the first commitment period multiplied by eight.

The emission levels of the Member States and Iceland cover the emissions from sectors and gases listed in Annex A to the Kyoto Protocol not covered by the EU emissions trading system (Directive 2009/29/EC of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community). The terms of the joint fulfilment determine that the assigned amounts of the members shall be equal to their respective emission levels, adjusted for Article 3(7bis) of the Kyoto Protocol.

The European Union, the 28 Member States and Iceland shall continue to report individually on emissions by sources and removals by sinks, submitting full greenhouse gas inventories covering all anthropogenic emissions by sources and removals by sinks for gases listed on Annex A to the Kyoto Protocol and all source categories covered by the UNFCCC reporting guidelines occurring on their territories under the Kyoto Protocol. They will also report annually in the national inventory reports on their verified emissions falling under the scope of the Emissions Trading System and the share of those emissions in the total emissions, allowing for the transparent annual monitoring of the respective emission levels.

Sections 2.3.1 and 2.4 of the EU's CP2 Initial Report provide detailed information, including figures for all members, on the emission levels and the calculation of the assigned amounts.



## **(d) Calculation of commitment period reserves**

Parties are required by decision 11/CMP.1 under the Kyoto Protocol and paragraph 18 of Decision 1/CMP.8 to establish and maintain a commitment period reserve as part of their responsibility to manage and account for their assigned amount. The commitment period reserve equals the lower of either 90% of a Party's assigned amount pursuant to Article 3(7bis), (8) and (8bis) or 100% of its most recently reviewed inventory, multiplied by 8.

For the purposes of the joint fulfilment, the commitment period reserve applies to the EU, its Member States and Iceland individually.

Section 2.5 of the EU's CP2 Initial Report shows the calculation for all members.

## **(e) Application and calculation pursuant to paragraph 13 in the annex of decision 2/CMP.7**

According to paragraph 13 in the annex of decision 2/CMP.7 for the second commitment period, additions to the assigned amount of a Party resulting from forest management under Article 3 paragraph 4, and from forest management project activities undertaken under Article 6, shall not exceed 3.5 per cent of the base year greenhouse gas emissions excluding land use, land-use change and forestry pursuant to Article 3 paragraphs 7 and 8, or any amendments thereto, times the duration of the commitment period in years.

Similar to the general accounting of emissions and removals under Article 3(3) and (4), Member States and Iceland will apply this provision individually. The maximum accountable quantity resulting from forest management that can be added to the assigned amount of Austria is 22 079 438 tonnes CO<sub>2</sub> eq.

Section 2.8 of the EU's CP2 Initial Report shows the information for all members.

## **Annex 1**

### **Complete greenhouse gas emission inventory**

The complete inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases, as requested by paragraph 1(a) of annex I to decision 2/CMP.8, is contained in Austria's National Inventory Report and in the CRF tables submitted together with this report.

Full time series for CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and F-gases are shown below.

**TABLE 10 EMISSION TRENDS**  
**GHG CO<sub>2</sub> eq emissions**  
**(Sheet 1 of 6)**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt CO <sub>2</sub> eq)													
<b>Total (net emissions)<sup>(2)</sup></b>		65991,86	65148,67	63390,49	63087,44	63684,68	65702,62	71454,93	62546,99	63712,39	59922,44	63511,66	64535,40	71142,63
<b>1. Energy</b>		52917,25	56603,28	52026,51	52318,25	51965,73	54447,39	58644,55	57161,73	56972,59	55763,58	55312,55	59543,97	60773,54
A. Fuel combustion (sectoral approach)		52215,44	56034,18	51414,50	51737,83	51495,40	53983,36	58252,92	56725,46	56508,98	55267,23	54816,08	59029,37	60274,70
1. Energy industries		13841,88	14677,95	11360,92	11512,96	11808,98	12969,97	13856,89	13925,42	13058,14	12580,27	12275,17	13887,38	13542,55
2. Manufacturing industries and construction		9891,83	10238,94	9465,37	9684,27	10433,46	10326,76	10958,93	11954,27	10555,40	9778,69	10039,69	10006,44	10463,15
3. Transport		13975,66	15456,70	15426,54	15558,14	15606,22	15886,57	17440,17	16452,64	18561,18	18022,41	18818,20	20309,11	22221,70
4. Other sectors		14470,20	15622,60	15127,15	14942,08	13604,19	14766,67	15957,07	14355,15	14290,90	14843,34	13641,22	14784,07	14004,37
5. Other		35,87	37,99	34,53	40,38	42,56	33,39	39,85	37,98	43,37	42,52	41,80	42,37	42,93
B. Fugitive emissions from fuels		701,81	569,10	612,01	580,42	470,33	464,03	391,64	436,27	463,60	496,35	496,47	514,60	498,84
1. Solid fuels		333,22	181,14	192,32	164,36	56,38	36,84	24,13	24,61	24,83	24,77	27,19	26,25	30,74
2. Oil and natural gas and other emissions from energy production		368,59	387,97	419,69	416,06	413,95	427,19	367,51	411,66	438,78	471,58	469,28	488,35	468,10
C. CO <sub>2</sub> transport and storage		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>2. Industrial Processes</b>		13663,05	13696,32	12054,17	12004,75	12739,49	13610,27	13060,95	14222,95	13867,34	13648,30	14642,16	14523,54	15166,35
A. Mineral industry		3092,46	2950,10	2990,50	2925,54	3026,71	2657,39	2594,10	2765,48	2602,40	2606,43	2733,20	2758,67	2842,66
B. Chemical industry		1555,31	1591,03	1471,18	1552,59	1459,59	1528,06	1552,14	1533,65	1560,41	1591,41	1623,74	1418,85	1448,39
C. Metal industry		8177,44	8210,89	6599,67	6258,66	6876,62	7842,13	7349,02	8072,09	7858,37	7553,56	8482,76	8315,24	8774,64
D. Non-energy products from fuels and solvent use		348,94	323,39	295,40	266,15	249,75	234,07	238,86	241,12	234,11	228,99	227,86	226,76	212,11
E. Electronic industry		133,87	214,92	286,95	358,97	429,37	509,61	413,68	610,33	479,34	460,23	419,96	474,82	459,47
F. Product uses as ODS substitutes		NO	NO	0,02	227,91	252,02	347,14	408,47	488,89	606,59	697,73	708,85	857,49	963,67
G. Other product manufacture and use		355,03	405,99	410,46	414,92	445,43	491,86	504,68	511,40	526,12	509,94	445,80	471,71	465,42
H. Other		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>3. Agriculture</b>		8104,08	8129,97	7710,41	7568,94	7816,25	7960,32	7710,27	7656,78	7629,06	7522,64	7423,69	7368,21	7254,44
A. Enteric fermentation		4820,53	4749,17	4550,32	4547,37	4552,90	4638,25	4563,33	4481,74	4447,96	4410,82	4386,67	4326,99	4239,51
B. Manure management		1025,08	1015,38	989,05	995,83	993,07	1009,83	993,03	980,73	978,95	952,60	942,32	939,06	918,21
C. Rice cultivation		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural soils		2162,47	2266,59	2072,23	1927,73	2170,78	2210,94	2052,75	2092,07	2099,12	2056,45	1994,82	2004,96	1999,15
E. Prescribed burning of savannas		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field burning of agricultural residues		1,58	1,54	1,55	1,41	1,52	1,51	1,41	1,49	1,46	1,50	1,32	1,46	1,38
G. Liming		89,97	91,06	91,09	90,81	91,39	91,85	92,05	92,08	91,45	90,87	90,19	90,10	90,06
H. Urea application		4,45	6,23	6,17	5,79	6,60	7,95	7,70	8,67	10,12	10,41	8,37	5,64	6,13
I. Other carbon-containing fertilizers		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
J. Other		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>4. Land use, land-use change and forestry<sup>(2)</sup></b>		-12852,77	-17488,24	-12540,51	-12900,79	-12818,80	-14110,42	-11553,88	-19927,40	-18058,45	-20184,27	-16917,68	-19845,41	-14986,92
A. Forest land		-10929,44	-16659,41	-11895,78	-12368,26	-11303,77	-12284,14	-9264,61	-18015,70	-16200,04	-19118,05	-16028,05	-17979,64	-12284,54
B. Cropland		129,56	137,83	129,14	126,29	138,76	8,60	24,31	37,96	50,55	56,27	50,43	-141,09	-108,02
C. Grassland		324,17	318,91	313,88	308,94	308,98	141,94	143,74	145,28	147,07	146,86	146,55	146,18	354,00
D. Wetlands		42,08	42,03	41,97	41,93	41,93	30,31	35,81	35,81	35,81	35,80	35,80	35,80	47,28
E. Settlements		389,50	392,12	394,74	397,44	394,37	338,55	333,12	327,69	322,26	319,67	317,09	314,50	397,16
F. Other land		444,28	453,87	463,44	473,13	473,35	375,43	371,63	367,83	364,03	364,92	365,82	366,71	335,49
G. Harvested wood products		-3252,93	-2173,59	-1987,90	-1880,27	-2872,42	-2721,12	-3197,88	-2826,27	-2778,12	-1989,75	-1805,30	-2587,85	-3728,28
H. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>5. Waste</b>		4160,25	4207,34	4139,91	4096,28	3982,01	3795,06	3593,04	3432,93	3301,86	3172,20	3050,93	2945,08	2935,21
A. Solid waste disposal		3880,10	3928,14	3868,03	3816,25	3690,79	3499,08	3296,47	3141,75	3012,16	2880,59	2754,60	2637,46	2620,87
B. Biological treatment of solid waste		35,74	37,47	44,43	55,09	65,39	69,09	72,49	71,32	73,90	77,72	82,59	93,92	105,27
C. Incineration and open burning of waste		27,09	23,59	10,91	10,64	10,69	11,01	11,33	11,66	11,98	12,30	12,30	12,30	12,30
D. Waste water treatment and discharge		217,32	218,14	216,55	214,30	215,14	215,87	212,74	208,20	203,82	201,59	201,44	201,41	196,76
E. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>6. Other (as specified in summary I.A)</b>		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

