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Contents

Table 1s2Table 1s3Table 1(a)s1Table 1(a)s2Table 1(a)s3Table 1(b)s1Table 1(b)s2Table 1(b)s2Table 1(b)s3Table 1(c)s1Table 1(c)s2Table 1(c)s2Table 1(c)s3Table 1(d)s1Table 1(d)s2Table 1(d)s2Table 1(d)s2Table 1(d)s2Table 1(d)s2Table 1(d)s2Table 1(d)s3Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(d)
Table 1(a)s1Table 1(a)s2Table 1(a)s3Table 1(b)s1Table 1(b)s2Table 1(b)s3Table 1(c)s1Table 1(c)s2Table 1(c)s3Table 1(d)s1Table 1(d)s2Table 1(d)s2Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(e)I
Table 1(a)s2 Table 1(a)s3 Table 1(b)s1 Table 1(b)s2 Table 1(b)s3 Table 1(c)s1 Table 1(c)s2 Table 1(c)s3 Table 1(d)s1 Table 1(d)s2 Table 1(d)s2 Table 1(d)s2 Table 2(a) Table 2(b) Table 2(c) Table 2(d) Table 2(c) Table 2(d) Table 2(c) Table 2(c)
Table 1(a)s3Table 1(b)s1Table 1(b)s2Table 1(b)s3Table 1(c)s1Table 1(c)s2Table 1(c)s3Table 1(d)s1Table 1(d)s2Table 1(d)s2Table 1(d)s2Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(d)Table 2(d)Table 2(d)Table 2(e)I
Table 1(b)s1Table 1(b)s2Table 1(b)s3Table 1(c)s1Table 1(c)s2Table 1(c)s3Table 1(d)s1Table 1(d)s2Table 1(d)s2Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(d)Table 2(e)I
Table 1(b)s2Table 1(b)s3Table 1(c)s1Table 1(c)s2Table 1(c)s3Table 1(d)s1Table 1(d)s2Table 1(d)s3Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(e) I
Table 1(b)s3Table 1(c)s1Table 1(c)s2Table 1(c)s3Table 1(d)s1Table 1(d)s2Table 1(d)s3Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(d)Table 2(d)Table 2(e)I
Table 1(c)s1Table 1(c)s2Table 1(c)s3Table 1(d)s1Table 1(d)s2Table 1(d)s3Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(d)Table 2(d)Table 2(e)I
Table 1(c)s2 Table 1(c)s3 Table 1(d)s1 Table 1(d)s2 Table 1(d)s3 Table 2(a) Table 2(b) Table 2(c) Table 2(d) Table 2(e)I
Table 1(c)s3Table 1(d)s1Table 1(d)s2Table 1(d)s3Table 2(a)Table 2(b)Table 2(c)Table 2(c)Table 2(d)Table 2(d)Table 2(e)I
Table 1(d)s1 Table 1(d)s2 Table 1(d)s3 Table 2(a) Table 2(b) Table 2(c) Table 2(d) Table 2(e)I
Table 1(d)s2Table 1(d)s3Table 2(a)Table 2(b)Table 2(c)Table 2(c)Table 2(d)Table 2(e)I
Table 1(d)s3Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(e)I
Table 2(a)Table 2(b)Table 2(c)Table 2(d)Table 2(e)I
Table 2(b) Table 2(c) Table 2(d) Table 2(e)I
Table 2(c) Table 2(d) Table 2(e)I
Table 2(d) Table 2(e)I
Table 2(e)I
Table 2(e)II
Table 2(f)
Table 3
Table 4
Table 4(a)I_2013
Table 4(a)I_2014
Table 4(a)II No data was imported from KP- LULUCF CRF table 10 from the latest official GHG inventory submission.
Table 4(b)
Table 5
Table 6(a)
Table 6(b) Greenhouse gas projections: Scenario 'without measures' was not included.
Table 6(c)
Table 7_2013
Table 7_2014
Table 7(a) 2013
Table 7(a) 2014
Table 7(b) 2013
Table 7(b) 2014
Table 8
Table 9

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

	Base year ^a	1990	1991	1992	1993	1994	1995	1996	1997
GREENHOUSE GAS EMISSIONS	kt CO ₂ eq								
CO ₂ emissions without net CO ₂ from LULUCF	32,742.45	32,742.45	33,485.00	33,323.54	33,548.89	34,675.21	35,693.95	37,307.83	38,648.63
CO ₂ emissions with net CO ₂ from LULUCF	36,645.64	36,645.64	38,495.87	38,485.93	39,183.51	39,481.98	41,831.18	43,994.16	42,479.11
CH ₄ emissions without CH ₄ from LULUCF	14,881.87	14,881.87	15,060.99	15,173.05	15,185.12	15,111.33	15,129.90	15,370.05	15,348.99
CH ₄ emissions with CH ₄ from LULUCF	15,356.39	15,356.39	15,482.94	15,565.71	15,658.18	15,603.83	15,696.78	16,072.56	15,835.91
N ₂ O emissions without N ₂ O from LULUCF	9,013.24	9,013.24	8,173.57	8,228.68	8,716.98	8,438.24	8,597.90	9,117.04	8,740.48
N ₂ O emissions with N ₂ O from LULUCF	9,160.11	9,160.11	8,319.61	8,368.01	8,876.65	8,607.16	8,791.11	9,340.67	8,931.23
HFCs	0.59	0.59	0.76	1.73	4.57	14.79	41.12	104.52	178.93
PFCs	0.12	0.12	9.87	19.62	39.11	58.61	97.61	133.29	169.01
Unspecified mix of HFCs and PFCs	NO	NO	NO	NO	NO	NO	NO	NO	NO
SF ₆	33.88	33.88	38.87	43.86	52.90	61.95	79.11	97.46	126.12
NF3	NO	NO	NO	NO	NO	NO	4.37	4.72	6.11
Total (without LULUCF)	56,672.15	56,672.15	56,769.06	56,790.48	57,547.58	58,360.14	59,643.97	62,134.91	63,218.27
Total (with LULUCF)	61,196.73	61,196.73	62,347.92	62,484.85	63,814.92	63,828.33	66,541.30	69,747.39	67,726.41
Total (without LULUCF, with indirect)	56,751.48	56,751.48	56,847.89	56,869.32	57,626.38	58,444.06	59,728.00	62,219.20	63,304.30
Total (with LULUCF, with indirect)	61,276.06	61,276.06	62,426.76	62,563.69	63,893.72	63,912.25	66,625.33	69,831.67	67,812.45
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ^a	1990	1991	1992	1993	1994	1995	1996	1997
	kt CO ₂ eq								
1. Energy	31,117.76	31,117.76	31,963.11	31,849.67	32,020.26	32,984.75	33,892.07	35,498.12	36,604.37
2. Industrial processes and product use	3,173.30	3,173.30	2,889.28	2,843.91	2,834.91	3,115.32	3,112.34	3,309.58	3,778.69
3. Agriculture	20,735.38	20,735.38	20,176.87	20,282.23	20,818.23	20,330.59	20,663.57	21,460.88	21,226.88
4. Land Use, Land-Use Change and Forestry ^b	4,524.58	4,524.58	5,578.86	5,694.37	6,267.34	5,468.19	6,897.33	7,612.47	4,508.14
5. Waste	1,645.71	1,645.71	1,739.79	1,814.67	1,874.19	1,929.49	1,975.99	1,866.33	1,608.33
6. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total (including LULUCF)	61,196.73	61,196.73	62,347.92	62,484.85	63,814.92	63,828.33	66,541.30	69,747.39	67,726.41

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

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

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

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
GREENHOUSE GAS EMISSIONS										
CO ₂ emissions without net CO ₂ from LULUCF	40,543.54	42,275.29	45,094.54	47,470.72	45,952.73	45,554.32	46,042.40	47,952.20	47,403.08	47,489.84
CO ₂ emissions with net CO ₂ from LULUCF	44,514.39	46,069.25	50,214.62	55,193.49	52,931.65	52,775.22	49,730.36	50,629.22	51,826.12	51,911.76
CH ₄ emissions without CH ₄ from LULUCF	15,593.92	15,104.37	14,532.19	14,585.95	14,525.92	15,178.67	14,248.66	13,980.69	13,991.96	13,362.99
CH ₄ emissions with CH ₄ from LULUCF	16,015.96	15,514.75	15,027.68	15,263.33	14,971.43	15,879.21	14,870.44	14,449.93	14,577.24	13,989.07
N ₂ O emissions without N ₂ O from LULUCF	9,308.11	9,088.02	8,585.93	8,843.86	8,171.43	8,221.26	7,926.38	8,134.84	7,806.17	6,931.49
N ₂ O emissions with N ₂ O from LULUCF	9,492.87	9,278.52	8,801.95	9,104.31	8,405.18	8,508.50	8,209.50	8,404.89	8,111.89	7,252.66
HFCs	228.48	239.48	303.60	353.64	434.07	589.38	732.79	939.29	975.68	984.05
PFCs	79.22	254.82	397.76	379.51	267.89	285.95	234.81	216.39	190.96	168.10
Unspecified mix of HFCs and PFCs	NO									
SF ₆	88.74	64.19	51.76	64.63	64.48	109.95	65.34	96.78	60.21	62.94
NF3	4.19	3.79	49.17	21.78	46.58	46.63	18.08	28.38	28.21	37.67
Total (without LULUCF)	65,846.19	67,029.95	69,014.95	71,720.09	69,463.11	69,986.16	69,268.46	71,348.57	70,456.26	69,037.07
Total (with LULUCF)	70,423.85	71,424.79	74,846.54	80,380.69	77,121.29	78,194.84	73,861.32	74,764.87	75,770.31	74,406.24
Total (without LULUCF, with indirect)	65,930.97	67,109.71	69,091.27	71,802.64	69,543.75	70,065.88	69,347.40	71,427.64	70,540.55	69,128.51
Total (with LULUCF, with indirect)	70,508.62	71,504.55	74,922.85	80,463.24	77,201.94	78,274.56	73,940.26	74,843.94	75,854.59	74,497.69
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1. Energy	38,811.75	40,226.90	42,525.09	44,626.25	43,402.57	44,034.48	43,826.37	45,648.99	45,152.07	45,115.66
2. Industrial processes and product use	3,585.94	3,700.91	4,491.39	4,553.48	4,033.34	3,442.48	3,630.74	3,954.32	3,869.92	3,919.34
3. Agriculture	21,769.63	21,394.09	20,246.85	20,635.52	19,973.97	20,349.23	19,891.73	19,959.03	19,551.32	18,565.73
4. Land Use, Land-Use Change and Forestry ^b	4,577.66	4,394.84	5,831.59	8,660.60	7,658.18	8,208.68	4,592.86	3,416.31	5,314.04	5,369.18
5. Waste	1,678.87	1,708.06	1,751.62	1,904.84	2,053.23	2,159.96	1,919.62	1,786.23	1,882.96	1,436.34
6. Other	NO									
Total (including LULUCF)	70,423.85	71,424.79	74,846.54	80,380.69	77,121.29	78,194.84	73,861.32	74,764.87	75,770.31	74,406.24

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

GREENHOUSE GAS EMISSIONS	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
							(%)
CO ₂ emissions without net CO ₂ from LULUCF	47,170.87	41,981.59	41,553.77	37,898.34	38,066.63	37,057.31	13.18
CO ₂ emissions with net CO ₂ from LULUCF	50,737.49	42,902.87	44,512.18	43,465.18	42,870.83	39,987.08	9.12
CH ₄ emissions without CH ₄ from LULUCF	13,206.40	12,870.52	12,632.35	12,593.36	12,890.28	13,232.26	-11.08
CH ₄ emissions with CH ₄ from LULUCF	13,802.80	13,365.41	13,577.72	13,542.40	13,369.30	13,831.95	-9.93
N ₂ O emissions without N ₂ O from LULUCF	7,103.19	7,318.93	7,476.14	7,061.28	7,395.64	7,135.66	-20.83
N ₂ O emissions with N ₂ O from LULUCF	7,450.52	7,650.26	7,889.08	7,467.71	7,720.35	7,479.46	-18.35
HFCs	1,128.30	1,108.08	1,127.64	1,147.98	1,135.47	1,276.74	215,565.03
PFCs	136.14	83.63	46.58	15.88	9.56	8.32	6,850.28
Unspecified mix of HFCs and PFCs	NO	NO	NO	NO	NO	NO	
SF_6	54.69	39.18	33.08	45.45	37.39	43.53	28.50
NF3	NO	NO	NO	NO	0.78	0.90	
Total (without LULUCF)	68,799.59	63,401.94	62,869.55	58,762.29	59,535.75	58,754.73	3.67
Total (with LULUCF)	73,309.93	65,149.43	67,186.28	65,684.59	65,143.67	62,627.98	2.34
Total (without LULUCF, with indirect)	68,879.27	63,475.96	62,936.70	58,827.88	59,599.34	58,820.88	3.65
Total (with LULUCF, with indirect)	73,389.61	65,223.46	67,253.43	65,750.18	65,207.26	62,694.13	2.31

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
							(%)
1. Energy	45,210.74	40,731.28	40,359.13	36,879.60	36,950.03	35,737.69	14.85
2. Industrial processes and product use	3,697.21	2,795.47	2,577.97	2,452.10	2,650.44	2,708.17	-14.66
3. Agriculture	18,576.15	18,705.05	18,758.03	18,165.33	18,750.34	18,964.61	-8.54
4. Land Use, Land-Use Change and Forestry ^b	4,510.34	1,747.49	4,316.73	6,922.30	5,607.91	3,873.25	-14.40
5. Waste	1,315.50	1,170.14	1,174.42	1,265.26	1,184.94	1,344.27	-18.32
6. Other	NO	NO	NO	NO	NO	NO	
Total (including LULUCF)	73,309.93	65,149.43	67,186.28	65,684.59	65,143.67	62,627.98	2.34

Notes:

(1) Further detailed information could be found in the common reporting format tables of the Party's greenhouse gas inventory, namely "Emission trends (CO_2)", "Emission trends (CH_4)", "Emission trends (N_2O)" and "Emission trends (HFCs, PFCs and SF₆)", which is included in an annex to this biennial report.

(2) 2011 is the latest reported inventory year.

(3) 1 kt CO_2 eq equals 1 Gg CO_2 eq.

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

^a The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

^b Includes net CO₂, CH₄ and N₂O from LULUCF.

