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3,091.44

NA

3,167.19

NA

Table 1
Emission trends: summary (1)
(Sheet 1 of 3)

	Base year ^a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS EMISSIONS	kt CO ₂ eq	kt CO 2 eq	kt CO ₂ eq						
CO ₂ emissions including net CO ₂ from LULUCF	266,563.18	237,408.59	227,244.57	200,330.86	164,892.70	154,174.64	135,737.41	123,692.49	124,632.48
CO ₂ emissions excluding net CO ₂ from LULUCF	268,730.18	239,531.59	229,591.23	202,897.53	169,802.37	161,474.97	145,483.41	135,876.82	139,196.48
CH ₄ emissions including CH ₄ from LULUCF	73,328.12	72,285.49	68,992.35	62,460.45	54,040.23	44,511.19	39,030.41	34,603.54	32,727.63
CH ₄ emissions excluding CH ₄ from LULUCF	73,327.77	72,285.04	68,991.95	62,460.21	54,038.67	44,504.22	39,027.30	34,541.45	32,723.35
N ₂ O emissions including N ₂ O from LULUCF	16,319.82	15,127.73	15,863.38	13,858.34	11,040.24	8,945.78	7,133.70	5,949.63	5,336.21
N ₂ O emissions excluding N ₂ O from LULUCF	16,319.71	15,127.60	15,863.27	13,858.27	11,039.78	8,943.72	7,132.78	5,931.30	5,334.94
HFCs	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.21	0.40	0.40	42.51
PFCs	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
SF ₆	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Total (including LULUCF)	356,211.11	324,821.82	312,100.30	276,649.65	229,973.17	207,631.81	181,901.92	164,246.06	162,738.83
Total (excluding LULUCF)	358,377.66	326,944.23	314,446.45	279,216.01	234,880.82	214,923.11	191,643.89	176,349.97	177,297.28
CDEENHOUGE CAS SOURCE AND SINK CATEGORIES	Base year ^a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt CO 2 eq	kt CO 2 eq	kt CO ₂ eq						
1. Energy	299,576.11	270,891.67	260,202.98	230,721.06	196,619.16	180,550.49	163,477.54	149,727.13	153,316.18
2. Industrial Processes	17,916.83	16,721.38	14,691.26	11,008.65	7,381.47	8,144.59	7,091.77	8,858.38	7,382.37
3. Solvent and Other Product Use	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
4. Agriculture	38,144.51	36,486.47	36,599.98	34,452.56	27,774.79	23,121.10	17,949.20	14,597.27	13,507.30
5. Land Use, Land-Use Change and Forestry ^b	-2,166.55	-2,122.41	-2,346.15	-2,566.36	-4,907.64	-7,291.30	-9,741.96	-12,103.92	-14,558.45

2,740.21

NA

2,952.23

NA

3,033.75

NA

3,105.39

356,211.11 324,821.82 312,100.30 276,649.65 229,973.17 207,631.81 181,901.92 164,246.06 162,738.83

NA

3,106.93

NA

3,125.38

NA

2,844.72

NA

Note: All footnotes for this table are given on sheet 3.

6. Waste

7. Other

Total (including LULUCF)

¹ The common tabular format will be revised, in accordance with relevant decisions of the Conference of the Parties and, where applicable, with decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol."

Table 1
Emission trends: summary (1)
(Sheet 2 of 3)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS EMISSIONS	kt CO ₂ eq	kt CO 2 eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq
CO ₂ emissions including net CO ₂ from LULUCF	97,466.00	122,982.81	118,748.28	139,059.02	156,662.23	162,543.54	177,877.04	199,562.45	197,798.40	184,038.22
CO ₂ emissions excluding net CO ₂ from LULUCF	109,808.00	133,106.47	126,580.28	144,577.35	159,833.90	165,557.54	180,740.70	202,286.78	200,269.73	186,513.22
CH ₄ emissions including CH ₄ from LULUCF	30,175.45	33,035.06	29,881.08	31,719.35	35,436.47	36,902.47	37,753.05	40,015.71	41,573.07	44,854.22
CH ₄ emissions excluding CH ₄ from LULUCF	30,168.41	33,030.67	29,874.61	31,714.21	35,424.87	36,887.09	37,748.66	40,008.26	41,550.14	44,852.24
N ₂ O emissions including N ₂ O from LULUCF	5,537.91	5,663.89	6,047.66	6,456.67	6,886.36	7,161.19	7,545.53	8,012.54	8,449.64	8,309.43
N ₂ O emissions excluding N ₂ O from LULUCF	5,535.83	5,662.60	6,045.75	6,455.15	6,882.94	7,156.65	7,544.23	8,010.34	8,442.87	8,308.85
HFCs	17.55	164.19	197.08	159.90	176.80	235.82	237.12	390.13	610.36	606.49
PFCs	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	87.17	567.27
SF ₆	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.45	0.15	0.03	0.02	0.11
Total (including LULUCF)	133,196.91	161,845.94	154,874.10	177,394.93	199,161.87	206,843.47	223,412.88	247,980.86	248,518.66	238,375.74
Total (excluding LULUCF)	145,529.79	171,963.93	162,697.72	182,906.61	202,318.51	209,837.55	226,270.86	250,695.54	250,960.30	240,848.18
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq	kt CO ₂ eq
1. Energy	119,403.39	144,113.45	133,559.41	152,094.00	169,478.00	175,084.43	190,447.95	213,943.62	212,439.66	201,458.40
2. Industrial Processes	8,835.40	10,226.43	10,861.47	11,526.37	12,348.09	13,216.26	13,258.11	13,073.31	13,902.54	14,383.47
							374 375			
3. Solvent and Other Product Use	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
3. Solvent and Other Product Use4. Agriculture	NA, NE 14,232.67	NA, NE 14,529.43	NA, NE 15,138.55	NA, NE 16,061.17	NA, NE 17,197.77	NA, NE 18,167.53	NA, NE 19,091.84	NA, NE 20,111.19	NA, NE 20,951.46	NA, NE 21,262.26
	. , , .	,		- '	,	,	,	. , .		. , .
4. Agriculture	14,232.67	14,529.43	15,138.55	16,061.17	17,197.77	18,167.53	19,091.84	20,111.19	20,951.46	21,262.26
 4. Agriculture 5. Land Use, Land-Use Change and Forestry^b 	14,232.67 -12,332.88	14,529.43 -10,117.98	15,138.55 -7,823.62	16,061.17 -5,511.68	17,197.77 -3,156.64	18,167.53 -2,994.08	19,091.84 -2,857.98	20,111.19 -2,714.68	20,951.46 -2,441.63	21,20

133,196.91 161,845.94 154,874.10 177,394.93 199,161.87 206,843.47 223,412.88 247,980.86 248,518.66 238,375.74

Note: All footnotes for this table are given on sheet 3.

Total (including LULUCF)

Emission trends: summary (1) (Sheet 3 of 3)

GREENHOUSE GAS EMISSIONS	2009	2010	2011	Change from base to latest reported year
	kt CO 2 eq	kt CO 2 eq	kt CO ₂ eq	(%)
CO ₂ emissions including net CO ₂ from LULUCF	204,310.23	223,747.28	211,622.79	-20.61
CO ₂ emissions excluding net CO ₂ from LULUCF	206,792.56	226,640.28	214,717.46	-20.10
CH ₄ emissions including CH ₄ from LULUCF	44,654.75	48,328.40	48,635.19	-33.67
CH ₄ emissions excluding CH ₄ from LULUCF	44,654.04	48,326.48	48,634.38	-33.68
N ₂ O emissions including N ₂ O from LULUCF	8,873.27	8,962.57	8,936.96	-45.24
N ₂ O emissions excluding N ₂ O from LULUCF	8,873.05	8,962.00	8,936.71	-45.24
HFCs	646.76	837.37	843.56	100.00
PFCs	678.93	1,201.50	1,328.41	100.00
SF ₆	3.31	NA, NO	NA, NO	0.00
Total (including LULUCF)	259,167.24	283,077.12	271,366.91	-23.82
Total (excluding LULUCF)	261,648.65	285,967.63	274,460.52	-23.42

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt CO ₂ eq	kt CO 2 eq	kt CO ₂ eq	(%)
1. Energy	222,221.59	244,609.22	231,802.61	-22.62
2. Industrial Processes	13,598.40	15,108.77	17,159.66	-4.23
3. Solvent and Other Product Use	NA, NE	NA, NE	NA, NE	0.00
4. Agriculture	21,987.11	22,295.96	21,432.69	-43.81
5. Land Use, Land-Use Change and Forestry ^b	-2,481.41	-2,890.50	-3,093.61	42.79
6. Waste	3,841.55	3,953.68	4,065.56	48.37
7. Other	NA	NA	NA	0.00
Total (including LULUCF)	259,167.24	283,077.12	271,366.91	-23.82

Notes:

- (1) 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 (CO_4)", "Emission trends (CO_4)" and "Emission trends (CO_4)", which is included in an annex to this biennial report.
- (2) 2011 is the latest reported inventory year.
- (3) 1 kt CO_2 eq equals 1 Gg CO_2 eq.