**TABLE 10 EMISSION TRENDS**  
**GHG CO<sub>2</sub> eq emissions**  
**(Sheet 1 of 6)**

Inventory 2014  
Submission 2016 v1  
AUSTRIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
<b>Total (net emissions)<sup>(2)</sup></b>	86497,53	81907,06	81432,40	83901,20	80736,97	81820,46	75110,34	78421,03	75693,07	73545,79	74841,10	70774,19	7,25
<b>1. Energy</b>	66669,88	66897,51	67336,19	64021,39	60688,23	60233,13	56776,61	59833,19	57433,59	55265,61	55248,16	51418,39	-2,83
A. Fuel combustion (sectoral approach)	66105,27	66386,58	66853,89	63504,13	60164,05	59750,78	56236,12	59311,71	56918,88	54737,50	54716,38	50927,67	-2,47
1. Energy industries	16366,73	16407,42	16378,21	15254,30	13982,73	13780,89	12828,15	14157,26	13932,26	12530,84	11279,68	9660,68	-30,21
2. Manufacturing industries and construction	10893,23	11127,66	11854,66	11451,68	11042,12	11435,27	10996,97	11561,68	11543,32	11259,66	11036,43	10542,77	6,58
3. Transport	24074,41	24590,09	24936,85	23631,89	23788,41	22510,82	21709,44	22386,74	21704,64	21596,98	22820,38	22180,72	58,71
4. Other sectors	14727,41	14217,37	13639,60	13121,20	11305,17	11977,63	10654,85	11158,77	9690,84	9301,63	9530,93	8493,98	-41,30
5. Other	43,49	44,04	44,58	45,06	45,62	46,17	46,69	47,26	47,82	48,38	48,96	49,51	38,03
B. Fugitive emissions from fuels	564,60	510,93	482,30	517,26	524,18	482,35	540,50	521,48	514,71	528,11	531,78	490,72	-30,08
1. Solid fuels	25,09	5,13	0,13	0,15	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
2. Oil and natural gas and other emissions from energy production	539,51	505,80	482,17	517,12	524,18	482,35	540,50	521,48	514,71	528,11	531,78	490,72	33,13
C. CO <sub>2</sub> transport and storage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>2. Industrial Processes</b>	15307,91	14863,58	15612,59	16251,81	16940,79	17274,08	13948,14	15925,85	16084,24	15696,93	15980,83	16075,60	17,66
A. Mineral industry	2829,34	2915,62	2888,79	3053,33	3265,67	3276,09	2714,93	2660,68	2779,36	2703,56	2719,69	2721,68	-11,99
B. Chemical industry	1558,95	972,93	943,33	983,43	908,74	1011,99	792,94	784,49	785,56	759,40	696,28	809,87	-47,93
C. Metal industry	8748,48	8761,68	9576,79	10049,47	10546,86	10740,63	8403,23	10227,41	10245,97	9901,54	10264,21	10197,63	24,70
D. Non-energy products from fuels and solvent use	215,47	208,69	210,14	206,55	207,36	202,74	196,14	192,89	195,68	200,08	182,14	181,98	-47,85
E. Electronic industry	513,53	552,11	352,34	370,08	391,05	370,94	113,86	149,77	119,16	101,25	90,35	96,94	-27,58
F. Product uses as ODS substitutes	1067,28	1153,21	1140,73	1146,10	1186,95	1239,19	1306,04	1481,14	1533,74	1610,38	1600,48	1640,79	
G. Other product manufacture and use	374,87	299,35	500,48	442,84	434,16	432,51	421,01	429,46	424,77	420,73	427,66	426,71	20,19
H. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>3. Agriculture</b>	7108,78	7085,67	7017,07	6987,96	7024,69	7122,81	7144,89	6996,11	7036,34	6965,23	6958,64	7074,00	-12,71
A. Enteric fermentation	4196,41	4196,35	4143,41	4129,87	4145,16	4137,39	4190,19	4178,56	4124,82	4096,08	4101,79	4119,71	-14,54
B. Manure management	908,00	899,29	894,76	890,90	898,72	887,66	899,17	895,86	881,99	873,83	871,35	871,27	-15,00
C. Rice cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
D. Agricultural soils	1904,35	1886,05	1874,68	1861,24	1872,61	1991,68	1944,42	1813,39	1923,06	1886,22	1877,00	1970,99	-8,85
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Field burning of agricultural residues	1,31	1,97	1,28	1,19	1,22	1,19	1,10	1,06	0,86	0,68	0,64	0,70	-55,49
G. Liming	90,09	91,17	91,19	89,85	89,05	88,33	88,03	87,68	87,24	86,73	86,36	85,87	-4,56
H. Urea application	8,62	10,84	11,76	14,91	17,92	16,55	21,97	19,56	18,36	21,69	21,51	25,44	471,56
I. Other carbon-containing fertilizers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
J. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>4. Land use, land-use change and forestry<sup>(2)</sup></b>	-5520,95	-9928,83	-11378,08	-6079,82	-6504,19	-5280,67	-5080,31	-6524,99	-6933,57	-6351,33	-5201,45	-5558,43	-56,75
A. Forest land	-2291,71	-7373,33	-8824,79	-3009,93	-1982,10	-1087,63	-4523,96	-4489,55	-4455,13	-4420,66	-4385,90	-4355,50	-60,15
B. Cropland	-67,58	-140,39	-137,81	-174,11	-382,61	-333,38	-264,54	-231,07	-348,01	-314,73	-268,94	-228,09	-276,05
C. Grassland	351,86	351,74	353,25	353,47	356,43	347,57	48,64	46,13	48,67	44,39	48,81	48,23	-85,12
D. Wetlands	47,27	47,30	47,33	37,20	39,34	51,32	68,13	68,79	73,41	69,78	101,17	71,05	68,84
E. Settlements	398,65	396,48	392,69	388,76	365,66	398,98	300,01	269,57	248,67	256,92	215,44	219,67	-43,60
F. Other land	336,44	328,28	320,12	312,01	303,89	295,78	211,27	203,62	195,97	188,32	180,80	173,27	-61,00
G. Harvested wood products	-4295,88	-3538,91	-3528,89	-3987,22	-5204,80	-4953,32	-919,86	-2392,49	-2697,15	-2175,35	-1092,83	-1487,08	-54,29
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>5. Waste</b>	2931,91	2989,14	2844,63	2719,86	2587,44	2471,11	2321,02	2190,87	2072,47	1969,35	1854,91	1764,63	-57,58
A. Solid waste disposal	2610,33	2645,70	2491,23	2362,11	2227,81	2113,31	1965,05	1835,19	1715,67	1609,34	1501,27	1403,60	-63,83
B. Biological treatment of solid waste	116,77	140,96	151,36	157,38	162,50	163,90	164,89	167,44	169,62	173,73	166,28	172,25	381,95
C. Incineration and open burning of waste	12,30	12,30	12,30	10,18	8,15	6,11	4,07	2,04	2,04	2,04	2,04	2,04	-92,48
D. Waste water treatment and discharge	192,50	190,17	189,73	190,18	188,99	187,79	187,00	186,21	185,13	184,25	185,33	186,75	-14,07
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>6. Other (as specified in summary I.A)</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

TABLE 10 EMISSION TRENDS

GHG CO<sub>2</sub> eq emissions

(Sheet 1 of 6)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt CO <sub>2</sub> eq)													
<b>Memo items:</b>														
<b>International bunkers</b>		950,23	1052,16	1135,44	1199,99	1259,10	1410,04	1552,22	1610,25	1669,78	1632,05	1793,48	1753,52	1652,39
Aviation		895,54	1004,59	1089,17	1152,46	1198,63	1341,95	1482,42	1542,14	1595,37	1558,47	1713,23	1668,65	1556,93
Navigation		54,68	47,57	46,26	47,53	60,47	68,09	69,80	68,11	74,41	73,59	80,26	84,87	95,47
<b>Multilateral operations</b>		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>CO<sub>2</sub> emissions from biomass</b>		9927,77	10814,86	10576,17	11145,84	10753,83	11454,01	12189,91	11755,98	11548,23	13213,80	12477,53	13552,81	12508,81
<b>CO<sub>2</sub> captured</b>		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>Long-term storage of C in waste disposal sites</b>		24898,20	25577,99	26185,95	26781,50	27238,68	27662,58	28090,23	28497,40	28908,30	29317,94	29733,28	30151,63	30612,21
<b>Indirect N<sub>2</sub>O</b>		NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE
<b>Indirect CO<sub>2</sub> <sup>(3)</sup></b>		NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE
<b>Total CO<sub>2</sub> equivalent emissions without LULUCF</b>		78844,63	82636,90	75931,00	75988,23	76503,49	79813,03	83008,81	82474,39	81770,84	80106,72	80429,34	84380,81	86129,55
<b>Total CO<sub>2</sub> equivalent emissions with LULUCF</b>		65991,86	65148,67	63390,49	63087,44	63684,68	65702,62	71454,93	62546,99	63712,39	59922,44	63511,66	64535,40	71142,63
<b>Total CO<sub>2</sub> equivalent emissions, incl. indirect CO<sub>2</sub>, without LULUCF</b>		78844,63	82636,90	75931,00	75988,23	76503,49	79813,03	83008,81	82474,39	81770,84	80106,72	80429,34	84380,81	86129,55
<b>Total CO<sub>2</sub> equivalent emissions, incl. indirect CO<sub>2</sub>, with LULUCF</b>		65991,86	65148,67	63390,49	63087,44	63684,68	65702,62	71454,93	62546,99	63712,39	59922,44	63511,66	64535,40	71142,63

