#### **BR CTF submission workbook**

Submission Year 2014	Party CROATIA
Submission Version v2.0	Submission Level Submitted
Submission Key HRV_2014_V2.0	Submission Status Closed
Submitted By Jasenka Nećak	Workbook Created 26.05.2014 07:28:16
Submitted Date 26.05.2014 07:27:24	

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

	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS EMISSIONS	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	16,907.29	9,248.03	8,125.62	8,570.35	7,977.96	8,116.78	8,997.28	10,579.83	11,427.31
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	23,338.72	17,352.45	16,708.08	17,165.18	16,490.29	17,201.66	17,834.25	18,861.38	19,623.64
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	3,478.98	3,227.33	2,911.46	3,055.34	2,838.18	2,794.63	2,787.83	2,869.44	2,721.95
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	3,466.48	3,214.84	2,908.61	3,031.14	2,827.19	2,792.76	2,780.30	2,857.55	2,699.66
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	3,948.46	3,764.28	3,660.05	3,135.72	3,197.10	3,058.51	3,058.53	3,351.45	2,891.51
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	3,940.75	3,756.74	3,654.89	3,125.84	3,190.41	3,054.07	3,052.97	3,345.06	2,882.91
HFCs	NO	NO	NO	NO	NO	49.37	68.32	90.87	118.19
PFCs	936.56	642.44	NO	NO	NO	NO	NO	NO	NC
SF <sub>6</sub>	10.95	10.83	10.92	11.04	11.16	11.66	12.13	11.98	12.57
Total (including LULUCF)	25,282.26	16,892.92	14,708.06	14,772.45	14,024.40	14,030.94	14,924.08	16,903.57	17,171.53
Total (excluding LULUCF)	31,693.47	24,977.30	23,282.50	23,333.20	22,519.04	23,109.52	23,747.97	25,166.85	25,336.97

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year <sup>a</sup>	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SHAR CATEGORIES	kt CO 2 eq	kt CO 2 eq	kt CO <sub>2</sub> eq						
1. Energy	22,796.49	17,102.52	16,385.56	17,291.17	16,311.69	17,263.04	17,823.34	18,754.80	19,407.22
2. Industrial Processes	3,788.53	2,913.62	2,544.99	2,001.25	2,228.29	2,015.86	2,089.36	2,325.44	2,104.88
3. Solvent and Other Product Use	116.98	120.40	101.58	108.74	110.52	108.34	122.22	113.24	111.59
4. Agriculture	4,380.72	4,225.93	3,626.30	3,298.47	3,219.12	3,054.84	3,038.12	3,278.66	3,005.73
5. Land Use, Land-Use Change and Forestry <sup>b</sup>	-6,411.22	-8,084.38	-8,574.44	-8,560.75	-8,494.64	-9,078.57	-8,823.88	-8,263.27	-8,165.44
6. Waste	610.76	614.83	624.07	633.58	649.43	667.44	674.92	694.71	707.55
7. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total (including LULUCF)	25,282.26	16,892.92	14,708.06	14,772.45	14,024.40	14,030.94	14,924.08	16,903.57	17,171.53

<sup>&</sup>lt;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 (1)
(Sheet 2 of 3)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS EMISSIONS	kt CO 2 eq	kt CO 2 eq	kt CO <sub>2</sub> eq							
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	11,978.86	12,308.54	12,845.52	13,729.35	15,559.48	15,138.48	15,326.56	15,633.76	17,261.78	15,920.15
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	20,535.28	20,093.24	21,033.98	22,108.03	23,528.66	23,152.39	23,485.16	23,716.52	24,999.12	23,755.72
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	2,714.26	2,833.20	2,932.58	3,000.02	3,120.72	3,197.44	3,182.71	3,472.53	3,632.10	3,614.82
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	2,712.86	2,782.50	2,922.21	2,994.80	3,096.30	3,196.39	3,181.58	3,471.04	3,627.09	3,610.99
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	3,221.04	3,299.73	3,343.97	3,268.45	3,117.84	3,482.87	3,495.63	3,545.90	3,610.67	3,578.14
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	3,217.39	3,284.97	3,337.92	3,263.04	3,107.52	3,477.37	3,489.59	3,539.26	3,602.70	3,569.91
HFCs	142.62	170.68	193.42	225.11	263.03	300.11	333.47	365.45	405.94	424.16
PFCs	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO	NA, NO	NA, NO
SF <sub>6</sub>	12.57	12.18	12.26	12.59	12.87	13.17	13.66	13.64	13.68	12.55
Total (including LULUCF)	18,069.35	18,624.33	19,327.75	20,235.52	22,073.93	22,132.08	22,352.02	23,031.29	24,924.18	23,549.83
Total (excluding LULUCF)	26,620.72	26,343.57	27,499.78	28,603.57	30,008.37	30,139.44	30,503.46	31,105.91	32,648.53	31,373.34

CREENHAUGE CAS SAURGE AND SHIP CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt CO 2 eq	kt CO 2 eq	kt CO <sub>2</sub> eq							
1. Energy	19,984.74	19,482.32	20,399.39	21,507.59	22,932.30	22,400.19	22,672.38	22,845.40	24,167.57	22,902.63
2. Industrial Processes	2,585.32	2,861.20	2,882.87	2,849.94	2,882.06	3,247.00	3,294.53	3,446.11	3,629.32	3,592.44
3. Solvent and Other Product Use	106.21	109.22	113.76	138.63	146.85	175.52	194.79	224.23	246.82	239.31
4. Agriculture	3,206.66	3,130.16	3,321.87	3,292.23	3,201.72	3,438.24	3,477.70	3,654.61	3,607.85	3,581.49
5. Land Use, Land-Use Change and Forestry <sup>b</sup>	-8,551.37	-7,719.24	-8,172.03	-8,368.05	-7,934.44	-8,007.36	-8,151.44	-8,074.62	-7,724.35	-7,823.51
6. Waste	737.79	760.67	781.89	815.18	845.44	878.50	864.06	935.56	996.98	1,057.48
7. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total (including LULUCF)	18,069.35	18,624.33	19,327.75	20,235.52	22,073.93	22,132.08	22,352.02	23,031.29	24,924.18	23,549.83

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

CRF: HRV\_CRF\_\_ v2.3

GREENHOUSE GAS EMISSIONS	2009	2010	2011	Change from base to latest reported year
	kt CO <sub>2</sub> eq	kt CO 2 eq	kt CO <sub>2</sub> eq	(%)
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	13,906.62	13,407.12	13,820.03	-18.26
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	21,982.48	21,288.79	20,869.29	-10.58
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	3,600.75	3,640.28	3,588.11	3.14
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	3,598.84	3,638.97	3,581.30	3.31
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	3,325.78	3,379.99	3,495.76	-11.47
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	3,317.47	3,371.29	3,485.11	-11.56
HFCs	435.68	472.25	475.94	100.00
PFCs	0.20	0.03	0.01	-100.00
$SF_6$	8.39	9.32	9.82	-10.38
Total (including LULUCF)	21,277.43	20,908.99	21,389.67	-15.40
Total (excluding LULUCF)	29,343.07	28,780.65	28,421.47	-10.32
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt CO 2 eq	kt CO 2 eq	kt CO <sub>2</sub> eq	(%)
1. Energy	21,650.68	21,009.15	20,715.35	-9.13
2. Industrial Processes	2,983.54	3,211.22	3,000.13	-20.81
3. Solvent and Other Product Use	152.91	152.48	144.16	23.24
4. Agriculture	3,457.15	3,315.98	3,442.21	-21.42
5. Land Use, Land-Use Change and Forestry <sup>b</sup>	-8,065.64	-7,871.65	-7,031.80	9.68
6. Waste	1,098.78	1,091.82	1,119.62	83.32
7. Other	NO	NO	NO	0.00
Total (including LULUCF)	21,277.43	20,908.99	21,389.67	-15.40

#### Notes:

- (1) Further detailed information could be found in the common reporting format tables of the Party's greenhouse gas inventory, namely "Emission trends ( $CO_2$ )", "Emission trends ( $CO_4$ )", "Emission trends ( $CO_4$ )" and "Emission trends ( $CO_4$ )", which is included in an annex to this biennial report.
- (2) 2011 is the latest reported inventory year.
- (3) 1 kt  $CO_2$  eq equals 1 Gg  $CO_2$  eq.

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

<sup>&</sup>lt;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.

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

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

CRF: HRV\_CRF\_\_ v2.3

HRV\_BR1\_v2.0

CDEDWAY OF GUID COURSE THE COURSE	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	21,233.57	15,721.99	15,038.48	15,805.86	14,958.57	15,903.85	16,418.24	17,274.25	18,111.63
A. Fuel Combustion (Sectoral Approach)	20,593.76	15,103.18	14,413.03	14,981.26	14,218.65	15,034.38	15,574.95	16,478.78	17,403.51
1. Energy Industries	7,126.54	4,768.18	5,338.81	5,918.93	4,671.23	5,262.45	5,110.49	5,593.57	6,272.23
2. Manufacturing Industries and Construction	5,842.92	4,344.22	3,680.56	3,515.57	3,700.16	3,540.91	3,507.98	3,594.79	3,770.72
3. Transport	4,018.54	2,954.92	2,844.51	3,015.56	3,231.46	3,405.46	3,727.43	4,010.17	4,219.35
4. Other Sectors	3,605.76	3,035.86	2,549.15	2,531.21	2,615.80	2,825.55	3,229.05	3,280.24	3,141.20
5. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Fugitive Emissions from Fuels	639.82	618.81	625.45	824.60	739.92	869.47	843.29	795.48	708.12
1. Solid Fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and Natural Gas	639.82	618.81	625.45	824.60	739.92	869.47	843.29	795.48	708.12
2. Industrial Processes	2,022.85	1,544.74	1,602.70	1,285.25	1,455.87	1,224.15	1,328.47	1,508.56	1,435.11
A. Mineral Products	1,305.19	864.23	932.50	799.69	968.67	749.26	833.60	943.13	1,017.32
B. Chemical Industry	466.01	447.00	575.22	446.83	450.03	438.77	476.59	517.83	388.43
C. Metal Production	251.65	233.51	94.99	38.74	37.17	36.12	18.28	47.61	29.36
D. Other Production	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Production of Halocarbons and SF6									
F. Consumption of Halocarbons and SF6									
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
3. Solvent and Other Product Use	82.26	85.68	66.86	74.02	75.80	73.62	87.50	78.52	76.87
4. Agriculture	02.20	05.00	00.00	74.02	75.00	73.02	07.50	70.32	70.07
A. Enteric Fermentation									
B. Manure Management									
C. Rice Cultivation									
D. Agricultural Soils									
E. Prescribed Burning of Savannas									
F. Field Burning of Agricultural Residues									
G. Other	6 421 42	9 104 42	0.502.46	9 504 92	0.510.22	0.004.00	0 026 07	0 201 55	9 106 22
5. Land Use, Land-Use Change and Forestry	-6,431.43	-8,104.42	-8,582.46	-8,594.82	-8,512.33	-9,084.88	-8,836.97	-8,281.55	-8,196.33
A. Forest Land	-6,984.34	-8,650.93	-9,067.56	-9,109.25	-9,047.00	-9,551.57	-9,303.55	-8,756.02	-8,680.36
B. Cropland	159.96	146.68	137.49	140.48	143.34	162.63	157.28	160.35	178.77
C. Grassland	-85.19	-56.59	-47.84	-60.10	-57.91	-80.97	-94.19	-89.27	-103.01
D. Wetlands	30.00	30.17	31.89	33.60	35.32	37.04	38.76	40.47	42.19
E. Settlements	448.15	426.24	363.57	400.45	413.93	348.00	364.73	362.92	366.07
F. Other Land	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
A. Solid Waste Disposal on Land	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
B. Waste-water Handling									
C. Waste Incineration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total CO2 emissions including net CO2 from LULUCF	16,907.29	9,248.03	8,125.62	8,570.35	7,977.96	8,116.78	8,997.28	10,579.83	11,427.31
Total CO2 emissions excluding net CO2 from LULUCF	23,338.72	17,352.45	16,708.08	17,165.18	16,490.29	17,201.66	17,834.25	18,861.38	19,623.64
Memo Items:									
International Bunkers	451.83	139.53	137.25	253.72	326.50	288.76	290.93	263.80	287.83
Aviation	343.29	68.19	56.62	139.18	188.18	186.75	176.02	190.17	206.83
Marine	108.54	71.34	80.62	114.54	138.33	102.01	114.91	73.63	81.00
Multilateral Operations	С	С	C	С	С	С	С	C	C
CO2 Emissions from Biomass	2,436.76	1,680.37	1,459.04	1,388.13	1,403.18	1,452.60	1,734.09	1,793.72	1,678.97