 $\label{eq:Abbreviation: LULUCF = land use, land-use change and forestry.}$

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

 $^{^{\}text{b}}\,$ Includes net CO $_2,$ CH $_4$ and N $_2O$ from LULUCF.

Table 1 (a)
Emission trends (CO₂)
(Sheet 1 of 3)

CREENHOUSE CAS SOURCE AND SINK CATECORIES	Base year a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	250,860.74	222,854.01	214,937.78	191,918.22	162,440.41	153,350.15	138,410.86	127,042.13	131,878.60
A. Fuel Combustion (Sectoral Approach)	244,844.47	216,681.31	208,922.18	186,573.13	157,715.30	148,570.33	133,102.77	121,099.38	125,896.54
1. Energy Industries	113,513.36	111,682.65	111,538.86	102,755.29	85,869.05	85,054.71	75,208.19	66,582.60	62,963.32
2. Manufacturing Industries and Construction	21,891.41	21,376.51	35,242.78	28,118.60	19,563.98	17,846.26	15,789.45	17,398.21	16,165.01
3. Transport	22,490.91	19,616.42	16,733.93	12,358.34	10,568.27	8,963.98	7,401.79	6,846.00	6,513.78
4. Other Sectors	51,747.99	48,072.06	42,809.90	41,105.40	38,162.96	32,445.62	31,175.29	25,550.00	18,649.24
5. Other	35,200.80	15,933.67	2,596.70	2,235.50	3,551.06	4,259.77	3,528.05	4,722.58	21,605.19
B. Fugitive Emissions from Fuels	6,016.27	6,172.71	6,015.60	5,345.09	4,725.10	4,779.82	5,308.09	5,942.75	5,982.06
1. Solid Fuels	169.06	164.38	162.03	142.06	132.75	105.47	108.56	105.07	106.53
2. Oil and Natural Gas	5,847.20	6,008.32	5,853.57	5,203.03	4,592.35	4,674.35	5,199.53	5,837.68	5,875.54
2. Industrial Processes	17,869.44	16,677.58	14,653.45	10,979.31	7,361.96	8,124.83	7,072.55	8,834.69	7,317.88
A. Mineral Products	5,955.81	5,385.50	4,756.77	3,228.78	2,186.76	2,041.39	1,757.30	1,677.18	1,444.46
B. Chemical Industry	1,588.67	1,398.21	1,112.87	528.23	270.14	349.89	334.98	188.43	96.39
C. Metal Production	10,324.96	9,893.87	8,783.80	7,222.31	4,905.06	5,733.54	4,980.27	6,969.08	5,777.03
D. Other Production	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Production of Halocarbons and SF6									
F. Consumption of Halocarbons and SF6									
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
4. Agriculture									
A. Enteric Fermentation									
B. Manure Management									
C. Rice Cultivation									
D. Agricultural Soils									
E. Prescribed Burning of Savannas									
F. Field Burning of Agricultural Residues									
G. Other									
5. Land Use, Land-Use Change and Forestry	-2,167.00	-2,123.00	-2,346.67	-2,566.67	-4,909.67	-7,300.33	-9,746.00	-12,184.33	-14,564.00
A. Forest Land	-1,774.67	-1,950.67	-2,368.67	-2,797.67	-3,564.00	-4,374.33	-5,239.67	-6,101.33	-6,959.33
B. Cropland	-11.00	58.67	132.00		165.00	128.33	88.00	47.67	99.00
C. Grassland	-381.33	-231.00	-110.00		-1,510.67	-3,054.33	-4,594.33	-6,130.67	-7,703.67
D. Wetlands	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
E. Settlements	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
F. Other Land	NO	NO	NO		NO	NO	NO	NO	NO
G. Other	NA		NA		NA	NA	NA	NA	NA
6. Waste	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
A. Solid Waste Disposal on Land	NA, NO	NA, NO	NA, NO		NA, NO				
B. Waste-water Handling	111,110	1112,110	1112,110	111,110	1112,110	1112,110	1111,110	1111,110	1112,110
C. Waste Incineration	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Other	NA NA		NA		NA	NA	NA	NA	NA
7. Other (as specified in the summary table in CRF)	NA NA		NA		NA	NA	NA	NA	NA
Total CO2 emissions including net CO2 from LULUCF	266,563.18		227,244.57		164,892.70	154,174.64	135,737.41	123,692.49	124,632.48
Total CO2 emissions excluding net CO2 from LULUCF	268,730.18		229,591.23		169,802.37	161,474.97	145,483.41	135,876.82	139,196.48
Memo Items:	200,730.10	237,331.39	227,371.23	202,071.33	107,002.37	101,7/4.7/	173,703.41	155,670.62	137,170.40
International Bunkers	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Aviation	NA, NE	NA, NE	NA, NE		NA, NE				
Aviation Marine									
	NA, NE	NA, NE	NA, NE		NA, NE				
Multilateral Operations	NO	NO	NO		NO	NO	NO	NO 526.01	NO
CO2 Emissions from Biomass	1,083.33	900.44	736.82	662.29	563.57	529.91	520.65	526.01	512.20

Table 1 (a)
Emission trends (CO₂)
(Sheet 2 of 3)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt									
1. Energy	101,016.29	123,072.49	115,945.06	133,240.15	147,692.40	152,607.90	167,748.51	189,634.18	187,099.38	173,333.91
A. Fuel Combustion (Sectoral Approach)	93,813.70	116,704.86	111,259.28	128,506.09	143,398.17	147,305.29	162,553.21	183,581.43	181,787.76	169,727.77
1. Energy Industries	48,892.05	55,547.75	58,808.24	62,494.28	69,324.81	79,938.30	83,236.20	87,225.65	84,671.04	80,686.88
2. Manufacturing Industries and Construction	19,304.86	21,524.46	23,070.40	24,706.74	25,939.16	23,009.01	25,394.57	27,193.80	28,361.30	26,497.92
3. Transport	5,827.12	9,141.29	10,352.43	12,527.12	13,787.77	11,438.73	13,168.26	17,663.20	20,298.72	21,936.69
4. Other Sectors	7,405.89	8,548.25	9,286.90	10,814.13	12,358.71	12,315.23	10,667.24	14,401.93	12,908.62	15,021.37
5. Other	12,383.76	21,943.12	9,741.31	17,963.82	21,987.72	20,604.01	30,086.92	37,096.85	35,548.07	25,584.91
B. Fugitive Emissions from Fuels	7,202.60	6,367.63	4,685.78	4,734.06	4,294.23	5,302.62	5,195.31	6,052.75	5,311.62	3,606.13
1. Solid Fuels	89.83	117.25	122.11	111.10	127.16	130.75	125.30	139.75	145.69	168.19
2. Oil and Natural Gas	7,112.77	6,250.37	4,563.67	4,622.96	4,167.06	5,171.86	5,070.01	5,913.00	5,165.93	3,437.95
2. Industrial Processes	8,791.70	10,033.99	10,635.22	11,337.20	12,141.50	12,949.63	12,992.19	12,652.60	13,169.95	13,178.71
A. Mineral Products	1,446.70	2,013.50	2,458.11	2,946.66	3,270.25	3,603.89	3,806.24	4,117.03	4,026.33	4,295.40
B. Chemical Industry	48.04	31.27	94.56	111.34	164.34	212.46	152.37	147.30	281.71	285.43
C. Metal Production	7,296.96	7,989.21	8,082.55	8,279.20	8,706.91	9,133.28	9,033.59	8,388.28	8,861.91	8,597.88
D. Other Production	NE									
E. Production of Halocarbons and SF6										
F. Consumption of Halocarbons and SF6										
G. Other	NA									
3. Solvent and Other Product Use	NA, NE									
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land Use, Land-Use Change and Forestry	-12,342.00	-10,123.67	-7,832.00	-5,518.33	-3,171.67	-3,014.00	-2,863.67	-2,724.33	-2,471.33	-2,475.00
A. Forest Land	-6,218.67	-5,569.67	-4,851.00	-4,106.67	-3,329.33	-3,083.67	-2,845.33	-2,610.67	-2,394.33	-2,702.33
B. Cropland	69.67	128.33	187.00	249.33	308.00	209.00	106.33	7.33	33.00	-69.67
C. Grassland	-6,193.00	-4,682.33	-3,168.00	-1,661.00	-150.33	-139.33	-124.67	-121.00	-110.00	297.00
D. Wetlands	NE, NO									
E. Settlements	NE, NO									
F. Other Land	NO									
G. Other	NA									
6. Waste	NA, NO	0.00	0.41	0.60						
A. Solid Waste Disposal on Land	NA, NO									
B. Waste-water Handling										
C. Waste Incineration	NO	0.00	0.41	0.60						
D. Other	NA									
7. Other (as specified in the summary table in CRF)	NA									
Total CO2 emissions including net CO2 from LULUCF	97,466.00	122,982.81	118,748.28	139,059.02	156,662.23	162,543.54	177,877.04	199,562.45	197,798.40	184,038.22
Total CO2 emissions excluding net CO2 from LULUCF	109,808.00	133,106.47	126,580.28	144,577.35	159,833.90	165,557.54	180,740.70	202,286.78	200,269.73	186,513.22
Memo Items:	-		-		-	-	-	-		
International Bunkers	NA, NE									
Aviation	NE									
Marine	NA, NE									
Multilateral Operations	NO									
A										

