#### BR CTF submission workbook

Submission Year	2014	Party	EUROPEAN UNION (28)
Submission Version	v2.0	Submission Level	Submitted
Submission Key	EUA_2014_V2.0	Submission Status	Closed
Submitted By	Ana Maria Danila	Workbook Created	10.04.2014 09:44:22
Submitted Date	10.04.2014 09:44:08		

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## Table 1 Emission trends: summary <sup>(1)</sup> (Sheet 1 of 3)

#### CRF: EUA\_CRF\_\_v1.3

	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS EMISSIONS	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	4,159,772.03	4,059,355.33	3,907,258.52	3,834,990.20	3,812,967.60	3,859,488.42	3,955,959.76	3,873,724.27	3,870,230.53
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	4,430,301.99	4,373,120.32	4,210,575.24	4,131,620.71	4,111,840.13	4,155,792.61	4,256,618.72	4,174,494.39	4,172,165.04
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	599,345.50	582,984.66	563,847.62	554,091.13	541,544.78	537,451.99	532,101.10	519,343.63	505,442.66
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	594,691.84	578,438.41	559,454.27	549,720.25	535,151.58	531,371.92	526,220.37	513,696.11	499,676.42
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	525,560.87	496,900.20	477,771.73	460,769.30	464,288.29	464,977.33	471,301.82	468,798.71	446,446.69
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	520,979.73	492,451.93	473,381.07	456,390.96	459,936.96	460,795.58	466,939.78	464,694.22	442,247.72
HFCs	27,881.79	27,537.47	29,447.04	31,880.42	36,038.81	40,425.61	45,761.01	52,796.44	54,213.98
PFCs	21,304.36	19,470.27	15,762.69	14,889.68	14,303.01	14,027.91	13,496.09	12,527.07	11,871.34
SF <sub>6</sub>	10,958.11	11,396.32	12,216.42	13,146.50	14,231.23	15,332.02	15,135.54	13,508.95	12,621.87
Total (including LULUCF)	5,344,822.66	5,197,644.24	5,006,304.02	4,909,767.23	4,883,373.73	4,931,703.30	5,033,755.33	4,940,699.07	4,900,827.08
Total (excluding LULUCF)	5,606,117.83	5,502,414.73	5,300,836.74	5,197,648.53	5,171,501.74	5,217,745.66	5,324,171.52	5,231,717.18	5,192,796.37
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CREENHOUSE CAS SOURCE AND SINK CATECORIES	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt CO <sub>2</sub> eq	$kt CO_2 eq$	kt CO <sub>2</sub> eq						
1. Energy	4,319,604.66	4,283,305.56	4,123,807.84	4,054,033.64	4,009,683.88	4,045,928.63	4,154,190.07	4,062,631.95	4,054,521.27
2. Industrial Processes	461,477.34	427,084.76	412,545.25	400,235.49	426,955.56	439,424.01	438,507.96	444,020.61	418,824.99
3. Solvent and Other Product Use	16,855.39	16,274.40	15,696.49	15,160.94	13,846.37	13,903.56	13,988.93	13,969.27	13,980.11
4. Agriculture	604,007.70	569,741.06	544,575.31	525,840.79	520,251.87	520,030.05	521,419.63	520,664.80	518,476.57
5. Land Use, Land-Use Change and Forestry <sup>b</sup>	-261,295.16	-304,770.49	-294,532.72	-287,881.30	-288,128.01	-286,042.36	-290,416.19	-291,018.11	-291,969.30
6. Waste	204,172.74	206,008.95	204,211.85	202,377.67	200,764.05	198,459.42	196,064.93	190,430.55	186,993.44
7. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (including LULUCF)	5,344,822.66	5,197,644.24	5,006,304.02	4,909,767.23	4,883,373.73	4,931,703.30	5,033,755.33	4,940,699.07	4,900,827.08

CDEENHOUSE CAS SOUDCE AND SINK CATECODIES	Base year <sup>a</sup>	1991	1992	1993	1994	
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt CO <sub>2</sub> eq	$kt CO_2 eq$	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt CO <sub>2</sub> eq	kt
1. Energy	4,319,604.66	4,283,305.56	4,123,807.84	4,054,033.64	4,009,683.88	
2. Industrial Processes	461,477.34	427,084.76	412,545.25	400,235.49	426,955.56	
3. Solvent and Other Product Use	16,855.39	16,274.40	15,696.49	15,160.94	13,846.37	
4. Agriculture	604,007.70	569,741.06	544,575.31	525,840.79	520,251.87	
5. Land Use, Land-Use Change and Forestry <sup>b</sup>	-261,295.16	-304,770.49	-294,532.72	-287,881.30	-288,128.01	
6. Waste	204,172.74	206,008.95	204,211.85	202,377.67	200,764.05	
7. Other	0.00	0.00	0.00	0.00	0.00	
Total (including LULUCF)	5,344,822.66	5,197,644.24	5,006,304.02	4,909,767.23	4,883,373.73	

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

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

## Table 1 Emission trends: summary <sup>(1)</sup> (Sheet 2 of 3)

## CRF: EUA\_CRF\_\_ v1.3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS EMISSIONS	kt CO <sub>2</sub> eq									
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	3,790,887.52	3,834,013.54	3,875,016.84	3,903,625.43	4,025,665.60	4,010,262.02	3,978,538.31	3,959,546.21	3,944,255.89	3,805,984.05
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	4,107,753.26	4,131,744.75	4,203,657.80	4,177,413.00	4,277,388.86	4,287,705.93	4,269,223.70	4,273,987.81	4,220,994.30	4,124,952.30
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	494,123.91	483,076.94	469,649.08	459,965.15	452,031.90	438,736.65	431,121.70	425,430.58	418,677.98	412,705.06
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	489,016.57	477,428.40	464,680.77	455,074.19	446,251.82	433,910.73	425,851.02	420,347.18	413,295.79	408,155.88
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	423,715.04	420,445.06	413,133.94	401,623.22	396,767.00	401,198.90	392,375.38	379,728.84	379,529.51	370,392.84
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	419,716.50	416,334.33	409,232.95	397,797.60	392,742.85	397,449.95	388,578.49	375,979.72	375,621.84	366,641.96
HFCs	47,681.39	47,141.79	46,846.22	49,573.96	54,878.43	57,111.04	61,685.76	64,537.33	69,319.41	72,745.18
PFCs	11,560.28	9,875.86	8,904.06	10,389.38	8,635.44	7,327.23	6,129.13	5,497.28	5,083.40	4,376.13
SF <sub>6</sub>	10,283.83	10,282.00	9,628.67	8,552.94	8,000.76	8,274.20	8,191.63	7,575.13	7,317.93	6,867.92
Total (including LULUCF)	4,778,251.97	4,804,835.19	4,823,178.82	4,833,730.08	4,945,979.13	4,922,910.04	4,878,041.92	4,842,315.37	4,824,184.12	4,673,071.17
Total (excluding LULUCF)	5,086,011.83	5,092,807.13	5,142,950.48	5,098,801.07	5,187,898.17	5,191,779.07	5,159,659.74	5,147,924.45	5,091,632.67	4,983,739.36
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt CO <sub>2</sub> eq									
1. Energy	3,993,695.50	4,000,241.99	4,078,342.28	4,048,880.69	4,138,318.00	4,132,250.81	4,106,848.65	4,102,931.98	4,039,129.57	3,959,346.10
2. Industrial Processes	381,456.49	393,099.41	380,584.96	375,468.80	388,396.79	402,633.06	406,017.27	403,715.35	415,232.89	391,718.76
3. Solvent and Other Product Use	13,622.34	13,442.00	13,032.81	12,659.63	12,263.89	12,151.74	12,187.69	12,254.38	11,787.55	11,287.28
4. Agriculture	515,660.51	508,448.25	500,085.26	494,081.11	487,087.07	487,939.46	481,543.41	477,833.30	478,423.66	477,854.61
5. Land Use, Land-Use Change and Forestry <sup>b</sup>	-307,759.86	-287,971.94	-319,771.66	-265,070.99	-241,919.04	-268,869.03	-281,617.81	-305,609.08	-267,448.55	-310,668.19
6. Waste	181,576.99	177,575.48	170,905.17	167,710.84	161,832.42	156,804.00	153,062.71	151,189.44	147,059.01	143,532.62
7. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (including LULUCF)	4,778,251.97	4,804,835.19	4,823,178.82	4,833,730.08	4,945,979.13	4,922,910.04	4,878,041.92	4,842,315.37	4,824,184.12	4,673,071.17

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

#### Table 1 Emission trends: summary <sup>(1)</sup> (Sheet 3 of 3)

GREENHOUSE GAS EMISSIONS	2009	2010	2011	Change from base to latest reported year
	kt CO 2 eq	kt CO 2 eq	kt CO <sub>2</sub> eq	(%)
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	3,462,425.59	3,607,925.07	3,458,943.87	-0.17
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	3,792,438.80	3,912,210.90	3,764,299.71	-0.15
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	403,753.47	400,313.03	392,168.58	-0.35
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	399,062.26	395,550.38	387,666.63	-0.35
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	349,716.60	339,842.33	338,577.35	-110.29
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	345,937.11	336,114.71	334,838.76	-110.76
HFCs	75,989.42	80,180.91	81,761.07	1.93
PFCs	2,843.73	3,328.60	3,601.67	-0.83
SF <sub>6</sub>	6,471.25	6,558.57	6,428.95	-0.41
Total (including LULUCF)	4,301,200.05	4,438,148.52	4,281,481.49	-0.20
Total (excluding LULUCF)	4,622,742.56	4,733,944.07	4,578,596.79	-0.18

CRF: EUA\_CRF\_\_ v1.3

	2009	2010	2011	Change from base to latest
GREENHOUSE GAS SOURCE AND SINK CATEGORIES				reported year
	kt CO <sub>2</sub> eq	$kt CO_2 eq$	kt CO <sub>2</sub> eq	(%)
1. Energy	3,680,648.12	3,784,410.73	3,634,726.58	-0.16
2. Industrial Processes	325,652.25	337,859.87	334,684.91	-0.27
3. Solvent and Other Product Use	10,356.14	10,414.76	10,214.56	-0.39
4. Agriculture	466,381.58	463,189.33	464,418.21	-0.23
5. Land Use, Land-Use Change and Forestry <sup>b</sup>	-321,542.51	-295,795.55	-297,115.30	0.14
6. Waste	139,704.47	138,069.38	134,552.52	-0.34
7. Other	0.00	0.00	0.00	0.00
Total (including LULUCF)	4,301,200.05	4,438,148.52	4,281,481.49	-0.20

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<sub>6</sub>)", 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.

<sup>a</sup> The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the 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.

 $^{\rm b}$  Includes net CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O from LULUCF.

**Custom Footnotes** 

The 'base year' column in fact contains 1990 data automatically imported from CRF Table 10.

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

## (Sheet 1 of 3)

## CRF: EUA\_CRF\_\_v1.3

	Base year $^{a}$	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	4,129,771.91	4,100,979.28	3,949,193.73	3,880,523.00	3,845,055.83	3,881,713.34	3,990,875.36	3,903,826.12	3,904,265.87
A. Fuel Combustion (Sectoral Approach)	4,104,312.35	4,076,671.33	3,924,308.66	3,855,426.23	3,820,398.98	3,854,666.22	3,963,449.55	3,876,625.77	3,879,597.51
1. Energy Industries	1,663,267.39	1,639,784.34	1,561,448.52	1,501,053.77	1,505,870.05	1,508,534.09	1,539,451.14	1,491,032.92	1,508,968.09
2. Manufacturing Industries and Construction	850,702.35	805,500.26	761,071.07	741,730.75	741,364.72	753,194.24	742,817.45	741,997.97	713,677.00
3. Transport	765,674.72	772,928.08	794,385.80	798,963.35	804,949.53	817,680.58	842,098.40	855,374.17	882,394.70
4. Other Sectors	796,899.74	835,425.13	788,556.35	796,850.79	752,235.96	759,613.84	824,868.58	774,750.55	760,843.50
5. Other	27,768.15	23,033.53	18,846.92	16,827.56	15,978.72	15,643.47	14,213.97	13,470.15	13,714.23
B. Fugitive Emissions from Fuels	25,459.56	24,307.95	24,885.08	25,096.76	24,656.85	27,047.12	27,425.81	27,200.35	24,668.35
1. Solid Fuels	4,473.72	3,213.30	3,207.19	2,884.00	1,668.37	2,642.32	2,663.84	3,747.79	1,972.95
2. Oil and Natural Gas	20,985.84	21,094.65	21,677.88	22,212.77	22,988.48	24,404.80	24,761.97	23,452.56	22,695.40
2. Industrial Processes	283,869.12	255,981.99	245,833.93	236,206.60	253,364.47	261,017.33	252,735.55	258,124.76	255,335.23
A. Mineral Products	150,233.10	136,947.31	132,385.41	126,546.16	134,946.36	140,009.96	135,585.84	138,741.35	140,914.67
B. Chemical Industry	44,010.13	41,213.40	38,982.28	37,557.60	40,305.80	43,698.47	43,816.18	41,853.87	40,836.41
C. Metal Production	88,274.13	76,519.47	73,017.76	70,782.93	76,729.24	75,831.41	71,984.48	76,053.44	71,889.80
D. Other Production	86.69	63.47	67.85	64.17	43.42	35.96	62.78	62.21	55.79
E. Production of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	1,265.07	1,238.33	1,380.63	1,255.74	1,339.65	1,441.54	1,286.26	1,413.89	1,638.57
3. Solvent and Other Product Use	11,785.67	11,291.41	10,658.44	10,158.98	8,911.16	8,940.40	8,930.62	9,002.42	9,072.17
4. Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A. Enteric Fermentation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Manure Management	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Rice Cultivation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Agricultural Soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Prescribed Burning of Savannas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Field Burning of Agricultural Residues	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Land Use, Land-Use Change and Forestry	-270,529.97	-313,765.00	-303,316.72	-296,630.51	-298,872.53	-296,304.19	-300,658.96	-300,770.12	-301,934.51
A. Forest Land	-390,799.19	-432,439.31	-421,849.45	-417,675.07	-420,692.01	-416,684.27	-417,862.10	-414,940.75	-418,266.52
B. Cropland	86,456.16	83,232.27	85,467.39	83,695.74	85,076.50	88,179.05	84,196.70	82,778.17	80,747.58
C. Grassland	2,878.51	2,446.81	-677.47	1,643.34	-114.40	-4,103.86	-3,399.90	-2,842.00	-724.24
D. Wetlands	5,466.22	5,594.76	5,568.30	5,462.26	5,646.70	5,680.87	5,683.76	5,584.97	5,506.39
E. Settlements	28,088.26	28,994.70	29,389.60	29,741.70	31,170.86	30,718.70	30,734.52	31,248.47	31,882.16
F. Other Land	2,447.11	1,875.01	1,765.09	2,657.04	2,392.16	2,865.05	3,746.06	3,069.73	4,423.46
G. Other	-5,067.04	-3,469.23	-2,980.19	-2,155.52	-2,352.35	-2,959.73	-3,758.00	-5,668.71	-5,503.33
6. Waste	4,875.29	4,867.65	4,889.13	4,732.15	4,508.67	4,121.54	4,077.18	3,541.09	3,491.76
A. Solid Waste Disposal on Land	226.69	267.78	307.69	299.09	243.64	104.22	82.83	60.18	58.34
B. Waste-water Handling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Waste Incineration	4,630.32	4,581.22	4,561.80	4,414.80	4,246.74	3,997.21	3,973.99	3,461.62	3,415.34
D. Other	18.28	18.65	19.65	18.25	18.29	20.11	20.37	19.30	18.09
7. Other (as specified in the summary table in CRF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total CO2 emissions including net CO2 from LULUCF	4,159,772.03	4,059,355.33	3,907,258.52	3,834,990.20	3,812,967.60	3,859,488.42	3,955,959.76	3,873,724.27	3,870,230.53
Total CO2 emissions excluding net CO2 from LULUCF	4,430,301.99	4,373,120.32	4,210,575.24	4,131,620.71	4,111,840.13	4,155,792.61	4,256,618.72	4,174,494.39	4,172,165.04
Memo Items:									
International Bunkers	178,662.36	175,925.27	183,156.01	190,728.25	190,417.31	196,004.85	207,224.60	220,577.20	233,540.78
Aviation	69,556.06	68,260.42	73,910.34	78,183.73	81,397.01	86,193.92	90,090.61	94,231.16	101,718.98
Marine	109 106 30	107 664 85	109 245 67	112 544 52	109 020 30	109 810 93	117 133 99	126 346 04	131 821 80

Wante	109,100.30	107,004.05	107,245.07	112,044.02	109,020.30	107,010.75	117,155.77	120,540.04	151,621.00
Multilateral Operations	1.35	1.78	1.56	1.83	2.05	2.48	2.70	3.10	2.94
CO2 Emissions from Biomass	177,810.05	187,975.01	188,910.49	206,022.63	206,952.02	215,469.98	228,581.28	241,299.14	243,067.41

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

## Table 1 (a) Emission trends (CO<sub>2</sub>) (Sheet 2 of 3)

## CRF: EUA\_CRF\_\_ v1.3

OPERATION OF CAR COURCE AND SINK OFFECODIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt									
1. Energy	3,847,999.48	3,860,265.31	3,942,565.77	3,916,728.34	4,007,441.67	4,006,514.95	3,984,775.71	3,984,048.94	3,924,482.76	3,845,364.75
A. Fuel Combustion (Sectoral Approach)	3,823,865.02	3,835,383.41	3,918,350.36	3,891,986.51	3,982,060.64	3,982,117.67	3,959,408.27	3,958,175.42	3,899,276.54	3,821,524.25
1. Energy Industries	1,469,307.22	1,497,585.30	1,535,312.38	1,554,581.39	1,606,266.86	1,592,145.39	1,579,664.87	1,589,977.87	1,598,771.05	1,523,270.05
2. Manufacturing Industries and Construction	692,255.45	701,744.00	680,525.25	661,063.22	672,665.67	671,428.22	665,232.88	665,680.74	659,500.31	631,174.62
3. Transport	902,712.23	899,892.94	915,024.30	926,680.42	936,895.97	956,301.28	956,830.69	963,793.76	973,460.36	954,060.52
4. Other Sectors	746,968.16	724,150.84	776,619.20	739,039.98	755,164.46	750,444.75	745,563.47	727,498.02	655,922.19	702,176.83
5. Other	12,621.95	12,010.32	10,869.23	10,621.50	11,067.68	11,798.03	12,116.36	11,225.03	11,622.63	10,842.23
B. Fugitive Emissions from Fuels	24,134.47	24,881.91	24,215.42	24,741.83	25,381.02	24,397.28	25,367.44	25,873.52	25,206.22	23,840.50
1. Solid Fuels	2,915.26	3,643.10	2,968.84	3,190.26	3,762.34	3,590.47	3,041.00	3,362.08	3,120.41	2,887.93
2. Oil and Natural Gas	21,219.21	21,238.81	21,246.58	21,551.56	21,618.68	20,806.80	22,326.45	22,511.44	22,085.81	20,952.57
2. Industrial Processes	247,609.46	259,406.08	249,325.17	248,783.28	258,183.18	269,479.78	272,506.02	277,760.41	285,162.59	268,612.64
A. Mineral Products	141,042.03	143,569.93	141,132.05	141,071.97	142,464.86	148,776.71	148,770.45	152,834.35	158,037.61	147,618.60
B. Chemical Industry	40,638.44	44,042.39	41,837.55	40,703.85	42,751.68	43,491.45	45,016.10	42,745.13	45,339.65	43,811.91
C. Metal Production	64,496.77	70,050.93	64,684.91	65,411.82	71,516.05	75,619.41	76,681.03	80,387.07	80,008.85	75,478.95
D. Other Production	65.68	61.60	56.39	45.53	59.64	55.02	48.43	32.62	42.88	52.10
E. Production of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	1,366.54	1,681.23	1,614.26	1,550.11	1,390.94	1,537.19	1,990.01	1,761.23	1,733.60	1,651.09
3. Solvent and Other Product Use	8,890.61	8,823.18	8,520.89	8,441.22	8,277.89	8,290.47	8,313.67	8,313.87	7,975.08	7,599.66
4. Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A. Enteric Fermentation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Manure Management	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Rice Cultivation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Agricultural Soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Prescribed Burning of Savannas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Field Burning of Agricultural Residues	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Land Use, Land-Use Change and Forestry	-316,865.74	-297,731.20	-328,640.96	-273,787.57	-251,723.26	-277,443.91	-290,685.38	-314,441.60	-276,738.41	-318,968.25
A. Forest Land	-429,335.54	-404,552.73	-435,001.20	-382,191.69	-366,396.79	-383,571.51	-393,277.34	-415,190.15	-384,364.19	-424,302.50
B. Cropland	81,500.97	78,143.54	77,359.90	82,128.40	88,071.55	79,257.11	76,055.11	73,614.31	75,470.94	73,898.08
C. Grassland	-4,235.15	-6,743.27	-8,022.75	-10,518.89	-11,023.35	-12,200.36	-12,830.18	-12,829.10	-7,276.93	-10,911.97
D. Wetlands	5,990.00	6,275.10	6,690.96	5,814.88	6,208.81	6,268.64	6,335.93	6,194.54	6,183.75	5,476.42
E. Settlements	33,524.15	32,893.89	33,266.30	33,707.38	34,229.68	35,837.53	37,168.16	38,549.28	38,678.30	39,988.81
F. Other Land	2,280.61	2,219.77	1,445.86	1,533.26	1,946.95	1,075.43	-115.24	-300.42	-676.39	326.43
G. Other	-6,590.79	-5,967.50	-4,380.03	-4,260.91	-4,760.11	-4,110.75	-4,021.84	-4,480.07	-4,753.90	-3,443.50
6. Waste	3,253.70	3,250.17	3,245.96	3,460.15	3,486.13	3,420.73	3,628.29	3,864.59	3,373.86	3,375.25
A. Solid Waste Disposal on Land	54.36	37.91	35.75	27.14	26.82	25.89	24.79	14.37	12.11	9.85
B. Waste-water Handling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Waste Incineration	3,180.43	3,193.50	3,191.60	3,414.80	3,439.79	3,377.12	3,585.30	3,831.51	3,342.47	3,343.97
D. Other	18.91	18.77	18.61	18.20	19.52	17.73	18.20	18.72	19.29	21.43
7. Other (as specified in the summary table in CRF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total CO2 emissions including net CO2 from LULUCF	3,790,887.52	3,834,013.54	3,875,016.84	3,903,625.43	4,025,665.60	4,010,262.02	3,978,538.31	3,959,546.21	3,944,255.89	3,805,984.05
Total CO2 emissions excluding net CO2 from LULUCF	4,107,753.26	4,131,744.75	4,203,657.80	4,177,413.00	4,277,388.86	4,287,705.93	4,269,223.70	4,273,987.81	4,220,994.30	4,124,952.30
Memo Items:										
International Bunkers	235,482.73	248,740.04	253,157.19	254,378.00	262,426.86	280,064.51	296,537.32	311,629.74	319,117.61	318,096.76
Aviation	109,381.25	115,493.49	113,926.42	111,270.97	115,769.85	124,613.93	131,432.44	137,178.79	141,609.59	142,602.58
Marine	126,101.48	133,246.55	139,230.76	143,107.03	146,657.02	155,450.59	165,104.88	174,450.96	177,508.01	175,494.18
Multilateral Operations	2.85	3.41	3.05	3.99	2.25	2.03	3.30	4.25	3.69	4.30
CO2 Emissions from Biomass	249,110.39	249,989.90	259,690.96	264,591.46	288,905.58	306,343.17	323,189.14	343,494.24	362,614.61	394,889.90