**Note:** All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

GHG CO<sub>2</sub> eq emissions

(Sheet 1 of 6)

Inventory 2014

Submission 2016 v1

AUSTRIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
<b>Memo items:</b>													
<b>International bunkers</b>	1544,34	1833,75	2069,35	2148,12	2281,79	2281,45	1978,58	2148,06	2259,09	2163,98	2070,74	2066,86	117,51
Aviation	1468,22	1742,86	1980,31	2070,31	2198,56	2204,85	1913,35	2071,02	2191,30	2094,55	1996,28	1997,57	123,06
Navigation	76,12	90,89	89,04	77,81	83,23	76,60	65,23	77,04	67,79	69,43	74,46	69,29	26,71
<b>Multilateral operations</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>CO<sub>2</sub> emissions from biomass</b>	12985,42	13152,82	16004,77	17042,60	18833,26	20186,82	20586,99	23250,80	22668,84	23744,87	24453,07	23352,66	135,23
<b>CO<sub>2</sub> captured</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>Long-term storage of C in waste disposal sites</b>	31145,95	31300,52	31460,69	31637,01	31797,99	31913,87	31981,12	32045,58	32117,50	32161,10	32209,18	32254,71	29,55
<b>Indirect N<sub>2</sub>O</b>	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	
<b>Indirect CO<sub>2</sub> <sup>(3)</sup></b>	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	
<b>Total CO<sub>2</sub> equivalent emissions without LULUCF</b>	92018,48	91835,89	92810,49	89981,02	87241,15	87101,13	80190,65	84946,02	82626,64	79897,12	80042,54	76332,62	-3,19
<b>Total CO<sub>2</sub> equivalent emissions with LULUCF</b>	86497,53	81907,06	81432,40	83901,20	80736,97	81820,46	75110,34	78421,03	75693,07	73545,79	74841,10	70774,19	7,25
<b>Total CO<sub>2</sub> equivalent emissions, incl. indirect CO<sub>2</sub>, without LULUCF</b>	92018,48	91835,89	92810,49	89981,02	87241,15	87101,13	80190,65	84946,02	82626,64	79897,12	80042,54	76332,62	-3,19
<b>Total CO<sub>2</sub> equivalent emissions, incl. indirect CO<sub>2</sub>, with LULUCF</b>	86497,53	81907,06	81432,40	83901,20	80736,97	81820,46	75110,34	78421,03	75693,07	73545,79	74841,10	70774,19	7,25

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

CO<sub>2</sub>

(Sheet 2 of 6)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt)													
<b>1. Energy</b>		51303,96	55046,91	50505,01	50824,72	50652,02	53111,04	57279,88	55928,58	55732,93	54509,92	54081,45	58289,62	59558,23
A. Fuel combustion (sectoral approach)		51201,80	54935,75	50384,80	50712,52	50524,30	52983,82	57208,66	55807,89	55590,91	54339,20	53916,73	58106,69	59390,99
1. Energy industries		13792,26	14621,06	11315,29	11466,21	11761,53	12918,31	13804,84	13874,80	13002,48	12526,21	12220,72	13824,01	13478,30
2. Manufacturing industries and construction		9813,33	10154,12	9380,88	9594,34	10341,22	10232,93	10853,64	11848,61	10446,59	9659,57	9916,35	9881,74	10344,67
3. Transport		13777,19	15240,69	15216,05	15352,03	15402,73	15686,02	17247,47	16270,98	18372,14	17846,16	18645,32	20134,72	22037,08
4. Other sectors		13784,01	14882,79	14438,91	14260,54	12977,26	14114,02	15263,83	13776,42	13727,31	14265,69	13093,54	14224,86	13489,03
5. Other		35,00	37,09	33,67	39,41	41,56	32,55	38,89	37,08	42,39	41,57	40,80	41,36	41,91
B. Fugitive emissions from fuels		102,16	111,16	120,21	112,20	127,71	127,22	71,22	120,70	142,01	170,72	164,72	182,93	167,24
1. Solid fuels		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA
2. Oil and natural gas and other emissions from energy production		102,16	111,16	120,21	112,20	127,71	127,22	71,22	120,70	142,01	170,72	164,72	182,93	167,24
C. CO <sub>2</sub> transport and storage		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>2. Industrial processes</b>		10871,89	10735,91	9819,12	9858,84	10428,45	10980,34	10276,34	11414,93	11200,81	11036,66	12082,47	11901,84	12459,91
A. Mineral industry		3092,46	2950,10	2990,50	2925,54	3026,71	2657,39	2594,10	2765,48	2602,40	2606,43	2733,20	2758,67	2842,66
B. Chemical industry		643,49	664,77	632,02	672,97	631,05	669,46	676,90	669,36	662,56	668,88	674,08	628,60	637,37
C. Metal industry		6787,00	6797,65	5901,21	5994,18	6520,94	7419,42	6766,48	7738,98	7701,73	7532,36	8447,33	8287,82	8767,78
D. Non-energy products from fuels and solvent use		348,94	323,39	295,40	266,15	249,75	234,07	238,86	241,12	234,11	228,99	227,86	226,76	212,11
E. Electronic industry														
F. Product uses as ODS substitutes														
G. Other product manufacture and use		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
H. Other		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>3. Agriculture</b>		94,42	97,29	97,25	96,60	97,98	99,80	99,75	100,76	101,57	101,28	98,56	95,74	96,19
A. Enteric fermentation														
B. Manure management														
C. Rice cultivation														
D. Agricultural soils														
E. Prescribed burning of savannas														
F. Field burning of agricultural residues														
G. Liming		89,97	91,06	91,09	90,81	91,39	91,85	92,05	92,08	91,45	90,87	90,19	90,10	90,06
H. Urea application		4,45	6,23	6,17	5,79	6,60	7,95	7,70	8,67	10,12	10,41	8,37	5,64	6,13
I. Other carbon-containing fertilizers		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
J. Other		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>4. Land use, land-use change and forestry<sup>(2)</sup></b>		-12868,26	-17503,14	-12555,71	-12915,90	-12833,65	-14125,07	-11568,43	-19941,82	-18073,08	-20198,54	-16932,04	-19859,67	-15001,80
A. Forest land		-10930,21	-16659,61	-11896,29	-12368,69	-11304,00	-12284,26	-9264,72	-18015,77	-16200,40	-19118,09	-16028,22	-17979,74	-12285,28
B. Cropland		114,84	123,13	114,46	111,61	124,14	-5,93	9,88	23,62	36,28	42,04	36,23	-155,27	-122,16
C. Grassland		324,17	318,91	313,88	308,94	308,98	141,94	143,74	145,28	147,07	146,86	146,55	146,18	354,00
D. Wetlands		42,08	42,03	41,97	41,93	41,93	30,31	35,81	35,81	35,81	35,80	35,80	35,80	47,28
E. Settlements		389,50	392,12	394,74	397,44	394,37	338,55	333,12	327,69	322,26	319,67	317,09	314,50	397,16
F. Other land		444,28	453,87	463,44	473,13	473,35	375,43	371,63	367,83	364,03	364,92	365,82	366,71	335,49
G. Harvested wood products		-3252,93	-2173,59	-1987,90	-1880,27	-2872,42	-2721,12	-3197,88	-2826,27	-2778,12	-1989,75	-1805,30	-2587,85	-3728,28
H. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>5. Waste</b>		26,89	23,40	10,86	10,60	10,65	10,97	11,30	11,62	11,94	12,26	12,26	12,26	12,26
A. Solid waste disposal		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA
B. Biological treatment of solid waste														
C. Incineration and open burning of waste		26,89	23,40	10,86	10,60	10,65	10,97	11,30	11,62	11,94	12,26	12,26	12,26	12,26
D. Waste water treatment and discharge														
E. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>6. Other (as specified in summary 1.A)</b>		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO



TABLE 10 EMISSION TRENDS

CO<sub>2</sub>

(Sheet 2 of 6)

