# FIRST BIENNIAL REPORT OF THE CZECH REPUBLIC

Accompanying the document:
Sixth National Communication
of the Czech Republic
under the United Nations Framework Convention on
Climate Change

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#### 1. Introduction

The first Biennial Report of the Czech Republic (BR1) was prepared under Decision 2/CP.17 of the Conference of the Parties to the UNFCCC and was submitted as an Annex to the 6<sup>th</sup> National Communication of the Czech Republic under the UNFCCC (NC6).

This document is structured according to an outline defined in Annex 1 of the Decision 2/CP.17. Provisions of many chapters are reflecting information already provided in the Czech 6<sup>th</sup> National Communication in its corresponding chapters. Some required provisions were merely referenced pointing to corresponding chapters in the Czech 6<sup>th</sup> National Communication. Although the outlines of Biennial report and National Communication are not completely identical we believe the structural and informational integrity has been retained in both documents.

Tabular information as defined and required by the UNFCCC Biennial report guidelines has been enclosed in the CTF annex at the end of the Czech first Biennial report and also submitted electronically through UNFCCC Application and Network Access Portal.

#### **Abbreviations**

To avoid confusion please check abbreviations in the List of Abbreviation of the Czech 6<sup>th</sup> National Communication.

#### 2. Information on GHG emissions and trends

Since its 5<sup>th</sup> National Communication on Climate Change (NC5), the Czech Republic has:

- more accurate and comprehensive emissions estimates following the adoption of new data, methods and source/sink categories;
- improved the national inventory system through strengthening of the planning and quality control systems.

# 2.1 Introduction and summary information from the Czech national GHG inventory

Annual monitoring of greenhouse gas emissions and removals is one of the obligations following from the *UN Framework Convention on Climate Change* and its *Kyoto Protocol*. In addition, as a result of membership in the European Union, the Czech Republic must also fulfil its reporting obligations concerning GHG emissions and removals following from Regulation of the European Parliament and Council No.525/2013/EC. This Regulation has succeeded the Decision of the European Parliament and Council No. 280/2004/EC and we are currently in the state of transition since the implementing legislation for monitoring and reporting is not yet in place

The *Czech Hydrometeorological Institute* (CHMI) was appointed in 1995 by the *Ministry of the Environment* (MoE), which is the founder and supervisor of CHMI, to be the institution responsible for compiling GHG inventories. Thereafter, CHMI has been the official provider of the Czech greenhouse gas emission data. The role of CHMI was improved following implementation of the establishment of the National Inventory System (NIS) in 2005, when CHMI was designated by MoE as the coordinating institution of the official national GHG inventory. Further information on the institutional arrangement of the Czech National Inventory System is provided in chapter 3.3.2 of the 6<sup>th</sup> National Communication of the Czech Republic.

The inventory covers anthropogenic emissions of direct greenhouse gases  $CO_2$ ,  $CH_4$ ,  $N_2O$ , HFC, PFC,  $SF_6$  and indirect greenhouse gases  $NO_X$ , CO, NMVOC and  $SO_2$ . Indirect means that they do not contribute directly to the greenhouse effect, but that their presence in the atmosphere may influence the climate in various ways. As mentioned above, ozone  $(O_3)$  is also a greenhouse gas that is formed by the chemical reactions of its precursors: nitrogen oxides, hydrocarbons and/or carbon monoxide.

The trends of the greenhouse gas emissions are described in the chapter 3.1 of the  $6^{th}$  National Communication of the Czech Republic. More detailed information about greenhouse gas inventory and about each greenhouse gases is provided in the chapter 3.2. of the  $6^{th}$  National Communication of the Czech Republic, i.e. in the chapters 3.2.2.1 for  $CO_2$ , 3.2.2.2 for  $CH_4$ , 3.2.2.3 for  $N_2O$  and 3.2.2.4 for F-gases.

The results of the Czech greenhouse gas inventory for the 1990 - 2011 period are presented in the CTF Table 1.

These results are taken from the National Inventory Report (NIR), which was submitted to the secretariat of the UN Framework Convention on Climate Change in April 2013. CTF Table 1 gives four trend tables, where are tables related to the main greenhouse gases ( $CO_2$ ,  $CH_4$  and  $N_2O$ ) and also to the overall (aggregate) greenhouse gas emissions expressed in  $CO_2$  equivalents.

In accordance with UNFCCC requirements on data outputs, the total emissions in CTF Table 1 are given both including emissions and sinks in the Land Use, Land Use Change and Forestry (LULUCF) sector and also without inclusion of this sector. Overall (aggregated) emissions for all the sectors (excluding LULUCF) decreased by 34.8 % from 1990 to 2011.

The trends in emissions and sinks in the main inventory categories are also depicted in Fig. 3.1 in the 6<sup>th</sup> National Communication of the Czech Republic. The rapid decrease in total greenhouse gas emissions after 1990 was caused by the reduction in production and subsequently also the restructuring of the economy, as one of the consequences of the substantial changes in the political system. Conditions have been relatively stable since 1994 and the existing fluctuations can be attributed to various factors (e.g. different winter temperatures, inter-annual changes in GDP and the degree of adoption of measures to reduce greenhouse gas emissions, etc.). The uncertainty in determination of emissions in the individual years is also reflected in the inter-annual changes. The decrease in emissions from the Energy sector (stationary combustion) and the Agricultural sector has been substantial, but emissions from Transport are continuing to increase. Fig. 3.2 in the 6<sup>th</sup> National Communication of the Czech Republic depicts the share of individual sectors on the total greenhouse gas emissions in the 1990 – 2011 period.

#### 3. Quantified economy-wide emission reduction target

The EU and its Member States committed themselves, in accordance with Art. 4 of the KP, to jointly fulfil quantified economy-wide emissions target for the 2<sup>nd</sup> commitment period of reducing greenhouse gases emissions by 20% in comparison with 1990. However, the ratification process adopting this particular change in KP, amended in Doha on 8 December 2012, has not been yet completed, on the EU or the national level.

The level of this commitment corresponds to the requirement for reduction of greenhouse gases emissions as determined by the relevant EU legislation within the framework of the so-called climate and energy package. The key parts of the package are Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC and Decision No. 406/2009/EC of the European Parliament and of the Council of 23 April 2009 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; Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC further defines targets for share of renewable sources in final energy consumption by 2020.

Detailed information regarding this joint commitment is provided in the EU submission to UNFCCC dated 20 March 2012, and contained in document FCCC/AWGLCA/2012/MISC.1. The potential increase of the target to 30% remains valid under the condition that other developed countries will commit themselves to comparable increase of emission reduction targets and developing countries will contribute adequately according to their respective capabilities. Emissions and sinks from LULUCF are not a part of this quantified target. Valid legislation also contains limits for the use of credits from flexible mechanisms.

The issues related to accounting for and evaluation of progress are regulated by Regulation (EU) No. 525/2013 of the European Parliament and of the Council of 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision No. 280/2004/EC. In line with the KP, the reference year for emissions in the Czech Republic is 1990 for carbon dioxide, methane and nitrous oxide emissions and 1995 for fluorinated gases. For Tabular summary please see CTF Table 2 and 3.

# 4. Progress in achievement of quantified economy-wide emission reduction targets and relevant information

The Czech Republic committed itself to reduce its greenhouse gas emissions between 2008 and 2012 by 8% in comparison with 1990. Between 1990 and 2011 the total greenhouse gas emissions in the Czech Republic excl. LULUCF, fell by 31.9% and incl. LULUCF by 34.8%. The Czech Republic therefore does not plan to use flexible mechanisms to meet its commitment in the first KP commitment

period. On the contrary, the Czech Republic has already sold, on international emission trading markets, more than 100 million AAUs, which represent the majority of the anticipated surplus in this period. The revenue was used to finance the so-called Green Investment Savings Programme seeking to achieve further energy savings. Following table gives overview of the use of credits from flexible mechanisms by facilities operators falling under the EU ETS, which represents approximately 60% of greenhouse gas emissions in the Czech Republic.

Use of credits from flexible mechanisms within the EUETS

Unit type	Removed by stationary facility operators	Removed by aircraft operators	Removed total
CER	19 874 444	79 350	19 953 794
ERU	18 735 943	56 346	18 792 289
Total CER/ERU	38 610 387	135 696	38 746 083
EUA/EUAA <sup>1</sup>	375 918 343	907 820	376 826 163

<sup>&</sup>lt;sup>1</sup> EUA – stationary facility emission allowance, EUAA – aircraft emission allowance

Source: OTE, a.s., MoE

In the second commitment period, the Czech Republic will fulfil its quantified objective jointly with other EU Member States. According to Member States' projections submitted in 2013, in line with Decision of the European Parliament and the Council No. 280/2004/EC, with inclusion of international aviation, it is anticipated that EU emissions in 2020 will be 21 % lower than in 1990 and 22% lower if international aviation is excluded. EU-28 countries are well on the way to meet the EU objective by 2020. 13 Member States will nevertheless need to make extra effort to meet the 2020 objective in certain sectors outside the EU ETS. 15 Member States, including the Czech Republic, expect, according to current estimates, to achieve these objectives without the necessity to adopt new policies and measures. More detailed information on progress monitoring and meeting the objectives are available in the European Commission report to the European Parliament and the Council of the European Union on progress towards Kyoto and 2020 objectives (COM (2013) 698 final).

For further information on relevant mitigation policies and measures please see chapter 4 of the 6<sup>th</sup> National Communication of the Czech Republic. Summary overview of all quantified implemented or prepared measures on national level in the Czech Republic is given in Annex 4 of the 6<sup>th</sup> National Communication of the Czech Republic.

For Tabular summary of mitigation progress please see CTF Table 3 and 4.

#### 5. Projections

Projections were prepared in accordance with the required methodology in particular pursuing two scenarios:

• Emission projection with existing measures, i.e. with implemented measures, which came into force before June 2012

• Emission projection with additional measures, i.e. with measures that are currently prepared or under preparation.

Additional measures included in preparation of projections are:

- Implementation of Energy Performance of Buildings Directive (Directive 2010/31/EU)
- Measures adopted on the basis of the EU Climate and Energy Package, e.g. continuation of EU ETS with full or partial auctioning of emission allowances
- Measures introduced on the basis of the prepared Regulation of the of the European Parliament and of the Council, laying down emission standards for new passenger cars (COM(2007)0856).

Information on projections of greenhouse gases emissions is given in detail in chapter 5 - Greenhouse gas emissions projections of the 6<sup>th</sup> National Communication.

For broad summary of Projections please see CTF Table 5 and 6.

#### 5.1 Changes in Projection system, Methodology

The methodology employed for preparation of emission projections is identical with the methodology required for preparation of projections for 5<sup>th</sup> National Communication and remained the same during last 4 years. Progress in methodology innovations are bound to planned systematic improvement - projection preparation and development shall be transferred to a brand new system for policies, measures and projections. Detailed provisions of this new institutional arrangement are currently under development and are to be decided in 2014.

Current methodology includes following set of steps:

- 1. Acquisition of inventory of greenhouse gases
- 2. Selection of base and final year and cross-cutting years for creating projections,
- 3. Selection of the actual methodology and model instruments for preparing the projection,
- 4. Collection and analysis of input data for the projection,
- 5. Establishment of initial assumptions,
- 6. Definition of scenarios,
- 7. Calculation of scenarios and presentation of their results,
- 8. Execution of sensitivity analysis over projected data and sets of assumptions

Information on provisions of individual steps is given in detail in its appropriate sub-chapters in the 6<sup>th</sup> National Communication.