Emission trends (CO<sub>2</sub>) (Sheet 2 of 3)

CRF: HRV\_CRF\_\_ v2.3

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	18,667.94	18,085.98	18,905.85	20,000.80	21,385.03	20,777.85	21,060.77	21,137.23	22,324.12	21,154.97
A. Fuel Combustion (Sectoral Approach)	17,976.50	17,347.11	18,117.29	19,198.13	20,630.90	19,975.60	20,280.60	20,347.42	21,573.18	20,496.00
1. Energy Industries	6,467.65	5,877.45	6,376.36	7,247.35	7,924.83	6,821.48	6,779.24	6,628.38	7,737.05	6,705.03
2. Manufacturing Industries and Construction	3,506.30	3,616.74	3,613.71	3,436.58	3,575.58	3,976.89	4,081.03	4,181.48	4,204.52	4,197.67
3. Transport	4,453.38	4,463.76	4,521.54	4,822.39	5,210.40	5,343.72	5,553.38	5,907.68	6,330.19	6,178.13
4. Other Sectors	3,549.17	3,389.15	3,605.68	3,691.81	3,920.10	3,833.52	3,866.95	3,629.88	3,301.42	3,415.17
5. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Fugitive Emissions from Fuels	691.44	738.88	788.56	802.67	754.13	802.25	780.17	789.81	750.94	658.97
1. Solid Fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and Natural Gas	691.44	738.88	788.56	802.67	754.13	802.25	780.17	789.81	750.94	658.97
2. Industrial Processes	1,795.81	1,932.72	2,049.05	2,003.28	2,031.46	2,233.70	2,264.29	2,389.75	2,462.81	2,395.16
A. Mineral Products	1,275.21	1,417.12	1,636.05	1,634.34	1,613.56	1,723.39	1,768.40	1,899.15	1,928.88	1,841.26
B. Chemical Industry	492.14	497.96	403.70	363.78	409.38	495.43	484.65	477.34	521.51	530.39
C. Metal Production	28.45	17.64	9.29	5.16	8.51	14.89	11.24	13.25	12.42	23.51
D. Other Production	NE NE	NE	NE	NE	NE	NE	NE	NE	NE	NE NE
E. Production of Halocarbons and SF6	1,12	2,2	1,2	2,2	1,2		1,2	- 1,2	- 1,2	2,1
F. Consumption of Halocarbons and SF6										
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
3. Solvent and Other Product Use	71.49	74.50	79.04	103.91	112.13	140.80	160.07	189.51	212.10	204.59
4. Agriculture	71.12	7 1.50	77.01	103.71	112.13	110.00	100.07	107.51	212.10	201.37
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land Use, Land-Use Change and Forestry	-8,556.41	-7,784.70	-8,188.47	-8,378.67	-7,969.18	-8,013.91	-8,158.60	-8,082.76	-7,737.34	-7,835.58
A. Forest Land	-9,032.40	-8,334.12	-8,783.26	-8,968.17	-8,557.00	-8,654.74	-8,783.84	-8,681.14	-8,269.28	-8,371.98
B. Cropland	168.37	245.45	278.07	254.40	239.61	249.08	230.06	208.00	132.82	98.94
C. Grassland	-108.60	-125.55	-171.74	-158.65	-155.77	-173.86	-162.37	-166.34	-162.02	-164.52
D. Wetlands	43.91	45.63	36.33	34.40	32.46	30.53	28.59	26.66	24.72	22.79
E. Settlements	372.30	383.89	452.14	459.36	471.53	535.08	528.96	530.06	536.42	579.19
F. Other Land	NO	NO	NO	439.30 NO	NO	NO	NO	NO	NO	NO
G. Other	NO NE	NE NE	NE NE	NE NE	NE NE	NE NE	NE NE	NE NE	NE NE	NE NE
6. Waste	0.04	0.04	0.04	0.04			0.03	0.04	0.08	
A. Solid Waste Disposal on Land		NA, NO		NA, NO	0.04 NA, NO	0.04				1.01 NA, NO
	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
B. Waste-water Handling	0.04	0.04	0.04	0.04	0.04	0.04	0.02	0.04	0.00	1.01
C. Waste Incineration	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.08	1.01
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total CO2 emissions including net CO2 from LULUCF	11,978.86	12,308.54	12,845.52	13,729.35	15,559.48	15,138.48	15,326.56	15,633.76	17,261.78	15,920.15
Total CO2 emissions excluding net CO2 from LULUCF	20,535.28	20,093.24	21,033.98	22,108.03	23,528.66	23,152.39	23,485.16	23,716.52	24,999.12	23,755.72
Memo Items:					225 13		205 15	***	245	
International Bunkers	263.26	226.42	258.85	236.22	230.13	260.46	305.13	290.81	312.94	332.32
Aviation	197.59	169.40	169.48	162.99	161.46	187.39	226.15	229.82	237.29	265.52
Marine	65.68	57.02	89.37	73.24	68.67	73.06	78.98	60.98	75.65	66.80
Multilateral Operations	С	С	С	С	С	С	С	С	С	C
CO2 Emissions from Biomass	1,495.79	1,680.11	1,315.01	1,331.36	1,714.51	1,704.33	1,586.57	1,641.97	1,442.73	1,412.76

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
4.72	kt	kt	kt	%
1. Energy	19,956.68	19,251.98	19,051.98	
A. Fuel Combustion (Sectoral Approach)	19,361.89	18,690.42	18,474.82	
1. Energy Industries	6,373.34	5,883.79	6,252.91	-12.26
2. Manufacturing Industries and Construction	3,378.56	3,363.53	3,139.07	-46.28
3. Transport	6,182.15	5,963.40	5,826.11	44.98
4. Other Sectors	3,427.84	3,479.71	3,256.73	
5. Other	NO	NO	NO	
B. Fugitive Emissions from Fuels	594.79	561.56	577.16	
1. Solid Fuels	NO	NO	NO	
2. Oil and Natural Gas	594.79	561.56	577.16	
2. Industrial Processes	1,906.09	1,915.25	1,709.86	
A. Mineral Products	1,449.16	1,419.76	1,204.74	
B. Chemical Industry	445.63	468.22	475.94	
C. Metal Production	11.30	27.27	29.18	
D. Other Production	NE	NE	NE	0.00
E. Production of Halocarbons and SF6				
F. Consumption of Halocarbons and SF6				
G. Other	NO	NO	NO	0.00
3. Solvent and Other Product Use	119.32	121.42	107.41	30.58
4. Agriculture				
A. Enteric Fermentation				
B. Manure Management				
C. Rice Cultivation				
D. Agricultural Soils				
E. Prescribed Burning of Savannas				
F. Field Burning of Agricultural Residues				
G. Other				
5. Land Use, Land-Use Change and Forestry	-8,075.86	-7,881.67	-7,049.26	9.61
A. Forest Land	-8,602.65	-8,467.79	-7,637.48	9.35
B. Cropland	85.30	118.71	93.99	-41.24
C. Grassland	-160.58	-139.91	-125.67	47.53
D. Wetlands	20.86	18.92	17.32	-42.24
E. Settlements	581.22	588.40	602.58	34.46
F. Other Land	NO	NO	NO	0.00
G. Other	NE	NE	NE	0.00
6. Waste	0.38	0.13	0.05	11.12
A. Solid Waste Disposal on Land	NA, NO	NA, NO	NA, NO	0.00
B. Waste-water Handling				
C. Waste Incineration	0.38	0.13	0.05	11.12
D. Other	NO	NO	NO	0.00
7. Other (as specified in the summary table in CRF)	NO	NO	NO	
Total CO2 emissions including net CO2 from LULUCF	13,906.62	13,407.12	13,820.03	-18.26
Total CO2 emissions excluding net CO2 from LULUCF	21,982.48	21,288.79	20,869.29	
Memo Items:				
International Bunkers	248.79	261.64	327.56	-27.51
Aviation	227.17	242.21	252.38	
Marine	21.62	19.43	75.18	
Multilateral Operations	C	C	, , , , , , , , , , , , , , , , , , ,	
CO2 Emissions from Biomass	1,541.07	1,746.18	2,004.31	-17.75

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

<sup>&</sup>lt;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.

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

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

eet 1 of 3) CRF: HRV\_CRF\_\_ v2.3

CDEENHOUSE CAS SOURCE AND SINU 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	69.31	62.20	60.97	67.16	60.80	61.26	61.92	64.99	57.29
A. Fuel Combustion (Sectoral Approach)	9.74	6.42	5.26	4.99	5.25	5.41	6.32	6.38	6.16
1. Energy Industries	0.17	0.11	0.11	0.14	0.12	0.14	0.13	0.12	0.14
2. Manufacturing Industries and Construction	0.52	0.41	0.35	0.34	0.33	0.32	0.31	0.34	0.34
3. Transport	1.64	1.24	1.10	1.09	1.18	1.23	1.33	1.41	1.45
4. Other Sectors	7.40	4.66	3.69	3.43	3.62	3.71	4.54	4.51	4.24
5. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Fugitive Emissions from Fuels	59.57	55.78	55.71	62.17	55.55	55.85	55.60	58.61	51.13
1. Solid Fuels	2.32	2.07	1.61	1.54	1.38	1.10	0.89	0.65	0.68
2. Oil and Natural Gas	57.25	53.71	54.10	60.63	54.17	54.75	54.71	57.96	50.45
2. Industrial Processes	0.68	0.45	0.39	0.43	0.41	0.33	0.31	0.28	0.28
A. Mineral Products	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
B. Chemical Industry	0.68	0.45	0.39	0.43	0.41	0.33	0.31	0.28	0.28
C. Metal Production	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Other Production									
E. Production of Halocarbons and SF6									
F. Consumption of Halocarbons and SF6									
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
3. Solvent and Other Product Use									
4. Agriculture	70.03	64.92	51.17	50.27	46.29	43.70	41.89	41.61	41.08
A. Enteric Fermentation	59.14	54.23	43.08	41.96	37.94	36.20	34.50	34.35	33.93
B. Manure Management	10.89	10.69	8.09	8.32	8.35	7.50	7.39	7.26	7.15
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural Soils	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	NE, NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	0.60	0.60	0.14	1.15	0.52	0.09	0.36	0.57	1.06
A. Forest Land	0.60	0.60	0.14	1.15	0.52	0.09	0.36	0.57	1.06
B. Cropland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
C. Grassland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Wetlands	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
E. Settlements	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
F. Other Land	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
G. Other	NE	NE NE	NE NE	NE NE	NE	NE NE	NE NE	NE NE	NE NE
6. Waste	25.05	25.52	25.98	26.47	27.13	27.70	28.27	29.20	29.90
A. Solid Waste Disposal on Land	11.55	12.09	12.63	13.20	13.82	14.54	15.32	16.20	17.13
B. Waste-water Handling	13.50	13.43	13.35	13.27	13.32	13.17	12.95	12.99	12.77
C. Waste Incineration	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Other	NO NO	NO NO	NO NO	NO NO	NO NO	NO NO	NO NO	NO NO	NO NO
7. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total CH4 emissions including CH4 from LULUCF	165.67	153.68	138.64	145.49	135.15	133.08	132.75	136.64	129.62
Total CH4 emissions excluding CH4 from LULUCF	165.07	153.08	138.51	144.34	133.13	132.99	132.73	136.07	129.02
Memo Items:	103.07	155.07	130.31	177.54	154.05	132.77	152.40	150.07	120.50
International Bunkers	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Aviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marine	0.00	0.00	0.00		0.00		0.00	0.00	0.00
	0.01 C			0.01		0.01			
Multilateral Operations CO2 Emissions from Biomass	C	С	С	С	С	С	С	С	C