Emission trends (CO₂) (Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
1. Energy	194,544.56	213,591.11	199,754.18	
A. Fuel Combustion (Sectoral Approach)	191,135.83	210,868.42	197,166.29	-20.37
Fuel Combustion (Sectoral Approach) Energy Industries	87,330.84	95,404.38	93,657.17	-17.49
Manufacturing Industries and Construction	25,765.63	25,295.34	26,292.54	20.10
Transport	20,379.30	19,809.93	19,910.39	
4. Other Sectors	13,207.62	14,348.16	16,795.38	
5. Other	44,452.44	56,010.61	40,510.80	15.08
B. Fugitive Emissions from Fuels	3,408.73	2,722.69	2,587.89	-56.99
Fugitive Emissions from Fuers Solid Fuels	149.08	174.46	181.17	7.16
Solid Fuels Oil and Natural Gas	3,259.65	2,548.23	2,406.73	-58.84
2. Industrial Processes	12,242.60	13,043.37	14,959.73	-36.84
A. Mineral Products	3,670.99			
A. Mineral Products B. Chemical Industry	3,670.99	4,133.54 243.10	5,360.16 273.53	-10.00 -82.78
C. Metal Production	8,318.94	8,666.72	9,326.04	-82.78 -9.67
D. Other Production	8,318.94 NE	8,000.72 NE	9,320.04 NE	0.00
E. Production of Halocarbons and SF6	NE	NE	NE	0.00
F. Consumption of Halocarbons and SF6				
G. Other	NA	NA	NA	0.00
3. Solvent and Other Product Use				0.00
4. Agriculture	NA, NE	NA, NE	NA, NE	0.00
A. Enteric Fermentation				
B. Manure Management				
C. Rice Cultivation				
D. Agricultural Soils				
E. Prescribed Burning of Savannas				
F. Field Burning of Agricultural Residues				
G. Other				
5. Land Use, Land-Use Change and Forestry	-2,482.33	-2,893.00	-3,094.67	42.81
A. Forest Land	-3,025.00	-3,058.00	-3,215.67	81.20
B. Cropland	-58.67	-58.67	-5,213.07 NE, NO	
C. Grassland	601.33	223.67	121.00	
D. Wetlands	NE, NO	NE, NO	NE, NO	
E. Settlements	NE, NO	NE, NO	NE, NO	0.00
F. Other Land	NE, NO	NE, NO	NO NO	0.00
G. Other	NA	NA NA	NA NA	
6. Waste	5.40	5.79	3.55	100.00
A. Solid Waste Disposal on Land	NA, NO	NA, NO	NA, NO	0.00
B. Waste-water Handling	IVA, IVO	IVA, IVO	IVA, NO	0.00
C. Waste Incineration	5.40	5.79	3.55	100.00
D. Other	3.40 NA	NA	3.33 NA	0.00
7. Other (as specified in the summary table in CRF)	NA NA	NA NA	NA NA	0.00
Total CO2 emissions including net CO2 from LULUCF	204,310.23	223,747.28	211,622.79	-20.61
Total CO2 emissions excluding net CO2 from LULUCF	206,792.56	226,640.28	214,717.46	-20.01
Memo Items:	200,192.30	220,040.20	217,/1/.40	-20.10
International Bunkers	508.10	458.01	397.95	100.00
Aviation	508.10	458.01	397.95	100.00
Marine	NA, NE	NA, NE	NA, NE	0.00
Multilateral Operations	NA, NE	NA, NE NO	NA, NE	0.00
CO2 Emissions from Biomass	459.97	511.41	495.34	

 $\label{lem:abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and forestry.$

^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 Conference 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 (+).

Emission trends (CH₄) (Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ^a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	2,278.30	2,250.29	2,119.75	1,815.67	1,600.23	1,268.97	1,169.96	1,059.15	999.32
A. Fuel Combustion (Sectoral Approach)	61.87	52.90	58.81	50.46	41.32	37.33	35.70	34.61	32.38
1. Energy Industries	1.87	1.82	1.61	1.45	1.18	1.19	1.06	0.94	0.89
2. Manufacturing Industries and Construction	1.58	1.56	2.63	2.08	1.46	1.32	1.17	1.27	1.20
3. Transport	5.98	4.98	4.64	3.59	3.06	2.55	2.12	1.90	1.80
4. Other Sectors	49.36	43.00	49.77	43.19	35.44	32.07	31.17	30.29	27.00
5. Other	3.08	1.53	0.16	0.15	0.18	0.20	0.18	0.21	1.49
B. Fugitive Emissions from Fuels	2,216.43	2,197.39	2,060.93	1,765.22	1,558.91	1,231.64	1,134.26	1,024.54	966.94
1. Solid Fuels	1,782.44	1,749.88	1,666.51	1,461.86	1,328.26	973.03	890.39	878.05	828.89
2. Oil and Natural Gas	433.99	447.51	394.43	303.36	230.65	258.60	243.87	146.49	138.05
2. Industrial Processes	2.26	2.09	1.80	1.40	0.93	0.93	0.90	1.11	1.05
A. Mineral Products	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Chemical Industry	2.26	2.09	1.80	1.40	0.93	0.93	0.90	1.11	1.05
C. Metal Production	IE, NA, NE,			IE, NA, NE,					
S. 1754 1754 1754 1754 1754 1754 1754 1754	NO NO	NO	NO	NO NO	NO	NO	NO	NO	NO
D. Other Production									
E. Production of Halocarbons and SF6									
F. Consumption of Halocarbons and SF6									
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use									
4. Agriculture	1,099.26	1,074.17	1,044.44	1,034.67	847.00	721.96	558.92	453.73	427.25
A. Enteric Fermentation	1,017.73	994.74	967.04	959.28	782.04	666.24	515.06	417.62	393.53
B. Manure Management	74.09	72.29	70.50	68.91	58.84	49.96	38.45	31.07	29.04
C. Rice Cultivation	7.44	7.14	6.90	6.48	6.12	5.76	5.40	5.04	4.68
D. Agricultural Soils	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
E. Prescribed Burning of Savannas	NA	NA	NA	NA	NA	NA	NA	NA	NA
F. Field Burning of Agricultural Residues	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
5. Land Use, Land-Use Change and Forestry	0.02	0.02	0.02	0.01	0.07	0.33	0.15	2.96	0.20
A. Forest Land	0.02	0.02		0.01	0.07	0.33	0.15	2.96	0.20
B. Cropland	NO	NO	NO	NO	NO		NO	NO	NO
C. Grassland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO		NE, NO	NE, NO	NE, NO
D. Wetlands	NO	NO		NO	NO			NO	NO
E. Settlements	NE. NO	NE, NO	NE, NO	NE. NO	NE, NO		NE, NO	NE, NO	NE, NO
F. Other Land	NE, NO	NE, NO		NE, NO	NE, NO		NE, NO	NE, NO	NO
G. Other	NE	NE, NE			NE NE			NE NE	NE
6. Waste	111.98	115.60			125.11	127.39	128.67	130.84	130.64
A. Solid Waste Disposal on Land	111.98	115.60			125.11	127.39	128.67	130.84	130.64
B. Waste-water Handling	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO		NA, NO	NA, NO	NA, NO
C. Waste Incineration	NA, NO	NA, NO NO			NA, NO NO			NA, NO NO	NA, NO NO
D. Other	NA NA	NA NA			NA NA		NA NA	NA NA	NA NA
7. Other (as specified in the summary table in CRF)	NA NA	NA NA			NA NA			NA NA	NA NA
Total CH4 emissions including CH4 from LULUCF					2,573.34				
	3,491.82	3,442.17	3,285.35	2,974.31		2,119.58	1,858.59	1,647.79	1,558.46
Total CH4 emissions excluding CH4 from LULUCF	3,491.80	3,442.14	3,285.33	2,974.30	2,573.27	2,119.25	1,858.44	1,644.83	1,558.25
Memo Items:	NT A NTT	NIA NIE	NIA NIE	NIA NIE	NIA NIE	NIA NIE	NIA NIE	NIA NID	NIA NIE
International Bunkers	NA, NE	NA, NE			NA, NE		NA, NE	NA, NE	NA, NE
Aviation	NE NE	NE NE			NE NE			NE NE	NE
Marine	NA, NE	NA, NE			NA, NE		NA, NE	NA, NE	NA, NE
Multilateral Operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 Emissions from Biomass									