# 6. Provisions of financial, technological and capacity-building support to developing country Parties

The Czech Republic as a Party not included in Annex II to the Convention and is not obliged to adopt measures, in line with Article 12.3 of the Convention and fulfil obligations pursuant to Articles 4.3, 4.4 and 4.5 of the Convention and create additional financial sources. Nevertheless, the Czech Republic is willing to provide to the certain extent available information on the financial support provided to developing countries in the years 2011 and 2012.

The climate financial support provided to developing countries through the Czech bilateral or multilateral cooperation is partially or fully credible for Official Development Assistance in accordance with the OECD-DAC methodology. More detailed information about our sectoral or territorial priorities are included in chapter 7 of the 6<sup>th</sup> National Communication of the Czech Republic.

All the funds are reported in Czech crowns (CZK). The methodology used for calculating currency exchange is the Annual Average Exchange Rates announced by the Czech National Bank. The used exchange rates are as follows: 2011: 1 USD = 17,69 CZK, 2012: 1 USD = 19,59 CZK.

The climate specific funding provided through the bilateral or multilateral channels has been identified in accordance with the OECD-DAC methodology. Only projects with adaptation or mitigation RIO Markers (significant or principal objective) have been included the climate specific funding. Other financial support provided to developing countries, which is also accountable for Official Development Assistance, but where the climate related component couldn't be identified, has been reported as the core/general funding in the BR1 CTF tables.

For the reason that the Czech Republic has not contributed to any specific programme aimed at capacity building or technology transfer in developing countries, the CTF Table 8 and Table 9 remain blank. However, many Czech bilateral projects also have the capacity building or the technology transfer element and these projects are reported among the other projects in CTF Table 7(b).

#### 7. Other reporting matters

No other reporting matters supplied in this submission

#### CTF Annex: Common Tabular Format workbook for the 1st Biennial Report of the Czech Republic

Overview of CTF tables provided with the first Biennial Report:

CTF Table 1: Emission trends

CTF Table 2: Description of quantified economy-wide emission reduction target

CTF Table 3: Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

CTF Table 4: Reporting on progress

CTF Table 4(a)II: Progress in achievement of the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the counting of emissions and removals from the land use, land-use change and forestry sector in relation to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol

CTF Table 4(b): Reporting on progress

CTF Table 5: Summary of key variables and assumptions used in the projections analysis

CTF Table 6(a)/(c): Information on updated greenhouse gas projections under a 'with measures' scenario and under a 'with additional measures' scenario

CTF Table 7: Provision of public financial support: summary information

CTF Table 7a Provision of public financial support: contribution through multilateral channels

CTF Table 7(b): Provision of public financial support: contribution through bilateral, regional and other channels

#### CTF Table 1

	1	1	1					1		1			1	1					1		1		
GREENHOUSE GAS EMISSIONS	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change from base to latest reported year
	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	(%)
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	161,063.42	145,166.86	129,061.30	126,342.64	119,647.89	120,716.21	124,726.58	122,787.35	116,087.53	108,360.14	118,075.11	117,473.69	114,371.25	119,617.89	120,188.53	118,926.93	123,501.76	126,412.32	117,067.00	107,424.34	112,368.94	106,270.18	-34.02
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	164,812.75	154,306.92	139,954.47	135,893.77	126,908.55	128,037.89	132,486.96	129,595.98	123,216.89	115,636.37	125,711.08	125,466.64	122,126.15	125,510.87	126,509.64	125,744.39	127,127.71	127,346.27	122,004.67	114,427.74	118,005.01	114,296.49	-30.65
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	17,915.09	16,277.58	15,339.56	14,420.96	13,575.80	13,395.62	13,274.42	13,018.90	12,571.32	11,975.71	11,176.34	10,886.27	10,501.16	10,445.75	10,155.47	10,513.46	10,816.51	10,470.03	10,532.74	10,205.50	10,412.56	10,288.77	-42.57
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	17,815.07	16,203.01	15,261.06	14,330.42	13,482.53	13,308.12	13,159.11	12,894.28	12,462.46	11,875.05	11,083.87	10,789.99	10,397.68	10,316.49	10,036.85	10,400.20	10,676.46	10,288.20	10,389.11	10,084.05	10,284.36	10,233.67	-42.56
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	13,364.89	11,587.58	10,344.24	9,163.61	9,007.81	9,278.46	8,875.16	8,955.67	8,760.40	8,593.51	8,697.13	8,859.36	8,561.65	8,060.21	8,753.05	8,443.31	8,277.19	8,313.75	8,436.79	7,896.25	7,639.11	7,782.94	-41.77
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	13,333.53	11,559.36	10,316.50	9,135.88	8,981.50	9,254.38	8,850.73	8,932.50	8,737.84	8,572.98	8,677.87	8,840.60	8,542.76	8,039.14	8,733.51	8,424.61	8,255.95	8,288.47	8,415.61	7,877.41	7,619.70	7,770.95	-41.72
HFCs	NO	NO	NO	NO	NO	0.73	101.31	244.81	316.56	267.47	262.50	393.37	391.29	590.14	600.30	594.21	872.35	1,605.85	1,262.45	1,020.25	1,467.85	1,130.42	100.00
PFCs	NO	NO	NO	NO	NO	0.12	4.11	0.89	0.89	2.55	8.81	12.35	13.72	24.53	17.33	10.08	22.56	20.16	27.48	27.14	29.43	29.43	100.00
SF <sub>6</sub>	77.68	77.32	76.96	76.60	76.24	75.20	77.52	95.48	64.19	76.98	141.92	168.73	67.72	101.25	51.89	85.88	83.07	75.85	47.04	49.61	16.22	34.55	-55.52
Total (including LULUCF)	192,421.08	173,109.33	154,822.06	150,003.81	142,307.75	143,466.34	147,059.10	145,103.09	137,800.88	129,276.37	138,361.80	137,793.77	133,906.79	138,839.78	139,766.55	138,573.86	143,573.44	146,897.96	137,373.51	126,623.08	131,934.11	125,536.29	-34.76
Total (excluding LULUCF)	196,039.02	182,146.60	165,608.99	159,436.67	149,448.82	150,676.45	154,679.74	151,763.94	144,798.83	136,431.41	145,886.05	145,671.68	141,539.32	144,582.43	145,949.52	145,259.37	147,038.10	147,624.79	142,146.37	133,486.19	137,422.56	133,495.50	-31.90

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change from base to latest reported year
	kt CO <sub>2</sub> eq	kt CO2 eq	kt CO <sub>2</sub> eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	kt CO2 eq	(%)							
1. Energy	156,764.91	149,464.92	133,384.03	131,908.42	121,745.25	123,652.36	127,351.01	123,606.44	117,071.61	111,370.65	119,603.41	119,901.74	116,255.36	118,757.78	119,162.73	120,084.32	120,767.73	120,111.99	115,470.97	110,163.85	113,328.33	109,514.58	-30.14
2. Industrial Processes	19,602.83	14,619.03	16,069.16	12,922.95	13,855.70	13,188.23	13,893.50	14,847.10	14,850.27	12,102.86	13,561.11	12,885.78	12,546.46	13,656.01	14,239.70	12,979.24	14,156.44	15,264.70	14,085.39	11,153.29	12,025.82	11,790.63	-39.85
3. Solvent and Other Product Use	764.83	728.05	690.99	650.54	616.05	596.31	586.63	584.76	580.41	578.49	568.56	549.96	539.65	525.16	519.28	513.77	512.93	512.17	515.27	506.15	492.05	469.42	-38.62
4. Agriculture	16,233.28	14,611.72	12,731.33	11,204.85	10,372.50	10,331.98	9,966.29	9,758.20	9,284.71	9,350.12	9,094.86	9,220.88	8,955.86	8,314.94	8,750.49	8,385.03	8,249.77	8,403.04	8,583.06	8,134.29	7,964.57	8,064.84	-50.32
5. Land Use, Land-Use Change and Forestryb	-3,617.94	-9,037.27	-10,786.93	-9,432.86	-7,141.07	-7,210.11	-7,620.64	-6,660.85	-6,997.96	-7,155.04	-7,524.24	-7,877.91	-7,632.54	-5,742.66	-6,182.96	-6,685.51	-3,464.66	-726.83	-4,772.86	-6,863.11	-5,488.45	-7,959.22	119.99
6. Waste	2,673.17	2,722.88	2,733.48	2,749.91	2,859.32	2,907.58	2,882.31	2,967.44	3,011.85	3,029.28	3,058.11	3,113.32	3,242.00	3,328.53	3,277.31	3,297.01	3,351.23	3,332.89	3,491.67	3,528.62	3,611.79	3,656.03	36.77
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
Total (including LULUCF)	192,421.08	173,109.33	154,822.06	150,003.81	142,307.75	143,466.34	147,059.10	145,103.09	137,800.88	129,276.37	138,361.80	137,793.77	133,906.79	138,839.78	139,766.55	138,573.86	143,573.44	146,897.96	137,373.51	126,623.08	131,934.11	125,536.29	-34.76

Matage

Abbreviation: LULUCF = land use, land-use change and forestry.

<sup>(1)</sup> Further detailed information could be found in the common reporting format tables of the Party's greenhouse gas inventory, namely "Emission trends  $(CO_2)$ ", "Emission trends  $(N_2O)$ " and "Emission trends  $(N_2O)$ " and "Emission trends  $(N_2O)$ ", "Emission trends  $(N_2O)$ " and "Emission trends  $(N_2O)$ "

<sup>(2) 2011</sup> is the latest reported inventory year. (3) 1 kt CO<sub>2</sub> eq equals 1 Gg CO<sub>2</sub> eq.

a 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 Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

b Includes net  $CO_2$ ,  $CH_4$  and  $N_2O$  from LULUCF.