Custom Footnotes

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ^a	1990	1991	1992	1993	1994	1995	1996	1997
OKEENHOUSE GAS SOURCE AND SINK CATEGORIES	kt								
1. Energy	30,140.28	30,140.28	31,005.84	30,956.36	31,128.58	32,101.24	32,990.41	34,535.31	35,623.36
A. Fuel combustion (sectoral approach)	30,140.28	30,140.28	31,005.84	30,956.36	31,128.58	32,101.24	32,990.41	34,535.31	35,623.36
1. Energy industries	11,145.01	11,145.01	11,604.43	12,263.69	12,282.24	12,618.22	13,301.42	14,016.85	14,674.03
2. Manufacturing industries and construction	3,942.64	3,942.64	4,055.14	3,752.29	3,969.39	4,225.46	4,329.85	4,163.99	4,531.31
3. Transport	5,021.69	5,021.69	5,199.86	5,614.73	5,577.05	5,799.89	6,054.20	7,023.59	7,344.83
4. Other sectors	10,030.94	10,030.94	10,146.41	9,325.66	9,299.90	9,457.67	9,304.94	9,330.88	9,073.19
5. Other	IE	IE	IE	IE	IE	IE	IE	IE	IE
B. Fugitive emissions from fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO
1. Solid fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Oil and natural gas and other emissions from energy production	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. CO2 transport and storage	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Industrial processes	2,112.05	2,112.05	2,027.27	1,965.93	1,925.37	2,166.90	2,076.93	2,156.17	2,484.77
A. Mineral industry	1,116.73	1,116.73	992.39	932.97	951.13	1,081.70	1,084.18	1,198.39	1,384.92
B. Chemical industry	990.23	990.23	1,030.32	1,003.56	946.19	1,056.63	973.44	922.85	1,073.12
C. Metal industry	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Non-energy products from fuels and solvent use	5.09	5.09	4.56	29.40	28.06	28.57	19.31	34.93	26.72
E. Electronic industry									
F. Product uses as ODS substitutes									
G. Other product manufacture and use	NO	NO	NO	NO	NO	NO	NO	NO	NO
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
3. Agriculture	399.51	399.51	360.97	309.92	403.24	315.05	534.28	524.14	461.50
A. Enteric fermentation									
B. Manure management									
C. Rice cultivation									
D. Agricultural soils									
E. Prescribed burning of savannas									
F. Field burning of agricultural residues									
G. Liming	355.04	355.04	315.15	255.60	357.30	269.64	494.60	484.03	423.49
H. Urea application	44.47	44.47	45.83	54.32	45.94	45.41	39.68	40.11	38.01
I. Other carbon-containing fertilizers	NO	NO	NO	NO	NO	NO	NO	NO	NO
J. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
4. Land Use, Land-Use Change and Forestry	3,903.20	3,903.20	5,010.87	5,162.39	5,634.61	4,806.77	6,137.24	6,686.33	3,830.47
A. Forest land	-2,692.40	-2,692.40	-2,792.79	-2,147.89	-2,837.59	-2,361.22	-1,971.33	-1,806.50	-3,035.49
B. Cropland	-1,524.52	-1,524.52	-65.12	81.56	942.86	-103.06	160.64	585.71	-401.90
C. Grassland	6,165.09	6,165.09	6,137.32	6,024.98	5,598.75	5,601.14	5,776.20	5,551.31	5,685.42
D. Wetlands	2,291.19	2,291.19	2,071.17	1,693.76	2,442.20	2,224.86	2,739.64	2,992.14	2,210.67
E. Settlements	73.88	73.88	67.63	68.62	73.23	89.52	88.07	111.59	122.29
F. Other land	0.55	0.55	0.56	0.57	0.57	0.58	0.85	16.90	17.17
G. Harvested wood products	-410.59	-410.59	-407.91	-559.22	-585.42	-645.05	-656.83	-764.82	-767.68
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	90.61	90.61	90.93	91.33	91.70	92.01	92.33	92.21	79.01
A. Solid waste disposal	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Biological treatment of solid waste									
C. Incineration and open burning of waste	90.61	90.61	90.93	91.33	91.70	92.01	92.33	92.21	79.01
D. Waste water treatment and discharge	_								
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Memo items:									
International bunkers	1,126.32	1,126.32	1,143.75	955.44	1,509.57	1,308.87	1,520.28	1,555.24	1,754.75
Aviation	1,069.54	1,069.54	1,036.71	901.96	1,338.96	1,185.87	1,150.90	1,056.03	1,277.39
Navigation	56.78	56.78	107.04	53.48	170.61	122.99	369.39	499.22	477.36
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 emissions from biomass	500.82	500.82	479.54	424.19	429.78	431.60	424.65	475.00	493.36
CO2 captured	NO	NO	NO	NO	NO	NO	NO	NO	NO
Long-term storage of C in waste disposal sites	NE	NE	NE	NE	NE	NE	NE	NE	NE
Indirect N2O							_		
Indirect CO2 (3)	79.33	79.33	78.84	78.84	78.80	83.92	84.03	84.28	86.03
Total CO2 equivalent emissions without land use, land-use change and forestry	56,672.15	56,672.15	56,769.06	56,790.48	57,547.58	58,360.14	59,643.97	62,134.91	63,218.27
Total CO2 equivalent emissions with land use, land-use change and forestry	61,196.73	61,196.73	62,347.92	62,484.85	63,814.92	63,828.33	66,541.30	69,747.39	67,726.41
Total CO2 equivalent emissions, including indirect CO2, without land use, land-use change	32,821.78	32,821.78	33,563.84	33,402.38	33,627.70	34,759.13	35,777.98	37,392.11	38,734.67
and forestry Total CO2 equivalent emissions, including indirect CO2, with land use, land-use change and	36,724.97	36,724.97	38,574.71	38,564.77	39,262.31	39,565.90	41,915.21	44,078.45	42,565.14
forestry	50,724.97	50,127.71	20,277.71	20,204.77	57,202.31	27,202.70	11,713.21	,07013	.2,202.14

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

A. Fuel combustion (sectoral approach) 3 I. Energy industries 1 2. Manufacturing industries and construction 1 3. Transport 1 4. Other sectors 1 5. Other 1 B. Fugitive emissions from fuels 1 1. Solid fuels 1 2. Oil and natural gas and other emissions from energy production 1 C. CO2 transport and storage 1 2. Industrial processes 1 A. Mineral industry 1 B. Chemical industry 1 C. Metal industry 1 D. Non-energy products from fuels and solvent use 1 E. Electronic industry 1 G. Other product manufacture and use 1 H. Other 1 A. Enteric fermentation 1 B. Manure management 1 C. Rice cultivation 1 D. Agricultural soils 1 E. Prescribed burning of savannas 1 F. Field burning of agricultural residues 1 I. Urea application 1 I. Other carbon-containing fertilizers 1 <th>7,761.25 7,761.25 5,057.14 4,569.07 8,618.23 9,516.80 IE NO NO 2,371.45 1,288.13 1,058.81 1,058.81 NO 24.52 NO NO 349.45 305.58 43.87 NO NO</th> <th>39,451.27 39,413.00 15,713.09 4,789.52 9,532.18 9,378.21 E 38.27 NO 2,324.42 1,353.71 942.82 NO 27.89 NO 27.89 NO 430.85 383.23 47.63 NO</th> <th>41,738.42 41,738.42 16,028.39 5,617.89 10,561.82 9,530.31 IE NO NO NO 2,874.22 1,908.78 882.30 NO 83.14 NO 83.14 NO 408.63 S 366.38</th> <th>43,827.19 43,771.14 17,239.00 5,573.79 11,079.75 9,878.60 IE 56.05 NO 3,137.80 2,061.44 1,041.18 NO 35.18 NO 423.76</th> <th>42,631.47 42,631.47 16,315.15 5,298.41 11,280.50 9,737.41 IE NO NO 2,904.42 2,063.38 810.90 NO 30.14 NO 30.14 NO NO 311.07</th> <th>42,605.54 42,605.54 15,611.30 5,488.09 11,491.16 10,014.98 IE NO NO NO 2,374.99 2,342.32 0.30 NO 32.37 NO NO 32.37</th> <th>43,084.50 43,084.50 15,234.86 5,666.12 12,211.72 9,971.80 NO NO NO 2,543.56 2,507.06 NO 36.50 NO NO 36.50 NO 271.55</th> <th>44,893.77 44,893.77 15,657.29 5,839.05 12,906.10 10,491.32 IE NO NO NO 2,636.53 2,552.80 NO 83.73 NO 83.73 NO 294.63</th> <th>14,906.9 5,722.5 13,591.3 10,196.4 II NO NO 2,577.0 2,538.7 NO 38.2 NO 38.2 NO NO</th>	7,761.25 7,761.25 5,057.14 4,569.07 8,618.23 9,516.80 IE NO NO 2,371.45 1,288.13 1,058.81 1,058.81 NO 24.52 NO NO 349.45 305.58 43.87 NO NO	39,451.27 39,413.00 15,713.09 4,789.52 9,532.18 9,378.21 E 38.27 NO 2,324.42 1,353.71 942.82 NO 27.89 NO 27.89 NO 430.85 383.23 47.63 NO	41,738.42 41,738.42 16,028.39 5,617.89 10,561.82 9,530.31 IE NO NO NO 2,874.22 1,908.78 882.30 NO 83.14 NO 83.14 NO 408.63 S 366.38	43,827.19 43,771.14 17,239.00 5,573.79 11,079.75 9,878.60 IE 56.05 NO 3,137.80 2,061.44 1,041.18 NO 35.18 NO 423.76	42,631.47 42,631.47 16,315.15 5,298.41 11,280.50 9,737.41 IE NO NO 2,904.42 2,063.38 810.90 NO 30.14 NO 30.14 NO NO 311.07	42,605.54 42,605.54 15,611.30 5,488.09 11,491.16 10,014.98 IE NO NO NO 2,374.99 2,342.32 0.30 NO 32.37 NO NO 32.37	43,084.50 43,084.50 15,234.86 5,666.12 12,211.72 9,971.80 NO NO NO 2,543.56 2,507.06 NO 36.50 NO NO 36.50 NO 271.55	44,893.77 44,893.77 15,657.29 5,839.05 12,906.10 10,491.32 IE NO NO NO 2,636.53 2,552.80 NO 83.73 NO 83.73 NO 294.63	14,906.9 5,722.5 13,591.3 10,196.4 II NO NO 2,577.0 2,538.7 NO 38.2 NO 38.2 NO NO
A. Fuel combustion (sectoral approach) 3 I. Energy industries 1 2. Manufacturing industries and construction 1 3. Transport 1 4. Other sectors 1 5. Other 1 B. Fugitive emissions from fuels 1 1. Solid fuels 1 2. Oil and natural gas and other emissions from energy production 1 C. CO2 transport and storage 1 2. Industrial processes 1 A. Mineral industry 1 B. Chemical industry 1 C. Metal industry 1 D. Non-energy products from fuels and solvent use 1 E. Electronic industry 1 D. Non-energy product manufacture and use 1 H. Other 1 A fariculture 1 A. Enteric formentation 1 B. Manure management 1 C. Rice cultivation 1 D. Agricultural soils 1 E. Prescribed burning of agricultural residues 1 I. Uter application 1 I. Other carbon-containing fertilizers 1 <tr< th=""><th>7,761.25 5,057.14 4,569.07 8,618.23 9,516.80 IE NO NO 2,371.45 1,288.13 1,058.81 NO 24.52 NO 349.45 349.45 349.45</th><th>39,413.00 15,713.09 4,789.52 9,532.18 9,378.21 IE 38.27 NO 2,324.42 1,353.71 942.82 NO 27.89 NO 27.89 NO 430.85 383.23 383.23</th><th>41,738.42 16,028.39 5,617.89 10,561.82 9,530.31 IE NO NO NO 2,874.22 1,908.78 882.30 NO 83.14 NO 408.63 NO 408.63</th><th>43,771.14 17,239.00 5,573.79 11,079.75 9,878.60 IE 56.05 NO 3,137.80 2,061.44 1,041.18 NO 35.18 NO 423.76</th><th>42,631.47 16,315.15 5,298.41 11,280.50 9,737.41 IE NO NO NO 2,904.42 2,063.38 810.90 NO 30.14 NO NO 30.14</th><th>42,605.54 15,611.30 5,488.09 11,491.16 10,014.98 IE NO NO NO 2,374.99 2,342.32 0.30 NO 32.37 NO 32.37</th><th>43,084.50 15,234.86 5,666.12 12,211.72 9,971.80 IE NO NO 2,543.56 2,507.06 NO NO 36.50 NO NO</th><th>44,893.77 15,657.29 5,839.05 12,906.10 10,491.32 IE NO NO 2,636.53 2,552.80 NO NO 83.73 NO 83.73</th><th>44,417.30 14,906.90 5,722.55 13,591.33 10,196.44 II NO NO 2,577.00 2,538.74 NO NO 38.24 NO NO NO NO NO NO NO NO NO NO NO NO NO</th></tr<>	7,761.25 5,057.14 4,569.07 8,618.23 9,516.80 IE NO NO 2,371.45 1,288.13 1,058.81 NO 24.52 NO 349.45 349.45 349.45	39,413.00 15,713.09 4,789.52 9,532.18 9,378.21 IE 38.27 NO 2,324.42 1,353.71 942.82 NO 27.89 NO 27.89 NO 430.85 383.23 383.23	41,738.42 16,028.39 5,617.89 10,561.82 9,530.31 IE NO NO NO 2,874.22 1,908.78 882.30 NO 83.14 NO 408.63 NO 408.63	43,771.14 17,239.00 5,573.79 11,079.75 9,878.60 IE 56.05 NO 3,137.80 2,061.44 1,041.18 NO 35.18 NO 423.76	42,631.47 16,315.15 5,298.41 11,280.50 9,737.41 IE NO NO NO 2,904.42 2,063.38 810.90 NO 30.14 NO NO 30.14	42,605.54 15,611.30 5,488.09 11,491.16 10,014.98 IE NO NO NO 2,374.99 2,342.32 0.30 NO 32.37 NO 32.37	43,084.50 15,234.86 5,666.12 12,211.72 9,971.80 IE NO NO 2,543.56 2,507.06 NO NO 36.50 NO NO	44,893.77 15,657.29 5,839.05 12,906.10 10,491.32 IE NO NO 2,636.53 2,552.80 NO NO 83.73 NO 83.73	44,417.30 14,906.90 5,722.55 13,591.33 10,196.44 II NO NO 2,577.00 2,538.74 NO NO 38.24 NO NO NO NO NO NO NO NO NO NO NO NO NO
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B. Chemical industry Image: Comparison of the section of the sect	1,058.81 NO 24.52 NO NO 349.45 349.45 305.58 43.87 NO	942.82 NO 27.89 NO 430.85 383.23 47.63	882.30 NO 83.14 NO NO 408.63 366.38	1,041.18 NO 35.18 NO NO 423.76	810.90 NO 30.14 NO NO	0.30 NO 32.37 NO NO	NO NO 36.50 NO NO	NO NO 83.73 NO NO	NO NO 38.23 NO NO
C. Metal industryImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useD. Non-energy products from fuels and solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useE. Electronic industryImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useG. Other product manufacture and useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useJ. AgricultureImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useB. Manure managementImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useC. Rice cultivationImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useJ. OtherImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useJ. OtherImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useJ. OtherImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useJ. OtherImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useImage: Constraint of the stand solvent useJ. OtherImage: Constraint of the	NO 24.52 NO NO 349.45 305.58 43.87 NO	NO 27.89 NO NO 430.85 383.23 47.63	NO 83.14 NO NO 408.63 366.38	NO 35.18 NO NO 423.76	NO 30.14 NO NO	NO 32.37 NO NO	NO 36.50 NO NO	NO 83.73 NO NO	N0 38.2 N0 N0
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F. Product uses as ODS substitutesImage: SubstitutesG. Other product manufacture and useImage: SubstitutesH. OtherImage: Substitutes3. AgricultureImage: SubstitutesA. Enteric fermentationImage: SubstitutesB. Manure managementImage: SubstitutesC. Rice cultivationImage: SubstitutesD. Agricultural soilsImage: SubstitutesE. Prescribed burning of savannasImage: SubstitutesF. Field burning of agricultural residuesImage: SubstitutesG. LimingImage: SubstitutesH. Urea applicationImage: SubstitutesI. Other carbon-containing fertilizersImage: SubstitutesJ. OtherImage: SubstitutesA. Forest landImage: SubstitutesB. CroplandImage: SubstitutesC. GrasslandImage: SubstitutesD. WetlandsImage: SubstitutesE. SettlementsImage: SubstitutesF. Other landImage: SubstitutesG. Harvested wood productsImage: SubstitutesH. OtherImage: SubstitutesI. OtherI.	NO 349.45 305.58 43.87 NO	NO 430.85 383.23 47.63	NO 408.63 366.38	NO 423.76	NO	NO	NO	NO	NO
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H. OtherImage: Second Seco	NO 349.45 305.58 43.87 NO	NO 430.85 383.23 47.63	NO 408.63 366.38	NO 423.76	NO	NO	NO	NO	NC
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A. Enteric fermentationB. Manure managementC. Rice cultivationD. Agricultural soilsE. Prescribed burning of savannasF. Field burning of agricultural residuesG. LimingH. Urea applicationI. Other carbon-containing fertilizersJ. Other 4. Land Use, Land-Use Change and Forestry A. Forest landD. WetlandsE. SettlementsF. Other landG. Harvested wood productsH. Other	305.58 43.87 NO	383.23 47.63	366.38						
B. Manure managementC. Rice cultivationD. Agricultural soilsE. Prescribed burning of savannasF. Field burning of agricultural residuesG. LimingH. Urea applicationI. Other carbon-containing fertilizersJ. Other4. Land Use, Land-Use Change and ForestryA. Forest landC. GrasslandD. WetlandsE. SettlementsF. Other landG. Harvested wood productsH. Other	43.87 NO	47.63		385.28					
C. Rice cultivationD. Agricultural soilsE. Prescribed burning of savannasF. Field burning of agricultural residuesG. LimingH. Urea applicationI. Other carbon-containing fertilizersJ. Other 4. Land Use, Land-Use Change and Forestry A. Forest landB. CroplandC. GrasslandD. WetlandsE. SettlementsF. Other landG. Harvested wood productsH. Other	43.87 NO	47.63		385.28					
E. Prescribed burning of savannasE.F. Field burning of agricultural residuesIG. LimingIH. Urea applicationII. Other carbon-containing fertilizersIJ. OtherI 4. Land Use, Land-Use Change and Forestry IA. Forest landIB. CroplandIC. GrasslandID. WetlandsIE. SettlementsIF. Other landIG. Harvested wood productsIH. OtherI	43.87 NO	47.63		385.28					
E. Prescribed burning of savannasF. Field burning of agricultural residuesG. LimingH. Urea applicationI. Other carbon-containing fertilizersJ. Other4. Land Use, Land-Use Change and ForestryA. Forest landB. CroplandC. GrasslandD. WetlandsE. SettlementsF. Other landG. Harvested wood productsH. Other	43.87 NO	47.63		385.28					
G. LimingIH. Urea applicationII. Other carbon-containing fertilizersIJ. OtherI 4. Land Use, Land-Use Change and Forestry IA. Forest landIB. CroplandIC. GrasslandID. WetlandsIE. SettlementsIF. Other landIG. Harvested wood productsIH. OtherI	43.87 NO	47.63		385.28					
G. LimingImage: Constraint of the system of the	43.87 NO	47.63		385.28					
I. Other carbon-containing fertilizersIJ. OtherI4. Land Use, Land-Use Change and ForestryIA. Forest landIB. CroplandIC. GrasslandID. WetlandsIE. SettlementsIF. Other landIG. Harvested wood productsIH. OtherI	NO		42.25		273.90	386.76	240.80	266.73	254.8
J. Other 4. Land Use, Land-Use Change and Forestry A. Forest land B. Cropland C. Grassland D. Wetlands E. Settlements F. Other land G. Harvested wood products H. Other		NO		38.47	37.17	36.10	30.75	27.90	29.5
4. Land Use, Land-Use Change and Forestry.A. Forest land.B. Cropland.C. Grassland.D. Wetlands.E. Settlements.F. Other land.G. Harvested wood products.H. Other.	NO		NO	NO	NO	NO	NO	NO	NO
A. Forest land - B. Cropland - C. Grassland - D. Wetlands - E. Settlements - F. Other land - G. Harvested wood products - H. Other -		NO	NO	NO	NO	NO	NO	NO	NO
B. CroplandImage: Section of the section	3,970.86	3,793.96	5,120.08	7,722.77	6,978.92	7,220.89	3,687.96	2,677.02	4,423.04
C. Grassland D. Wetlands E. Settlements F. Other land G. Harvested wood products H. Other	2,375.93	-2,424.80	-1,908.47	-1,782.88	-1,644.59	-2,173.87	-3,327.71	-3,033.06	-2,978.2
D. WetlandsImage: Constraint of the second seco	-405.20	-539.36	153.57	1,843.00	1,156.18	1,252.22	-760.90	-1,659.67	-1,605.8
E. Settlements F. F. Other land G. G. Harvested wood products F. H. Other F.	5,587.97	5,662.16	5,831.65	5,673.98	5,575.13	5,624.06	5,469.62	5,560.63	5,280.6
F. Other land G. Harvested wood products H. Other G. Harvested wood products	1,892.66	1,893.19	1,894.27	2,763.85	2,532.36	3,334.34	3,019.27	2,518.92	2,662.1
G. Harvested wood products H. Other	131.99	141.30	177.77	229.64	213.65	255.79	268.43	310.74	361.04
H. Other	17.43	17.70	18.12	30.35	30.77	31.20	31.62	32.04	1,450.34
	-878.06	-956.23	-1,046.83	-1,035.17	-884.59	-1,102.83	-1,012.36	-1,052.58	-747.13
	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	61.39	68.75	73.27	81.98	105.77	150.93	142.79	127.27	124.3
A. Solid waste disposal	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Biological treatment of solid waste									
C. Incineration and open burning of waste	61.39	68.75	73.27	81.98	105.77	150.93	142.79	127.27	124.3
D. Waste water treatment and discharge									
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Memo items:									
International bunkers	1,814.69	2,101.27	2,288.28	2,698.62	2,782.70	2,812.30	2,627.74	2,832.21	3,285.7
Aviation	1,315.15	1,557.28	1,810.43	2,188.99	2,327.68	2,272.06	2,153.56	2,501.97	2,881.4
Navigation	499.54	543.98	477.85	509.63	455.02	540.24	474.19	330.25	404.32
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO
CO2 emissions from biomass	587.23	557.23	597.60	654.29	643.41	612.46	715.32	902.02	931.4
CO2 captured	NO	NO	NO	NO	NO	NO	NO	NO	NO
Long-term storage of C in waste disposal sites	NE	NE	NE	NE	NE	NE	NE	NE	NI
Indirect N2O									
Indirect CO2 (3)	84.78	79.76	76.32	82.55	80.64	79.72	78.94	79.07	84.2
	5,846.19	67,029.95	69,014.95	71,720.09	69,463.11	69,986.16	69,268.46	71,348.57	70,456.2
	0,423.85	71,424.79	74,846.54	80,380.69	77,121.29	78,194.84	73,861.32	74,764.87	75,770.3
· , , , , ,	0,628.31	42,355.05	45,170.85	47,553.27	46,033.37	45,634.05	46,121.34	48,031.27	47,487.3
change and forestry		46.140.00	50.000.00	55 074 04	52 010 22	50.054.04	40,000,00	50 700 20	51 010 1
Total CO2 equivalent emissions, including indirect CO2, with land use, land-use change 4 and forestry	4,599.17	46,149.00	50,290.93	55,276.04	53,012.30	52,854.94	49,809.30	50,708.29	51,910.41

