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Contents

Table 1s1	
Table 1s2	
Table 1s3	
Table 1(a)s1	
Table 1(a)s2	
Table 1(a)s3	
Table 1(b)s1	
Table 1(b)s2	
Table 1(b)s3	
Table 1(c)s1	
Table 1(c)s2	
Table 1(c)s3	
Table 1(d)s1	
Table 1(d)s2	
Table 1(d)s3	
Table 2(a)	
Table 2(b)	
Table 2(c)	
Table 2(d)	
Table 2(e)I	
Table 2(e)II	
Table 2(f)	
Table 3	
Table 4	
Table 4(a)I 2013	
Table 4(a)I 2014	
Table 4(a)II	No data was imported from KP-LULUCF CRF table 10 from the latest official GHG inventory submission.
Table 4(b)	
Table 5	
Table 6(a)	
Table 6(b)	Greenhouse gas projections: Scenario 'without measures' was not included.
Table 6(c)	Greenhouse gas projections: Scenario 'with additional measures' was not included.
Table 7 2013	
Table 7 2014	
Table 7(a) 2013	
Table 7(a) 2014	
Table 7(b) 2013	
Table 7(b) 2014	
Table 8	
Table 9	

Table 1

BGR_BR2_v1.0

Emission trends: summary [(1)]

(Sheet 1 of 3)

GREENHOUSE GAS EMISSIONS	Base year[a]	1990	1991	1992	1993	1994	1995	1996	1997
	kt CO_2 eq								
CO_2 emissions without net CO_2 from LULUCF	90,782.60	80,286.15	61,613.99	58,133.40	58,700.96	56,398.23	57,894.57	58,330.38	55,611.11
CO_2 emissions with net CO_2 from LULUCF	76,379.23	66,140.41	47,802.41	45,412.35	46,241.65	44,125.13	45,725.87	48,574.06	45,904.65
CH_4 emissions without CH_4 from LULUCF	19,502.17	19,226.87	17,908.13	16,755.42	14,906.72	13,201.19	12,497.41	12,186.73	11,515.32
CH_4 emissions with CH_4 from LULUCF	19,503.79	19,230.53	17,909.92	16,773.84	14,970.55	13,264.80	12,499.34	12,194.29	11,518.05
N_2O emissions without N_2O from LULUCF	10,453.95	8,848.43	6,814.70	5,641.14	5,097.83	5,006.83	4,823.13	4,673.97	4,490.56
N_2O emissions with N_2O from LULUCF	10,454.25	8,849.10	6,815.03	5,644.54	5,109.62	5,018.58	4,823.49	4,675.36	4,491.06
HFCs	NO	NO	NO	0.00	0.01	1.08	2.99	5.17	8.14
PFCs	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of HFCs and PFCs	NO	NO	NO	NO	NO	NO	NO	NO	NO
SF_6	3.30	3.69	3.91	4.13	4.37	4.63	4.90	5.18	5.48
NF3	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total (without LULUCF)	120,742.02	108,365.14	86,340.73	80,534.09	78,709.89	74,611.96	75,222.99	75,201.43	71,630.61
Total (with LULUCF)	106,340.58	94,223.73	72,531.27	67,834.87	66,326.20	62,414.22	63,056.58	65,454.06	61,927.39
Total (without LULUCF, with indirect)	120,742.02	108,365.14	86,340.73	80,534.09	78,709.89	74,611.96	75,222.99	75,201.43	71,630.61
Total (with LULUCF, with indirect)	106,340.58	94,223.73	72,531.27	67,834.87	66,326.20	62,414.22	63,056.58	65,454.06	61,927.39

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year[a]	1990	1991	1992	1993	1994	1995	1996	1997
	kt CO_2 eq								
1. Energy	82,905.90	75,111.91	57,298.69	55,067.11	55,330.30	52,155.91	52,204.33	52,904.96	50,305.86
2. Industrial processes and product use	13,311.90	10,114.20	8,149.98	6,902.05	7,112.49	7,876.93	9,859.13	9,644.34	8,885.69
3. Agriculture	17,451.97	15,995.79	14,440.75	12,552.97	10,444.59	8,797.82	7,228.98	6,738.68	6,618.63
4. Land Use, Land-Use Change and Forestry[b]	-14,401.44	-14,141.41	-13,809.46	-12,699.23	-12,383.69	-12,197.75	-12,166.41	-9,747.37	-9,703.22
5. Waste	7,072.25	7,143.24	6,451.31	6,011.97	5,822.51	5,781.30	5,930.54	5,913.45	5,820.42
6. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total (including LULUCF)	106,340.58	94,223.73	72,531.27	67,834.87	66,326.20	62,414.22	63,056.58	65,454.06	61,927.39

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

[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 BGR_BR2_v1.0

Emission trends: summary [(1)]

(Sheet 2 of 3)

GREENHOUSE GAS EMISSIONS	*1998*	1999	2000	2001	2002	2003	2004	2005	2006	2007
CO_2 emissions without net CO_2 from LULUCF	52,980.02	46,547.03	45,669.46	49,330.75	46,561.33	50,773.89	49,603.69	50,631.31	51,851.51	55,533.05
CO_2 emissions with net CO_2 from LULUCF	43,096.21	36,656.48	35,569.08	40,492.91	37,746.15	41,995.83	40,513.76	41,758.48	43,105.24	46,456.32
CH_4 emissions without CH_4 from LULUCF	10,779.19	10,307.74	10,080.06	9,331.10	9,561.60	10,428.91	9,921.42	9,230.17	9,093.56	9,107.55
CH_4 emissions with CH_4 from LULUCF	10,803.67	10,336.88	10,283.58	9,401.99	9,584.49	10,446.86	9,925.43	9,235.25	9,106.58	9,260.18
N_2O emissions without N_2O from LULUCF	3,617.44	3,797.84	3,864.55	4,007.53	3,954.47	3,716.28	4,221.12	4,060.06	3,580.57	3,607.76
N_2O emissions with N_2O from LULUCF	3,621.96	3,803.22	3,902.13	4,020.62	3,958.70	3,719.60	4,221.86	4,061.00	3,582.98	3,635.95
HFCs	13.36	19.95	25.62	37.35	52.30	70.40	104.10	157.54	220.48	302.45
PFCs	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of HFCs and PFCs	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SF_6	5.80	6.14	6.49	6.87	7.27	7.69	8.13	8.16	8.48	8.81
NF3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total (without LULUCF)	67,395.80	60,678.69	59,646.17	62,713.60	60,136.97	64,997.18	63,858.46	64,087.24	64,754.60	68,559.62
Total (with LULUCF)	57,540.99	50,822.65	49,786.90	53,959.74	51,348.90	56,240.36	54,773.27	55,220.44	56,023.76	59,663.71
Total (without LULUCF, with indirect)	67,395.80	60,678.69	59,646.17	62,713.60	60,136.97	64,997.18	63,858.46	64,087.24	64,754.60	68,559.62
Total (with LULUCF, with indirect)	57,540.99	50,822.65	49,786.90	53,959.74	51,348.90	56,240.36	54,773.27	55,220.44	56,023.76	59,663.71

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*1998*	1999	2000	2001	2002	2003	2004	2005	2006	2007
1. Energy	49,466.98	43,455.07	41,933.60	45,541.46	43,441.18	47,234.48	45,637.87	46,411.21	47,440.37	51,044.53
2. Industrial processes and product use	6,483.98	5,630.93	6,602.89	6,530.27	5,839.64	6,446.73	6,521.01	6,966.57	6,744.10	7,152.41
3. Agriculture	5,782.13	6,109.89	5,676.29	5,387.39	5,599.55	5,498.04	5,960.02	5,663.55	5,587.61	5,435.71
4. Land Use, Land-Use Change and Forestry[b]	-9,854.81	-9,856.04	-9,859.27	-8,753.86	-8,788.07	-8,756.81	-9,085.18	-8,866.81	-8,730.84	-8,895.90
5. Waste	5,662.70	5,482.80	5,433.39	5,254.47	5,256.60	5,817.93	5,739.56	5,045.91	4,982.51	4,926.97
6. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total (including LULUCF)	57,540.99	50,822.65	49,786.90	53,959.74	51,348.90	56,240.36	54,773.27	55,220.44	56,023.76	59,663.71

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

Table 1 BGR_BR2_v1.0

Emission trends: summary [(1)]

(Sheet 3 of 3)

GREENHOUSE GAS EMISSIONS	*2008*	2009	2010	2011	2012	2013	Change from base to latest reported year
							(%)
CO_2 emissions without net CO_2 from LULUCF	53,772.87	45,602.18	47,824.94	53,179.27	48,336.98	42,755.77	-52.90
CO_2 emissions with net CO_2 from LULUCF	45,305.98	37,041.17	39,095.47	44,072.36	39,181.96	33,438.54	-56.22
CH_4 emissions without CH_4 from LULUCF	8,939.40	8,562.52	8,586.51	8,832.80	8,459.71	8,318.23	-57.35
CH_4 emissions with CH_4 from LULUCF	8,958.51	8,570.50	8,609.45	8,857.98	8,505.55	8,329.89	-57.29
N_2O emissions without N_2O from LULUCF	3,798.00	3,368.72	3,549.21	3,524.11	3,624.35	3,901.10	-62.68
N_2O emissions with N_2O from LULUCF	3,801.53	3,370.19	3,553.45	3,528.76	3,632.82	3,903.25	-62.66
HFCs	496.81	560.93	600.18	657.55	751.80	898.35	
PFCs	NO	0.02	0.06	0.06	0.06	0.05	
Unspecified mix of HFCs and PFCs	NO	NO	NO	NO	NO	NO	
SF_6	9.16	9.52	12.47	14.19	19.29	19.72	497.62
NF3	NO	NO	NO	NO	NO	NO	
Total (without LULUCF)	67,016.24	58,103.89	60,573.36	66,207.98	61,192.18	55,893.22	-53.71
Total (with LULUCF)	58,571.99	49,552.33	51,871.07	57,130.90	52,091.47	46,589.80	-56.19
Total (without LULUCF, with indirect)	67,016.24	58,103.89	60,573.36	66,207.98	61,192.18	55,893.22	-53.71
Total (with LULUCF, with indirect)	58,571.99	49,552.33	51,871.07	57,130.90	52,091.47	46,589.80	-56.19

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*2008*	2009	2010	2011	2012	2013	Change from base to latest reported year
							(%)
1. Energy	50,161.99	44,458.77	46,500.47	51,641.57	46,829.04	41,122.51	-50.40
2. Industrial processes and product use	6,390.14	3,584.81	3,941.32	4,494.52	4,297.65	4,324.51	-67.51
3. Agriculture	5,635.17	5,394.92	5,546.65	5,511.07	5,593.39	5,939.35	-65.97
4. Land Use, Land-Use Change and Forestry[b]	-8,444.25	-8,551.56	-8,702.29	-9,077.08	-9,100.71	-9,303.42	-35.40
5. Waste	4,828.94	4,665.39	4,584.92	4,560.82	4,472.10	4,506.85	-36.27
6. Other	NO	NO	NO	NO	NO	NO	
Total (including LULUCF)	58,571.99	49,552.33	51,871.07	57,130.90	52,091.47	46,589.80	-56.19

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 (CH_4)", "Emission trends (N_2O)" and "Emission trends (HFCs, PFCs and SF_6)", 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.

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.

[b] Includes net CO_2, CH_4 and N_2O from LULUCF.