Emission trends (CH<sub>4</sub>)

(Sheet 2 of 3) CRF: HRV\_CRF\_\_ v2.3

CDEENHOUGE CAS SOUDCE AND SINV CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt									
1. Energy	56.12	59.33	64.37	66.85	68.34	69.50	69.14	75.86	82.17	77.84
A. Fuel Combustion (Sectoral Approach)	5.92	6.37	5.19	5.24	6.23	6.06	5.72	5.71	5.08	5.09
1. Energy Industries	0.14	0.14	0.16	0.19	0.22	0.21	0.20	0.19	0.22	0.19
2. Manufacturing Industries and Construction	0.30	0.30	0.29	0.28	0.31	0.36	0.33	0.34	0.35	0.33
3. Transport	1.48	1.43	1.22	1.19	1.14	1.07	0.91	0.95	0.91	0.84
4. Other Sectors	4.01	4.49	3.51	3.59	4.56	4.42	4.28	4.24	3.59	3.73
5. Other	NO									
B. Fugitive Emissions from Fuels	50.20	52.97	59.18	61.61	62.11	63.44	63.42	70.14	77.09	72.75
1. Solid Fuels	0.20	NO	NC							
2. Oil and Natural Gas	49.99	52.97	59.18	61.61	62.11	63.44	63.42	70.14	77.09	72.75
2. Industrial Processes	0.25	0.25	0.26	0.21	0.23	0.22	0.20	0.29	0.26	0.19
A. Mineral Products	NE, NO	NE, NC								
B. Chemical Industry	0.25	0.25	0.26	0.21	0.23	0.22	0.20	0.29	0.26	0.19
C. Metal Production	NE, NO									
D. Other Production										
E. Production of Halocarbons and SF6										
F. Consumption of Halocarbons and SF6										
G. Other	NO									
3. Solvent and Other Product Use										
4. Agriculture	41.75	40.65	41.54	41.25	43.16	45.20	45.77	49.52	47.83	48.62
A. Enteric Fermentation	33.82	33.28	34.13	33.72	35.28	36.70	38.36	39.10	38.00	39.26
B. Manure Management	7.93	7.37	7.41	7.52	7.89	8.50	7.41	10.43	9.83	9.37
C. Rice Cultivation	NO									
D. Agricultural Soils	NO									
E. Prescribed Burning of Savannas	NO									
F. Field Burning of Agricultural Residues	NO									
G. Other	NO									
5. Land Use, Land-Use Change and Forestry	0.07	2.41	0.49	0.25	1.16	0.05	0.05	0.07	0.24	0.18
A. Forest Land	0.07	2.41	0.49	0.25	1.16	0.05	0.05	0.07	0.24	0.18
B. Cropland	NE, NO									
C. Grassland	NE, NO									
D. Wetlands	NE, NO									
E. Settlements	NE, NO									
F. Other Land	NE, NO									
G. Other	NE, NO	NE, NO	NE, NO	NE NE	NE NE	NE, NO	NE, NO	NE, NO	NE NE	NE, NO
6. Waste	31.07	32.27	32.98	34.30	35.70	37.28	36.39	39.62	42.46	45.30
A. Solid Waste Disposal on Land	18.18	19.24	20.47	21.85	23.39	24.82	24.01	27.14	29.86	32.87
•										
B. Waste-water Handling C. Waste Incineration	12.88 NE, NO	13.03 NE, NO	12.51 NE, NO	12.45 NE, NO	12.32 NE, NO	12.45 NE, NO	12.38 NE, NO	12.48 NE, NO	12.60 NE, NO	12.44 NE, NO
D. Other  7. Other (or specified in the summers table in CPF)	NO									
7. Other (as specified in the summary table in CRF)	NO									
Total CH4 emissions including CH4 from LULUCF	129.25	134.91	139.65	142.86	148.61	152.26	151.56	165.36	172.96	172.13
Total CH4 emissions excluding CH4 from LULUCF	129.18	132.50	139.15	142.61	147.44	152.21	151.50	165.29	172.72	171.95
Memo Items:										
International Bunkers	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Aviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Marine	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Multilateral Operations	С	C	C	C	C	С	C	С	C	C
CO2 Emissions from Biomass										

HRV\_BR1\_v2.0 Table 1(b)

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

CRF: HRV_0	CRF v2.3
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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
1. Energy	75.37	78.46	74.43	7.39
A. Fuel Combustion (Sectoral Approach)	5.20	5.72	6.45	-33.71
1. Energy Industries	0.19	0.21	0.22	27.89
2. Manufacturing Industries and Construction	0.30	0.32	0.29	-43.17
3. Transport	0.78	0.70	0.66	-59.65
4. Other Sectors	3.93	4.49	5.28	-28.72
5. Other	NO	NO	NO	0.00
B. Fugitive Emissions from Fuels	70.17	72.74	67.98	14.10
1. Solid Fuels	NO	NO	NO	-100.00
2. Oil and Natural Gas	70.17	72.74	67.98	18.73
2. Industrial Processes	0.04	0.00	0.00	-100.00
A. Mineral Products	NE, NO	NE, NO	NE, NO	0.00
B. Chemical Industry	0.04	0.00	0.00	-100.00
C. Metal Production	NE, NO	NE, NO	NE, NO	0.00
D. Other Production				
E. Production of Halocarbons and SF6				
F. Consumption of Halocarbons and SF6				
G. Other	NO	NO	NO	0.00
3. Solvent and Other Product Use				
4. Agriculture	48.72	47.90	47.74	-31.83
A. Enteric Fermentation	38.81	38.48	38.28	-35.28
B. Manure Management	9.91	9.42	9.46	
C. Rice Cultivation	NO	NO	NO	0.00
D. Agricultural Soils	NO	NO	NO	
E. Prescribed Burning of Savannas	NO	NO	NO	0.00
F. Field Burning of Agricultural Residues	NO	NO	NO	
G. Other	NO	NO	NO	
5. Land Use, Land-Use Change and Forestry	0.09	0.06	0.32	
A. Forest Land	0.09	0.06	0.32	
B. Cropland	NE, NO	NE, NO	NE, NO	
C. Grassland	NE, NO	NE, NO	NE, NO	
D. Wetlands	NE, NO	NE, NO	NE, NO	
E. Settlements	NE, NO	NE, NO	NE, NO	
F. Other Land	NE, NO	NE, NO	NE, NO	
G. Other	NE NE	NE NE	NE, NO	
6. Waste	47.23	46.92	48.37	
A. Solid Waste Disposal on Land	35.57	35.21	36.71	
B. Waste-water Handling	11.66	11.71	11.66	
C. Waste Incineration	NE, NO	NE, NO	NE, NO	
D. Other	NO NO	NO NO	NE, NO	
7. Other (as specified in the summary table in CRF)	NO	NO	NO	
Total CH4 emissions including CH4 from LULUCF	171.46	173.35	170.86	
Total CH4 emissions excluding CH4 from LULUCF	171.46	173.33	170.86	
Memo Items:	171.37	173.20	170.34	5.51
International Bunkers	0.01	0.01	0.01	43.39
Aviation	0.01	0.01	0.01	
Aviation Marine	0.00	0.00	0.01	
Multilateral Operations CO2 Emissions from Biomass	С	С	C	0.00

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

<sup>&</sup>lt;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.

Table 1(c) HRV\_BR1\_v2.0

(Sheet 1 of 3) CRF: HRV\_CRF\_\_ v2.3

	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	0.35	0.24	0.22	0.24	0.25	0.23	0.34	0.37	0.30
A. Fuel Combustion (Sectoral Approach)	0.34	0.24	0.21	0.24	0.25	0.23	0.34	0.37	0.30
1. Energy Industries	0.04	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.04
2. Manufacturing Industries and Construction	0.06	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03
3. Transport	0.14	0.10	0.09	0.12	0.13	0.11	0.20	0.23	0.16
4. Other Sectors	0.11	0.07	0.06	0.06	0.06	0.06	0.07	0.07	0.07
5. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Fugitive Emissions from Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1. Solid Fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Industrial Processes	2.59	2.28	2.98	2.24	2.43	2.33	2.17	2.28	1.72
A. Mineral Products	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
B. Chemical Industry	2.59	2.28	2.98	2.24	2.43	2.33	2.17	2.28	1.72
C. Metal Production	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Other Production									
E. Production of Halocarbons and SF6									
F. Consumption of Halocarbons and SF6									
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
3. Solvent and Other Product Use	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
4. Agriculture	9.39	9.23	8.23	7.23	7.25	6.89	6.96	7.76	6.91
A. Enteric Fermentation									
B. Manure Management	1.23	1.15	0.91	0.89	0.83	0.78	0.73	0.72	0.70
C. Rice Cultivation									
D. Agricultural Soils	8.16	8.09	7.32	6.34	6.42	6.11	6.23	7.04	6.21
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	NE, NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	0.02	0.02	0.02	0.03	0.02	0.01	0.02	0.02	0.03
A. Forest Land	0.01	0.01	0.00	0.02	0.01	0.00	0.01	0.01	0.02
B. Cropland	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
C. Grassland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Wetlands	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
E. Settlements	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
F. Other Land	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	0.27	0.25	0.25	0.25	0.26	0.28	0.26	0.26	0.26
A. Solid Waste Disposal on Land									
B. Waste-water Handling	0.27	0.25	0.25	0.25	0.26	0.28	0.26	0.26	0.26
C. Waste Incineration	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total N2O emissions including N2O from LULUCF	12.74	12.14	11.81	10.12	10.31	9.87	9.87	10.81	9.33
Total N2O emissions excluding N2O from LULUCF	12.71	12.12	11.79	10.08	10.29	9.85	9.85	10.79	9.30
Memo Items:									
International Bunkers	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Aviation	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01
Marine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multilateral Operations	C	C	C	C	C	C	C	C	0.00 C
CO2 Emissions from Biomass									

HRV\_BR1\_v2.0

### Emission trends $(N_2O)$

(Sheet 2 of 3)