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

#### Table 1(a) Emission trends (CO<sub>2</sub>) (Sheet 3 of 3)

#### CRF: EUA\_CRF\_\_ v1.3

	2009	2010	2011	Change from base to
				latest reported year
GREENHOUSE GAS SOURCE AND SINK CATEGORIES				
	kt	kt	kt	%
1. Energy	3,572,082.08	3,673,771.37	3,526,430.48	-0.15
A. Fuel Combustion (Sectoral Approach)	3,549,395.25	3,650,626.16	3,503,091.52	-0.15
1. Energy Industries	1,398,667.76	1,421,659.16	1,399,747.89	-0.16
2. Manufacturing Industries and Construction	532,942.74	571,227.36	559,521.34	-0.34
3. Transport	930,525.58	925,039.82	915,617.46	0.20
4. Other Sectors	677,377.12	723,216.75	618,717.85	-0.22
5. Other	9,882.04	9,483.08	9,486.97	-0.66
B. Fugitive Emissions from Fuels	22,686.83	23,145.21	23,338.96	-0.08
1. Solid Fuels	2,054.81	3,200.31	3,382.78	-0.24
2. Oil and Natural Gas	20,632.02	19,944.90	19,956.18	-0.05
2. Industrial Processes	210,310.41	227,954.49	227,779.33	-0.20
A. Mineral Products	117,850.45	120,030.02	120,276.24	-0.20
B. Chemical Industry	38,304.99	41,548.76	43,425.12	-0.01
C. Metal Production	52,518.01	64,596.48	62,414.44	-0.29
D. Other Production	49.15	47.73	38.10	-0.56
E. Production of Halocarbons and SF6	0.00	0.00	0.00	
F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	
G. Other	1,587.82	1,731.51	1,625.44	0.28
3. Solvent and Other Product Use	6,817.06	7,129.04	6,988.72	-0.41
4. Agriculture	0.00	0.00	0.00	
A. Enteric Fermentation	0.00	0.00	0.00	
B. Manure Management	0.00	0.00	0.00	
C. Rice Cultivation	0.00	0.00	0.00	
D. Agricultural Soils	0.00	0.00	0.00	
E. Prescribed Burning of Savannas	0.00	0.00	0.00	
F. Field Burning of Agricultural Residues	0.00	0.00	0.00	
G. Other	0.00	0.00	0.00	
5. Land Use, Land-Use Change and Forestry	-330,013.21	-304,285.83	-305,355.84	0.13
A. Forest Land	-430,977.29	-401,415.29	-405,798.46	0.04
B. Cropland	72,755.47	74,476.57	77,349.47	-0.11
C. Grassland	-11,642.80	-13,312.89	-12,883.83	-5.48
D. Wetlands	5,957.72	5,602.91	5,680.50	0.04
E. Settlements	38,981.59	38,618.64	38,468.53	0.37
F. Other Land	-1,013.05	-2,174.42	-2,329.32	-1.95
G. Other	-4,074.85	-6,081.36	-5,842.74	0.15
6. Waste	3,229.25	3,356.00	3,101.17	-0.36
A. Solid Waste Disposal on Land	5.10	2.26	1.64	-0.99
B. Waste-water Handling	0.00	0.00	0.00	
C. Waste Incineration	3,203.14	3,335.54	3,081.32	-0.33
D. Other	21.01	18.19	18.21	0.00
7. Other (as specified in the summary table in CRF)	0.00	0.00	0.00	0.00
Total CO2 emissions including net CO2 from LULUCF	3.462.425.59	3.607.925.07	3,458,943.87	-0.17
Total CO2 emissions excluding net CO2 from LULUCF	3.792.438.80	3,912.210.90	3,764,299.71	-0.15
Memo Items:		, ,	, ,	,
International Bunkers	290.468.39	282.208.04	297.038.34	0.66
Aviation	131.845.26	131.845.84	135.342.82	0.95
Marine	158 623 13	150 362 20	161 695 52	0.48
Multilatoral Operations	376	4.04	3 50	1.66

	5.10	-1.0-1	5.67	1.00
CO2 Emissions from Biomass	411,240.21	460,109.31	460,040.93	1.59

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

 $a^{a}$  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** 

The 'base year' column in fact contains 1990 data automatically imported from CRF Table 10.

## Table 1(b) Emission trends (CH<sub>4</sub>) (Sheet 1 of 3)

CRF: EUA\_CRF\_\_v1.3

CPEENHOUSE CAS SOURCE AND SINK CATEGORIES	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	7,409.14	7,046.45	6,703.60	6,639.67	6,174.58	6,144.68	6,027.88	5,802.85	5,368.28
A. Fuel Combustion (Sectoral Approach)	1,210.90	1,210.54	1,141.91	1,149.39	1,055.89	1,047.51	1,095.35	1,039.96	981.09
1. Energy Industries	55.24	56.41	55.09	57.44	58.24	64.69	71.08	70.51	73.23
2. Manufacturing Industries and Construction	77.99	74.46	71.54	70.81	72.36	75.18	75.85	77.82	78.04
3. Transport	244.92	235.15	233.19	224.36	216.70	207.82	200.83	189.52	181.14
4. Other Sectors	820.21	834.04	775.83	791.94	705.34	696.94	745.02	699.89	646.80
5. Other	12.53	10.48	6.25	4.85	3.25	2.89	2.57	2.21	1.89
B. Fugitive Emissions from Fuels	6,198.25	5,835.91	5,561.70	5,490.28	5,118.69	5,097.17	4,932.53	4,762.90	4,387.19
1. Solid Fuels	3,505.51	3,341.93	3,160.58	3,068.23	2,719.37	2,788.42	2,667.98	2,591.00	2,281.30
2. Oil and Natural Gas	2,692.74	2,493.98	2,401.11	2,422.06	2,399.32	2,308.75	2,264.55	2,171.90	2,105.89
2. Industrial Processes	64.16	59.97	58.54	58.58	64.42	65.53	63.94	63.88	59.22
A. Mineral Products	1.54	1.36	1.29	1.17	1.31	1.34	1.34	1.37	1.41
B. Chemical Industry	44.24	42.84	43.19	42.63	47.14	47.36	46.38	46.20	42.75
C. Metal Production	15.88	13.36	11.66	12.41	13.55	14.35	13.79	13.86	12.74
D. Other Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Production of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	2.26	2.16	2.14	2.11	2.17	2.21	2.17	2.16	2.05
3. Solvent and Other Product Use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4. Agriculture	11,991.09	11,499.40	11,024.58	10,702.87	10,535.34	10,477.23	10,466.94	10,337.90	10,281.91
A. Enteric Fermentation	9,277.23	8,870.16	8,492.30	8,256.97	8,134.27	8,085.75	8,073.82	7,958.69	7,901.66
B. Manure Management	2,553.61	2,475.13	2,389.03	2,311.63	2,259.41	2,252.38	2,246.99	2,228.38	2,239.71
C. Rice Cultivation	113.79	107.92	103.76	101.18	108.50	106.10	113.50	113.87	107.90
D. Agricultural Soils	0.33	0.33	0.31	0.47	0.40	0.44	0.45	0.45	0.45
E. Prescribed Burning of Savannas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Field Burning of Agricultural Residues	46.13	45.87	39.18	32.61	32.77	32.56	32.19	36.52	32.20
G. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Land Use, Land-Use Change and Forestry	221.60	216.49	209.21	208.14	304.44	289.53	280.03	268.93	274.58
A. Forest Land	78.39	76.41	70.56	64.92	77.22	64.98	57.26	60.26	67.59
B. Cropland	7.19	8.25	7.50	7.32	6.74	6.93	7.31	6.42	7.21
C. Grassland	29.29	24.95	24.05	28.52	27.86	14.94	17.23	19.01	26.53
D. Wetlands	104.75	104.87	105.09	105.33	105.34	105.53	105.89	105.87	105.82
E. Settlements	1.90	1.93	1.95	1.99	2.10	2.05	2.13	2.25	2.35
F. Other Land	0.08	0.07	0.06	0.06	0.18	0.09	0.21	0.13	0.09
G. Other	0.00	0.00	0.00	0.00	85.00	95.00	90.00	75.00	65.00
6. Waste	8,854.27	8,938.87	8,853.96	8,776.03	8,709.06	8,615.98	8,499.35	8,257.09	8,084.70
A. Solid Waste Disposal on Land	7,694.37	7,818.64	7,767.70	7,707.07	7,643.55	7,548.75	7,449.34	7,219.72	7,051.68
B. Waste-water Handling	1,131.63	1,087.84	1,052.10	1,033.55	1,026.89	1,024.92	1,003.13	992.40	988.35
C. Waste Incineration	9.37	9.91	9.40	8.75	7.35	6.99	7.36	3.53	3.70
D. Other	18.89	22.47	24.76	26.65	31.26	35.32	39.52	41.44	40.98
7. Other (as specified in the summary table in CRF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total CH4 emissions including CH4 from LULUCF	28,540.26	27,761.17	26,849.89	26,385.29	25,787.85	25,592.95	25,338.15	24,730.65	24,068.70
Total CH4 emissions excluding CH4 from LULUCF	28,318.66	27,544.69	26,640.68	26,177.15	25,483.41	25,303.42	25,058.11	24,461.72	23,794.12
Memo Items:									
International Bunkers	5.42	5.11	5.23	5.39	5.28	5.46	5.53	5.79	12.90
Aviation	1.32	1.22	1.28	1.25	1.28	1.35	1.36	1.40	1.49
Marine	4.10	3.89	3.95	4.13	4.00	4.11	4.17	4.39	11.42
Multilateral Operations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CO2 Emissions from Biomass		-	-						-

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

## Table 1(b) Emission trends (CH<sub>4</sub>) (Sheet 2 of 3)

#### CRF: EUA\_CRF\_\_ v1.3

ØKEL-KURSE GAS JOERCE AND SINK CATCRORETS         Ø         I         U         I         U         I		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Lensy         5.002.3         4.007 3         4.003 3	GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt							
A hard Constant Scatter Approach97.2097.2197.1197.209	1. Energy	5,196.53	5,012.85	4,809.73	4,660.56	4,568.58	4,320.71	4,175.93	4,024.24	3,823.96	3,816.38
i. hunga instantamis and Carana and Anno Anno Anno Anno Anno Anno An	A. Fuel Combustion (Sectoral Approach)	952.68	883.54	874.71	829.06	854.89	865.07	863.63	873.09	867.76	902.40
2. Mandfarthan and Convencion         77.88         89.97         11.10         81.40         97.30         97.40         97.30         97.40         97.30         97.40         97.30         97.40         97.30         97.40         97.50 <t< td=""><td>1. Energy Industries</td><td>73.33</td><td>70.97</td><td>72.31</td><td>74.13</td><td>93.11</td><td>100.14</td><td>106.03</td><td>113.04</td><td>123.65</td><td>133.22</td></t<>	1. Energy Industries	73.33	70.97	72.31	74.13	93.11	100.14	106.03	113.04	123.65	133.22
3. Transport       192.09       192.09       192.09       192.09       192.09       192.00<	2. Manufacturing Industries and Construction	77.68	80.97	81.10	81.49	87.05	91.33	92.40	92.32	88.91	85.57
4. Oher Searce         977.7         974.40         977.47         974.40         975.47         958.09         954.07         565.00         597.56         297.57           B. Fighter breisses from Fuels         424.88         147.93         132.01         31.41.18         2002.07         134.84         10007         135.85         135.94         2.020.07         120.148         2.012.07         120.91         120.90         122.00         123.00         124.00         143.00         143.00         143.00         143.00         143.00         143.00         143.00         143.00         143.00         143.00         143.00         143.00         143.00         140.00         140.00         140.00         140.00         140.00         140.00         140.00         140.00         140.00         140.00         140.00         140.00         140.00         140.00 <t< td=""><td>3. Transport</td><td>170.70</td><td>152.93</td><td>143.94</td><td>132.92</td><td>123.60</td><td>115.03</td><td>107.69</td><td>99.56</td><td>91.81</td><td>83.46</td></t<>	3. Transport	170.70	152.93	143.94	132.92	123.60	115.03	107.69	99.56	91.81	83.46
5. Oher1.191.312.063.002.072.3473.1453.1203.1453.1203.14153.1203.14153.1203.14153.1203.14153.1203.14153.1203.14153.1203.14153.1203.14153.1203.14153.1416	4. Other Sectors	629.00	577.17	574.40	537.46	548.27	555.89	554.07	565.02	560.56	597.52
J. Pugher braices from hash4.424x84.429x94.73x05.8x105.8x145.4x11.005.4545x5.3x12.05.1x12.001.0x1200 <td>5. Other</td> <td>1.98</td> <td>1.51</td> <td>2.96</td> <td>3.06</td> <td>2.87</td> <td>2.69</td> <td>3.45</td> <td>3.15</td> <td>2.82</td> <td>2.64</td>	5. Other	1.98	1.51	2.96	3.06	2.87	2.69	3.45	3.15	2.82	2.64
1. Solid resh2.120.32.110.32.021.432.021.432.020.411.81.84.51.500.781.	B. Fugitive Emissions from Fuels	4,243.85	4,129.30	3,935.02	3,831.50	3,713.69	3,455.63	3,312.30	3,151.15	2,956.20	2,913.99
2. Ohlanski Manari Gas     2011as     2011as     2011as     2011as     2011as     1921as	1. Solid Fuels	2,232.27	2,116.63	1,920.14	1,818.45	1,700.78	1,503.75	1,359.45	1,270.29	1,122.07	1,078.29
21057.0457.0457.0457.0457.0467.0867.2867.2867.2867.2857.35AMineel Ponderia11.5914.424.2344.5110.7210.60 </td <td>2. Oil and Natural Gas</td> <td>2,011.58</td> <td>2,012.67</td> <td>2,014.88</td> <td>2,013.06</td> <td>2,012.91</td> <td>1,951.88</td> <td>1,952.85</td> <td>1,880.86</td> <td>1,834.13</td> <td>1,835.70</td>	2. Oil and Natural Gas	2,011.58	2,012.67	2,014.88	2,013.06	2,012.91	1,951.88	1,952.85	1,880.86	1,834.13	1,835.70
AIntegr <td>2. Industrial Processes</td> <td>55.22</td> <td>58.38</td> <td>57.04</td> <td>54.58</td> <td>60.88</td> <td>62.48</td> <td>63.56</td> <td>62.85</td> <td>62.87</td> <td>58.35</td>	2. Industrial Processes	55.22	58.38	57.04	54.58	60.88	62.48	63.56	62.85	62.87	58.35
B. Chennal honksym     93.94     42.32     41.54     94.79     44.50     44.50     44.50     44.50       C. Meal Production     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     11.85     10.00     0.00 <t< td=""><td>A. Mineral Products</td><td>1.29</td><td>1.40</td><td>1.45</td><td>1.41</td><td>1.44</td><td>1.48</td><td>1.40</td><td>1.74</td><td>1.84</td><td>1.42</td></t<>	A. Mineral Products	1.29	1.40	1.45	1.41	1.44	1.48	1.40	1.74	1.84	1.42
C Mat Poulacian       11.85       12.88       11.89       11.89       11.89       11.89       11.89       11.89       11.89       11.89       11.80	B. Chemical Industry	39.84	42.32	41.54	39.72	45.01	46.03	45.39	43.44	43.27	40.85
D. Oher Production       0.00       0	C. Metal Production	11.85	12.48	11.89	11.35	12.26	12.88	14.69	15.56	15.68	14.05
EProduction of Halocations and SF60.000.	D. Other Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Consumption of Halocarbons and SF60.00 <td>E. Production of Halocarbons and SF6</td> <td>0.00</td>	E. Production of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Odher       1.96       1.86       1.81       1.81       1.85       1.17       1.77       1.79       1.76       1.72         3. Solvent and Other Product Use       0.000       2.224.14       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.223.92       7.263.26       7.233.26       7.232.92       7.273.43       7.263.26       7.233.26       7.233.26       7.232.82       7.273.43       7.263.26       7.237.23       7.253.26       7.253.82       7.273.83       7.233	F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Solvent and Other Product Use0.000.000.000.000.000.000.000.000.000.000.000.000.000.000.0000	G. Other	1.96	1.86	1.85	1.81	1.85	1.77	1.77	1.79	1.76	1.72
4. Agriculture       10.2032       10.032×0       9.944.74       9.81.03       9.75.03       9.75.04       7.95.94       7.202.30       9.259.44       9.59.34       9.59.34       9.56.58         A. Enterir Fermentation       7.751.43       7.704.3       7.012.7       7.225.77       7.231.88       7.202.29       7.202.00       7.224.4       7.204.23       7.204.23       7.204.23       7.204.23       7.204.23       7.204.24	3. Solvent and Other Product Use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A. Encirci Fermentation       7,841.34       7,704.63       7,704.63       7,691.62       7,391.88       7,292.39       7,260.26       7,227.44       7,263.82       7,227.43       2,218.92         B. Manue Management       2,227.52       2,219.973       2,2117       2,225.67       2,223.64       2,205.79       2,202.67       2,202.67       2,202.67       2,202.64       2,223.44       2,239.43       2,189.29         C. Rice Cultivation       103.50       9.891       9.698       10.457       10.83       10.153       10.11.26       111.29       104.44         D. Agricultaral Residues       0.00       <	4. Agriculture	10,203.27	10,032.89	9,944.74	9,810.35	9,756.30	9,647.09	9,599.45	9,593.41	9,631.96	9,566.58
B. Manure Management $2.22752$ $2.197.3$ $2.211.72$ $2.226.57$ $2.202.00$ $2.226.40$ $2.226.40$ $2.226.40$ $2.226.40$ $2.202.00$ $2.226.40$ $2.226.40$ $2.202.00$ $2.226.40$ $2.226.40$ $2.202.00$ $2.226.40$ $2.226.40$ $2.202.00$ $2.226.40$ $2.226.40$ $2.202.00$ $2.226.40$ $2.226.40$ $2.202.00$ $2.226.40$ $2.226.40$ $2.104.00$ $111.26$ $111$	A. Enteric Fermentation	7.841.34	7,704.63	7,601.62	7,452.67	7,391.88	7,292.39	7,260.26	7,227.41	7,263.82	7,244.52
C. Rice Cultivation       103.50       98.91       98.98       104.57       108.30       111.59       111.15       111.26       111.24       1111.24       111.24       111.24 <th< td=""><td>B. Manure Management</td><td>2,227.52</td><td>2,199.73</td><td>2,211.72</td><td>2,226.57</td><td>2,223.60</td><td>2,205.79</td><td>2,202.00</td><td>2,226.41</td><td>2,229.43</td><td>2,189.29</td></th<>	B. Manure Management	2,227.52	2,199.73	2,211.72	2,226.57	2,223.60	2,205.79	2,202.00	2,226.41	2,229.43	2,189.29
D. Agricultural Soils0.450.450.040.030.030.030.040.040.04E. Presched Burning of Swannas0.000.	C. Rice Cultivation	103.50	98.91	98.98	104.57	108.30	116.52	111.59	111.26	112.91	104.64
Prescribed Burning of Savannas0.000.000.000.000.000.000.000.00F. Field Burning of Agricultural Residues30.4529.1731.9926.1632.1132.0325.2227.9925.3827.72G. Oher0.00 <td< td=""><td>D. Agricultural Soils</td><td>0.45</td><td>0.45</td><td>0.43</td><td>0.38</td><td>0.41</td><td>0.37</td><td>0.37</td><td>0.41</td><td>0.42</td><td>0.41</td></td<>	D. Agricultural Soils	0.45	0.45	0.43	0.38	0.41	0.37	0.37	0.41	0.42	0.41
F Field Burning of Agricultural Residues30.4529.1731.9926.1632.1132.0325.2227.9325.3827.72G. Other0.00 <td>E. Prescribed Burning of Savannas</td> <td>0.00</td>	E. Prescribed Burning of Savannas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other0.00<	F. Field Burning of Agricultural Residues	30.45	29.17	31.99	26.16	32.11	32.03	25.22	27.93	25.38	27.72
S. Land Use, Land-Use Change and Forestry         243.21         243.21         243.23         236.99         232.90         275.24         229.81         220.98         242.07         256.99           A. Forest Land         54.82         77.55         55.66         58.41         93.66         54.37         79.89         71.48         66.33         44.06           B. Cropland         66.63         6.64         6.65         6.058         8.68         7.55         6.65         6.058         8.68         7.55         6.65         6.058         6.657         6.057         6.057         6.057         6.057         10.614         13.66         16.057         10.627         107.17         107.47         109.89         108.03         108.07           D. Wetlands         10.59         12.01         2.026         2.026         0.026         0.29         3.12         3.28         3.42         3.455           F. Other Land         0.19         0.011         0.19         0.07         0.055         5.014         6.412.0         6.402.0         4.040         6.30.30         3.61.06         5.994.68           A. Solid Waste Disposal on Land         6.816.16         6.699.10         6.417.17         6.541.27         6.53.14	G. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A. Forest Land       55.46       55.66       55.66       58.41       93.46       54.37       70.99       71.48       66.33       44.00         B. Cropland       6.63       6.64       6.65       6.68       8.68       7.55       6.95       6.68       6.63       6.720       6.63 <td>5. Land Use, Land-Use Change and Forestry</td> <td>243.21</td> <td>268.98</td> <td>236.59</td> <td>232.90</td> <td>275.24</td> <td>229.81</td> <td>250.98</td> <td>242.07</td> <td>256.29</td> <td>216.63</td>	5. Land Use, Land-Use Change and Forestry	243.21	268.98	236.59	232.90	275.24	229.81	250.98	242.07	256.29	216.63
B. CroplandI. Crop I. CropsI. Crops<	A. Forest Land	54.82	77.55	55.66	58.41	93.46	54.37	79.89	71.48	63.35	44.06
C. Grassland14.7121.4415.7311.6418.7116.1413.6613.7136.3316.17D. Wetlands105.94106.03105.83106.01106.67106.72107.17107.47107.98108.07E. Settlements2.932.312.622.692.662.913.123.283.433.45F. Other Land0.100.110.190.070.070.050.400.000.3000.3300.37.50G. Other5.80055.0055.0048.0045.0040.0039.0035.0055.94.68A. Solid Waste Disposal on Land6.81.616.699.106.417.176.241.275.937.555.703.635.54.615.441.935.282.845.140.79B. Waste-water Handling967.88880.66848.27846.31865.17872.90838.59835.29819.07795.07C. Waste Incineration3.8447.2647.275.35.45.40.705.51.15.52.305.51.15.52.305.51.15.52.305.51.15.52.305.51.45.40.309.00.00.00<	B. Cropland	6.63	6.54	6.56	6.08	8.68	7.55	6.95	6.86	6.89	7.20
D. Wetlands         Data	C. Grassland	14.71	21.44	15.73	11.64	18.71	16.14	13.66	13.71	36.33	16.17
E. Settlements0.0.00.0.10.0.10.0.00.0.00.0.10.0.10.0.00.0.10.0.00.0.10.0.00.0.00.0.10.0.0	D. Wetlands	105.94	106.03	105.83	106.01	106.67	106.72	107.17	107.47	107.98	108.07
Fordier Land         International         Internati	E. Settlements	2.93	2.31	2.62	2.69	2.66	2.91	3.12	3.28	3.42	3.45
G. OtherG. Other58.0050.0048.0048.0042.0040.0039.0038.0037.006. Waste7,831.497,630.577,316.147,144.716.864.226.632.146.439.886.336.036.611.935.994.68A. Solid Waste Disposal on Land6.816.106.699.106.417.176.241.275.937.555.703.635.544.615.441.935.282.845.140.79B. Waste-water Handling967.88888.06848.27846.3136.97.9883.59835.29819.077.95.07C. Waste Incineration907.88880.66848.275.34.33.555.703.635.54.465.44.193.528.245.140.79D. Other907.87838.96848.27846.313.65.973.63.553.63.633.73.03.7	F. Other Land	0.19	0.11	0.19	0.07	0.05	0.12	0.20	0.26	0.33	0.17
6. Waste7.83.497.83.497.83.677.31.61.47.14.716.864.326.632.146.439.686.33.036.161.965.994.68A. Solid Waste Disposal on Land6.816.166.699.10 $6.417.17$ $6.241.27$ $5.937.55$ $5.703.63$ $5.544.61$ $5.441.93$ $5.282.84$ $5.140.79$ B. Waste-water Handling967.88888.06 $848.27$ $846.31$ $869.17$ $872.99$ $838.59$ $835.29$ $819.07$ $795.07$ C. Waste Incineration3.80 $3.55$ $3.43$ $3.59$ $3.53$ $4.08$ $3.73$ $3.73$ $3.57$ $3.53$ D. Other (as specified in the summary table in CRF)0.00 $0.00$ </td <td>G. Other</td> <td>58.00</td> <td>55.00</td> <td>50.00</td> <td>48.00</td> <td>45.00</td> <td>42.00</td> <td>40.00</td> <td>39.00</td> <td>38.00</td> <td>37.50</td>	G. Other	58.00	55.00	50.00	48.00	45.00	42.00	40.00	39.00	38.00	37.50
A. Solid Waste Disposal on LandA. GoldA. GoldG. Gol	6. Waste	7.831.49	7.630.57	7.316.14	7,144.71	6.864.32	6.632.14	6.439.68	6.336.03	6.161.96	5,994.68
B. Waste-water Handling       PG7.88       S88.66       S88.27       S86.61       S87.290       S83.85       S83.59       S81.07       795.07         C. Waste Incineration       3.03       3.55       3.43       3.55       3.43       3.55       3.43       3.55       3.43       3.55       3.53       4.08       3.78       3.71       3.72       3.83         D. Other       Asspecified in the summary table in CRF)       0.00       0.	A. Solid Waste Disposal on Land	6.816.16	6.699.10	6.417.17	6.241.27	5.937.55	5.703.63	5.544.61	5.441.93	5.282.84	5.140.79
C. Wate Individuely C. Waste Incineration3.803.803.553.433.593.534.083.783.713.723.83D. Other43.6447.2647.2753.5454.0751.5252.7055.1156.3255.007. Other (as specified in the summary table in CRF)0.00 <td< td=""><td>B. Waste-water Handling</td><td>967.88</td><td>880.66</td><td>848.27</td><td>846.31</td><td>869.17</td><td>872.90</td><td>838.59</td><td>835.29</td><td>819.07</td><td>795.07</td></td<>	B. Waste-water Handling	967.88	880.66	848.27	846.31	869.17	872.90	838.59	835.29	819.07	795.07
D. Other       43.64       47.26       47.27       53.54       54.07       51.52       52.70       55.11       56.32       55.00         7. Other (as specified in the summary table in CRF)       0.00	C. Waste Incineration	3.80	3.55	3.43	3.59	3.53	4.08	3.78	3.71	3.72	3.83
7. Other (as specified in the summary table in CRF)       0.000	D. Other	43.64	47.26	47.27	53.54	54.07	51.52	52.70	55.11	56.32	55.00
Total CH4 emissions including CH4 from LULUCF       23,529.71       23,003.66       22,364.24       21,903.10       21,525.33       20,892.22       20,529.60       20,258.60       19,937.05       19,652.62         Total CH4 emissions excluding CH4 from LULUCF       23,286.50       22,734.69       22,127.66       21,670.20       21,525.33       20,892.22       20,016.53       19,680.75       10,60       10,650       10,650       10,650       10,650       10,650       10,650       10,650       10,650       10,650       10,650       10,650 </td <td>7. Other (as specified in the summary table in CRF)</td> <td>0.00</td>	7. Other (as specified in the summary table in CRF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total CH4 emissions excluding CH4 from LULUCF       23,286.50       22,734.69       22,127.66       21,570.20       21,520.09       20,662.42       20,278.62       20,016.53       19,680.75       19,435.99         Memo Items:       International Bunkers       6.08       6.44       6.71       6.68       6.94       7.25       7.55       10.46       22.42       13.51         Aviation       1.51       1.49       1.40       1.35       1.40       1.52       1.57       1.59       1.60       1.65         Marine       4.57       4.95       5.31       5.32       5.54       5.72       5.98       8.87       20.82       11.86         Multilateral Operations       0.00	Total CH4 emissions including CH4 from LULUCF	23 529 71	23 003 66	22 364 24	21 903 10	21 525 33	20 892 22	20 529 60	20 258 60	19 937 05	19 652 62
Number of the characterization of the characterizatione of the characterization of the characterization of the characte	Total CH4 emissions excluding CH4 from LULUCF	23,325.71	22,005.00	22,304.24	21,505.10	21,323.33	20,652.22	20,329.00	20,230.00	19,680,75	19 435 99
International Bunkers6.00 <t< td=""><td>Mama Itams:</td><td>25,200.50</td><td>22,734.07</td><td>22,127.00</td><td>21,070.20</td><td>21,230.07</td><td>20,002.42</td><td>20,270.02</td><td>20,010.55</td><td>17,000.75</td><td>17,433.77</td></t<>	Mama Itams:	25,200.50	22,734.07	22,127.00	21,070.20	21,230.07	20,002.42	20,270.02	20,010.55	17,000.75	17,433.77
International bunchs       0.00 <th< td=""><td>International Bunkers</td><td>6 09</td><td>6 11</td><td>671</td><td>6 69</td><td>6 0/</td><td>7 25</td><td>7 55</td><td>10.46</td><td>22 42</td><td>12 51</td></th<>	International Bunkers	6 09	6 11	671	6 69	6 0/	7 25	7 55	10.46	22 42	12 51
Availability       1.49       1.49       1.40       1.50       1.40       1.52       1.57       1.59       1.60       1.60       1.60         Marine       4.57       4.95       5.31       5.32       5.54       5.72       5.98       8.87       20.82       11.86         Multilateral Operations       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00         CO2 Emissions from Biomass       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00	Aviation	1.51	1.49	1.40	1 35	1.40	1.20	1.55	1 50	1.60	1 65
Matrix       4.57       4.55       5.51       5.52	Marine	1.51	1.49	5 21	5 3 2	5.54	5 72	5 08	1.59 Q Q7	20.82	11.05
CO2 Emissions from Biomass         O </td <td>Multilateral Operations</td> <td>4.57</td> <td>4.73</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.07</td> <td>0.00</td> <td>0.00</td>	Multilateral Operations	4.57	4.73	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
	CO2 Emissions from Biomass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