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

2006	2007
4,417.30	44,379.49
4,417.30	44,379.49
4,906.98	14,406.63
4,900.98 5,722.52	5,782.42
3,591.35	14,188.55
0,196.44	14,188.55
IE	IE
NO	NO
2,577.02	2,627.47
2,538.74	2,582.80
NO	NO
NO	NO
38.28	44.66
NO	NO
NO	NO
284.41	400.12
251.96	276 77
254.86	376.77
29.55	23.36
NO	NO
NO	NO
4,423.04	4,421.92
2,978.25	-3,505.85
1,605.81	-39.35
5,280.68	5,279.68
2,662.17	3,093.44
361.04	574.98
1,450.34	9.49
-747.13	-990.47
NO	NO
124.35	82.76
124.33 NO	82.70 NO
NU	NO
124.35	82.76
124.33	02.70
NO	NO
NO	NO
NU	NU
3,285.79	3,409.80
2,881.46	3,052.83
404.32	356.97
NO	NO
931.45	1,008.20
NO	NO
NE	NE
84.29	91.44
0,456.26	69,037.07
5,770.31	74,406.24
7,487.36	47,581.28
1,910.41	52,003.20

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
							%
1. Energy	44,477.99	40,045.92	39,696.54	36,261.97	36,344.61	35,139.30	
A. Fuel combustion (sectoral approach)	44,477.99	40,045.92	39,696.54	36,261.97	36,344.61	35,139.30	
1. Energy industries	14,495.44	12,926.12	13,176.05	11,798.09	12,633.59	11,239.25	
2. Manufacturing industries and construction	5,626.82	4,470.54	4,472.85	4,144.74	4,155.39	4,209.13	
 Transport Other sectors 	13,500.85	12,295.75	11,392.52	11,087.47	10,707.72	10,935.10	
5. Other	10,854.88	10,353.52	10,655.12	9,231.68	8,847.91	8,755.82 IE	
	IE	IE	IE	IE	IE		
B. Fugitive emissions from fuels1. Solid fuels	NO NO	NO NO	NO NO	NO NO	NO NO	NO NO	
 Solid rules Oil and natural gas and other emissions from energy production 	NO	NO	NO	NO	NO	NO	
C. CO2 transport and storage	NO	NO	NO	NO	NO	NO	
2. Industrial processes	2,337.98	1,524.05	1,329.96	1,201.90	1,426.25	1,337.61	
A. Mineral industry	2,303.11	1,486.14	1,329.90	1,168.75	1,393.44	1,301.70	
B. Chemical industry	2,303.11 NO	1,480.14 NO	1,300.01 NO	1,108.75 NO	1,393.44 NO	1,301.70 NO	
C. Metal industry	NO	NO	NO	NO	NO	NO	
D. Non-energy products from fuels and solvent use	34.87	37.91	29.94	33.15	32.81	35.91	
E. Electronic industry	5-107	51.71	27.74	55.15	52.01	55.71	005.57
F. Product uses as ODS substitutes							
G. Other product manufacture and use	NO	NO	NO	NO	NO	NO	
H. Other	NO	NO	NO	NO	NO	NO	
3. Agriculture	292.97	348.25	473.10	393.00	250.72	537.35	
A. Enteric fermentation	272.71	540.25	475.10	375.00	250.72	551.55	54.50
B. Manure management							
C. Rice cultivation							
D. Agricultural soils							
E. Prescribed burning of savannas							
F. Field burning of agricultural residues							
G. Liming	262.21	307.32	427.93	360.68	229.40	515.69	45.25
H. Urea application	30.76	40.93	45.16	32.32	21.32	21.66	
I. Other carbon-containing fertilizers	NO	NO	NO	NO	NO	NO	
J. Other	NO	NO	NO	NO	NO	NO	
4. Land Use, Land-Use Change and Forestry	3,566.62	921.28	2,958.42	5,566.84	4,804.19	2,929.77	-24.94
A. Forest land	-4,896.65	-4,985.99	-4,104.46	-3,994.96	-3,411.92	-3,672.98	
B. Cropland	592.73	-1,234.99	-1,241.31	1,040.41	1,457.62	-364.38	
C. Grassland	5,196.60	5,485.07	5,098.72	4,922.45	4,877.37	4,901.47	
D. Wetlands	2,662.46	2,093.19	3,763.62	4,250.57	2,270.43	2,691.59	
E. Settlements	589.30	188.61	231.35	62.20	258.89	54.96	-25.61
F. Other land	19.62	11.10	11.09	11.08	11.07	11.06	
G. Harvested wood products	-597.45	-635.71	-800.59	-724.91	-659.28	-691.95	68.53
H. Other	NO	NO	NO	NO	NO	NO	
5. Waste	61.94	63.38	54.17	41.47	45.05	43.05	-52.49
A. Solid waste disposal	NO	NO	NO	NO	NO	NO	
B. Biological treatment of solid waste							
C. Incineration and open burning of waste	61.94	63.38	54.17	41.47	45.05	43.05	-52.49
D. Waste water treatment and discharge							
E. Other	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	
Memo items:							
International bunkers	3,059.36	2,544.18	2,745.39	2,408.65	2,139.09	2,243.51	99.19
Aviation	2,838.50	2,240.57	2,315.15	2,074.25	1,741.67	1,803.22	
Navigation	220.86	303.61	430.24	334.40	397.43	440.29	675.49
Multilateral operations	NO	NO	NO	NO	NO	NO	
CO2 emissions from biomass	1,081.77	1,223.84	1,366.64	1,424.98	1,601.38	1,737.40	246.91
CO2 captured	NO	NO	NO	NO	NO	NO	
Long-term storage of C in waste disposal sites	NE	NE	NE	NE	NE	NE	
Indirect N2O							
Indirect CO2 (3)	79.68	74.03	67.15	65.59	63.59	66.15	-16.62
Total CO2 equivalent emissions without land use, land-use change and forestry	68,799.59	63,401.94	62,869.55	58,762.29	59,535.75	58,754.73	
Total CO2 equivalent emissions with land use, land-use change and forestry	73,309.93	65,149.43	67,186.28	65,684.59	65,143.67	62,627.98	
Total CO2 equivalent emissions, including indirect CO2, without land use, land-use change	47,250.55	42,055.62	41,620.92	37,963.93	38,130.22	37,123.45	
and forestry	,	,	,	,			
Total CO2 equivalent emissions, including indirect CO2, with land use, land-use change and forestry	50,817.17	42,976.90	44,579.33	43,530.76	42,934.42	40,053.22	9.06