CDEENHOUSE CAS SOURCE AND SINU CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	0.45	0.48	0.46	0.33	0.36	0.53	0.51	0.37	0.38	0.36
A. Fuel Combustion (Sectoral Approach)	0.44	0.48	0.46	0.33	0.36	0.52	0.51	0.37	0.38	0.36
1. Energy Industries	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
2. Manufacturing Industries and Construction	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.04	0.04	0.03
3. Transport	0.31	0.33	0.32	0.18	0.19	0.36	0.35	0.21	0.22	0.21
4. Other Sectors	0.07	0.07	0.06	0.06	0.08	0.07	0.07	0.07	0.06	0.06
5. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Fugitive Emissions from Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1. Solid Fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Industrial Processes	2.03	2.39	2.01	1.95	1.84	2.24	2.19	2.17	2.39	2.44
A. Mineral Products	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
B. Chemical Industry	2.03	2.39	2.01	1.95	1.84	2.24	2.19	2.17	2.39	2.44
C. Metal Production	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Other Production										
E. Production of Halocarbons and SF6										
F. Consumption of Halocarbons and SF6										
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
3. Solvent and Other Product Use	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
4. Agriculture	7.52	7.34	7.90	7.83	7.40	8.03	8.12	8.43	8.40	8.26
A. Enteric Fermentation										
B. Manure Management	0.72	0.70	0.70	0.69	0.72	0.73	0.72	0.90	0.88	0.82
C. Rice Cultivation	· · · ·	01,0	0.7.0	0.07	31.2	0.7.5	J		0.00	0.0-
D. Agricultural Soils	6.80	6.65	7.20	7.14	6.69	7.29	7.40	7.54	7.52	7.43
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	0.01	0.05	0.02	0.02	0.03	0.02	0.02	0.02	0.03	0.03
A. Forest Land	0.00	0.03	0.02	0.00	0.03	0.00	0.00	0.00	0.00	0.00
B. Cropland	0.01	0.04	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00
C. Grassland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Wetlands	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
E. Settlements						,		,		
	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
F. Other Land G. Other	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
	NE 0.28	NE 0.27	NE 0.20	NE 0.21	NE 0.21	NE	NE 0.22	NE 0.22	NE	NE
6. Waste	0.28	0.27	0.29	0.31	0.31	0.31	0.32	0.33	0.34	0.34
A. Solid Waste Disposal on Land	0.00	0.27	0.00	0.01	0.01	0.21	0.00	0.00	0.04	0.24
B. Waste-water Handling	0.28	0.27	0.29	0.31	0.31	0.31	0.32	0.33	0.34	0.34
C. Waste Incineration	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
D. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
7. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total N2O emissions including N2O from LULUCF	10.39	10.64	10.79	10.54	10.06	11.24	11.28	11.44	11.65	11.54
Total N2O emissions excluding N2O from LULUCF	10.38	10.60	10.77	10.53	10.02	11.22	11.26	11.42	11.62	11.52
Memo Items:										
International Bunkers	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Aviation	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02
Marine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multilateral Operations	C	C	C	C	C	C	C	C	C	C
CO2 Emissions from Biomass										

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
1. Energy	0.36	0.35	0.32	-6.58
A. Fuel Combustion (Sectoral Approach)	0.36	0.35	0.32	-6.19
1. Energy Industries	0.05	0.05	0.06	31.47
2. Manufacturing Industries and Construction	0.03	0.03	0.03	-55.38
3. Transport	0.22	0.20	0.16	14.93
4. Other Sectors	0.07	0.07	0.08	-21.93
5. Other	NO	NO	NO	0.00
B. Fugitive Emissions from Fuels	0.00	0.00	0.00	-68.44
1. Solid Fuels	NO	NO	NO	0.00
2. Oil and Natural Gas	0.00	0.00	0.00	-68.44
2. Industrial Processes	2.04	2.63	2.60	0.08
A. Mineral Products	NE, NO	NE, NO	NE, NO	0.00
B. Chemical Industry	2.04	2.63	2.60	0.08
C. Metal Production	NO	NO	NO	0.00
D. Other Production				
E. Production of Halocarbons and SF6				
F. Consumption of Halocarbons and SF6				
G. Other	NO	NO	NO	0.00
3. Solvent and Other Product Use	0.11	0.10	0.12	5.86
4. Agriculture	7.85	7.45	7.87	-16.16
A. Enteric Fermentation				
B. Manure Management	0.82	0.78	0.78	-36.73
C. Rice Cultivation				
D. Agricultural Soils	7.03	6.68	7.09	-13.06
E. Prescribed Burning of Savannas	NO	NO	NO	0.00
F. Field Burning of Agricultural Residues	NO	NO	NO	0.00
G. Other	NO	NO	NO	0.00
5. Land Use, Land-Use Change and Forestry	0.03	0.03	0.03	38.06
A. Forest Land	0.00	0.00	0.01	-45.46
B. Cropland	0.03	0.03	0.03	87.24
C. Grassland	NE, NO	NE, NO	NE, NO	0.00
D. Wetlands	NE, NO	NE, NO	NE, NO	0.00
E. Settlements	NE, NO	NE, NO	NE, NO	0.00
F. Other Land	NE, NO	NE, NO	NE, NO	0.00
G. Other	NE	NE	NE	0.00
6. Waste	0.34	0.34	0.33	22.69
A. Solid Waste Disposal on Land				
B. Waste-water Handling	0.34	0.34	0.33	22.69
C. Waste Incineration	NE, NO	NE, NO	NE, NO	0.00
D. Other	NO	NO	NO	
7. Other (as specified in the summary table in CRF)	NO	NO	NO	
Total N2O emissions including N2O from LULUCF	10.73	10.90	11.28	-11.47
Total N2O emissions excluding N2O from LULUCF	10.70	10.88	11.24	
Memo Items:				
International Bunkers	0.01	0.01	0.01	40.56
Aviation	0.01	0.01	0.01	47.03
Marine	0.00	0.00	0.00	
Multilateral Operations	С	С	C	
CO2 Emissions from Biomass				

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

<sup>&</sup>lt;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.

Table 1(d)

Emission trends (HFCs, PFCs and SF<sub>6</sub>)

(Sheet 1 of 3)

CRF: HRV\_CRF\_\_ v2.3

GDEENWAYGE GAG GAVDGE AVD GUW GATEGADYEG	Base year a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
Emissions of HFCsc - (kt CO2 eq)	NO	NO	NO	NO	NO	49.37	68.32	90.87	118.19
HFC-23	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-32	NO	NO	NO	NO	NO	0.00	0.00	0.00	0.00
HFC-41	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-43-10mee	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-125	NO	NO	NO	NO	NO	0.00	0.00	0.00	0.01
HFC-134	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-134a	NO	NO	NO	NO	NO	0.03	0.04	0.05	0.06
HFC-152a	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-143	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-143a	NO	NO	NO	NO	NO	0.00	0.00	0.00	0.01
HFC-227ea	NO	NO	NO	NO	NO	0.00	0.00	0.00	0.00
HFC-236fa	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-245ca	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of listed HFCsd - (kt CO <sub>2</sub> eq)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emissions of PFCsc - (kt CO2 eq)	936.56	642.44	NO						
CF <sub>4</sub>	0.13	0.09	NO						
$C_2F_6$	0.01	0.01	NO						
C 3F8	NO	NO	NO	NO	NO	NO	NO	NO	NO
$C_4F_{10}$	NO	NO	NO	NO	NO	NO	NO	NO	NO
$c-C_4F_8$	NO	NO	NO	NO	NO	NO	NO	NO	NO
$C_5F_{12}$	NO	NO	NO	NO	NO	NO	NO	NO	NO
$C_6F_{14}$	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of listed PFCs(4) - (Gg CO <sub>2</sub> equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emissions of SF6(3) - (Gg CO2 equivalent)	10.95	10.83	10.92	11.04	11.16	11.66	12.13	11.98	12.57
$SF_6$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1(d)

Emission trends (HFCs, PFCs and SF<sub>6</sub>)

(Sheet 2 of 3)

CRF: HRV\_CRF\_\_ v2.3

GREENWAVIER GAR GOVER GRAND GRAND GRAND GARRIEG GRAND	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt									
Emissions of HFCsc - (kt CO2 eq)	142.62	170.68	193.42	225.11	263.03	300.11	333.47	365.45	405.94	424.16
HFC-23	NO									
HFC-32	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
HFC-41	NO									
HFC-43-10mee	NO									
HFC-125	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
HFC-134	NO									
HFC-134a	0.08	0.09	0.11	0.12	0.15	0.17	0.19	0.21	0.23	0.24
HFC-152a	NO	0.00	0.00	0.00						
HFC-143	NO									
HFC-143a	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HFC-227ea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-236fa	NO	0.00	0.00	0.00						
HFC-245ca	NO									
Unspecified mix of listed HFCsd - (kt CO <sub>2</sub> eq)	NO									
Emissions of PFCsc - (kt CO2 eq)	NO	NO	NO	NO	NO	NO	NA, NO	NA, NO	NA, NO	NA, NO
CF <sub>4</sub>	NO									
$C_2F_6$	NO									
C 3F8	NO									
$C_4F_{10}$	NO									
c-C <sub>4</sub> F <sub>8</sub>	NO									
$C_5F_{12}$	NO									
$C_6F_{14}$	NO									
Unspecified mix of listed PFCs(4) - (Gg CO <sub>2</sub> equivalent)	NO									
Emissions of SF6(3) - (Gg CO2 equivalent)	12.57	12.18	12.26	12.59	12.87	13.17	13.66	13.64	13.68	12.55
SF <sub>6</sub>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

CRF: HRV\_CRF\_\_ v2.3

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	kt	kt	kt	%
Emissions of HFCsc - (kt CO2 eq)	435.68	472.25	475.94	100.00
HFC-23	NO	0.00	0.00	100.00
HFC-32	0.01	0.01	0.01	100.00
HFC-41	NO	NO	NO	0.00
HFC-43-10mee	NO	NO	NO	0.00
HFC-125	0.02	0.02	0.02	100.00
HFC-134	NO	NO	NO	0.00
HFC-134a	0.25	0.27	0.26	100.00
HFC-152a	0.05	0.04	NO	0.00
HFC-143	NO	NO	NO	0.00
HFC-143a	0.01	0.01	0.02	100.00
HFC-227ea	0.00	0.00	0.00	100.00
HFC-236fa	NO	NO	0.00	100.00
HFC-245ca	NO	NO	NO	0.00
Unspecified mix of listed HFCsd - (kt CO <sub>2</sub> eq)	NO	NO	NO	0.00
Emissions of PFCsc - (kt CO2 eq)	0.20	0.03	0.01	-100.00
CF <sub>4</sub>	NO	NO	NO	-100.00
$C_2F_6$	NO	NO	NO	-100.00
C 3F8	NO	NO	NO	0.00
$C_4F_{10}$	NO	NO	NO	0.00
c-C <sub>4</sub> F <sub>8</sub>	NO	NO	NO	0.00
$C_5F_{12}$	NO	NO	NO	0.00
$C_6F_{14}$	NO	NO	NO	0.00
Unspecified mix of listed PFCs(4) - (Gg CO <sub>2</sub> equivalent)	NO	NO	NO	0.00
Emissions of SF6(3) - (Gg CO2 equivalent)	8.39	9.32	9.82	-10.38
SF <sub>6</sub>	0.00	0.00	0.00	-10.38

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

<sup>&</sup>lt;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.