#### Table 1(b) Emission trends (CH<sub>4</sub>) (Sheet 3 of 3)

#### CRF: EUA\_CRF\_\_ v1.3

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
1. Energy	3,642.04	3,699.38	3,611.73	-0.51
A. Fuel Combustion (Sectoral Approach)	888.24	962.55	901.76	-0.26
1. Energy Industries	134.39	148.19	147.87	1.68
2. Manufacturing Industries and Construction	71.87	79.69	82.28	0.05
3. Transport	76.76	71.05	65.90	-0.73
4. Other Sectors	602.84	661.18	602.63	-0.27
5. Other	2.38	2.44	3.08	-0.75
B. Fugitive Emissions from Fuels	2,753.80	2,736.84	2,709.97	-0.56
1. Solid Fuels	957.29	932.15	936.13	-0.73
2. Oil and Natural Gas	1,796.52	1,804.68	1,773.84	-0.34
2. Industrial Processes	47.68	52.49	51.80	-0.19
A. Mineral Products	1.22	1.22	1.21	-0.22
B. Chemical Industry	36.38	39.80	38.63	-0.13
C. Metal Production	8.09	9.48	9.97	-0.37
D. Other Production	0.00	0.00	0.00	
E. Production of Halocarbons and SF6	0.00	0.00	0.00	
F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	
G. Other	1.69	1.69	1.69	-0.25
3. Solvent and Other Product Use	0.00	0.00	0.00	
4. Agriculture	9,489.21	9,347.44	9,215.98	-0.23
A. Enteric Fermentation	7,178.45	7,076.62	7,000.48	-0.25
B. Manure Management	2,160.26	2,116.16	2,056.82	-0.19
C. Rice Cultivation	120.21	124.10	126.98	0.12
D. Agricultural Soils	0.42	0.46	0.44	0.34
E. Prescribed Burning of Savannas	0.00	0.00	0.00	0.00
F. Field Burning of Agricultural Residues	29.87	30.09	31.26	-0.32
G. Other	0.00	0.00	0.00	0.00
5. Land Use, Land-Use Change and Forestry	223.39	226.79	214.38	-0.03
A. Forest Land	49.09	56.84	45.56	-0.42
B. Cropland	7.24	7.82	6.83	-0.05
C. Grassland	18.07	13.69	13.32	-0.55
D. Wetlands	108.29	108.87	109.58	0.05
E. Settlements	3.26	3.01	3.03	0.59
F. Other Land	0.45	0.07	0.07	-0.11
G. Other	37.00	36.50	36.00	0.00
6. Waste	5,824.03	5,736.42	5,580.81	-0.37
A. Solid Waste Disposal on Land	5,005.33	4,901.08	4,731.90	-0.39
B. Waste-water Handling	761.93	777.42	789.09	-0.30
C. Waste Incineration	3.77	3.73	3.73	-0.60
D. Other	52.99	54.19	56.07	1.97
7. Other (as specified in the summary table in CRF)	0.00	0.00	0.00	0.00
Total CH4 emissions including CH4 from LULUCF	19,226.36	19,062.53	18,674.69	-0.35
Total CH4 emissions excluding CH4 from LULUCF	19,002.96	18,835.73	18,460.32	-0.35
Memo Items:				
International Bunkers	9.42	9.44	9.28	0.71
Aviation	1.47	1.46	1.49	0.13
Marine	7.94	7.98	7.79	0.90
Multilateral Operations	0.00	0.00	0.00	9.68
CO2 Emissions from Biomass				

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

<sup>*a*</sup> The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the 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** 

The 'base year' column in fact contains 1990 data automatically imported from CRF Table 10.

Table 1(c)	
Emission trends (N <sub>2</sub> O)	)
(Sheet 1 of 3)	

## CRF: EUA\_CRF\_\_ v1.3

	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	110.45	110.81	109.16	109.93	112.78	113.47	118.48	119.18	121.04
A. Fuel Combustion (Sectoral Approach)	110.12	110.49	108.82	109.58	112.43	113.09	118.08	118.80	120.66
1. Energy Industries	35.11	35.36	34.17	32.78	32.84	28.88	29.76	28.25	28.61
2. Manufacturing Industries and Construction	24.12	23.36	22.74	21.74	21.96	22.26	21.79	22.11	21.61
3. Transport	24.28	24.72	26.01	28.48	32.06	36.53	40.10	42.67	45.39
4. Other Sectors	24.34	24.91	23.90	24.58	23.60	23.63	24.69	24.03	23.43
5. Other	2.27	2.14	2.00	2.00	1.96	1.79	1.75	1.73	1.63
B. Fugitive Emissions from Fuels	0.33	0.32	0.34	0.35	0.35	0.38	0.40	0.38	0.38
1. Solid Fuels	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Oil and Natural Gas	0.32	0.32	0.34	0.34	0.35	0.38	0.39	0.38	0.37
2. Industrial Processes	374.57	359.48	348.57	331.88	347.31	345.95	354.96	341.04	269.48
A. Mineral Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Chemical Industry	374.22	359.12	348.21	331.52	346.94	345.61	354.62	340.68	269.13
C. Metal Production	0.13	0.12	0.11	0.11	0.12	0.09	0.09	0.10	0.09
D. Other Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Production of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
3. Solvent and Other Product Use	16.35	16.07	16.25	16.14	15.92	16.01	16.32	16.02	15.83
4. Agriculture	1,136.11	1,058.88	1,009.87	971.23	964.55	967.77	972.95	979.25	975.99
A. Enteric Fermentation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Manure Management	135.98	130.61	124.22	118.24	115.47	114.62	112.97	112.62	112.18
C. Rice Cultivation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Agricultural Soils	999.07	927.24	884.75	852.25	848.32	852.39	859.23	865.82	863.07
E. Prescribed Burning of Savannas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Field Burning of Agricultural Residues	1.07	1.03	0.89	0.74	0.75	0.75	0.75	0.81	0.74
G. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Land Use, Land-Use Change and Forestry	14.78	14.35	14.16	14.12	14.04	13.49	14.07	13.24	13.55
A. Forest Land	2.05	1.90	1.87	1.74	1.78	1.76	2.40	1.64	1.81
B. Cropland	11.65	11.54	11.42	11.35	11.22	11.08	10.95	10.82	10.73
C. Grassland	0.74	0.57	0.52	0.69	0.69	0.30	0.36	0.42	0.64
D. Wetlands	0.33	0.33	0.33	0.33	0.34	0.34	0.35	0.34	0.34
E. Settlements	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
F. Other Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Waste	43.09	43.31	43.19	43.06	43.11	43.23	43.55	43.52	44.27
A. Solid Waste Disposal on Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Waste-water Handling	41.81	41.92	41.71	41.50	41.38	41.34	41.42	41.40	41.83
C. Waste Incineration	0.80	0.80	0.79	0.78	0.77	0.76	0.75	0.68	0.80
D. Other	0.43	0.53	0.62	0.71	0.91	1.11	1.36	1.42	1.62
7. Other (as specified in the summary table in CRF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total N2O emissions including N2O from LULUCF	1,695.36	1,602.90	1,541.20	1,486.35	1,497.70	1,499.93	1,520.33	1,512.25	1,440.15
Total N2O emissions excluding N2O from LULUCF	1,680.58	1,588.55	1,527.04	1,472.23	1,483.67	1,486.44	1,506.26	1,499.01	1,426.61
Memo Items:									
International Bunkers	5.09	5.37	5.74	6.05	6.33	6.67	6.53	6.18	7.32
Aviation	2.12	2.05	2.23	2.35	2.47	2.59	2.70	2.82	3.05
Marine	2.97	3.32	3.51	3.71	3.86	4.07	3.83	3.36	4.28
Multilateral Operations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CO2 Emissions from Biomass									

EUA\_BR1\_v2.0

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

## Table 1(c) Emission trends (N<sub>2</sub>O) (Sheet 2 of 3)

#### CRF: EUA\_CRF\_\_ v1.3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt									
1. Energy	117.96	111.96	112.17	110.58	112.70	112.91	110.90	110.88	110.79	109.15
A. Fuel Combustion (Sectoral Approach)	117.60	111.60	111.81	110.24	112.38	112.58	110.52	110.51	110.38	108.81
1. Energy Industries	27.51	28.24	29.28	29.99	31.35	31.34	31.18	31.54	31.69	31.20
2. Manufacturing Industries and Construction	21.32	21.37	21.21	21.08	21.43	21.46	21.66	21.78	21.93	21.07
3. Transport	43.73	37.40	35.96	34.55	34.31	34.28	32.11	32.10	32.42	31.55
4. Other Sectors	23.46	23.09	23.96	23.25	23.78	23.91	24.10	23.59	22.89	23.68
5. Other	1.58	1.49	1.39	1.37	1.51	1.59	1.47	1.50	1.45	1.33
B. Fugitive Emissions from Fuels	0.37	0.36	0.36	0.34	0.32	0.33	0.38	0.37	0.40	0.34
1. Solid Fuels	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
2. Oil and Natural Gas	0.37	0.36	0.36	0.34	0.32	0.32	0.37	0.37	0.40	0.34
2. Industrial Processes	203.75	210.22	208.65	183.95	185.23	190.74	181.19	151.69	151.71	122.23
A. Mineral Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Chemical Industry	203.39	209.83	208.29	183.59	184.83	190.33	180.72	151.20	151.22	121.76
C. Metal Production	0.08	0.09	0.08	0.07	0.09	0.10	0.17	0.18	0.18	0.17
D. Other Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E. Production of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
3. Solvent and Other Product Use	15.26	14.90	14.55	13.61	12.86	12.46	12.50	12.71	12.30	11.90
4. Agriculture	972.23	960.51	939.50	929.24	910.34	920.49	903.08	891.52	890.81	893.41
A. Enteric Fermentation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Manure Management	109.86	106.51	105.98	104.51	102.65	101.03	100.72	99.38	100.13	98.69
C. Rice Cultivation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Agricultural Soils	861.66	853.41	832.93	824.22	807.10	818.84	801.87	791.62	790.24	794.20
E. Prescribed Burning of Savannas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F. Field Burning of Agricultural Residues	0.71	0.59	0.60	0.51	0.58	0.61	0.50	0.52	0.45	0.52
G. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Land Use, Land-Use Change and Forestry	12.90	13.26	12.58	12.34	12.98	12.09	12.25	12.09	12.61	12.10
A. Forest Land	1.60	2.01	1.67	1.69	2.20	1.64	1.99	1.81	1.78	1.70
B. Cropland	10.61	10.39	10.21	10.06	9.92	9.74	9.62	9.62	9.57	9.68
C. Grassland	0.31	0.48	0.32	0.21	0.50	0.34	0.26	0.28	0.87	0.32
D. Wetlands	0.37	0.37	0.36	0.37	0.36	0.36	0.37	0.36	0.37	0.38
E. Settlements	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
F. Other Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G. Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Waste	44.72	45.43	45.23	45.84	45.79	45.51	45.81	46.03	46.08	46.03
A. Solid Waste Disposal on Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B. Waste-water Handling	42.02	42.46	42.14	42.17	41.96	41.79	41.81	41.80	41.85	41.83
C. Waste Incineration	0.82	0.88	0.84	0.82	0.81	0.86	0.84	0.82	0.75	0.69
D. Other	1.86	2.09	2.23	2.85	3.02	2.86	3.15	3.40	3.47	3.50
7. Other (as specified in the summary table in CRF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total N2O emissions including N2O from LULUCF	1,366.82	1,356.27	1,332.69	1,295.56	1,279.89	1,294.19	1,265.73	1,224.93	1,224.29	1,194.82
Total N2O emissions excluding N2O from LULUCF	1,353.92	1,343.01	1,320.11	1,283.22	1,266.91	1,282.10	1,253.48	1,212.84	1,211.68	1,182.72
Memo Items:										
International Bunkers	6.56	6.93	6.88	6.60	6.82	7.20	7.48	8.17	9.84	8.88
Aviation	3.27	3.49	3.44	3.34	3.48	3.76	4.00	4.19	4.38	4.51
Marine	3.29	3.44	3.44	3.25	3.35	3.44	3.48	3.99	5.46	4.36
Multilateral Operations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CO2 Emissions from Biomass										