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

^{*a*} The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

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

Custom Footnotes

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

	Base year ^a	1990	1991	1992	1993	1994	1995	1996	1997
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt								
1. Energy	28.97	28.97	28.02	25.02	24.37	22.37	20.90	20.66	18.89
A. Fuel combustion (sectoral approach)	20.49	20.49	20.15	17.53	17.06	15.33	14.12	14.15	12.64
1. Energy industries	0.27	0.27	0.27	0.27	0.29	0.29	0.31	0.36	0.37
2. Manufacturing industries and construction	0.27	0.27	0.27	0.23	0.24	0.23	0.24	0.26	0.26
3. Transport	1.92	1.92	1.98	2.02	1.90	1.85	1.84	1.82	1.72
4. Other sectors	18.04	18.04	17.63	15.02	14.63	12.96	11.73	11.72	10.29
5. Other	IE	IE	IE	IE	IE	IE	IE	IE	IE
B. Fugitive emissions from fuels	8.47	8.47	7.87	7.49	7.31	7.04	6.78	6.51	6.24
1. Solid fuels	2.22	2.22	1.80	1.63	1.51	1.41	1.33	1.26	1.21
2. Oil and natural gas and other emissions from energy production	6.25	6.25	6.07	5.86	5.81	5.63	5.45	5.25	5.04
C. CO2 transport and storage									
2. Industrial processes	NO	NO	NO	NO	NO	NO	NO	NO	NO
A. Mineral industry									
B. Chemical industry	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Metal industry	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Non-energy products from fuels and solvent use	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Electronic industry									
F. Product uses as ODS substitutes									
G. Other product manufacture and use	NO	NO	NO	NO	NO	NO	NO	NO	NO
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
3. Agriculture	507.97	507.97	512.32	516.89	515.64	512.41	512.72	526.96	537.76
A. Enteric fermentation	454.28	454.28	458.16	462.24	461.23	458.60	459.20	471.59	481.39
B. Manure management	53.69	53.69	54.17	54.65	54.41	53.81	53.51	55.38	56.37
C. Rice cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural soils	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field burning of agricultural residues	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Liming									
H. Urea application									
I. Other carbon-containing fertilizers									
J. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
4. Land use, land-use change and forestry	18.98	18.98	16.88	15.71	18.92	19.70	22.68	28.10	19.48
A. Forest land	2.34	2.34	2.25	2.20	2.44	2.56	2.81	2.95	2.69
B. Cropland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
C. Grassland	10.54	10.54	9.96	9.88	10.75	10.95	11.86	14.14	11.25
D. Wetlands	6.09	6.09	4.67	3.63	5.73	6.19	8.00	11.01	5.54
E. Settlements	IE	IE	IE	IE	IE	IE	IE	IE	IE
F. Other land	IE	IE	IE	IE	IE	IE	IE	IE	IE
G. Harvested wood products		12	12	12	12	i D	12	12	
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	58.34	58.34	62.10	65.01	67.39	69.68	71.58	67.17	57.31
A. Solid waste disposal	55.86	55.86	59.61	62.50	64.86	67.14	69.03	64.64	54.87
B. Biological treatment of solid waste	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Incineration and open burning of waste	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04
D. Waste water treatment and discharge	2.44	2.44	2.46	2.48	2.49	2.50	2.51	2.50	2.40
E. Other	NO	NO	2.40 NO	NO	NO	2.50 NO	NO	2.50 NO	2.40 NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total CH4 emissions without CH4 from LULUCF	595.27	595.27	602.44	606.92	607.40	604.45	605.20	614.80	613.96
Total CH4 emissions with CH4 from LULUCF	614.26	614.26	619.32	622.63	626.33	624.15	627.87	642.90	633.44
Memo items:	014.20	014.20	017.52	022.05	020.55	024.15	027.07	0+2.90	055.44
International bunkers	0.02	0.02	0.02	0.02	0.03	0.02	0.05	0.06	0.06
Aviation	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.08	0.08
	0.01	0.01	0.01	0.01	0.01		0.01	0.01	0.01
Navigation	0.01	0.01	0.01	0.00	0.02	0.01	0.05	0.05	0.05

Multilateral operations	NO								
CO2 emissions from biomass									
CO2 captured									
Long-term storage of C in waste disposal sites									
Indirect N2O									
Indirect CO2 (3)									

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1. Energy	18.87	16.21	15.91	15.84	14.44	40.47	13.57	13.50	12.70	13.06
A. Fuel combustion (sectoral approach)	13.31	10.21	10.77	10.41	14.44	9.64	9.45	9.85	9.54	9.31
1. Energy industries	0.37	0.40	0.44	0.46	0.43	0.41	0.36	0.37	0.35	0.36
2. Manufacturing industries and construction	0.28	0.40	0.44	0.40	0.34	0.36	0.39	0.45	0.33	0.30
3. Transport	1.77	1.73	1.61	1.59	1.46	1.39	1.35	1.35	1.29	1.23
4. Other sectors	10.89	8.40	8.38	8.01	7.88	7.49	7.34	7.68	7.47	7.30
5. Other	IE									
B. Fugitive emissions from fuels	5.56	5.39	5.15	5.43	4.32	30.83	4.12	3.65	3.17	3.75
1. Solid fuels	1.16	1.12	1.08	1.05	1.02	0.99	0.97	0.94	0.92	0.90
2. Oil and natural gas and other emissions from energy production	4.40	4.27	4.07	4.38	3.30	29.84	3.15	2.71	2.25	2.85
C. CO2 transport and storage										
2. Industrial processes	NO									
A. Mineral industry										
B. Chemical industry	NO									
C. Metal industry	NO									
D. Non-energy products from fuels and solvent use	NO									
E. Electronic industry										
F. Product uses as ODS substitutes										
G. Other product manufacture and use	NO									
H. Other	NO									
3. Agriculture	544.19	526.55	502.49	499.16	493.32	491.08	490.06	484.27	481.60	472.30
A. Enteric fermentation	487.18	471.83	450.43	447.19	441.94	440.32	439.53	433.73	431.58	423.48
B. Manure management	57.01	54.72	52.05	51.97	51.38	50.76	50.52	50.54	50.02	48.82
C. Rice cultivation	NO									
D. Agricultural soils	NE									
E. Prescribed burning of savannas	NO									
F. Field burning of agricultural residues	NO									
G. Liming										
H. Urea application										
I. Other carbon-containing fertilizers										
J. Other	NO									
4. Land use, land-use change and forestry	16.88	16.42	19.82	27.10	17.82	28.02	24.87	18.77	23.41	25.04
A. Forest land	2.56	2.55	2.82	3.25	2.70	3.64	3.22	2.85	2.85	2.89
B. Cropland	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
C. Grassland	10.42	10.27	11.57	14.38	11.27	14.71	14.16	12.17	14.16	14.77
D. Wetlands	3.90	3.59	5.43	9.46	3.85	9.67	7.49	3.74	6.39	7.38
E. Settlements	IE									
F. Other land	IE	IE	IE	IE	IE	IE	NE	IE	IE	IE
G. Harvested wood products										
H. Other	NO									
5. Waste	60.70	61.42	62.89	68.44	73.28	75.60	66.32	61.46	65.37	49.16
A. Solid waste disposal	57.96	58.80	60.33	65.75	70.36	73.16	64.05	59.07	63.19	47.10
B. Biological treatment of solid waste	NO	NO	NO	0.09	0.14	0.19	0.20	0.32	0.32	0.29
C. Incineration and open burning of waste	0.04	0.06	0.06	0.08	0.18	0.24	0.14	0.09	0.09	0.00
D. Waste water treatment and discharge	2.70	2.56	2.50	2.52	2.61	2.01	1.93	1.97	1.77	1.77
E. Other	NO									
6. Other (as specified in the summary table in CRF)	NO									
Total CH4 emissions without CH4 from LULUCF	623.76	604.17	581.29	583.44	581.04	607.15	569.95	559.23	559.68	534.52
Total CH4 emissions with CH4 from LULUCF	640.64	620.59	601.11	610.53	598.86	635.17	594.82	578.00	583.09	559.56
Memo items:	0.01	0.07	0.04	0.01	0.01	0.04	0.07	0.07	0.07	0.05
International bunkers	0.06	0.07	0.06	0.06	0.06	0.06	0.07	0.05	0.05	0.05
Aviation	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.02	0.01	0.01
Navigation	0.05	0.05	0.05	0.05	0.04	0.05	0.04	0.03	0.04	0.03
Multilateral operations	NO									
CO2 emissions from biomass										
CO2 captured										
Long-term storage of C in waste disposal sites										
Indirect N2O										
Indirect CO2 (3)										

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
							%
1. Energy	12.96	12.41	11.73	10.77	10.41	10.64	-63.27
A. Fuel combustion (sectoral approach)	9.62	9.85	9.37	8.61	8.44	8.89	-56.62
1. Energy industries	0.29	0.28	0.28	0.23	0.28	0.27	0.53
2. Manufacturing industries and construction	0.39	0.34	0.35	0.32	0.32	0.32	20.92
3. Transport	1.14	1.01	0.89	0.82	0.74	0.70	-63.77
4. Other sectors	7.80	8.22	7.85	7.23	7.11	7.61	-57.85
5. Other	IE	IE	IE	IE	IE	IE	
B. Fugitive emissions from fuels	3.34	2.56	2.35	2.16	1.96	1.75	-79.35
1. Solid fuels	0.88	0.87	0.85	0.83	0.82	0.81	-63.74
2. Oil and natural gas and other emissions from energy production	2.46	1.69	1.51	1.32	1.14	0.94	-84.90
C. CO2 transport and storage							
2. Industrial processes	NO	NO	NO	NO	NO	NO	
A. Mineral industry							
B. Chemical industry	NO	NO	NO	NO	NO	NO	
C. Metal industry	NO	NO	NO	NO	NO	NO	
D. Non-energy products from fuels and solvent use	NO	NO	NO	NO	NO	NO	
E. Electronic industry							
F. Product uses as ODS substitutes							
G. Other product manufacture and use	NO	NO	NO	NO	NO	NO	
H. Other	NO	NO	NO	NO	NO	NO	
3. Agriculture	470.28	463.38	454.01	449.24	464.83	471.84	-7.11
A. Enteric fermentation	421.63	415.24	406.64	402.16	415.61	422.15	-7.07
B. Manure management	48.66	48.14	47.38	47.08	49.22	49.69	-7.45
C. Rice cultivation	NO	NO	NO	NO	NO	NO	
D. Agricultural soils	NE	NE	NE	NE	NE	NE	
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	NO	
F. Field burning of agricultural residues	NO	NO	NO	NO	NO	NO	
G. Liming							
H. Urea application							
I. Other carbon-containing fertilizers							
J. Other	NO	NO	NO	NO	NO	NO	
4. Land use, land-use change and forestry	23.86	19.80	37.81	37.96	19.16	23.99	26.38
A. Forest land	2.90	2.80	3.64	3.04	2.79	3.09	31.89
B. Cropland	0.00	0.00	0.01	0.01	0.00	0.00	2.03
C. Grassland	14.55	13.26	19.70	19.95	13.24	15.00	42.27
D. Wetlands	6.40	3.74	14.46	14.96	3.13	5.89	-3.24
E. Settlements	IE	IE	IE	IE	IE	IE	
F. Other land	NE	IE	IE	IE	IE	IE	
G. Harvested wood products							
H. Other	NO	NO	NO	NO	NO	NO	
5. Waste	45.01	39.03	39.55	43.72	40.37	46.81	-19.76
A. Solid waste disposal	42.59	36.48	37.05	41.17	37.82	44.24	-20.80
B. Biological treatment of solid waste	0.38	0.49	0.49	0.53	0.52	0.53	
C. Incineration and open burning of waste	0.00	0.00	0.00	0.02	0.00	0.00	-91.22
D. Waste water treatment and discharge	2.03	2.06	2.01	2.00	2.03	2.03	-16.75
E. Other	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	
Total CH4 emissions without CH4 from LULUCF	528.26	514.82	505.29	503.73	515.61	529.29	
Total CH4 emissions with CH4 from LULUCF	552.11	534.62	543.11	541.70	534.77	553.28	
Memo items:							
International bunkers	0.03	0.04	0.05	0.04	0.05	0.05	178.15
	0.01	0.01	0.01	0.01	0.01		

Aviation	0.01	0.01	0.01	0.01	0.01	0.01	-36.11
Navigation	0.02	0.03	0.04	0.03	0.04	0.04	685.75
Multilateral operations	NO	NO	NO	NO	NO	NO	
CO2 emissions from biomass							
CO2 captured							
Long-term storage of C in waste disposal sites							
Indirect N2O							
Indirect CO2 (3)							

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

^{*a*} The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

Custom Footnotes

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ^a	1990	1991	1992	1993	1994	1995	1996	1997
1. Energy	^{kt} 0.85	0.85	0.86	0.90	0.95	1.09	1.27	1.50	1.71
A. Fuel combustion (sectoral approach)	0.85	0.85	0.86	0.90	0.95	1.09	1.27	1.50	1.71
1. Energy industries	0.24	0.24	0.25	0.25	0.24	0.25	0.25	0.26	0.26
2. Manufacturing industries and construction	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
3. Transport	0.22	0.22	0.22	0.27	0.32	0.43	0.57	0.85	1.05
4. Other sectors	0.35	0.35	0.36	0.34	0.34	0.13	0.41	0.35	0.35
5. Other	IE	IE	IE	IE	IE	IE	IE	IE	IE
B. Fugitive emissions from fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO
1. Solid fuels	NO	NO	NO	NO	NO	NO	NO	NO	NO
 Solid rules Oil and natural gas and other emissions from energy production 	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. CO2 transport and storage	110	NO	no	110	110	110	110	110	no
2. Industrial processes	3.45	3.45	2.73	2.73	2.73	2.73	2.73	2.73	2.73
A. Mineral industry	5.45	5.45	2.15	2.15	2.15	2.15	2.13	2.15	2.13
B. Chemical industry	3.34	3.34	2.62	2.62	2.62	2.62	2.62	2.62	2.62
C. Metal industry	5.54	5.54	2.02	2.02	2.02	2.02	2.02	2.02	2.02
D. Non-energy products from fuels and solvent use	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Electronic industry	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Electronic industry F. Product uses as ODS substitutes									
	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
G. Other product manufacture and use	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
3. Agriculture A. Enteric fermentation	25.63	25.63	23.52	23.66	25.25	24.18	24.53	26.05	24.57
	1.00	1.66	1 70	1.71	1.70	1.72	1.74	1.01	1.07
B. Manure management	1.66	1.66	1.70	1.71	1.72	1.73	1.74	1.81	1.87
C. Rice cultivation	22.06	22.06	21.02	21.05	22.52	22.45	22.70	24.24	22.60
D. Agricultural soils	23.96	23.96	21.82	21.95	23.53	22.45	22.79	24.24	22.69
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field burning of agricultural residues	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Liming									
H. Urea application									
I. Other carbon containing fertlizers	NO	NO	NO	NO	NO	NO	NO	NO	NO
J. Other	NO	NO	NO	NO 0.45	NO	NO 0.57	NO	NO	NO
4. Land use, land-use change and forestry	0.49	0.49	0.49	0.47	0.54	0.57	0.65	0.75	0.64
A. Forest land	0.31	0.31	0.33	0.34	0.36	0.37	0.40	0.41	0.42
B. Cropland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Grassland	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.01	0.02
D. Wetlands	0.16	0.16	0.13	0.10	0.15	0.16	0.20	0.27	0.15
E. Settlements	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04
F. Other land	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02
G. Harvested wood products									
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Waste	0.32	0.32	0.32	0.33	0.33	0.32	0.32	0.32	0.32
A. Solid waste disposal									
B. Biological treatment of solid waste	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Incineration and open burning of waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Waste water treatment and discharge	0.32	0.32	0.32	0.33	0.32	0.32	0.31	0.31	0.32
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Total direct N2O emissions without N2O from LULUCF	30.25	30.25	27.43	27.61	29.25	28.32	28.85	30.59	29.33
Total direct N2O emissions with N2O from LULUCF	30.74	30.74	27.92	28.08	29.79	28.88	29.50	31.34	29.97
Memo items:									
International bunkers	0.04	0.04	0.04	0.03	0.05	0.04	0.05	0.05	0.06
Aviation	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04
Navigation	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Multilateral operations	NO	NO	NO	NO	NO	NO	NO	NO	NO

Multilateral operations	NO								
CO2 emissions from biomass									
CO2 captured									
Long-term storage of C in waste disposal sites									
Indirect N2O	NO, NE								
Indirect CO2 (3)									