<sup>&</sup>lt;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>&</sup>lt;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.)

Table 2(a) HRV\_BR1\_v2.0

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

Party	Croatia				
Base year /base period	1990				
Emission reduction target	% of base year/base period	% of 1990 <sup>b</sup>			
	20.00	20.00			
Period for reaching target	2013-2020				

<sup>&</sup>lt;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>&</sup>lt;sup>b</sup> Optional.

Table 2(b) HRV\_BR1\_v2.0

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

Gases covered		Base year for each gas (year):
$CO_2$		1990
CH <sub>4</sub>		1990
$N_2O$		1990
HFCs		1990
PFCs		1990
SF <sub>6</sub>		1990
NF <sub>3</sub>		
Other Gases (specify)	)	
Sectors covered <sup>b</sup>	Energy	Yes
	Transport <sup>f</sup>	Yes
	Industrial processes <sup>g</sup>	Yes
	Agriculture	Yes
	LULUCF	No
	Waste	Yes
	Other Sectors (specify)	'

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

<sup>&</sup>lt;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>&</sup>lt;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.

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

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

Table 2(c) HRV\_BR1\_v2.0

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

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

Abbreviations: GWP = global warming potential

<sup>&</sup>lt;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>&</sup>lt;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) HRV\_BR1\_v2.0

Description of quantified economy-wide emission reduction target: approach to counting emissions and removals from the LULUCF  ${\sf sector}^a$ 

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

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

<sup>&</sup>lt;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 HRV\_BR1\_v2.0

### Description of quantified economy-wide emission reduction target: market-based mechanisms under the ${\bf Convention}^a$

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>&</sup>lt;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>&</sup>lt;sup>d</sup> As indicated in paragraph 5(e) of the guidelines contained in annex I of decision 2/CP.17.

<sup>&</sup>lt;sup>i</sup> AAUs issued to or purchased by a Party.

<sup>&</sup>lt;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 HRV\_BR1\_v2.0

#### 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>&</sup>lt;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 emissio	on reduction target: any other inf	formation <sup>a,b</sup>	

HRV\_BR1\_v2.0

Custom Footnotes

Table 2(f)

<sup>&</sup>lt;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>&</sup>lt;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.

Table 3

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

Name of mitigation action <sup>a</sup>	Sector(s) affected b	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Involving the plant and aircraft operators in third part of emission trading scheme (EU ETS)	Energy, Industry/industria I processes	CO <sub>2</sub> , PFCs, N <sub>2</sub> O	emission reduction	Economic	Implemented	From 1 January 2013, The Republic of Croatia is included in the emission trading scheme (EU ETS) in full range. Plant operators in Croatia - the payers in the scheme have been secured Permits for greenhouse gas emissions and establish a regime for emissions reporting to the Authority.	2013	MENP, CEA	NE
Adaptation of the Plan for use of funds obtained from the sale of emission allowances through auctions	Energy, Industry/industria 1 processes, Forestry/LULUC F	CO <sub>2</sub> , N <sub>2</sub> O, PFCs	distribution of funds raised at the auction in projects mitigation and adaptation to climate change		Implemented	Of the total number of allowances specified for the allocation of plant and aircraft operators, in each year of the trading period, part is distributed free of charge according to the prescribed methodology. Air Protection Act (Official Gazette 130/11) stipulates that Croatia for such purpose use all funds decreased by 5 percent which will be paid into the state budget of the Republic of Croatian to cover the costs of administering the emissions trading scheme, for administrative affairs, the functioning of the Union Registry, auctioneers, the National System for monitoring greenhouse gas emissions and other matters related to climate change.	2013	MENP	NE
Preparation of National Feasibility Study with the action plan of the preparatory activities for CCS projects in Croatia	Energy	CO <sub>2</sub>	preparing CCS projects in the Republic of Croatia	Regulatory	Planned	Technology for carbon capture and storage for large emission sources is not yet commercially available. The possibility of commercial application is expected in the period after the 2020th.		ME	NE

Table 3

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

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Promotion of energy efficiency in households and services through project activities	Energy	CO <sub>2</sub>	The primary objective of the project is to encourage the use of cost-effective, energy efficient (EE) technologies, materials and services in households and the public sector, all in order to reduce unnecessary energy consumption and emission of greenhouse gases into the atmosphere.		Implemented	The contribution to improving energy efficiency is being achieved through the project "Removing Barriers to Efficient Use of Energy in Households and Services Sector" led by the Ministry of Economy and the United Nations Development Programme (UNDP) with support of Environmental protection and energy efficiency Fund and Global Environmental Fond.Project target groups are households, service sector facilities and public facilities responsible for 40 % of the total energy consumption of Croatia.	2013	UNDP, ME	NE
Energy audits in industry	Energy	CO <sub>2</sub>	support to assess the potential energy savings in industrial plants through co-financing the implementation of energy audits, should be provided		Implemented	Scheme for Energy audits in industry includes: Mandatory energy audits for large consumers (companies with annual energy consumption of more than 10,000 MWh); voluntary scheme of energy audits for other companies	2013	МСРР	NE
Measurement and informative calculation of energy consumption	Energy	CO <sub>2</sub>	Increase of energy efficiency	Regulatory	Implemented	Law on Energy Efficiency in the Final Consumption (Official Gazette no. 152/2008, 55/2012) stipulates that the operator of distribution system and/or electricity or heat or natural gas supplier have to provide to final customers, for each part of the building that represents an independent entity, the offer of the equipment for measuring energy consumption and billing of energy consumption based on actual energy consumption. Legible and understandable energy bills (electricity, heat and natural gas) and individual consumption metering, are obligation of distribution system operators and suppliers. This will increase consumer awareness of the way in which they consume energy.	2013	ME, Electricity, heat and natural gas suppliers	NE

Table 3

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Name of mitigation actio	Sector(s) affected b	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Promotion of the construction of cogeneration	Energy	CO <sub>2</sub>	Achieve the share of electricity production from cogeneration plants by 4% of the total final consumption of electricity		Implemented	The legislative framework which introduces a system of incentives for the production of electricity from cogeneration was adopted for the implementation of this measure. Regulation on the minimum share of electricity produced from renewable energy sources and cogeneration, whose production is stimulated, (Official Gazette No. 33/2007, 8/2011) as a target by the end of 2020th is set to achieve the share of electricity generation from cogeneration plants, the production of electricity supplied to the transmission and distribution network of 4% of the total final energy consumption. The largest contribution is expected from the new industrial cogeneration.	2013	ME	NE
Marking the energy efficiency of household appliances	Energy	CO <sub>2</sub>	Increase of energy efficiency	Other (Other (Reporting))	Implemented	With energy labeling information about the energy consumption of the device are provided to customers	2013	ME	NE
Ecological design of energy-using products	Energy	CO <sub>2</sub>	Increase of energy efficiency	Other (Economic)	Implemented	With Ordinance on setting ecodesign requirements for energy related products (Official Gazette no. 80/2013) has been transferred 2009/125/EZ Directive of the European Parliament and of the Council of 21 October 2009. establishing a framework for establishing ecodesign requirements for energy related products in the Croatian legislation.	2013	ME	NE
Encouraging the use of renewable sources in electricity production	Energy	CO <sub>2</sub>	emission reduction	Other (Economic)	Implemented	Regulation on the minimum share of electricity produced from renewable energy sources and cogeneration whose production is stimulated (Official Gazette No. 33/2007, 8/2011) as a target by the end of the 2020th is to realize the share of electricity production from renewable sources by 13.6% of the total final consumption of electricity.	2013	ME	NE

Table 3

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

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Usage of biodegradable fraction of municipal waste in public electricity and heating plants	Energy, Waste management/was te	CO <sub>2</sub>		Other (Regulatory)	Implemented	This is a cross-cutting measure meaning it requires coordination of activities with "Waste management" sector. This measure is related to Production of fuel from waste measure. Among the main objectives defined in the Waste Management Plan of the Republic of Croatia for the period from 2007th to 2015th (Official Gazette no. 85/2007, 126/2010, 31/2011) is the reduction of biodegradable waste disposed in municipal solid waste.	2013	MENP	NE
Usage of refused derived fuel in the cement industry	Energy, Waste management/was te	CO <sub>2</sub>	emission reduction and using waste as a fuel also means reducing consumption of fossil fuels		Implemented	Use of fuel from waste results in reduced consumption of primary energy sources.  Precondition for implementation of this measure is to ensure a stable quantity, composition and structure of waste.		MENP	NE
Promotion of the use of renewable energy sources in heat/cooling energy production	Energy	CO <sub>2</sub>	emission reduction	Other (Economic)	Implemented	Promoting heating and cooling from renewable energy sources is based on the Production, distribution and supply of thermal energy act (Official Gazette No. 42/2005, 20/2010).	2013	ME	NE
Promotion of the use of renewable energy sources and energy efficiency by HBOR-a	Energy	CO <sub>2</sub>	The goal of the loan program of environmental projects, energy efficiency and renewable energy sources is the realization of investment projects focused on environmental protection, improving energy efficiency and promoting renewable energy		Implemented	For the purpose of financing environmental protection projects, HBOR extends loans through the Loan programme for the Preparation of Renewable Energy Resources and Loan Programme for the Financing of Projects of Environmental protection, Energy Efficiency and Renewable Energy Resources.		CBRD	NE

Table 3

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

Name of mitigation action	sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Promotion of the use of renewable energy sources and energy efficiency by EPEEF resources	Energy	CO2	Resources of the Environmental Protection and Energy Efficiency Fund are allocated to projects, which improve energy efficiency, including cogeneration, district heating systems, energy audits and demonstration activities, public lighting projects, fuel replacement and waste heat use and projects in the field of building construction and sustainable building.	Other (Regulatory)	Implemented	Environmental Protection and Energy Efficiency Fund provides funding for the preparation, implementation and development of programs and projects in the field of environmental protection, energy efficiency and use of renewable energy sources and climate change mitigation.	2013	EPEEF	NE
Energy efficiency projects with implementation through the energy services	Energy	CO <sub>2</sub>	These projects include the development, implementation and financing to improve energy efficiency and reduce operation and maintenance	Other (Regulatory)	Implemented	Energy efficiency projects with implementation through the energy services include modernization, reconstruction and renovation of existing plants and facilities with the aim of rational use of energy in a way that with savings in energy costs and maintenance will achieve investment return.	2013	HEP-ESCO	NE
Prescribing limit values for components and characteristics of liquid petroleum fuels	Energy, Transport	CO <sub>2</sub>	defines limit values for components and characteristics of liquid petroleum fuels	Regulatory	Implemented	Regulation on the quality of liquid petroleum fuels (Official Gazette No. 110/2013) defines limit values for components and characteristics of liquid petroleum fuels including gasoline, diesel fuel, gas oil, fuel oil, marine fuel and kerosene. Also, prescribes the method of determining and monitoring the quality of liquid petroleum fuels, attestation of conformity, marking products, and the method and deadline for delivery of reports on the quality of liquid petroleum fuels Environmental Protection Agency.	2013	MENP	NE