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

#### Table 1(c) Emission trends (N<sub>2</sub>O) (Sheet 3 of 3)

#### CRF: EUA\_CRF\_\_ v1.3

	2009	2010	2011	Change from
				base to latest
GREENHOUSE GAS SOURCE AND SINK CATEGORIES				reported year
	kt	kt	kt	%
1. Energy	103.49	106.30	104.68	-0.05
A. Fuel Combustion (Sectoral Approach)	103.17	105.98	104.34	-0.05
1. Energy Industries	30.14	30.89	30.68	-0.13
2. Manufacturing Industries and Construction	18.48	19.38	19.06	-0.21
3. Transport	29.92	30.10	30.45	0.25
4. Other Sectors	23.35	24.39	22.99	-0.06
5. Other	1.29	1.23	1.16	-0.49
B. Fugitive Emissions from Fuels	0.33	0.32	0.33	0.01
1. Solid Fuels	0.00	0.00	0.01	-0.18
2. Oil and Natural Gas	0.33	0.31	0.33	0.01
2. Industrial Processes	93.67	60.44	45.25	-0.88
A. Mineral Products	0.00	0.00	0.00	0.00
B. Chemical Industry	93.27	60.01	44.82	-0.88
C. Metal Production	0.10	0.12	0.13	0.02
D. Other Production	0.00	0.00	0.00	
E. Production of Halocarbons and SF6	0.00	0.00	0.00	
F. Consumption of Halocarbons and SF6	0.00	0.00	0.00	
G. Other	0.03	0.04	0.04	2.73
3. Solvent and Other Product Use	11.42	10.60	10.41	-0.36
4. Agriculture	861.64	860.95	873.82	-0.23
A. Enteric Fermentation	0.00	0.00	0.00	
B Manure Management	96.73	95.63	94 47	-0.31
C. Rice Cultivation	0.00	0.00	0.00	0.01
D Agricultural Soils	764.36	764.76	778.76	-0.22
E Prescribed Burning of Savannas	0.00	0.00	0.00	0.22
E Field Burning of Agricultural Residues	0.55	0.55	0.58	-0.45
G Other	0.00	0.00	0.00	0.00
5. Land Use, Land-Use Change and Forestry	12 19	12.02	12.06	-0.18
A Forest Land	1 74	1.88	1.82	-0.11
B Cronland	9.66	9.47	9.41	-0.19
C Grassland	0.38	0.26	0.39	-0.47
D Wetlands	0.30	0.20	0.37	0.47
E Settlements	0.02	0.40	0.42	0.20
E. Other Land	0.02	0.02	0.02	-0.11
G Other	0.00	0.00	0.00	-0.11
6 Waste	45 71	45.96	45.98	0.00
A Solid Waste Disposal on Land			0.00	0.07
B Waste-water Handling	41.49	41.58	41.48	-0.01
C Waste Incineration	0.64	0.64	0.61	-0.23
D Other	3.57	3 75	3.80	-0.23
7 Other (as specified in the summary table in CPF)	0.00	0.00	0.00	0.00
Total N2O emissions including N2O from I III UCF	1 128 12	1 096 27	1 002 10	-0.00
Total N2O emissions excluding N2O from LULUCE	1,120.12	1 084 24	1 080 12	-0.30
Mamo Itams	1,113.95	1,004.24	1,000.13	-0.30
International Runkers	7 05	7 67	7 71	0.51
Aviation	1.03	2.07	/./1	0.31
Marine	4.02	2.75	2 70	0.09
Multilateral Operations	0.04	0.00	0.00	0.23
CO2 Emissions from Piomoss	0.00	0.00	0.00	230.17
CO2 Emissions from Diomass				

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

<sup>*a*</sup> The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the 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** 

The 'base year' column in fact contains 1990 data automatically imported from CRF Table 10.

## Table 1(d) Emission trends (HFCs, PFCs and SF<sub>6</sub>) (Sheet 1 of 3)

#### CRF: EUA\_CRF\_\_ v1.3

	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
Emissions of HFCsc - (kt CO2 eq)	27,881.79	27,537.47	29,447.04	31,880.42	36,038.81	40,425.61	45,761.01	52,796.44	54,213.98
HFC-23	1.81	1.81	1.95	2.05	2.26	2.41	2.60	2.78	2.54
HFC-32	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.06	0.10
HFC-41	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,
	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE
HFC-43-10mee	0.00	0.00	0.00	0.01	0.01	0.02	0.04	0.04	0.04
HFC-125	0.02	0.02	0.02	0.04	0.09	0.18	0.30	0.51	0.73
HFC-134	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,
	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE
HFC-134a	0.11	0.13	0.66	2.62	3.43	4.64	6.94	9.20	11.29
HFC-152a	0.00	0.00	0.01	0.14	0.15	0.91	1.05	1.17	1.17
HFC-143	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,
	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE
HFC-143a	0.51	0.53	0.41	0.03	0.07	0.13	0.29	0.43	0.66
HFC-227ea	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.09
HFC-236fa	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	0.00	0.00
	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE		
HFC-245ca	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,	NA, NO,
	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE	NE, IE
Unspecified mix of listed HFCsd - (kt $CO_2$ eq)	4,554.44	4,180.48	4,165.23	4,178.79	4,563.54	4,951.23	4,114.20	4,836.85	4,674.02
Emissions of PFCsc - (kt CO2 eq)	21,304.36	19,470.27	15,762.69	14,889.68	14,303.01	14,027.91	13,496.09	12,527.07	11,871.34
$CF_4$	2.43	2.19	1.69	1.55	1.45	1.47	1.41	1.34	1.31
$C_2F_6$	0.47	0.43	0.38	0.38	0.37	0.29	0.29	0.28	0.25
C 3F8	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.03
$C_4F_{10}$	0.03	0.03	0.03	0.03	0.03	0.05	0.04	0.03	0.01
c-C <sub>4</sub> F <sub>8</sub>	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
C <sub>5</sub> F <sub>12</sub>	0.04	0.04	0.05	0.04	0.06	0.06	0.06	0.03	0.03
$C_{6}F_{14}$	0.06	0.05	0.05	0.06	0.05	0.06	0.05	0.04	0.04
Unspecified mix of listed PFCs(4) - (Gg $CO_2$ equivalent)	58.29	68.88	79.93	107.66	139.36	176.34	171.48	218.97	173.07
Emissions of SF6(3) - (Gg CO2 equivalent)	10,958.11	11,396.32	12,216.42	13,146.50	14,231.23	15,332.02	15,135.54	13,508.95	12,621.87
SF <sub>6</sub>	0.46	0.48	0.51	0.55	0.60	0.64	0.63	0.57	0.53

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

## Table 1(d) Emission trends (HFCs, PFCs and SF<sub>6</sub>) (Sheet 2 of 3)

#### CRF: EUA\_CRF\_\_ v1.3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt									
Emissions of HFCsc - (kt CO2 eq)	47,681.39	47,141.79	46,846.22	49,573.96	54,878.43	57,111.04	61,685.76	64,537.33	69,319.41	72,745.18
HFC-23	1.70	1.36	0.85	0.71	0.69	0.49	0.46	0.29	0.26	0.26
HFC-32	0.17	0.25	0.38	0.49	0.66	0.86	1.09	1.32	1.57	1.80
HFC-41	NA, NO,									
	NE, IE									
HFC-43-10mee	0.06	0.10	0.14	0.16	0.19	0.21	0.24	0.27	0.29	0.32
HFC-125	1.05	1.36	1.80	2.11	2.64	3.09	3.52	4.08	4.54	4.88
HFC-134	NA, NO,	0.00	0.00							
	NE, IE									
HFC-134a	12.42	14.34	16.75	18.38	20.36	21.78	23.52	24.90	26.64	27.76
HFC-152a	1.29	1.86	2.95	3.65	3.59	3.13	2.41	2.60	2.54	2.24
HFC-143	NA, NO,									
	NE, IE									
HFC-143a	0.91	1.25	1.57	1.80	2.21	2.47	2.74	3.04	3.32	3.42
HFC-227ea	0.15	0.22	0.27	0.34	0.40	0.44	0.49	0.51	0.54	0.55
HFC-236fa	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
HFC-245ca	NA, NO,	0.00	0.00	0.00	0.00	0.00				
	NE, IE									
Unspecified mix of listed HFCsd - (kt CO <sub>2</sub> eq)	4,373.74	2,769.04	2,422.38	2,482.89	2,028.66	2,271.89	2,441.67	2,486.11	2,744.74	3,117.82
Emissions of PFCsc - (kt CO2 eq)	11,560.28	9,875.86	8,904.06	10,389.38	8,635.44	7,327.23	6,129.13	5,497.28	5,083.40	4,376.13
$CF_4$	1.27	1.02	0.92	1.11	0.91	0.75	0.62	0.54	0.49	0.42
$C_2F_6$	0.25	0.23	0.20	0.25	0.18	0.14	0.11	0.09	0.07	0.06
C 3F8	0.03	0.03	0.04	0.05	0.05	0.06	0.06	0.06	0.05	0.05
$C_4F_{10}$	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
c-C <sub>4</sub> F <sub>8</sub>	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
$C_5F_{12}$	0.02	0.03	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00
$C_{6}F_{14}$	0.04	0.03	0.04	0.02	0.04	0.04	0.04	0.04	0.03	0.05
Unspecified mix of listed PFCs(4) - (Gg CO <sub>2</sub> equivalent)	219.90	268.88	256.47	209.14	284.77	335.44	330.07	356.38	428.79	359.60
Emissions of SF6(3) - (Gg CO2 equivalent)	10,283.83	10,282.00	9,628.67	8,552.94	8,000.76	8,274.20	8,191.63	7,575.13	7,317.93	6,867.92
SF <sub>6</sub>	0.43	0.43	0.40	0.36	0.33	0.35	0.34	0.32	0.31	0.29

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

#### Table 1(d) Emission trends (HFCs, PFCs and SF<sub>6</sub>) (Sheet 3 of 3)

#### CRF: EUA\_CRF\_\_ v1.3

	2009	2010	2011	Change from
				base to latest
GREENHOUSE GAS SOURCE AND SINK CATEGORIES				vear
				year
	kt	kt	kt	%
Emissions of HFCsc - (kt CO2 eq)	75,989.42	80,180.91	81,761.07	1.93
HFC-23	0.24	0.30	0.24	-0.87
HFC-32	2.00	2.27	2.53	287.90
HFC-41	NA, NO,	NA, NO,	NA, NO,	0.00
	NE, IE	NE, IE	NE, IE	
HFC-43-10mee	0.35	0.38	0.38	1,051.00
HFC-125	5.36	6.03	6.49	372.97
HFC-134	0.00	0.00	0.00	0.00
HFC-134a	28.19	28.70	29.25	259.52
HFC-152a	2.33	2.17	1.88	4,701.45
HFC-143	NA, NO,	NA, NO,	NA, NO,	0.00
	NE, IE	NE, IE	NE, IE	
HFC-143a	3.71	4.07	4.20	7.27
HFC-227ea	0.57	0.59	0.61	2,327.33
HFC-236fa	0.01	0.01	0.01	0.00
HFC-245ca	0.00	0.00	0.00	0.00
Unspecified mix of listed HFCsd - (kt CO <sub>2</sub> eq)	3,351.33	2,761.56	2,349.18	-0.48
Emissions of PFCsc - (kt CO2 eq)	2,843.73	3,328.60	3,601.67	-0.83
CF <sub>4</sub>	0.25	0.32	0.35	-0.86
$C_2F_6$	0.04	0.05	0.04	-0.91
C 3F8	0.04	0.05	0.05	1.19
$C_4F_{10}$	0.00	0.01	0.02	-0.23
$c-C_4F_8$	0.00	0.00	0.00	-0.58
C <sub>5</sub> F <sub>12</sub>	0.00	0.00	0.00	-1.00
$C_6F_{14}$	0.04	0.03	0.03	-0.49
Unspecified mix of listed PFCs(4) - (Gg $CO_2$ equivalent)	162.18	223.35	167.27	1.87
Emissions of SF6(3) - (Gg CO2 equivalent)	6,471.25	6,558.57	6,428.95	-0.41
SF <sub>6</sub>	0.27	0.27	0.27	-0.41

*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.

<sup>c</sup>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.

<sup>d</sup>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**

The 'base year' column in fact contains 1990 data automatically imported from CRF Table 10.

Documentation Box:		

#### Table 2(a)

#### EUA\_BR1\_v2.0

#### Description of quantified economy-wide emission reduction target: base year<sup>a</sup>

Party	uropean Union (28)					
Base year /base period	90					
Emission reduction target	% of base year/base period	% of 1990 <sup>b</sup>				
	20.00	20.00				
Period for reaching target	2020					

<sup>*a*</sup> 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.

<sup>b</sup> Optional.

#### Table 2(b)

## Description of quantified economy-wide emission reduction target: gases and sectors covered<sup>a</sup>

Gases	covered	Base year for each gas (year):
CO <sub>2</sub>		1990
CH <sub>4</sub>		1990
N <sub>2</sub> O		1990
HFCs		1990
PFCs		1990
SF <sub>6</sub>		1990
NF <sub>3</sub>		1995/2000
Other Gases (specify)		
Total F-gases (HFCs + P	FCs + SF6)	
Sectors covered <sup>b</sup>	Energy	Yes
	Transport <sup>f</sup>	Yes
	Industrial processes <sup>g</sup>	Yes
	Agriculture	Yes
	LULUCF	No
	Waste	Yes
	Other Sectors (specify)	
	Aviation	Yes
	Other (CRF 3 +7)	Yes

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

<sup>*a*</sup> 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.

<sup>b</sup> 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.

<sup>f</sup> Transport is reported as a subsector of the energy sector.

<sup>g</sup> Industrial processes refer to the industrial processes and solvent and other product use sectors.

# Table 2(c)EUA\_BR1\_v2.0Description of quantified economy-wide emission reduction target: globalwarming potential values (GWP)<sup>a</sup>

Gases	GWP values <sup>b</sup>
CO <sub>2</sub>	4nd AR
CH <sub>4</sub>	4nd AR
N <sub>2</sub> O	4nd AR
HFCs	4nd AR
PFCs	4nd AR
SF <sub>6</sub>	4nd AR
NF <sub>3</sub>	4nd AR
Other Gases (specify)	
Total F-gases (HFCs + PFCs + SF6)	2nd AR

Abbreviations: GWP = global warming potential

<sup>*a*</sup> 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.

<sup>b</sup> 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)

#### EUA\_BR1\_v2.0

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

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

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

<sup>*a*</sup> 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

## Description of quantified economy-wide emission reduction target: market-based mechanisms under the Convention<sup>*a*</sup>

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

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

<sup>*a*</sup> 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 .
- <sup>*i*</sup> AAUs issued to or purchased by a Party.

<sup>*j*</sup> 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

#### Description of quantified economy-wide emission reduction target: other market-based mechanisms<sup>a</sup>

Other market-based mechanisms	Possible scale of contributions
(Specify)	(estimated kt CO $_2$ eq)

<sup>*a*</sup> 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<sup>*a,b*</sup>

In December 2009, the European Council reiterated the conditional offer of the EU to move to a 30% reduction by 2020 compared to 1990 levels as part of a global and comprehensive agreement for the period beyond 2012, provided that other developed countries commit themselves to comparable emission reductions and that developing countries contribute adequately according to their responsibilities and respective capabilities.

<sup>*a*</sup> 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.

<sup>b</sup> 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**

Reduction target: Legally binding target trajectories for the period 2013-2020 are enshrined in both the EU-ETS Directive (Directive 2003/87/EC and respective amendments) and the Effort Sharing; Decision (Decision No 406/2009/EC). These legally binding trajectories not only result in a 20% GHG reduction in 2020 compared to 1990 but also define the EU's annual target pathway to reduce EU GHG emissions from 2013 to 2020. The Effort Sharing Decision sets annual national emission targets for all Member States for the period 2013-2020 for those sectors not covered by the EU emissions trading system (ETS), expressed as percentage changes from 2005 levels. In March 2013, the Commission formally adopted the national annual limits throughout the period for each Member State. By 2020, the national targets will collectively deliver a reduction of around 10% in total EU emissions from the sectors covered compared with 2005 levels. The emission reduction to be achieved from the sectors covered by the EU ETS will be 21% below 2005 emission levels.

Coverage of gases as adopted in UNFCCC reporting guidelines for national GHG inventories of Annex I Parties and as adopted under the EU Monitoring Mechanism Regulation. For NF3, the base year is not yet determined.

Total F-Gases (HFCs & amp; PFCs & amp; SF6) line is inserted here in CTF Table 2 only in order to facilitate F-gases projections reporting in CTF Table 6.

Aviation: Aviation in the scope of the EU-ETS:CO2 emissions from all flights falling within the aviation activities listed in Annex I of the EU ETS Directive which depart from an aerodrome situated in the territory of a Member State and those which arrive in such an aerodrome from a third country, excluding small commercial emitters. For more details on the coverage of aviation in the ETS, please see section [BR1] 4.2.2.

'Other' sector (CRF 3 & amp; 7) included in CTF Table 2 only in order to facilitate projections reporting in CTF Table 6.

CERs: The exact number of units that can be used during the period 2013-2020 can only be determined following the availability of final data concerning the use of these units during the period 2008-2012 and relevant greenhouse gas emissions data. The use of these units under the ETS Directive and the Effort Sharing Decision is subject to the limits specified above which do not separate between CERs and ERUs, but include additional criteria for the use of CERs.

ERUs: The exact number of units that can be used during the period 2013-2020 can only be determined following the availability of final data concerning the use of these units during the period 2008-2012 and relevant greenhouse gas emissions data. The use of these units under the ETS Directive and the Effort Sharing Decision is subject to the limits specified above which do not separate between CERs and ERUs, but include additional criteria for the use of ERUs.

AAUs: AAUs for the period 2013-2020 have not yet been determined. The EU expects to achieve its 20% target for the period 2013-2020 with the implementation of the ETS Directive and the ESD Decision in the non-ETS sectors which do not allow the use of AAUs from non-EU Parties.

Carry-over units: The exact number of carry-over units for the EU and its Member States from the first commitment period that can be used for compliance during the period 2013-2020 can only be determined after the true-up period of the first commitment period. In the second commitment period, which can only be determined at the end of the second commitment period. At CMP.9 the EU made a declaration when adopting the Doha amendment of the Kyoto Protocol that the European Union legislation on Climate-Energy Package for the implementation of its emission reduction objectives for the period 2013-2020 does not allow the use of surplus AAUs carried over from the first commitment period to meet these objectives.