Inventory 2014

Submission 2016 v1

AUSTRIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
<b>1. Energy</b>	65448,20	65720,75	66158,21	62854,40	59526,04	59075,58	55656,06	58650,01	56289,73	54107,58	54067,51	50323,44	-1,91
A. Fuel combustion (sectoral approach)	65214,97	65510,52	65952,97	62622,17	59288,80	58863,34	55390,82	58412,76	56056,48	53870,33	53816,26	50102,19	-2,15
1. Energy industries	16292,35	16326,69	16290,04	15160,15	13882,73	13673,55	12719,73	14029,41	13808,59	12409,18	11166,13	9555,35	-30,72
2. Manufacturing industries and construction	10768,63	11000,87	11708,10	11303,83	10890,72	11281,68	10847,52	11413,28	11395,54	11114,96	10891,14	10400,79	5,99
3. Transport	23886,08	24404,31	24752,11	23450,09	23604,39	22332,60	21533,06	22204,33	21522,54	21410,76	22618,17	21976,38	59,51
4. Other sectors	14225,43	13735,62	13159,15	12664,03	10866,34	11530,32	10244,78	10719,45	9282,96	8888,04	9092,84	8121,15	-41,08
5. Other	42,47	43,03	43,57	44,06	44,63	45,19	45,72	46,28	46,84	47,40	47,97	48,52	38,61
B. Fugitive emissions from fuels	233,23	210,23	205,23	232,24	237,24	212,24	265,24	237,25	233,25	237,25	251,25	221,25	116,57
1. Solid fuels	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
2. Oil and natural gas and other emissions from energy production	233,23	210,23	205,23	232,24	237,24	212,24	265,24	237,25	233,25	237,25	251,25	221,25	116,57
C. CO <sub>2</sub> transport and storage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>2. Industrial processes</b>	12464,77	12553,97	13315,08	13965,64	14626,97	14879,70	11912,60	13772,55	13929,80	13480,63	13779,72	13825,78	27,17
A. Mineral industry	2829,34	2915,62	2888,79	3053,33	3265,67	3276,09	2714,93	2660,68	2779,36	2703,56	2719,69	2721,68	-11,99
B. Chemical industry	674,91	667,99	643,58	666,25	601,61	651,72	587,90	676,83	692,75	662,02	599,11	715,41	11,18
C. Metal industry	8745,05	8761,68	9572,21	10037,36	10546,58	10740,33	8402,69	10227,14	10245,82	9897,08	10255,39	10181,97	50,02
D. Non-energy products from fuels and solvent use	215,47	208,69	210,14	206,55	207,36	202,74	196,14	192,89	195,68	200,08	182,14	181,98	-47,85
E. Electronic industry													
F. Product uses as ODS substitutes													
G. Other product manufacture and use	NO	NO	0,36	2,15	5,75	8,82	10,94	15,01	16,19	17,90	23,38	24,74	
H. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>3. Agriculture</b>	98,72	102,01	102,95	104,76	106,97	104,89	110,01	107,24	105,60	108,42	107,86	111,31	17,88
A. Enteric fermentation													
B. Manure management													
C. Rice cultivation													
D. Agricultural soils													
E. Prescribed burning of savannas													
F. Field burning of agricultural residues													
G. Liming	90,09	91,17	91,19	89,85	89,05	88,33	88,03	87,68	87,24	86,73	86,36	85,87	-4,56
H. Urea application	8,62	10,84	11,76	14,91	17,92	16,55	21,97	19,56	18,36	21,69	21,51	25,44	471,56
I. Other carbon-containing fertilizers	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
J. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>4. Land use, land-use change and forestry <sup>(2)</sup></b>	-5535,82	-9942,80	-11392,16	-6094,86	-6520,52	-5298,54	-5098,49	-6543,33	-6952,40	-6370,14	-5220,36	-5577,16	-56,66
A. Forest land	-2292,42	-7373,40	-8824,91	-3010,22	-1982,24	-1087,82	-4524,17	-4489,74	-4455,30	-4420,87	-4386,25	-4355,72	-60,15
B. Cropland	-81,74	-154,30	-151,76	-188,87	-398,80	-351,05	-282,50	-249,22	-366,67	-333,33	-287,50	-246,60	-314,74
C. Grassland	351,86	351,74	353,25	353,47	356,43	347,57	48,64	46,13	48,67	44,39	48,81	48,23	-85,12
D. Wetlands	47,27	47,30	47,33	37,20	39,34	51,32	68,13	68,79	73,41	69,78	101,17	71,05	68,84
E. Settlements	398,65	396,48	392,69	388,76	365,66	398,98	300,01	269,57	248,67	256,92	215,44	219,67	-43,60
F. Other land	336,44	328,28	320,12	312,01	303,89	295,78	211,27	203,62	195,97	188,32	180,80	173,27	-61,00
G. Harvested wood products	-4295,88	-3538,91	-3528,89	-3987,22	-5204,80	-4953,32	-919,86	-2392,49	-2697,15	-2175,35	-1092,83	-1487,08	-54,29
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>5. Waste</b>	12,26	12,26	12,26	10,15	8,12	6,09	4,06	2,03	2,03	2,03	2,03	2,03	-92,45
A. Solid waste disposal	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
B. Biological treatment of solid waste													
C. Incineration and open burning of waste	12,26	12,26	12,26	10,15	8,12	6,09	4,06	2,03	2,03	2,03	2,03	2,03	-92,45
D. Waste water treatment and discharge													
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>6. Other (as specified in summary 1.A)</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

TABLE 10 EMISSION TRENDS

CO<sub>2</sub>

(Sheet 2 of 6)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt)													
Memo items:														
International bunkers		935,45	1036,93	1119,30	1182,99	1240,34	1388,98	1529,50	1587,09	1645,40	1608,08	1767,97	1727,79	1626,91
Aviation		885,97	993,88	1077,44	1139,98	1185,65	1327,42	1466,42	1525,57	1578,21	1541,67	1695,58	1651,28	1540,85
Navigation		49,48	43,05	41,86	43,00	54,69	61,55	63,08	61,52	67,18	66,41	72,39	76,51	86,06
Multilateral operations		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO <sub>2</sub> emissions from biomass		9927,77	10814,86	10576,17	11145,84	10753,83	11454,01	12189,91	11755,98	11548,23	13213,80	12477,53	13552,81	12508,81
CO <sub>2</sub> captured		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Long-term storage of C in waste disposal sites		24898,20	25577,99	26185,95	26781,50	27238,68	27662,58	28090,23	28497,40	28908,30	29317,94	29733,28	30151,63	30612,21
Indirect N <sub>2</sub> O														
Indirect CO <sub>2</sub> <sup>(3)</sup>	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE
Total CO <sub>2</sub> emissions without LULUCF		62297,17	65903,51	60432,25	60790,76	61189,10	64202,16	67667,26	67455,89	67047,25	65660,13	66274,74	70299,47	72126,59
Total CO <sub>2</sub> emissions with CO <sub>2</sub> from LULUCF		49428,90	48400,37	47876,54	47874,86	48355,46	50077,09	56098,84	47514,07	48974,17	45461,60	49342,70	50439,80	57124,79
Total CO <sub>2</sub> emissions, incl. indirect CO <sub>2</sub> , without LULUCF		62297,17	65903,51	60432,25	60790,76	61189,10	64202,16	67667,26	67455,89	67047,25	65660,13	66274,74	70299,47	72126,59
Total CO <sub>2</sub> emissions, incl. indirect CO <sub>2</sub> , with LULUCF		49428,90	48400,37	47876,54	47874,86	48355,46	50077,09	56098,84	47514,07	48974,17	45461,60	49342,70	50439,80	57124,79

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

CO<sub>2</sub>

(Sheet 2 of 6)

Inventory 2014

Submission 2016 v1

AUSTRIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
Memo items:													
International bunkers	1521,59	1806,86	2040,20	2119,21	2251,24	2251,64	1952,94	2120,08	2230,68	2136,52	2044,04	2040,64	118,14
Aviation	1452,97	1724,93	1959,83	2048,88	2175,79	2181,97	1893,40	2049,55	2168,44	2072,66	1975,44	1976,70	123,11
Navigation	68,62	81,93	80,37	70,33	75,44	69,67	59,54	70,53	62,24	63,86	68,60	63,94	29,22
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
CO <sub>2</sub> emissions from biomass	12985,42	13152,82	16004,77	17042,60	18833,26	20186,82	20586,99	23250,80	22668,84	23744,87	24453,07	23352,66	135,23
CO <sub>2</sub> captured	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Long-term storage of C in waste disposal sites	31145,95	31300,52	31460,69	31637,01	31797,99	31913,87	31981,12	32045,58	32117,50	32161,10	32209,18	32254,71	29,55
Indirect N <sub>2</sub> O													
Indirect CO <sub>2</sub> <sup>(3)</sup>	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	NE,NA,NO,IE	
Total CO2 emissions without LULUCF	78023,95	78389,00	79588,50	76934,95	74268,11	74066,26	67682,73	72531,83	70327,17	67698,66	67957,12	64262,56	3,15
Total CO2 emissions with CO2 from LULUCF	72488,14	68446,20	68196,35	70840,09	67747,59	68767,72	62584,24	65988,49	63374,76	61328,52	62736,76	58685,40	18,73
Total CO2 emissions, incl. indirect CO2, without LULUCF	78023,95	78389,00	79588,50	76934,95	74268,11	74066,26	67682,73	72531,83	70327,17	67698,66	67957,12	64262,56	3,15
Total CO2 emissions, incl. indirect CO2, with LULUCF	72488,14	68446,20	68196,35	70840,09	67747,59	68767,72	62584,24	65988,49	63374,76	61328,52	62736,76	58685,40	18,73