Table 3

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

Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO 2 eq)
Providing information to consumers on fuel economy and CO2 emission of new passenger cars	Transport	CO <sub>2</sub>	Emission reduction	Other (Other (Reporting))	Implemented	Pursuant to the Ordinance on Availability of Information on Fuel Economy and CO2 Emissions from Passenger Cars (OG 120/07) each supplier of new passenger cars intended for sale shall provide consumers with information on the fuel consumption rate and specific CO2 emission of passenger cars.	2013	MI	NE
The implementation of the pilot project and the establishment of the training of drivers of road vehicles for eco- driving	Transport	CO <sub>2</sub>	energy efficiency in transport	Other (Other (Reporting))	Planned	With the implementation of the pilot project and the establishment of training of drivers of road vehicles for eco driving, the highest level of awareness of all citizens and drivers in the Republic of Croatia on the benefits of this modern, intelligent and environmentally friendly driving style will be achieved.	2013	MENP, MMATI, MI	NE
Promotion of the production and use of biofuels in transport	Transport	CO <sub>2</sub>	Plan establishes a policy to encourage increased production and use of biofuels in transport in Croatia	Other (Fiscal)	Implemented	The basic regulation that regulates and encourages usage of biofuel is Law on Biofuels for Transport (OG 65/09, 145/10, 26/11, 144/12). Based on this law, in the 2010th, The National Action Plan encouraging the production and use of biofuels in transport for the period 2011th - 2020th was designed.	2013	ME	NE
Modification of the system for special fee payment for the environment for the motor vehicles	Transport	CO <sub>2</sub>	Motivating for buying vehicles with lower emissions	Fiscal	Planned	The current system of paying a special fee for the environment in motor vehicles is regulated with Environmental Protection and Energy Efficiency Law (OG, 107/03, 144/12), Regulation on unit charges, corrective coefficients and detailed criteria and standards to determine the special environmental fee for motor vehicles (OG 2/04) and Ordinance on the manner and terms of calculation and payment of the special fee for environment in motor vehicles (OG 20/04). This measure proposes changes in the method of calculating fees according to which the basic criteria for the calculation will be emissions of pollutants and greenhouse gases which should motivate purchase of vehicles with lower emissions	2013	MENP	NE

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Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)
Financial incentives for the purchase of hybrid and electric vehicles	Transport	CO <sub>2</sub>	encourage greater market share of electric and hybrid vehicles	Fiscal	Planned	Electric and hybrid vehicles are currently still more expensive than conventional vehicles with internal combustion engines because of high costs of technological development. Electric vehicles are more efficient than conventional in terms of primary energy consumption and almost neutral in terms of carbon dioxide emissions, if they are powered by electricity generated by using renewable sources. With the aim of increasing the share of electric and hybrid vehicles, introduction of incentive fees and subventions for the purchase of electric and hybrid vehicles through a grant funds is proposed.	2014	MENP, ME	NE
Development of infrastructure for electric vehicles in urban areas	Transport	CO <sub>2</sub>	infrastructure development, primarily charging stations or battery exchange stations	Fiscal	Planned	The main objective of this measure is developing and establishing the infrastructure necessary for popularizing the concept of mobility in urban areas and increase the number of electric vehicles in road traffic. Development of infrastructure should be focused on building charging stations and stations for changing electric batteries.			NE
Development of sustainable transport systems in urban areas	Transport	CO <sub>2</sub>	development of sustainable transport systems	Other (Other (Development))	Planned	Traffic and the need for mobility is one of the biggest pressures on the environment in urban areas. The increase in the number of passenger cars, the way they are used, the intensity of traffic and unstructured expansion of urban areas largely revesed technological progress in relation to the energy efficiency of vehicles and emission intensity, including noise.	2013	MENP, local governments	NE
Abolition and reduction of consumption of controlled and new substances and fluorinated greenhouse gases	Industry/industria	HFCs, PFCs	Prohibition of production, import, export, drain, placing on the market	Regulatory	Implemented	This group of measures for the elimination and reduction of consumption of fluorinated greenhouse gases regulates the production, import, export, release, placing on the market and use of controlled substances, new substances and fluorinated greenhouse gases, as well as equipment and products containing these substances, that depend on them. Measures of this group refer primarily to forbidding these activities, except in specified defined cases.	2013	MENP	NE

Table 3

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Name of mitigation action <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO 2 eq)
Technical and organizational measures for collecting, recycling and recovering controlled substances and fluorinated greenhouse gases	Industry/industria l processes	HFCs, PFCs	recovery of fluorinated greenhouse gases	Regulatory	Implemented	This group of measures defines the way in which used controlled substances and fluorinated greenhouse gases contained in products and equipment must be recovered, recycled, reclaimed or destroyed. With these measures the Center's activities for the collection, recycling and recovery of controlled substances and fluorinated greenhouse gases should be determined.	2013	MENP	NE
Preventive measures for the prevention of uncontrolled leaking	Industry/industria l processes	HFCs, PFCs	leakage preventing	Regulatory	Implemented	With these measures, duties of operators of equipment or systems containing controlled substances and fluorinated greenhouse gases, to take all necessary technically feasible measures to prevent leakage, early eliminate any detected leakage and emissions reduction of these substances into the atmosphere are defined.	2013	MENP	NE
Preparation of Study about possibilities of applying measures to reduce greenhouse gas emissions in the agricultural sector	Agriculture	CH <sub>4</sub> , N <sub>2</sub> O	emission reduction	Research	Planned	Preparation of Study for the agricultural sector is proposed as a measure in order to assess the medium-term acceptability of possible measures, which includes a variety of sociological and economic risks for farmers.	2014	MA, MENP	NE
Improving the reporting from LULUCF sector	Forestry/LULUC F	CO <sub>2</sub>	establish adequate monitoring for all carbon deposits	Other (Other (Development))	Planned	Annex I countries United Nations Framework Convention on Climate Change, including the Croatian, are obligated in accordance with Annex I to Decision 15/CP.17 continuously review the quality of the relevant technical elements of GHG inventory.	2013	MENP, MA	NE
Preparation of cost- benefit analysis of reforestation on new surfaces and biological regeneration of forests as a measure of increasing sinks in LULUCF sector	Forestry/LULUC F	CO <sub>2</sub>	Making analysis of the possibilities of increasing outflow application of afforestation	Other (Other (Development))	Planned	Changes in the sinks of greenhouse gases as a result of direct land use change caused by human activity and forestry activities are allowed to calculate in the national balance of emissions and sinks of greenhouse gases and used to fulfill obligations under the Kyoto Protocol. By analyzing the costs and benefits of reforestation on the new areas possibility of increasing greenhouse gas sinks using reforestation activities on the barren productive forest floor will be investigated.		MENP, MA	NE

Table 3

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Revision of reference levels for Forest Management (FMRL) under Article 3.4 of the Kyoto Protocol for the second commitment period	Forestry/LULUC F	CO <sub>2</sub>	Use of outflow in second assessment period	Other (Regulatory)	Implemented	For the second commitment period of the Kyoto Protocol new rules for the calculation of sinks generated from forest management under which the outflow is calculated relative to the reference level of Forest Management (FMRL) were adopted. In addition, obligation of revision of reference levels for forest management activities in accordance with the correction in the national inventory is introduced and it is necessary to determine the new value of the reference level for Croatia.	2014	MENP, MA	NE
Development of Action plan for LULUCF sector	Forestry/LULUC F	CO <sub>2</sub>	Use of outflow in second assessment period	Research Regulat ory Other (Development)	Planned	This plan shall be submitted as a stand-alone document or as part of the national strategy for low-carbon development, and other strategies and plans related to the LULUCF sector. In the framework of the action plan will be determined which accumulation of carbon in the wood mass should be achieved in the forestry sector that the same could be calculated as a drain, but all in relation to the reference value and the use of biomass for energy purposes.	2014	MENP, MA	NE
Avoiding generation and reducing the quantity of municipal waste	Waste management/was te	CH <sub>4</sub>	amount of waste reduction	Regulatory	Implemented	This measure should be achieved by cleaner production, education, economic instruments, implementation of regulations on integrated pollution prevention and control and investment in modern technologies. According the Act concerning the conditions of accession of the Republic of Croatia to the European union, quantitative targets and deadlines for reducing the total amount of waste deposited in incompatible landfills are defined.	2005	local (regional) self- government	NE
Increasing the quantity of sorted and recycled municipal waste	Waste management/was te	CH <sub>4</sub>	amount of waste reduction	Regulatory	Implemented	The Waste Management Strategy of the Republic of Croatia has defined quantitative objectives and deadlines for increasing amounts of sorted and recycled municipal waste: a share of 12 percent sorted and recycled waste is planned to achieve till 2015th, a share of 12 percent till 2020th. The share of sorted wastes in municipal solid waste was 16 per cent in the 2011th, which is 2 percent more than in 2010. Of the total amount sorted wastes from municipal waste only half was addressed directly on the recycling.	2005	local (regional) self- government	NE

Table 3

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Increasing the population coverage of organized municipal waste collection system	Waste management/was te	CH <sub>4</sub>	amount of waste reduction	Regulatory	Implemented	The amount of waste disposed on controlled landfills has been increased by inclusion of larger population into system of organized municipal waste collection. The Waste Management Strategy of the Republic of Croatia has defined quantitative objective for population coverage of 90 % by 2015, and 95 % by 2020. The objective was set to achieve complete population coverage of organized municipal waste collection by 2025. From 2011th municipal waste collection system covers all cities and municipalities. In 2011th organized collection of municipal waste covers about 85 percent of population in Croatia.	2005	local (regional) self- government	NE
Methane flaring or using methane as fuel for electricity production	Waste management/was te	CH <sub>4</sub>	CH4 emission reduction	Regulatory	Implemented	The Ordinance on the Modalities and Requirements for Waste Disposal, Categories and Operational Requirements for Landfills (OG 117/07) stipulates that the landfills where landfill gas is generated shall have the system for collection of gas which shall be processed and used. If the collected landfill gas cannot be used for energy production, it must be flared at the landfill site or the emission of those gases into air has to be prevented.	2007	local (regional) self- government, electricity and heat producers	532.70
Reducing the quantities of disposed biodegradable municipal waste	Waste management/was te	CH <sub>4</sub>	reduce the amount of biodegradable waste	Regulatory	Implemented	The aim of this measure is to reduce the amount of biodegradable fraction of waste disposed at landfills, thus reducing methane emissions resulting from anaerobic decomposition of waste. In the 2011th of total biodegradable waste produced, 9.3 per cent of waste were collected separately, and 6.2 percent were referred for recycling.	2005	local (regional) self- government	152.58
Production of fuel from waste	Waste management/was te	CH <sub>4</sub>	CH4 emission reduction	Regulatory	Implemented	The measure is associated with measures under energy sector which substitutes a part of fossil fuel for electricity and heat production and for cement production in rotary kilns by fuel from waste (refuse derived fuel).	2007	local (regional) self- government, electricity and heat producers	NE