Custom Footnotes

Table 1 (a) BGR_BR2_v1.0

Emission trends (CO_2)

(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*Base year*[a]	1990	1991	1992	1993	1994	1995	1996	1997
	kt								
1. Energy	79,460.59	71,866.93	54,637.48	52,225.88	52,472.13	49,484.91	49,446.48	50,138.16	47,833.79
A. Fuel combustion (sectoral approach)	79,455.60	71,862.80	54,633.69	52,221.19	52,466.61	49,480.29	49,441.70	50,134.31	47,830.53
1. Energy industries	42,105.08	38,666.29	30,391.93	28,724.90	29,001.78	26,688.84	27,192.78	27,024.42	28,981.12
2. Manufacturing industries and construction	18,659.71	18,932.92	14,854.06	14,197.06	13,099.88	13,269.49	13,815.87	14,248.11	11,436.62
3. Transport	7,228.04	6,604.93	3,801.64	3,967.15	4,486.58	4,111.27	4,392.13	4,303.09	4,355.02
4. Other sectors	6,361.99	7,629.06	5,537.47	5,272.66	5,800.02	5,363.62	3,985.61	4,482.77	3,028.59
5. Other	5,100.78	29.59	48.60	59.43	78.36	47.06	55.32	75.92	29.18
B. Fugitive emissions from fuels	4.99	4.13	3.79	4.69	5.52	4.62	4.77	3.85	3.27
1. Solid fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and natural gas and other emissions from energy production	4.99	4.13	3.79	4.69	5.52	4.62	4.77	3.85	3.27
C. CO2 transport and storage	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Industrial processes	11,303.49	8,399.38	6,956.33	5,888.66	6,208.48	6,892.64	8,427.18	8,171.63	7,756.55
A. Mineral industry	3,698.06	3,242.54	2,045.69	1,733.41	1,756.87	2,079.46	2,702.87	2,660.17	2,090.85
B. Chemical industry	3,002.45	2,879.68	2,514.47	1,868.14	1,744.70	1,989.65	2,508.53	2,621.39	2,272.89
C. Metal industry	3,736.39	1,412.61	1,533.65	1,423.70	1,910.61	2,732.75	3,151.50	2,832.18	3,348.57
D. Non-energy products from fuels and solvent use	859.47	858.76	858.04	858.04	790.05	84.93	56.49	51.30	37.82
E. Electronic industry									
F. Product uses as ODS substitutes									
G. Other product manufacture and use									
H. Other	7.13	5.79	4.48	5.37	6.25	5.86	7.80	6.59	6.41
3. Agriculture	NO	NO	NO	NO	NO	NO	NO	NO	NO
A. Enteric fermentation									
B. Manure management									
C. Rice cultivation									
D. Agricultural soils									
E. Prescribed burning of savannas									
F. Field burning of agricultural residues									
G. Liming	NO	NO	NO	NO	NO	NO	NO	NO	NO
H. Urea application	NO	NO	NO	NO	NO	NO	NO	NO	NO
I. Other carbon-containing fertilizers	NO	NO	NO	NO	NO	NO	NO	NO	NO
J. Other									
4. Land Use, Land-Use Change and Forestry	-14,403.36	-14,145.74	-13,811.59	-12,721.05	-12,459.31	-12,273.10	-12,168.70	-9,756.32	-9,706.45
A. Forest land	-14,771.94	-14,823.41	-14,838.90	-14,843.87	-14,826.90	-14,833.79	-14,839.66	-12,550.13	-12,498.56
B. Cropland	496.03	814.19	968.00	1,143.27	1,424.39	1,650.95	1,763.50	1,866.83	1,849.43
C. Grassland	-158.23	-158.23	-158.23	-158.23	-158.23	-158.23	-158.23	-158.23	-158.23
D. Wetlands	IE, NE, NO	IE, NE, NO	IE, NE, NO	IE, NE, NO	IE, NE, NO	IE, NE, NO	13.27	21.36	43.27
E. Settlements	687.26	678.19	691.95	705.91	677.98	682.67	689.91	689.93	689.96
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Harvested wood products	-656.48	-656.48	-474.41	431.86	423.45	385.29	362.50	373.92	367.68
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	18.51	19.83	20.18	18.86	20.34	20.68	20.91	20.60	20.77
A. Solid waste disposal	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Biological treatment of solid waste									
C. Incineration and open burning of waste	18.51	19.83	20.18	18.86	20.34	20.68	20.91	20.60	20.77
D. Waste water treatment and discharge									
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Memo items:									
International bunkers	2,048.19	895.95	1,392.57	1,683.03	1,940.35	1,733.85	1,758.60	1,335.88	467.86
Aviation	1,103.07	713.28	466.88	838.46	1,123.95	911.37	904.78	593.82	439.65
Navigation	945.12	182.66	925.68	844.57	816.40	822.48	853.82	742.06	28.21
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 emissions from biomass	889.39	808.75	660.80	733.94	662.37	755.22	945.95	1,028.83	1,098.27
CO2 captured	NO	NO	NO	NO	NO	NO	NO	NO	NO
Long-term storage of C in waste disposal sites	NE	NE	NE	NE	NE	NE	NE	NE	NE
Indirect N2O									
Indirect CO2 (3)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total CO2 equivalent emissions without land use, land-use change and forestry	120,742.02	108,365.14	86,340.73	80,534.09	78,709.89	74,611.96	75,222.99	75,201.43	71,630.61
Total CO2 equivalent emissions with land use, land-use change and forestry	106,340.58	94,223.73	72,531.27	67,834.87	66,326.20	62,414.22	63,056.58	65,454.06	61,927.39
Total CO2 equivalent emissions, including indirect CO2, without land use, land-use change and forestry	90,782.60	80,286.15	61,613.99	58,133.40	58,700.96	56,398.23	57,894.57	58,330.38	55,611.11
Total CO2 equivalent emissions, including indirect CO2, with land use, land-use change and forestry	76,379.23	66,140.41	47,802.41	45,412.35	46,241.65	44,125.13	45,725.87	48,574.06	45,904.65

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

Table 1 (a) BGR_BR2_v1.0

Emission trends (CO_2)

(Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*1998*	1999	2000	2001	2002	2003	2004	2005	2006	2007
1. Energy	47,177.07	41,496.14	39,885.81	43,657.16	41,453.02	45,105.48	43,996.07	44,708.40	45,810.21	49,291.71
A. Fuel combustion (sectoral approach)	47,173.85	41,492.66	39,882.74	43,654.17	41,450.03	45,103.03	43,979.68	44,683.28	45,785.90	49,277.28
1. Energy industries	27,777.57	24,199.63	24,035.35	27,911.70	25,234.26	27,115.58	26,823.66	27,034.13	27,329.37	30,658.45
2. Manufacturing industries and construction	10,667.49	8,824.78	8,096.20	7,999.42	7,857.61	8,897.87	8,106.07	7,796.63	7,882.32	8,481.17
3. Transport	5,513.79	5,751.04	5,526.00	5,691.45	5,928.72	6,521.65	6,924.55	7,725.01	8,203.32	8,047.29
4. Other sectors	3,202.35	2,673.86	2,213.29	2,038.65	2,419.81	2,567.93	2,125.39	2,127.51	2,370.89	2,090.37
5. Other	12.64	43.36	11.91	12.95	9.63	NO	NO	NO	NO	NO
B. Fugitive emissions from fuels	3.22	3.48	3.06	2.99	2.99	2.45	16.40	25.12	24.31	14.43
1. Solid fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and natural gas and other emissions from energy production	3.22	3.48	3.06	2.99	2.99	2.45	16.40	25.12	24.31	14.43
C. CO2 transport and storage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Industrial processes	5,768.07	5,022.57	5,721.07	5,633.89	5,069.55	5,624.62	5,537.96	5,868.09	5,989.73	6,207.11
A. Mineral industry	1,529.73	1,426.09	1,596.62	1,621.52	1,689.18	1,723.00	1,950.50	2,153.20	2,287.15	2,775.47
B. Chemical industry	1,491.66	1,089.68	1,703.18	1,723.76	1,289.91	1,296.54	1,499.05	1,592.85	1,372.78	1,416.50
C. Metal industry	2,721.54	2,487.11	2,389.90	2,271.64	2,073.26	2,581.54	2,071.58	2,098.25	2,302.12	1,990.05
D. Non-energy products from fuels and solvent use	20.76	15.41	27.07	13.18	14.27	20.24	13.87	20.27	24.15	21.60
E. Electronic industry										
F. Product uses as ODS substitutes										
G. Other product manufacture and use										
H. Other	4.38	4.28	4.31	3.78	2.93	3.30	2.96	3.51	3.52	3.49
3. Agriculture	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
A. Enteric fermentation										
B. Manure management										
C. Rice cultivation										
D. Agricultural soils										
E. Prescribed burning of savannas										
F. Field burning of agricultural residues										
G. Liming	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
H. Urea application	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
I. Other carbon-containing fertilizers	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
J. Other										
4. Land Use, Land-Use Change and Forestry	-9,883.81	-9,890.55	-10,100.38	-8,837.84	-8,815.18	-8,778.07	-9,089.93	-8,872.83	-8,746.27	-9,076.73
A. Forest land	-12,456.88	-12,449.69	-12,442.28	-10,995.74	-11,003.38	-11,052.66	-11,040.68	-11,052.20	-10,604.12	-10,627.70
B. Cropland	1,645.20	1,589.30	1,573.83	1,498.68	1,530.42	1,632.77	1,612.78	1,636.75	1,582.20	1,541.79
C. Grassland	-158.23	-158.23	-158.23	-93.82	-121.99	-150.15	-178.31	-206.48	-234.64	-262.80
D. Wetlands	59.72	76.15	92.56	108.84	125.10	141.32	157.51	173.66	189.79	205.88
E. Settlements	689.98	690.00	692.04	629.88	642.61	623.02	607.32	716.94	744.84	839.37
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Harvested wood products	336.39	361.91	141.70	14.32	12.06	27.63	-248.54	-141.50	-424.34	-773.26
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	34.88	28.33	62.58	39.71	38.75	43.79	69.66	54.83	51.57	34.22
A. Solid waste disposal	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Biological treatment of solid waste										
C. Incineration and open burning of waste	34.88	28.33	62.58	39.71	38.75	43.79	69.66	54.83	51.57	34.22
D. Waste water treatment and discharge										
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Memo items:										
International bunkers	606.80	234.10	440.41	611.39	701.13	905.96	819.84	908.99	868.40	707.18
Aviation	387.39	209.07	239.81	310.52	372.01	476.55	459.38	564.20	539.54	544.19
Navigation	219.41	25.04	200.60	300.87	329.12	429.42	360.46	344.79	328.86	162.99
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 emissions from biomass	1,918.22	2,009.73	2,580.26	2,532.88	3,021.31	3,207.57	3,339.15	3,263.90	3,500.14	3,209.40
CO2 captured	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Long-term storage of C in waste disposal sites	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Indirect N2O										
Indirect CO2 (3)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total CO2 equivalent emissions without land use, land-use change and forestry	67,395.80	60,678.69	59,646.17	62,713.60	60,136.97	64,997.18	63,858.46	64,087.24	64,754.60	68,559.62
Total CO2 equivalent emissions with land use, land-use change and forestry	57,540.99	50,822.65	49,786.90	53,959.74	51,348.90	56,240.36	54,773.27	55,220.44	56,023.76	59,663.71
Total CO2 equivalent emissions, including indirect CO2, without land use, land-use change and forestry	52,980.02	46,547.03	45,669.46	49,330.75	46,561.33	50,773.89	49,603.69	50,631.31	51,851.51	55,533.05
Total CO2 equivalent emissions, including indirect CO2, with land use, land-use change and forestry	43,096.21	36,656.48	35,569.08	40,492.91	37,746.15	41,995.83	40,513.76	41,758.48	43,105.24	46,456.32

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

Table 1(a) BGR_BR2_v1.0

Emission trends (CO_2)