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

CH<sub>4</sub>

(Sheet 3 of 6)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt)													
<b>1. Energy</b>		45,61	41,50	40,72	39,19	32,29	32,58	32,80	28,15	27,87	28,19	27,59	27,66	26,41
A. Fuel combustion (sectoral approach)		21,62	23,18	21,05	20,46	18,59	19,11	19,98	15,52	15,01	15,16	14,32	14,39	13,14
1. Energy industries		0,24	0,26	0,22	0,23	0,22	0,23	0,25	0,26	0,25	0,24	0,23	0,26	0,27
2. Manufacturing industries and construction		0,33	0,37	0,37	0,36	0,38	0,39	0,42	0,43	0,42	0,42	0,44	0,46	0,46
3. Transport		2,62	2,60	2,29	2,03	1,84	1,68	1,50	1,33	1,31	1,15	1,05	1,00	1,00
4. Other sectors		18,44	19,95	18,16	17,84	16,14	16,81	17,82	13,50	13,03	13,36	12,60	12,66	11,41
5. Other		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
B. Fugitive emissions from fuels		23,99	18,32	19,67	18,73	13,70	13,47	12,82	12,62	12,86	13,02	13,27	13,27	13,26
1. Solid fuels		13,33	7,25	7,69	6,57	2,26	1,47	0,97	0,98	0,99	0,99	1,09	1,05	1,23
2. Oil and natural gas and other emissions from energy production		10,66	11,07	11,98	12,15	11,45	12,00	11,85	11,64	11,87	12,03	12,18	12,22	12,03
C. CO <sub>2</sub> transport and storage														
<b>2. Industrial processes</b>		1,40	1,40	1,36	1,40	1,41	1,38	1,39	1,40	1,43	1,39	1,40	1,37	1,40
A. Mineral industry														
B. Chemical industry		1,40	1,40	1,36	1,40	1,41	1,38	1,39	1,40	1,43	1,39	1,40	1,37	1,40
C. Metal industry		NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE
D. Non-energy products from fuels and solvent use		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Electronic industry														
F. Product uses as ODS substitutes														
G. Other product manufacture and use		NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
H. Other		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>3. Agriculture</b>		216,35	213,07	204,43	204,34	204,34	207,79	204,31	200,63	199,16	196,89	195,56	192,99	188,93
A. Enteric fermentation		192,82	189,97	182,01	181,89	182,12	185,53	182,53	179,27	177,92	176,43	175,47	173,08	169,58
B. Manure management		23,48	23,06	22,36	22,40	22,17	22,21	21,73	21,31	21,19	20,41	20,05	19,86	19,30
C. Rice cultivation		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural soils		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Prescribed burning of savannas		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field burning of agricultural residues		0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,04	0,05	0,04
G. Liming														
H. Urea application														
I. Other carbon-containing fertilizers														
J. Other		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>4. Land use, land-use change and forestry</b>		0,02	0,00	0,01	0,01	0,01	0,00	0,00	0,00	0,01	0,00	0,00	0,00	0,02
A. Forest land		0,02	0,00	0,01	0,01	0,01	0,00	0,00	0,00	0,01	0,00	0,00	0,00	0,02
B. Cropland		IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO
C. Grassland		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Other land		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Harvested wood products														
H. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>5. Waste</b>		160,58	162,51	160,08	158,03	153,00	145,21	136,82	130,28	124,79	119,33	114,12	109,36	108,63
A. Solid waste disposal		155,20	157,13	154,72	152,65	147,63	139,96	131,86	125,67	120,49	115,22	110,18	105,50	104,83
B. Biological treatment of solid waste		0,52	0,55	0,65	0,82	0,98	1,04	1,09	1,08	1,12	1,18	1,25	1,43	1,61
C. Incineration and open burning of waste		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
D. Waste water treatment and discharge		4,85	4,84	4,70	4,56	4,39	4,21	3,87	3,53	3,19	2,93	2,68	2,43	2,18
E. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>6. Other (as specified in summary 1.A)</b>		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

TABLE 10 EMISSION TRENDS

CH<sub>4</sub>

(Sheet 3 of 6)

Inventory 2014

Submission 2016 v1

AUSTRIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
<b>1. Energy</b>	26,06	24,20	22,94	22,63	22,28	21,81	21,30	22,60	21,62	22,34	22,63	20,42	-55,23
A. Fuel combustion (sectoral approach)	12,80	12,18	11,86	11,23	10,81	11,00	10,29	11,23	10,36	10,70	11,41	9,64	-55,42
1. Energy industries	0,31	0,34	0,34	0,38	0,39	0,41	0,44	0,48	0,50	0,53	0,50	0,51	117,56
2. Manufacturing industries and construction	0,49	0,52	0,51	0,53	0,54	0,58	0,60	0,60	0,60	0,57	0,56	0,56	67,86
3. Transport	0,97	0,90	0,84	0,74	0,67	0,58	0,52	0,48	0,45	0,41	0,40	0,37	-85,95
4. Other sectors	11,04	10,41	10,17	9,58	9,21	9,43	8,72	9,68	8,80	9,19	9,95	8,20	-55,53
5. Other	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	33,00
B. Fugitive emissions from fuels	13,25	12,03	11,08	11,40	11,48	10,80	11,01	11,37	11,26	11,63	11,22	10,78	-55,06
1. Solid fuels	1,00	0,21	0,01	0,01	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
2. Oil and natural gas and other emissions from energy production	12,25	11,82	11,08	11,40	11,48	10,80	11,01	11,37	11,26	11,63	11,22	10,78	1,14
C. CO <sub>2</sub> transport and storage													
<b>2. Industrial processes</b>	1,39	1,40	1,45	1,92	1,90	1,88	1,84	1,87	1,87	1,87	1,96	1,87	33,26
A. Mineral industry													
B. Chemical industry	1,39	1,40	1,45	1,92	1,90	1,88	1,84	1,87	1,87	1,87	1,96	1,87	33,26
C. Metal industry	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NA,NO,IE	
D. Non-energy products from fuels and solvent use	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
E. Electronic industry													
F. Product uses as ODS substitutes													
G. Other product manufacture and use	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	
H. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>3. Agriculture</b>	186,80	186,48	184,22	183,49	184,17	183,52	185,85	185,30	182,83	181,48	181,63	182,33	-15,72
A. Enteric fermentation	167,86	167,85	165,74	165,19	165,81	165,50	167,61	167,14	164,99	163,84	164,07	164,79	-14,54
B. Manure management	18,90	18,56	18,44	18,26	18,33	17,99	18,21	18,12	17,81	17,61	17,54	17,52	-25,38
C. Rice cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
D. Agricultural soils	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Field burning of agricultural residues	0,04	0,06	0,04	0,04	0,04	0,04	0,04	0,03	0,03	0,02	0,02	0,02	-53,55
G. Liming													
H. Urea application													
I. Other carbon-containing fertilizers													
J. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>4. Land use, land-use change and forestry</b>	0,02	0,00	0,00	0,01	0,00	0,00	0,01	0,00	0,00	0,01	0,01	0,01	-72,00
A. Forest land	0,02	0,00	0,00	0,01	0,00	0,00	0,01	0,00	0,00	0,01	0,01	0,01	-72,00
B. Cropland	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	NO,IE	
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
G. Harvested wood products													
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>5. Waste</b>	108,20	109,86	103,77	98,67	93,36	88,76	82,78	77,54	72,73	68,52	64,08	60,31	-62,44
A. Solid waste disposal	104,41	105,83	99,65	94,48	89,11	84,53	78,60	73,41	68,63	64,37	60,05	56,14	-63,83
B. Biological treatment of solid waste	1,84	2,24	2,48	2,70	2,86	2,94	2,98	3,03	3,06	3,15	3,02	3,15	504,95
C. Incineration and open burning of waste	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-98,41
D. Waste water treatment and discharge	1,95	1,79	1,64	1,48	1,39	1,29	1,20	1,10	1,05	1,00	1,01	1,02	-79,07
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>6. Other (as specified in summary 1.A)</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

TABLE 10 EMISSION TRENDS

CH<sub>4</sub>

(Sheet 3 of 6)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt)													
Total CH <sub>4</sub> emissions without CH <sub>4</sub> from LULUCF		423,94	418,48	406,59	402,95	391,03	386,96	375,32	360,46	353,25	345,81	338,65	331,37	325,36
Total CH <sub>4</sub> emissions with CH <sub>4</sub> from LULUCF		423,96	418,49	406,60	402,96	391,04	386,96	375,32	360,46	353,26	345,81	338,66	331,37	325,38
Memo items:														
International bunkers		0,02	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,03	0,03	0,03	0,03	0,04
Aviation		0,01	0,02	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,03	0,03	0,03	0,03
Navigation		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Multilateral operations		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO <sub>2</sub> emissions from biomass														
CO <sub>2</sub> captured														
Long-term storage of C in waste disposal sites														
Indirect N <sub>2</sub> O														
Indirect CO <sub>2</sub> <sup>(3)</sup>														

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

CH<sub>4</sub>

(Sheet 3 of 6)

Inventory 2014

Submission 2016 v1

AUSTRIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
Total CH <sub>4</sub> emissions without CH <sub>4</sub> from LULUCF	322,45	321,95	312,38	306,71	301,72	295,97	291,77	287,31	279,06	274,21	270,30	264,93	-37,51
Total CH <sub>4</sub> emissions with CH <sub>4</sub> from LULUCF	322,47	321,95	312,39	306,71	301,73	295,98	291,78	287,32	279,06	274,21	270,31	264,94	-37,51
Memo items:													
International bunkers	0,04	0,05	0,04	0,04	0,05	0,05	0,04	0,04	0,05	0,05	0,05	0,05	168,40
Aviation	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,05	0,04	0,04	0,04	202,83
Navigation	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-35,08
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
CO <sub>2</sub> emissions from biomass													
CO <sub>2</sub> captured													
Long-term storage of C in waste disposal sites													
Indirect N <sub>2</sub> O													
Indirect CO <sub>2</sub> <sup>(3)</sup>													