#### CTF Table 1a - Emission trends (CO<sub>2</sub>)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	110	kt	%																	
1. Energy	146,069.96	140,167.01	124,557.41	123,455.69	113,761.33	115,710.35	119,474.26	115,862.48	109,600.97	104,525.20	113,364.08	113,941.04	110,671.96	113,134.49	113,653.92	114,118.67	114,510.23	114,181.79	109,584.07	104,573.83	107,603.34		-28.89
A. Fuel Combustion (Sectoral Approach)	145,609.70	139,766.58	124,158.24	123,073.73	113,388.83	115,342.95	119,118.95	115,512.20	109,254.73	104,204.76	113,035.44	113,602.92	110,328.59	112,800.53	113,328.62	113,793.84	114,165.05	113,869.73	109,277.45	104,306.51	107,330.28	103,603.96	-28.85
1. Energy Industries	57,702.19	57,393.91	51,278.87	53,524.14	53,708.88	60,464.52	64,412.93	60,416.89	58,079.74	56,022.65	59,287.69	61,555.98	59,942.45	59,891.14	59,919.14	60,866.72	60,319.79	63,914.45	58,766.58	55,907.25	58,602.52	58,119.62	0.72
2. Manufacturing Industries and Construction	46,484.78	48,995.89	40,973.40	41,844.33	32,498.17	27,696.93	27,939.40	27,447.22	24,359.03	22,184.89	27,126.45	24,645.31	23,805.06	23,305.89	23,455.69	23,150.65	22,547.22	20,272.50	20,476.73	19,271.09	19,298.51	17,804.88	-61.70
3. Transport	7,576.09	6,782.97	7,617.60	7,535.34	7,862.54	9,617.05	10,703.33	11,402.71	11,627.20	11,817.01	11,931.81	12,771.81	13,344.93	15,129.28	15,891.71	17,220.94	17,548.71	18,470.60	18,321.07	17,761.96	16,728.75	16,564.58	118.64
4. Other Sectors	32,245.74	25,184.81	22,967.71	18,893.90	18,034.04	16,373.01	14,922.77	15,056.81	13,924.88	12,934.80	13,454.70	13,436.15	12,096.22	13,413.66	12,955.45	11,461.51	12,675.34	10,127.34	10,579.96	10,248.73	11,617.31	10,023.42	-68.92
5. Other	1,600.90	1,409.00	1,320.66	1,276.02	1,285.19	1,191.44	1,140.51	1,188.56	1,263.88	1,245.41	1,234.79	1,193.67	1,139.94	1,060.56	1,106.63	1,094.02	1,073.99	1,084.84	1,133.10	1,117.48	1,083.19	1,091.45	-31.82
B. Fugitive Emissions from Fuels	460.27	400.43	399.17	381.96	372.50	367.40	355.32	350.28	346.24	320.43	328.64	338.12	343.37	333.97	325.30	324.83	345.18	312.07	306.62	267.32	273.06	268.31	-41.71
1. Solid Fuels	456.24	395.10	392.83	373.45	362.60	356.21	343.65	337.79	332.53	306.33	315.13	324.03	322.98	309.65	301.87	300.85	324.80	293.09	288.00	250.22	259.30	255.45	-44.01
2. Oil and Natural Gas	4.02	5.33	6.34	8.51	9.90	11.19	11.66	12.49	13.70	14.10	13.50	14.09	20.39	24.32	23.43	23.98	20.39	18.98	18.62	17.10	13.76	12.86	219.64
2. Industrial Processes	18,169.32	13,598.67	14,888.07	11,957.66	12,682.71	11,875.05	12,569.52	13,288.79	13,175.19	10,670.75	11,929.93	11,104.03	11,005.01	11,873.66	12,370.50	11,151.25	12,128.39	12,665.02	11,897.10	9,381.36	9,962.44		-44.96
A. Mineral Products	4,829.84	4,035.32	3,851.96	3,513.84	3,610.47	3,602.45	3,908.44	4,035.98	4,187.14	4,082.17	4,166.32	3,859.10	3,602.97	3,685.61	3,874.20	3,855.38	3,974.79	4,364.06	4,130.05	3,449.11	3,425.23		
B. Chemical Industry	806.81	781.92	806.14	753.81	841.62	743.05	799.72	732.91	755.54	643.56	736.48	619.87	540.77	703.91	698.65	609.30	581.10	544.38	616.13	634.42	+		+
C. Metal Production	12,532.67	8,781.42	10,229.96	7,690.01	8,230.63	7,529.55	7,861.35	8,519.90	8,232.51	5,945.01	7,027.13	6,625.06	6,861.28	7,484.13	7,797.64	6,686.57	7,572.50	7,756.59	7,150.92	5,297.83	5,919.38	_	+
D. Other Production	12,332.07	0,701.12	10,227.70	7,000.01	0,230.03	1,527.55	7,001.55	0,517.70	0,232.31	3,7 13.01	7,027.13	0,023.00	0,001.20	7,101.13	7,777.01	0,000.57	7,572.50	7,750.57	7,130.72	3,277.03	3,717.50	3,023.30	33.13
E. Production of Halocarbons and SF <sub>6</sub>																						+	+
F. Consumption of Halocarbons and SF <sub>6</sub>																						+	+
G. Other																						+	
3. Solvent and Other Product Use	550.31	513.53	476.47	436.02	401.53	381.79	372.11	370.24	365.89	363.97	354.04	335.44	325.13	310.64	304.76	299.25	298.41	297.65	282.77	273.65	259.55	3 236.92	-56.95
	330.31	313.33	4/0.4/	450.02	401.33	361.79	3/2.11	370.24	303.69	303.97	334.04	333.44	323.13	310.04	304.70	299.23	296.41	297.03	282.11	273.03	239.33	230.92	-30.93
4. Agriculture																							
A. Enteric Fermentation																							
B. Manure Management																						+	<del></del>
C. Rice Cultivation																							<del>                                     </del>
D. Agricultural Soils																							<del>                                      </del>
E. Prescribed Burning of Savannas																							<del>                                     </del>
F. Field Burning of Agricultural Residues																							<u> </u>
G. Other																							<u> </u>
5. Land Use, Land-Use Change and Forestry	-3,749.32	-9,140.07	-10,893.17	-9,551.13	-7,260.66	-7,321.68	-7,760.39	-6,808.64	-7,129.36	-7,276.24	-7,635.97	-7,992.95	-7,754.90		-6,321.11	-6,817.47	-3,625.95	1		+		-	114.07
A. Forest Land	-5,057.19	-9,485.66	-11,121.28	-9,842.36	-7,356.00	-7,363.48	-7,614.49	-6,814.95	-7,420.51	-7,342.05	-7,592.77	-7,910.17	-7,673.45	-5,882.05	-6,271.43	-6,750.22	-3,508.06	-795.02	-4,840.68	-6,869.63	-5,551.27	-7,964.19	57.48
B. Cropland	1,315.34	548.59	305.94	300.17	268.98	273.92	269.52	248.94	370.02	200.64	200.40	180.03	155.41	161.75	141.95	144.77	134.27	127.23	165.09	113.93	132.50	147.70	-88.77
C. Grassland	-127.89	-293.05	-198.90	-195.82	-305.17	-331.13	-542.68	-380.12	-282.25	-361.07	-418.60	-399.58	-395.66	-379.60	-393.06	-388.33	-394.01	-383.09	-384.39		-371.32		157.19
D. Wetlands	22.53	33.32	18.73	8.69	8.01	9.94	11.42	16.40	24.74	24.03	27.70	11.69	33.71	22.75	19.19	20.44	19.89	19.55	22.26	20.48	34.25	31.62	40.31
E. Settlements	86.08	51.41	95.23	172.07	121.41	88.01	115.73	121.08	178.19	201.76	126.78	112.83	112.23	181.29	175.50	154.74	114.56	94.22	94.62	102.79	117.51	87.48	1.63
F. Other Land																							
G. Other	11.82	5.32	7.11	6.12	2.11	1.06	0.12	0.01	0.45	0.44	20.53	12.24	12.85	2.87	6.73	1.13	7.41	3.15	5.42	0.04	2.25	0.01	-99.89
6. Waste	23.15	27.71	32.52	44.41	62.97	70.70	71.07	74.49	74.84	76.46	63.04	86.13	124.05	192.08	180.46	175.22	190.66	201.80	240.74	198.91	179.67	187.37	709.41
A. Solid Waste Disposal on Land																							
B. Waste-water Handling																							
C. Waste Incineration	23.15	27.71	32.52	44.41	62.97	70.70	71.07	74.49	74.84	76.46	63.04	86.13	124.05	192.08	180.46	175.22	190.66	201.80	240.74	198.91	179.67	187.37	709.41
D. Other																						1	
7. Other																						1	1
Total CO <sub>2</sub> including net CO <sub>2</sub> from LULUCF	161,063.42	145,166.86	129,061.30	126,342.64	119,647.89	120,716.21	124,726.58	122,787.35	116,087.53	108,360.14	118,075.11	117,473.69	114,371.25	119,617.89	120,188.53	118,926.93	123,501.76	126,412.32	117,067.00	107,424.34	112,368.94	106,270.18	-34.02
Total CO <sub>2</sub> excluding net CO <sub>2</sub> from LULUCF	164,812.75	154,306.92			-				123,216.89		125,711.08						127,127.71			114,427.74			
Memo Items:	7	,		,	,	,	,	,		,			,	,,				,	,		,,,,,,,,	<b>†</b>	1
International Bunkers	542.86	446.18	516.33	429.24	534.17	578.55	434.97	504.83	598.46	563.22	615.42	657.05	567.40	763.13	980.81	1,019.22	1,044.31	1,095.74	1,161.28	1,062.23	993.63	985.06	81.46
Aviation	542.86	446.18	516.33	429.24	534.17	578.55	434.97	504.83	598.46	563.22	615.42	657.05	567.40			1,019.22				-		+	
Marine	372.00	770.10	510.55	727.24	JJT.17	510.55	757.71	204.03	370.40	303.22	013.72	037.03	307.40	703.13	700.01	1,017.22	1,077.31	1,075.74	1,101.20	1,002.23	773.03	765.00	01.40
Multilateral Operations							<u> </u>															+	+
CO <sub>2</sub> Emissions from Biomass	2,367.75	2 406 77	2,384.39	2,358.04	2.355.08	4,593.46	4,652.85	5,098.46	5,695.64	5,788.24	5,353.62	5,900.00	6,108.53	6,377.73	7,070.48	7 100 62	7,755.42	8,821.97	8,885.86	9,464.47	10,692.28	3 11,258.62	375.50
$CO_2$ Emissions from Biomass Abbreviations: $CRF = common \ reporting \ for$					,	4,393.40	4,032.83	2,098.40	2,093.04	J,108.24	ع.53.52	5,900.00	0,108.33	0,377.73	7,070.48	7,180.62	1,133.42	0,021.97	0,063.80	9,404.47	10,092.28	11,238.02	373.30

a 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 Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

b Fill in net emissions/removals as reported in CRF table Summary 1.A of the latest reported inventory year. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