(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*2008*	2009	2010	2011	2012	2013	Change from base to latest reported year
							%
1. Energy	48,441.91	42,840.58	44,759.43	49,590.49	44,933.74	39,435.00	-50.37
A. Fuel combustion (sectoral approach)	48,430.96	42,838.37	44,754.83	49,569.80	44,915.31	39,421.08	-50.39
1. Energy industries	32,183.41	29,570.00	31,505.88	36,267.40	31,496.99	27,276.97	-35.22
2. Manufacturing industries and construction	5,975.80	3,557.96	3,635.60	3,252.04	3,128.96	3,111.67	-83.32
3. Transport	8,435.08	8,115.54	7,874.37	8,066.12	8,352.10	7,346.88	1.64
4. Other sectors	1,836.68	1,594.87	1,738.97	1,984.24	1,937.26	1,685.56	-73.51
5. Other	NO	NO	NO	NO	NO	NO	
B. Fugitive emissions from fuels	10.95	2.21	4.60	20.69	18.43	13.93	179.04
1. Solid fuels	NO	NO	NO	NO	NO	NO	
2. Oil and natural gas and other emissions from energy production	10.95	2.21	4.60	20.69	18.43	13.93	179.04
C. CO2 transport and storage	NO	NO	NO	NO	NO	NO	
2. Industrial processes	5,288.57	2,728.33	3,052.06	3,579.07	3,383.15	3,281.86	-70.97
A. Mineral industry	2,769.22	1,738.26	1,776.69	1,914.87	2,038.26	1,913.62	-48.25
B. Chemical industry	1,469.47	883.64	1,194.04	1,573.42	1,272.09	1,315.52	-56.19
C. Metal industry	1,024.16	81.99	55.82	68.58	50.41	32.73	-99.12
D. Non-energy products from fuels and solvent use	22.31	17.96	21.40	18.41	18.35	15.14	-98.24
E. Electronic industry							
F. Product uses as ODS substitutes							
G. Other product manufacture and use							
H. Other	3.41	6.48	4.12	3.78	4.04	4.85	-31.96
3. Agriculture	NO	NO	NO	NO	NO	NO	
A. Enteric fermentation							
B. Manure management							
C. Rice cultivation							
D. Agricultural soils							
E. Prescribed burning of savannas							
F. Field burning of agricultural residues							
G. Liming	NO	NO	NO	NO	NO	NO	
H. Urea application	NO	NO	NO	NO	NO	NO	
I. Other carbon-containing fertilizers	NO	NO	NO	NO	NO	NO	
J. Other							
4. Land Use, Land-Use Change and Forestry	-8,466.89	-8,561.01	-8,729.47	-9,106.90	-9,155.02	-9,317.23	-35.31
A. Forest land	-10,663.74	-10,713.69	-10,739.75	-10,764.47	-10,774.73	-11,056.28	-25.15
B. Cropland	1,532.24	1,530.60	1,453.73	1,435.31	1,464.90	1,490.14	200.41
C. Grassland	-296.66	-330.53	-364.39	-398.26	-432.12	-465.98	194.50
D. Wetlands	221.93	237.96	253.95	269.90	285.83	281.62	
E. Settlements	1,039.02	856.14	1,034.77	957.74	948.45	978.29	42.35
F. Other land	NO	NO	NO	NO	NO	NO	
G. Harvested wood products	-299.69	-141.49	-367.77	-607.14	-647.35	-545.01	-16.98
H. Other	NO	NO	NO	NO	NO	NO	
5. Waste	42.39	33.28	13.45	9.71	20.09	38.90	110.13
A. Solid waste disposal	NO	NO	NO	NO	NO	NO	
B. Biological treatment of solid waste							
C. Incineration and open burning of waste	42.39	33.28	13.45	9.71	20.09	38.90	110.13
D. Waste water treatment and discharge							
E. Other	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	
Memo items:							
International bunkers	1,015.13	1,101.66	806.55	744.39	688.72	760.59	-62.87
Aviation	633.35	455.03	501.14	507.29	488.85	476.55	-56.80
Navigation	381.79	646.64	305.41	237.10	199.87	284.04	-69.95
Multilateral operations	NO	NO	NO	NO	NO	NO	
CO2 emissions from biomass	3,651.02	3,593.90	4,300.84	4,556.96	5,160.47	5,334.69	499.81
CO2 captured	NO	NO	NO	NO	NO	NO	
Long-term storage of C in waste disposal sites	NE	NE	NE	NE	NE	NE	
Indirect N2O							
Indirect CO2 (3)	NO	NO	NO	NO	NO	NO	
Total CO2 equivalent emissions without land use, land-use change and forestry	67,016.24	58,103.89	60,573.36	66,207.98	61,192.18	55,893.22	-53.71
Total CO2 equivalent emissions with land use, land-use change and forestry	58,571.99	49,552.33	51,871.07	57,130.90	52,091.47	46,589.80	-56.19
Total CO2 equivalent emissions, including indirect CO2, without land use, land-use change and forestry	53,772.87	45,602.18	47,824.94	53,179.27	48,336.98	42,755.77	-52.90
Total CO2 equivalent emissions, including indirect CO2, with land use, land-use change and forestry	45,305.98	37,041.17	39,095.47	44,072.36	39,181.96	33,438.54	-56.22

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 (+).

Custom Footnotes

Table 1(b) BGR_BR2_v1.0

Emission trends (CH_4)

(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*Base year* [a]	1990	1991	1992	1993	1994	1995	1996	1997
	kt								
1. Energy	111.45	104.21	87.78	96.28	96.53	89.15	92.20	91.94	81.55
A. Fuel combustion (sectoral approach)	18.53	15.70	12.35	14.42	14.91	12.43	11.47	13.18	10.91
1. Energy industries	0.75	0.54	0.40	0.37	0.37	0.33	0.34	0.34	0.34
2. Manufacturing industries and construction	1.34	0.91	0.80	0.71	0.63	0.68	0.68	0.71	0.62
3. Transport	2.86	2.81	1.42	1.66	1.91	1.85	2.00	1.74	1.31
4. Other sectors	13.39	11.43	9.73	11.54	11.82	9.37	8.16	10.18	8.34
5. Other	0.19	0.00	0.01	0.14	0.18	0.19	0.31	0.20	0.29
B. Fugitive emissions from fuels	92.92	88.51	75.43	81.86	81.62	76.71	80.73	78.77	70.64
1. Solid fuels	83.00	77.70	65.96	73.23	73.30	68.47	70.95	69.01	62.25
2. Oil and natural gas and other emissions from energy production	9.92	10.81	9.47	8.63	8.32	8.25	9.78	9.75	8.39
C. CO2 transport and storage									
2. Industrial processes	1.65	1.27	1.02	0.92	1.07	1.51	1.66	1.59	1.72
A. Mineral industry									
B. Chemical industry	0.26	0.20	0.13	0.15	0.15	0.18	0.20	0.22	0.22
C. Metal industry	1.39	1.07	0.89	0.77	0.92	1.33	1.46	1.37	1.50
D. Non-energy products from fuels and solvent use	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE
E. Electronic industry									
F. Product uses as ODS substitutes									
G. Other product manufacture and use									
H. Other	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE
3. Agriculture	384.91	378.73	370.35	333.36	266.65	207.03	169.72	158.29	145.42
A. Enteric fermentation	229.88	219.00	210.63	196.61	166.25	132.67	111.62	105.54	103.01
B. Manure management	148.78	154.73	155.45	134.26	98.61	73.37	56.86	51.39	40.38
C. Rice cultivation	5.08	3.81	2.96	1.63	1.12	0.30	0.50	0.94	1.37
D. Agricultural soils	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Prescribed burning of savannas									
F. Field burning of agricultural residues	1.16	1.19	1.31	0.86	0.67	0.70	0.74	0.42	0.67
G. Liming									
H. Urea application									
I. Other carbon-containing fertilizers									
J. Other									
4. Land use, land-use change and forestry	0.06	0.15	0.07	0.74	2.55	2.54	0.08	0.30	0.11
A. Forest land	0.06	0.15	0.07	0.74	2.55	2.54	0.08	0.30	0.11
B. Cropland	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Harvested wood products									
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	282.08	284.87	257.17	239.66	232.02	230.35	236.31	235.64	231.91
A. Solid waste disposal	155.67	158.38	159.51	160.48	161.37	162.18	162.91	163.56	165.60
B. Biological treatment of solid waste	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Incineration and open burning of waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Waste water treatment and discharge	126.41	126.48	97.66	79.18	70.65	68.17	73.40	72.08	66.32
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total CH4 emissions without CH4 from LULUCF	780.09	769.07	716.33	670.22	596.27	528.05	499.90	487.47	460.61
Total CH4 emissions with CH4 from LULUCF	780.15	769.22	716.40	670.95	598.82	530.59	499.97	487.77	460.72
Memo items:									
International bunkers	0.10	0.02	0.09	0.08	0.08	0.08	0.08	0.07	0.01
Aviation	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00
Navigation	0.09	0.02	0.08	0.08	0.07	0.08	0.08	0.07	0.00
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 emissions from biomass									
CO2 captured									
Long-term storage of C in waste disposal sites									
Indirect N2O									
Indirect CO2 (3)									

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

Table 1(b) BGR_BR2_v1.0

Emission trends (CH_4)

(Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*1998*	1999	2000	2001	2002	2003	2004	2005	2006	2007
1. Energy	72.67	60.04	64.24	57.87	61.51	66.42	50.32	52.37	48.98	54.18
A. Fuel combustion (sectoral approach)	13.33	11.43	11.69	10.24	13.16	14.24	13.33	12.96	13.71	12.83
1. Energy industries	0.32	0.28	0.27	0.31	0.28	0.30	0.29	0.30	0.30	0.33
2. Manufacturing industries and construction	0.57	0.47	0.41	0.47	0.48	0.57	0.53	0.47	0.46	0.49
3. Transport	1.65	1.64	1.45	1.34	1.41	1.40	1.28	1.33	1.37	1.30
4. Other sectors	10.47	8.84	9.56	8.01	10.89	11.96	11.12	10.86	11.58	10.71
5. Other	0.32	0.20	0.00	0.11	0.10	NO	0.11	NO	NO	NO
B. Fugitive emissions from fuels	59.35	48.61	52.55	47.62	48.35	52.18	36.99	39.41	35.27	41.34
1. Solid fuels	51.71	40.92	44.15	39.83	40.78	44.55	28.68	29.71	25.60	31.58
2. Oil and natural gas and other emissions from energy production	7.64	7.69	8.40	7.79	7.57	7.63	8.31	9.70	9.67	9.76
C. CO2 transport and storage										
2. Industrial processes	1.45	1.22	1.25	1.24	1.11	1.41	1.20	1.14	1.18	1.12
A. Mineral industry										
B. Chemical industry	0.19	0.16	0.15	0.14	0.13	0.14	0.14	0.13	0.13	0.14
C. Metal industry	1.26	1.05	1.10	1.10	0.97	1.27	1.06	1.01	1.05	0.98
D. Non-energy products from fuels and solvent use	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE
E. Electronic industry										
F. Product uses as ODS substitutes										
G. Other product manufacture and use										
H. Other	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE
3. Agriculture	132.05	132.97	123.09	105.68	111.26	118.51	118.77	116.22	116.51	113.41
A. Enteric fermentation	100.97	105.32	103.03	89.39	91.90	95.01	93.65	90.85	88.58	84.11
B. Manure management	29.31	26.57	18.28	14.25	17.13	21.01	22.28	23.11	25.66	26.56
C. Rice cultivation	1.18	0.51	1.29	1.40	1.50	2.03	2.04	1.62	1.63	2.37
D. Agricultural soils	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Prescribed burning of savannas										
F. Field burning of agricultural residues	0.59	0.57	0.49	0.63	0.73	0.46	0.80	0.64	0.63	0.37
G. Liming										
H. Urea application										
I. Other carbon-containing fertilizers										
J. Other										
4. Land use, land-use change and forestry	0.98	1.17	8.14	2.84	0.92	0.72	0.16	0.20	0.52	6.11
A. Forest land	0.98	1.17	8.14	2.84	0.92	0.72	0.16	0.20	0.52	6.11
B. Cropland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Harvested wood products										
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	224.99	218.08	214.62	208.46	208.58	230.82	226.57	199.46	197.07	195.60
A. Solid waste disposal	164.85	163.43	163.03	162.39	160.15	157.99	155.85	153.95	151.40	149.57
B. Biological treatment of solid waste	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Incineration and open burning of waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Waste water treatment and discharge	60.14	54.65	51.60	46.07	48.44	72.83	70.72	45.51	45.67	46.03
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total CH4 emissions without CH4 from LULUCF	431.17	412.31	403.20	373.24	382.46	417.16	396.86	369.21	363.74	364.30
Total CH4 emissions with CH4 from LULUCF	432.15	413.48	411.34	376.08	383.38	417.87	397.02	369.41	364.26	370.41
Memo items:										
International bunkers	0.02	0.00	0.02	0.03	0.03	0.04	0.04	0.04	0.03	0.02
Aviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Navigation	0.02	0.00	0.02	0.03	0.03	0.04	0.03	0.03	0.03	0.02
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 emissions from biomass										
CO2 captured										
Long-term storage of C in waste disposal sites										
Indirect N2O										
Indirect CO2 (3)										