Table 1(c) Emission trends (N₂O) (Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	1.04	1.24	1 20	1.25	1 20	1.40	1.25	1.40	1.40	1.27
1. Energy	1.94	1.24	1.30	1.35	1.38	1.40	1.35	1.40	1.40	1.37
A. Fuel combustion (sectoral approach)	1.94	1.24	1.30	1.35	1.38	1.40	1.35	1.40	1.40	1.37
1. Energy industries	0.25	0.26	0.26	0.28	0.32	0.35	0.31	0.34	0.36	0.39
2. Manufacturing industries and construction	0.05	0.05	0.05	0.06	0.05	0.06	0.06	0.07	0.07	0.06
3. Transport	1.29	0.58	0.63	0.64	0.63	0.62	0.62	0.61	0.60	0.57
4. Other sectors	0.35	0.36	0.37	0.37	0.37	0.38	0.36	0.39	0.37	0.36
5. Other	IE									
B. Fugitive emissions from fuels	NO									
1. Solid fuels	NO									
2. Oil and natural gas and other emissions from energy production	NO									
C. CO2 transport and storage										
2. Industrial processes	2.73	2.73	2.73	2.00	1.06	0.12	0.12	0.12	0.13	0.13
A. Mineral industry										
B. Chemical industry	2.62	2.62	2.62	1.89	0.94	NO	NO	NO	NO	NO
C. Metal industry										
D. Non-energy products from fuels and solvent use	NO									
E. Electronic industry										
F. Product uses as ODS substitutes										
G. Other product manufacture and use	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.13	0.13
H. Other	NO									
3. Agriculture	26.23	26.17	24.42	25.95	24.60	25.67	24.73	25.36	24.25	21.34
A. Enteric fermentation										
B. Manure management	1.91	1.84	1.76	1.77	1.77	1.76	1.76	1.77	1.75	1.72
C. Rice cultivation										
D. Agricultural soils	24.31	24.33	22.66	24.18	22.82	23.91	22.97	23.59	22.50	19.61
E. Prescribed burning of savannas	NO									
F. Field burning of agricultural residues	NO									
G. Liming										
H. Urea application										
I. Other carbon containing fertlizers										
J. Other	NO									
4. Land use, land-use change and forestry	0.62	0.64	0.72	0.87	0.78	0.96	0.95	0.91	1.03	1.08
A. Forest land	0.43	0.44	0.46	0.48	0.49	0.50	0.50	0.51	0.52	0.53
B. Cropland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Grassland	0.01	0.02	0.03	0.02	0.03	0.02	0.03	0.03	0.03	0.03
D. Wetlands	0.11	0.10	0.14	0.24	0.11	0.24	0.19	0.10	0.16	0.18
E. Settlements	0.04	0.04	0.06	0.09	0.10	0.13	0.16	0.19	0.18	0.21
F. Other land	0.03	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.13	0.13
G. Harvested wood products										
H. Other	NO									
5. Waste	0.34	0.35	0.36	0.38	0.39	0.40	0.40	0.41	0.42	0.42
A. Solid waste disposal										
B. Biological treatment of solid waste	NO	NO	NO	0.01	0.01	0.01	0.01	0.02	0.02	0.02
C. Incineration and open burning of waste	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00
D. Waste water treatment and discharge	0.33	0.35	0.35	0.36	0.37	0.38	0.38	0.38	0.39	0.39
E. Other	NO									
6. Other (as specified in the summary table in CRF)	NO									
Total direct N2O emissions without N2O from LULUCF	31.24	30.50	28.81	29.68	27.42	27.59	26.60	27.30	26.20	23.26
Total direct N2O emissions with N2O from LULUCF	31.86	31.14	28.81	30.55	27.42	28.55	20.00	27.30	20.20	23.20
Memo items:	51.00	51.14	27.34	50.55	20.21	20.33	21.33	20.20	21.22	24.34
International bunkers	0.06	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.10	0.11
Aviation	0.06	0.07	0.07	0.09	0.09	0.09	0.08	0.09	0.10	0.11
Navigation	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

IRL_BR2_v1.0

Navigation	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Multilateral operations	NO									
CO2 emissions from biomass										
CO2 captured										
Long-term storage of C in waste disposal sites										
Indirect N2O	NO, NE									
Indirect CO2 (3)										

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
							%
1. Energy	1.37	1.26	1.24	1.17	1.16	1.12	31.23
A. Fuel combustion (sectoral approach)	1.37	1.26	1.24	1.17	1.16	1.12	31.23
1. Energy industries	0.48	0.46	0.48	0.44	0.45	0.42	73.81
2. Manufacturing industries and construction	0.06	0.05	0.05	0.05	0.05	0.05	10.34
3. Transport	0.44	0.41	0.38	0.38	0.37	0.39	75.92
4. Other sectors	0.39	0.34	0.32	0.31	0.29	0.27	-23.75
5. Other	IE	IE	IE	IE	IE	IE	
B. Fugitive emissions from fuels	NO	NO	NO	NO	NO	NO	
1. Solid fuels	NO	NO	NO	NO	NO	NO	
2. Oil and natural gas and other emissions from energy production	NO	NO	NO	NO	NO	NO	
C. CO2 transport and storage							
2. Industrial processes	0.13	0.14	0.14	0.14	0.14	0.14	-96.00
A. Mineral industry							
B. Chemical industry	NO	NO	NO	NO	NO	NO	
C. Metal industry							
D. Non-energy products from fuels and solvent use	NO	NO	NO	NO	NO	NO	
E. Electronic industry							
F. Product uses as ODS substitutes	_						
G. Other product manufacture and use	0.13	0.14	0.14	0.14	0.14	0.14	31.01
H. Other	NO	NO	NO	NO	NO	NO	
3. Agriculture	21.90	22.73	23.27	21.95	23.08	22.25	-13.17
A. Enteric fermentation							
B. Manure management	1.72	1.71	1.66	1.64	1.72	1.74	4.42
C. Rice cultivation	1.72	1.71	1.00	1.04	1.72	1.74	1.12
D. Agricultural soils	20.18	21.01	21.61	20.31	21.37	20.51	-14.39
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	20.51 NO	-14.57
F. Field burning of agricultural residues	NO	NO	NO	NO	NO	NO	
G. Liming	NO	NO	NO	NO	NO	NO	
H. Urea application	_						
I. Other carbon containing fertlizers	_						
J. Other	NO	NO	NO	NO	NO	NO	
			1.39	1.36	1.09		
4. Land use, land-use change and forestry	1.17	1.11				1.15	134.09
A. Forest land	0.54	0.55	0.57	0.57	0.57	0.58	84.85
B. Cropland	0.00	0.00	0.00	0.00	0.00	0.00	2.03
C. Grassland	0.03	0.03	0.03	0.04	0.04	0.03	962.73
D. Wetlands	0.16	0.10	0.35	0.36	0.08	0.15	-7.20
E. Settlements	0.26	0.26	0.27	0.23	0.22	0.23	1,064.69
F. Other land	0.17	0.17	0.17	0.17	0.17	0.17	67,154.55
G. Harvested wood products							
H. Other	NO	NO	NO	NO	NO	NO	
5. Waste	0.43	0.44	0.44	0.44	0.44	0.44	35.51
A. Solid waste disposal							
B. Biological treatment of solid waste	0.03	0.04	0.04	0.04	0.04	0.04	
C. Incineration and open burning of waste	0.00	0.00	0.00	0.00	0.00	0.00	-56.75
D. Waste water treatment and discharge	0.40	0.40	0.40	0.40	0.40	0.40	24.12
E. Other	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	
Total direct N2O emissions without N2O from LULUCF	23.84	24.56	25.09	23.70	24.82	23.95	-20.83
Total direct N2O emissions with N2O from LULUCF	25.00	25.67	26.47	25.06	25.91	25.10	-18.35
Memo items:							
International bunkers	0.10	0.08	0.09	0.08	0.07	0.07	90.76

Aviation	0.09	0.07	0.08	0.07	0.06	0.06	65.54
Navigation	0.01	0.01	0.01	0.01	0.01	0.01	685.75
Multilateral operations	NO	NO	NO	NO	NO	NO	
CO2 emissions from biomass							
CO2 captured							
Long-term storage of C in waste disposal sites							
Indirect N2O	NO, NE						
Indirect CO2 (3)							

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

^{*a*} The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

Custom Footnotes

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year ^a	1990	1991	1992	1993	1994	1995	1996	1997
	kt 0.71	0.51	10.62	21.24	12 (2)	52.41	100 50	225 01	217.01
Emissions of HFCs and PFCs - (kt CO2 equivalent)	0.71	0.71	10.63	21.34	43.68	73.41	138.73	237.81	347.94
Emissions of HFCs - (kt CO2 equivalent)	0.59	0.59	0.76	1.73	4.57	14.79	41.12	104.52	178.93
HFC-23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-32	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-41	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-43-10mee	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-125	NO	NO	NO	NO	NO	NO	NO	NO	0.00
HFC-134	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-134a	NO	NO	NO	0.00	0.00	0.01	0.03	0.07	0.11
HFC-143	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-143a	NO	NO	NO	NO	NO	NO	NO	NO	0.00
HFC-152	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-152a	NO	NO	NO	NO	NO	0.00	0.00	0.00	0.00
HFC-161	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-227ea	NO	NO	NO	NO	NO	NO	NO	0.00	0.00
HFC-236cb	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-236ea	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-236fa	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-245ca	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-245fa	NO	NO	NO	NO	NO	NO	NO	NO	NO
HFC-365mfc	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of HFCs(4) - (kt CO ₂ equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emissions of PFCs - (kt CO2 equivalent)	0.12	0.12	9.87	19.62	39.11	58.61	97.61	133.29	169.01
CF_4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C_2F_6	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
C ₃ F ₈	NO	NO	NO	NO	NO	NO	NO	NO	NO
C_4F_{10}	NO	NO	NO	NO	NO	NO	NO	NO	NO
$c-C_4F_8$	NO	NO	NO	NO	NO	NO	NO	NO	NO
C ₅ F ₁₂	NO	NO	NO	NO	NO	NO	NO	NO	NO
C ₆ F ₁₄	NO	NO	NO	NO	NO	NO	NO	NO	NO
C10F18	NO	NO	NO	NO	NO	NO	NO	NO	NO
c-C3F6	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of PFCs(4) - (kt CO ₂ equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Unspecified mix of HFCs and PFCs - (kt CO2 equivalent)	NO	NO	NO	NO	NO	NO	NO	NO	NO
Emissions of SF6 - (kt CO2 equivalent)	33.88	33.88	38.87	43.86	52.90	61.95	79.11	97.46	126.12
SF ₆	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Emissions of NF3 - (kt CO2 equivalent)	NO	NO	NO	NO	NO	NO	4.37	4.72	6.11
NF3	NO	NO	NO	NO	NO	NO	0.00	0.00	0.00

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

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Emissions of HFCs and PFCs - (kt CO2 equivalent)	307.70	494.31	701.36	733.16	701.97	875.33	967.60	1,155.67	1,166.64	1,152.15
Emissions of HFCs - (kt CO2 equivalent) Emissions of HFCs - (kt CO2 equivalent)	228.48	239.48	303.60	353.64	434.07	589.38	732.79	939.29	975.68	984.05
HFC-23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-41	NO	0.02 NO	NO							
HFC-43-10mee	NO									
HFC-125	0.00	0.00	0.01	0.01	0.02	0.03	0.05	0.06	0.07	0.07
HFC-125 HFC-134	NO	0.07 NO	0.07 NO							
HFC-134 HFC-134a	0.15	0.14	0.16	0.17	0.18	0.22	0.23	0.28	0.29	0.29
HFC-154a HFC-143	0.13 NO	NO	0.10 NO	0.17 NO	NO	0.22 NO	0.23 NO	0.28 NO	0.29 NO	0.29 NO
HFC-143 HFC-143a	0.00		0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.06
HFC-145a HFC-152	0.00 NO	0.00 NO	0.00 NO	NO	0.02 NO	0.03 NO	0.04 NO	0.00 NO	0.08 NO	0.06 NO
HFC-152a HFC-161	0.00	0.00	0.00 NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NO	NO 0.00		NO 0.00	NO	NO 0.01	NO	NO 0.01	NO	NO
HFC-227ea	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
HFC-236cb	NO									
HFC-236ea	NO									
HFC-236fa	NO									
HFC-245ca	NO									
HFC-245fa	NO									
HFC-365mfc	NO									
Unspecified mix of HFCs(4) - (kt CO_2 equivalent)	NO									
Emissions of PFCs - (kt CO2 equivalent)	79.22	254.82	397.76	379.51	267.89	285.95	234.81	216.39	190.96	168.10
CF ₄	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
C_2F_6	0.01	0.02	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01
C_3F_8	NO									
C_4F_{10}	NO									
c-C ₄ F ₈	NO	NO	NO	NO	0.00	0.00	0.00	0.00	0.00	0.00
C ₅ F ₁₂	NO									
C_6F_{14}	NO									
C10F18	NO									
c-C3F6	NO									
Unspecified mix of $PFCs(4)$ - (kt CO_2 equivalent)	NO									
Unspecified mix of HFCs and PFCs - (kt CO2 equivalent)	NO									
Emissions of SF6 - (kt CO2 equivalent)	88.74	64.19	51.76	64.63	64.48	109.95	65.34	96.78	60.21	62.94
SF ₆	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions of NF3 - (kt CO2 equivalent)	4.19	3.79	49.17	21.78	46.58	46.63	18.08	28.38	28.21	37.67
NF3	0.00	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 SF₆) (Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
							%
Emissions of HFCs and PFCs - (kt CO2 equivalent)	1,264.44	1,191.72	1,174.22	1,163.85	1,145.03	1,285.06	180,444.46
Emissions of HFCs - (kt CO2 equivalent)	1,128.30	1,108.08	1,127.64	1,147.98	1,135.47	1,276.74	215,565.03
HFC-23	0.00	0.00	0.00	0.00	0.00	0.00	479.28
HFC-32	0.02	0.02	0.03	0.02	0.03	0.03	
HFC-41	NO	NO	NO	NO	NO	NO	
HFC-43-10mee	NO	NO	NO	NO	NO	NO	
HFC-125	0.08	0.08	0.09	0.09	0.09	0.11	
HFC-134	NO	NO	NO	NO	NO	NO	
HFC-134a	0.32	0.33	0.33	0.33	0.32	0.33	
HFC-143	NO	NO	NO	NO	NO	NO	
HFC-143a	0.07	0.06	0.06	0.07	0.07	0.08	
HFC-152	NO	NO	NO	NO	NO	NO	
HFC-152a	0.00	0.00	0.00	0.00	0.00	0.00	
HFC-161	NO	NO	NO	NO	NO	NO	
HFC-227ea	0.01	0.01	0.01	0.01	0.01	0.01	
HFC-236cb	NO	NO	NO	NO	NO	NO	
HFC-236ea	NO	NO	NO	NO	NO	NO	
HFC-236fa	NO	NO	NO	NO	NO	NO	
HFC-245ca	NO	NO	NO	NO	NO	NO	
HFC-245fa	NO	NO	NO	NO	NO	NO	
HFC-365mfc	NO	NO	NO	NO	NO	NO	
Unspecified mix of HFCs(4) - (kt CO_2 equivalent)	NO	NO	NO	NO	NO	NO	
Emissions of PFCs - (kt CO2 equivalent)	136.14	83.63	46.58	15.88	9.56	8.32	6,850.28
CF_4	0.00	0.00	0.00	0.00	0.00	0.00	16,566.67
C_2F_6	0.01	0.01	0.00	0.00	0.00	0.00	1,700.00
C_3F_8	NO	NO	NO	NO	NO	NO	
C_4F_{10}	NO	NO	NO	NO	NO	NO	
c-C ₄ F ₈	0.00	0.00	0.00	0.00	0.00	0.00	
C_5F_{12}	NO	NO	NO	NO	NO	NO	
C_6F_{14}	NO	NO	NO	NO	NO	NO	
C10F18	NO	NO	NO	NO	NO	NO	
c-C3F6	NO	NO	NO	NO	NO	NO	
Unspecified mix of PFCs(4) - (kt CO_2 equivalent)	NO	NO	NO	NO	NO	NO	
Unspecified mix of HFCs and PFCs - (kt CO2 equivalent)	NO	NO	NO	NO	NO	NO	
Emissions of SF6 - (kt CO2 equivalent)	54.69	39.18	33.08	45.45	37.39	43.53	28.50
SF ₆	0.00	0.00	0.00	0.00	0.00	0.00	28.50
Emissions of NF3 - (kt CO2 equivalent)	NO	NO	NO	NO	0.78	0.90	
NF3	NO	NO	NO	NO	0.00	0.00	

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

^a The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

^cEnter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this be provided in the documentation box. Only in these rows are the emissions expressed as CO2 equivalent emissions.