#### CTF Table 1b - Emission trends (CH<sub>4</sub>)

CIF Table 1b - Emission trenas (C																							Change
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	from base to latest reported year
	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	%
1. Energy	474.33	409.52	389.15	371.09	349.36	344.15	339.16	332.34	318.57	288.3	256.28	240.78	220.72	217.94	209.63	229.33	242.35	224.63	224.01	211.08	218.22	214.66	-54.74
A. Fuel Combustion (Sectoral Approach)	69.66	52.08	49.63	40.49	35.47	35.64	36.13	34.93	29.82	24.41	25.91	26.04	22.3	24.16	24.62	24.98	28.97	26.66	25.61	26.28	28.6	26.62	-61.79
1. Energy Industries	0.67	0.68	0.6	0.64	0.63	0.72	0.81	0.81	0.81	0.78	0.76	0.79	0.77	0.91	0.99	0.8	0.83	0.9	0.93	0.98	1.06	1.08	61.83
2. Manufacturing Industries and Construction	4.31	4.88	3.91	4.22	3.34	2.88	2.85	2.91	2.61	2.34	2.72	2.52	2.6	2.31	2.34	2.57	2.58	2.42	2.46	2.38	2.4	2.36	-45.22
3. Transport	1.38	1.19	1.41	1.41	1.51	1.67	1.83	1.91	1.88	1.87	1.74	1.77	1.66	1.71	1.62	1.64	1.55	1.55	1.5	1.43	1.26	1.2	-12.9
4. Other Sectors	62.97	45.03	43.44	33.96	29.73	30.12	30.42	29.11	24.37	19.32	20.6	20.88	17.2	19.16	19.6	19.9	23.95	21.71	20.64	21.42	23.81	21.9	-65.22
5. Other	0.34	0.29	0.27	0.26	0.26	0.24	0.22	0.19	0.14	0.1	0.08	0.08	0.08	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	-77.19
B. Fugitive Emissions from Fuels	404.67	357.45	339.52	330.61	313.9	308.52	303.03	297.41	288.75	263.89	230.36	214.74	198.41	193.78	185	204.34	213.38	197.97	198.4	184.81	189.62	188.04	-53.53
1. Solid Fuels	361.93	321.01	306	298.03	282.02	276.64	268.51	263.5	253.1	229.04	197.25	183.66	166.41	164.62	157.91	171.96	180.29	164.83	168.08	152.54	155.69	156.32	-56.81
2. Oil and Natural Gas	42.74	36.43	33.52	32.58	31.87	31.87	34.52	33.9	35.65	34.85	33.11	31.08	32.01	29.16	27.09	32.38	33.09	33.14	30.32	32.26	33.92	31.72	-25.78
2. Industrial Processes	6.93	5.95	4.67	4.76	4.88	5.1	5.2	4.76	4.63	4.12	4.45	4.51	4.5	4.52	4.84	4.64	4.72	4.61	4.53	3.55	3.91	3.97	-42.64
A. Mineral Products	0.14	0.12	0.12	0.13	0.14	0.14	0.16	0.18	0.2	0.18	0.25	0.25	0.2	0.2	0.22	0.22	0.21	0.21	0.23	0.17	0.16	0.16	16.29
B. Chemical Industry	0.73	0.63	0.67	0.68	0.74	0.7	0.73	0.74	0.79	0.85	0.92	0.94	0.88	0.89	1.12	1.17	1.13	1.07	1.13	1.08	1.19	1.14	56.92
C. Metal Production	6.06	5.2	3.88	3.95	4	4.26	4.3	3.84	3.64	3.09	3.28	3.32	3.42	3.42	3.5	3.25	3.38	3.33	3.18	2.3	2.56	2.67	-55.99
D. Other Production																							
E. Production of Halocarbons and SF <sub>6</sub>																							
F. Consumption of Halocarbons and SF <sub>6</sub>																							
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
3. Solvent and Other Product Use																							
4. Agriculture	248.6	235.43	211.97	185.42	162.35	157.11	156.12	146.87	138.11	140.15	134.06	133.91	131.01	129.09	125.64	122.28	120.52	121.33	121.3	116.91	114.09	113.42	-54.38
A. Enteric Fermentation	200.92	189.53	169.9	147.06	128.79	125.33	124.2	115.99	108.76	111.13	106.71	107.47	105.21	104.09	101.84	99.72	98.3	99.22	100.14	97.48	95.18	95.38	-52.53
B. Manure Management	47.68	45.91	42.07	38.37	33.56	31.78	31.92	30.89	29.34	29.02	27.34	26.45	25.8	25	23.8	22.55	22.22	22.11	21.16	19.43	18.91	18.04	-62.15
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0
D. Agricultural Soils	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	0
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0
F. Field Burning of Agricultural Residues	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	0
5. Land Use, Land-Use Change and Forestry	4.76	3.55	3.74	4.31	4.44	4.17	5.49	5.93	5.18	4.79	4.4	4.58	4.93	6.16	5.65	5.39		8.66	6.84		6.11	2.62	-44.9
A. Forest Land	4.76	3.55	3.74	4.31	4.44	4.17	5.49	5.93	5.18	4.79	4.4	4.58	4.93	6.16	5.65	5.39	6.67	8.66	6.84	5.78	6.11	2.62	-44.9
B. Cropland	NO	NO	NO	NO	NO	NO	NO	NO	NO	+	NO	NO	NO	NO	NO	NO	NO	NO	NO	1	NO	NO	0
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO	1	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO	NO	0
D. Wetlands	NA, NO	NA, NO	NA, NO		NA, NO		1	NA, NO	1		NA, NO	NA, NO	NA, NO					NA, NO					0
E. Settlements	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			NA, NO	NA, NO	0
F. Other Land	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			NA, NO	NA, NO	0
G. Other	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE		NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	1	NA, NE		1	NA, NE	NA, NE	0
6. Waste	118.48	120.66	120.93	121.12	125.43	127.36	126.15	130.04	132.15		133.02	134.61	138.9		137.84	139.01	140.81	139.34	144.88	148.64	153.51	155.27	31.05
A. Solid Waste Disposal on Land	79.17	82.79	85.97	89.48	92.95	96.2	97.12	99.89	102.65	105.48	107.27	109.78	112.26		113.4	114.69	1	114.85	120.39		128.96	130.69	65.08
B. Waste-water Handling	39.31	37.88	34.96	31.64	32.48	31.16	29.02	30.16	29.5	1	25.75	24.82	26.64	24.57	24.44	24.32	24.86	24.49	24.49	24.18	24.55	24.57	-37.48
C. Waste Incineration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ŭ	0	0	0	0	0	0	0	709.41
D. Other	NA	NA	NA	NA	NA	NA	NA	NA		1	NA	NA	NA	1		NA		NA	NA	1	NA	NA	0
7. Other  Total CO, including not CO, from LULUCE	NA 052.1	NA	NA	NA	NA CACAZ	NA (27.00	NA (22.12	NA (10.05			NA 522.21	NA	NA	NA 407.42	NA	NA 500.64		NA	NA		NA 405.04	NA 400.04	0
Total CO <sub>2</sub> including net CO <sub>2</sub> from LULUCF	853.1	775.12	730.46	686.71	646.47	637.89	632.12	619.95	598.63	570.27	532.21	518.39	500.06	497.42	483.59	500.64	515.07	498.57	501.56		495.84	489.94	-42.57
Total CO <sub>2</sub> excluding net CO <sub>2</sub> from LULUCF	848.34	771.57	726.72	682.4	642.03	633.72	626.62	614.01	593.45	565.48	527.8	513.81	495.13	491.26	477.95	495.25	508.4	489.91	494.72	480.19	489.73	487.32	-42.56
Memo Items: International Bunkers	0.00	0.07	0.00	0.07	0.00	0.1	0.05	0.00	0.1	0.00	0.1	0.11	0.00	0.12	0.16	0.17	0.17	0.10	0.10	0.10	0.15	0.16	01.02
Aviation  Aviation	0.09	0.07	0.08	0.07	0.09	0.1	0.07	0.08	0.1	0.09	0.1	0.11	0.09	0.13	0.16	0.17		0.18	0.19		0.16	0.16	81.83
Marine		0.07	0.08	0.07		0.1	0.07	0.08	0.1		0.1	0.11			0.16	0.17	0.17	0.18	0.19	1	0.16	0.16	81.83
Multilateral Operations	NA, NO	NA, NO	NA, NO		NA, NO	NA, NO	1	NA, NO	1		NA, NO	NA, NO	NA, NO			NA, NO	1	NA, NO		1	NA, NO	NA, NO	
CO <sub>2</sub> Emissions from Biomass	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0
CO2 Emissions from Diomass		l															1						

a 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 Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

#### CTF Table 1c - Emission trends $(N_2O)$

CIF Table Ic - Emission trends (N <sub>2</sub>				T			1							1				l					Change
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	from base to latest reported year
	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	%
1. Energy	2.37	2.25	2.11	2.13	2.09	2.31	2.43	2.47	2.52	2.55	2.77	2.92	3.06	3.38	3.57	3.71	3.77	3.91	3.82	3.73	3.69	3.66	54.57
A. Fuel Combustion (Sectoral Approach)	2.37	2.25		<del> </del>	2.09	2.31	2.43	2.47	2.52	2.55	2.77	2.92	3.06	3.38	3.57	3.71		3.91	3.81	3.73	3.68	3.66	54.57
Energy Industries	0.81	0.81	0.73	t t	0.75	0.86	0.91	0.86	0.84	0.81	0.86	0.89	0.88	0.89	0.9	0.89	1	0.95	0.89	0.85	0.9	0.91	12.34
Manufacturing Industries and Construction	0.58	0.65	0.52	<del>                                     </del>	0.43	0.36	0.35	0.35	0.31	0.27	0.33	0.3	0.31	0.27	0.28	0.31	0.31	0.29	0.29	0.29	0.29	0.28	-50.6
3. Transport	0.49	0.42		1	0.64	0.78	0.9	0.97	1.07	1.18	1.28	1.43	1.61	1.91	2.08	2.22	1	2.36	2.32	2.28	2.16	2.15	341.16
4. Other Sectors	0.43	0.32		0.22	0.21	0.26	0.23	0.23	0.22	0.2	0.22	0.22	0.19	0.23	0.23	0.21	0.25	0.24	0.23	0.23	0.26	0.25	-43.34
5. Other	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.05	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.07	0.07	0.07	0.08	0.08	0.07	0.07	17.18
B. Fugitive Emissions from Fuels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230.38
1. Solid Fuels	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0
2. Oil and Natural Gas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230.38
2. Industrial Processes	3.9	2.64	3.25	2.54	3.21	3.64	3.33	3.6	3.86	3.22	3.63	3.59	3.14	3.13	3.54	3.36	3.07	2.58	2.44	1.94	1.51	1.65	-57.63
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
B. Chemical Industry	3.9	2.64	3.25	2.54	3.21	3.64	3.33	3.6	3.86	3.22	3.63	3.59	3.14	3.13	3.54	3.36	3.07	2.58	2.44	1.94	1.51	1.65	-57.63
C. Metal Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
D. Other Production																							
E. Production of Halocarbons and SF <sub>6</sub>																							
F. Consumption of Halocarbons and SF <sub>6</sub>																							
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
3. Solvent and Other Product Use	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.75	0.75	0.75	0.75	8.38
4. Agriculture	35.52	31.19	26.71	23.58	22.46	22.69	21.57	21.53	20.6	20.67	20.26	20.67	20.01	18.08	19.72	18.77	18.45	18.89	19.47	18.32	17.96	18.33	-48.4
A. Enteric Fermentation																							
B. Manure Management	5.51	5.23	4.71	4.19	3.73	3.47	3.65	3.54	3.35	3.39	3.13	2.99	2.81	2.67	2.58	2.46	2.42	2.41	2.37	2.26	2.2	2.14	-61.14
C. Rice Cultivation																							
D. Agricultural Soils	30.01	25.96	22	19.39	18.73	19.22	17.92	17.99	17.25	17.28	17.13	17.68	17.2	15.41	17.14	16.3	16.03	16.47	17.1	16.06	15.76	16.19	-46.06
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0
F. Field Burning of Agricultural Residues	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
5. Land Use, Land-Use Change and Forestry	0.1	0.09	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.07	0.06	0.06	0.07	0.08	0.07	0.06	0.06	0.04	-61.78
A. Forest Land	0.03	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.06	0.05	0.04	0.04	0.02	-44.9
B. Cropland	0.07	0.07	0.06	0.06	0.05	0.05	0.04	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-69.85
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0
D. Wetlands	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0
E. Settlements	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0
F. Other Land	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0
G. Other	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	0
6. Waste	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.65	0.65	0.65	0.65	0.65	0.65	0.66	0.66	0.67	0.67	0.67	0.67	28.45
A. Solid Waste Disposal on Land																							
B. Waste-water Handling	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.65	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.66	0.66	0.66	0.66	26.61
C. Waste Incineration	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	709.41
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
Total CO <sub>2</sub> including net CO <sub>2</sub> from LULUCF	43.11	37.38	33.37	29.56	29.06	29.93	28.63	28.89	28.26	27.72	28.06	28.58	27.62	26	28.24	27.24	26.7	26.82	27.22	25.47	24.64	25.11	-41.77
Total CO <sub>2</sub> excluding net CO <sub>2</sub> from LULUCF	43.01	37.29	33.28	29.47	28.97	29.85	28.55	28.81	28.19	27.65	27.99	28.52	27.56	25.93	28.17	27.18	26.63	26.74	27.15	25.41	24.58	25.07	-41.72
Memo Items:																							
International Bunkers	0.07	0.06	0.07	0.06	0.07	0.08	0.06	0.07	0.08	0.08	0.09	0.09	0.08	0.11	0.14	0.14	0.14	0.15	0.16	0.15	0.14	0.14	81.83
Aviation	0.07	0.06	0.07	0.06	0.07	0.08	0.06	0.07	0.08	0.08	0.09	0.09	0.08	0.11	0.14	0.14	0.14	0.15	0.16	0.15	0.14	0.14	81.83
Marine	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0
Multilateral Operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0
CO <sub>2</sub> Emissions from Biomass						·										·							

a 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 Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