Table 1(b)
Emission trends (CH₄)
(Sheet 2 of 3)

CDEENHOUGE CAC COURCE AND SINU CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt							
1. Energy	858.57	981.66	818.85	875.96	1,013.10	1,045.10	1,053.63	1,128.42	1,176.31	1,311.56
A. Fuel Combustion (Sectoral Approach)	15.64	16.63	18.44	19.79	22.67	28.18	23.44	24.05	26.48	28.96
1. Energy Industries	0.66	0.79	0.80	0.94	1.05	1.23	1.36	1.28	1.22	1.22
2. Manufacturing Industries and Construction	1.50	1.61	1.68	1.71	1.76	1.71	1.87	2.18	2.46	2.25
3. Transport	1.78	2.27	2.46	3.00	3.23	3.17	3.80	4.62	5.38	6.15
4. Other Sectors	10.71	10.12	12.78	13.09	15.29	21.03	14.57	13.96	14.92	18.00
5. Other	0.99	1.86	0.71	1.05	1.34	1.04	1.83	2.02	2.50	1.34
B. Fugitive Emissions from Fuels	842.93	965.03	800.41	856.17	990.43	1,016.91	1,030.19	1,104.37	1,149.83	1,282.60
1. Solid Fuels	695.94	807.72	610.12	674.28	782.52	772.65	752.72	815.40	827.91	944.15
2. Oil and Natural Gas	146.99	157.31	190.29	181.89	207.90	244.27	277.47	288.97	321.91	338.45
2. Industrial Processes	1.25	1.35	1.39	1.39	1.42	1.45	1.36	1.45	1.67	1.47
A. Mineral Products	NO	NO	NO							
B. Chemical Industry	1.25	1.35	1.39	1.39	1.42	1.45	1.36	1.45	1.67	1.47
C. Metal Production	IE, NA, NE, NO		IE, NA, NO							
D. Other Production					2,0			2.0	2,0	
E. Production of Halocarbons and SF6										
F. Consumption of Halocarbons and SF6										
G. Other	NA	NA	NA							
3. Solvent and Other Product Use										
4. Agriculture	445.70	457.74	468.74	497.07	534.07	568.72	597.90	626.74	647.87	666.67
A. Enteric Fermentation	411.58	422.24	432.29	458.74	492.26	525.54	553.07	580.23	600.07	618.61
B. Manure Management	29.72	30.85	32.16	34.25	36.75	38.30	39.69	41.23	42.52	43.50
C. Rice Cultivation	4.40	4.65	4.29	4.08	5.06	4.88	5.14	5.28	5.28	4.56
D. Agricultural Soils	NA, NE	NA, NE	NA, NE							
E. Prescribed Burning of Savannas	NA	NA	NA		NA	NA	NA	NA		NA
F. Field Burning of Agricultural Residues	NA, NO		NA, NO							
G. Other	NA	NA	NA							
5. Land Use, Land-Use Change and Forestry	0.34	0.21	0.31	0.24	0.55	0.73	0.21	0.35		0.09
A. Forest Land	0.34	0.21	0.31	0.24	0.55	0.73	0.21	0.35		0.09
B. Cropland	NO	NO	NO							
C. Grassland	NE, NO	NE, NO	NE, NO							
D. Wetlands	NO	NO	NO		NO	NO	NO	NO		NO
E. Settlements	NE, NO	NE, NO	NE, NO		NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
F. Other Land	NO	NO	NO							
G. Other	NE	NE	NE							
6. Waste	131.08	132.14	133.63	135.77	138.31	141.27	144.66	148.54	152.73	156.12
A. Solid Waste Disposal on Land	131.08	132.14	133.63	135.77	138.31	141.27	144.66	148.54	152.73	156.12
B. Waste-water Handling	NA, NO	NA, NO	NA, NO							
C. Waste Incineration	NO	NO	NO							
D. Other	NA	NA	NA							
7. Other (as specified in the summary table in CRF)	NA	NA	NA							
Total CH4 emissions including CH4 from LULUCF	1,436.93	1,573.10	1,422.91	1,510.45	1,687.45	1,757.26		1,905.51	1,979.67	2,135.92
Total CH4 emissions excluding CH4 from LULUCF	1,436.59	1,572.89	1,422.60	1,510.20	1,686.90	1,756.53	1,797.56	1,905.16		2,135.82
Memo Items:			, ,		, 1		, ,		, ,	,
International Bunkers	NA, NE	NA, NE	NA, NE							
Aviation	NE	NE			NE	NE	NE	NE		NE
Marine	NA, NE	NA, NE			NA, NE	NA, NE		NA, NE		NA, NE
Multilateral Operations	NO	NO	NO		NO	NO	NO	NO		NO
CO2 Emissions from Biomass										

Table 1(b) KAZ_BR1_v2.0

Emission trends (CH₄) (Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
1. Energy	1,285.92	1,442.22	1,494.01	-34.42
A. Fuel Combustion (Sectoral Approach)	31.08	33.34	40.43	-34.66
1. Energy Industries	1.21	1.33	1.28	-31.66
2. Manufacturing Industries and Construction	2.25	2.16	2.26	
3. Transport	5.90	6.02	5.80	-2.98
4. Other Sectors	18.29	19.56	27.68	-43.93
5. Other	3.43	4.27	3.42	10.86
B. Fugitive Emissions from Fuels	1,254.84	1,408.88	1,453.59	-34.42
1. Solid Fuels	941.08	1,066.46	1,082.64	-39.26
2. Oil and Natural Gas	313.76	342.42	370.95	-14.53
2. Industrial Processes	1.28	1.26	1.33	-40.99
A. Mineral Products	NO	NO	NO	0.00
B. Chemical Industry	1.28	1.26	1.33	-40.99
C. Metal Production	IE, NA, NO	IE, NA, NO	IE, NA, NO	0.00
D. Other Production				
E. Production of Halocarbons and SF6				
F. Consumption of Halocarbons and SF6				
G. Other	NA	NA	NA	0.00
3. Solvent and Other Product Use				
4. Agriculture	678.93	692.77	650.46	-40.83
A. Enteric Fermentation	629.57	642.28	603.28	-40.72
B. Manure Management	44.14	44.85	41.60	-43.85
C. Rice Cultivation	5.22	5.64	5.58	-25.00
D. Agricultural Soils	NA, NE	NA, NE	NA, NE	0.00
E. Prescribed Burning of Savannas	NA	NA	NA	0.00
F. Field Burning of Agricultural Residues	NA, NO	NA, NO	NA, NO	0.00
G. Other	NA	NA	NA	0.00
5. Land Use, Land-Use Change and Forestry	0.03	0.09	0.04	135.29
A. Forest Land	0.03	0.09	0.04	135.29
B. Cropland	NO	NO	NO	0.00
C. Grassland	NE, NO	NE, NO	NE, NO	0.00
D. Wetlands	NO	NO	NO	0.00
E. Settlements	NE, NO	NE, NO	NE, NO	0.00
F. Other Land	NO	NO	NO	0.00
G. Other	NE	NE	NE	0.00
6. Waste	160.25	165.01	170.12	51.92
A. Solid Waste Disposal on Land	160.25	165.01	170.12	51.92
B. Waste-water Handling	NA, NO	NA, NO	NA, NO	0.00
C. Waste Incineration	NO	NO	NO	0.00
D. Other	NA	NA	NA	0.00
7. Other (as specified in the summary table in CRF)	NA	NA	NA	0.00
Total CH4 emissions including CH4 from LULUCF	2,126.42	2,301.35	2,315.96	-33.67
Total CH4 emissions excluding CH4 from LULUCF	2,126.38	2,301.26	2,315.92	-33.68
Memo Items:				
International Bunkers	0.00	0.00	0.00	100.00
Aviation	0.00	0.00	0.00	100.00
Marine	NA, NE	NA, NE	NA, NE	0.00
Multilateral Operations	NO	NO	NO	0.00
CO2 Emissions from Biomass				