^dIn accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories", HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is kt of CO2 equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.)

Custom Footnotes

Documentation Box:

Table 2(a)

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

Party	Ireland	
Base year /base period	1990	
Emission reduction target	% of base year/base period	% of 1990 ^b
	20.00	
Period for reaching target	BY-2020	

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

^b Optional.

Table 2(b)IRL_BR2_v1.0Description of quantified economy-wide emission reduction target: gasesand sectors covered a

Ga	ses covered	Base year for each gas (year):					
CO ₂		1990					
CH ₄		1990					
N ₂ O		1990					
HFCs		1990					
PFCs		1990					
SF ₆		1990					
NF ₃							
Other Gases (specify)		·					
Sectors covered ^b	Energy	Yes					
Sectors covered ^b	Transport ^f	Yes					
	Industrial processes ^g	Yes					
	Agriculture	Yes					
	LULUCF	Yes					
	Waste	Yes					
	Other Sectors (specify)						
	Aviation in the scope of EU-ETS	No					

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

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

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

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

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

Table 2(c)IRL_BR2_v1.0Description of quantified economy-wide emission reduction target: globalwarming potential values $(GWP)^a$

Gases	GWP values ^b
CO ₂	4th AR
CH ₄	4th AR
N ₂ O	4th AR
HFCs	4th AR
PFCs	4th AR
SF ₆	4th AR
NF ₃	4th AR
Other Gases (specify)	- -

Abbreviations : GWP = global warming potential

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

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

Table 2(d)

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

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

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

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

Table 2(e)I IRL_BR2_v1.0 Description of quantified economy-wide emission reduction target: market-based mechanisms under the Convention^a

Market-based mechanisms	Possible scale of contributions						
under the Convention	(estimated kt CO $_2$ eq)						
CERs	NA						
ERUs	NA						
AAUs ⁱ	NA						
Carry-over units ^j							
Other mechanism units under the Convention (specify) ^d							

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

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

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

^{*i*} AAUs issued to or purchased by a Party.

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

Table 2(e)II IRL_BR2_v1.0 Description of quantified economy-wide emission reduction target: other market-based mechanisms^a

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

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

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

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

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

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

Custom Footnotes

Inprinciple, the EU ETS should cover CO2 emissions of all flights arriving at, and departing from, airports in all EU Member States, Norway, Iceland and Liechtensteinand closely related territories. However, since 2012, flights to and from aerodromes from other countrieshave not been included in the EU ETS. This exclusion was taken in order to facilitate negotiation of a globalagreement to address aviation emissions in the forum of the International CivilAviation Organisation (ICAO). The EU has decided on a reduced scope in the2013–2016 period (Regulation (EU) No 421/2014 of the European Parliament and of the Council of 16 April 2014)

Use of CER and ERU cannot be quantified at the time of reporting.

Name of mitigation action ^a	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO $_2$ eq)		
									2020	2025	2030
Large Industry Energy Programme*	Industry/industria l processes, Energy	CO ₂ , CH ₄ , N ₂ O	Develop and maintain robust energy management in industry.	Voluntary Agreement	Implemented	The Large Industry Energy Network (LIEN) is a voluntary network, facilitated by the Sustainable Energy Authority of Ireland, of companies working to maintain strong energy management and environmental protection practices.	2000	Sustainable Energy Authority of Ireland	417.92	417.92	417.93
Accelerated Capital Allowance for energy efficient equipment*	Energy, Industry/industria l processes	CO ₂ , CH ₄ , N ₂ O	The Accelerated Capital Allowance (ACA) is a tax incentive introduced by the Government in the Finance Act, 2008, to encourage companies to buy energy- efficient equipment.		Implemented	The Accelerated Capital Allowance for Energy Efficiency Equipment (ACA), introduced in 2008, aims to improve the energy efficiency of Irish companies by encouraging them to purchase energy saving technologies. The ACA is a tax incentive for companies paying corporation tax and aims to encourage investment in energy efficient equipment. The ACA offers an attractive incentive whereby it allows companies to write off 100% of the purchase value of qualifying energy efficient equipment against their profit in the year of purchase		Department of Finance; The Office of the Revenue Commissioners	119.34	119.34	119.34
Better Energy Workplaces - Public and Business sectors*	Energy, Industry/industria l processes	CO ₂ , CH ₄ , N ₂ O	Deliver a major increase in the pace, scale and depth of sustainable energy investments in upgrading existing buildings and facilities	Economic	Implemented	Stimulating energy-saving actions in the business and public sectors. Support was available for sustainable energy upgrades to buildings, services, facilities and processes, involving investment actions comprising individual or packaged measures, aimed at achieving on-going and lasting energy savings. Projects entailing upgrades to thermal, electrical or transport energy performance are all considered eligible. In addition the wider programme helps businesses and the public sector to improve their energy efficiency and competitiveness through networking, training and advisory programmes and integration of energy management into workplaces	2011	Sustainable Energy Authority of Ireland	101.15	101.05	99.75
CHP Deployment - Public and Business Sectors*	Energy	CO ₂ , CH ₄ , N ₂ O	The CHP Deployment programme provided grants for selected renewable and alternative heat sources and was designed to prime the market and to establish a supply chain.	Economic	Implemented	The CHP Deployment programme provided grant aid towards the installation of small scale CHP, up to 1 MWe at sites with a suitable heat load. The CHP programme acted as a demonstration and market priming programme which increased the capacity of the supply chain.	2006	Sustainable Energy Authority of Ireland	149.15	149.15	149.15

Name of mitigation action ^a	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO $_2$ eq)			
									2020	2025	2030	
Renewable Heat (ReHeat) Deployment Programme - Public and Business Sectors*	Energy		The ReHeat programme provided grant aid towards the installation of renewable and alternative heating technologies in the tertiary sector.		Implemented	The ReHeat programme provided grants for selected renewable and alternative heat sources and was designed to prime the market and to establish a supply chain.	2008	Sustainable Energy Authority of Ireland	100.5	100.5	100.5	
Commercial/Industry Sector Retrofit	Energy, Industry/industria l processes	CO ₂ , CH ₄ , N ₂ O	Stimulating energy-saving actions in the business (commercial and industrial) sectors.	Economic	Planned	In accordance with Artciel 7 of the Energy Efficiency Directive (2012/27/EU), Ireland will implement an Energy Supplier Obligation with an annual target currently set at 550GWh per annum. A portion of these savings will be achieved in the commercial/industrial sectors.	2014	Department of Communications, Energy and Natural Resources; Sustainable Energy Authority of Ireland	478.84	422.14	437.74	
Carbon Tax*	Energy, Transport, Industry/industria I processes, Cross-cutting		Cross sectoral tax on fuel used for heating and transport.	Fiscal	Implemented	Incorporate a price signal for carbon in the non- emissions trading sector, specifically fuels used for heating and transport. The tax applies to petrol, diesel,kerosene, marked gas oil (for agricultural use), Liquid Petroleum Gas (LPG), fuel oil, natural gas, coal and commercial peat.	2008	Office of the Revenue Commissioners	325.05	325.07	325.03	
Public Sector Retrofit (including Sustainable Energy Authority of Ireland Public Sector Programme)	Energy		10	Economic Inform ation Education	Planned	Implementation of measures to enable the public sector contribute to its requirements under the national target of increasing energy efficiency nationally by 20% by 2020. Sustainable Energy Authority of Ireland calculates savings based on on- going programme monitoring. In 2014, a new monitoring and reporting system was established, collecting electricity (and gas) meter data from 40,000 meters.	2011	Department of Communications, Energy and Natural Resources; Sustainable Energy Authority of Ireland.	497.16	454.66	459.76	

Name of mitigation action ^a	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities		imate of mitigation cumulative, in kt C	-
									2020	2025	2030
Supports for Exemplar Energy Efficiency Projects (SEEEP) and Energy Efficiency Retrofit Fund (EERF) - Public and Business Sectors*	Energy	CO ₂ , CH ₄ , N ₂ O	The Supports for Exemplar Energy Efficiency Projects (SEEEP) programme aimed to achieve significant energy efficiency gains through increasing the capability of the supply chain and stimulating direct employment focusing on energy efficiency projects. The Energy Efficiency Retrofit Fund (EERF) provided for funding towards the implementation of a limited number of qualifying energy efficiency projects	Economic	Implemented	Projects installed across a range of technologies, including lighting and controls, building fabric upgrades, heating systems and controls, ventilation controls, variable speed drives and others. The EERF programme closed in August 2010. Funding under the SEEEP programme provided for c.35% for private projects and c.50% for public sector projects. Support under the EERF programme provided for typically 35% funding for private projects and 50% up to 80 % funding for public projects. Projects funded provide demonstration and development of techniques for energy savings in commercial and public buildings	2009	Department of Communications, Energy and Natural Resources	40.37	40.37	40.27
Public Sector Building Demonstration Programme*	Energy	CO ₂ , CH ₄ , N ₂ O	The Public Sector Building Demonstration Programme offered financial support to public and commercial sector organisations to stimulate the innovative application of sustainable energy design strategies, technologies and services in new and retrofit projects, acting as both an exemplar for good practice and as a demand leader for the services and technologies involved	ation Research E		Funding under Public Sector Building Demonstration Programme was provided for new and retrofit public sector buildings via three main elements: Design Support, Model Solutions Investment Support, Energy Management Bureau Services (support made available for outsourced energy management to monitor and report on energy control and management). Savings based on individual projected reductions in energy consumption for the range of projects funded. Calculated on the basis of, for example, number of lights to be replaced, demand reduction through building fabric improvements etc. A consequent multiplication effect is the development of the capacity for energy efficient retrofit of public sector buildings.	2001	Department of Communications, Energy and Natural Resources; Sustainable Energy Authority of Ireland	19.86	19.86	19.86
Small and Medium Enterprises (SME) Programme*	Energy	CO ₂ , CH ₄ , N ₂ O	To promote reduced energy use in small and medium enterprises	Other (Information)	Implemented	The programme aims to increase energy efficiency in small and medium enterprises through providing advice, mentoring and training to participating enterprises. Participating companies report on energy savings via their Sustainable Energy Authority of Ireland appointed energy advisor. These reports are collated and analysed to monitor savings	2008	Sustainable Energy Authority of Ireland	75.68	75.68	75.68

Name of mitigation actio	n ^a	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities		nate of mitigation in cumulative, in kt CC	1
										2020	2025	2030
2012 Building Regulations: Part L Conservation of fuel and energy - Buidlings other than dwellings	j	Energy	CO ₂ , CH ₄ , N ₂ O	The objective of this measure is to impose minimum efficiency standards for new buildings other than dwellings.	Regulatory	Planned	The 2012 Building Regulations revision for Buildings other than dwellings are planned to improve minimum standards set in previous regulations (2005): Insulation levels in building fabric; Ventilation and air infiltration; Avoidance of excessive solar gain; Thermal bridging reduction; Heating plant efficiency and control; Air- conditioning plant efficiency; Insulation of hot water storage vessels, pipes and ducts. In addition a minimum overall performance will be set on the Energy Performance Co-efficient (EPC) and Carbon Performance Coefficient (CPC). The maximum EPC will be set at a 40% improvement on an equivalent building built to 2005 Regulations.		Department of Environment, Community and Local Government.	125.47	125.47	125.47
2005 Building Regulations Part L Conservation of fuel and energy - Buildings other than dwellings*]	Energy	CO ₂ , CH ₄ , N ₂ O	The measure imposes minimum efficiency standards for new buildings other than dwellings which were built since 2005.	Regulatory	Implemented	The 2005 Building Regulations revision for Buildings other than dwellings improved minimum standards set in previous regulations: Insulation levels in building fabric; Ventilation and air infiltration; Avoidance of excessive solar gain; Thermal bridging reduction; Heating plant efficiency and control; Air-conditioning plant efficiency; Insulation of hot water storage vessels, pipes and ducts. The 2005 Regulations identified in this measure are used as a benchmark to assess savings.		Department of Environment, Community and Local Government.	60.56	60.56	60.56
2002 Building Regulations Part L Conservation of fuel and energy in dwellings*]	Energy	CO ₂ , CH ₄ , N ₂ O	The measure imposes minimum efficiency standards for new dwellings from 2002 onwards. The 2002 Part L Building Regulations was the first in a series of incrementally improved efficiency standards which is now moving towards low to zero carbon housing.	Regulatory	Implemented	The 2002 Part L Building Regulations imposed minimum standards in: Insulation levels in building fabric; Ventilation and air infiltration; Thermal bridging reduction; Heating and hot water system controls; Insulation of hot water storage vessels, pipes and ducts. The 2002 Part L Building Regulations was the first in a series of incrementally improved efficiency standards which is now moving towards low to zero carbon housing.	2003	Department of Environment, Community and Local Government.	308.95	308.95	308.95
2008 Building Regulations Part L Conservation of Fuel and Energy in Dwellings*]	Energy	CO ₂ , CH ₄ , N ₂ O	The 2008 Part L Building Regulations for Dwellings were one of a series of incrementally improved efficiency standards which is now moving towards low to zero carbon housing.	Regulatory	Implemented	The 2008 Building Regulations imposed minimum standards in: Renewables requirements; Insulation levels in building fabric; Ventilation and air infiltration; Thermal bridging reduction; Heating and hot water system controls; Insulation of hot water storage vessels, pipes and ducts; Overall Energy Performance Co-efficient (EPC) and Carbon Performance Co-efficient (CPC). The maximum EPC is set as a 40% improvement on an equivalent dwelling built to 2002 Regulations.	2008	Department of Environment, Community and Local Government	262.69	262.69	262.69