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

Table 1(b) BGR_BR2_v1.0

Emission trends (CH_4)

(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*2008*	2009	2010	2011	2012	2013	Change from base to latest reported year
							%
1. Energy	55.01	51.98	56.33	67.55	61.85	54.79	-50.84
A. Fuel combustion (sectoral approach)	12.97	12.15	13.56	14.55	15.06	14.09	-23.97
1. Energy industries	0.35	0.34	0.36	0.40	0.36	0.32	-58.16
2. Manufacturing industries and construction	0.39	0.27	0.39	0.38	0.42	0.47	-64.92
3. Transport	1.26	1.25	1.19	1.07	1.06	0.96	-66.51
4. Other sectors	10.97	10.29	11.63	12.69	13.22	12.35	-7.77
5. Other	NO	NO	NO	NO	NO	NO	
B. Fugitive emissions from fuels	42.05	39.82	42.77	53.00	46.79	40.70	-56.20
1. Solid fuels	32.69	33.07	35.78	44.05	38.16	32.13	-61.29
2. Oil and natural gas and other emissions from energy production	9.36	6.75	6.99	8.96	8.63	8.57	-13.65
C. CO2 transport and storage							
2. Industrial processes	0.53	0.07	0.00	0.00	0.00	0.00	-99.99
A. Mineral industry							
B. Chemical industry	0.12	0.06	NO, NA	NO, NA	NO, NA	0.00	-99.97
C. Metal industry	0.40	0.00	0.00	0.00	0.00	0.00	-100.00
D. Non-energy products from fuels and solvent use	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	
E. Electronic industry							
F. Product uses as ODS substitutes							
G. Other product manufacture and use							
H. Other	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	
3. Agriculture	110.71	105.29	104.32	104.05	98.82	99.73	-74.09
A. Enteric fermentation	81.95	77.33	75.49	75.99	73.69	74.59	-67.55
B. Manure management	25.19	24.25	23.73	23.00	20.79	20.46	-86.25
C. Rice cultivation	2.81	2.99	4.31	4.25	3.56	3.68	-27.56
D. Agricultural soils	NO	NO	NO	NO	NO	NO	
E. Prescribed burning of savannas							
F. Field burning of agricultural residues	0.78	0.71	0.79	0.81	0.78	1.01	-13.19
G. Liming							
H. Urea application							
I. Other carbon-containing fertilizers							
J. Other							
4. Land use, land-use change and forestry	0.76	0.32	0.92	1.01	1.83	0.47	618.08
A. Forest land	0.76	0.32	0.92	1.01	1.83	0.47	618.08
B. Cropland	NO	NO	NO	NO	NO	NO	
C. Grassland	NO	NO	NO	NO	NO	NO	
D. Wetlands	NO	NO	NO	NO	NO	NO	
E. Settlements	NO	NO	NO	NO	NO	NO	
F. Other land	NO	NO	NO	NO	NO	NO	
G. Harvested wood products							
H. Other	NO	NO	NO	NO	NO	NO	
5. Waste	191.32	185.17	182.81	181.71	177.72	178.21	-36.82
A. Solid waste disposal	147.51	148.72	146.40	146.05	144.05	140.63	-9.66
B. Biological treatment of solid waste	NO	NO	NO	0.34	0.32	0.43	
C. Incineration and open burning of waste	0.00	0.00	0.00	0.00	0.00	0.00	105.50
D. Waste water treatment and discharge	43.82	36.45	36.42	35.33	33.35	37.15	-70.61
E. Other	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	
Total CH4 emissions without CH4 from LULUCF	357.58	342.50	343.46	353.31	338.39	332.73	-57.35
Total CH4 emissions with CH4 from LULUCF	358.34	342.82	344.38	354.32	340.22	333.20	-57.29
Memo items:							
International bunkers	0.04	0.06	0.03	0.03	0.02	0.03	-68.82
Aviation	0.00	0.00	0.00	0.00	0.00	0.00	-56.80
Navigation	0.04	0.06	0.03	0.02	0.02	0.03	-69.87
Multilateral operations	NO	NO	NO	NO	NO	NO	
CO2 emissions from biomass							
CO2 captured							
Long-term storage of C in waste disposal sites							
Indirect N2O							
Indirect CO2 (3)							

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

[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.

Custom Footnotes

Table 1(c)

BGR_BR2_v1.0

Emission trends (N_2O)

(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*Base year* [a]	1990	1991	1992	1993	1994	1995	1996	1997
	kt								
1. Energy	2.21	2.15	1.57	1.46	1.49	1.48	1.52	1.57	1.45
A. Fuel combustion (sectoral approach)	2.21	2.15	1.57	1.46	1.49	1.48	1.52	1.57	1.45
1. Energy industries	0.46	0.45	0.36	0.36	0.37	0.34	0.34	0.33	0.37
2. Manufacturing industries and construction	0.81	0.69	0.53	0.43	0.38	0.40	0.38	0.42	0.38
3. Transport	0.22	0.36	0.19	0.27	0.36	0.38	0.45	0.43	0.36
4. Other sectors	0.70	0.65	0.48	0.40	0.37	0.37	0.34	0.39	0.35
5. Other	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Fugitive emissions from fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1. Solid fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and natural gas and other emissions from energy production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. CO2 transport and storage									
2. Industrial processes	6.59	5.64	3.91	3.31	2.93	3.16	4.64	4.77	3.60
A. Mineral industry									
B. Chemical industry	6.48	5.53	3.80	3.20	2.82	3.04	4.54	4.67	3.49
C. Metal industry									
D. Non-energy products from fuels and solvent use	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE
E. Electronic industry									
F. Product uses as ODS substitutes									
G. Other product manufacture and use	0.11	0.11	0.11	0.11	0.11	0.12	0.10	0.11	0.11
H. Other	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE
3. Agriculture	26.27	21.90	17.39	14.16	12.68	12.15	10.02	9.33	10.01
A. Enteric fermentation									
B. Manure management	3.08	2.96	2.76	2.48	2.09	1.68	1.45	1.41	1.35
C. Rice cultivation									
D. Agricultural soils	23.17	18.92	14.60	11.66	10.57	10.46	8.56	7.91	8.64
E. Prescribed burning of savannas									
F. Field burning of agricultural residues	0.03	0.03	0.03	0.02	0.01	0.01	0.02	0.01	0.01
G. Liming									
H. Urea application									
I. Other carbon containing fertlizers									
J. Other									
4. Land use, land-use change and forestry	0.00	0.00	0.00	0.01	0.04	0.04	0.00	0.00	0.00
A. Forest land	0.00	0.00	0.00	0.01	0.04	0.04	0.00	0.00	0.00
B. Cropland	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Harvested wood products									
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
A. Solid waste disposal									
B. Biological treatment of solid waste	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Incineration and open burning of waste	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01
D. Waste water treatment and discharge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total direct N2O emissions without N2O from LULUCF	35.08	29.69	22.87	18.93	17.11	16.80	16.19	15.68	15.07
Total direct N2O emissions with N2O from LULUCF	35.08	29.69	22.87	18.94	17.15	16.84	16.19	15.69	15.07
Memo items:									
International bunkers	0.06	0.02	0.04	0.05	0.05	0.05	0.05	0.04	0.01
Aviation	0.03	0.02	0.01	0.02	0.03	0.03	0.03	0.02	0.01
Navigation	0.03	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.00
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 emissions from biomass									
CO2 captured									
Long-term storage of C in waste disposal sites									
Indirect N2O	5.79	4.78	3.68	3.01	2.72	2.63	2.13	2.03	2.15
Indirect CO2 (3)									

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

Table 1(c) BGR_BR2_v1.0

Emission trends (N_2O)

(Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*1998*	1999	2000	2001	2002	2003	2004	2005	2006	2007
1. Energy	1.59	1.54	1.48	1.47	1.51	1.57	1.29	1.32	1.36	1.34
A. Fuel combustion (sectoral approach)	1.59	1.54	1.48	1.47	1.51	1.57	1.29	1.32	1.36	1.34
1. Energy industries	0.36	0.30	0.31	0.37	0.33	0.35	0.35	0.36	0.36	0.41
2. Manufacturing industries and construction	0.37	0.35	0.34	0.33	0.33	0.35	0.32	0.32	0.33	0.30
3. Transport	0.48	0.51	0.45	0.42	0.46	0.48	0.24	0.26	0.28	0.27
4. Other sectors	0.38	0.37	0.39	0.35	0.38	0.39	0.37	0.38	0.39	0.35
5. Other	0.00	0.00	0.00	0.00	0.00	NO	0.00	NO	NO	NO
B. Fugitive emissions from fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1. Solid fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and natural gas and other emissions from energy production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. CO2 transport and storage										
2. Industrial processes	2.22	1.85	2.75	2.76	2.29	2.38	2.82	3.03	1.66	2.03
A. Mineral industry										
B. Chemical industry	2.09	1.73	2.63	2.63	2.16	2.26	2.72	2.95	1.58	1.95
C. Metal industry										
D. Non-energy products from fuels and solvent use	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE
E. Electronic industry										
F. Product uses as ODS substitutes										
G. Other product manufacture and use	0.13	0.12	0.12	0.12	0.13	0.12	0.10	0.09	0.08	0.08
H. Other	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE
3. Agriculture	8.33	9.35	8.72	9.21	9.46	8.51	10.04	9.25	8.98	8.73
A. Enteric fermentation										
B. Manure management	1.28	1.33	1.25	1.14	1.23	1.37	1.39	1.35	1.35	1.35
C. Rice cultivation										
D. Agricultural soils	7.03	8.00	7.46	8.06	8.22	7.13	8.63	7.89	7.61	7.37
E. Prescribed burning of savannas										
F. Field burning of agricultural residues	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01
G. Liming										
H. Urea application										
I. Other carbon containing fertlizers										
J. Other										
4. Land use, land-use change and forestry	0.02	0.02	0.13	0.04	0.01	0.01	0.00	0.00	0.01	0.09
A. Forest land	0.02	0.02	0.13	0.04	0.01	0.01	0.00	0.00	0.01	0.09
B. Cropland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Harvested wood products										
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.01
A. Solid waste disposal										
B. Biological treatment of solid waste	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Incineration and open burning of waste	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.01
D. Waste water treatment and discharge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total direct N2O emissions without N2O from LULUCF	12.14	12.74	12.97	13.45	13.27	12.47	14.16	13.62	12.02	12.11
Total direct N2O emissions with N2O from LULUCF	12.15	12.76	13.09	13.49	13.28	12.48	14.17	13.63	12.02	12.20
Memo items:										
International bunkers	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.02	0.02
Aviation	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Navigation	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 emissions from biomass										
CO2 captured										
Long-term storage of C in waste disposal sites										
Indirect N2O	1.76	2.00	1.87	1.95	1.97	1.77	2.07	1.91	1.84	1.83
Indirect CO2 (3)										

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

Table 1(c) BGR_BR2_v1.0

Emission trends (N_2O)