 $Abbreviations: \ CRF = common\ reporting\ format,\ LULUCF = land\ use,\ land-use\ change\ and\ forested and land-use change are land-use change and land-use change are land-use change and land-use change are land-use change$

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

Table 1(c)Emission trends (N₂O) (Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	2.81	2.52	2.42	2.17	1.85	1.78	1.61	1.43	1.46
A. Fuel Combustion (Sectoral Approach)	2.81	2.52	2.42	2.17	1.85	1.78	1.61	1.43	1.46
1. Energy Industries	1.40	1.38	1.43	1.32	1.13	1.11	0.98	0.87	0.82
2. Manufacturing Industries and Construction	0.21	0.20	0.35	0.28	0.20	0.18	0.16	0.18	0.17
3. Transport	0.11	0.11	0.09	0.06	0.05	0.05	0.04	0.04	0.04
4. Other Sectors	0.68	0.64	0.53	0.49	0.44	0.40	0.39	0.31	0.21
5. Other	0.41	0.19	0.02	0.02	0.03	0.04	0.03	0.04	0.23
B. Fugitive Emissions from Fuels	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
1. Solid Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
2. Oil and Natural Gas	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
2. Industrial Processes	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
A. Mineral Products	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Chemical Industry	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C. Metal Production	NA	NA	NA	NA	NA	NA	NA	NA	NA
D. Other Production									
E. Production of Halocarbons and SF6									
F. Consumption of Halocarbons and SF6									
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
4. Agriculture	48.58	44.93	47.31	41.05	32.22	25.68	20.04	16.35	14.63
A. Enteric Fermentation									
B. Manure Management	18.32	18.03	17.72	17.48	14.45	12.07	9.25	7.51	7.03
C. Rice Cultivation									
D. Agricultural Soils	30.26	26.90	29.59	23.56	17.77	13.61	10.78	8.84	7.60
E. Prescribed Burning of Savannas	NA	. NA	NA	. NA	NA	NA	NA	NA	NA
F. Field Burning of Agricultural Residues	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
G. Other	NA	NA	NA	. NA	NA	NA	NA	NA	NA
5. Land Use, Land-Use Change and Forestry	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.06	0.00
A. Forest Land	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.06	0.00
B. Cropland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
C. Grassland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
F. Other Land	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	1.25	1.35	1.44	1.48	1.54	1.39	1.37	1.35	1.12
A. Solid Waste Disposal on Land									
B. Waste-water Handling	1.25	1.35	1.44	1.48	1.54	1.39	1.37	1.35	1.12
C. Waste Incineration	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Other	NA	. NA	NA	. NA	NA	NA	NA	NA	NA
7. Other (as specified in the summary table in CRF)	NA	. NA	NA	. NA	NA		NA	NA	NA
Total N2O emissions including N2O from LULUCF	52.64	48.80	51.17	44.70	35.61	28.86	23.01	19.19	17.21
Total N2O emissions excluding N2O from LULUCF	52.64	48.80			35.61	28.85	23.01	19.13	17.21
Memo Items:									
International Bunkers	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
Aviation	NE						NE	·	NE
Marine	NA, NE						NA, NE		
Multilateral Operations	NO						NO	·	NO
CO2 Emissions from Biomass									

Table 1(c) Emission trends (N_2O) (Sheet 2 of 3)

CREENHOUSE CAS SOURCE AND SINU CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt									
1. Energy	1.15	1.37	1.35	1.48	1.65	1.71	1.85	1.98	2.06	1.88
A. Fuel Combustion (Sectoral Approach)	1.15	1.37	1.35	1.48	1.65	1.71	1.85	1.98	2.06	1.88
1. Energy Industries	0.63	0.72	0.78	0.80	0.89	1.03	1.04	1.10	1.09	1.03
2. Manufacturing Industries and Construction	0.25	0.27	0.29	0.30	0.32	0.30	0.31	0.34	0.37	0.35
3. Transport	0.02	0.04	0.05	0.06	0.06	0.06	0.06	0.08	0.09	0.11
4. Other Sectors	0.10	0.10	0.12	0.14	0.16	0.15	0.13	0.14	0.14	0.16
5. Other	0.15	0.25	0.11	0.18	0.22	0.17	0.30	0.32	0.36	0.22
B. Fugitive Emissions from Fuels	NA, NE, NO									
1. Solid Fuels	NA, NO									
2. Oil and Natural Gas	NA, NE, NO									
2. Industrial Processes	NA, NO									
A. Mineral Products	NO									
B. Chemical Industry	NA, NO									
C. Metal Production	NA	NA	. NA	NA	NA	NA	NA	NA	NA	NA
D. Other Production										
E. Production of Halocarbons and SF6										
F. Consumption of Halocarbons and SF6										
G. Other	NA	NA	. NA	NA	NA	. NA	NA	NA	NA	NA
3. Solvent and Other Product Use	NA, NE									
4. Agriculture	15.72	15.86	17.08	18.14	19.30	20.08	21.08	22.42	23.70	23.43
A. Enteric Fermentation										
B. Manure Management	7.17	7.44	7.75	8.26	8.82	9.25	9.61	10.08	10.40	10.68
C. Rice Cultivation										
D. Agricultural Soils	8.55	8.42	9.33	9.88	10.48	10.83	11.47	12.34	13.30	12.74
E. Prescribed Burning of Savannas	NA									
F. Field Burning of Agricultural Residues	NA, NO									
G. Other	NA									
5. Land Use, Land-Use Change and Forestry	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.01	0.02	0.00
A. Forest Land	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.01	0.02	0.00
B. Cropland	NE, NO									
C. Grassland	NE, NO									
D. Wetlands	NO									
E. Settlements	NE, NO									
F. Other Land	NO									
G. Other	NE									
6. Waste	0.99	1.03	1.07	1.21	1.26	1.30	1.40	1.45	1.48	1.50
A. Solid Waste Disposal on Land										
B. Waste-water Handling	0.99	1.03	1.07	1.21	1.26	1.30	1.40	1.45	1.48	1.50
C. Waste Incineration	NO									
D. Other	NA	NA	. NA	NA	NA	NA	NA	NA	NA	NA
7. Other (as specified in the summary table in CRF)	NA									
Total N2O emissions including N2O from LULUCF	17.86	18.27	19.51	20.83	22.21	23.10	24.34	25.85	27.26	26.80
Total N2O emissions excluding N2O from LULUCF	17.86	18.27	19.50	20.82	22.20	23.09	24.34	25.84	27.24	26.80
Memo Items:										
International Bunkers	NA, NE									
Aviation	NE									
Marine	NA, NE									
Multilateral Operations	NO									
CO2 Emissions from Biomass										

Emission trends (N₂O) (Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009 kt	2010	2011	Change from base to latest reported year
1 Enouge	2.17	2.36	2.17	-22.61
1. Energy A. Fuel Combustion (Sectoral Approach)	2.17	2.36	2.17	-22.61
Fuel Combustion (Sectoral Approach) Energy Industries	1.12	1.21	1.19	-14.97
Manufacturing Industries and Construction	0.35	0.33	0.35	69.92
3. Transport	0.11	0.33	0.33	-6.07
4. Other Sectors	0.16	0.16	0.20	
5. Other	0.44	0.10	0.20	
B. Fugitive Emissions from Fuels			NA, NE, NO	0.00
-				
1. Solid Fuels	NA, NO	NA, NO	NA, NO	0.00
2. Oil and Natural Gas	NA, NE, NO	NA, NE, NO	NA, NE, NO	0.00
2. Industrial Processes	NA, NO	NA, NO	NA, NO	0.00
A. Mineral Products	NO	NO	NO	0.00
B. Chemical Industry	NA, NO	NA, NO	NA, NO	0.00
C. Metal Production	NA	NA	NA	0.00
D. Other Production				
E. Production of Halocarbons and SF6				
F. Consumption of Halocarbons and SF6				
G. Other	NA	NA	NA	0.00
3. Solvent and Other Product Use	NA, NE	NA, NE	NA, NE	0.00
4. Agriculture	24.93	24.99	25.07	-48.39
A. Enteric Fermentation				
B. Manure Management	10.92	11.12	10.50	-42.66
C. Rice Cultivation				
D. Agricultural Soils	14.01	13.87	14.57	-51.85
E. Prescribed Burning of Savannas	NA	NA	NA	0.00
F. Field Burning of Agricultural Residues	NA, NO	NA, NO	NA, NO	0.00
G. Other	NA	NA	NA	0.00
5. Land Use, Land-Use Change and Forestry	0.00	0.00	0.00	135.29
A. Forest Land	0.00	0.00	0.00	135.29
B. Cropland	NE, NO	NE, NO	NE, NO	0.00
C. Grassland	NE, NO	NE, NO	NE, NO	0.00
D. Wetlands	NO	NO	NO	0.00
E. Settlements	NE, NO	NE, NO	NE, NO	0.00
F. Other Land	NO	NO	NO	0.00
G. Other	NE	NE	NE	
6. Waste	1.52	1.56	1.58	25.98
A. Solid Waste Disposal on Land				
B. Waste-water Handling	1.52	1.56	1.58	
C. Waste Incineration	NO	NO	NO	0.00
D. Other	NA	NA	NA	0.00
7. Other (as specified in the summary table in CRF)	NA 20.62	NA	NA 20.02	0.00
Total N2O emissions including N2O from LULUCF	28.62	28.91	28.83	-45.24
Total N2O emissions excluding N2O from LULUCF	28.62	28.91	28.83	-45.24
Memo Items:	0.00	0.00	0.01	100.00
International Bunkers	0.02	0.02	0.01	100.00
Aviation	0.02	0.02	0.01	100.00
Marine Multilatoral Operations	NA, NE	NA, NE	NA, NE	
Multilateral Operations CO2 Emissions from Biomass	NO	NO	NO	0.00