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

N<sub>2</sub>O

(Sheet 4 of 6)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt)													
<b>1. Energy</b>		1,59	1,74	1,69	1,72	1,70	1,75	1,83	1,78	1,82	1,84	1,82	1,89	1,86
A. Fuel combustion (sectoral approach)		1,59	1,74	1,69	1,72	1,70	1,75	1,83	1,78	1,82	1,84	1,82	1,89	1,86
1. Energy industries		0,15	0,17	0,13	0,14	0,14	0,15	0,15	0,15	0,17	0,16	0,16	0,19	0,19
2. Manufacturing industries and construction		0,24	0,25	0,25	0,27	0,28	0,28	0,32	0,32	0,33	0,36	0,38	0,38	0,36
3. Transport		0,45	0,51	0,51	0,52	0,53	0,53	0,52	0,50	0,52	0,50	0,49	0,50	0,54
4. Other sectors		0,76	0,81	0,79	0,79	0,75	0,78	0,83	0,81	0,80	0,82	0,78	0,81	0,77
5. Other		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
B. Fugitive emissions from fuels		NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE
1. Solid fuels		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA
2. Oil and natural gas and other emissions from energy production		NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE
C. CO <sub>2</sub> transport and storage														
<b>2. Industrial processes</b>		3,69	3,74	3,45	3,58	3,41	3,52	3,57	3,53	3,64	3,73	3,82	3,25	3,28
A. Mineral industry														
B. Chemical industry		2,94	2,99	2,70	2,83	2,66	2,77	2,82	2,78	2,89	2,98	3,07	2,54	2,60
C. Metal industry		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D. Non-energy products from fuels and solvent use		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Electronic industry														
F. Product uses as ODS substitutes														
G. Other product manufacture and use		0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,71	0,67
H. Other		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>3. Agriculture</b>		8,73	9,08	8,40	7,93	8,76	8,95	8,40	8,52	8,55	8,39	8,18	8,21	8,17
A. Enteric fermentation														
B. Manure management		1,47	1,47	1,44	1,46	1,47	1,53	1,51	1,50	1,51	1,48	1,48	1,48	1,46
C. Rice cultivation														
D. Agricultural soils		7,26	7,61	6,95	6,47	7,28	7,42	6,89	7,02	7,04	6,90	6,69	6,73	6,71
E. Prescribed burning of savannas		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field burning of agricultural residues		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
G. Liming														
H. Urea application														
I. Other carbon containing fertilizers														
J. Other		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>4. Land use, land-use change and forestry</b>		0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05
A. Forest land		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
B. Cropland		0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05
C. Grassland		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Other land		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Harvested wood products														
H. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>5. Waste</b>		0,40	0,41	0,43	0,45	0,49	0,52	0,54	0,55	0,57	0,59	0,62	0,67	0,70
A. Solid waste disposal														
B. Biological treatment of solid waste		0,08	0,08	0,09	0,12	0,14	0,14	0,15	0,15	0,15	0,16	0,17	0,20	0,22
C. Incineration and open burning of waste		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
D. Waste water treatment and discharge		0,32	0,33	0,33	0,34	0,35	0,37	0,39	0,40	0,42	0,43	0,45	0,47	0,48
E. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>6. Other (as specified in summary I.A)</b>		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO



TABLE 10 EMISSION TRENDS

N<sub>2</sub>O

(Sheet 4 of 6)

Inventory 2014

Submission 2016 v1

AUSTRIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
<b>1. Energy</b>	1,91	1,92	2,03	2,02	2,03	2,05	1,97	2,07	2,02	2,01	2,06	1,96	23,55
A. Fuel combustion (sectoral approach)	1,91	1,92	2,03	2,02	2,03	2,05	1,97	2,07	2,02	2,01	2,06	1,96	23,55
1. Energy industries	0,22	0,24	0,27	0,28	0,30	0,33	0,33	0,39	0,37	0,36	0,34	0,31	111,59
2. Manufacturing industries and construction	0,38	0,38	0,45	0,45	0,46	0,47	0,45	0,45	0,45	0,44	0,44	0,43	82,44
3. Transport	0,55	0,55	0,55	0,55	0,56	0,55	0,55	0,57	0,57	0,59	0,65	0,65	46,66
4. Other sectors	0,76	0,74	0,76	0,73	0,70	0,71	0,64	0,66	0,63	0,62	0,64	0,56	-25,48
5. Other	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	14,10
B. Fugitive emissions from fuels	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	
1. Solid fuels	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	
2. Oil and natural gas and other emissions from energy production	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	NA,NO,IE	
C. CO <sub>2</sub> transport and storage													
<b>2. Industrial processes</b>	3,49	1,50	1,44	1,43	1,39	1,56	1,00	0,69	0,63	0,62	0,62	0,62	-83,30
A. Mineral industry													
B. Chemical industry	2,85	0,91	0,88	0,90	0,87	1,05	0,53	0,20	0,15	0,17	0,16	0,16	-94,56
C. Metal industry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
D. Non-energy products from fuels and solvent use	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
E. Electronic industry													
F. Product uses as ODS substitutes													
G. Other product manufacture and use	0,64	0,60	0,56	0,53	0,52	0,51	0,47	0,48	0,47	0,45	0,46	0,46	-39,15
H. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>3. Agriculture</b>	7,85	7,79	7,75	7,70	7,76	8,15	8,02	7,57	7,92	7,78	7,75	8,07	-7,56
A. Enteric fermentation													
B. Manure management	1,46	1,46	1,46	1,46	1,48	1,47	1,49	1,49	1,47	1,45	1,45	1,45	-1,11
C. Rice cultivation													
D. Agricultural soils	6,39	6,33	6,29	6,25	6,28	6,68	6,52	6,09	6,45	6,33	6,30	6,61	-8,85
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Field burning of agricultural residues	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-63,80
G. Liming													
H. Urea application													
I. Other carbon containing fertilizers													
J. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>4. Land use, land-use change and forestry</b>	0,05	0,05	0,05	0,05	0,05	0,06	0,06	0,06	0,06	0,06	0,06	0,06	23,78
A. Forest land	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-72,00
B. Cropland	0,05	0,05	0,05	0,05	0,05	0,06	0,06	0,06	0,06	0,06	0,06	0,06	25,78
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
G. Harvested wood products													
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>5. Waste</b>	0,72	0,77	0,80	0,82	0,82	0,83	0,83	0,84	0,85	0,85	0,84	0,86	114,35
A. Solid waste disposal													
B. Biological treatment of solid waste	0,24	0,28	0,30	0,30	0,31	0,30	0,30	0,31	0,31	0,32	0,30	0,31	311,56
C. Incineration and open burning of waste	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-95,78
D. Waste water treatment and discharge	0,48	0,49	0,50	0,51	0,52	0,52	0,53	0,53	0,53	0,53	0,54	0,54	67,97
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>6. Other (as specified in summary I.A)</b>	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

TABLE 10 EMISSION TRENDS

N<sub>2</sub>O

(Sheet 4 of 6)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt)													
Total direct N <sub>2</sub> O emissions without N <sub>2</sub> O from LULUCF		14,41	14,97	13,97	13,69	14,36	14,73	14,34	14,39	14,59	14,55	14,44	14,02	14,01
Total direct N <sub>2</sub> O emissions with N <sub>2</sub> O from LULUCF		14,46	15,02	14,02	13,74	14,41	14,78	14,39	14,43	14,64	14,60	14,48	14,07	14,06
Memo items:														
International bunkers		0,05	0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,08	0,08	0,08	0,08	0,08
Aviation		0,03	0,03	0,04	0,04	0,04	0,05	0,05	0,05	0,06	0,05	0,06	0,06	0,05
Navigation		0,02	0,01	0,01	0,02	0,02	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,03
Multilateral operations		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO <sub>2</sub> emissions from biomass														
CO <sub>2</sub> captured														
Long-term storage of C in waste disposal sites														
Indirect N <sub>2</sub> O		NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE
Indirect CO <sub>2</sub> <sup>(3)</sup>														

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

N<sub>2</sub>O

(Sheet 4 of 6)

Inventory 2014

Submission 2016 v1

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
Total direct N <sub>2</sub> O emissions without N <sub>2</sub> O from LULUCF	13,97	11,99	12,02	11,97	12,00	12,59	11,82	11,18	11,42	11,27	11,28	11,50	-20,16
Total direct N <sub>2</sub> O emissions with N <sub>2</sub> O from LULUCF	14,02	12,03	12,07	12,02	12,06	12,65	11,88	11,24	11,48	11,34	11,34	11,56	-20,01
Memo items:													
International bunkers	0,07	0,09	0,09	0,09	0,10	0,10	0,08	0,09	0,09	0,09	0,09	0,08	74,83
Aviation	0,05	0,06	0,07	0,07	0,07	0,07	0,06	0,07	0,07	0,07	0,07	0,07	114,77
Navigation	0,02	0,03	0,03	0,02	0,03	0,02	0,02	0,02	0,02	0,02	0,02	0,02	3,31
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
CO <sub>2</sub> emissions from biomass													
CO <sub>2</sub> captured													
Long-term storage of C in waste disposal sites													
Indirect N <sub>2</sub> O	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	NE,NO,IE	
Indirect CO <sub>2</sub> <sup>(3)</sup>													