(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*2008*	2009	2010	2011	2012	2013	Change from base to latest reported year
							%
1. Energy	1.16	1.07	1.12	1.22	1.17	1.07	-51.77
A. Fuel combustion (sectoral approach)	1.16	1.07	1.12	1.22	1.17	1.07	-51.78
1. Energy industries	0.43	0.39	0.41	0.48	0.41	0.35	-22.60
2. Manufacturing industries and construction	0.18	0.18	0.19	0.20	0.21	0.21	-74.01
3. Transport	0.29	0.24	0.23	0.23	0.24	0.21	-2.52
4. Other sectors	0.26	0.27	0.28	0.30	0.31	0.29	-58.06
5. Other	NO	NO	NO	NO	NO	NO	
B. Fugitive emissions from fuels	0.00	0.00	0.00	0.00	0.00	0.00	-39.22
1. Solid fuels	NO	NO	NO	NO	NO	NO	
2. Oil and natural gas and other emissions from energy production	0.00	0.00	0.00	0.00	0.00	0.00	-39.22
C. CO2 transport and storage							
2. Industrial processes	1.95	0.95	0.93	0.82	0.48	0.42	-93.66
A. Mineral industry							
B. Chemical industry	1.87	0.88	0.86	0.76	0.42	0.41	-93.61
C. Metal industry							
D. Non-energy products from fuels and solvent use	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	
E. Electronic industry							
F. Product uses as ODS substitutes							
G. Other product manufacture and use	0.08	0.07	0.07	0.06	0.06	0.00	-96.54
H. Other	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	NO, NA, IE	
3. Agriculture	9.62	9.27	9.86	9.76	10.48	11.56	-55.99
A. Enteric fermentation							
B. Manure management	1.30	1.25	1.23	1.22	1.21	1.20	-60.92
C. Rice cultivation							
D. Agricultural soils	8.30	8.00	8.61	8.52	9.26	10.34	-55.38
E. Prescribed burning of savannas							
F. Field burning of agricultural residues	0.02	0.02	0.02	0.02	0.02	0.02	-18.44
G. Liming							
H. Urea application							
I. Other carbon containing fertlizers							
J. Other							
4. Land use, land-use change and forestry	0.01	0.00	0.01	0.02	0.03	0.01	618.08
A. Forest land	0.01	0.00	0.01	0.02	0.03	0.01	618.08
B. Cropland	NO	NO	NO	NO	NO	NO	
C. Grassland	NO	NO	NO	NO	NO	NO	
D. Wetlands	NO	NO	NO	NO	NO	NO	
E. Settlements	NO	NO	NO	NO	NO	NO	
F. Other land	NO	NO	NO	NO	NO	NO	
G. Harvested wood products							
H. Other	NO	NO	NO	NO	NO	NO	
5. Waste	0.01	0.01	0.00	0.03	0.03	0.04	656.71
A. Solid waste disposal							
B. Biological treatment of solid waste	NO	NO	NO	0.03	0.02	0.03	
C. Incineration and open burning of waste	0.01	0.01	0.00	0.00	0.01	0.01	114.65
D. Waste water treatment and discharge	0.00	0.00	0.00	0.00	0.00	0.00	-39.02
E. Other	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	
Total direct N2O emissions without N2O from LULUCF	12.74	11.30	11.91	11.83	12.16	13.09	-62.68
Total direct N2O emissions with N2O from LULUCF	12.76	11.31	11.92	11.84	12.19	13.10	-62.66
Memo items:							
International bunkers	0.03	0.03	0.02	0.02	0.02	0.02	-62.66
Aviation	0.02	0.01	0.01	0.01	0.01	0.01	-56.80
Navigation	0.01	0.02	0.01	0.01	0.01	0.01	-69.87
Multilateral operations	NO	NO	NO	NO	NO	NO	
CO2 emissions from biomass							
CO2 captured							
Long-term storage of C in waste disposal sites							
Indirect N2O	1.98	1.90	2.03	1.99	2.17	2.40	-58.61
Indirect CO2 (3)							

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

[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.

Custom Footnotes

Table 1(d) BGR_BR2_v1.0

Emission trends (HFCs, PFCs and SF_6)

(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*Base year* [a]	1990	1991	1992	1993	1994	1995	1996	1997
	kt								
Emissions of HFCs and PFCs - (kt CO2 equivalent)	NO	NO	NO	0.00	0.01	1.08	2.99	5.17	8.14
Emissions of HFCs - (kt CO2 equivalent)	NO	NO	NO	0.00	0.01	1.08	2.99	5.17	8.14
HFC-23	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-32	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-41	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-43-10mee	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-125	NO	NO	NO	NO	NO	NO	NO	0.00	0.00
HFC-134	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-134a	NO	NO	NO	0.00	0.00	0.00	0.00	0.00	0.01
HFC-143	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-143a	NO	NO	NO	NO	NO	NO	NO	0.00	0.00
HFC-152	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-152a	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-161	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-227ea	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-236cb	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-236ea	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-236fa	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-245ca	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-245fa	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-365mfc	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of HFCs(4) - (kt CO_2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emissions of PFCs - (kt CO2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO
CF_4	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_2F_6	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_3F_8	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_4F_{10}	NO	NO	NO	NO	NO	NO	NO	NO	NO
c-C_4F_8	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_5F_{12}	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_6F_{14}	NO	NO	NO	NO	NO	NO	NO	NO	NO
C10F18	NO	NO	NO	NO	NO	NO	NO	NO	NO
c-C3F6	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of PFCs(4) - (kt CO_2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emissions of SF6 - (kt CO2 equivalent)	3.30	3.69	3.91	4.13	4.37	4.63	4.90	5.18	5.48
Emissions of NF3 - (kt CO2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO

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

Table 1(d) BGR_BR2_v1.0

Emission trends (HFCs, PFCs and SF_6)

(Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*1998*	1999	2000	2001	2002	2003	2004	2005	2006	2007
Emissions of HFCs and PFCs - (kt CO2 equivalent)	13.36	19.95	25.62	37.35	52.30	70.40	104.10	157.54	220.48	302.45
Emissions of HFCs - (kt CO2 equivalent)	13.36	19.95	25.62	37.35	52.30	70.40	104.10	157.54	220.48	302.45
HFC-23	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-32	NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
HFC-41	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-43-10mee	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-125	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02
HFC-134	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-134a	0.01	0.01	0.02	0.02	0.03	0.03	0.05	0.07	0.09	0.12
HFC-143	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-143a	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-152	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-152a	NO	NO	NO	NO	NO	0.00	0.00	0.08	0.22	0.30
HFC-161	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-227ea	NO	NO	NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-236cb	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-236ea	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-236fa	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-245ca	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-245fa	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-365mfc	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of HFCs(4) - (kt CO_2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emissions of PFCs - (kt CO2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
CF_4	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_2F_6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_3F_8	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_4F_{10}	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
c-C_4F_8	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_5F_{12}	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_6F_{14}	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
C10F18	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
c-C3F6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of PFCs(4) - (kt CO_2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emissions of SF6 - (kt CO2 equivalent)	5.80	6.14	6.49	6.87	7.27	7.69	8.13	8.16	8.48	8.81
Emissions of NF3 - (kt CO2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

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

Table 1(d) BGR_BR2_v1.0

Emission trends (HFCs, PFCs and SF_6)

(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	*2008*	2009	2010	2011	2012	2013	Change from base to latest reported year
							%
Emissions of HFCs and PFCs - (kt CO2 equivalent)	496.81	560.95	600.23	657.62	751.85	898.40	
Emissions of HFCs - (kt CO2 equivalent)	496.81	560.93	600.18	657.55	751.80	898.35	
HFC-23	NO	NO	NO	0.00	0.00	0.00	
HFC-32	0.02	0.04	0.05	0.06	0.07	0.10	
HFC-41	NO	NO	NO	NO	NO	NO	
HFC-43-10mee	NO	NO	NO	NO	NO	NO	
HFC-125	0.03	0.05	0.06	0.07	0.08	0.11	
HFC-134	NO	NO	NO	NO	NO	NO	
HFC-134a	0.22	0.20	0.21	0.22	0.24	0.28	
HFC-143	NO	NO	NO	NO	NO	NO	
HFC-143a	0.01	0.01	0.01	0.01	0.01	0.01	
HFC-152	NO	NO	NO	NO	NO	NO	
HFC-152a	0.28	0.37	0.26	0.22	0.18	0.14	
HFC-161	NO	NO	NO	NO	NO	NO	
HFC-227ea	0.00	0.00	0.00	0.00	0.00	0.00	
HFC-236cb	NO	NO	NO	NO	NO	NO	
HFC-236ea	NO	NO	NO	NO	NO	NO	
HFC-236fa	NO	NO	NO	NO	NO	NO	
HFC-245ca	NO	NO	NO	NO	NO	NO	
HFC-245fa	NO	NO	NO	NO	NO	NO	
HFC-365mfc	NO	NO	NO	NO	NO	NO	
Unspecified mix of HFCs(4) - (kt CO_2 equivalent)	NO	NO	NO	NO	NO	NO	
Emissions of PFCs - (kt CO2 equivalent)	NO	0.02	0.06	0.06	0.06	0.05	
CF_4	NO	NO	NO	NO	NO	NO	
C_2F_6	NO	NO	NO	NO	NO	NO	
C_3F_8	NO	0.00	0.00	0.00	0.00	0.00	
C_4F_{10}	NO	NO	NO	NO	NO	NO	
c-C_4F_8	NO	NO	NO	NO	NO	NO	
C_5F_{12}	NO	NO	NO	NO	NO	NO	
C_6F_{14}	NO	NO	NO	NO	NO	NO	
C10F18	NO	NO	NO	NO	NO	NO	
c-C3F6	NO	NO	NO	NO	NO	NO	
Unspecified mix of PFCs(4) - (kt CO_2 equivalent)	NO	NO	NO	NO	NO	NO	
Emissions of SF6 - (kt CO2 equivalent)	9.16	9.52	12.47	14.19	19.29	19.72	497.62
Emissions of NF3 - (kt CO2 equivalent)	NO	NO	NO	NO	NO	NO	

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.

[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 CO2 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 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.)

Custom Footnotes

Documentation Box:

Table 2(a) BGR_BR2_v1.0

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

Party	*Bulgaria*	
Base year /base period		
Emission reduction target	% of base year/base period	% of 1990 [b]
	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.

[b] Optional.

Table 2(b) BGR_BR2_v1.0

Description of quantified economy-wide emission reduction target: gases and sectors covered[a]

Gases covered		*Base year for each gas (year):*
CO_2		1988
CH_4		1988
N_2O		1988
HFCs		1995
PFCs		1995
SF_6		1995
NF_3		1995
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) BGR_BR2_v1.0

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

Gases	*GWP values* [b]
CO_2	4th AR
CH_4	4th AR
N_2O	4th AR
HFCs	4th AR
PFCs	4th AR
SF_6	4th AR
NF_3	4th 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) BGR_BR2_v1.0

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	Included
	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 BGR_BR2_v1.0

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

Market-based mechanisms under the Convention	*Possible scale of contributions (estimated kt CO_2 eq)*
CERs	NE
ERUs	NE
AAUs[i]	NE
Carry-over units[j]	NE
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 BGR_BR2_v1.0

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.

Description of quantified economy-wide emission reduction target: any other information[a,b]

[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.