#### CTF Table 1d - Emission trends (HFC, PFC, SF<sub>6</sub>)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	from base to latest reported year
	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt	%
T																						ļ	<u> </u>
Emissions of HFCsc - (kt CO <sub>2</sub> eq)	NA, NO	NA, NO	, , , , , ,			0.73	101.31	244.81	316.56	267.47	262.5	393.37	391.29	590.14	600.3	594.21	872.35	1,605.85	1,262.45	1,020.25	1,467.85	1,130.42	10
HFC-23	NA, NO	NA, NO	+		NA, NO		NA, NO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
HFC-32	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0	0	0	0	0	0	0	0.02	0.02	0.05	0.04	0.03	0.04	0.04	10
HFC-41	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	NA, NO	NA, NO	
HFC-43-10mee	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	NA, NO		NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	
HFC-125	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0.01	0	0.02	0.01	0.02	0.02		0.05	0.05	0.09	0.14	0.11	0.11	0.14	0.13	10
HFC-134	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	NA, NO	- /	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	<u> </u>
HFC-134a	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0.07	0.16	0.23	0.11	0.16	0.14	0.2	0.25	0.21	0.21	0.25	0.58	0.59	0.27	0.36	0.27	10
HFC-152a	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0	0	0	0	0	0	0	0	0	0	0	0	NA, NO	0	0	10
HFC-143	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	
HFC-143a	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0	0	0.02	0.01	0.04	0.01	0.03	0.05	0.04	0.07	0.11	0.04	0.08	0.14	0.1	10
HFC-227ea	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	IE, NA, NO	IE, NA, NO		IE, NA, NO	0	0	0	0	0	0	0	0	0	0	0	10
HFC-236fa	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0	10
HFC-245ca	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	NA, NO	0	0	0	0	0	0	0	0	10
Unspecified mix of listed HFCsd - (kt CO <sub>2</sub> eq)	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	
Emissions of PFCsc - (kt CO <sub>2</sub> eq)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.12	4.11	0.89	0.89	2.55	8.81	12.35	13.72	24.53	17.33	10.08	22.56	20.16	27.48	27.14	29.43	29.43	10
CF4	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0	0	0	0	0	NA, NO	NA, NO	NA, NO	0	0	0	0	NA, NO	NA, NO	
C2F6	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0	0	0	0	0	0	0	0	0	0	0	10
C 3F8	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0	0	IE, NA, NO	IE, NA, NO	0	0	0	0	0	0	0	0	0	0	0	IE, NA, NO	IE, NA, NO	
C4F10	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	
c-C4F8	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	NA, NO	NA, NO	NA, NO					
C5F12	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	
C6F14	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	0	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	
Unspecified mix of listed PFCs(4) - (Gg CO <sub>2</sub>	. ,	, , , , ,	, , , , ,	, , , , ,	, , , , ,	, , , , ,	, , , , ,	, , , , ,	, , , , ,	, , , , ,	. ,	, , , ,	, , , , ,	1	, , , ,	, , , ,	. ,	, , , ,	, , , , ,	, , , ,		1	
equivalent)	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	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	
Emissions of $SF_6(3)$ - $(Gg CO_2 equivalent)$	77.68	77.32	76.96	76.6	76.24	75.2	77.52	95.48	64.19	76.98	141.92	168.73	67.72	101.25	51.89	85.88	83.07	75.85	47.04	49.61	16.22	34.55	-55.5
SF <sub>6</sub>	1 0	0	0	0	0	0	0	0	0	0	0.01	0.01	0	0	0	0	0	0	0	0	0	0	-55

a 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 Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

c Enter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this be provided in the documentation box. Only in these rows are the emissions expressed as CO<sub>2</sub> equivalent emissions.

d In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories", HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for 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.)

#### CTF Table 2a - Description of quantified economy-wide emission reduction target: base year

Party	Czech Repub	lic
Base year /base period	1990	
Emission reduction target	% of base year/base period	% of 1990 <sup>b</sup>
Emission reduction target	20.00%	20.00%
Period for reaching target	BY-2020	

a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

CTF Table 2b - Description of quantified economy-wide emission reduction target: gases and sectors covered

Gas	es covered	Base year for each gas (year):
CO <sub>2</sub>		1990
CH <sub>4</sub>		1990
N <sub>2</sub> O		1990
HFCs		1995
PFCs		1995
SF <sub>6</sub>		1995
NF <sub>3</sub>		To be decided
Other Gases (specify	7)	
Sectors covered <sup>b</sup>	Energy	Yes
	Transport <sup>f</sup>	Yes
	Industrial processes <sup>g</sup>	Yes
	Agriculture	Yes
	LULUCF	No
	Waste	Yes
	Other Sectors (specify	)

Abbreviations: LULUCF = land use, land-use change and forestry.

a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

b More than one selection will be allowed. If Parties use sectors other than those indicated above, the explanation of how these sectors relate to the sectors defined by the IPCC should be provided.

f Transport is reported as a subsector of the energy sector.

g Industrial processes refer to the industrial processes and solvent and other product use sectors.

CTF Table 2c - Description of quantified economy-wide emission reduction target: global warming potential values (GWP)

Gases	GWP values <sup>b</sup>
CO <sub>2</sub>	4nd AR
CH <sub>4</sub>	4nd AR
$N_2O$	4nd AR
HFCs	4nd AR
PFCs	4nd AR
SF <sub>6</sub>	4nd AR
NF <sub>3</sub>	4nd AR
Other Gases (specify)	'

Abbreviations: GWP = global warming potential

## CTF Table 2d - Description of quantified economy-wide emission reduction target: approach to counting emissions and removals from the LULUCF sector

•		
Role of LULUCF	LULUCF in base year level and target	Excluded
	Contribution of LULUCF is calculated using	-

Abbreviation: LULUCF = land use, land-use change and forestry.

### CTF Table 2e1 - Description of quantified economy-wide emission reduction target: market-based mechanisms under the Convention

Market-based mechanisms	Possible scale of contributions
under the Convention	(estimated kt $CO_2$ eq)
CERs	NE
ERUs	NE
AAUs <sup>i</sup>	NE
Carry-over units <sup>j</sup>	NE
Other mechanism units under the Convention (specify) <sup>d</sup>	1

Abbreviations: AAU = assigned amount unit, CER = certified emission reduction, ERU = emission reduction unit.

#### CTF Table 2e2 - Description of quantified economy-wide emission reduction target: other market-based mechanisms No information provided in table 2e2

#### CTF Table 2f - Description of quantified economy-wide emission reduction target: any other information

No information provided in table 2f

a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

b Please specify the reference for the GWP: Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) or the Fourth Assessment Report of the IPCC.

a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

d As indicated in paragraph 5(e) of the guidelines contained in annex I of decision 2/CP.17.

i AAUs issued to or purchased by a Party.

j Units carried over from the first to the second commitment periods of the Kyoto Protocol, as described in decision 13/CMP.1 and consistent with decision 1/CMP.8.

CTF Table 3 - Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

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Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
PANEL/NEW PANEL	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency	Economic	Implemented	Support for reconstructoin/modernization of apartment buildings in pursuiit of increase of value, efficiency and extending of life-time	2001	MIT	158.00
State programme in support of energy savings and use of renewable energy sources	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency	Economic	Implemented				115.00
IPPC	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency	Regulatory	Implemented	Protection of environment against pollution from industrial and agricultural facilities.	2002		2,600.00
Preferential feed- in tariffs for electricity produced from renewable energy sources	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency	Regulatory	Implemented				2,873.00
Directive on energy performance of buildings	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency	Regulatory	Implemented				538.00
Implementation of directive on co-generation	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency	Regulatory	Implemented				90.00
Operational Programme Industry and Enterprise (OPIE)	Industry/industrial processes	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Manufacturing industry and related services	Economic	Implemented			MIT	17.00

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Operational Programme Enterprise and Innovation	Industry/industrial processes	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Manufacturing industry and related services	Economic Research Education	Implemented	It will be possible for applicants to use financial resources from these programmes for co-financing business projects in the manufacturing industry and related services. Funding will derive in part from EU structural funds (85%) and in part from the state budget (15%).	2007	MIT	1,195.00
Operational Programme Environment	Energy, Industry/industrial processes, Waste management/waste	CH <sub>4</sub> , CO <sub>2</sub> , HFCs, N <sub>2</sub> O, NF <sub>3</sub> , PFCs, SF <sub>6</sub>	Water Management Infrastructure and Reduction of Flood Risks, Air Quality and Reduction of Emissions, The Sustainable Use of Energy Sources, The Improvement of Waste Management and the Rehabilitation of Old Ecological Burdens, The Limiting of Industrial Pollution and Environmental Risks, Improving the State of Nature and the Landscape, The Development of Infrastructure for Environmental Education, Consultancy and Awareness	Economic	Implemented	Based on the amount of financial resources, the Operational Programme Environment (OPE) is the second largest Czech operational programme. Between 2007 and 2013, this programme will offer almost EUR 5 billion from the Cohesion Fund and the European Regional Development Fund, and an additional EUR 300 million from the National Environmental Fund of the Czech Republic and the state budget. The Operational Programme's main goal is to protect and improve environmental quality throughout the Czech Republic.	2007	MoE, SEF of CR	245.00
Green savings programme	Energy	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	support for heating installations utilising renewable energy sources	Other (Regulatory)	Implemented	The Green Savings programme focuses on support for heating installations utilising renewable energy sources but also investment in energy savings in reconstructions and new buildings. The programme will support quality insulation of family houses and multiple-dwelling houses, the replacement of environment unfriendly heating for low-emission	2009	MoE, SEF of CR	860.00

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
						biomass-fired boilers and efficient heat pumps, installations of these sources in new low-energy buildings, installation of solar-thermal collectors as well as construction of new houses in the passive energy standard.			
Improvement of the fuel quality	Transport, Energy	N <sub>2</sub> O, CO <sub>2</sub> , CH <sub>4</sub>		Regulatory	Implemented				266.00
Emission limits on new cars	Transport	CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub>		Regulatory	Implemented				152.00
Rural Development Program (2007- 2013)	Agriculture, Forestry/LULUCF	CH <sub>4</sub> , N <sub>2</sub> O, CO <sub>2</sub>	rural areas	Other (Regulatory)	Implemented	Rural Development Programme measures assist in achieving goals of the Lisbon Strategy in all its areas.	2007	МоЕ	325.00
Horizontal Rural Development	Agriculture, Forestry/LULUCF	CH <sub>4</sub> , N <sub>2</sub> O	ensure the sustainable development of agriculture, the countryside and its natural resources	Regulatory	Implemented	preservation and support of the agricultural system with low inputs, protection and support of sustainable agriculture meeting environmental demands, preservation and strengthening of a viable social structure in rural areas	2004	MoA	150.00
Action Plan for Development of Organic farming	Agriculture	CH <sub>4</sub> , N <sub>2</sub> O	organic farming in CR until 2015	Economic	Implemented	Strategy for the development of organic farming (OF) in the Czech Republic (CZ) until 2015. The main objectives of the Action Plan are to achieve a 15 % proportion of organic farming by 2015, a 60 % share of Czech organic foods in the organic foods market, and a 3 % share of organic foods in the food market overall.	2011	MoA	250.00