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitig cumulative,	gation impact (not in kt CO $_2$ eq)			
Directive 2009/29/EC and 2003/87/EC EU- Emission Trading Scheme	Other (Cross sectoral)	CO <sub>2</sub> , N <sub>2</sub> O, PFCs	Cost-efficient reduction of emissions	Regulatory	Implemented	Cap and trade system for defined energy intensive industries and electricity	2005	CION/MS	2010	2015	2020	2025	2030
Effort Sharing Decision	Other (Cross sectoral)	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub>	GHG emissions reduction in sectors not included in the EU ETS.	Regulatory	Adopted	Binding GHG emissions targets for MS for the years 2013-2020 for sectors not included in the EU ETS	Yet missing	MS need to implement national measures and policies to limit emissions from sectors covered here					
CCS Directive	Other (Cross sectoral)	CO <sub>2</sub>	geological storage of CO2	Regulatory	Adopted	Establishes a legal framework for the environmentally safe geological storage of CO2	2009	MS					
Taxation of Energy Products and Electricity	Other (Cross sectoral)	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	set minimum levels of taxation of energy products to reduce GHG emissions	Regulatory	Implemented	The Directive covers all taxes on energy consumption, except for VAT and provides for common taxation rules and common minimum levels of taxation	2003	MS					
Research and Innovation in Climate and Energy	Other (Cross sectoral)	Other (Not directly affected)	Research and Systematic Observation through involvement of multiple actors and multiple instruments, tools and programmes. New EU research and development programme (Horizon 2020) for 2014-2020. contains objective of reaching 35% climate related expenditures.	Research	Implemented	Includes research programmes and activities, such as • EU Framework Programmes (FP) for Research and Technological Development • LIFE+ (EU's funding instrument for the environment) • Competitiveness and Innovation Framework Programme • International Development Cooperation • Contribution to and/or financial support for major international institutions, research initiatives and programmes	NA	CION/EP, MS and others					
Structural and Cohesion Funds	Other (Cross sectoral)	Other (Not directly affected)	Funds are financial instruments of European Union cohesion policy, to narrow the development disparities among regions and Member States	Other (Financial)	Implemented	Funds are used to co-finance regional development related measures between 2007 and 2013	2007	CION/MS					
National Emissions Ceilings Directive	Other (Cross sectoral)	Other (Atmospheric pollutants: SO2, NOx, VOC, NH3, O3)	Meet specified interim environmental and health objectives for acidification, eutrophication and ground-level ozone pollution in 2010	Regulatory	Implemented	Directives sets sets upper limits for each Member State for the total emissions in 2010 of four atmospheric pollutants	2001 f	CION/MS					

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigo cumulative, in	ation impact (not 1 kt CO <sub>2</sub> eq)			
Renewable Energy Roadmap / Directive 2009/28/EC on the promotion of the use of energy from renewable sources	Energy, Transport	CO <sub>2</sub>	20 % share of renewable sources in EU total gross final energy consumption in 2020 (electricity, heat and transport	Regulatory	Implemented	The Directive promotes the increase of renewables in the energy supply sector, such as the transport sector and it supports cooperation between Member States.	2010	MS	2010	2015	<u>2020</u> 750,000.00	2025	2030
Biomass Action Plan	Energy	CO <sub>2</sub>	Increase use of biomass for electricity and heat production and transport	Regulatory	Implemented	Sets out Community actions to increase the demand for biomass, improve supply, overcome technical barriers and develop research.	2005	MS	148,000.00				
Directive 2004/8/EC on the promotion of cogeneration based on a useful heat demand in the internal energy market	Energy	CO <sub>2</sub>	Promotion and development of high efficiency cogeneration of heat and power	Regulatory	Implemented	It requires Member States to carry out analyses of their potential for high efficiency cogeneration and to evaluate progress towards increasing the share of this technology	2006 (end date: 04.06. 2014)	MS	33,000.00				
Directive 2006/32/EC on energy end-use efficiency and energy services	Energy, Industry/industria l processes	CO <sub>2</sub>	Remove barriers to promote energy efficiency and to achieve energy savings in energy consumption	Regulatory	Implemented	Member States are required to set themselves indicative national targets of at least 9 % of energy savings for the year 2016 based on the average final energy consumption of the last available five years.	2008 (end date: 04.06. 2014)	MS					
Directive 2010/31/EU on the energy performance of buildings	Energy	CO <sub>2</sub>	Improve the energy performance of new buildings and of existing buildings	Regulatory	Implemented	The Directive obliges Member States to set minimum standards for the energy performance of new buildings and existing buildings that are subject to major renovation work.	2012	MS			185,000.00		
Energy Efficiency Plan 2011 COM(2011) 109 final	Energy, Transport	CO <sub>2</sub>	Reduction of primary energy consumption by 20% in 2020	Regulatory	Adopted	Member States have to set indicative national targets and develop energy efficiency programmes.	2011	MS			740,000.00		
Directive 2012/27/EU on energy efficiency	Energy, Industry/industria l processes	CO <sub>2</sub>	Reduction of barriers in the energy market and avoiding market failure, increase of energy efficiency at all stages of the energy chain	Regulatory	Adopted	The Directive establishes a common framework of measures for the promotion of energy efficiency and supports the Energy Efficiency Plan 2011.	2014	MS					
Directive 2009/72/EC concerning common rules for the internal market in electricity	Energy	CO <sub>2</sub>	Develop a competitive, secure and sustainable electricity market.	Regulatory	Implemented	The Directive introduces common rules for the generation, transmission, distribution and supply of electricity. It lays down universal service obligations and consumer rights, and clarifies competition requirements.	2011	MS					
Directive 2009/125/EC establishing a framework for the setting of eco-design requirements for energy- related products	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	This is the framework Directive for eco-design requirements and one of the major cornerstones of the Community Strategy on Integrated Product Policy, together with the Energy Labelling Directive.	2009	CION/MS					

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitig cumulative, i	tation impact (not in kt CO $_2$ eq)			
Directive 2010/30/EU on the indication by labelling and standard product information of the consumption of energy and other resources by energy- related products	Energy	CO <sub>2</sub>	Help consumers to identify energy-saving products	Regulatory	Implemented	The Directive is part of the Community Strategy for Integrated Product Policy and introduces energy labels to sign energy-related products. The ranking scale ranges from A(+++) most efficient to G least efficient.	2010	CION/MS	2010	2015	2020	2025	2030
Eco-design requirements for glandless standalone circulators and glandless circulators integrated in products (COM REG (EC) 641/2009)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for glandless standalone circulators and circulator integrated products, including the requirement for Energy labelling (see Reg. (EC) 622/2012)	2009	CION/MS/ industry			12,000.00		
Eco-design requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballasts and luminaires able to operate such lamps (COM REG (EC) 245/2009 amended by COM REG (EU) 347/2010)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for fluorescent lamps, high discharge lamps, ballasts and luminaires able to operate such lamps, including the requirement for Energy labelling. (see Reg. (EU) 874/2012)	2009	CION/MS/industry		15,300.00			
Eco-design requirements for non- directional household lamps, amendment is replacing functionality requirements for lamps excluding compact fluorescent lamps and LED lamps (COM REG (EC) 244/2009 amended by COM REG (EC) 859/2009)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for non directional household lamps, including the requirement for Energy labelling (see Reg. (EU) 874/2012).	2009	CION/MS/industry			15,400.00		
Eco-design requirements for household refrigerating appliances (COM REG (EC) 643/2009)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for household refrigerating appliances, including the requirement for Energy labelling (see Reg. (EU) 1060/2010).	2009	CION/MS/industry			2,000.00	6,000.00	
Eco-design requirements for televisions (COM REG (EC) 642/2009)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for televisions, including the requirement for Energy labelling (see Reg. (EU) 1062/2010	2009	CION/MS/industry			165,000.00		
Eco-design requirements for electric motors (COM REG (EC) 640/2009)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for electric motors; Energy labelling has not been introduced.	2009	CION/MS/industry			64,000.00	94,000.00	

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Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitig cumulative,	gation impact (not in kt CO <sub>2</sub> eq)			
									2010	2015	2020	2025	2030
Eco-design requirements for no- load condition electric power consumption and average active efficiency of external power supplies (COM REG (EC) 278/2009)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for no- load condition electric power consumption and average active efficiency of external power supplies; Energy labelling has not been introduced.	2009	CION/MS/industry		2013	36,000.00	2025	2030
Eco-design requirements for simple set-top boxes (COM REG (EC) 107/2009)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for simple set-top boxes; Energy labelling has not been introduced.	2009	CION/MS/industry			17,000.00		
Eco-design requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment (COM REG (EC) 1275/2008)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for standby and off mode electric power consumption of electrical and electronic household and office equipment; Energy labelling has not been introduced.	2009	CION/MS/industry			14,000.00		
Eco-design requirements for household tumble driers (COM REG (EU) 932/2012)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for household tumble driers, including the requirement for Energy labelling (see Reg. (EU) 392/2012)	2012	CION/MS/industry		400.00	1,500.00	2,900.00	38,000.00
Eco-design requirements for water pumps (COM REG (EU) 547/2012)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for water pumps; Energy labelling has not been introduced.	2012	CION/MS/industry					
Eco-design requirements for air conditioners and comfort fans (COM REG (EU) 206/2012)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for air conditioners and comfort fans, including the requirement for Energy labelling (see Reg. (EU) 626/2011)	2012	CION/MS/industry		17,000.00	3,800.00	5,500.00	6,000.00
Eco-design requirements for industrial fans (COM REG (EU) 327/2011)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for industrial fans; Energy labelling has not been introduced.	2011	CION/MS/industry		9,600.00	24,800.00	41,600.00	
Eco-design requirements for household dishwashers (COM REG (EU) 1016/2010)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for household dishwashers, including the requirement for Energy labelling (see Reg. (EU) 1059/2010)	2010	CION/MS/industry			500.00	1,800.00	
Eco-design requirements for household washing machines (COM REG (EU) 1015/2010)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for household washing machines, including the requirement for Energy labelling (see Reg. (EU) 1061/2010)	2010	CION/MS/industry			800.00		

Name of mitigation action	a Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitig cumulative, in	ation impact (not in kt CO <sub>2</sub> eq)			
	_								2010	2015	2020	2025	2030
Eco-design requirements for directional lamps, light emitting diode lamps and related equipment (COM REG (EU) 1194/2012)	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Implemented	The Regulation sets minimum standards for directional lamps, light emitting diode lamps and related equipment, including the requirement for Energy labelling (see Reg. (EU) 874/2012)	2013	CION/MS/industry			9,500.00	10,300.00	
Voluntary eco-design scheme for complex set- top boxes	Energy	CO <sub>2</sub>	Reduce energy consumption	Voluntary Agreement	Implemented	Voluntary agreement on energy consumption targets for set-top boxes without Energy labelling.	2010	CION/MS/industry					
Voluntary eco design scheme for imaging equipment	Energy	CO <sub>2</sub>	Reduce energy consumption	Voluntary Agreement	Implemented	Voluntary agreement on energy consumption targets for imaging equipment without Energy labelling.	2011	CION/MS/industry			10,200.00		
Draft for eco-design requirements for space heaters and combination heaters	Energy	CO <sub>2</sub>	Reduce energy consumption	Regulatory	Planned	The draft Regulation aims to set minimum standards for space heaters and combination heaters.	NA	CION/MS/industry			110,000.00		
Green Public Procurement	Energy	CO <sub>2</sub>	Increase the share of efficient and environmentally friendly technologies, products, services in the public sector	Voluntary Agreement	Implemented	Provision of guidelines and criteria for GPP in public authorities	2004	MS	35,000.00				
Energy Star Programme	Energy	CO <sub>2</sub>	promotion of less energy consuming office appliances	Voluntary Agreement	Implemented	The label shall help consumers to identify low energy consumption products.	2002	MS					
Motor Challenge Programme	Industry/industria l processes	CO <sub>2</sub>	Improve the energy efficiency of their electric Motor Driven Systems	Voluntary Agreement	Implemented	Companies receive aid, advice and technical assistance to undertake specific measures to reduce energy consumption.	2003	Companies					
Strategic Energy Technology Plan (COM(2007) 723)	Energy	CO <sub>2</sub>	Support introduction of low carbon technologies	Other (Planning/strategy )	Implemented	The plan comprises measures relating to planning, implementation, resources and international cooperation in the field of energy technology	2007	CION					
Intelligent Energy — Europe II Programme	Energy, Transport	CO <sub>2</sub>	Improve energy efficiency	Economic	Implemented	It is a funding instrument and provides grants and tenders in the four areas of: energy efficiency and rational use, new and renewable energy sources, energy in transport and integrated initiatives.	2007 (start of funding period)	CION (funding: MS)					
Covenant of Mayors	Energy	CO <sub>2</sub>	Support and coordinate climate action on local level	Voluntary Agreement	Implemented	In order to translate their political commitment into specific measures and projects, Covenant signatories undertake to prepare and submit a Sustainable Energy Action Plan (SEAP).	2008	Local governments			420,000.00		
CO2 from cars (Regulation 443/2009)	Transport	CO <sub>2</sub>	130 grams of CO2 per kilometre (g/km) by 2015 and 95g/km by 2020.	Regulatory	Implemented	The Regulation is setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO2 emissions from light-duty vehicles	2009	MS			24,900.00		43,600.00
CO2 from vans (Regulation 510/2011)	Transport	CO <sub>2</sub>	175 grams of CO2 per kilometre (g/km) by 2017 and 147g/km by 2020.	Regulatory	Implemented	The Regulation is similar to the one for new cars and sets CO2 emission targets for new vans sold on the EU market.	2011	MS			1,900.00		5,300.00

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigo cumulative, in	ntion impact (not a kt CO $_2$ eq)			
									2010	2015	2020	2025	2030
Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport	Transport	CO <sub>2</sub>	Indicative target for biofuels and other renewable energy used in road transport: 5.75 % by 2010	Regulatory	Planned	The Directive was repealed on 31.12.2011 by the Renewable Energy Directive (see section 4.3.3), which sets mandatory targets.	2004 (end date: 31.12.2011)	MS	37,500.00				
Directive 2009/28/EC on the promotion of the use of energy from renewable sources (Transport sector)	Transport	CO <sub>2</sub>	By 2020, the share of renewable energy shall amount to 10 % of fuels consumed in the transport sector	Regulatory	Implemented	The Directive sets a number of sustainability criteria that must be met for biofuels and bioliquids to count towards the target, including a minimum threshold of GHG savings for biofuels	2010	MS					
Directive 2009/30/EC on the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions	Transport	CO <sub>2</sub>	Reduce the greenhouse gas intensity of fuels used in road transport by 6% in 2020	Regulatory	Implemented	The reduction shall be obtained through the use of biofuels, alternative fuels or reductions in flaring and venting. The Directive applies to all petrol, diesel and biofuels used in road transport, as well as to gas oil used in non-road- mobile machinery.	2010	MS			55,000.00		
Proposal for the amendment of the Fuel Quality Directive and the Renewable Energy Directive	Transport	CO <sub>2</sub>	reduce GHG emissions from indirect land-use change	Regulatory	Planned	It is planned that both the Fuel Quality Directive and the transport-related section of the RES Directive will be amended because GHG emissions related to indirect land use changes (ILUC) are not taken into account under the current legislation.	NA	MS			48,000.00		
Euro 5 and 6 Standards Regulation (EC) No 692/2008	Transport	CO <sub>2</sub> , Other (Indirect GHG)	Limitation of emissions of CO, non- methane hydrocarbons, total hydrocarbons, NOx and PM	Regulatory	Implemented	The Regulation applies to all passenger vehicles, vans, and commercial vehicles intended for the transport of passengers or goods weighing less than 2,610 kg.	2009 (Euro 5), 2014 (Euro 6)	Industry			2,000.00		
Euro VI Standard for heavy duty vehicles (buses and trucks) Regulation (EC) No 595/2009	Transport	Other (Indirect GHG)	reduce harmful exhaust emissions, including ozone precursors, NOx, hydrocarbons, PM	Regulatory	Adopted	The Regulation provides harmonized technical rules for trucks, lorries and buses (vehicles over 2,610 kg) for type approval and standards for the durability of pollution control devices.	2013	Industry					
General Safety Regulation (EC/661/2009) and Tyre Labelling and Minimum Rolling Resistance (EC1222/2009)	Transport	CO <sub>2</sub>	Enhance safety of motor vehicles, increase fuel efficiency of motor vehicles and tyres, reduce noise emissions of tyres	Regulatory	Implemented	The regulation integrates environmental and safety requirements for type approval of vehicles and tyres. It applies to vehicles of passenger transport (category M), transportation of goods (category N) and trailers (category O).	2000	Industry			2,750.00		
Infrastructure charging for heavy goods vehicles (1999/62//EC, amended by 2006/38/EC and 2011/76/EU)	Transport	CO <sub>2</sub>	better functioning of the internal market and reduction of congestion, noise and air pollution	Regulatory	Implemented	The Directive stipulates rules how and to what extent the cost of constructing, operating and developing infrastructure can be borne (through tolls and vignettes) by road users.	1999	MS					

Name of mitigation actio	n <sup>a</sup> affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitig cumulative,	gation impact (not in kt CO <sub>2</sub> eq)			
Clean Power for Transport package including the deployment of alternative fuel infrastructure Alternative fuels infrastructure COM(2013) 18 final	Transport	CO <sub>2</sub>	Reduce CO2 emissions through shift of fuel type	Other (Planning/strategy )	Adopted	The Communication lays out a comprehensive European alternative fuels strategy for the long- term substitution of oil as energy source in all modes of transport and a proposal for a Directive on the deployment of alternative fuels infrastructure.	2013	MS	2010	2015	2020	2025	2030
Clean vehicles Directive (2009/33/EC)	Transport	CO <sub>2</sub>	Reduce CO2 emissions through procurement of green vehicles	Regulatory	Implemented	The Directive requires that energy and environmental impacts linked to the operation of vehicles over their whole lifetime, including CO2 emissions, are taken into account in public procurement decisions.	2010	MS		1,900.00			
White Paper: Roadmap to a Single European Transport Area COM(2011) 144 final	Transport	CO <sub>2</sub>	Create a competitive and efficient internal EU transport system, cut transport emissions by 60% by 2050	Other (Strategy)	Adopted	The 2011 White Paper, which forms an integral part of the "Resource Efficiency" initiative of the Commission, defines a long-term strategy to achieve a competitive and resource efficient transport system.	2011	CION					
Integrating maritime transport emissions in the EU's greenhouse gas reduction policies COM(2013) 479 final	Transport	CO <sub>2</sub>	Include GHG emissions from maritime transport in the EU's emission reduction policy	Other (Strategy)	Adopted	The strategy proposes an MRV system, reduction targets and further measures, including market-based instruments	2013	CION					4,400.00
F-gas Regulation	Industry/industria l processes	HFCs, PFCs, SF <sub>6</sub>	Reduce consumption and use of F-gases	Regulatory	Implemented	The Regulation has been supplemented by ten implementing acts or "Commission Regulations", which stipulate reporting format, form of labels, standard leaking checking requirements, training of companies and personnel, etc.	2006	CION, MS		27,000.00	33,000.00		
Proposed revision of the F-gas regulation	Industry/industria l processes	HFCs, PFCs, SF <sub>6</sub>	Reduce consumption and use of F-gases	Regulatory	Planned	The new proposal anticipates bold steps to limit the use of F-gases in new equipment, which includes a limitation of the total amount of HFCs sold in the EU.	2014	CION, MS					72,000.00
European Directive on mobile air-conditioning systems (MACs) (2006/40/EC)	Industry/industria l processes	HFCs	Reduce use and consumption of F- gases	Regulatory	Implemented	The Directive lays down the requirements for the EC type approval or national type-approval of vehicles as regards emissions from, and the safe functioning of, air-conditioning systems.	2006	CION, MS, industry		3,000.00	13,000.00		
Industrial Emissions Directive (2010/75/EU)	Industry/industria l processes	Other (All gases)	Reduction of harmful industrial emissions across the EU	Regulatory	Implemented	The Directive is a recast of existing legislation aiming at achieving benefits to the environment and human health by reducing polluting emissions as well as waste from industrial and agricultural installations in particular through Best Available Techniques (BAT).	2011	CION, MS					
Common Agricultural Policy	Agriculture	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Ensure sustainable agriculture	Regulatory Econo mic Information	Implemented	The CAP is based on two pillars: the first one focuses on direct income support for farmers and measures aimed at better functioning of markets, the second pillar supporting rural development based on a programming approach.	1962	CION/MS					

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitig cumulative,	eation impact (not in kt CO $_2$ eq)			
Rural Development Policy	Agriculture	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Preserve, enhance ecosystems dependen on agriculture and forest;	Other t (Economic)	Implemented	The EU's rural development policy (RDP) addresses the multiple roles of farming in society and, in particular, challenges faced in its wider rural context.	current legal framework: 2007-2013, new legal framework 2014-2020	CION/MS	2010	2015	2020	2025	2030
Thematic Soil Strategy (COM(2006) 231)/ Soil Framework Directive	Agriculture, Forestry/LULUC F	CO <sub>2</sub>	protect soil as carbon pool	Information Educ ation Research Re gulatory	Adopted	The proposed Directive aims at establishing a common strategy for the protection and sustainable use of soil based on the principles of integration of soil concerns into other policies.	2006, Directive being negotiated	CION/MS					
Nitrates Directive (91/676/EEC)	Agriculture	N <sub>2</sub> O	prevent water pollution	Regulatory	Implemented	The Directive contains actions and measures to be elaborated by the Member States, such as monitoring of waters, identification of nitrates vulnerable zones (NZV), establishment of Codes of Good Agricultural Practices (CGAP) and implementation of actions plans.	1991	CION/MS					
EU Forest Strategy/EU Forest Action Plan (SEC(2006) 748)	Forestry/LULUC F	CO <sub>2</sub>	Sustainable forest management	Other (Planning)	Adopted	The Forest Action Plan includes several key actions referring to climate change mitigation: promotion of forest biomass for energy generation, EU compliance with UNFCCC and Kyoto obligations, protection of EU forests.	1998/2006	CION/MS					
Forestry measure within the Rural Development Policy	Forestry/LULUC F, Agriculture	CO <sub>2</sub>	Sustainable forest management	Economic	Implemented	Forestry is an integral part of rural development; support for sustainable and climate-friendly land use should encompass forest area development and sustainable management of forests.	2007, reformed in 2013	CION/MS					
LULUCF accounting	Forestry/LULUC F, Agriculture	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> O	Robust accounting of LULUCF activities across Europe	Regulatory	Adopted	Provides the basis for a formal inclusion of the LULUCF sector and ensures a harmonized legal framework allowing the collection of reliable data by robust accounting and reporting in a standardized way.	2013 (as together with start of second commitment period)	CION (DG Clima)					
Waste Framework Directive (2008/98/EC)	Energy, Industry/industria l processes, Waste management/waste e	CH <sub>4</sub> , CO <sub>2</sub>	Promote prevention and recycling of waste	Regulatory	Implemented	The Directive is a legal framework for the management of waste to cope with the challenge of decoupling economic growth from waste generation and promoting strict hierarchy of intervention for waste prevention and management. It has been amended in 2006 and 2008.	1975	CION/MS			40,100.00		
Landfill Directive (1999/31/EC)	Waste management/was e, Energy	CH <sub>4</sub>	prevent or reduce as far as possible negative effects on the environment resulting from landfilling	Regulatory	Implemented	The Landfill Directive defines the different categories of waste (municipal waste, hazardous waste, non-hazardous waste and inert waste) and applies to all landfills, defined as waste disposal sites for the deposit of waste onto or into land.	1999	CION/MS	48,000.00		44,000.00		
Waste Incineration (2000/76/EC)	Energy, Industry/industria l processes, Waste management/wast e	CH <sub>4</sub> , CO <sub>2</sub>	avoid or minimize polluting emission due waste (co)- incineration	Regulatory	Implemented	The objective of the Directive is to prevent or to limit negative effects on the environment from the incineration and co-incineration of waste, in particular pollution by emissions into air, soil, surface water and groundwater, and the resulting risks to human health.	2000	CION/MS					

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	ective and/or Type of Status of instrument <sup>c</sup> implementation <sup>d</sup> Brief description <sup>e</sup> Status of implementation		Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)					
									2010	2015	2020	2025	2030
EU policies targeting waste streams	Energy, Industry/industria l processes, Waste management/wast e	CO <sub>2</sub> , CH <sub>4</sub> , HFCs, PFCs, SF <sub>6</sub>	Saving of resources	Regulatory	Implemented	These policy group targets different waste streams to promote recycling, re-use and waste recovery.	Different for each directive, first in 1994	CION/MS					
Management of biodegradable waste (COM/2008/0811 final)	Energy, Waste management/wast e	CH <sub>4</sub> , CO <sub>2</sub>	Make use of bio- waste as energy or material source		Planned	The CION published a Green Paper on the Management of biodegradable waste to use the potential of bio-waste. Currently the MS follow different strategies to manage their bio-waste. A binding target is under discussion.	NA	CION/MS					
Urban Waste Water Treatment Directive (91/271/EEC)	Waste management/wast e	CH <sub>4</sub> , N <sub>2</sub> O	protect the environment from the adverse effects of urban & industrial waste water discharges	Regulatory	Implemented	The Directive concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors.	1991	CION/MS					

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

<sup>a</sup> Parties should use an asterisk (\*) to indicate that a mitigation action is included in the 'with measures' projection.