Name of mitigation action	a Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities		aate of mitigation in umulative, in kt CO	-
									2020	2025	2030
2011 Building Regulations Part L Conservation of Fuel and Energy in Dwellings	Energy	CO ₂ , CH ₄ , N ₂ O	The 2011 Part L Building Regulations for dwellings are one of a series of incrementally improved efficiency standards which is moving towards low to zero carbon housing. The measure imposes minimum efficiency standards for new dwellings.	Regulatory	Planned	The 2011 Part L Building Regulations improve minimum standards set in previous regulations: Insulation levels in building fabric; Ventilation and air infiltration; Thermal bridging reduction; Heating and hot water system controls; Insulation of hot water storage vessels, pipes and ducts. In addition a minimum overall performance is set on the Specific Energy Consumption, defined in the regulations as the Energy Performance Co-efficient (EPC) and Carbon Performance Coefficient (CPC). The maximum EPC is set as a 60% improvement on equivalent dwelling built to 2002 Regulations.	2012	Department of Environment, Community and Local Government	105.36	105.36	105.36
Building Regulations - Nearly Zero Energy Dwellings	Energy	CO ₂ , CH ₄ , N ₂ O	The planned 'Nearly Zero Energy Dwellings - Domestic Building Regulations' revision will occur in accordance with the re-cast of the European Union Energy Performance of Buildings Directve which is to occur in or around 2016.		Planned	This measure is the last of a planned series of incrementally improved efficiency standards and will reflect near zero carbon and energy housing before 2020. The planned measure will impose minimum efficiency standards for new dwellings to improve minimum standards set in previous regulations: Insulation levels in building fabric; Ventilation and air infiltration; Thermal bridging reduction; Heating and hot water system controls; Insulation of hot water storage vessels, pipes and ducts. In addition a minimum overall performance will be set on the Energy Performance Co-efficient (EPC) and Carbon Performance Coefficient (CPC). The maximum EPC will be set as a 70% improvement on an equivalent dwelling built to 2002 Regulations.	2016	Department of Environment, Community and Local Government	33.01	33.01	33.01
Energy Efficient Boiler Regulation*	Energy	CO ₂ , CH ₄ , N ₂ O	The measure set a minimum seasonal efficiency of 86% for boilers installed in existing or new dwellings from 2008 and 90% from 2011.	Regulatory	Implemented	The 2008 Part L Building Regulations imposed a minimum boiler efficiency of 86% for all boilers installed in new or existing buildings. This was further improved to a minimum boiler efficiency of 90% in 2011 Building Regulations. Energy savings are predicted bottom up model of energy use in domestic boilers and an assumed replacement rate (based on a 25 year lifetime) of existing boilers.	2008	Department of Environment, Community and Local Government.	286.46	286.46	286.46
Domestic Lighting (Eco-Design Directive 2009/125/EC) *	Energy	CO ₂ , CH ₄ , N ₂ O	The measure is a phasing out of incandescent lights through the Energy related Products Directive (2009/125/EC) and Commission Regulation (EC) No 244/2009.	Regulatory	Implemented	Commission Regulation (EC) No 244/2009 of 18 March 2009 implements Directive 2005/32/EC (superseded by Directive 2009/125/EC) with regard to eco-design requirements for non- directional household lamps. The regulation provides for the phased introduction of minimum efficiency standards for lamps and effectively phases out incandescent lamps.	2008	Department of Enterprise, Trade and Innovation.	83.9	83.8	80.6

Name of mitigation actio	n^{a} Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities		nate of mitigation in cumulative, in kt CO	•
									2020	2025	2030
Greener Homes Scheme*	Energy	CO ₂ , CH ₄ , N ₂ O	The measure provided grant aid for the installation of renewable domestic heating systems.	Economic Volunt ary Agreement Infor mation Education	-	Grant assistance was provided towards the purchase of certain energy efficient and renewable energy heating appliances for the domestic sector. These were: Heat pumps (ground source, air source and water source); Biomass boilers (wood pellet boilers, wood pellet stoves, wood pellet stoves with integral boiler and gasification boilers); Solar thermal systems. A list of qualifying products that meet the requirements of relevant EN standards and defined performance characteristics was developed. Similarly a list of registered installers who had received appropriate training and demonstrated competency was developed. The greener homes scheme was limited to existing dwellings once new building regulations were enacted, and there is therefore no potential overlap with measures to promote renewables in new buildings. The Greener Homes Scheme was instrumental in developing the supply and installer base for energy efficient and renewable heating technologies and enabling the Building Regulations to be revised.		Sustainable Energy Authority of Ireland	25.07	25.07	25.07
Better Energy Warmer Homes Scheme*	Energy	CO ₂ , CH ₄ , N ₂ O		Economic Volunt ary Agreement Infor mation Education	-	The measure involves the installation of standard energy efficiency measures appropriate to the elegible household subject to a survey conducted by Sustainable Energy Authority of Ireland, budget allocation and available capacity. The service is provided at no cost to the household and the measures avaiable under the scheme are : attic insulation; draught proofing; lagging jackets, low energy light bulbs, cavity wall insulation and energy advice.	2000	Sustainable Energy Authority of Ireland	31.34	31.35	31.34
Home Energy Saving Scheme*	Energy	CO ₂ , CH ₄ , N ₂ O	The measure provides funding for the installation of approved building fabric and energy efficient heating system upgrades in existing dwellings.		Implemented	The Home Energy Saving (HES) scheme provided assistance to homeowners who were interested in improving the energy efficiency of their home in order to reduce energy use and costs as well as greenhouse gas emissions. Assistance was provided by way of fixed grants towards the costs of implementing upgrade measures. The types of measures eligible under this scheme were roof insulation, wall insulation and heating system upgrades. There was also a grant for households who choose to get a Building Energy Rating (BER) assessment before and after the works are completed.		Sustainable Energy Authority of Ireland	84.77	84.77	84.76

Name of mitigation action ⁶	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities		nate of mitigation cumulative, in kt C	-
									2020	2025	2030
Smart Meter roll-out	Energy	CO ₂ , CH ₄ , N ₂ O	e		Planned	Smart meters offer a range of benefits for both the electricity and gas consumer and the installation of smart metering will allow electricity and gas suppliers to create innovative pricing arrangements that can be offered to customers to support the efficient use of electricity and gas, such as time-of use tariffs.		Department of Communications, Energy and Natural Resources; Commission for Energy Regulation.	88.9	62.4	65.0
Residential Retrofit	Energy	CO ₂ , CH ₄ , N ₂ O	Stimulating energy- efficiency actions to reduce energy usage by homeowners and the general public.	Economic Educat ion Information	t Planned	The measure provides funding for the installation of approved building fabric and energy efficient heating system upgrades in existing dwellings. In accordance with Article 7 of the Energy Efficiency Directive (2012/27/EU). Ireland will implement an Energy Supplier Obligation with an annual target currently set at 550GWh per annum. A portion of these savings will be achieved in the residential sector. An official Building Energy Rating (BER) is completed on each home which receives an upgrade detailing all energy efficiency measures carried out on the house	2011	Department of Communications, Energy and Natural Resources; Sustainable Energy Authority of Ireland.	732.97	726.58	727.29
Public Transport Efficiency*	Transport	CO ₂ , CH ₄ , N ₂ O	The aim of the measure is to promote efficiency in the public transport system including: Eco-driving in buses; Efficiency in suburban electric rail; Efficiency in national rail network.	Agreement Infor	Implemented	The semi-state group of public transport companies (Coras Iompair Eireann) generate around 230 million passenger journeys by bus each year, and over 40 million passenger journeys by rail. Since 2009 a range of programmes aimed at improving energy efficiency have taken place: Eco-driving within Dublin Bus and Bus Eireann; Diesel trains in the Irish Rail fleet have cut their fuel use by up to 6% through more efficient schedules and automatic train engine shutdowns; Electric trains in the Dublin area are saving over 20% as a result of a switch to lower voltage supply and regenerative breaking technologies.		Irish Rail; Bus Eireann; Dublin Bus; Sustainable Energy Authority of Ireland.	41.56	41.59	41.0

Name of mitigation actio	n ^a	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected		Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities		mate of mitigation i cumulative, in kt Co	-
										2020	2025	2030
Electric Vehicle Deployment	Tı	ransport	CO ₂ , CH ₄ , N ₂ O	Grant support and favourable road tax and vehicle registation tax rates for new electric vehicles.		Planned	Electric vehicles were identified as an important element in efforts to achieve both energy efficiency and renewable energy targets as part of the EU Climate and Energy Package. In response 1,000 publicly accessible charge points were aimed to be in place in 2014 including 70 fast chargers along all major inter urban routes in Ireland to facilitate the adoption of electric vehicles. Specific measures include: information campaigns, installation of the charging infrastructure and $\varepsilon_{2,000} - \varepsilon_{5,000}$ grant for new purchases of electric cars to stimulate activity. It is aimed to have 50,000 electric vehicles on Irish roads by 2020.		Department of Communications, Energy and Natural Resources; Sustainable Energy Authority of Ireland.	- 27.35	- 11.24	- 13.43
Vehicle Registration Tax and Annual Motor Tax*	Tı	ransport	2	e e	Regulatory Educa tion Fiscal	Implemented	Seven emission bands exist, ranging from A-G, of specific CO2 emissions were defined and all new cars are categorised within these bands. Vehicle registration tax and annual motor tax are then applied according to the cars specific CO2 emission categorisation. The measure is a reweighting of vehicle registration tax and annual motor tax to favour more energy efficient cars.	2008	Department of Finance	172.19	172.28	172.34
Improved fuel economy of the private car fleet (Regulation 443/2009/EU)*	Tı	ransport	CO ₂ , CH ₄ , N ₂ O	The EU, through Regulation 443/2009 has mandated an improvement in average new car efficiency to 130 g CO2/km by 2015 with a target of 95 g CO2/km for 2020.	Regulatory	Implemented	The EU, through Regulation 443/2009 has mandated an improvement in average new car efficiency to 130 g CO2/km by 2015 with a target of 95 g CO2/km for 2020.	2012	European Commission; National Standards Authority of Ireland.	908.07	908.53	908.85
More efficient road traffic movements	Tr	ransport	CO ₂ , CH ₄ , N ₂ O	The promotion of eco- driving techniques has been demonstrated to achieve significant on-road energy savings and to be successful in reducing the gap between observed on- road energy use and emissions and standard test cycle emissions.	Voluntary Agreement Infor mation Education	Adopted	It is proposed that the construction of motorways and other high-quality road infrastructure will allow long-distance inter-urban vehicle movements to take place in a more fuel efficient manner. As vehicles can maintain higher gears and therefore lower revolutions for prolonged periods, with less need for braking/re-acceleration, fuel economy is maximised. It is planned to launch an awareness campaign and driver skills development programme to promote energy efficient driving behaviour	2010	Department of Environment, Community and Local Government; Department of Transport, Tourism and Sport.	121.14	121.2	121.24

Name of mitigation action	n ^a	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities		nate of mitigation i cumulative, in kt Co	-
Aviation Efficiency*	T	Fransport		The aim of this measure is to reduce fuel consumption and CO2 emissions (per revenue tonne kilometer) by at least 25% by 2020, compared to 2005 levels in aviation.	Voluntary Agreement	Implemented	The Irish and UK National Supervisory Authorities (NSAs) created the UK-Ireland Functional Airspace Block in 2008 to help reduce fragmentation of air navigation service provision across Europe. The primary objective of UK- Ireland Functional Airspace Block (FAB) is to reduce costs to airspace users and increase the efficiency of FAB airspace. Through this objective, the FAB is aiming to contribute to the European Union's SES performance targets regarding safety, cost efficiency, capacity/delay and the environment. In the first four years it has delivered over €70m of enabled savings to customers, including 232,000 tonnes of CO2 and 73,000 tonnes of fuel.		Irish Aviation Authority; UK National Air Traffic Services.	2020 66.51	2025 66.54	2030 66.5
Reduction in natural gas combusted at compressor stations for natural gas pipeline transport	Т	Fransport		demand under the with	Other (Non climate related policy)	Planned	This reduction in emissions arise due to the reduced demand for natural gas in the with additional measures scenario when compared to the with measures scenario. Therefore the natural gas used in compressors stations along the pipeline is reduced in the with additional measures compared to the with measures scenario.	2014	Bord Gais Energy; Department of Communications, Energy and Natural Resources	23.91	28.61	33.3
Energy Efficiency in Electricity Generation*	E	Energy		Investment in new, efficient power generation plant and renewable electricity generation. This measure includes the promotion and prioritising energy efficiency in investment decisions for new generation plant, promoting competition in the All-Island Single Electricity Market and providing incentives to encourage large energy users to reduce peak energy use.	Economic	Implemented	This measure includes the promotion and prioritising energy efficiency in investment decisions for new generation plant, promoting competition in the All-Island Single Electricity Market and providing incentives to encourage large energy users to reduce peak energy use.	2008	Department of Communications, Energy and Natural Resources; Commission for Energy Regulation.	979.11	1028.27	1028.3
Energy Efficiency in Electricity Transmission and Distribution*	E	Energy		Upgrades to the electricity transmission and distribution networks to improve efficiency.	Economic	Implemented	Approximately 8% of energy input into the production of electricity for the end user is lost through transformers, overhead lines and underground cables in the electricity transmission and distribution networks. This measure is aimed at reducing this loss through the deployment of new technologies, reinforcement of the electricity grid and replacing aging assets	2008	Department of Communications, Energy and Natural Resources; Commission for Energy Regulation.	48.74	48.71	46.86

Name of mitigation action ^a	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities		nate of mitigation in cumulative, in kt CC	-
									2020	2025	2030
Replacement of coal fired electricity generation with natural gas	Energy	CO ₂ , CH ₄ , N ₂ C	Examine the effect of replacing coal fired electricity generation with natural gas.	Research	Planned	This measure, which is included in the with additional measures scenario is aimed at examining the effect of replacing coal fired electricity generation with natural gas fired electricity generation.	2025	Department of Communications, Energy and Natural Resources; Commission for Energy Regulation.		4974.61	4180.4
Mobile Air Conditioning Directive (2006/40/EC)*	Industry/industria l processes	HFCs	The objectives of Directive 2006/40/EC are to control the leakage of specific fluorinated gas in the air conditioning systems fitted to vehicles and to prohibit air conditioning systems designed to contain fluorinated gases with a global warming potential highre than 150.	Regulatory	Adopted	The Directive lays down the requirements for the EC type-approval or national type-approval of vehicles as regards emissions from, and the safe functioning of, air conditioning systems fitted to vehicles. It also lays down provisions on retrofitting and refilling of such systems.	2011	Department of Transport, Tourism and Sport	72.34	154	206.61
Landfill Directive (1999/31/EC)*	Waste management/was te	CH ₄	Reduce as far as possible the negative effects of landfilling of waste on the environment.	Regulatory	Implemented	This Directive by way of strict operational and technical requirements aims as far as is possible to reduce the negative effects of landfills on the environment, in particular the pollution of surface water, groundwater, soil and air, and on the global environment.	1999	Department of Environment, Community and Local Government; Environmental Protection Agency.	488	453.52	394.38
Nitrogen Fertilizer Use Efficiency in Agriculture	Agriculture	N ₂ O	The overall objective of this measure is to reduce the use of nitrogen fertilizer and to use nitorgen fertilizer more efficiently.	Voluntary Agreement	Planned	Nutrient Management Planning is an integral part of the of the Green, Low-Carbon, Agri- Environmental Scheme (GLAS) which was set up under the Rural Development Programme 2014- 2020. In this measure it is envisaged that nitrification and urease inhibitors will be used in conjunction with nitrogen fertilizers, thereby reducing gaseous losses and reducing total fertilizer nitrogen use.	2018	Department of Agriculture, Food and the Marine.	155.51	155.51	155.51
Renewables - With Measures scenario (Electricity Generation)*	Energy	CO ₂ , CH ₄ , N ₂ C	 This measure encompasses the penetration of renewable energy in electricity generation under the with measures scenario. Renewables targets under Directive 2009/28/EC are envisaged to be met in the with additional measures scenario. 	Other (Economic)	Implemented	This measure encompasses the development of renewable energy in electricity generation under the With Measures scenario. Under this measure renewable fuels account for 22% of electricity generation in 2020.	2005	Department of Communications, Energy and Natural Resources.	1525.91	1520.57	1521.22