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Cross Compliance	Agriculture	N <sub>2</sub> O, CH <sub>4</sub>	control system for farmers	Regulatory	Implemented	The direct payments and other selected subsidies can be granted only on the condition that a beneficiary meets the statutory management requirements addressing environment, public health, the health of animals and plants, and animal welfare; the standards of good agricultural and environmental conditions (GAEC); and minimum requirements for fertilizer and plant protection product use as part of agri-environmental measures.	2009	MoA	NA
Measures on vehicles - devices for gas adjustment	Transport	N <sub>2</sub> O, CH <sub>4</sub> , CO <sub>2</sub>	quality of vehicles	Other (Regulatory)	Implemented				266.00
Economic and tax tools	Cross-cutting	CO <sub>2</sub> , CH <sub>4</sub> , HFCs, N <sub>2</sub> O, NF <sub>3</sub> , PFCs, SF <sub>6</sub>		Other (Fiscal)	Implemented				209.00
Increase of the public transport attractiveness	Transport	N <sub>2</sub> O, CH <sub>4</sub> , CO <sub>2</sub>		Economic	Implemented			MoE	190.00
Combined transportation support	Transport	N <sub>2</sub> O, CH <sub>4</sub> , CO <sub>2</sub>		Regulatory	Planned				114.00
Mobility management	Transport	N <sub>2</sub> O, CH <sub>4</sub> , CO <sub>2</sub>		Regulatory	Planned				95.00
Environmental education, education and enlightenment at primary and secondary schools on				Education	Implemented				95.00

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
"ecological transport"									
Eco-labelling	Agriculture, Industry/industrial processes, Waste management/waste	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	labeling systems for food and consumer products	Other (Regulatory)	Implemented	Labeling systems for food and consumer products, which are more friendly to environment and to the health of the consumer.	1993	MoE, CENIA	76.00
Integration of public in the transport projects	Transport	N <sub>2</sub> O, CO <sub>2</sub> , CH <sub>4</sub>		Information	Planned				76.00
Eco-driving	Transport	N <sub>2</sub> O, CO <sub>2</sub> , CH <sub>4</sub>	energy efficient use of vehicles	Education	Planned				171.00
Territorial planned measures				Other (Economic)	Implemented				190.00
Waste management plan (2003) Government Regulation No. 197/2003	Waste management/waste			Regulatory	Implemented				6.00
Waste management plan (2003) Government Regulation No. 197/2003	Energy			Regulatory	Implemented				130.00
Waste management plan (2011)	Waste management/waste, Energy			Regulatory	Implemented				400.00
EU ETS	Energy, Transport, Industry/industrial processes	CO <sub>2</sub>		Other (Fiscal)	Implemented		2005		3,230.00

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Support of voluntary commitments to energy savings	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency		Implemented				458.00
Energy labelling of household electrical appliances	Energy	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	labeling of home appliance products	Information	Implemented	Energy labelling of household appliances is a means by which EU states are attempting to accommodate the end users of these products and help them purchase the most energy efficient products possible as well as achieve the goal of 20% reduction of energy consumption in the EU by 2020.	1999	Electrotechnical testing institute	952.00
Support to housing fund modernization using the building saving	Energy	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	Energy efficiency	Economic	Planned				513.00
Energy Star	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency	Regulatory	Planned				1.17
Eco-design	Energy	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	Energy efficiency	Education	Implemented				166.00
Minimum share of biofuels	Transport, Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O		Regulatory	Planned				912.00
Recast of the Directive on energy performance of buildings	Energy	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Energy efficiency	Regulatory	Implemented		2010		410.00
Regulation on CO <sub>2</sub> from light-commercial vehicles	Transport	CO <sub>2</sub>		Regulatory	Planned				486.10
vemeles									

Abbreviation: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

- a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.
- b For the base year, information reported on the emission reduction target shall include the following: (a) total GHG emissions, excluding emissions and removals from the LULUCF sector; (b) emissions and/or removals from the LULUCF sector based on the accounting approach applied taking into consideration any relevant decisions of the Conference of the Parties and the activities and/or land that will be accounted for; (c) total GHG emissions, including emissions and removals from the LULUCF sector. For each reported year, information reported on progress made towards the emission reduction targets shall include, in addition to the information noted in paragraphs 9(a—c) of the UNFCCC biennial reporting guidelines for developed country Parties, information on the use of units from market-based mechanisms.
- c Parties may add additional rows for years other than those specified below.
- d Information in this column should be consistent with the information reported in table 4(a)I or 4(a)II, as appropriate. The Parties for which all relevant information on the LULUCF contribution is reported in table 1 of this common tabular format can refer to table 1.

#### CTF Table 4 - Reporting on progress

	Total emissions excluding LULUCF	Contribution from LULUCF <sup>d</sup>	Quantity of units from market under the Conv		Quantity of units fron based mecha	
Year <sup>c</sup>	(kt CO <sub>2</sub> eq)	$(kt\ CO_2\ eq)$	(number of units)	$(kt\ CO_2\ eq)$	(number of units)	(kt CO <sub>2</sub> eq)
(1990)	196,039.02	-3,617.94	NO	NO		
2010	137,422.56	-5,488.45	789,859,031.00	789,859.03		
2011	133,495.50	-7,959.22	780,200,222.00	780,200.23		
2012	130,660.67	-7,251.97	765,302,222.00	765,302.22		

Abbreviation:  $\overline{GHG}$  = greenhouse gas,  $\overline{LULUCF}$  = land use, land-use change and forestry.

CTF Table 4a1 Progress in achieving the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the contribution of the land use, land-use change and forestry sector in 2011

No information provided in table 4a1

a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

b For the base year, information reported on the emission reduction target shall include the following: (a) total GHG emissions, excluding emissions and removals from the LULUCF sector; (b) emissions and/or removals from the LULUCF sector based on the accounting approach applied taking into consideration any relevant decisions of the Conference of the Parties and the activities and/or land that will be accounted for; (c) total GHG emissions, including emissions and removals from the LULUCF sector. For each reported year, information reported on progress made towards the emission reduction targets shall include, in addition to the information noted in paragraphs 9(a—c) of the UNFCCC biennial reporting guidelines for developed country Parties, information on the use of units from market-based mechanisms.

c Parties may add additional rows for years other than those specified below.

d Information in this column should be consistent with the information reported in table 4(a)I or 4(a)II, as appropriate. The Parties for which all relevant information on the LULUCF contribution is reported in table 1 of this common tabular format can refer to table 1.

CTF Table 4a2 Progress in achievement of the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the counting of emissions and removals from the land use, land-use change and forestry sector in relation to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol

GREENHOUSE GAS SOURCE AND SINK ACTIVITIES	Base year <sup>d</sup>			nissions/rer			Accounting parameters <sup>h</sup>	Accounting quantity <sup>i</sup>		
		2008	2009	2010	2011	Total <sup>g</sup>				
		(kt CO <sub>2</sub> eq)								
A. Article 3.3 activities										
A.1. Afforestation and Reforestation								-1'245.81		
A.1.1. Units of land not harvested since the beginning of the commitment periodj		-271.99	-294.68	-322.26	-356.88	-1,245.81		-1'245.81		
A.1.2. Units of land harvested since the beginning of the commitment periodj								NO		
A.2. Deforestation		160.20	170.19	206.87	163.70	700.97		700.97187		
B. Article 3.4 activities										
B.1. Forest Management (if elected)		4,403.99	6,441.15	5,096.22	7,568.71	23,510.07		-5866.66667		
3.3 offset <sup>k</sup>							0	0		
FM cap <sup>l</sup>							5866.66667	-5866.66667		
B.2. Cropland Management (if elected)	0	NA	NA	NA	NA	NA	0	0		
B.3. Grazing Land Management (if elected)	0	NA	NA	NA	NA	NA	0	0		
B.4. Revegetation (if elected)	0	NA	NA	NA	NA	NA	0	0		

*Note: 1 kt CO<sub>2</sub> eq equals 1 Gg CO<sub>2</sub> eq.* 

- a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.
- b Developed country Parties with a quantified economy-wide emission reduction target as communicated to the secretariat and contained in document FCCC/SB/2011/INF.1/Rev.1 or any update to that document, that are Parties to the Kyoto Protocol, may use table 4(a)II for reporting of accounting quantities if LULUCF is contributing to the attainment of that target.
- c Parties can include references to the relevant parts of the national inventory report, where accounting methodologies regarding LULUCF are further described in the documentation box or in the biennial reports.
- d Net emissions and removals in the Party's base year, as established by decision 9/CP.2.
- e All values are reported in the information table on accounting for activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, of the CRF for the relevant inventory year as reported in the current submission and are automatically entered in this table.
- f Additional columns for relevant years should be added, if applicable.
- g Cumulative net emissions and removals for all years of the commitment period reported in the current submission.
- h The values in the cells "3.3 offset" and "Forest management cap" are absolute values.
- i The accounting quantity is the total quantity of units to be added to or subtracted from a Party's assigned amount for a particular activity in accordance with the provisions of Article 7, paragraph 4, of the Kyoto Protocol.
- j In accordance with paragraph 4 of the annex to decision 16/CMP.1, debits resulting from harvesting during the first commitment period following afforestation and reforestation since 1990 shall not be greater than the credits accounted for on that unit of land.
- k In accordance with paragraph 10 of the annex to decision 16/CMP.1, for the first commitment period a Party included in Annex I that incurs a net source of emissions under the provisions of Article 3 paragraph 3, may account for anthropogenic greenhouse gas emissions by sources and removals by sinks in areas under forest management under Article 3, paragraph 4, up to a level that is equal to the net source of emissions under the provisions of Article 3, paragraph 3, but not greater than 9.0 megatonnes of carbon times five, if the total anthropogenic greenhouse gas emissions by sources and removals by sinks in the managed forest since 1990 is equal to, or larger than, the net source of emissions incurred under Article 3, paragraph 3.
- 1 In accordance with paragraph 11 of the annex to decision 16/CMP.1, for the first commitment period of the Kyoto Protocol only, additions to and subtractions from the assigned amount of a Party resulting from Forest management under Article 3, paragraph 4, after the application of paragraph 10 of the annex to decision 16/CMP.1 and resulting from forest management project activities undertaken under Article 6, shall not exceed the value inscribed in the appendix of the annex to decision 16/CMP.1, times five.