<sup>b</sup> 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.

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

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

<sup>e</sup> Additional information may be provided on the cost of the mitigation actions and the relevant timescale.

<sup>*f*</sup> Optional year or years deemed relevant by the Party.

#### **Custom Footnotes**

Abbreviations for implementing entities: CION: European Commission; EP: European Parliament; MS: Member States

Biennial Reports. The "No" entries in the respective columns are the default setting of the reporting software and could not replaced with "No information available".

see chapter [BR1] 4.2.2

Effort Sharing Decision: For 2020 the mitigation impact is estimated at 10 % compared to 2005 levels; see chapter [BR1] 4.2.3; emission targets were adopted by EC in March 2013

CCS Directive : see chapter [BR1] 4.2.4

Taxation of Energy Products and Electricity : see chapter [BR1] 4.2.5; revision in adoption process

Research and Innovation in Climate and Energy: Targeted towards research and observation, see chapter [BR1] 4.2.6

Structural and Cohesion Funds: Not directly affected; see chapter [BR1] 4.2.7

National Emissions Ceilings Directive: revision underway; see chapter [BR1] 4.2.8

Renewable Energy Roadmap / Directive 2009/28/EC on the promotion of the use of energy from renewable sources: Estimated; impact range: 600-900 Mt (2020), Source: Citizens' Summary of 23

Biomass Action Plan: Impact includes reductions in the transport sector, SEC(2005) 1573 see chapter [BR1] 4.3.4; Status of implementation: published. Directive 2004/8/EC on the promotion of cogeneration based on a useful heat demand in the internal energy market: Estimated; impact range: 24000-42000 kt (2010) Source: COM(2004) 366 final see chapter [BR1] 4.3.2 and 4.3.3

Directive 2006/32/EC on energy end-use efficiency and energy services: impact not estimated see chapter [BR1] 4.3.6

Directive 2010/31/EU on the energy performance of buildings: Estimated impact range: 160000-210000kt (2020), Source: SEC(2008) 2864 see chapter [BR1] 4.3.7

Energy Efficiency Plan 2011 COM(2011) 109 final: SEC(2011) 277 final see chapter [BR1] 4.3.8

Directive 2012/27/EU on energy efficiency: (impact not estimated) see chapter [BR1] 4.3.9

Directive 2009/72/EC concerning common rules for the internal market in electricity: (impact not estimated) see chapter [BR1] 4.3.10

Directive 2009/125/EC establishing a framework for the setting of eco-design requirements for energy-related products: Impact estimated separately for each product category (see related eco-design regulations below); see chapter [BR1] 4.3.11

		-						-					
Name of mitigation action <sup>a</sup>	Sector(s) affected $^{b}$	GHG(s) affected	<i>Objective and/or</i> activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mi cumulative	tigation impact (not $e$ , in kt CO $_2$ $eq$ )			
	55				1				2010	2015	2020	2024	2030
Directive 2010/30/EU on the in	dication by labelling	g and standard p	roduct information of th	e consumption of e	energy and other resou	irces by energy-related products: (impact not estin	nated) see chapter [BR1]	4.3.12	2010	2010	2020		 2020
Eco-design requirements	for glandless sta	indalone circu	lators and glandless	s circulators int	egrated in product	s (COM REG (EC); 641/2009): SEC(20	009) 1016 final see c	hapter [BR1] 4.3.11					
SEC(2009) 324; see chapter [B	R1] 4.3.11	2		<b>~</b> • •	<b>C</b>								
SEC(2009) 327 see chapter [BH	R1] 4.3.11	<b>.</b> ·			•			-					
Eco-design requirements for ho	usehold refrigeratin	ng appliances (CO	OM REG (EC) 643/200	9): SEC(2009) 102	0 final see chapter [B	R1] 4.3.11							
Eco-design requirements for tel	evisions (COM RE	G (EC) 642/2009	9): SEC(2009) 1011 fin	al see chapter [BR	1] 4.3.11								
Eco-design requirements for ele	ectric motors (COM	I REG (EC) 640/	(2009): SEC(2009) 101	3 final see chapter	[BR1] 4.3.11								
Eco-design requirements for no	-load condition elec	ctric power const	umption and average ac	tive efficiency of e	sternal power supplies	s (COM REG (EC) 278/2009): SEC(2009) 434 se	e chapter [BR1] 4.3.11						
Eco-design requirements for sir	nple set-top boxes (	COM REG (EC	) 107/2009): SEC(2009	) 114 final see chap	pter [BR1] 4.3.11								
Eco-design requirements for sta	ndby and off mode	electric power c	onsumption of electrica	l and electronic ho	usehold and office equ	aipment (COM REG (EC) 1275/2008): SEC(200	8) 3071 see chapter [BR]	1] 4.3.11					
Eco-design requirements for ho	usehold tumble drie	ers (COM REG (	(EU) 932/2012): Impact	assessment draft 2	2012 see chapter [BR1	] 4.3.11							
Eco-design requirements for wa	ter pumps (COM F	REG (EU) 547/2	012): Impact assessmen	t shows ranges bet	ween 1200 and 2100	kt in 2020, Source: SWD(2012) 178 final see cha	pter [BR1] 4.3.11						
Eco-design requirements for air	conditioners and c	omfort fans (CO	M REG (EU) 206/2012	): SWD(2012) 35	final see chapter [BR1	] 4.3.11							
Eco-design requirements for inc	lustrial fans (COM	REG (EU) 327/2	2011): SEC(2011) 384 f	inal see chapter [B	R1] 4.3.11								
Eco-design requirements for ho	usehold dishwasher	rs (COM REG (I	EU) 1016/2010): SEC(2	010) 1356 final see	e chapter [BR1] 4.3.1	I							
Eco-design requirements for ho	usehold washing m	achines (COM R	EG (EU) 1015/2010): S	SEC(2010) 1354 se	ee chapter [BR1] 4.3.1	1							
Eco-design requirements for dir	ectional lamps, ligh	nt emitting diode	lamps and related equip	oment (COM REG	(EU) 1194/2012): SV	VD(2012) 0419 see chapter [BR1] 4.3.11							
Voluntary eco-design scheme for	or complex set-top l	boxes: Cumulativ	ve impact 2020: 21000k	t, SWD(2012) 391	final see chapter [BR	1] 4.3.11							
Voluntary eco design scheme fo	r imaging equipme	nt: SWD(2013)	15 final see chapter [BR	1] 4.3.11									
Draft for eco-design requirement	nts for space heaters	s and combinatio	n heaters: Impact assess	sment draft 2013 s	ee chapter [BR1] 4.3.	12							
Green Public Procurement: Esti	mated impact range	e: 25000-45000k	t (2010). Source: Secor	d ECCP Progress	Report (EU 15 only) s	ee chapter [BR1] 4.3.13							
Energy Star Programme: (impa	ct not estimated) se	e chapter [BR1]	4.3.14										
Motor Challenge Programme: (	impact not estimate	d) see chapter [H	3R1] 4.3.15										
Strategic Energy Technology Pl	an (COM(2007) 72	23): (impact not e	estimated) see chapter []	3R1] 4.3.16									
Intelligent Energy — Europe II	Programme: (impa	ct not estimated)	see chapter [BR1] 4.3.1	17									
Covenant of Mayors: Impact co	mpared to base yea	r 1990. Source:	Five-year assessment by	JRC see chapter [	BR1] 4.3.18								
CO2 from cars (Regulation 443	/2009): SWD(2012	2) 213 final Part	II see chapter [BR1] 4.4	.3									
CO2 from vans (Regulation	on 510/2011):; s	ee chapter [B	R1] 4.4.4										
expired.		-		•		· · · ·	· • •						
Directive 2009/28/EC on the pr	omotion of the use	of energy from r	enewable sources (Tran	sport sector): (imp	act not estimated for t	ransport sector) see chapter [BR1] 4.4.5							
Directive 2009/30/EC on the sp	ecification of petro	l, diesel and gas-	oil and introducing a me	echanism to monito	or and reduce greenho	use gas emissions: see chapter [BR1] 4.4.6							
Proposal for the amendment of	the Fuel Quality Di	rective and the R	Renewable Energy Direc	tive: SWD(2012) 3	343 final. This figure of	only includes emission reductions in the transport	sector. see chapter [BR1]	] 4.4.7					
Euro 5 and 6 Standards Regulat	ion (EC) No 692/2	008: SEC(2005)	1745 see chapter [BR1]	] 4.4.8. Status of ir	nplementation: impler	nented/adopted.							
Euro VI Standard for heavy dut	y vehicles (buses ar	nd trucks) Regula	ation (EC) No 595/2009	: SEC(2007) 1718	see chapter [BR1] 4.4	4.9							
General Safety Regulation (EC/	661/2009) and Tyre	e Labelling and M	Ainimum Rolling Resist	ance (EC1222/200	9): Estimated impact	range: 1500-5000 kt, Source: SEC(2008)2860 se	e chapter [BR1] 4.4.10						
Infrastructure charging for heav	y goods vehicles (1	999/62//EC, ame	ended by 2006/38/EC as	nd 2011/76/EU): In	npact not estimated; s	tatus of implementation: partly implemented. see	chapter [BR1] 4.4.11						
Clean Power for Transpor	t package inclu	ding the deplo	syment of alternativ	e fuel infrastruc	cture Alternative f	uels infrastructure; COM(2013) 18 final	(impact not estimate	ed) see chapter [BR]	1] 4.4.12				
Clean vehicles Directive (2009/	33/EC): Impact esti	imated for year 2	017, Impact assessment	t report; see chapte	r [BR1] 4.4.13								
White Paper: Roadmap to a Sin	gle European Trans	sport Area COM	(2011) 144 final: (impac	ct not estimated) se	e chapter [BR1] 4.4.1	4							
Integrating maritime transport e	missions in the EU	's greenhouse ga	s reduction policies CO	M(2013) 479 final	SWD(2013) 237 fina	ll/2; see chapter [BR1] 4.4.15							
F-gas Regulation: Impacts from	consultancy report	; see chapter [BI	R1] 4.5.2										
Proposed revision of the F-gas	regulation: SWD(20	)12) 363; see cha	apter [BR1] 4.5.3										
European Directive on mo	bile air-condition	oning systems	(MACs) (2006/40/	EC): COM (20	011) 581 final;; see	e chapter [BR1] 4.5.4							
Industrial Emissions Directive (	2010/75/EU): (imp	act not estimated	l) see chapter [BR1] 4.5	.5									
Common Agricultural Policy: (i	mpact not estimate	d) see chapter [E	BR1] 4.6.2										

Rural Development Policy: Impact not estimated; status of implementation: RDPs 2007-2013 under implementation. see chapter [BR1] 4.6.3

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitig cumulative, i	ation impact (not n kt CO <sub>2</sub> eq)			
									2010	2015	2020	2025	2030

Thematic Soil Strategy (COM(2006) 231)/ Soil Framework Directive: Impact not estimated; status of implementation: Strategy adopted, Directive planned. see chapter [BR1] 4.6.4

Nitrates Directive (91/676/EEC): (impact not estimated) see chapter [BR1] 4.6.5

EU Forest Strategy/EU Forest Action Plan (SEC(2006) 748): (impact not estimated) see chapter [BR1] 4.7.1

Forestry measure within the Rural Development Policy: (impact not estimated) see chapter [BR1] 4.7.2

LULUCF accounting: (impact not estimated) see chapter [BR1] 4.7.3

Waste Framework Directive (2008/98/EC): Impacts from Consultancy report ; see chapter [BR1] 4.8.2

Landfill Directive (1999/31/EC): 2010 impact compared to 1995 levels, 2020 impact compared to 2008 levels (if all MS fully meet the targets: 62000kt in 2020), Source: EEA report; see chapter [BR1] 4.8.3

Waste Incineration (2000/76/EC): (impact not estimated) see chapter [BR1] 4.8.4

EU policies targeting waste streams: (impact not estimated) see chapter [BR1] 4.8.5

Management of biodegradable waste (COM/2008/0811 final): Reduction potential ranges between 1500 and 6000 kt CO2eq in 2020, depending on the target. Source: Feasibility assessment; see chapter [BR1] 4.8.6 Urban Waste Water Treatment Directive (91/271/EEC): (impact not estimated) see chapter [BR1] 4.8.7

## Table 4**Reporting on progress** $^{a, b}$

(1990) 2010

2011

2012

	Total emissions excluding LULUCF	Contribution from LULUCF <sup>d</sup>	Quantity of units fr mechanisms unde	rom market based r the Convention	Quantity of units from other market based mechanisms			
Year <sup>c</sup>	$(kt \ CO_2 \ eq)$	$(kt \ CO_2 \ eq)$	(number of units)	$(kt \ CO_2 \ eq)$	(number of units)	$(kt \ CO_2 \ eq)$		
	5,791,121.99							
	4,733,815.65	-83,976.59	2,258,546,746.00	2,258,546.75				

2,761,334,892.00

2,315,900,565.00

2,761,334.89

2,315,900.57

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

<sup>*a*</sup> 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.

-83,976.59

-83,976.59

<sup>b</sup> 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.

<sup>c</sup> 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**

Contribution from LULUCF: Average projected accounting of activites under Article 3.3 and 3.4, see chapter [BR1] 4.11.

4,578,468.64

For market-based mechanisms under the Conventions, see chapter [BR1] 4.12.

#### Table 4(a)I

Progress in achieving the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the contribution of the land use, land-use change and forestry sector in 2011 <sup>a,b</sup>

	Net GHG emissions/removals from LULUCF categories <sup>c</sup>	Base year/period or reference level value <sup>d</sup>	Contribution from LULUCF for reported year	Cumulative contribution from LULUCF <sup>e</sup>	Accounting approach <sup>f</sup>
		$(kt CO_2 e)$	q)		
Total LULUCF					
A. Forest land					
1. Forest land remaining forest land					
2. Land converted to forest land					
3. Other <sup>g</sup>					
B. Cropland					
1. Cropland remaining cropland					
2. Land converted to cropland					
3. Other <sup>g</sup>					
C. Grassland					
1. Grassland remaining grassland					
2. Land converted to grassland					
3. Other <sup>g</sup>					
D. Wetlands					
1. Wetland remaining wetland					
2. Land converted to wetland					
3. Other <sup>g</sup>					
E. Settlements					
1. Settlements remaining settlements					
2. Land converted to settlements					
3. Other <sup>g</sup>					
F. Other land					
1. Other land remaining other land					
2. Land converted to other land					
3. Other <sup>g</sup>					
Harvested wood products					

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

<sup>*a*</sup> 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.

<sup>b</sup> 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.

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

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

<sup>*f*</sup> 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).

<sup>g</sup> 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

Progress in achieving the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the contribution of the land use, land-use change and forestry sector in 2012 <sup>a, b</sup>

	Net GHG emissions/removals from LULUCF categories <sup>c</sup>	Base year/period or reference level value <sup>d</sup>	Contribution from LULUCF for reported year	Cumulative contribution from LULUCF <sup>e</sup>	Accounting approach <sup>f</sup>
		$(kt CO_2 ec$	q)		
Total LULUCF					
A. Forest land					
1. Forest land remaining forest land					
2. Land converted to forest land					
3. Other <sup>g</sup>					
B. Cropland					
1. Cropland remaining cropland					
2. Land converted to cropland					
3. Other <sup>g</sup>					
C. Grassland					
1. Grassland remaining grassland					
2. Land converted to grassland					
3. Other <sup>g</sup>					
D. Wetlands					
1. Wetland remaining wetland					
2. Land converted to wetland					
3. Other <sup>g</sup>					
E. Settlements					
1. Settlements remaining settlements					
2. Land converted to settlements					
3. Other <sup>g</sup>					
F. Other land					
1. Other land remaining other land					
2. Land converted to other land					
3. Other <sup>g</sup>					
Harvested wood products					

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

<sup>*a*</sup> 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.

<sup>b</sup> 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.

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

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

<sup>*f*</sup> 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).

<sup>g</sup> 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)II

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

GREENHOUSE GAS SOURCE AND SINK ACTIVITIES	Base year <sup>d</sup>	2000	N	et emissions/removals	2011		Accounting parameters <sup>h</sup>	Accounting quantity <sup>i</sup>				
		2008	2009	2010	2011	Total <sup>g</sup>						
	(kt CO <sub>2</sub> eq)											
A. Article 3.3 activities												
A.1. Afforestation and Reforestation								-226548.74				
A.1.1. Units of land not harvested since the beginning of the commitment periodj		-53,133.24	-56,592.49	-58,302.70	-58,230.82	-226,259.26		-226259.26				
A.1.2. Units of land harvested since the beginning of the commitment periodj								-289.48				
A.2. Deforestation		36,890.01	34,260.82	31,416.02	30,677.71	133,244.56		133244.55794				
B. Article 3.4 activities												
B.1. Forest Management (if elected)		-337,739.62	-337,540.41	-307,270.05	-314,865.87	-1,297,415.94		-243755.87463				
3.3 offset <sup>k</sup>							44521.75147	-45816.79808				
FM cap <sup>1</sup>							197939.07655	-197939.07655				
B.2. Cropland Management (if elected)	9600.25545	1,981.30	1,330.31	1,480.18	827.46	5,619.26	38401.02178	-32781.75741				
B.3. Grazing Land Management (if elected)	2218.92221	-0.67	-130.96	-267.13	-430.03	-828.80	8875.68885	-9704.48523				
B.4. Revegetation (if elected)	-1274.96939	-238.94	-253.57	-268.28	-286.95	-1,047.75	-5099.87756	4052.13242				

*Note:* 1 kt  $CO_2$  eq equals 1 Gg  $CO_2$  eq.

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

<sup>*a*</sup> 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.

<sup>b</sup> Developed country Parties with a quantified economy-wide emission reduction target as communicated to the secretariat and contained in document FCCC/SB/2011/INF.1/Rev.1 or any update to that document, that are Parties to the Kyoto Protocol, may use table 4(a)II for reporting of accounting quantities if LULUCF is contributing to the attainment of that target.

<sup>c</sup> Parties can include references to the relevant parts of the national inventory report, where accounting methodologies regarding LULUCF are further described in the documentation box or in the biennial

<sup>d</sup> Net emissions and removals in the Party's base year, as established by decision 9/CP.2.

<sup>e</sup> All values are reported in the information table on accounting for activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, of the CRF for the relevant inventory year as reported in the current submission and are automatically entered in this table.

<sup>*f*</sup> Additional columns for relevant years should be added, if applicable.

<sup>g</sup> Cumulative net emissions and removals for all years of the commitment period reported in the current submission.

<sup>h</sup> The values in the cells "3.3 offset" and "Forest management cap" are absolute values.

<sup>*i*</sup> The accounting quantity is the total quantity of units to be added to or subtracted from a Party's assigned amount for a particular activity in accordance with the provisions of Article 7, paragraph 4, of the Kyoto Protocol.

<sup>*j*</sup> In accordance with paragraph 4 of the annex to decision 16/CMP.1, debits resulting from harvesting during the first commitment period following afforestation and reforestation since 1990 shall not be greater than the credits accounted for on that unit of land.

<sup>k</sup> In accordance with paragraph 10 of the annex to decision 16/CMP.1, for the first commitment period a Party included in Annex I that incurs a net source of emissions under the provisions of Article 3 paragraph 3, may account for anthropogenic greenhouse gas emissions by sources and removals by sinks in areas under forest management under Article 3, paragraph 4, up to a level that is equal to the net source of emissions under the provisions of Article 3, paragraph 3, but not greater than 9.0 megatonnes of carbon times five, if the total anthropogenic greenhouse gas emissions by sources and removals by sinks in the managed forest since 1990 is equal to, or larger than, the net source of emissions incurred under Article 3, paragraph 3.

<sup>1</sup> In accordance with paragraph 11 of the annex to decision 16/CMP.1, for the first commitment period of the Kyoto Protocol only, additions to and subtractions from the assigned amount of a Party resulting from Forest management under Article 3, paragraph 4, after the application of paragraph 10 of the annex to decision 16/CMP.1 and resulting from forest management project activities undertaken under Article 6, shall not exceed the value inscribed in the appendix of the annex to decision 16/CMP.1, times five.

**Custom Footnotes** 

Documentation Box:

#### EUA\_BR1\_v2.0 Source: EUA\_CRF\_\_ v1.3

#### Table 4(b) **Reporting on progress<sup>a, b, c</sup>**

	Units of market based mochanisms		Yea	r
	Units of market basea mechanisms		2011	2012
	Kanda Durata ad antita	(number of units)	2,761,334,892.00	2,315,900,565.00
	Kyoto Protocol units	$(kt CO_2 eq)$	2,761,334.89	2,315,900.57
		(number of units)	2,603,870,003.00	2,098,437,856.00
	AAUS	(kt CO2 eq)	2,603,870.00	2,098,437.86
	EDU	(number of units)	20,506,866.00	63,453,240.00
Kyoto Bristopol	ERUS	(kt CO2 eq)	20,506.87	63,453.24
Protocol units <sup>d</sup>	OF D	(number of units)	136,958,023.00	154,009,469.00
unns	CERS	(kt CO2 eq)	136,958.02	154,009.47
		(number of units)	NO	NO
	tCEKs	(kt CO2 eq)	NO	NO
		(number of units)	NO	NO
	ICERS	(kt CO2 eq)	NO	NO
	Units from market-based mechanisms under the	(number of units)		
	Convention	$(kt CO_2 eq)$		
		(number of units)		
Other units		(kt CO2 eq)		
d,e		(number of units)		
	Units from other market-basea mechanisms	$(kt CO_2 eq)$		
Total	1	(number of units)	2,761,334,892.00	2,315,900,565.00
1 otal		$(kt CO_2 eq)$	2,761,334.89	2,315,900.57

Abbreviations: AAUs = assigned amount units, CERs = certified emission reductions, ERUs = emission reduction units, ICERs = long-term certified emission reductions, tCERs = temporary certified emission reductions. Note: 2011 is the latest reporting year.