 $\label{eq:Abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and fc} Abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and fc}$

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

Table 1(d)
Emission trends (HFCs, PFCs and SF₆)
(Sheet 1 of 3)

CREENWOUGH CAS SOURCE AND SINK CATEGORIES	Base year ^a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
Emissions of HFCsc - (kt CO2 eq)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.21	0.40	0.40	42.51
HFC-23	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-32	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-41	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
HFC-125	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-134	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-134a	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.00	0.00	0.00	0.03
HFC-152a	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-143	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	NA, NO	NA, NO	NA, NO
HFC-227ea	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-236fa	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-245ca	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Unspecified mix of listed HFCsd - (kt CO ₂ eq)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Emissions of PFCsc - (kt CO2 eq)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
CF ₄	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_2F_6	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C 3F8	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_4F_{10}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
c-C ₄ F ₈	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_5F_{12}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_6F_{14}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Unspecified mix of listed PFCs(4) - (Gg CO ₂ equivalent)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Emissions of SF6(3) - (Gg CO2 equivalent)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
SF ₆	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO

Table 1(d)
Emission trends (HFCs, PFCs and SF₆)
(Sheet 2 of 3)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt									
Emissions of HFCsc - (kt CO2 eq)	17.55	164.19	197.08	159.90	176.80	235.82	237.12	390.13	610.36	606.49
HFC-23	NA, NO									
HFC-32	NA, NO	0.00	0.00							
HFC-41	NA, NO									
HFC-43-10mee	NA, NO									
HFC-125	NA, NO	0.03	0.03							
HFC-134	NA, NO									
HFC-134a	0.01	0.13	0.15	0.12	0.14	0.18	0.18	0.30	0.32	0.32
HFC-152a	NA, NO									
HFC-143	NA, NO									
HFC-143a	NA, NO	0.03	0.03							
HFC-227ea	NA, NO									
HFC-236fa	NA, NO									
HFC-245ca	NA, NO									
Unspecified mix of listed HFCsd - (kt CO ₂ eq)	NA, NO									
Emissions of PFCsc - (kt CO2 eq)	NA, NO	87.17	567.27							
CF ₄	NA, NO	0.01	0.07							
C_2F_6	NA, NO	0.00	0.01							
C 3F8	NA, NO									
C_4F_{10}	NA, NO									
$c-C_4F_8$	NA, NO									
C_5F_{12}	NA, NO									
C_6F_{14}	NA, NO									
Unspecified mix of listed PFCs(4) - (Gg CO ₂ equivalent)	NA, NO									
Emissions of SF6(3) - (Gg CO2 equivalent)	NA, NO	0.45	0.15	0.03	0.02	0.11				
SF ₆	NA, NO	0.00	0.00	0.00	0.00	0.00				

Emission trends (HFCs, PFCs and SF₆) (Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		2009	2010	2011	Change from base to latest reported year
	-	kt	kt	kt	%
Emissions of HFCsc - (kt CO2 eq)		646.76	837.37	843.56	100.00
HFC-23		NA, NO	NA, NO	NA, NO	0.00
HFC-32		0.01	0.01	0.03	100.00
HFC-41		NA, NO	NA, NO	NA, NO	0.00
HFC-43-10mee		NA, NO	NA, NO	NA, NO	0.00
HFC-125		0.04	0.06	0.06	100.00
HFC-134		NA, NO	NA, NO	NA, NO	0.00
HFC-134a		0.32	0.35	0.38	100.00
HFC-152a		NA, NO	NA, NO	NA, NO	0.00
HFC-143		NA, NO	NA, NO	NA, NO	0.00
HFC-143a		0.03	0.05	0.04	100.00
HFC-227ea		NA, NO	NA, NO	NA, NO	0.00
HFC-236fa		NA, NO	NA, NO	NA, NO	0.00
HFC-245ca		NA, NO	NA, NO	NA, NO	0.00
Unspecified mix of listed HFCsd - (kt CO ₂ eq)		NA, NO	NA, NO	NA, NO	0.00
Emissions of PFCsc - (kt CO2 eq)		678.93	1,201.50	1,328.41	100.00
CF ₄		0.09	0.15	0.17	100.00
C_2F_6		0.01	0.02	0.02	100.00
C 3F8		NA, NO	NA, NO	NA, NO	0.00
C_4F_{10}		NA, NO	NA, NO	NA, NO	0.00
c-C ₄ F ₈		NA, NO	NA, NO	NA, NO	0.00
C_5F_{12}		NA, NO	NA, NO	NA, NO	0.00
C_6F_{14}		NA, NO	NA, NO	NA, NO	0.00
Unspecified mix of listed PFCs(4) - (Gg CO ₂ equivalent)		NA, NO	NA, NO	NA, NO	0.00
Emissions of SF6(3) - (Gg CO2 equivalent)		3.31	NA, NO	NA, NO	0.00
SF ₆		0.00	NA, NO	NA, NO	0.00

Abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and forestry.

^cEnter 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 CO2 equivalent emissions.

^dIn 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 HFCs and PFCs, respectively. Note that the unit used for this row is kt of CO2 equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.)

Documentation Box:

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

Table 2(a) KAZ_BR1_v2.0

Description of quantified economy-wide emission reduction target: base year^a

Party	Tazakhstan		
Base year /base period	1990		
Emission reduction target	% of base year/base period	% of 1990 ^b	
	85.00		
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.

^b Optional.

Table 2(b) KAZ_BR1_v2.0

Description of quantified economy-wide emission reduction target: gases and sectors ${\bf covered}^a$

Ga	ses covered	Base year for each gas (year):
CO ₂		1990
CH ₄		1990
N_2O		1990
HFCs		1995
PFCs		1995
SF ₆		1995
NF ₃		NA
Other Gases (specify)		
Sectors covered ^b	Energy	Yes
'	Transport ^f	Yes
	Industrial processes ^g	Yes
	Agriculture	Yes
	LULUCF	Yes
	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.

Table 2(c) KAZ_BR1_v2.0

Description of quantified economy-wide emission reduction target: global warming potential values $(GWP)^a$

Gases	GWP values ^b			
CO ₂	2nd AR			
CH ₄	2nd AR			
N_2O	2nd AR			
HFCs	2nd AR			
PFCs	2nd AR			
SF ₆	2nd AR			
NF ₃	2nd AR			
Other Gases (specify)				

Abbreviations: GWP = global warming potential

^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.

Table 2(d) KAZ_BR1_v2.0

Description of quantified economy-wide emission reduction target: approach to counting emissions and removals from the LULUCF sector a

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.

^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.

Table 2(e)I KAZ_BR1_v2.0

Description of quantified economy-wide emission reduction target: market-based mechanisms under the $Convention^a$

Market-based mechanisms	Possible scale of contributions			
under the Convention	(estimated kt CO 2 eq)			
CERs				
ERUs				
AAUs ⁱ				
Carry-over units ^j				
Other mechanism units under the Convention (specify) ^d				

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

^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.