Custom Footnotes

Table 3 BGR_BR2_v1.0

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

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)*	
Improvement of production efficiency in existing coal-fired power plants*	Energy	CO_2	Increase the efficiency of production of the power plants	Research	Implemented	In 2007-2009 the average carbon intensity of electricity generation from coal-fired power plants is 1.2 t CO2 equivalent per MWh. Measures to increase the efficiency of production in a cost effective way can lead to reduction of this factor by approximately 5% - 7% which is equal to 1.3 mln. tonnes annual reduction of carbon dioxide emissions from existing coal-fired power plants by 2020 or cumulatively 4.68 mln. tonnes of CO2 eq. for the entire period . The expected reductions in greenhouse gases is calculated on the basis of estimates as follows: 20% of the potential to be realized by 2014; additional 30% to be realized by 2016, 30% – by 2018, and 100% of the potential for reducing emissions as a result of the modernization of coal-fired plants within the period by 2020. These targets are cumulative respectively for the period until 2014 - the first two-year period, until 2016 – for a four-year period, until 2018 – for a six-year period and until 2020 - for the entire period by 2020.	2013	MEE		4680
Fuel substitution – from coal to natural gas*	Energy	CO_2	Substitution of coal in the energy sector with natural gas	Economic	Implemented	The European Emission Trading Scheme and the competition on the electricity market encourage the transition to low carbon technologies and fuels such as natural gas. Every 100 MW coal-based generating capacity substituted with natural gas will be reflected as a reduction of 450 thousand tonnes of CO2 per year. The target values are calculated by years and the commissioning of 100 MW is envisaged for the period by 2014; additional 100 MW are envisaged by 2016, another 200 MW - for the period until 2018 and additional 200 MW until 2020, or a total of 600 MW new, substituting gas capacity for the period 2012-2020.	2013	MEE		11700

Table 3 BGR_BR2_v1.0

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

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)*	
Increasing of high efficiency combined production*			Support of the increase of efficient co-generation of heat and electricity.	Economic|Fiscal|Regulatory	Implemented	The Energy Strategy of the Republic of Bulgaria envisages that the co-generation of electric energy will account for 15% in the electric energy mix by 2020. The co-generation of heat and electric energy improves the overall efficiency of fuel use and saves the primary energy needed to produce the two types of energy separately. The increased share of electricity produced by co-generation and the saved primary energy will be reflected as a reduction in the carbon intensity of the electricity generation mix.	2013	MEE		1600
Increasing the share of heating and cooling based on renewable energy sources*	Energy	CO_2	Reduction of greenhouse gas emissions	Regulatory	Implemented	The measure is intended to create conditions for sustainable development of the district heating sector in Bulgaria and for substitution of conventional fuel for production of thermal energy with renewable sources. The introduction of renewable thermal energy will be gradual and will start with generation of 2% thermal energy from renewable sources in 2014 reaching 10% of the generated thermal energy, mainly from biomass. The cumulative effect of the measure will lead to reduction of greenhouse gases emitted by the district heating systems by 488 000 t until 2020. The contribution of the measure towards the national target in the field of renewable energy sources is relatively small - about 1%.	2012	MEE		488

Table 3 BGR_BR2_v1.0

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

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)*	
Implementation of the measures in the programme for accelerated gasification (PAG) in Bulgaria*	Energy	CO_2	Reduction of end-use energy intensity of households	Fiscal	Implemented	The Energy Strategy of Bulgaria envisages creation of conditions for access to the gas distribution system to 30% of households in 2020 and substitution of electricity used for heating purposes which would save households more than 1 bln. BGN of energy costs. The use of natural gas instead of electricity for heating and domestic purposes can save about 100kWh/year at least, and up to 1800 kWh/year per household. The evaluation of the potential decrease of emissions was made with the following assumptions: a household with 3 members, an apartment with 70 m2 of heated area, without energy saving measures, using electricity for heating and household needs. The average annual consumption of energy for heating is about 11 188 kWh. In view of the delayed implementation of policies in this area a conservative scenario with 15% gasified domestic needs was considered when assessing this measure. An emission factor was adopted with regard to electric energy as in the National Programme for Renovation of Residential Buildings in the Republic of Bulgaria. In the absence of reliable data and projections a scenario of even development was used for a period of 7 years until the total percentage rate of gasified households is reached in 2020.	2013	MEE		2476

Table 3 BGR_BR2_v1.0

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

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)*	
After the entry into force of the new directive on energy efficiency - restoration of the specified annual percentage of the overall public and government buildings (with total area over 250m2)*	Energy	CO_2	Improving the energy efficiency in municipal dwellings	Economic	Adopted	The measure will come into effect after adoption of the new Energy Efficiency Directive (EED) expected by the end of 2012. At this stage of negotiations within the EU legislative bodies the percentage of buildings that are to be retrofitted per year laid down in the draft directive is 3%, which is acceptable for our country according to the Bulgarian position on the proposal. State-owned and municipal dwellings68 account for 3,1% of the total number of buildings in the country according to data from the National Statistical Institute. 64% of them are two-room and three-room dwellings, while another 22,9% have four or more rooms (we assume that they fall into this group). Assuming 3% annual sanitation means that 4562 buildings are to be retrofitted by 2020 (their number will be revised according to the scope and percentage laid down in the EED). Pursuant to thematic objective 4 "Support for the transition to a low carbon economy" of the draft financial regulations for the period 2014 - 2020 it is envisaged for the next programming period OP Regional Development to support energy efficiency measures in buildings. Measures will be implemented in both public and residential buildings and their cost is estimated at about 950 mln.BGN. In addition, the operational program for the next programming period will provide for energy efficiency measures to be applied horizontally to the public health, social, cultural, educational and sports infrastructures, along with the envisaged construction and repair activities.	2015	MEE		204

Table 3 BGR_BR2_v1.0

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

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)*	
Introduction of mandatory energy efficiency scheme (reduction of the consumption of fuel and energy in the energy end-use consumption)*	Energy	CO_2	This measure is proactive and is consistent with the announced direction and actions of the EC aiming at reducing fuel and energy consumption.	Regulatory	Adopted	This measure is proactive and is consistent with the announced direction and actions of the EC aiming at reducing fuel and energy consumption. Precondition for achieving the estimated effect are the regulatory changes with the view of introducing a requirement for specific (proportional) annual reduction of the amount of energy provided on the market by distribution companies and traders in energy (end-use consumption). Market mechanisms and incentives to reduce fuel and energy consumption need to be established along with mandatory schemes and market of energy services (market of “white” certificates/ certificates of energy savings). The measure is consistent with the new policy proposed by the EC to improve the energy efficiency in end-use consumption by saving annually fuel and energy equivalent to 1.5% of the energy provided by distribution companies and traders in energy on the market for the previous year (excluding energy in transport). The annual energy savings, respectively obligations, will be constant value (expressed in percentage) until 2020. To introduce such a scheme it is necessary to undertake appropriate legislative changes and to prepare its structure and operation. The responsible persons will be determined in the course of development of the scheme. These can be both traders in fuel and energy or end consumers. The actual reduction of fuel and energy consumption occurs in end-use consumption and should be a result of implemented measures. The anticipated effect is determined on the basis of projected fuel and energy consumption in the Industry and Household sectors where the consumption is expected to decrease by 1,5% on an annual basis. The decrease in final fuel and energy consumption according to the objectives will lead to reduction of emissions as follows: 40.5ktCO2eq. (by 2016); 41.4	2014	MEE		105

Table 3 BGR_BR2_v1.0

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

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)*	
Replacement of the obsolete and inefficient equipment for production of energy with new equipment*	Energy	CO_2	The measure applies to the end-use consumption of fuels, their conversion into energy for heating, cooling and domestic hot water and to energy consumption.	Regulatory	Implemented	The process should be linked to the activities for control and inspection of heating and air conditioning installations. The financial incentives should combine existing schemes with mandatory co-financing by the beneficiary. The measure is linked also to the activities provided in SNAPEE in accordance with the Regulation adopted pursuant to Art. 15 of Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products . The measure applies to the end-use consumption of fuels, their conversion into energy for heating, cooling and domestic hot water and to energy consumption. The assessment of the impact is made on the basis of the projected consumption of fuels in the Households and Services sector taking into account also other related measures.	2013	MEE		72
Development and staged implementation of national programme “1000 sunny roofs”*	Energy	CO_2	Commissioning of a bivalent system for preparation of hot water for domestic needs - evacuated tube solar collectors and heat pump units (air) for 1000 multi-family buildings (46 apartments, households with 3 members).	Economic	Adopted	Commissioning of a bivalent system for preparation of hot water for domestic needs - evacuated tube solar collectors and heat pump units (air) for 1000 multi-family buildings (46 apartments, households with 3 members). The effect was evaluated on the basis of electricity, taking into account the consumption of the heat pump units. This program is not laid down in a national strategic document, however it is in line with the national RES policy and encourages the production of heat from RES. 164.9 GWh of electricity can be saved per year (by 2020) as a result of the development and implementation of this programme.	2015	MEE		107

Table 3 BGR_BR2_v1.0

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

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)*	
Audits for energy efficiency and implementation of the prescribed measures*	Energy	CO_2, HFCs, PFCs	Industrial systems with annual energy consumption over 3 000 MWh are required to have their energy efficiency audited every three years.	Regulatory	Implemented	Industrial systems with annual energy consumption over 3 000 MWh are required to have their energy efficiency audited every three years. The prescribed measures are mandatory. Energy Efficiency for Competitive Industry is a new programme that provides low-interest loans to small and medium-sized enterprises. The total amount of funds under the programme is €300 mln.. €150 million of this amount will be provided by Operational Program Competitiveness and the remaining amount -from EBRD credit lines through the Bulgarian commercial banks	2008	MEE		1778
Use of biomass in the combustion units of installations*	Energy, Waste management/waste	CO_2, CH_4, N_2O	The aim is to decrease the use of fossil fuel use and increase share of the alternative fuel and wastes. Reduction of heat price. Improved waste management and reduced GHG emissions from waste sector.	Other (Regulatory)	Adopted	The aim is to increase the use of waste as an alternative fuel such as: separately collected household waste (RDF); sludge from domestic sewage water; agricultural waste and waste from the food industry; industrial waste mixed with biomass. It is related to the ban on landfilling of biodegradable waste. The procedure for a green industry is intended to attain more efficient use of waste products. It is proposed to finance in the next programming period facilities that enable the utilization of sludge from urban wastewater treatment plants in industrial installations.	2014	MEE, MEW		3880
Construction of installations for mechanical and biological treatment (mbt) and installations for treatment and recovery of compost and biogas*	Waste management/waste	CH_4	Gradual reduction of biodegradable waste intended for landfilling 2010-2020.	Economic	Implemented	The measure is incorporated into the National strategic plan for gradual reduction of biodegradable waste intended for landfilling 2010-2020. As a result of its implementation for the period 2013-2020 5 289 000 tonnes of biodegradable waste will be diverted from landfills. An additional impact of the measure will be the substitution of phosphate fertilizers in agriculture with compost produced at waste treatment installations.	2013	MEW		5823

Table 3 BGR_BR2_v1.0

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

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)*	
Capture and burning of biogas in all new and in the existing reginoal landfills*	Waste management/waste	CH_4	360 mln. Nm3 methane will be burned by 2020 with the introduction of systems for capture and flaring of biogas in all regional landfills.	Other (Regulatory)	Implemented	The requirement for design and operation of landfills is provided for in Ordinance №8/2004. It is necessary to improve the control over its implementation. 360 mln. Nm3 methane will be burned by 2020 with the introduction of systems for capture and flaring of biogas in all regional landfills. The combined effect of the two measures is expected to be 5 070 122 total reduction in tonnes CO2 eq. by 2020.	2013	MEW		5070
Introduction of anaerobic stabilization of sludge with management capture and burning of biogas in new plants and plants under reconstruction in settlements with population equivalent over 20 thousand residents*	Waste management/waste	CH_4, N_2O	A cost-benefit analysis for each project should justify or discourage the recovery of methane.	Other (Economic)	Implemented	A cost-benefit analysis for each project should justify or discourage the recovery of methane. Practice has shown that it is technologically feasible and economically viable to produce electricity from the biogas emitted from the methane tanks of large wastewater treatment plants (more than 50 000 PE) in order to cover the main share of the energy needs of the plants. An additional effect of the stabilization of sludge at UWWTP will be achieved as a result of the possibility to use the stabilized sludge in agriculture so as to recycle the nutritional substances, to preserve the fertile soils and to limit the use of agricultural chemicals and synthetic fertilizers.	2013	MEW		1025

Table 3 BGR_BR2_v1.0

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

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)*	
Encouraging the use of suitable crop rotation, especially with crops fixing atmospheric nitrogen*	Agriculture	CH_4	The introduction of sustainable crop rotations that include plant cover in winter and legumes (beans, soybeans, alfalfa, clover) will prevent soil erosion and will retain organic carbon (carbon sequestration), which is a potential tool for reducing greenhouse gases.	Economic	Implemented	Rotation means science-based successive rotation of crops in time and place on a farmland. The period required for all crops to pass through all fields following the order of the crop rotation scheme is called rotation period or rotation. The introduction of sustainable crop rotations that include plant cover in winter and legumes (beans, soybeans, alfalfa, clover) will prevent soil erosion and will retain organic carbon (carbon sequestration), which is a potential tool for reducing greenhouse gases. The proposed budget for the measure is based on: 350 BGN/ha is the current payment for biological field crops under Measure 214 of RDP 2007-2013; 150 BGN/ha is the current payment for the introduction of rotation under Measure 214 of RDP 2007-2013. This measure covers: 20 000 ha, of which 60% in organic production. Organic production: 12 000 ha X 350 BGN/ha = 4 200 000 BGN Crop rotation: 8000 ha x 150 BGN/ha = 1 200 000 BGN	2013	MAF		6.4