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Use of biogas from bioreactors for electricity and heat production	Waste management/was te, Energy	CH <sub>4</sub>	CH4 emission reduction	Regulatory	Implemented	The use of biogas for electricity production is incentivized through the feed-in tariff system for renewable energy sources under energy sector. Greenhouse gas emission reduction potential of the waste management sector only is equal to emission reduction of methane collected in bioreactor and used for electricity production, instead of being released into the atmosphere.	2007	local (regional) self- government, electricity and heat producers	NE
Thermal processing of municipal waste and sludge from wastewater treatment	Waste management/was te	CH <sub>4</sub>	CH4 emission reduction	Regulatory	Planned	Construction of a facility for thermal processing of municipal waste in the city of Zagreb is planned in which around 300,000 tonnes of municipal waste and around 70,000 tonnes of dried sludge from the "Central waste water treatment plant" would be processed annually at the facility by 2020th. Construction of the plant is related to the issue of reaching the full capacity of the existing municipal waste landfill Prudinec – Jakuševec in Zagreb and disposal of sludge from waste water treatment plants.			NE
Establishing a monitoring, reporting and verification of greenhouse gas emissions in the	Cross-cutting	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	greenhouse gas emissions monitoring	Regulatory	Implemented	According to the Law on Air Protection (Official Gazette no. 130/11), supplier which put fuels on domestic market is bound to monitor greenhouse gas emissions per unit of energy in the lifetime of fuel.	2013	MENP	NE
lifetime of liquid fuels CO2 emission tax	Cross-cutting	CO <sub>2</sub>	CO2 emission reduction	Regulatory	Implemented	The Regulation on Unit Charges, Corrective Coefficients and Detailed Criteria and Benchmarks for Determination of the Charge for Emissions into Environment of Carbon Dioxide (OG 73/07, 48/09) stipulates the obligation to pay charges on CO2 emission for all stationary sources emitting more than 30 tonnes CO2 per year. Fee payers who invest in energy efficiency, renewable energy and other measures to reduce emissions of CO2 and other greenhouse gas emissions smaller fee is calculated.	2007	MENP	NE

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The establishment of committee for intersectoral coordination for policies and measures to mitigate and adapt to climate change and Committee for intersectoral coordination for a national system for monitoring greenhouse gas emissions	Cross-cutting	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, NF <sub>3</sub> , PFCs, SF <sub>6</sub>	emission reduction	Regulatory	Planned	According to the Law on Air Protection (Official Gazette no. 130/11) it is necessary to establish a committee for intersectoral coordination of policies and measures to mitigate and adapt to climate changes. The Committee shall be appointed by representatives of relevant government bodies and other relevant institutions, agencies and nongovernmental organizations.	2014	MENP		NE
Intensifying the use of innovative information and communication technologies (ICT) to reduce greenhouse gas emissions	Cross-cutting	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	greenhouse gas emissions reduction	Education	Planned	Innovative information and communication technologies have an increasingly important role in reducing greenhouse gas emissions and increase energy efficiency. Intensifying their use in public administration, services and manufacturing processes, boost productivity and work efficiency while reducing energy consumption and consequent greenhouse gas emissions.	2014	MENP		NE

Note: The two final columns specify the year identified by the Party for estimating impacts (based on the status of the measure and whether an ex post or ex ante estimation is available).

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

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

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

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

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

<sup>&</sup>lt;sup>f</sup> Optional year or years deemed relevant by the Party.

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### Reporting on progress<sup>a, b</sup>

	Total emissions excluding LULUCF	Contribution from LULUCF d	Quantity of units from market based mechanisms under the Convention		Quantity of units from other market based mechanisms	
Year <sup>c</sup>	$(kt \ CO_2 \ eq)$	$(kt \ CO_2 \ eq)$	(number of units)	$(kt \ CO_2 \ eq)$	(number of units)	$(kt \ CO_2 \ eq)$
(1990)	31,693.47	NA	NO		NO	
2010	28,780.65	NA	NO		NO	
2011	28,421.47	NA		29,755.70		
2012	NE			29,755.70		

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

<sup>&</sup>lt;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>&</sup>lt;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>&</sup>lt;sup>c</sup> Parties may add additional rows for years other than those specified below.

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

Table 4(a)I

Progress in achieving the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the contribution of the land use, land-use change and forestry sector in 2011  $^{\rm a,b}$ 

	Net GHG emissions/removals from LULUCF categories <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	<i>q)</i>		
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					

<sup>&</sup>lt;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>&</sup>lt;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.

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

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

<sup>&</sup>lt;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.

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

<sup>&</sup>lt;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.

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  $^{\rm a,\,b}$ 

	Net GHG emissions/removals from LULUCF categories c	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 f
		(kt CO 2 eq	q)		
Total LULUCF					
A. Forest land					
1. Forest land remaining forest land					
2. Land converted to forest land					
3. Other <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					

<sup>&</sup>lt;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>&</sup>lt;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.

<sup>&</sup>lt;sup>c</sup> 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>&</sup>lt;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>&</sup>lt;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>&</sup>lt;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>&</sup>lt;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.

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>	Net emissions/removals <sup>e</sup>						Accounting quantity i
		2008	2009	2010	2011	Total <sup>g</sup>		
				(kt CO <sub>2</sub> eq)				
A. Article 3.3 activities								
A.1. Afforestation and Reforestation								-731.11
A.1.1. Units of land not harvested since the beginning of the commitment periodj		-178.51	-182.37	-178.65	-191.58	-731.11		-731.11
A.1.2. Units of land harvested since the beginning of the commitment periodj								NO
A.2. Deforestation		495.87	441.86	411.35	371.59	1,720.68		1720.67505
B. Article 3.4 activities								
B.1. Forest Management (if elected)		-8,174.04	-8,417.93	-8,298.56	-7,452.30	-32,342.83		-4858.33333
3.3 offset <sup>k</sup>							989.56812	0
FM cap <sup>l</sup>							4858.33333	-4858.33333
B.2. Cropland Management (if elected)		) NA	NA	NA	NA	NA	0	0
B.3. Grazing Land Management (if elected)	(	) NA	NA	NA	NA	NA	0	0
B.4. Revegetation (if elected)	(	) NA	NA	NA	NA	NA	0	0

Note: 1 kt CO<sub>2</sub> eq equals 1 Gg CO<sub>2</sub> 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>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.
- f 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>&</sup>lt;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.

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.

# Reporting on progress<sup>a, b, c</sup>

	Units of market based mechanisms		Year	
	Onus oj markei vasea mecnanisms		2011	2012
	Victor During and Juniter	(number of units)		
	Kyoto Protocol units	(kt CO <sub>2</sub> eq)	29,755.70	29,755.70
	4.477	(number of units)		
	AAUs	(kt CO2 eq)	29,755.70	29,755.70
	EDIT	(number of units)		
Kyoto	ERUs	(kt CO2 eq)		
Protocol units <sup>d</sup>	CED	(number of units)		
unus	CERs	(kt CO2 eq)		
	GUD	(number of units)		
	tCERs	(kt CO2 eq)		
	LOUD	(number of units)		
	ICERs	(kt CO2 eq)		
	Units from market-based mechanisms under the	(number of units)		
	Convention	(kt CO <sub>2</sub> eq)		
Other units				
d, $e$	Units from other market-based mechanisms	(number of units)		
	Onus from other market-based mechanisms	(kt CO <sub>2</sub> eq)		
		(number of units)		
Total		(kt CO <sub>2</sub> eq)	29,755.70	29,755.70

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.

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.

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.

Parties may include this information, as appropriate and if relevant to their target.

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

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

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

Key underlying a	ssumptions	Historical <sup>b</sup>						Projected			
Assumption	Unit	1990	1995	2000	2005	2010	2011	2015	2020	2025	2030
GDP growth rate	%	NE	6.80	2.90	4.20	-1.20	0.00	3.50	4.00	3.00	2.50
Population	thousands	4,778.00	4,669.00	4,426.00	4,440.00	4,425.00	4,403.00	4,405.00	4,366.00	4,320.00	4,267.00
International coal price	EUR/GJ	NE	NE	NE	5.09	5.09	5.09	5.09	5.09	5.09	5.09
International oil price	EUR/GJ	NE	NE	NE	10.12	10.12	10.12	10.12	10.12	10.12	10.12
International gas price	EUR/GJ	NE	NE	NE	9.69	9.69	9.69	9.69	9.69	9.69	9.69
Degree-day heating		NE	NE	NE	2.48	2.48	2.48	2.48	2.48	2.48	2.48
Number of heating days		NE	NE	NE	167.00	167.00	167.00	167.00	167.00	167.00	167.00

<sup>&</sup>lt;sup>a</sup> Parties should include key underlying assumptions as appropriate.

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

Table 6(a)

HRV\_BR1\_v2.0

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

		GHG emissions and removals b								
			(	kt CO 2 eq)				(kt CO	eq)	
	Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030	
Sector d,e										
Energy	18,079.02	18,701.08	13,797.04	14,885.01	16,991.20	14,969.50	14,826.65	17,026.90	17,245.00	
Transport	4,069.97	4,095.41	3,466.00	4,597.31	5,681.18	6,039.64	5,888.70	6,642.60	5,909.60	
Industry/industrial processes	4,185.46	3,905.50	2,124.20	2,970.42	3,489.32	3,363.70	3,144.29	3,009.50	3,703.30	
Agriculture	4,328.40	4,380.72	3,054.84	3,130.16	3,477.70	3,315.98	3,442.21	3,668.20	3,865.80	
Forestry/LULUCF	-4,184.92	-6,411.22	-9,078.57	-7,719.24	-8,151.44	-7,871.65	-7,031.80	-9,472.80	-8,923.60	
Waste management/waste	578.72	610.76	667.44	760.67	864.06	1,091.82	1,119.62	922.40	875.20	
Other (specify)										
Gas										
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	18,895.52	16,907.29	8,116.78	12,308.54	15,326.56	13,407.12	13,820.03	14,491.90	14,764.10	
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	23,080.45	23,338.72	17,201.66	20,093.24	23,485.16	21,288.79	20,869.29	23,964.70	23,687.70	
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	3,425.89	3,478.98	2,794.63	2,833.20	3,182.71	3,640.28	3,588.11	3,764.30	4,096.70	
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	3,425.87	3,466.48	2,792.76	2,782.50	3,181.58	3,638.97	3,581.30	3,764.30	4,096.70	
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	3,867.89	3,948.46	3,058.51	3,299.73	3,495.63	3,379.99	3,495.76	2,886.70	2,987.10	
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	3,867.89	3,940.75	3,054.07	3,284.97	3,489.59	3,371.29	3,485.11	2,886.70	2,987.10	
HFCs	NO	NO	49.37	170.68	333.47	472.25	475.94	641.00	809.60	
PFCs	936.56	936.56	NO	NO	NA, NO	0.03	0.01			
SF <sub>6</sub>	11.01	10.95	11.66	12.18	13.66	9.32	9.82	12.90	17.80	
Other (specify)										
Total with LULUCF <sup>f</sup>	27,136.87	25,282.24	14,030.95	18,624.33	22,352.03	20,908.99	21,389.67	21,796.80	22,675.30	
Total without LULUCF	31,321.78	31,693.46	23,109.52	26,343.57	30,503.46	28,780.65	28,421.47	31,269.60	31,598.90	

<sup>&</sup>lt;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.