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

HFCs, PFCs, SF<sub>6</sub>, and NF<sub>3</sub>

(Sheet 5 of 6)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	(kt)													
Emissions of HFCs and PFCs - (kt CO <sub>2</sub> equivalent)		1185,22	1196,51	516,11	298,78	332,06	441,28	501,04	618,30	665,87	781,00	801,49	979,44	1070,75
Emissions of HFCs - (kt CO <sub>2</sub> equivalent)		2,44	3,89	5,64	235,26	261,11	357,93	420,79	500,83	610,34	701,82	713,63	863,10	968,78
HFC-23		NO,NA	NO,NA	NO,NA	0,00	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	NO,NA,IE	0,00	0,00	0,00
HFC-32		NO,NA	NO,NA	NO,NA	NO,NA	0,00	0,00	0,00	0,00	0,00	0,00	0,01	0,01	0,01
HFC-41		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-43-10mee		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	0,00	0,00	0,00
HFC-125		NO,NA	NO,NA	NO,NA	0,00	0,00	0,00	0,00	0,01	0,01	0,02	0,03	0,04	0,04
HFC-134		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-134a		NO,NA	NO,NA	0,00	0,15	0,16	0,22	0,25	0,29	0,34	0,38	0,30	0,34	0,35
HFC-143		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-143a		NO,NA	NO,NA	NO,NA	0,00	0,00	0,00	0,00	0,01	0,01	0,02	0,02	0,03	0,04
HFC-152		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-152a		NO,NA	NO,NA	NO,NA	0,07	0,08	0,08	0,09	0,10	0,10	0,10	0,60	0,61	0,95
HFC-161		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-227ea		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	0,00	0,00	0,00	0,00	0,00
HFC-236cb		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-236ea		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-236fa		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-245ca		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-245fa		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	0,00	0,00	0,00
HFC-365mfc		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	0,00	0,00	0,00
Unspecified mix of HFCs <sup>(4)</sup> - (kt CO <sub>2</sub> equivalent)		2,44	3,89	5,62	7,35	9,08	10,79	12,32	11,93	3,75	4,09	4,78	5,61	5,11
Emissions of PFCs - (kt CO <sub>2</sub> equivalent)		1182,79	1192,62	510,47	63,52	70,96	83,35	80,25	117,47	55,53	79,18	87,87	116,34	101,97
CF <sub>4</sub>		0,14	0,14	0,05	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA
C <sub>2</sub> F <sub>6</sub>		0,01	0,01	0,00	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA
C <sub>3</sub> F <sub>8</sub>		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA
C <sub>4</sub> F <sub>10</sub>		NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA
c-C <sub>4</sub> F <sub>8</sub>		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C <sub>5</sub> F <sub>12</sub>		NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0,00	NA,NO	NA,NO
C <sub>6</sub> F <sub>14</sub>		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C <sub>10</sub> F <sub>18</sub>		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
c-C <sub>3</sub> F <sub>6</sub>		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unspecified mix of PFCs <sup>(4)</sup> - (kt CO <sub>2</sub> equivalent)		34,03	43,86	53,69	63,52	70,96	83,35	80,25	117,47	55,53	79,18	87,32	116,34	101,97
Unspecified mix of HFCs and PFCs - (kt CO <sub>2</sub> equivalent)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Emissions of SF <sub>6</sub> - (kt CO <sub>2</sub> equivalent)		470,61	614,14	656,27	744,00	926,17	1100,11	1176,90	1086,40	869,88	676,37	574,53	629,33	613,30
SF <sub>6</sub>		0,02	0,03	0,03	0,03	0,04	0,05	0,05	0,05	0,04	0,03	0,03	0,03	0,03
Emissions of NF <sub>3</sub> - (kt CO <sub>2</sub> equivalent)		NO,NA	NO,NA	NO,NA	NO,NA	0,76	6,44	7,93	15,53	9,43	8,24	10,51	10,51	10,51
NF <sub>3</sub>		NO,NA	NO,NA	NO,NA	NO,NA	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

Note: All footnotes for this table are given at the end of the table on sheet 6.

TABLE 10 EMISSION TRENDS

HFCs, PFCs, SF<sub>6</sub>, and NF<sub>3</sub>

(Sheet 5 of 6)

Inventory 2014

Submission 2016 v1

AUSTRIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													%
<b>Emissions of HFCs and PFCs - (kt CO<sub>2</sub> equivalent)</b>	1198,57	1315,92	1309,09	1324,85	1426,22	1456,72	1344,22	1561,24	1609,31	1663,18	1651,83	1695,83	43,08
<b>Emissions of HFCs - (kt CO<sub>2</sub> equivalent)</b>	1072,19	1158,34	1145,81	1152,47	1195,89	1248,53	1308,20	1483,19	1535,80	1612,47	1602,60	1642800,77	67295,30
HFC-23	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
HFC-32	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,05	0,05	0,06	0,06	
HFC-41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HFC-43-10mee	0,00	0,00	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
HFC-125	0,06	0,06	0,07	0,08	0,08	0,09	0,10	0,12	0,13	0,13	0,13	0,13	
HFC-134	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HFC-134a	0,39	0,43	0,41	0,38	0,39	0,39	0,39	0,42	0,44	0,47	0,48	0,50	
HFC-143	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HFC-143a	0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,09	0,09	
HFC-152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HFC-152a	0,64	0,43	0,20	0,25	0,25	0,09	0,13	0,13	NO,NA	NO,NA	NO,NA	NA,NO	
HFC-161	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HFC-227ea	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
HFC-236cb	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HFC-236ea	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HFC-236fa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HFC-245ca	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HFC-245fa	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
HFC-365mfc	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
Unspecified mix of HFCs <sup>(4)</sup> - (kt CO <sub>2</sub> equivalent)	4,91	5,14	5,03	6,36	8,94	9,35	2,16	2,05	2,06	2,09	2,12	2009,84	-17,55
<b>Emissions of PFCs - (kt CO<sub>2</sub> equivalent)</b>	126,38	157,57	163,29	172,39	230,33	208,19	36,02	78,05	73,51	50,72	49,23	53028,51	-95,52
CF <sub>4</sub>	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
C <sub>2</sub> F <sub>6</sub>	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
C <sub>3</sub> F <sub>8</sub>	NO,NA	NO,NA	NO,NA	0,00	0,00	0,00	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
C <sub>4</sub> F <sub>10</sub>	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NO,NA	NA,NO	
c-C <sub>4</sub> F <sub>8</sub>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
C <sub>5</sub> F <sub>12</sub>	NA,NO	NA,NO	0,00	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	
C <sub>6</sub> F <sub>14</sub>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
C <sub>10</sub> F <sub>18</sub>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
c-C <sub>3</sub> F <sub>6</sub>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Unspecified mix of PFCs <sup>(4)</sup> - (kt CO <sub>2</sub> equivalent)	126,38	157,57	157,79	170,57	228,85	207,25	36,02	78,05	73,51	50,72	49,23	53028,51	55,84
<b>Unspecified mix of HFCs and PFCs - (kt CO<sub>2</sub> equivalent)</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>Emissions of SF<sub>6</sub> - (kt CO<sub>2</sub> equivalent)</b>	549,44	484,01	493,63	453,46	367,01	373,43	341,68	335,87	307,35	311,88	304,87	0,01	-33,50
SF <sub>6</sub>	0,02	0,02	0,02	0,02	0,02	0,02	0,01	0,01	0,01	0,01	0,01	0,01	-33,50
<b>Emissions of NF<sub>3</sub> - (kt CO<sub>2</sub> equivalent)</b>	21,56	26,54	28,16	32,73	59,39	53,47	4,54	4,12	4,10	8,56	9,75	0,00	
NF <sub>3</sub>	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	

Note: All footnotes for this table are given at the end of the table on sheet 6.

**TABLE 10 EMISSION TRENDS  
SUMMARY  
(Sheet 6 of 6)**

GREENHOUSE GAS EMISSIONS	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	CO <sub>2</sub> equivalent (kt)													
CO <sub>2</sub> emissions without net CO <sub>2</sub> from LULUCF		62297,17	65903,51	60432,25	60790,76	61189,10	64202,16	67667,26	67455,89	67047,25	65660,13	66274,74	70299,47	72126,59
CO <sub>2</sub> emissions with net CO <sub>2</sub> from LULUCF		49428,90	48400,37	47876,54	47874,86	48355,46	50077,09	56098,84	47514,07	48974,17	45461,60	49342,70	50439,80	57124,79
CH <sub>4</sub> emissions without CH <sub>4</sub> from LULUCF		10598,57	10462,10	10164,75	10073,83	9775,86	9674,05	9382,93	9011,52	8831,33	8645,18	8466,37	8284,30	8134,08
CH <sub>4</sub> emissions with CH <sub>4</sub> from LULUCF		10599,03	10462,22	10165,06	10074,09	9775,99	9674,12	9382,99	9011,56	8831,55	8645,19	8466,46	8284,36	8134,53
N <sub>2</sub> O emissions without N <sub>2</sub> O from LULUCF		4293,06	4460,65	4161,62	4080,85	4279,53	4389,00	4272,75	4286,76	4347,07	4335,80	4301,70	4177,76	4174,31
N <sub>2</sub> O emissions with N <sub>2</sub> O from LULUCF		4308,09	4475,43	4176,51	4095,70	4294,24	4403,58	4287,23	4301,13	4361,48	4350,04	4315,97	4191,97	4188,75
HFCs		2,44	3,89	5,64	235,26	261,11	357,93	420,79	500,83	610,34	701,82	713,63	863,10	968,78
PFCs		1182,79	1192,62	510,47	63,52	70,96	83,35	80,25	117,47	55,53	79,18	87,87	116,34	101,97
Unspecified mix of HFCs and PFCs		NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
SF <sub>6</sub>		470,61	614,14	656,27	744,00	926,17	1100,11	1176,90	1086,40	869,88	676,37	574,53	629,33	613,30
NF <sub>3</sub>		NO,NA	NO,NA	NO,NA	NO,NA	0,76	6,44	7,93	15,53	9,43	8,24	10,51	10,51	10,51
<b>Total (without LULUCF)</b>		78844,63	82636,90	75931,00	75988,23	76503,49	79813,03	83008,81	82474,39	81770,84	80106,72	80429,34	84380,81	86129,55
<b>Total (with LULUCF)</b>		65991,86	65148,67	63390,49	63087,44	63684,68	65702,62	71454,93	62546,99	63712,39	59922,44	63511,66	64535,40	71142,63
<b>Total (without LULUCF, with indirect)</b>		78844,63	82636,90	75931,00	75988,23	76503,49	79813,03	83008,81	82474,39	81770,84	80106,72	80429,34	84380,81	86129,55
<b>Total (with LULUCF, with indirect)</b>		65991,86	65148,67	63390,49	63087,44	63684,68	65702,62	71454,93	62546,99	63712,39	59922,44	63511,66	64535,40	71142,63