<sup>*a*</sup> 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.

<sup>c</sup> Parties may include this information, as appropriate and if relevant to their target.

<sup>d</sup> Units surrendered by that Party for that year that have not been previously surrendered by that or any other Party.

<sup>e</sup> Additional rows for each market-based mechanism should be added, if applicable.

#### **Custom Footnotes**

In addition, 288 245 RMUs (= 288.25 kt CO2 eq) were retired in 2012.

#### Table 5

#### Summary of key variables and assumptions used in the projections analysis<sup>*a*</sup>

Key underlying assumptions				Histo	orical <sup>b</sup>	Projected					
Assumption	Unit	1990	1995	2000	2005	2010	2011	2015	2020	2025	2030
GDP	Billion Euro(2005)							13.00	14.00	16.00	17.00
International oil price	Euro(2010) / boe							86.00	94.00	95.00	101.00
International coal price	Euro(2010) / boe							19.00	20.00	23.00	23.00
International gas price	Euro(2010) / boe							50.00	54.00	58.00	61.00
Population	Million							506.00	514.00	518.00	510.00
CO2-Price	Euro(2010) / t							12.00	17.00	21.00	27.00

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<sup>*a*</sup> Parties should include key underlying assumptions as appropriate.

<sup>b</sup> Parties should include historical data used to develop the greenhouse gas projections reported.

#### **Custom Footnotes**

The key assumptions reported here; are based on data aggregated from what; individual Member State; have reported in 2013 under the MMD.;

boe: barrel of oil equivalent annual growth rate of EU-28 GDP

Population: Missing projected values on Member State level gap-filled with linear extrapolation of trend. In case all values were missing, 2010 values were gap filled with Eurostat data and projected values were held constant.

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## Table 6(a)

#### Information on updated greenhouse gas projections under a 'with measures' scenario<sup>a</sup>

	GHG emissions and removals <sup>b</sup>							GHG emission p	projections
				$(kt CO_2 eq)$				(kt CO <sub>2</sub> e	eq)
	Base Year	1990	1995	2000	2005	2010	2011	2020	2030
Sector <sup>d,e</sup>									
Energy		3,541,260.26	3,212,558.24	3,085,544.00	3,137,803.21	2,848,548.59	2,708,284.58	2,490,519.10	2,354,772.86
Transport		778,344.39	833,370.39	914,697.99	969,045.43	935,862.14	926,442.00	917,398.85	937,767.36
Industry/industrial processes		461,477.34	439,424.01	393,099.41	406,017.27	337,859.87	334,684.91	360,357.38	367,624.43
Agriculture		604,007.70	520,030.05	508,448.25	481,543.41	463,189.33	464,418.21	464,373.33	463,950.79
Forestry/LULUCF									
Waste management/waste		204,172.74	198,459.42	177,575.48	153,062.71	138,069.38	134,552.52	113,709.06	101,718.03
Other (specify)		16,855.39	13,903.56	13,442.00	12,187.69	10,414.76	10,214.56	12,743.73	13,016.05
Other (CRF 3 +7)		16,855.39	13,903.56	13,442.00	12,187.69	10,414.76	10,214.56	12,743.73	13,016.05
Aviation									
Gas									
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF									
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF		4,430,301.99	4,155,792.61	4,131,744.75	4,269,223.70	3,912,210.90	3,764,299.71	3,561,271.65	3,458,596.15
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF									
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF		594,691.84	531,371.92	477,428.40	425,851.02	395,550.38	387,666.63	363,186.16	346,120.25
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF									
N2O emissions excluding N2O from LULUCF		520,979.73	460,795.58	416,334.33	388,578.49	336,114.71	334,838.76	339,257.11	340,861.76
HFCs									
PFCs									
SF <sub>6</sub>									
Other (specify)		60,144.26	69,785.55	67,299.65	76,006.53	90,068.08	91,791.69	95,435.67	93,318.86
CO <sub>2</sub>									
HFCs									
CH <sub>4</sub>									
Total F-gases (HFCs + PFCs + SF6)		60,144.26	69,785.55	67,299.65	76,006.53	90,068.08	91,791.69	95,435.67	93,318.86
N <sub>2</sub> O									
SF <sub>6</sub>									
PFCs									
Total with LULUCF <sup>f</sup>		60,144.26	69,785.55	67,299.65	76,006.53	90,068.08	91,791.69	95,435.67	93,318.86
Total without LULUCF		5,606,117.82	5,217,745.66	5,092,807.13	5,159,659.74	4,733,944.07	4,578,596.79	4,359,150.59	4,238,897.02

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

#### Table 6(a)

#### Information on updated greenhouse gas projections under a 'with measures' scenario<sup>a</sup>

		G	GHG emissions and ren	novals <sup>b</sup>			GHG emissio	n projections
			$(kt \ CO_2 \ eq)$				(kt Co	$O_2 eq$ )
Base Year	1990	2011	2011 2020 20					

<sup>*a*</sup> 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.

<sup>b</sup> 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.

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

 $d^{d}$  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.

<sup>e</sup> 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.

<sup>*f*</sup> Parties may choose to report total emissions with or without LULUCF, as appropriate.

#### **Custom Footnotes**

No base year emissions are reported for the EU-28 as there is no common base year under the Kyoto Protocol.

Data labelled in the automatic sums as "Totals as summed for the sectors - Total with LULUCF" are in fact the sector totals without LULUCF.

The BR App software does not allow reporting projections for 2015 and 2025.

Sectoral projections for 'Energy' do exlude transport (CRF 1A3) emissions.

Projections for Forestry / LULUCF are not reported.

Memo items on;international bunkers (aviation; marine) are reported in section 6 (projections) of the EU 1st Biennial Report.

does not yet cover NF3). LULUCF.

#### Table 6(c)

#### Information on updated greenhouse gas projections under a 'with additional measures' scenario<sup>a</sup>

		GHG emissions and removals <sup>b</sup>								
				$(kt CO_2 eq)$				(kt CO <sub>2</sub> eq)		
	Base Year	1990	1995	2000	2005	2010	2011	2020	2030	
Sector <sup>d,e</sup>										
Energy		3,541,260.26	3,212,558.24	3,085,544.00	3,137,803.21	2,848,548.59	2,708,284.58	2,347,301.00	2,140,274.32	
Transport		778,344.39	833,370.39	914,697.99	969,045.43	935,862.14	926,442.00	875,065.23	867,611.60	
Industry/industrial processes		461,477.34	439,424.01	393,099.41	406,017.27	337,859.87	334,684.91	353,323.88	348,919.90	
Agriculture		604,007.70	520,030.05	508,448.25	481,543.41	463,189.33	464,418.21	460,388.99	456,404.52	
Forestry/LULUCF										
Waste management/waste		204,172.74	198,459.42	177,575.48	153,062.71	138,069.38	134,552.52	107,441.44	96,070.81	
Other (specify)		16,855.39	13,903.56	13,442.00	12,187.69	10,414.76	10,214.56	12,709.75	12,952.54	
Other (CRF 3 +7)		16,855.39	13,903.56	13,442.00	12,187.69	10,414.76	10,214.56	12,709.75	12,952.54	
Aviation										
Gas						· · · · ·		· · · · ·		
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF										
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF		4,430,301.99	4,155,792.61	4,131,744.75	4,269,223.70	3,912,210.90	3,764,299.71	3,376,322.18	3,168,075.78	
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF										
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF		594,691.84	531,371.92	477,428.40	425,851.02	395,550.38	387,666.63	354,604.82	334,816.42	
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF										
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF		520,979.73	460,795.58	416,334.33	388,578.49	336,114.71	334,838.76	333,532.71	333,422.75	
HFCs										
PFCs										
SF <sub>6</sub>										
Other (specify)		60,144.26	69,785.55	67,299.65	76,006.53	90,068.08	91,791.69	91,884.21	86,036.05	
CO <sub>2</sub>										
HFCs										
CH <sub>4</sub>										
Total F-gases (HFCs + PFCs + SF6)		60,144.26	69,785.55	67,299.65	76,006.53	90,068.08	91,791.69	91,884.21	86,036.05	
N <sub>2</sub> O										
SF <sub>6</sub>										
PFCs										
Total with $LULUCF^{f}$		60,144.26	69,785.55	67,299.65	76,006.53	90,068.08	91,791.69	91,884.21	86,036.05	
Total without LULUCF		5,606,117.82	5,217,745.66	5,092,807.13	5,159,659.74	4,733,944.07	4,578,596.79	4,156,343.92	3,922,351.00	

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

<sup>a</sup> 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

<sup>b</sup> 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

#### Table 6(c)

#### Information on updated greenhouse gas projections under a 'with additional measures' scenario<sup>a</sup>

		GE	HG emissions and ren	novals <sup>b</sup>			GHG emissio	on projections
		(kt CO	$D_2$ eq)					
Base Year	1990	1995	2000	2005	2010	2011	2020	2030

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

<sup>d</sup> 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

<sup>e</sup> 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.

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

## Table 7 Provision of public financial support: summary information in 2011<sup>a</sup>

						Year				
		E	uropean euro - EUR				USD <sup>b</sup>			
Allocation channels			Climate-s		Cl					
	Core/general <sup>c</sup>	Mitigation	Adaptation	Cross-cutting <sup>e</sup>	<i>Other</i> <sup>f</sup>	Core/general <sup>c</sup>	Mitigation	Adaptatio		
Total contributions through multilateral channels:										
Multilateral climate change funds <sup>g</sup>										
Other multilateral climate change funds <sup>h</sup>										
Multilateral financial institutions, including regional										
development banks										
Specialized United Nations bodies										
Total contributions through bilateral, regional and other channels		85,850,681.00	88,669,476.00	453,851,867.00			119,402,895.00	123,323,3		
Total		85,850,681.00	88,669,476.00	453,851,867.00			119,402,895.00	123,323,3		

*Abbreviation:* USD = United States dollars.

- <sup>a</sup> Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.
- <sup>b</sup> 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.
- <sup>c</sup> This refers to support to multilateral institutions that Parties cannot specify as climate-specific.
- <sup>d</sup> Parties should explain in their biennial reports how they define funds as being climate-specific.
- <sup>e</sup> This refers to funding for activities which are cross-cutting across mitigation and adaptation.
- <sup>*f*</sup> Please specify.
- <sup>g</sup> Multilateral climate change funds listed in paragraph 17(a) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.
- <sup>h</sup> 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:

mate-	specific <sup>d</sup>	
ı	Cross-cutting <sup>e</sup>	<i>Other</i> <sup>f</sup>
33.00	631,226,518.00	
33.00	631,226,518.00	

## Table 7Provision of public financial support: summary information in 2012<sup>a</sup>

					Y	ear			
		l	European euro - EUR					US	
Allocation channels			Climate-s	pecific <sup>d</sup>					
	Core/general <sup>c</sup>	Mitigation	Adaptation	Cross-cutting <sup>e</sup>	<i>Other</i> <sup>f</sup>	Core/general <sup>c</sup>	Mitigation	Adap	
Total contributions through multilateral channels:									
Multilateral climate change funds <sup>g</sup>									
Other multilateral climate change funds <sup>h</sup>									
Multilateral financial institutions, including regional									
development banks									
Specialized United Nations bodies									
Total contributions through bilateral, regional and other		184,639,734.00	79,034,455.00	470,068,362.00			237,326,137.00	101,	
channels									
Total		184,639,734.00	79,034,455.00	470,068,362.00			237,326,137.00	101,	

*Abbreviation:* USD = United States dollars.

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

<sup>b</sup> 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.

<sup>c</sup> This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

<sup>d</sup> Parties should explain in their biennial reports how they define funds as being climate-specific.

<sup>e</sup> This refers to funding for activities which are cross-cutting across mitigation and adaptation.

<sup>f</sup> Please specify.

<sup>g</sup> Multilateral climate change funds listed in paragraph 17(a) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

<sup>h</sup> 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:

$D^{b}$											
Climate-specific <sup>d</sup>											
tation	Cross-cutting <sup>e</sup>	<i>Other</i> <sup>f</sup>									
586,703.00	604,200,977.00										
586,703.00	604,200,977.00										

#### Table 7(a)

#### Provision of public financial support: contribution through multilateral channels in 2011<sup>a</sup>

		Total	amount						
Donor funding	Core/ge	eneral <sup>d</sup>	Climate-	-specific <sup>e</sup>	Status <sup>b</sup>	Funding source <sup>f</sup>	Financial	Type of support <sup>f, g</sup>	Sector
	European euro - EUR	USD	European euro - EUR	USD	- Dianas	I unung source	instrument <sup>J</sup>	Type of support	
Total contributions through multilateral channels									
Multilateral climate change funds <sup>g</sup>									
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.

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

<sup>b</sup> 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.

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

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

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

<sup>f</sup> Please specify.

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

#### **Custom Footnotes**

The EU has not provided core contributions to multilateral organizations, including to the operating entities of thefinancial mechanism of UNFCCC (the Global Environmental Facility and the GreenClimate Fund). The EU's contributions to the UNFCCC and theKyoto Protocol's budgets are included in the National Communication.

## Table 7(a) Provision of public financial support: contribution through multilateral channels in 2012<sup>a</sup>

		Total a	amount						
Donor funding	Core/ge	eneral <sup>d</sup>	Climate-	specific <sup>e</sup>	Status <sup>b</sup>	Funding source <sup>f</sup>	Financial	Type of support <sup>f, g</sup>	Sector
2 onor junanty	European euro - EUR	USD	European euro - EUR	USD	Sianas	T unung source	instrument <sup>†</sup>	Type of support	20007
Total contributions through multilateral channels									
Multilateral climate change funds <sup>g</sup>									
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.

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

<sup>b</sup> 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.

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

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

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

<sup>f</sup> Please specify.

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

#### **Custom Footnotes**

The EU has not provided core contributions to multilateral organizations, including to the operating entities of thefinancial mechanism of UNFCCC (the Global Environmental Facility and the GreenClimate Fund). The EU's contributions to the UNFCCC and theKyoto Protocol's budgets are included in the National Communication.

## Provision of public financial support: contribution through bilateral, regional and other channels in 2011<sup>a</sup>

	Total am	nount						
Recipient country/	Climate-sp	pecific <sup>f</sup>	Status <sup>c</sup>	Funding	Financial	<i>Type of support</i> $^{g,}_{h}$	Sector <sup>d</sup>	Additional $information^{e}$
region/projecu/programme	European euro - EUR	USD		source	instrument			injormation
Total contributions through bilateral,	628,372,024.00	873,952,746.00						
Bangladesh /	20,000,000.00	27,816,412.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Benin /	8,000,000.00	11,126,565.00	Committed	ODA	Grant	Cross-cutting	Water and sanitation	Flood prevention and control
Bhutan /	3,600,000.00	5,006,954.00	Committed	ODA	Grant	Cross-cutting	Agriculture	
Burkina Faso /	2,000,000.00	2,781,641.00	Committed	ODA	Grant	Cross-cutting	Agriculture	
Burkina Faso /	1,200,000.00	1,668,985.00	Committed	ODA	Grant	Adaptation	Other (Aviation)	
Central African Republic /	2,680,000.00	3,727,399.00	Committed	ODA	Grant	Mitigation	Forestry	
China /	10,000,000.00	13,908,206.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
China /	2,000,000.00	2,781,641.00	Committed	ODA	Grant	Adaptation	Other (Aviation)	
Côte d'Ivoire /	3,120,000.00	4,339,360.00	Committed	ODA	Grant	Cross-cutting	Agriculture	
Cook Islands /	600,000.00	834,492.00	Committed	ODA	Grant	Adaptation	Cross-cutting	
Cuba /	7,000,000.00	9,735,744.00	Committed	ODA	Grant	Cross-cutting	Agriculture	
Democratic Republic of the Congo /	14,000,000.00	19,471,488.00	Committed	ODA	Grant	Cross-cutting	Forestry	
Djibouti /	4,800,000.00	6,675,939.00	Committed	ODA	Grant	Mitigation	Energy	
Egypt /	1,250,953.00	1,739,851.00	Committed	ODA	Grant	Mitigation	Energy	
Egypt /	8,000,000.00	11,126,565.00	Committed	ODA	Grant	Adaptation	Transport	Urban Development
Egypt /	10,749,047.00	14,949,996.00	Committed	ODA	Grant	Mitigation	Energy	
Gabon /	4,800,000.00	6,675,939.00	Committed	ODA	Grant	Adaptation	Water and sanitation	
Gambia /	3,860,000.00	5,368,567.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Grenada /	1,000,000.00	1,390,821.00	Committed	ODA	Grant	Mitigation	Energy	
Guatemala /	800,000.00	1,112,656.00	Committed	ODA	Grant	Cross-cutting	Agriculture	
Guyana /	736,739.00	1,024,672.00	Committed	ODA	Grant	Mitigation	Energy	
Guyana /	1,120,000.00	1,557,719.00	Committed	ODA	Grant	Adaptation	Agriculture	
Guyana /	6,880,000.00	9,568,846.00	Committed	ODA	Grant	Adaptation	Agriculture	

## Provision of public financial support: contribution through bilateral, regional and other channels in 2011<sup>a</sup>

	Total an	nount						
Recipient country/	Climate-sp	pecific <sup>f</sup>	Status <sup>c</sup>	Funding	Financial	Type of support <sup>g,</sup>	Sector	Additional
region/project/programme <sup>b</sup>	European euro - EUR	USD	Sittius	source <sup>8</sup>	instrument <sup>8</sup>	h	Sector	information <sup>e</sup>
Haiti /	7,480,000.00	10,403,338.00	Committed	ODA	Grant	Mitigation	Cross-cutting	
Indonesia /	15,000,000.00	20,862,309.00	Committed	ODA	Grant	Cross-cutting	Forestry	
Jamaica /	12,381,200.00	17,220,028.00	Committed	ODA	Grant	Mitigation	Cross-cutting	
Jamaica /	172,742.00	240,253.00	Committed	ODA	Grant	Mitigation	Energy	
Jordan /	14,000,000.00	19,471,488.00	Committed	ODA	Grant	Mitigation	Energy	
Lao People's Democratic Republic /	5,000,000.00	6,954,103.00	Committed	ODA	Grant	Cross-cutting	Forestry	
Lebanon /	3,200,000.00	4,450,626.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Malawi /	4,634,400.00	6,445,619.00	Committed	ODA	Grant	Adaptation	Agriculture	
Mozambique /	1,966,800.00	2,735,466.00	Committed	ODA	Grant	Adaptation	Agriculture	
Mozambique /	5,000,000.00	6,954,103.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Nicaragua /	2,140,000.00	2,976,356.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Niger /	6,000,000.00	8,344,924.00	Committed	ODA	Grant	Adaptation	Agriculture	
Sierra Leone /	6,600,000.00	9,179,416.00	Committed	ODA	Grant	Mitigation	Forestry	
Solomon Islands /	990,000.00	1,376,912.00	Committed	ODA	Grant	Adaptation	Transport	Road Infrastructure
Swaziland /	4,800,000.00	6,675,939.00	Committed	ODA	Grant	Cross-cutting	Water and sanitation	
South Sudan /	16,800,000.00	23,365,786.00	Committed	ODA	Grant	Adaptation	Agriculture	Food Security
Sudan /	9,200,000.00	12,795,549.00	Committed	ODA	Grant	Adaptation	Agriculture	Food Security
Suriname /	78,276.00	108,868.00	Committed	ODA	Grant	Adaptation	Agriculture	Water
Tajikistan /	6,400,000.00	8,901,252.00	Committed	ODA	Grant	Adaptation	Agriculture	
United Republic of Tanzania /	4,000,000.00	5,563,282.00	Committed	ODA	Grant	Adaptation	Cross-cutting	
Uganda /	11,000,000.00	15,299,026.00	Committed	ODA	Grant	Adaptation	Agriculture	
Uganda /	1,380,300.00	1,919,750.00	Committed	ODA	Grant	Mitigation	Energy	
Uganda /	6,619,700.00	9,206,815.00	Committed	ODA	Grant	Mitigation	Energy	
Uzbekistan /	4,000,000.00	5,563,282.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Rural Development
Viet Nam /	1,200,000.00	1,668,985.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Western Samoa /	3,000,000.00	4,172,462.00	Committed	ODA	Grant	Adaptation	Water and sanitation	

#### Provision of public financial support: contribution through bilateral, regional and other channels in 2011<sup>a</sup>

	Total amount							
Recipient country/	Climate-specific <sup>f</sup>		Status <sup>c</sup>	Funding	Financial	<i>Type of support</i> $^{g,}_{h}$	Sector <sup>d</sup>	Additional $information^{e}$
regionoprojecoprogramme	European euro - EUR	USD		300/00	msnumeni			injormation
Regional Africa /	71,977,736.00	100,108,117.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Several projects
Regional Asia /	44,080,000.00	61,307,371.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Several projects
Regional Latin America /	16,000,000.00	22,253,129.00	Committed	ODA	Grant	Mitigation	Cross-cutting	
Unspecified LDCs /	154,374,131.00	214,706,719.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Several projects
Regional Eastern Europe and Central Asia /	70,200,000.00	97,635,605.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Several projects
Regional Oceania /	500,000.00	695,410.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Several projects

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

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

<sup>b</sup> Parties should report, to the extent possible, on details contained in this table.

<sup>c</sup> 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.

<sup>d</sup> Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

<sup>e</sup> Parties should report, as appropriate, on project details and the implementing agency.

<sup>*f*</sup> Parties should explain in their biennial reports how they define funds as being climate-specific.

<sup>g</sup> Please specify.