Table 2(e)II KAZ_BR1_v2.0

Description of quantified economy-wide emission reduction target: other market-based mechanisms^a

Other market-based mechanisms	Possible scale of contributions
(Specify)	(estimated kt CO 2 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.

ription of quantified economy-wide emission reduction target: any other information ^{a,b}				

KAZ_BR1_v2.0

Custom Footnotes

Table 2(f)

^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 This information could include information on the domestic legal status of the target or the total assigned amount of emission units for the period for reaching a target. Some of this information is presented in the narrative part of the biennial report.

Table 3

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

KAZ BR1 v2.

Name of mitigation action ^a	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO ₂ eq)		
energy intensity	Energy, Industry/industria 1 processes		25 % of energy efficiency reduction compared to 2008 level	Regulatory	Adopted	Strategic Development Plan of Kazakhstan until 2020 defined the tasks, activities and targets to reduce GHG emissions, energy efficiency and development of renewable energy in the strategic plans of the ministries and local authorities.	2008	Ministry of Iindustry and New Technologies (after August of 2014 - Ministry of Energy and Ministry of Invensments and Development), local authorities.		313.70	
Development of small hydropower plants, wind energy and the increased use of solar energy, building of nuclear power plant	Energy		With regard to the implementation of measures for the development of alternative energy sources it is expected to increase their share in total energy consumption to more than 3% in 2020, it is also planned to increase the share of renewable energy sources to 1.5% by 2015. The Strategic Development Plan of Kazakhstan until 2020, also provides the implementation of the necessary incentives for the development of wind, solar and geothermal energy.	Regulatory	Planned	Local executive authorities (akimates) of regions and limited liability partnerships are responsible for the implementation of RES (Renewable energy sources) projects. For the purpose of power plants construction the funds of investors will be involved. In addition, the government is going to subsidize the installation of wind farms by farmers. In particular, financial support is established to the individuals who do not have connection to a power supply system – subsidizing of a half of cost of installation with a power up to 5 kWh will be carried out at the expense of budgetary funds.	2013	Before August of 2014 the implementig Agency was the Ministry of Industry and New Technologies, (after - Ministry of Energy and Ministry of Investments and Development), and local authorities			

Note: The two final columns specify the year identified by the Party for estimating impacts (based on the status of the measure and whether an expost or ex ante estimation is available). *Abbreviations*: GHG = greenhouse gas; LULUCF = land use, land-use change and forestry.

^a Parties should use an asterisk (*) to indicate that a mitigation action is included in the 'with measures' projection.

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

^c To the extent possible, the following types of instrument should be used: economic, fiscal, voluntary agreement, regulatory, information, education, research, other.

^d To the extent possible, the following descriptive terms should be used to report on the status of implementation: implemented, adopted, planned.

^e Additional information may be provided on the cost of the mitigation actions and the relevant timescale.

 $^{^{\}it f}$ Optional year or years deemed relevant by the Party.

Table 4 KAZ_BR1_v2.0

Reporting on progress^{a, b}

	Total emissions excluding LULUCF	Contribution from LULUCF ^d	Quantity of units from market based mechanisms under the Convention		Quantity of units from mecha	
Year ^c	(kt CO ₂ eq)	(kt CO ₂ eq)	(number of units) (kt CO 2 eq)		(number of units)	(kt CO ₂ eq)
(1990)						
2010						
2011						
2012						

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.

Table 4(a)I

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 $^{\rm a,b}$

	Net GHG emissions/removals from LULUCF categories c	Base year/period or reference level value ^d	Contribution from LULUCF for reported year	Cumulative contribution from LULUCF ^e	Accounting approach f
		(kt CO 2 eq	<i>q)</i>		
Total LULUCF					
A. Forest land					
1. Forest land remaining forest land					
2. Land converted to forest land					
3. Other ^g					
B. Cropland					
1. Cropland remaining cropland					_
2. Land converted to cropland					
3. Other ^g					
C. Grassland					
1. Grassland remaining grassland					
2. Land converted to grassland					
3. Other ^g					
D. Wetlands					
1. Wetland remaining wetland					
2. Land converted to wetland					
3. Other ^g					
E. Settlements					
1. Settlements remaining settlements					
2. Land converted to settlements					
3. Other ^g					
F. Other land					
1. Other land remaining other land					
2. Land converted to other land					
3. Other ^g					
Harvested wood products					

Abbreviations: 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 Parties that use the LULUCF approach that is based on table 1 do not need to complete this table, but should indicate the approach in table 2. Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

^c For each category, enter the net emissions or removals reported in the most recent inventory submission for the corresponding inventory year. If a category differs from that used for the reporting under the Convention or its Kyoto Protocol, explain in the biennial report how the value was derived.

d Enter one reference level or base year/period value for each category. Explain in the biennial report how these values have been calculated.

^e If applicable to the accounting approach chosen. Explain in this biennial report to which years or period the cumulative contribution refers to.

Label each accounting approach and indicate where additional information is provided within this biennial report explaining how it was implemented, including all relevant accounting parameters (i.e. natural disturbances, caps).

^g Specify what was used for the category "other". Explain in this biennial report how each was defined and how it relates to the categories used for reporting under the Convention or its Kyoto Protocol.

Table 4(a)I

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 2012 $^{a, b}$

	Net GHG emissions/removals from LULUCF categories c	Base year/period or reference level value ^d	Contribution from LULUCF for reported year	Cumulative contribution from LULUCF ^e	Accounting approach f
		(kt CO 2 eq	q)		
Total LULUCF					
A. Forest land					
1. Forest land remaining forest land					
2. Land converted to forest land					
3. Other ^g					
B. Cropland					
1. Cropland remaining cropland					
2. Land converted to cropland					
3. Other ^g					
C. Grassland					
1. Grassland remaining grassland					
2. Land converted to grassland					
3. Other ^g					
D. Wetlands					
1. Wetland remaining wetland					
2. Land converted to wetland					
3. Other ^g					
E. Settlements					
1. Settlements remaining settlements					
2. Land converted to settlements					
3. Other ^g					
F. Other land					
1. Other land remaining other land					
2. Land converted to other land					
3. Other ^g					
Harvested wood products					

Abbreviations: 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 Parties that use the LULUCF approach that is based on table 1 do not need to complete this table, but should indicate the approach in table 2. Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

^c For each category, enter the net emissions or removals reported in the most recent inventory submission for the corresponding inventory year. If a category differs from that used for the reporting under the Convention or its Kyoto Protocol, explain in the biennial report how the value was derived.

^d Enter one reference level or base year/period value for each category. Explain in the biennial report how these values have been calculated.

^e If applicable to the accounting approach chosen. Explain in this biennial report to which years or period the cumulative contribution refers to.

^f Label each accounting approach and indicate where additional information is provided within this biennial report explaining how it was implemented, including all relevant accounting parameters (i.e. natural disturbances, caps).

^g Specify what was used for the category "other". Explain in this biennial report how each was defined and how it relates to the categories used for reporting under the Convention or its Kyoto Protocol.

Reporting on progress^{a, b, c}

	Unite of market based mechanisms		Y	ear
	Units of market based mechanisms		2011	2012
	Visata Dueta and units	(number of units)		
	Kyoto Protocol units	(kt CO ₂ eq)		
	AATI	(number of units)		
	AAUs	(kt CO2 eq)		
	EDIT	(number of units)		
Kyoto Protocol	ERUs	(kt CO2 eq)		
units ^d	CIED	(number of units)		
unus	CERs tCERs	(kt CO2 eq)		
	CED	(number of units)		
	tCERs	(kt CO2 eq)		
	ICED	(number of units)		
	ICERS	(kt CO2 eq)		
	Units from market-based mechanisms under the	(number of units)		
	Convention	(kt CO ₂ eq)		
Other units				
d,e	Units from other market-based mechanisms	(number of units)		
	Onus from other marker-vasea mechanisms	(kt CO ₂ eq)		
Total	I.	(number of units)		
Total		(kt CO ₂ eq)		

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

Note: 2011 is the latest reporting year.

^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.

^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.

 $^{^{\}it e}$ Additional rows for each market-based mechanism should be added, if applicable.

Table 5 KAZ_BR1_v2.0

Summary of key variables and assumptions used in the projections analysis^a

Key underlying assur	nptions			Historical ^b				Projected			
Assumption	Unit	1990	1995	2000	2005	2010	2011	2015	2020	2025	2030
Population	thousands	16,297.98	15,675.80	14,865.60	15,219.30	16,442.00	16,559.00	17,310.00	18,311.53	19,312.76	20,314.00
Population growth	%	99.00	98.24	99.76	100.90	101.76	101.42	101.09	101.04	99.00	94.00
GDP growth rate	%	NA	NE	109.80	109.70	107.30	107.50	NE	NE	NE	NE

^a Parties should include key underlying assumptions as appropriate.