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>(1)</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	CO <sub>2</sub> equivalent (kt)													
1. Energy		52917,25	56603,28	52026,51	52318,25	51965,73	54447,39	58644,55	57161,73	56972,59	55763,58	55312,55	59543,97	60773,54
2. Industrial processes and product use		13663,05	13696,32	12054,17	12004,75	12739,49	13610,27	13060,95	14222,95	13867,34	13648,30	14642,16	14523,54	15166,35
3. Agriculture		8104,08	8129,97	7710,41	7568,94	7816,25	7960,32	7710,27	7656,78	7629,06	7522,64	7423,69	7368,21	7254,44
4. Land use, land-use change and forestry <sup>(5)</sup>		-12852,77	-17488,24	-12540,51	-12900,79	-12818,80	-14110,42	-11553,88	-19927,40	-18058,45	-20184,27	-16917,68	-19845,41	-14986,92
5. Waste		4160,25	4207,34	4139,91	4096,28	3982,01	3795,06	3593,04	3432,93	3301,86	3172,20	3050,93	2945,08	2935,21
6. Other		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
<b>Total (including LULUCF)<sup>(5)</sup></b>		65991,86	65148,67	63390,49	63087,44	63684,68	65702,62	71454,93	62546,99	63712,39	59922,44	63511,66	64535,40	71142,63
Documentation box														

<sup>(1)</sup> The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the COP. For these Parties, this different base year is used to calculate the percentage change in the final column

<sup>(2)</sup> Fill in net emissions/removals as reported in table Summary 1.A. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

<sup>(3)</sup> In accordance with the UNFCCC reporting guidelines, for Parties that decide to report indirect CO<sub>2</sub> the national totals shall be provided with and without indirect CO<sub>2</sub>.

<sup>(4)</sup> 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

<sup>(5)</sup> Includes net CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O from LULUCF.

<b>Documentation box:</b>
• Parties should provide detailed explanations on emissions trends in chapter 2: Trends in Greenhouse Gas Emissions and, as appropriate, in the corresponding Chapters 3 - 8 of the national inventory report (NIR). Use this documentation box to provide references to relevant sections of the NIR
• Use the documentation box to provide explanations if potential emissions are reported.

**TABLE 10 EMISSION TRENDS  
SUMMARY  
(Sheet 6 of 6)**

Inventory 2014  
Submission 2016 v1  
AUSTRIA

GREENHOUSE GAS EMISSIONS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													(%)
CO <sub>2</sub> emissions without net CO <sub>2</sub> from LULUCF	78023,95	78389,00	79588,50	76934,95	74268,11	74066,26	67682,73	72531,83	70327,17	67698,66	67957,12	64262,56	3,15
CO <sub>2</sub> emissions with net CO <sub>2</sub> from LULUCF	72488,14	68446,20	68196,35	70840,09	67747,59	68767,72	62584,24	65988,49	63374,76	61328,52	62736,76	58685,40	18,73
CH <sub>4</sub> emissions without CH <sub>4</sub> from LULUCF	8061,21	8048,71	7809,62	7667,63	7543,05	7399,36	7294,26	7182,82	6976,42	6855,14	6757,49	6623,27	-37,51
CH <sub>4</sub> emissions with CH <sub>4</sub> from LULUCF	8061,63	8048,75	7809,69	7667,80	7543,14	7399,48	7294,39	7182,93	6976,52	6855,27	6757,70	6623,40	-37,51
N <sub>2</sub> O emissions without N <sub>2</sub> O from LULUCF	4163,75	3571,72	3581,49	3567,39	3577,37	3751,89	3523,22	3330,15	3402,29	3359,69	3361,48	3427,44	-20,16
N <sub>2</sub> O emissions with N <sub>2</sub> O from LULUCF	4178,19	3585,65	3595,49	3582,26	3593,62	3769,64	3541,27	3348,38	3421,02	3378,38	3380,19	3446,04	-20,01
HFCs	1072,19	1158,34	1145,81	1152,47	1195,89	1248,53	1308,20	1483,19	1535,80	1612,47	1602,60	1642,80	67295,30
PFCs	126,38	157,57	163,29	172,39	230,33	208,19	36,02	78,05	73,51	50,72	49,23	53,03	-95,52
Unspecified mix of HFCs and PFCs	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	
SF <sub>6</sub>	549,44	484,01	493,63	453,46	367,01	373,43	341,68	335,87	307,35	311,88	304,87	312,96	-33,50
NF <sub>3</sub>	21,56	26,54	28,16	32,73	59,39	53,47	4,54	4,12	4,10	8,56	9,75	10,56	
<b>Total (without LULUCF)</b>	92018,48	91835,89	92810,49	89981,02	87241,15	87101,13	80190,65	84946,02	82626,64	79897,12	80042,54	76332,62	-3,19
<b>Total (with LULUCF)</b>	86497,53	81907,06	81432,40	83901,20	80736,97	81820,46	75110,34	78421,03	75693,07	73545,79	74841,10	70774,19	7,25
<b>Total (without LULUCF, with indirect)</b>	92018,48	91835,89	92810,49	89981,02	87241,15	87101,13	80190,65	84946,02	82626,64	79897,12	80042,54	76332,62	-3,19
<b>Total (with LULUCF, with indirect)</b>	86497,53	81907,06	81432,40	83901,20	80736,97	81820,46	75110,34	78421,03	75693,07	73545,79	74841,10	70774,19	7,25

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Change from base to latest reported year
													(%)
1. Energy	66669,88	66897,51	67336,19	64021,39	60688,23	60233,13	56776,61	59833,19	57433,59	55265,61	55248,16	51418,39	-2,83
2. Industrial processes and product use	15307,91	14863,58	15612,59	16251,81	16940,79	17274,08	13948,14	15925,85	16084,24	15696,93	15980,83	16075,60	17,66
3. Agriculture	7108,78	7085,67	7017,07	6987,96	7024,69	7122,81	7144,89	6996,11	7036,34	6965,23	6958,64	7074,00	-12,71
4. Land use, land-use change and forestry <sup>(5)</sup>	-5520,95	-9928,83	-11378,08	-6079,82	-6504,19	-5280,67	-5080,31	-6524,99	-6933,57	-6351,33	-5201,45	-5558,43	-56,75
5. Waste	2931,91	2989,14	2844,63	2719,86	2587,44	2471,11	2321,02	2190,87	2072,47	1969,35	1854,91	1764,63	-57,58
6. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>Total (including LULUCF)<sup>(5)</sup></b>	86497,53	81907,06	81432,40	83901,20	80736,97	81820,46	75110,34	78421,03	75693,07	73545,79	74841,10	70774,19	7,25

Documentation box

<sup>(1)</sup> The column "Base year" should be filled in only by those Parties with economy of this table.

<sup>(2)</sup> Fill in net emissions/removals as reported in table Summary 1.A. For the purpose

<sup>(3)</sup> In accordance with the UNFCCC reporting guidelines, for Parties that decide to

<sup>(4)</sup> In accordance with the UNFCCC reporting guidelines, HFC and PFC emissions are reported as figures for HFCs and PFCs, respectively. Note that the unit used for this row is kt of CO<sub>2</sub> equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

<sup>(5)</sup> Includes net CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O from LULUCF.

**Documentation box:**

• Parties should provide detailed explanations on emissions trends in chapter 2: TR if any additional information and further details are needed to understand the content of this table.

• Use the documentation box to provide explanations if potential emissions are re-

## **Annex 2**

**Submission of information on forest management reference levels  
by Austria pursuant to Decision 2/CMP.6, paragraph 4**

**and**

**Technical assessment report pursuant to decision 2/CMP.6,  
paragraph 5, on the forest management reference level submission  
of Austria.**



The following documents are included in this report by reference:

Submission of information on forest management reference levels by Austria pursuant to Decision 2/CMP.6, paragraph 4:

[http://unfccc.int/files/meetings/ad\\_hoc\\_working\\_groups/kp/application/pdf/awgkp\\_austria\\_2011.pdf](http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/awgkp_austria_2011.pdf)

Technical assessment report pursuant to decision 2/CMP.6, paragraph 5, on the forest management reference level submission of Austria" (FCCC/TAR/2011/AUT):

<http://unfccc.int/resource/docs/2011/tar/aut01.pdf>