Table 3 BGR_BR2_v1.0

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

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)*	
Management of degraded agricultural land using: Biological reclamation with grass species typical of the region. Management of degraded agricultural land using: Implementation of erosion control measures and soil treatment methods*	Agriculture	CH_4	Management of degraded agricultural land	Economic	Implemented	Soil erosion is a process of mechanical destruction and weathering of soil by the action of water and wind. It gradually reduces the amount of nutrients and the humus in soil. Erosion aggravates the structure, as well as the water and air regime of soil. The combination of the specific natural and economic conditions in Bulgaria is a reason for the high risk of degradation processes in agricultural soils. The most common processes of soil degradation include water and wind erosion, pollution, reduction of organic matter stocks (humus), compaction, acidification, salinisation, loss of biodiversity. More than 60% of the country is affected by varying degrees of erosion. 11.8 % of the country's territory is severely eroded. 65% of agricultural land is threatened by water erosion and 24% is threatened by wind erosion. The average annual intensity of soil erosion varies according to land use, but soil loss in agricultural lands is estimated at 12.256 tonnes/ha a year on average. The water erosion of soil controls the stocks of organic carbon and their distribution on the landscape which affects the circulation of carbon, the content of carbon dioxide in the atmosphere and the global warming. The proposed budget for the measure is based on reclamation of 2500 ha: • 2500 ha x 380 BGN/ha = 950 000 BGN Erosion control practices for 2500 ha • 2500 ha x 145 BGN/ha = 362 500 BGN The amounts used are under the current Measure 214 Agri-environmental payments under RDP 2007-2013	2013	MAF, MEW		20

Table 3 BGR_BR2_v1.0

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

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)*	
Improvement of the manure use and management*	Agriculture	CH_4	All activities aimed at storage and handling of manure should take into account both the type of manure - solid or liquid - and the technologies for gathering and processing.	Education|Research|Other (Planning)	Implemented	Production, processing and management of manure is one of the most significant sources of the greenhouse gas CH4 in agriculture. All activities aimed at storage and handling of manure should take into account both the type of manure - solid or liquid - and the technologies for gathering and processing. The investment support is crucial to motivate the farmers to build such expensive facilities. The proposed budget for the measure is based on: The average cost of building facilities for storage of manure for one farm with 50 cows is 130 000 BGN. 1000 x 130 000 BGN = 130 000 000 BGN For training: 300 livestock holdings x 690 BGN = 207 000 BGN	2013	MAF		1.2
Introduction of low-carbon practices for processing manure, e.g. composting, transformation of manure into biogas under anaerobic conditions*	Agriculture	CH_4	Improved animal waste management systems	Research|Economic|Education|Regulatory	Adopted	The introduction of low carbon practices for the processing of manure can reduce the emissions from its storage. This requires considerable accumulation of knowledge and experience at regional level, since the efficiency of the implementation of the measure depends on the conditions under which it is implemented. It is therefore advisable to establish model farms in different production areas of the country in order to accumulate practical experience that can be presented to the farmers. Given the resources required by such investments and the need for changes in the production process it is advisable to provide also investment support. The reduction of emissions depends on the type of animals: - holdings that breed pigs: 811 kg CO2 eq. per head - holdings that breed cattle: 78 kg CO2 eq. per head - holdings that breed sheep: 4 kg CO2 eq. per head - holdings that breed birds: 18.4 kg CO2 eq. per head The proposed budget for the measure is based on: For training: 200 livestock holdings x 690 BGN = 138 000 BGN For model farms – 1 000 000 BGN	2014	MAF		0.75

Table 3 BGR_BR2_v1.0

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

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)*	
Technical support for farmers for tilling soil/ stubbles*	Agriculture	CH_4	Improved management of organic soils, Other activities improving cropland management	Economic	Adopted	The use of plant residues in agriculture requires both a change or adjustment of the production processes as well as investment in new equipment and machinery. This requires substantial financial resources and supporting them is appropriate. The efficient recovery of waste will reduce the need for burning stubble. The reduction of emissions is estimated at 3.62 kg CO2 eq. per tonne production. The proposed budget for the measure is based on: 5000 holdings x 45 000 BGN = 225 000 000 BGN	2014	MAF		0.66
Financial support for improving the equipment and the technology of production*	Agriculture	CH_4	Other agriculture	Other (Economic)	Adopted	In recent years, rice production in the country has been gradually recovering its potential. The introduction of low carbon technologies and methods is necessary, feasible and appropriate in this specific period.	2014	MAF		0.01
Utilization of "non-wooded areas intended for afforestation" in forest areas*	Forestry/LULUCF	CO_2	Increasing forest area has an important role in offsetting the greenhouse gas emissions from other sectors. The afforestation of non-wooded areas in the long term will increase the capacity of the forests as sinks of greenhouse gases.	Economic	Implemented	The measure is consistent with the requirements set out in the Forestry Act (2011). The needed financial resources are estimated on the basis of the accepted mean values of investments. The implementation of the measure is important for achieving the goals of NAPCC because forests are a major carbon sink and a reservoir of 90-95% of the total amount of sequestered carbon in the LULUCF sector. Increasing forest area has an important role in offsetting the greenhouse gas emissions from other sectors. The afforestation of non-wooded areas in the long term will increase the capacity of the forests as sinks of greenhouse gases.	2013	MAF		14

Table 3 BGR_BR2_v1.0

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

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)*	
Afforestation of abandoned agricultural land, barren and deforested areas, eroded and threatened by erosion land outside forest areas*	Forestry/LULUCF	CO_2	The implementation of the measure will increase the absorption of greenhouse gases and thus contribute to climate change mitigation, to the protection of biodiversity and of the soil against erosion.	Other (Research)	Implemented	The proposed measure corresponds to those with codes 223 and 226 under the Rural Development Programme. It is possible to apply under this programme with projects and to obtain appropriate funding. The needed financial resources are estimated on the basis of accepted mean values of investments. There is a potential for creating new forests outside the forested areas especially over the last two decades, when large territories of the agricultural land is not cultivated. The implementation of the measure will increase the absorption of greenhouse gases and thus contribute to climate change mitigation, to the protection of biodiversity and of the soil against erosion. To achieve the objective of the measure it is necessary, before undertaking afforestation activities, to make an inventory of the areas that are suitable for afforestation and to conduct applied scientific studies to evaluate their suitability and possibility for afforestation; appropriate recommendations for suitable species should be provided on the basis of the conditions of the places where they grow.	2013	MAF, MRDPW and municipalities		35.2

Table 3 BGR_BR2_v1.0

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

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)*	
Increase of areas for urban and suburban parks and green zones*	Forestry/LULUCF	CO_2	Increasing the areas of urban and suburban parks and green zones and keeping them in good condition will contribute to increased absorption of greenhouse gases and to better quality of the living environment.	Economic	Implemented	The proposed measure corresponds in part to measure with code 322 form the Rural Development Programme that provides funding opportunities. The measure is also related to Ordinance № 5 on Spatial Planning Rules and Standards, setting standards for the surface area of public green areas in cities. The needed financial resources are estimated on the basis of the accepted mean values of investments. The expansion of urban areas and the intensive building in recent years is a prerequisite for significant emissions of greenhouse gases. Increasing the areas of urban and suburban parks and green zones and keeping them in good condition will contribute to increased absorption of greenhouse gases and to better quality of the living environment. The measure will contribute also to the gradual achievement of the standards for green areas laid down in the General Development Plans.	2013	MRDPW, Municipalities		2.5
Restoration and sustainable management of wetlands. Protection and preservation of wetlands in forest areas, peatlands, marshlands*	Forestry/LULUCF	CO_2, CH_4	The restoration and the conservation of wetlands and woodlands and their proper management will enhance their efficiency as carbon stores.	Research|Economic|Regulatory	Implemented	The main instrument for the protection of wetlands is the Convention on Wetlands which is transposed in the Biological Diversity Act. The wetlands are designated as protected areas with priority or are included in Natura 2000. They will be subject to management plans that are currently being developed and that will be supplemented by special programmes for management in view of climate change. The needed financial resources are estimated on the basis of the accepted mean values of investments. Wetlands are characterized by great biological diversity and play an important role in carbon retention because they are among the most productive ecosystems. The restoration and the conservation of wetlands and woodlands and their proper management will enhance their efficiency as carbon stores	2013	MEW		4.7

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

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)*	
Restoration and maintenance of protective forest belts and new anti-erosion afforestation*	Forestry/LULUCF	CO_2	Besides the direct effect for absorption of carbon by the new forests in these zones, there are also significant indirect effects associated with preventing wind erosion after the restoration of belts.	Other (Economic)	Implemented	The first step is to update the programme for restoration of shelter belts and the specific activities will commence after its approval. Besides the direct effect for absorption of carbon by the new forests in these zones, there are also significant indirect effects associated with preventing wind erosion after the restoration of belts. The information on the areas and the funds necessary for the restoration is provided by EFA.	2013	MAF, EFA		8.4
Increasing the density in the listed natural and artificial plantations*	Forestry/LULUCF	CO_2	Increasing the density in the listed plantations by supporting their natural regeneration or using other methods.	Research|Economic|Other (Planning)	Implemented	A first step can be the assignment of scientific studies followed by amendments to the regulations. Activities will commence on this basis with the view of increasing the density in the listed plantations by supporting their natural regeneration or using other methods. The information on the areas and the necessary funding is provided by EFA.	2013	EFA, MAF		16.7
Rehabilitation and modernization of the existing road infrastructure to ensure optimum speed and optimum driving modes of automobile engines*	Transport	CO_2	Improved transport infrastructure	Economic	Adopted	Assessment of the emission saving potential of projects for rehabilitation and modernization – within the EIA. Existing methodology of the European Investment Bank. (http://www.eib.org/attachments/strategies/footprint_summary_of_the_methodologies_en.pdf)	2014	MF, MTITC, MRDPW, Road Infrastructure Agency		542.5

Table 3 BGR_BR2_v1.0

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

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)*	
Introduction of intelligent transport systems along the national and the urban road network*	Transport	CO_2, CH_4, N_2O	Intelligent transport systems and telematic solutions help improve road safety, promote the efficiency of the used existing infrastructure and contribute to the reduction of environmental pollution through control over traffic flows and management of traffic volume.	Fiscal|Regulatory|Economic	Adopted	Intelligent Transport Systems (ITS) encompass a wide range of technical solutions designed to improve transport by improving mobility and increasing the safety of road traffic. Telematics (a combination of telecommunications and informatics) uses advanced technologies to meet transport needs. Intelligent transport systems and telematic solutions help improve road safety, promote the efficiency of the used existing infrastructure and contribute to the reduction of environmental pollution through control over traffic flows and management of traffic volume. The intelligent transport systems in urban settings can include integrated management of public transport charges, enhanced management of customer relationships, traffic forecasts, improved traffic management, traveler information and toll collection. These systems apply advanced technologies to collect more and better data, to make a precise analysis of these data and to link them through more effective networks. The result: more effective, more efficient and better oriented towards citizens on the move services.	2014	MTITC		1017.2
Increasing the share of biofuels*	Transport	CO_2, CH_4, N_2O	The most promising projects in Bulgaria are the projects for production of ethanol and biodiesel.	Regulatory	Implemented	Biofuels are fuels produced from biomass and used in transport. They diversify the energy mix and reduce the dependence on fossil fuels. The main types of biofuels are bioethanol, biodiesel, biogas, synthetic biofuels, bio-hydrogen, pure vegetable oils. The most promising projects in Bulgaria are the projects for production of ethanol and biodiesel. The consumption of biodiesel in Bulgaria in 2010 amounted to 38 911.13 tonnes. In the previous two years these amounts were respectively 4260 t and 6566 t. The Renewable Energy Sources Act (Art. 47(1)) introduces stages for the introduction of certain percentages of biodiesel and bioethanol content in the relevant fuel, as well as requirements to the types of biofuels and sustainability criteria which they must meet.	2012	MEET, SEDA, MEW		407