#### CTF Table 4b Reporting on progress

	Units of market based mechanisms		Ye	ar
	Onis of market basea mechanisms		2011	2012
	v 5	(number of units)	780,200,222.00	765,302,222.00
	Kyoto Protocol units	(kt CO <sub>2</sub> eq)	780,200.23	765,302.22
		(number of units)	766,345,459.00	747,756,091.00
	AAUs	(kt CO <sub>2</sub> eq)	766,345.46	747,756.09
		(number of units)	1,813,118.00	4,063,078.00
	ERUs	(kt CO <sub>2</sub> eq)	1,813.12	4,063.08
Kyoto Protocol units <sup>d</sup>		(number of units)	12,041,645.00	13,483,053.00
	CERs	(kt CO <sub>2</sub> eq)	12,041.65	13,483.05
		(number of units)	NO	NC
	tCERs	(kt CO <sub>2</sub> eq)	NO	NC
		(number of units)	NO	NO
	ICERs	(kt CO <sub>2</sub> eq)	NO	NC
	Hair famous Laboratoria de la Compi	(number of units)		
	Units from market-based mechanisms under the Convention	(kt CO <sub>2</sub> eq)		
Other units <sup>d,e</sup>		(number of units)		
	Units from other market-based mechanisms	$(kt CO_2 eq)$		
		(1.1. 002 04)		
Total		(number of units)	780,200,222.00	765,302,222.00
10141		(kt CO <sub>2</sub> eq)	780,200.23	765,302.22

Abbreviations: AAUs = assigned amount units, CERs = certified emission reductions, ERUs = emission reduction units, ICERs = long-term certified emission reductions, tCERs = temporary certified emission reductions.

Note: 2011 is the latest reporting year.

- c Parties may include this information, as appropriate and if relevant to their target.
- d Units surrendered by that Party for that year that have not been previously surrendered by that or any other Party.
- e Additional rows for each market-based mechanism should be added, if applicable.

CTF Table 5 Summary of key variables and assumptions used in the projections analysis

	2 0 2			1	1 0	<u> </u>			
Key underlying assu	mptions	Histor	rical <sup>b</sup>	Projected					
Assumption	Unit	2010	2011	2015	2020	2025	2030		
Population	thousands	10,517.00		10,635.00	10,761.00	10,839.00	10,861.00		
Number of households	thousands	4,614.00		4,803.00	4,975.00	5,095.00	5,173.00		
GDP growth rate	%	100.00		118.24	143.30	167.70	191.38		
International oil price	USD / boe			86.00	88.50	89.20	93.10		
International coal price	USD / boe			22.00	22.60	23.70	24.00		
International gas price	USD / boe			53.80	61.50	58.90	64.50		
Population growth	%	100.00		101.12	102.32	103.06	103.27		

a Parties should include key underlying assumptions as appropriate.

a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

b For each reported year, information reported on progress made towards the emission reduction target shall include, in addition to the information noted in paragraphs 9(a-c) of the reporting guidelines, on the use of units from market-based mechanisms.

b Parties should include historical data used to develop the greenhouse gas projections reported.

CTF Table 6a Information on updated greenhouse gas projections under a 'with measures' scenario

			GHG em	nissions and r	emovals <sup>b</sup>			GHG en projec	
				(kt CO <sub>2</sub> eq)				(kt CC	O <sub>2</sub> eq)
	Base Year	1990	1995	2000	2005	2010	2011	2020	2030
Sector <sup>d,e</sup>									
Energy	147,381.47	147,381.47	112,546.55	105,976.97	101,021.23	94,796.27	91,143.18	79,611.50	67,777.30
Transport	9,383.44	9,383.44	11,105.81	13,626.44	19,063.09	18,532.06	18,371.41	18,754.00	17,931.00
Industry/industrial processes	20,367.66	20,367.66	13,784.54	14,129.67	13,493.01	12,517.87	12,260.05	12,783.70	12,690.70
Agriculture	16,233.28	16,233.28	10,331.98	9,094.86	8,385.03	7,964.57	8,064.84	7,809.50	7,648.60
Forestry/LULUCF	-3,617.94	-3,617.94	-7,210.11	-7,524.24	-6,685.51	-5,488.45	-7,959.22	-459.00	-2,042.00
Waste management/waste	2,673.17	2,673.17	2,907.58	3,058.11	3,297.01	3,611.79	3,656.03	3,738.80	3,608.30
Other (specify)									
Gas									
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	161,063.42	161,063.42	120,716.21	118,075.11	118,926.93	112,368.94	106,270.18	103,446.00	90,237.20
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	164,812.75	164,812.75	128,037.89	125,711.08	125,744.39	118,005.01	114,296.49	104,134.90	92,511.40
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	17,915.09	17,915.09	13,395.62	11,176.34	10,513.46	10,412.56	10,288.77	9,506.70	8,295.00
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	17,815.07	17,815.07	13,308.12	11,083.87	10,400.20	10,284.36	10,233.67	9,378.60	8,164.80
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	13,364.89	13,364.89	9,278.46	8,697.13	8,443.31	7,639.11	7,782.94	7,626.00	7,378.00
$N_2O$ emissions excluding $N_2O$ from LULUCF	13,333.53	13,333.53	9,254.38	8,677.87	8,424.61	7,619.70	7,770.95	7,595.00	7,347.00
HFCs	NO	NO	0.73	262.50	594.21	1,467.85	1,130.42	1,534.30	1,569.10
PFCs	NO	NO	0.12	8.81	10.08	29.43	29.43	29.40	29.40
SF <sub>6</sub>	77.68	77.68	75.20	141.92	85.88	16.22	34.55	24.60	24.60
Other (specify)									
Total with LULUCF <sup>f</sup>	192,421.08	192,421.08	143,466.34	138,361.81	138,573.87	131,934.11	125,536.29	122,167.00	107,533.30
Total without LULUCF	196,039.03	196,039.03	150,676.44	145,886.05	145,259.37	137,422.57	133,495.51	122,696.80	109,646.30

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

a In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", at a minimum Parties shall report a 'with measures' scenario, and may report 'without measures' and 'with additional measures' scenarios. If a Party chooses to report 'without measures' and/or 'with additional measures' scenarios they are to use tables 6(b) and/or 6(c), respectively. If a Party does not choose to report 'without measures' or 'with additional measures' scenarios then it should not include tables 6(b) or 6(c) in the biennial report.

b Emissions and removals reported in these columns should be as reported in the latest GHG inventory and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in this biennial report. Where the sectoral breakdown differs from that reported in the GHG inventory Parties should explain in their biennial report how the inventory sectors relate to the sectors reported in this table.

c 20XX is the reporting due-date year (i.e. 2014 for the first biennial report).

d In accordance with paragraph 34 of the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 17 of those guidelines, namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry, agriculture, forestry and waste management.

e To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

f Parties may choose to report total emissions with or without LULUCF, as appropriate.

CTF Table 6c Information on updated greenhouse gas projections under a 'with additional measures' scenario

		GHG emissions and removals <sup>b</sup>									
		$(kt\ CO_2\ eq)$									
	Base Year	1990	1995	2000	2005	2010	2011	2020	2030		
Sector <sup>d,e</sup>											
Energy	147,381.47	147,381.47	112,546.55	105,976.97	101,021.23	94,796.27	91,143.18	78,687.90	66,450.50		
Transport	9,383.44	9,383.44	11,105.81	13,626.44	19,063.09	18,532.06	18,371.41	18,244.00	17,108.00		
Industry/industrial processes	20,367.66	20,367.66	13,784.54	14,129.67	13,493.01	12,517.87	12,260.05	12,783.70	12,690.70		
Agriculture	16,233.28	16,233.28	10,331.98	9,094.86	8,385.03	7,964.57	8,064.84	7,809.50	7,648.60		
Forestry/LULUCF	-3,617.94	-3,617.94	-7,210.11	-7,524.24	-6,685.51	-5,488.45	-7,959.22	-235.00	-1,602.00		
Waste management/waste	2,673.17	2,673.17	2,907.58	3,058.11	3,297.01	3,611.79	3,656.03	3,327.60	2,908.70		
Other (specify)											
Gas											
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	161,063.42	161,063.42	120,716.21	118,075.11	118,926.93	112,368.94	106,270.18	102,425.80	88,780.50		
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	164,812.75	164,812.75	128,037.89	125,711.08	125,744.39	118,005.01	114,296.49	102,808.50	90,530.60		
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	17,915.09	17,915.09	13,395.62	11,176.34	10,513.46	10,412.56	10,288.77	9,013.20	7,459.20		
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	17,815.07	17,815.07	13,308.12	11,083.87	10,400.20	10,284.36	10,233.67	8,883.00	7,331.10		
$N_2O$ emissions including $N_2O$ from LULUCF	13,364.89	13,364.89	9,278.46	8,697.13	8,443.31	7,639.11	7,782.94	7,595.00	7,347.00		
$N_2O$ emissions excluding $N_2O$ from LULUCF	13,333.53	13,333.53	9,254.38	8,677.87	8,424.61	7,619.70	7,770.95	7,564.00	7,316.00		
HFCs	NO	NO	0.73	262.50	594.21	1,467.85	1,130.42	1,534.30	1,569.10		
PFCs	NO	NO	0.12	8.81	10.08	29.43	29.43	29.40	29.40		
SF <sub>6</sub>	77.68	77.68	75.20	141.92	85.88	16.22	34.55	24.60	24.60		
Other (specify)											
Total with LULUCF <sup>f</sup>	192,421.08	192,421.08	143,466.34	138,361.81	138,573.87	131,934.11	125,536.29	120,622.30	105,209.80		
Total without LULUCF	196,039.03	196,039.03	150,676.44	145,886.05	145,259.37	137,422.57	133,495.51	120,843.80	106,800.80		

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

a In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", at a minimum Parties shall report a 'with measures' scenario, and may report 'without measures' and 'with additional measures' scenarios. If a Party chooses to report 'without measures' and/or 'with additional measures' scenarios they are to use tables 6(b) and/or 6(c), respectively. If a Party does not choose to report 'without measures' or 'with additional measures' scenarios then it should not include tables 6(b) or 6(c) in the biennial report.

b Emissions and removals reported in these columns should be as reported in the latest GHG inventory and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in this biennial report. Where the sectoral breakdown differs from that reported in the GHG inventory Parties should explain in their biennial report how the inventory sectors relate to the sectors reported in this table.

c 20XX is the reporting due-date year (i.e. 2014 for the first biennial report).

d In accordance with paragraph 34 of the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 17 of those guidelines, namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry, agriculture, forestry and waste management.

e To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

f Parties may choose to report total emissions with or without LULUCF, as appropriate.

CTF Table 7 Provision of public financial support: summary information in 2011 and 2012

				Year	2011 (ir	ı thousands)				
Allocation channels		Czech	koruna - CZI	ζ.	$USD^b$					
	Core/		Climate-sp	ecific <sup>d</sup>		Core/ general <sup>c</sup>		Climate-sp	ecific <sup>d</sup>	
	general <sup>c</sup>	Mitigation	Adaptation	Cross- cutting <sup>e</sup>	Other <sup>f</sup>		Mitigation	Adaptation	Cross- cutting <sup>e</sup>	Other <sup>f</sup>
Total contributions through multilateral channels:	386,640			25,000		21,857			1,413	
Multilateral climate change funds <sup>g</sup>				25,000					1,413	
Other multilateral climate change funds <sup>h</sup>										
Multilateral financial institutions, including regional development banks	375,740					21,241				
Specialized United Nations bodies	10,900					616				
Total contributions through bilateral, regional and other channels	1,259,070	38,809	62,001			71,174	2,194	3,505		
Total	1,645,710	38,809	62,001	25,000		94,031	2,194	3,505	1,413	

Footnotes attached to next table.