Custom Footnotes

Population and GDP growth rate are presented in % related to the values of the previous years

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

Table 6(a)
Information on updated greenhouse gas projections under a 'with measures' scenario^a

		GHG emissions and removals ^b							
			((kt CO ₂ eq)				(kt CO ₂ eq)	
	Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030
Sector d,e									
Energy	299,576.11	299,576.11	180,550.49	144,113.45	190,447.95	244,609.22	231,802.61	229,400.00	268,300.00
Transport	22,490.91	22,490.91	8,963.98	9,141.29	13,168.26	19,809.93	19,910.39	17,660.00	20,300.00
Industry/industrial processes	17,816.83	17,816.83	8,144.59	10,226.43	13,258.11	15,108.77	17,159.66	21,000.00	27,700.00
Agriculture	38,144.51	38,144.51	23,121.10	14,529.43	19,091.84	22,295.96	21,432.69	28,500.00	35,500.00
Forestry/LULUCF	-2,166.55	-2,166.55	-7,291.30	-10,117.98	-2,857.98	-2,890.50	-3,098.61	-3,229.70	-3,178.70
Waste management/waste	2,740.21	2,740.21	3,106.93	3,094.62	3,472.95	3,953.68	4,065.56	5,172.20	6,408.40
Other (specify)									
Gas									
CO ₂ emissions including net CO ₂ from LULUCF	266,563.18	266,563.18	154,147.64	122,982.81	177,877.04	223,747.28	211,622.79	244,570.30	289,121.30
CO ₂ emissions excluding net CO ₂ from LULUCF	268,730.18	268,730.18	161,474.97	133,106.47	180,740.70	226,640.28	214,717.46	247,800.00	292,300.00
CH ₄ emissions including CH ₄ from LULUCF	73,328.12	73,328.12	44,511.19	33,035.06	37,753.05	48,328.40	48,635.19	36,900.00	31,700.00
CH ₄ emissions excluding CH ₄ from LULUCF	73,327.77	73,327.77	44,504.22	33,030.67	37,748.66	48,326.48	48,634.38	53,700.00	68,100.00
N ₂ O emissions including N ₂ O from LULUCF	16,319.82	16,319.82	8,945.78	5,663.89	7,545.53	8,962.57	8,936.86	5.34	0.50
N ₂ O emissions excluding N ₂ O from LULUCF	16,319.71	16,319.71	8,943.72	5,662.60	7,544.23	8,962.00	8,936.71	12.20	15.50
HFCs	NE	NE	0.21	164.19	237.12	837.37	843.56	1.50	2.70
PFCs	NE	NE	NE	NE	NE	1,201.50	1,328.41	1.30	1.30
SF ₆	NE	NE	NE	NE	0.15	NE	NE	NE	NE
Other (specify)									
Total with LULUCF	356,211.12	356,211.12	207,604.82	161,845.95	223,412.89	283,077.12	271,366.81	281,478.44	320,825.80
Total without LULUCF	358,377.66	358,377.66	214,923.12	171,963.93	226,270.86	285,967.63	274,460.52	301,515.00	360,419.50

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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.

 $^{^{\}circ}~20XX$ 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.

 $[\]sp f$ Parties may choose to report total emissions with or without LULUCF, as appropriate.

Table 7 KAZ_BR1_v2.0

Provision of public financial support: summary information in 2011^a

		Year								
	Kazakhstani tenge - KZT					USD^b				
Allocation channels	Core/		Climate-	specific ^d		Core/		Climate-	specific ^d	
	general ^c	Mitigation	Adaptation	Cross- cutting ^e	Other ^f	general ^c	Mitigation	Adaptation	Cross- cutting ^e	Other ^f
Total contributions through multilateral channels:										
Multilateral climate change funds ^g										
Other multilateral climate change funds ^h										
Multilateral financial institutions, including regional development banks										
Specialized United Nations bodies										
Total contributions through bilateral, regional and other channels										
Total										

Abbreviation: USD = United States dollars.

Each Party shall provide an indication of what new and additional financial resources they have provided, and clarify how they have determined that such resources are new and additional. Please provide
this information in relation to table 7(a) and table 7(b).
Documentation Box:

^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.

Provision of public financial support: summary information in 2012^a

	Year									
	Kazakhstani tenge - KZT					USD^b				
Allocation channels	Core/		Climate-	specific ^d		Core/		Climate-	specific ^d	
	general ^c	Mitigation	Adaptation	Cross- cutting ^e	Other f	general ^c	Mitigation	Adaptation	Cross- cutting ^e	Other ^f
Total contributions through multilateral channels:										
Multilateral climate change funds ^g										
Other multilateral climate change funds ^h										
Multilateral financial institutions, including regional development banks										
Specialized United Nations bodies										
Total contributions through bilateral, regional and other channels										
Total										

Abbreviation: USD = United States dollars.

Each Party shall provide an indication of what new and additional financial resources they have provided, and clarify how they have determined that such resources are new and additional. Please
provide this information in relation to table 7(a) and table 7(b).
Documentation Box:

^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.

Table 7(a) KAZ_BR1_v2.0

Provision of public financial support: contribution through multilateral channels in 2011^a

		Total	amount						
Donor funding	Core/general ^d		Climate-s	specific ^e	Status ^b	Funding source f	Financial	Type of support ^{f, g}	Sector c
	Kazakhstani tenge - KZT	USD	Kazakhstani tenge - KZT	USD	Status	T unumg source	instrument ^f	Type of support	Sector
Total contributions through multilateral channels									
Multilateral climate change funds ^g									
1. Global Environment Facility									
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									
1. World Bank									
2. International Finance Corporation									
3. African Development Bank									
4. Asian Development Bank									
5. European Bank for Reconstruction and Development									
6. Inter-American Development Bank									
7. Other									
Specialized United Nations bodies									
1. United Nations Development Programme									
2. United Nations Environment Programme									
3. Other									

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.

Table 7(a) KAZ_BR1_v2.0

Provision of public financial support: contribution through multilateral channels in 2012^a

		Total	amount						
Donor funding	Core/general ^d		Climate-	specific ^e	Status ^b	Funding source ^f	Financial	Type of support ^{f, g}	Sector c
	Kazakhstani tenge - KZT	USD	Kazakhstani tenge - KZT	USD	Status	runding source	instrument ^f	Type of support	Secioi
Total contributions through multilateral channels									
Multilateral climate change funds ^g									
1. Global Environment Facility									
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									
1. World Bank									
2. International Finance Corporation									
3. African Development Bank									
4. Asian Development Bank									
5. European Bank for Reconstruction and Development									
6. Inter-American Development Bank									
7. Other									
Specialized United Nations bodies									
1. United Nations Development Programme									
2. United Nations Environment Programme									
3. Other									

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.

Table 7(b) KAZ_BR1_v2.0

Provision of public financial support: contribution through bilateral, regional and other channels in 2011^a

	Total a	mount							
Recipient country/ region/project/programme b	Climate-s	specific ^f	Status ^c	Funding	g		Sector d	Additional information ^e	
region/project/programme	Kazakhstani tenge - KZT	USD		source	source s instrument s	support ^{g, h}			
Total contributions through bilateral, regional and other channels									

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.

Table 7(b) KAZ_BR1_v2.0

Provision of public financial support: contribution through bilateral, regional and other channels in 2012^a

	Total a	mount						
Recipient country/ region/project/programme b	Climate-	specific ^f	Status C	o		Sector ^d	Additional information ^e	
region/project/programme	Kazakhstani tenge - KZT	USD		source	source source instrument s	support ^{g, h}		
Total contributions through bilateral, regional and other channels								

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.

Provision of technology development and transfer support ab

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	C 4 C	Source of the funding for technology transfer	Status	Additional information ^d

^a To be reported to the extent possible.

^b The tables should include measures and activities since the last national communication or biennial report.

^c Parties may report sectoral disaggregation, as appropriate.

^d Additional information may include, for example, funding for technology development and transfer provided, a short description of the measure or activity and co-financing arrangements.

Table 9 KAZ_BR1_v2.0

Provision of capacity-building support^a

Recipient country/region	Targeted area	Programme or project title	Description of programme or project b,c

^a To be reported to the extent possible.

^b Each Party included in Annex II to the Convention shall provide information, to the extent possible, on how it has provided capacity-building support that responds to the existing and emerging capacity-building needs identified by Parties not included in Annex I to the Convention in the areas of mitigation, adaptation and technology development and transfer.

^c Additional information may be provided on, for example, the measure or activity and co-financing arrangements.