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

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)*	
Reducing the share of trips by private motor vehicles*	Transport	CO_2, CH_4, N_2O	Improving the urban public transport and non-motorized transport development	Economic|Regulatory|Other (Planning)	Implemented	Reducing the share of trips by private motor vehicles by improving the urban public transport and non-motorized transport development.Project-oriented approach – specific implementation	2012	MRDPW		678
Development and promotion of cycling*	Transport	CO_2, CH_4, N_2O	Promotion of cycling	Education|Information|Economic	Implemented	Project-oriented approach – specific implementation 1. Design and construction of new cycling infrastructure 2. Developing systems for use of municipal bicycles Trainings and campaigns	2013	MF; MRDPW; MEW; Municipal authorities		1017
Increasing the share of public electrical transport - railways, trolley, tram, metro*	Transport	CO_2, CH_4, N_2O	Increasing the share of public electrical transport1.Increasing the share of electric railway transport - infrastructure improvements; 2. Increasing the share of electric railway transport - renovation of vehicles; 3.Increasing the share of electric mass public transport - infrastructure improvements; 4.Increasing the share of electric mass public transport - renovation of vehicles.ncreasing the share of public electrical transport1.Increasing the share of electric railway transport - infrastructure improvements; 2. Increasing the share of electric railway transport - renovation of vehicles; 3.Increasing the share of electric mass public transport - infrastructure improvements;	Fiscal	Adopted	OP “Transport” 2007-2013, Priority axis 1 “Development of railway infrastructure along the major national and Pan-European transport axes” provides for: modernization of the railway line Sofia – Plovdiv; reconstruction and electrification of railway line Svilengrad - Turkish border; renewal of sections of railway infrastructure on the railway line Plovdiv - Burgas (along Trans-European Transport Network); modernization of railway line Sofia - Dragoman (along TEN-T); design of the construction of railway line Vidin - Sofia. Given the crucial importance of the central section of Line 2, it is currently a separate Sofia Metro Expansion Project which is included in Operational Programme Transport, with financing by the European Regional Development Fund, with national and local co-financing. This stretch covers the section: “Road junction Nadezhda - Central Railway Station – Sv. Nedelya Square - Cherny Vrah Blvd.” International tender procedures were conducted in 2007-2008 for selection of contractors of this project and the contracts entered into force in December 2008 with a time limit for completion - autumn 2012. The expected effect of the implementation of such measures is reduction of hazardous and greenhouse gases – 90 500 tonnes CO2 per year.	2014	MF; MTITC; MRDPW; National Railway Infrastructure Company, municipal governments		142

Table 3 BGR_BR2_v1.0

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

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)*	
Development and construction of intermodal terminals for combined transport*	Transport	CO_2, CH_4, N_2O	Increase of the degree of utilization of more environmentally friendly modes of transport and creation of favorable conditions for increasing the added value of transport activity with overall reduction of transport costs per unit of GDP	Economic	Adopted	The measure aims to achieve a two-sided effect, consisting, on one side, in increase of the degree of utilization of more environmentally friendly modes of transport and, on the other side, in the creation of favorable conditions for increasing the added value of transport activity with overall reduction of transport costs per unit of GDP. The expected results of its implementation are: • more efficient use of rail and water transport; • development of transport schemes and technologies meeting contemporary requirements with regard to environment and climate; • increased coordination and integration of different transport modes; • lower cost for passenger and cargo transport; • integration of the Bulgarian transport system with that of the EU and increasing its competitiveness.	2014	MF; MTITC; National Railway Infrastructure Company		406.9

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 ex post 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.

[f] Optional year or years deemed relevant by the Party.

Custom Footnotes

Table 4 BGR_BR2_v1.0

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 other market based mechanisms*	
Year[c]	*(kt CO_2 eq)*	*(kt CO_2 eq)*	*(number of units)*	*(kt CO_2 eq)*	*(number of units)*	*(kt CO_2 eq)*
Base year/base period	120,742.00	NA				
2010	60,573.36	NA	NA		NA	
2011	66,207.98	NA	NA		NA	
2012	61,192.18	NA	NA		NA	
2013	55,893.22	NA	NA		NA	
2014	NA	NA	NA		NA	

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.

Custom Footnotes

Table 4(a)I BGR_BR2_v1.0

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 2013 [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)				
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.

Custom Footnotes

Table 4(a)I BGR_BR2_v1.0

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 2014 [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)				
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.

Custom Footnotes

Table 4(b) BGR_BR2_v1.0

Reporting on progress[a, b, c]

Units of market based mechanisms			*Year*	
			2013	*2014*
Kyoto Protocol units[d]	*Kyoto Protocol units*	*(number of units)*		
		(kt CO_2 eq)		
	AAUs	*(number of units)*		
		(kt CO2 eq)		
	ERUs	*(number of units)*		
		(kt CO2 eq)		
	CERs	*(number of units)*		
		(kt CO2 eq)		
	tCERs	*(number of units)*		
		(kt CO2 eq)		
	lCERs	*(number of units)*		
		(kt CO2 eq)		
Other units[d,e]	*Units from market-based mechanisms under the Convention*	*(number of units)*		
		(kt CO_2 eq)		
	Units from other market-based mechanisms	*(number of units)*		
		(kt CO_2 eq)		
Total		*(number of units)*		
		(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.

[e] Additional rows for each market-based mechanism should be added, if applicable.

Custom Footnotes

Table 5 BGR_BR2_v1.0

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

Key underlying assumptions		*Historical*[b]									Projected		
Assumption	*Unit*	*1990*	*1995*	2000	2005	2010	2011	2012	2013	2015	2020	2025	2030
GDP growth rate	*%*					0.40	1.80	0.60	0.50	0.80	1.40	1.10	1.10
Population	thousands					7.50	7.36	7.28	7.24	7.17	6.97	6.76	6.55
Population growth	%						-1.87	-1.09	-0.55	-0.38	-2.80	-3.10	-3.20
International oil price	USD / boe							111.49	108.66	59.85	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

[a] Parties should include key underlying assumptions as appropriate.

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

Custom Footnotes

Table 6(a) BGR_BR2_v1.0

Information on updated greenhouse gas projections under a 'with measures' scenario[a]

	GHG emissions and removals[b]							GHG emission projections	
	(kt CO_2 eq)							(kt CO_2 eq)	
	Base Year	1990	1995	2000	2005	2010	2013	2020	2030
Sector[d,e]									
Energy	82,905.90	75,111.91	52,204.33	41,933.60	46,411.21	46,500.47	41,122.51	45,703.36	42,320.49
Transport	7,363.64	6,782.67	4,577.29	5,696.85	7,834.99	7,972.78	7,433.30	7,104.43	6,238.50
Industry/industrial processes	13,311.90	10,114.20	9,859.13	6,602.89	6,966.57	3,941.32	4,324.51	4,264.29	4,212.92
Agriculture	17,451.97	15,995.79	7,228.99	5,676.29	5,663.55	5,546.66	5,939.35	6,349.68	7,196.92
Forestry/LULUCF	-14,401.44	-14,141.41	-12,166.41	-9,859.27	-8,866.81	-8,702.29	-9,303.42	-11,053.39	-13,132.53
Waste management/waste	7,072.25	7,143.24	5,930.54	5,433.39	5,045.91	4,584.92	4,506.85	3,850.03	3,438.10
Other (specify)									
Gas									
CO_2 emissions including net CO_2 from LULUCF	76,379.23	66,140.41	45,725.87	35,569.08	41,758.48	39,095.47	33,438.54	35,941.51	30,349.13
CO_2 emissions excluding net CO_2 from LULUCF	90,782.60	80,286.15	57,894.57	45,669.46	50,631.31	47,824.94	42,755.77	47,011.31	43,501.16
CH_4 emissions including CH_4 from LULUCF	19,503.79	19,230.35	12,499.34	10,283.58	9,235.25	8,609.45	12,499.34	8,325.44	8,253.33
CH_4 emissions excluding CH_4 from LULUCF	19,502.17	19,226.87	12,497.41	10,080.06	9,230.17	8,586.51	12,497.41	8,311.58	8,413.73
N_2O emissions including N_2O from LULUCF	10,454.25	8,849.10	4,823.49	3,902.13	4,060.06	3,553.45	4,823.49	4,071.66	4,676.13
N_2O emissions excluding N_2O from LULUCF	10,453.95	9,948.43	4,823.13	3,864.55	4,061.00	3,549.21	4,823.13	4,071.66	4,676.13
HFCs	NO	NO	2.99	25.62	157.54	600.18	898.35	763.60	557.43
PFCs	NO	NO	NO	NO	NO	0.06	0.05	0.05	0.05
SF_6	3.30	3.69	4.90	6.49	8.16	12.47	19.72	21.10	22.38
Other (specify)									
Total with LULUCF[f]	106,340.57	94,223.55	63,056.59	49,786.90	55,219.49	51,871.08	51,679.49	49,123.36	43,858.45
Total without LULUCF	120,742.02	109,465.14	75,223.00	59,646.18	64,088.18	60,573.37	60,994.43	60,179.30	57,170.88

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.

Table 6(a) BGR_BR2_v1.0

Information on updated greenhouse gas projections under a 'with measures' scenario[a]

	GHG emissions and removals[b]							GHG emission projections	
	(kt CO_2 eq)							(kt CO_2 eq)	
	Base Year	1990	1995	2000	2005	2010	2013	2020	2030

[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.

Custom Footnotes

Table 7 BGR_BR2_v1.0

Provision of public financial support: summary information in 2013[a]

Allocation channels	*Year*									
	American dollar - USD					*USD[b]*				
	Core/ general[c]	*Climate-specific[d]*				*Core/ general[c]*	*Climate-specific[d]*			
		Mitigation	*Adaptation*	*Cross-cutting[e]*	*Other[f]*		*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.

[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.

Custom Footnotes

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:

Table 7 BGR_BR2_v1.0

Provision of public financial support: summary information in 2014[a]

Allocation channels	*Year*									
	American dollar - USD					*USD[b]*				
	Core/ general[c]	*Climate-specific[d]*				*Core/ general[c]*	*Climate-specific[d]*			
		Mitigation	*Adaptation*	*Cross-cutting[e]*	*Other[f]*		*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.

[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.

Custom Footnotes

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:

Table 7(a) BGR_BR2_v1.0

Provision of public financial support: contribution through multilateral channels in 2013[a]

Donor funding	*Total amount*				*Status*[b]	*Funding source*[f]	*Financial instrument*[f]	*Type of support*[f, g]	*Sector*[c]
	Core/general[d]		*Climate-specific*[e]						
	American dollar - USD	*USD*	*American dollar - USD*	*USD*					
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.

Custom Footnotes

Table 7(a)

BGR_BR2_v1.0

Provision of public financial support: contribution through multilateral channels in 2014[a]

Donor funding	*Total amount*				*Status*[b]	*Funding source*[f]	*Financial instrument*[f]	*Type of support*[f, g]	*Sector*[c]
	Core/general[d]		*Climate-specific*[e]						
	American dollar - USD	*USD*	*American dollar - USD*	*USD*					
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.

Custom Footnotes

Table 7(b) BGR_BR2_v1.0

Provision of public financial support: contribution through bilateral, regional and other channels in 2013[a]

Recipient country/ region/project/programme [b]	*Total amount*		*Status* [c]	*Funding source* [g]	*Financial instrument* [g]	*Type of support* [g, h]	*Sector* [d]	*Additional information* [e]
	Climate-specific [f]							
	American dollar - USD	*USD*						
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.

Custom Footnotes

Table 7(b) BGR_BR2_v1.0

Provision of public financial support: contribution through bilateral, regional and other channels in 2014[a]

Recipient country/ region/project/programme [b]	*Total amount*		*Status* [c]	*Funding source* [g]	*Financial instrument* [g]	*Type of support* [g, h]	*Sector* [d]	*Additional information* [e]
	Climate-specific [f]							
	American dollar - USD	*USD*						
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.

Custom Footnotes

Table 8 BGR_BR2_v1.0

Provision of technology development and transfer support[a,b]

Recipient country and/or region	*Targeted area*	*Measures and activities related to technology transfer*	*Sector* [c]	*Source of the funding for technology transfer*	*Activities undertaken by*	*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.

Custom Footnotes

Table 9 BGR_BR2_v1.0

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.

Custom Footnotes