Allocation channels	Year 2012 (in thousands)											
		Czech k	oruna - CZK		$USD^b$							
			Climate-spe	ecific <sup>d</sup>		Core/ general <sup>c</sup>		Climate-sp	$ecific^d$			
	Core/ general <sup>c</sup>	Mitigation	Adaptation	Cross- cutting <sup>e</sup>	Other <sup>f</sup>		Mitigation	Adaptation	Cross-cutting <sup>e</sup>	Other <sup>f</sup>		
Total contributions through multilateral channels:	366,621	2,900		17,000		23,320	148		868			
Multilateral climate change funds <sup>g</sup>				17,000					868			
Other multilateral climate change funds <sup>h</sup>												
Multilateral financial institutions, including regional development banks	354,871					22,720						
Specialized United Nations bodies	11,750	2,900				600	148					
Total contributions through bilateral, regional and other channels	1,199,239	40,190	58,601			61,217	2,051	2,992				
Total	1,565, 860	43,090	58,601	17,000		79,932	2,200	2,992	868			

Abbreviation: USD = United States dollars.

- a Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.
- b Parties should provide an explanation on methodology used for currency exchange for the information provided in table 7, 7(a) and 7(b) in the box below.
- c This refers to support to multilateral institutions that Parties cannot specify as climate-specific.
- d Parties should explain in their biennial reports how they define funds as being climate-specific.
- e This refers to funding for activities which are cross-cutting across mitigation and adaptation.
- f Please specify.
- g Multilateral climate change funds listed in paragraph 17(a) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.
- h Other multilateral climate change funds as referred in paragraph 17(b) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

CTF Table 7a Provision of public financial support: contribution through multilateral channels in 2011

		Total amount	(in thousands)					Type of support <sup>f, g</sup>	Sector <sup>c</sup>
Donor funding	Core/gen	eral <sup>d</sup>	Climate-sp	ecific <sup>e</sup>	Status <sup>b</sup>	Funding source <sup>f</sup>	Financial		
Donor january	Czech koruna - CZK	USD	Czech koruna - CZK	USD	Status		instrument <sup>f</sup>	Type of support	
Total contributions through multilateral channels	366,621	18,715	19,900	1,016					
Multilateral climate change funds <sup>g</sup>			17,000	868					
1. Global Environment Facility			17,00	868	Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. Least Developed Countries Fund									
3. Special Climate Change Fund									
4. Adaptation Fund									
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities									
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks	354,871	18,115							
1. World Bank	329,491	16,819			Provided	ODA	Other (Grant/Equity)	Cross-cutting	Cross-cutting
2. International Finance Corporation									
3. African Development Bank									
4. Asian Development Bank									
5. European Bank for Reconstruction and Development	25,380	1,296			Provided	ODA	Grant	Cross-cutting	Cross-cutting
6. Inter-American Development Bank									
7. Other									
Specialized United Nations bodies									
1. United Nations Development Programme	10,750	549	2,900	148					
UNDP	1000	51			Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. United Nations Environment Programme									
UNEP	366,621	18,715	19,900	1,016	Provided	ODA	Grant	Cross-cutting	Cross-cutting
3. Other			17,000	868					

Abbreviations: ODA = official development assistance, OOF = other official flows.

a Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

b Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

c Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

d This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

e Parties should explain in their biennial reports how they define funds as being climate-specific.

f Please specify.

g Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

#### CTF Table 7a Provision of public financial support: contribution through multilateral channels in 2012

		Total amount (	in thousands)				Financial	Type of support <sup>f, g</sup>	
Donor funding	Core/ger	neral <sup>d</sup>	Climate-s <sub>i</sub>	pecific <sup>e</sup>	Status <sup>b</sup>	Funding source <sup>f</sup>			Sector <sup>c</sup>
Donor junuing	Czech koruna - CZK	USD	Czech koruna - CZK	USD	Status	2	instrument <sup>f</sup>		Sector
Total contributions through multilateral channels	354,871	22,720	17,000	868					
Multilateral climate change funds <sup>g</sup>			17,000	868					
1. Global Environment Facility			17,000	868	Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. Least Developed Countries Fund									
3. Special Climate Change Fund									
4. Adaptation Fund									
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities									
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks	354,871	22,720							
1. World Bank	329,491	21,424			Provided	ODA	Other (Grant/Equity)	Cross-cutting	Cross-cutting
2. International Finance Corporation									
3. African Development Bank									
4. Asian Development Bank									
5. European Bank for Reconstruction and Development	25,380	1,296			Provided	ODA	Grant	Cross-cutting	Cross-cutting
6. Inter-American Development Bank									
7. Other									
Specialized United Nations bodies									
1. United Nations Development Programme	10,750	549	2,900	148					
2. United Nations Environment Programme	1000	51							
3. Other									

 $\overline{Abbreviations: ODA = official\ development\ assistance,\ OOF = other\ official\ flows.}$ 

a Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

b Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

c Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

d This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

e Parties should explain in their biennial reports how they define funds as being climate-specific.

f Please specify

g Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

CTF Table 7b Provision of public financial support: contribution through bilateral, regional and other channels in 2011

	Total amo thousar							
Recipient country/ region/project/programme	Climate-s <sub>I</sub>	pecific <sup>f</sup>	Status <sup>c</sup>	Funding source <sup>g</sup>	Financial instrument <sup>g</sup>	Type of support <sup>g, h</sup>	Sector <sup>d</sup>	Additional information
U	Czech koruna - CZK	USD		source	mstrument	зирроп		injornation
Total contributions through bilateral, regional and other channels	100,810	5,699						
Afghanistan /	4,000	226	Provided	ODA	Grant	Adaptation	Agriculture	
Angola /	12,139	686	Provided	ODA	Grant	Adaptation	Agriculture	
Bosnia and Herzegovina /	17,148	969	Provided	ODA	Grant	Mitigation	Energy	
Ethiopia /	5,322	301	Provided	ODA	Grant	Adaptation	Cross- cutting	Sectors affected: Water, Agriculture, Forestry
Ethiopia /	2,291	130	Provided	ODA	Grant	Adaptation	Other (Water)	
Ethiopia /	4,000	226	Provided	ODA	Grant	Adaptation	Agriculture	
Georgia /	4,013	227	Provided	ODA	Grant	Adaptation	Cross- cutting	Prevention against extreme weather events
Georgia /	2,561	145	Provided	ODA	Grant	Mitigation	Energy	
Moldova /	4,894	277	Provided	ODA	Grant	Adaptation	Other (Water)	
Mongolia /	5,908	334	Provided	ODA	Grant	Adaptation	Other (Water)	Specification of recipient country: Mongolia, Zalugiin Gol
Mongolia /	4,934	279	Provided	ODA	Grant	Adaptation	Agriculture	
Palestine /	5,500	311	Provided	ODA	Grant	Adaptation	Other (Water)	
Palestine /	7,000	396	Provided	ODA	Grant	Mitigation	Energy	
Palestine /	2,500	141	Provided	ODA	Grant	Adaptation	Other (Water)	
Serbia /	3,100	175	Provided	ODA	Grant	Mitigation	Energy	
Viet Nam /	3,000	170	Provided	ODA	Grant	Mitigation	Energy	
Ethiopia /	4,500	254	Provided	ODA	Grant	Adaptation	Other (Water)	Specification of recipient country: Ethiopia - Sidama
Ethiopia /	2,000	113	Provided	ODA	Grant	Adaptation	Other (Water)	Specification of recipient country: Ethiopia - Alaba
Cambodia /	6,000	339	Provided	ODA	Grant	Mitigation	Energy	Specification of recipient country: Cambodia, Robi

Abbreviations: ODA = official development assistance, OOF = other official flows; USD = United States dollars.

- a Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.
- b Parties should report, to the extent possible, on details contained in this table.
- c Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.
- d Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".
- e Parties should report, as appropriate, on project details and the implementing agency.
- f Parties should explain in their biennial reports how they define funds as being climate-specific.
- g Please specify.
- h Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

## CTF Table 7b Provision of public financial support: contribution through bilateral, regional and other channels in 2012

	Total amo thousa	,						
Recipient country/ region/project/program me <sup>b</sup>	Climate-s	pecific <sup>f</sup>	Status <sup>c</sup>	Funding source <sup>g</sup>	Financial instrument <sup>g</sup>	Type of support <sup>g, h</sup>	Sector <sup>d</sup>	Additional information <sup>e</sup>
me	Czech koruna - CZK	USD						·
Total contributions through bilateral, regional and other channels	98,791	5,043						
Afghanistan /	3,000	153	Provided	ODA	Grant	Adaptation	Agriculture	
Bosnia and Herzegovina /	14,366	733	Provided	ODA	Grant	Mitigation	Energy	
Ethiopia /	4,200	214	Provided	ODA	Grant	Adaptation	Cross- cutting	Sectors affected: Water, Agriculture, Forestry
Ethiopia /	2,230	114	Provided	ODA	Grant	Adaptation	Other (Water)	
Ethiopia /	2,400	123	Provided	ODA	Grant	Adaptation	Other (Water)	
Ethiopia /	3,500	179	Provided	ODA	Grant	Adaptation	Agriculture	
Georgia /	4,047	207	Provided	ODA	Grant	Adaptation	Cross- cutting	Prevention against extrem weather events
Georgia /	4,954	253	Provided	ODA	Grant	Mitigation	Energy	
Moldova /	4,894	250	Provided	ODA	Grant	Adaptation	Other (Water)	
Mongolia /	5,189	265	Provided	ODA	Grant	Adaptation	Other (Water)	Specification of recipient country: Mongolia, Zalugiin Gol
Mongolia /	1,523	78	Provided	ODA	Grant	Adaptation	Agriculture	Specification of recipient country: Mongolia, Gobi
Mongolia /	2,340	119	Provided	ODA	Grant	Adaptation	Other (Water)	Specification of recipient country: Mongolia - Chovsgul
Palestine /	5,000	255	Provided	ODA	Grant	Adaptation	Other (Water)	
Palestine /	5,000	255	Provided	ODA	Grant	Mitigation	Energy	
Palestine /	2,500	128	Provided	ODA	Grant	Adaptation	Other (Water)	
Serbia /	9,170	468	Provided	ODA	Grant	Mitigation	Energy	
Viet Nam /	2,700	138	Provided	ODA	Grant	Mitigation	Energy	
Yemen /	3,200	163	Provided	ODA	Grant	Adaptation	Agriculture	
Ethiopia /	12,578	642	Provided	ODA	Grant	Adaptation	Other (Water)	Specification of recipient country: Ethiopia - Sidama

Ethiopia /	2,000	102	Provided	ODA	Grant	Adaptation	Other (Water)	Specification of recipient country: Ethiopia - Alaba
Cambodia /	4,000	204	Provided	ODA	Grant	Mitigation	Energy	Specification of recipient country: Cambodia, Robi

Abbreviations: ODA = official development assistance, OOF = other official flows; USD = United States dollars.

- a Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.
- b Parties should report, to the extent possible, on details contained in this table.
- c Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.
- d Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".
- e Parties should report, as appropriate, on project details and the implementing agency.
- f Parties should explain in their biennial reports how they define funds as being climate-specific.
- g Please specify.
- h Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

#### CTF Table 8 Provision of technology development and transfer support

No information provided in table 8

#### CTF Table 8 Provision of capacity-building support

No information provided in table 9