Table 6(a) HRV\_BR1\_v2.0

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

		GHG en	nissions and re	movals <sup>b</sup>		GHG emission	on projections	
			$(kt\ CO_2\ eq)$			(kt C0	O <sub>2</sub> eq)	
Base y (199		2020	2030					

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

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

Information on updated greenhouse gas projections under a 'without measures' scenario<sup>a</sup>

			GHG emis	ssions and rem	ovals b			GHG emission	n projections
			(	kt CO 2 eq)				(kt CO	<sub>2</sub> eq)
	Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030
Sector d,e									
Energy	18,079.02	18,701.08	13,797.04	14,885.01	16,991.20	14,969.50	14,826.65	22,630.40	29,238.00
Transport	4,069.97	4,095.41	3,466.00	4,597.31	5,681.18	6,039.64	5,888.70	7,058.70	7,185.40
Industry/industrial processes	4,185.46	3,905.50	2,124.20	2,970.42	3,489.32	3,363.70	3,144.29	3,958.30	4,729.80
Agriculture	4,328.40	4,380.72	3,054.84	3,130.16	3,477.70	3,315.98	3,442.21	3,746.80	3,948.40
Forestry/LULUCF	-4,184.92	-6,411.22	-9,078.57	-7,719.24	-8,151.44	-7,871.65	-7,031.80	-7,653.80	-7,761.30
Waste management/waste	578.72	610.76	667.44	760.67	864.06	1,091.82	1,119.62	1,607.60	1,679.30
Other (specify)									
Gas									
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	18,895.52	16,907.29	8,116.78	12,308.54	15,326.56	13,407.12	13,820.03	22,268.50	29,072.50
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	23,080.45	23,338.72	17,201.66	20,093.24	23,485.16	21,288.79	20,869.29	29,922.30	36,833.80
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	3,425.89	3,478.98	2,794.63	2,833.20	3,182.71	3,640.28	3,588.11	4,811.80	5,356.20
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	3,425.87	3,466.48	2,792.76	2,782.50	3,181.58	3,638.97	3,581.30	4,811.80	5,356.20
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	3,867.89	3,948.46	3,058.51	3,299.73	3,495.63	3,379.99	3,495.76	3,613.80	3,763.50
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	3,867.89	3,940.75	3,054.07	3,284.97	3,489.59	3,371.29	3,485.11	3,613.80	3,763.50
HFCs	NO	NO	49.37	170.68	333.47	472.25	475.94	641.00	809.60
PFCs	936.56	936.56	NO	NO	NA, NO	0.03	0.01		
SF <sub>6</sub>	11.01	10.95	11.66	12.18	13.66	9.32	9.82	12.90	17.80
Other (specify)									
Total with LULUCF <sup>f</sup>	27,136.87	25,282.24	14,030.95	18,624.33	22,352.03	20,908.99	21,389.67	31,348.00	39,019.60
Total without LULUCF	31,321.78	31,693.46	23,109.52	26,343.57	30,503.46	28,780.65	28,421.47	39,001.80	46,780.90

<sup>&</sup>lt;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.

Table 6(b)

# Information on updated greenhouse gas projections under a 'without measures' scenario<sup>a</sup>

		GHG em	issions and re	movals <sup>b</sup>			GHG emission	on projections	
			(kt CO <sub>2</sub> eq)				(kt CO	O <sub>2</sub> eq)	
Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030	

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

<sup>&</sup>lt;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 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>&</sup>lt;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. crosscutting), as appropriate.

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

Table 6(c)

HRV\_BR1\_v2.0

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

			GHG emis	ssions and rem	ovals <sup>b</sup>			GHG emission	n projections
			(	kt CO 2 eq)				(kt CC	0 <sub>2</sub> eq)
	Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030
Sector d,e									
Energy	18,079.02	18,701.08	13,797.04	14,885.01	16,991.20	14,969.50	14,826.65	17,026.90	12,418.60
Transport	4,069.97	4,095.41	3,466.00	4,597.31	5,681.18	6,039.64	5,888.70	6,642.60	5,309.60
Industry/industrial processes	4,185.46	3,905.50	2,124.20	2,970.42	3,489.32	3,363.70	3,144.29	3,009.50	3,703.30
Agriculture	4,328.40	4,380.72	3,054.84	3,130.16	3,477.70	3,315.98	3,442.21	3,668.20	3,865.80
Forestry/LULUCF	-4,184.92	-6,411.22	-9,078.57	-7,719.24	-8,151.44	-7,871.65	-7,031.80	-10,737.60	-10,509.70
Waste management/waste	578.72	610.76	667.44	760.67	864.06	1,091.82	1,119.62	922.40	875.20
Other (specify)									
Gas									
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF	18,895.52	16,907.29	8,116.78	12,308.54	15,326.56	13,407.12	13,820.03	13,227.10	7,786.20
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF	23,080.45	23,338.72	17,201.66	20,093.24	23,485.16	21,288.79	20,869.29	23,964.70	18,295.90
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF	3,425.89	3,478.98	2,794.63	2,833.20	3,182.71	3,640.28	3,588.11	3,764.30	4,083.80
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF	3,425.87	3,466.48	2,792.76	2,782.50	3,181.58	3,638.97	3,581.30	3,764.30	4,083.80
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF	3,867.89	3,948.46	3,058.51	3,299.73	3,495.63	3,379.99	3,495.76	2,886.70	2,965.40
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF	3,867.89	3,940.75	3,054.07	3,284.97	3,489.59	3,371.29	3,485.11	2,886.70	2,965.40
HFCs	NO	NO	49.37	170.68	333.47	472.25	475.94	641.00	809.60
PFCs	936.56	936.56	NO	NO	NA, NO	0.03	0.01		
SF <sub>6</sub>	11.01	10.95	11.66	12.18	13.66	9.32	9.82	12.90	17.80
Other (specify)									
Total with LULUCF	27,136.87	25,282.24	14,030.95	18,624.33	22,352.03	20,908.99	21,389.67	20,532.00	15,662.80
Total without LULUCF	31,321.78	31,693.46	23,109.52	26,343.57	30,503.46	28,780.65	28,421.47	31,269.60	26,172.50

<sup>&</sup>quot; 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' or 'with additional measures' or 'with additional measures' scenarios then it should not include tables 6(b) or 6(c) in the biennial report.

# Table 6(c)

### Information on updated greenhouse gas projections under a 'with additional measures' scenario

		GHG emi	ssions and rer	novals <sup>b</sup>			GHG emission	on projections	
			(kt CO <sub>2</sub> eq)				(kt CC	O <sub>2</sub> eq)	
Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030	

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

<sup>&</sup>lt;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 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>&</sup>lt;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.

 $<sup>^{\</sup>it f}$  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>

					Ye	ar				
		Cro	oatian kuna - H	IRK		$USD^b$				
Allocation channels	Core/	Climate-specific d				Core/		Climate-	te-specific <sup>d</sup>	
	general <sup>c</sup>	Mitigation	Adaptation	Cross- cutting <sup>e</sup>	Other <sup>f</sup>	general <sup>c</sup>	Mitigation	Adaptation	Cross- cutting <sup>e</sup>	Other <sup>f</sup>
Total contributions through multilateral channels:	NE				NE	NE				NE
Multilateral climate change funds <sup>g</sup>	NE				NE	NE				NE
Other multilateral climate change funds <sup>h</sup>										
Multilateral financial institutions, including regional development banks	NE				NE	NE				NE
Specialized United Nations bodies										
Total contributions through bilateral, regional and other channels	NE					NE				
Total	NE				NE	NE				NE

Abbreviation: USD = United States dollars.

#### 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).

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

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

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

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

<sup>&</sup>lt;sup>f</sup> Please specify.

<sup>&</sup>lt;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>&</sup>lt;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.

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

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

Abbreviation: USD = United States dollars.

Table 7

#### 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).

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

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

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

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

<sup>&</sup>lt;sup>f</sup> Please specify.

<sup>&</sup>lt;sup>8</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>&</sup>lt;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.

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

		Total a	mount						
Donor funding	Core/general <sup>d</sup>		Climate-specific <sup>e</sup>		Status <sup>b</sup>	Funding source f	Financial	Type of support <sup>f, g</sup>	Sector c
20nor juntania	Croatian kuna - HRK	USD	Croatian kuna - HRK	USD	Sienus	T unung source	instrument <sup>†</sup>	Type of support	Sector
Total contributions through multilateral channels	NE	NE	NE	NE					
Multilateral climate change funds <sup>g</sup>	NE	NE	NE	NE					
1. Global Environment Facility	NE	NE	NE	NE					
2. Least Developed Countries Fund	NE	NE	NE	NE					
3. Special Climate Change Fund	NE	NE	NE	NE					
4. Adaptation Fund	NE	NE	NE	NE					
5. Green Climate Fund	NE	NE	NE	NE					
6. UNFCCC Trust Fund for Supplementary Activities	NE	NE	NE	NE					
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks	NE	NE	NE	NE					
1. World Bank	NE	NE	NE	NE					
2. International Finance Corporation	NE	NE	NE	NE					
3. African Development Bank	NE	NE	NE	NE					
4. Asian Development Bank	NE	NE	NE	NE					
5. European Bank for Reconstruction and Development	NE	NE	NE	NE					
6. Inter-American Development Bank	NE	NE	NE	NE					
7. Other									
Specialized United Nations bodies									
United Nations Development Programme									
2. United Nations Environment Programme									
3. Other									

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

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

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

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

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

<sup>&</sup>lt;sup>f</sup> Please specify.

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

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

		Total a	mount			Funding source <sup>f</sup>	Financial instrument <sup>f</sup>	Type of support <sup>f, g</sup>	Sector <sup>c</sup>
Donor funding	Core/ge	neral <sup>d</sup>	Climate-s	specific <sup>e</sup>	Status <sup>b</sup>				
Donot fundants	Croatian kuna - HRK	USD	Croatian kuna - HRK	USD	Siaius	runung source			
Total contributions through multilateral channels	NE	NE	NE	NE					
Multilateral climate change funds <sup>g</sup>	NE	NE	NE	NE					
1. Global Environment Facility	NE	NE	NE	NE					
2. Least Developed Countries Fund	NE	NE	NE	NE					
3. Special Climate Change Fund	NE	NE	NE	NE					
4. Adaptation Fund	NE	NE	NE	NE					
5. Green Climate Fund	NE	NE	NE	NE					
6. UNFCCC Trust Fund for Supplementary Activities	NE	NE	NE	NE					
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks	NE	NE	NE	NE					
1. World Bank	NE	NE	NE	NE					
2. International Finance Corporation	NE	NE	NE	NE					
3. African Development Bank	NE	NE	NE	NE					
4. Asian Development Bank	NE	NE	NE	NE					
5. European Bank for Reconstruction and Development	NE	NE	NE	NE					
6. Inter-American Development Bank	NE	NE	NE	NE					
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>&</sup>lt;sup>a</sup> Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

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

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

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

f Please specify.

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

Table 7(b) HRV\_BR1\_v2.0

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

Recipient country/ region/project/programme <sup>b</sup>	Total amount  Climate-specific f		Status <sup>c</sup>	Funding	Financial instrument 8	Type of support g, h	Sector <sup>d</sup>	Additional information <sup>e</sup>	
									region/project/programme
Total contributions through bilateral, regional and other channels									

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

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

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

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

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

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

<sup>&</sup>lt;sup>g</sup> Please specify.

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

Table 7(b) HRV\_BR1\_v2.0

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

Recipient country/ region/project/programme b	Total amount		Status <sup>c</sup>	Funding	Financial instrument 8	Type of support g, h	Sector <sup>d</sup>	Additional information <sup>e</sup>	
	Climate-specific f								
region/project/programme	Croatian kuna - HRK	USD		source <sup>8</sup>	insirument	<i>support</i>			
Total contributions through bilateral,									
regional and other channels									

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

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

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

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

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

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

<sup>&</sup>lt;sup>g</sup> Please specify.

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

# Provision of technology development and transfer support ab

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector <sup>c</sup>	Source of the funding for technology transfer	Activities undertaken by	Status	Additional information <sup>d</sup>
	Mitigation			Public	Public	Implemented	

<sup>&</sup>lt;sup>a</sup> To be reported to the extent possible.

<sup>&</sup>lt;sup>b</sup> The tables should include measures and activities since the last national communication or biennial report.

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

<sup>&</sup>lt;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.

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

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

<sup>&</sup>lt;sup>a</sup> To be reported to the extent possible.

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