<sup>*h*</sup> Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

**Custom Footnotes** 

## Provision of public financial support: contribution through bilateral, regional and other channels in 2012<sup>a</sup>

	Total amo	ount						
Recipient country/	Climate-spe	ecific <sup>f</sup>	Status <sup>c</sup>	Funding	Financial	<i>Type of support</i> $^{g}$ , $h$	Sector <sup>d</sup>	Additional information <sup>e</sup>
region/project/programme	European euro - EUR	USD		source	instrument			
Total contributions through bilateral,	733,742,551.00	943,113,817.00						
regional and other channels								
Afghanistan /	24,000,000.00	30,848,329.00	Committed	ODA	Grant	Cross-cutting	Agriculture	
Algeria /	13,600,000.00	17,480,720.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Algeria /	6,000,000.00	7,712,082.00	Committed	ODA	Grant	Adaptation	Other (Aviation)	
Bangladesh /	12,100,000.00	15,552,699.00	Committed	ODA	Grant	Adaptation	Agriculture	
Belize /	240,000.00	308,483.00	Committed	ODA	Grant	Adaptation	Other (Aviation)	
Bolivia /	8,800,000.00	11,311,054.00	Committed	ODA	Grant	Adaptation	Water and sanitation	
Burundi /	6,400,000.00	8,226,221.00	Committed	ODA	Grant	Mitigation	Energy	
Burkina Faso /	8,000,000.00	10,282,776.00	Committed	ODA	Grant	Cross-cutting	Forestry	
Cambodia /	8,000,000.00	10,282,776.00	Committed	ODA	Grant	Adaptation	Agriculture	
Central African Republic /	4,000,000.00	5,141,388.00	Committed	ODA	Grant	Cross-cutting	Forestry	
Chad /	2,000,000.00	2,570,694.00	Committed	ODA	Grant	Cross-cutting	Other (Aviation)	
Chad /	2,000,000.00	2,570,694.00	Committed	ODA	Grant	Mitigation	Other (Aviation)	
Congo /	13,600,000.00	17,480,720.00	Committed	ODA	Grant	Mitigation	Transport	
Djibouti /	40,500,000.00	52,056,555.00	Committed	ODA	Grant	Cross-cutting	Water and sanitation	
Dominica /	6,108,000.00	7,850,900.00	Committed	ODA	Grant	Cross-cutting	Other (Aviation)	
Timor-Leste /	4,000,000.00	5,141,388.00	Committed	ODA	Grant	Adaptation	Cross-cutting	
Egypt /	12,000,000.00	15,424,165.00	Committed	ODA	Grant	Mitigation	Energy	
Egypt /	4,000,000.00	5,141,388.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Gambia /	1,900,000.00	2,442,159.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Ghana /	2,896,000.00	3,722,365.00	Committed	ODA	Grant	Cross-cutting	Agriculture	

## Provision of public financial support: contribution through bilateral, regional and other channels in 2012<sup>a</sup>

	Total amount		Status <sup>C</sup>	Funding	Financial	Type of support <sup>g,</sup>	Sactor <sup>d</sup>	
Recipient country/	Climate-specific <sup><math>f</math></sup>							A division of information e
region/project/programme <sup>b</sup>	European euro -		Siaius	source <sup>g</sup>	instrument <sup>8</sup>	h	Sector	Additional information
	EUR	USD						
Honduras /	18,800,000.00	24,164,524.00	Committed	ODA	Grant	Cross-cutting	Forestry	
Jamaica /	1,892,000.00	2,431,877.00	Committed	ODA	Grant	Adaptation	Other (Aviation)	
Kenya /	2,701,600.00	3,472,494.00	Committed	ODA	Grant	Mitigation	Agriculture	
Kiribati /	1,922,455.00	2,471,022.00	Committed	ODA	Grant	Adaptation	Water and sanitation	
Lebanon /	4,800,000.00	6,169,666.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Lesotho /	4,000,000.00	5,141,388.00	Committed	ODA	Grant	Adaptation	Cross-cutting	
Liberia /	2,000,000.00	2,570,694.00	Committed	ODA	Grant	Cross-cutting	Other (Aviation)	
Madagascar /	13,600,000.00	17,480,720.00	Committed	ODA	Grant	Adaptation	Agriculture	
Malawi /	4,000,000.00	5,141,388.00	Committed	ODA	Grant	Adaptation	Agriculture	
Malaysia /	4,000,000.00	5,141,388.00	Committed	ODA	Grant	Cross-cutting	Forestry	REDD+ readiness
Morocco /	37,000,000.00	47,557,841.00	Committed	ODA	Grant	Cross-cutting	Forestry	
Mozambique /	2,000,000.00	2,570,694.00	Committed	ODA	Grant	Cross-cutting	Other (Aviation)	
Nicaragua /	8,000,000.00	10,282,776.00	Committed	ODA	Grant	Cross-cutting	Forestry	
Palestine /	5,780,000.00	7,429,306.00	Committed	ODA	Grant	Cross-cutting	Water and sanitation	
Papua New Guinea /	6,000,000.00	7,712,082.00	Committed	ODA	Grant	Mitigation	Other (Aviation)	
Philippines /	2,400,000.00	3,084,833.00	Committed	ODA	Grant	Cross-cutting	Other (Aviation)	
Saint Lucia /	4,140,000.00	5,321,337.00	Committed	ODA	Grant	Cross-cutting	Agriculture	
Saint Vincent and the Grenadines /	3,972,000.00	5,105,398.00	Committed	ODA	Grant	Cross-cutting	Other (Aviation)	
Somalia /	25,000,000.00	32,133,676.00	Committed	ODA	Grant	Cross-cutting	Agriculture	
Swaziland /	2,800,000.00	3,598,972.00	Committed	ODA	Grant	Cross-cutting	Water and sanitation	

#### Provision of public financial support: contribution through bilateral, regional and other channels in 2012<sup>a</sup>

	Total amount				Financial	Type of support <sup>g,</sup>	Sector <sup>d</sup>	
Recipient country/	Climate-specific <sup><math>f</math></sup>		Status <sup>c</sup>	Funding				Additional information <sup>e</sup>
region/project/programme <sup>®</sup>	European euro - EUR	USD		source <sup>s</sup>	instrument <sup>*</sup>	n		
Sudan /	2,800,000.00	3,598,972.00	Committed	ODA	Grant	Adaptation	Agriculture	
United Republic of Tanzania /	20,604,000.00	26,483,290.00	Committed	ODA	Grant	Cross-cutting	Water and sanitation	
Tonga /	2,595,200.00	3,335,733.00	Committed	ODA	Grant	Cross-cutting	Energy	
Tuvalu /	950,000.00	1,221,080.00	Committed	ODA	Grant	Mitigation	Energy	Also on Water and Sanitation
Uganda /	12,200,000.00	15,681,234.00	Committed	ODA	Grant	Mitigation	Water and sanitation	
Vanuatu /	1,000,000.00	1,285,347.00	Committed	ODA	Grant	Cross-cutting	Energy	
Western Samoa /	7,240,000.00	9,305,913.00	Committed	ODA	Grant	Adaptation	Water and sanitation	
Zambia /	4,440,000.00	5,706,941.00	Committed	ODA	Grant	Adaptation	Agriculture	
Regional ACP /	27,705,562.00	35,611,262.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Transport Sector
Regional Africa /	86,108,134.00	110,678,835.00	Committed	ODA	Grant	Mitigation	Energy	Including NIF
Regional Asia /	34,400,000.00	44,215,938.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Including FLEGT Asia (Forestry) and SWITCH Asia
Regional Caribbean /	26,000,000.00	33,419,023.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Regional Latin America /	47,000,000.00	60,411,311.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Including LAIF
Unspecified LDCs /	14,824,984.00	19,055,249.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Regional Eastern Europe and Central Asia /	42,680,000.00	54,858,612.00	Committed	ODA	Grant	Mitigation	Energy	Including IFCA
Regional Oceania /	7,200,000.00	9,254,499.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	
Global /	61,042,616.00	78,460,946.00	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Including 2012 AAP Part I; Sustainable Energy for All; CEPF and PMR;

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

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

#### Provision of public financial support: contribution through bilateral, regional and other channels in 2012<sup>a</sup>

	Total a	amount						
<i>Recipient country/</i> <i>region/project/programme</i> <sup>b</sup>	$Climate$ -specific $^{f}$		Status <sup>c</sup>	Funding	Financial	Type of support $_{h}^{g}$	Sector <sup>d</sup>	Additional information <sup>e</sup>
	European euro - EUR	USD		source	instrument*			

<sup>b</sup> Parties should report, to the extent possible, on details contained in this table.

<sup>c</sup> 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.

<sup>d</sup> Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

<sup>e</sup> Parties should report, as appropriate, on project details and the implementing agency.

<sup>f</sup> Parties should explain in their biennial reports how they define funds as being climate-specific.

<sup>g</sup> Please specify.

<sup>*h*</sup> Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

**Custom Footnotes** 

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

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector <sup>c</sup>	Source of the funding for technology transfer	Activities undertaken by	Status	Additional information <sup>d</sup>
	Mitigation and Adaptation	EU Framework Programmes	Energy, Transport, Agriculture, Other (Other (CRF 3 +7))	Public	Private and Public	Implemented	The 7th Framework Programme for research and technological development (FP7) remained during 2007-2013 the most important EU financial mechanism to support research on climate change and the development of energy technologies, including cooperation with non-EU countries, with resources for research in support to TT and capacity building with third countries. Many specific FP instruments are developed to promote and support international cooperation including on climate change technologies. The main component of FP7, which ran between 2007 and 2013, was the $\in$ 32.4 billion "Cooperation" programme, which was divided into research themes, one of which is called "Environment (including climate change)": with a total budget of $\in$ 1.89 billion, which was the cornerstone of environmental research in Europe and also expanded to developing countries, as a number of projects under FP7 were specifically targeted at these countries. Furthermore, the mitigation of greenhouse gas emissions was a priority of projects across FP7, i.e. on energy, transport or food production.
	Mitigation	Strategic Energy Technology Plan	Energy	Public	Private and Public	Implemented	The Strategic Energy Technology (SET) Plan provides a blueprint for Europe to develop a world-class portfolio of affordable, clean, efficient and low emission energy technologies. It puts forward a vision of Europe investing and working collectively to develop and facilitate a global market take-up of such technologies, with European industry leading the way. SET Plan also includes a substantial international cooperation dimension with industrialised, emerging and developing countries that should create new opportunities for cooperation between the EU and international partners.

## Table 8

## **Provision of technology development and transfer support**<sup>*a,b*</sup>

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector <sup>c</sup>	Source of the funding for technology transfer	Activities undertaken by	Status	Additional information <sup>d</sup>
China	Mitigation	Near-zero Emissions Power Generation Technology through Carbon Dioxide Capture and Storage	Energy	Public	Private and Public	Implemented	The EU and China committed to cooperate on Carbon Dioxide Capture and Storage (CCS) in the framework of the "Near-zero Emissions Power Generation Technology through Carbon Dioxide Capture and Storage" programme (NZEC). This cooperation aims at demonstrating the CCS technology in China to enable deployment from 2020. The first phase of NZEC was completed between 2006 and 2009. Four research and development projects financed by the European Commission and UK involving Chinese and European academic organizations, companies and government bodies made significant progress in identifying options and constraints for CCS in China. At the 2009 Summit, China and EU jointly agreed to finalise the feasibility (phase II) of a demonstration plant, and a Memorandum of Understanding was signed between the European Commission and the Ministry of Science and Technology (MOST). Implementation is on- going. In 2010 Norway joined the initiative. A call for proposals has been launched in 2013 to select the project and conduct pre-feasibility studies to be finalised in 2014.

<sup>*a*</sup> To be reported to the extent possible.

<sup>b</sup> The tables should include measures and activities since the last national communication or biennial

<sup>c</sup> Parties may report sectoral disaggregation, as appropriate.

<sup>d</sup> 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** 

This table is purely illustrative and is not a comprehensive list of technology transfer activities;

## Table 9**Provision of capacity-building support**<sup>a</sup>

Recipient country/region	Targeted area	Programme or project title	Description of programme or project b,c
Cambodia	Multiple Areas	Cambodia Climate Change Alliance	The EU is, together with Sweden, Danida and UNDP, supporting national capacity development and institutional strengthening in Cambodia through the Cambodia Climate Change Alliance (CCCA). The CCCA's overall objective is to strengthen the capacity of the National Climate Change Committee (NCCC) to fulfil its mandate to address climate change. The support is strategically important to build climate change adaptation capacity and in order to make the government better prepared to receive and manage climate change funds. The capacity building and institutional strengthening activities include, inter alia: i) the establishment of a climate fund and a fund secretariat which are integrated in the Climate Change Department within the Ministry of Environment; ii) establishment of an inter-ministerial technical team specialised on climate issues has been established to provide support to the National Committee on Climate Change; iii) the establishment of a knowledge and information platform; and iv) strengthening capacity of government officials to actively manage climate change issues and participate in national and international climate change dialogue. The total budget is 10 million USD.
Nepal	Adaptation	Nepal Climate Change Support Programme- Building Climate Resilience in Nepal: Integrating climate change into poverty reduction and other development strategies	The European Union (Global Climate Change Alliance), in partnership with the UK and Cyprus, is supporting the Nepal Climate Change Support Programme (NCCSP), which focuses on building community resilience to climate change. Local communities will use a simple national adaptation framework to plan and prioritize adaptation activities. The UK support will help fund these activities to ensure the needs of the poorest and most climate vulnerable people in Nepal are addressed first. The project also aims to enable the Government of Nepal (GoN) to adopt climate change policies and implement actions that increase benefits and sustainability of public as well as public private development efforts in a longer term. It does so by building capacity of GoN to develop, cost, budget and implement evidence-based policy and measures aimed at mainstreaming climate change in key development sectors (agriculture, forestry, water and energy), including through public-private partnerships. An interesting feature of the program is that it also seeks to strengthen technical and institutional capacity of Village Development Committees (DDCs) in mid- and far-west regions (14 districts), to increase their capacity in integrating climate change into key local and district policies, government institutions and budget processes. The initiative will support GoN to implement NAPA prioritized activities through the national framework of Local Adaptation Plans for Action (LAPA), which provides effective delivery of adaptation services to the most climate vulnerable communities. The programme will also establish and/or strengthen mechanisms of sharing in adaptation interventions among different stakeholders at the district and national levels. The project is expected to have important cross-cutting impacts and aspects, such as

## Table 9**Provision of capacity-building support**<sup>a</sup>

Recipient country/region	Targeted area	Programme or project title	Description of programme or project b,c
Bolivia	Adaptation	Peri-urban water and sanitation programme (PASAP)	Together with Sweden, the EU supports strengthened institutional capacity building for climate change adaptation in Bolivia through support to the Bolivian government, Ministry of Water and Environment, to implement the sector programme PASAP which is based on the national plan for basic sanitation. The overall objective of PASAP is to improve the livelihoods of people living in poverty in peri-urban areas focusing on sustainable management of water resources and promoting water and sanitation systems that are resilient to climate change. Indicators for climate change adaptation have been developed in order to ensure that climate-resilient water and sanitation systems are implemented, e.g. in terms of more efficient water use, installing low-consumption appliances, and treating waste water. The support from EU and Sweden for the overall intervention is 28 million Euro, of which the capacity building component amounts to 2 million Euro.
Uganda	Adaptation	Improving livelihoods and food security in rural Uganda	Climate change poses a significant threat to Uganda because of its predicted effect on agriculture, food security and soil and water resources. The project is tackling this threat by focusing on the sustainable improvement of livelihoods and food security for the rural population. The aim is to strengthen the resilience of the rural population and the agricultural production systems in the central part of the cattle corridor, and to build the capacities of communities, commercial farmers and the Government of Uganda to cope with climate change. Ireland has provided € 11 million for the project through the EU's Global Climate Change Alliance. The project has three key components: strengthening knowledge and capacities for climate change adaptation; creating better access for livestock to water; and improving the resilience of agricultural production systems in the cattle corridor. The project will run from 2012 to 2016. Good progress has been made in consultation and engagement with partners including local governments, ministries and other development partners. This has provided the opportunity to assess the potential for using existing structures and implementation modalities for the project, as well as assessing complementarities and alignment with existing projects and programmes. Following the conclusion of the Memorandum of Understanding between the FAO and the Government of Uganda in August 2012, the project has moved from inception to launch. The definition of all the key actions has been established and major procurement of technical assistance and other core services has been undertaken. Experience shows the need to work closely with farmer groups and the private sector, which are the key drivers of agriculture and forestry in Uganda. In the water sector,

## Table 9Provision of capacity-building support<sup>a</sup>

Recipient country/region	Targeted area	Programme or project title	Description of programme or project b,c
Peru	Adaptation	QESPIKUNA: Capacity building of local authorities and civil society actors for the integration of DRM in the sustainable development planning	Peru is one of the most bio-diverse countries, with the most productive sea, one of the largest portions of the Amazon forest, and the Andean glaciers representing 70 % of the ice surface in the tropics. Many rural communities live in difficult conditions in sometimes harsh environmental conditions: they are highly vulnerable to and badly affected by the effects of climate change. In order to reduce this vulnerability, "QESPIKUNA", an action supported by the NGO Practical Action together with local communities, has prioritized work in three regions of the Peruvian Andes to strengthen the capacities of local authorities and civil society for the integration of the Disaster Risk Management (DRM) in local sustainable development planning. The project seeks to disseminate and apply political and economic tools to allow appropriate social development planning and greater coordination and transparency among the institutions involved, prioritizing the use of Information and Communication Technologies (ICT).
Mozambique	Adaptation	Mainstreaming of climate change into national systems and policies	Aiming at supporting the government of Mozambique's efforts in tackling the adverse effects of climate change, with a special focus on the most vulnerable communities in the rural areas of the country, this program seeks to increase the capacity of the Government to adequately mainstream climate change and climate-proofing initiatives into its poverty alleviation and development strategies. It benefits from support of the Global Climate Change Alliance (GCCA), Ireland and Denmark. The main expected results and activities are structured around 3 pillars, two of which have a strong capacity- building component. The first pillar aims at strengthening institutional capacity and technical expertise of key government institutions. It does so by supporting local staff to review relevant sector development strategies to integrate environmental and climate change themes. These reviews are set against the most recent legal and policy frameworks. Other courses of action include strengthening the environmental monitoring system to adequately measure sector performance; promoting good governance practices; improving compliance with relevant legal and regulatory framework; and providing a clear reference for enhanced coordination and linkages between all government and non-state actors, at central, provincial and district level. Information sharing and awareness campaigns form the backbone of the second pillar. Specific tailor-made capacity- building actions take the form of on-the-job training courses aimed at improving responsiveness to climate change amongst key development agents at all levels from central to local level. Finally, the third pillar focuses on implementation of the national response to climate change (Environment Strategy for Sustainable Development, National Adaptation

## Table 9Provision of capacity-building support

Recipient country/region	Targeted area	Programme or project title	Description of programme or project <sup>b,c</sup>
Argentina, Bhutan, Chile, China, Colombia,	Mitigation	Low Emission Capacity-	This global initiative aims at supporting developing and
Costa Rica, Democratic Republic of the		Building Programme: A	emerging countries in their national climate change
Congo, Ecuador, Egypt, Ghana, Indonesia,		global initiative to support	mitigation efforts, low emission development strategies and
Kenya, Lebanon, Malaysia, Mexico, Morocco,		NAMA, LEDS and MRV	enhanced measuring, reporting and verification systems.
Peru, Philippines, Tanzania, Republic of Moldova, Theiland, Trinidad and Tohago			The methodology follows a country-driven and multi-
Uganda Viet Nam Zambia			both the public and the private sectors. It is based on
Chanda, viet Itali, Zamola			focused capacity-building activities addressing collection of
			relevant data, identification of key actions in selected
			sectors, design of measuring, reporting and verification
			(MRV) systems, linkages with outcomes and processes of
			National Communications.
			Building Programme (LECB) programme works is
			Argentina. In this country, the LECB efforts are
			contributing to strengthen the capacity of the Secretariat of
			the Environment and Sustainable Development to lead the
			process of policy dialogue and formulation to support
			mitigation strategies in the petrochemical and fertiliser
			industry. Such a process is indeed a complex task requiring
			participation of a wide spectrum of stakeholders.
			The following three specific objectives were agreed upon:
			•support knowledge generation and transfer allowing a
			positioning of Climate Change in the design of
			development policies and strategies;
			•develop capacities by promoting sector-based dialogue and
			•design and implement an advocacy and communications
			plan on Climate Change to better position the subject into
			the political agenda.
			The project thus supports the public and private sector to
			formalize a joint strategy towards the reduction of
Tengenia	Adaptation	Chalala Ess villager en	greenhouse gases. This joint work conducted with all
Tanzania	Adaptation	integrated approach to	of Tanzania is made up of vulnerable and deprived farming
		adaptation and resilience	families, using rain fed agriculture, subsistence farming,
			communal grazing, and thus dependent on natural resources
			for livelihood.
			Seeking to strengthen capacity of vulnerable rural
			communities to adapt to climate change, the pilot project
			a model of good practice in climate change adaptation and
			mitigation. It worked closely with all villagers to identify,
			test, evaluate and share innovative adaptation technologies
			and approaches; to support the village community to adopt
			and implement land use plans and natural resource
			management practices; to empower women to act at the
			and reduced workload and to increase household food
			security and income, and improve livelihoods.
			What has been achieved so far? 400 farmers and their
			families now have improved food security thanks to the
			introduction of drought resistant, high-yielding, early-
			maturing seeds and supply of improved cattle and cocks.
			The village water supply system was restored, roor catchment for rainwater installed at the village school and a
			sub-surface dam and a sand dam, to capture water in the
			nearby river, were constructed. In addition, 133 villagers
			were trained on afforestation and nursery management, and
			planted 14 500 tree seedlings and 3 000 trees. As regards
			energy efficiency, 10 domestic biogas plants were
			constructed and are now functioning, 60 energy saving
			Several high-ranking officials from the Government. as
			well as the media, visited the village which raised the
			awareness of many communities in the country, leading to
			wide-ranging efforts to scale-up and replicate the initiative.

<sup>*a*</sup> To be reported to the extent possible.

#### Table 9

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

<sup>b</sup> 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.

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

#### **Custom Footnotes**

This table is purely illustrative and is not a comprehensive list of capacity building activities.