Name of mitigation action	a Sector(s) affected b	GHG(s) affected	<i>Objective and/or activity affected</i>	Type of instrument ^c	Status of implementation ^d	Brief description ^e	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO $_2$ eq)		
									2020	2025	2030
Renewables - With Measures Scenario (Transport)*	Transport	CO ₂ , CH ₄ , N ₂ O	This measure encompasses the penetration of renewable energy in transport under the with measures scenario. Renewables targets under Directive 2009/28/EC are envisaged to be met in the with additional measures scenario.	Other (Regulatory)	Implemented	This measure encompasses the development of renewable energy in transport under the With Measures scenario. Under this measure renewables fuels account for 6 percent of the total fuel used in transport in 2020.	2005	Department of Transport, Tourism and Sport.	636.16	687.01	723.11
Directive 2009/28/EC - Heat component	Industry/industr l processes	ia CO ₂ , CH ₄ , N ₂ O	Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC- Heat component.	••••	Planned	The Irish Government has set a target of 12% renewable heat by 2020. This measure assumes full implementation of this target by 2020. This renewable heat target in conjunction with renewable fuel penetration in the transport sector and renewable electricity targets forms part of Ireland's overall renewable energy target of 16% by 2020 under Directive 2009/28/EC.	2014	Department of Communications, Energy and Natural Resources; Sustainable Energy Authority of Ireland.	605.07	944.85	1401.51
Directive 2009/28/EC - Electricity component	Energy	CO ₂ , CH ₄ , N ₂ O	Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC- Electricity component.		Planned	The Irish Government has set a target of 40% electricity consumption from renewables sources by 2020. This PAM assumes full implementation of this target by 2020. This renewable electricity target in conjunction with renewable fuel penetration in the transport sector and renewable fuels for heat forms part of Ireland's overall renewable energy target of 16% by 2020 under Directive 2009/28/EC.		Department of Communications, Energy and Natural Resources; Commission for Energy Regulation.	2438.5	1461.4	1461.4
Directive 2009/28/EC - Transport component	Transport	CO ₂ , CH ₄ , N ₂ O	Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC- Transport component.		Planned	The Irish Government has set a target of 10% renewable fuels in transport by 2020. This PAM assumes full implementation of this target by 2020. This renewable fuels in transport target in conjunction with renewable electricity targets and renewable fuels for heat forms part of Ireland's overall renewable energy target of 16% by 2020 under Directive 2009/28/EC.	2014	Department of Transport, Tourism and Sport	468.3	507.05	532.51

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

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

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

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

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

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

^{*f*} Optional year or years deemed relevant by the Party.

Custom Footnotes

Table 4Reporting on progress

	Total emissions excluding LULUCF	z		Quantity of units from other market based mechanisms			
Year ^c	$(kt \ CO_2 \ eq)$	$(kt \ CO_2 \ eq)$	(number of units)	$(kt \ CO_2 \ eq)$	(number of units)	$(kt \ CO_2 \ eq)$	
(1990)	56,751.48						
2010	62,936.70						
2011	58,827.88						
2012	59,599.34						
2013	58,820.88						
2014	NA						

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

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

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

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

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

Custom Footnotes

Table 4(a)I

Progress in achieving the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the contribution of the land use, land-use change and forestry sector in 2013 ^{a,b}

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

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

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

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

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

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

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

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

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

Custom Footnotes
Table 4(a)I

Progress in achieving the quantified economy-wide emission reduction targets – further information on mitigation actions relevant to the contribution of the land use, land-use change and forestry sector in 2014 ^{a, b}

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

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

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

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

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

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

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

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

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

Table 4(b) **Reporting on progress^{a, b, c}**

	Unite of menhot has a dona having		Ye	ear
	Units of market based mechanisms		2013	2014
	Kunda Dunda na Lumida	(number of units)		
	Kyoto Protocol units	$(kt CO_2 eq)$		
		(number of units)		
	AAUs	(kt CO2 eq)		
-	EDU	(number of units)		
Kyoto Protocol	ERUs	(kt CO2 eq)		
nits ^d		(number of units)		
mus	CERs	(kt CO2 eq)		
	tCERs	(number of units)		
		(kt CO2 eq)		
		(number of units)		
	lCERs	(kt CO2 eq)		
	Units from market-based mechanisms under the	(number of units)		
	Convention	$(kt CO_2 eq)$		
Other units				
d,e	Units from other market-based mechanisms	(number of units)		
	onus jioni onier markei-basea meenanisms	$(kt \ CO_2 \ eq)$		
7-4-1		(number of units)		
Fotal		$(kt CO_2 eq)$		

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.

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

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

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

^d Units surrendered by that Party for that year that have not been previously surrendered by that or any other Party.

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

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

Key underlying a	issumptions		Historical ^b							Projected		
Assumption	Unit	1990	1995	2000	2005	2010	2011	2015	2020	2025	2030	
GDP growth rate	%	4.08	12.75	9.02	5.92	-0.62	1.71		4.50	2.00	0.80	
International oil price	USD / boe	1			60.50	70.80			98.90	124.30	154.20	
International coal price	USD / boe				17.00	20.80			20.10	23.70	27.60	
International gas price	USD / boe				40.40	49.30			49.30	58.70	62.50	
Population growth	%	0.57	0.42	1.28	2.19	-0.46	0.01		0.70	2.00	0.80	
Population	thousands	3,506.70	3,061.40	3,789.60	4,134.10	4,429.38	4,429.74		4,837.00	5,010.00	5,162.00	
Number of households	thousands	1,159.00	1,253.00	1,429.00	1,730.00	1,815.00	1,815.00		2,062.00	2,173.00	2,290.00	

^{*a*} Parties should include key underlying assumptions as appropriate.

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

Table 6(a)

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

			GHG emis	ssions and rem	ovals ^b			GHG emission	n projections
			($(kt CO_2 eq)$				(kt CO	2 eq)
	Base year (1990)	1990	1995	2000	2005	2010	2013	2020	2030
Sector ^{d,e}									
Energy	25,982.58	25,982.58	27,620.68	31,736.57	32,527.57	28,830.98	24,970.01	25,143.64	26,534.35
Transport	5,135.18	5,135.18	6,271.39	10,788.52	13,121.41	11,528.15	11,067.68	13,177.72	14,966.29
Industry/industrial processes	3,252.63	3,252.63	3,196.37	4,567.71	4,033.39	2,645.12	2,774.31	2,858.45	3,059.95
Agriculture	20,735.38	20,735.38	20,663.57	20,246.85	19,959.03	18,758.03	18,964.61	18,796.48	18,873.14
Forestry/LULUCF	4,524.58	4,524.58	6,897.33	5,831.59	3,416.31	4,316.73	3,873.25	2,496.99	5,681.83
Waste management/waste	1,645.71	1,645.71	1,975.99	1,751.62	1,786.23	1,174.42	1,344.27	817.91	662.95
Other (specify)									
Gas									
CO ₂ emissions including net CO ₂ from LULUCF	36,724.97	36,724.97	41,915.21	50,290.93	50,708.29	44,579.33	40,053.22	40,986.43	47,623.48
CO ₂ emissions excluding net CO ₂ from LULUCF	32,821.78	32,821.78	35,777.98	45,170.85	48,031.27	41,620.92	37,123.45	39,982.28	43,498.12
CH ₄ emissions including CH ₄ from LULUCF	15,356.39	15,356.39	15,696.78	15,027.68	14,449.93	13,577.72	13,831.95	13,457.64	13,075.25
CH ₄ emissions excluding CH ₄ from LULUCF	14,881.87	14,881.87	15,129.90	14,532.19	13,980.69	12,632.35	13,232.26	12,936.57	12,575.68
N ₂ O emissions including N ₂ O from LULUCF	9,160.11	9,160.11	8,791.11	8,801.95	8,404.89	7,889.08	7,479.46	7,632.59	7,932.41
N ₂ O emissions excluding N ₂ O from LULUCF	9,013.24	9,013.25	8,597.90	8,585.93	8,134.84	7,476.14	7,135.66	6,892.99	7,188.18
HFCs	0.59	0.59	41.12	303.60	939.29	1,127.64	1,276.74	914.28	759.78
PFCs	0.12	0.12	97.61	397.76	216.39	46.58	8.32	11.51	13.96
SF ₆	33.88	33.88	79.11	51.76	96.78	33.08	43.53	56.56	60.96
Other (specify)									
Total with LULUCF ^f	61,276.06	61,276.06	66,620.94	74,873.68	74,815.57	67,253.43	62,693.22	63,059.01	69,465.84
Total without LULUCF	56,751.48	56,751.49	59,723.62	69,042.09	71,399.26	62,936.71	58,819.96	60,794.19	64,096.68

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

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

Table 6(a)

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

		GHG em	issions and rer	novals ^b			GHG emissio	on projections
			$(kt CO_2 eq)$				(kt CO ₂ eq)	
ear	1990	1995	2000	2005	2010	2013	2020	2030
990)								

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

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

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

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

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

Table 6(c)

IRL_BR2_v1.0

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

			GHG emi.	ssions and rem	novals ^b			GHG emission	n projections
			((kt CO ₂ eq)				(kt CO	2 eq)
	Base year (1990)	1990	1995	2000	2005	2010	2013	2020	2030
Sector ^{d,e}									
Energy	25,982.58	25,982.58	27,620.68	31,736.57	32,527.57	28,830.98	24,970.01	20,085.61	17,570.70
Transport	5,135.18	5,135.18	6,271.39	10,788.52	13,121.41	11,528.15	11,067.68	12,537.32	14,252.16
Industry/industrial processes	3,252.63	3,252.63	3,196.37	4,567.71	4,033.39	2,645.12	2,774.31	2,858.45	3,059.95
Agriculture	20,735.38	20,735.38	20,663.57	20,246.85	19,959.03	18,758.03	18,964.61	18,640.97	18,717.63
Forestry/LULUCF	4,524.58	4,524.58	6,897.33	5,831.59	3,416.31	4,316.73	3,873.25	2,496.99	5,681.83
Waste management/waste	1,645.71	1,645.71	1,975.99	1,751.62	1,786.23	1,174.42	1,344.27	817.91	662.95
Other (specify)									
Gas									
CO ₂ emissions including net CO ₂ from LULUCF	36,724.97	36,724.97	41,915.21	50,290.93	50,708.29	44,579.33	40,053.22	35,327.41	37,973.78
CO ₂ emissions excluding net CO ₂ from LULUCF	32,821.78	32,821.78	35,777.98	45,170.85	48,031.27	41,620.92	37,123.45	34,323.26	33,848.42
CH ₄ emissions including CH ₄ from LULUCF	15,356.39	15,356.39	15,696.78	15,027.68	14,449.93	13,577.72	13,831.95	13,450.27	13,063.25
CH ₄ emissions excluding CH ₄ from LULUCF	14,881.87	14,881.87	15,129.90	14,532.19	13,980.69	12,632.35	13,232.26	12,929.20	12,563.68
N ₂ O emissions including N ₂ O from LULUCF	9,160.11	9,160.11	8,791.11	8,801.95	8,404.89	7,889.08	7,479.46	7,445.04	7,760.83
N ₂ O emissions excluding N ₂ O from LULUCF	9,013.24	9,013.25	8,597.90	8,585.93	8,134.84	7,476.14	7,135.66	6,705.44	7,016.60
HFCs	0.59	0.59	41.12	303.60	939.29	1,127.64	1,276.74	914.28	759.78
PFCs	0.12	0.12	97.61	397.76	216.39	46.58	8.32	11.51	13.96
SF ₆	33.88	33.88	79.11	51.76	96.78	33.08	43.53	56.56	60.96
Other (specify)									
Total with LULUCF ^f	61,276.06	61,276.06	66,620.94	74,873.68	74,815.57	67,253.43	62,693.22	57,205.07	59,632.56
Total without LULUCF	56,751.48	56,751.49	59,723.62	69,042.09	71,399.26	62,936.71	58,819.96	54,940.25	54,263.40

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

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

Table 6(c)

		GHG em	issions and rer	novals ^b			GHG emissio	on projections
			$(kt CO_2 eq)$				(kt CO ₂ eq)	
se year 1990)	1990	1995	2000	2005	2010	2013	2020	2030

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.

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

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

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

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

Table 7Provision of public financial support: summary information in 2013^a

					Year						
Allocation channels		Eu	uropean euro - EU	R		USD^{b}					
Allocation channels	C (1 ^C		Climate-	specific ^d		G (1 ⁶		Climate-spe	ecific ^d		
	Core/general ^c	Mitigation	Adaptation	Cross-cutting ^e	<i>Other</i> ^f	Core/ general ^c	Mitigation	Adaptation	Cross-cutting ^e	<i>Other</i> ^f	
Total contributions through multilateral channels:	35,242,781.00		155,000.00	450,000.00		46,805,937.00		205,856.00	597,645.00		
Multilateral climate change funds ^g	1,421,000.00			250,000.00		1,887,230.00			332,025.00		
Other multilateral climate change funds ^h											
Multilateral financial institutions, including regional	33,821,781.00					44,918,707.00					
development banks											
Specialized United Nations bodies			155,000.00	200,000.00				205,856.00	265,620.00		
Total contributions through bilateral, regional and other		2,564,000.00	22,583,000.00	8,393,000.00			3,406,000.00	29,995,000.00	11,147,000.00		
channels											
Total	35,242,781.00	2,564,000.00	22,738,000.00	8,843,000.00		46,805,937.00	3,406,000.00	30,200,856.00	11,744,645.00		

Abbreviation: USD = United States dollars.

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

Custom Footnotes

Information on how climate specific funding is attributed between adapation and mitigation is set out in the Biennial Report, along with details of the use of a coefficient in line with Rio Markers. & http://www.oecd.org/ireland/ireland.htm

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

Documentation Box:

Ireland has delivered climate finance even in the context of seriously reduced national budget spending. Ireland's contribution in 2013 and 2014 was drawn from grant and other non-refundable contributions provided by Irish Aid via climaterelevant ODA; the Department of the Environment, Community and Local Government; and the Department of Agriculture, Food and the Marine.

Table 7Provision of public financial support: summary information in 2014^a

					Yea	ar				
Allocation channels		E	uropean euro - EUR			USD^{b}				
Allocation channels			Climate-specific ^d Climate-specific ^d			pecific ^d				
	Core/ general ^c	Mitigation	Adaptation	Cross-cutting ^e	$Other^{f}$	Core/general ^c	Mitigation	Adaptation	Cross-cutting ^e	$Other^{f}$
Total contributions through multilateral channels:	75,431,800.00	37,600.00	1,300,000.00	100,000.00	300,000.00	100,211,147.00	49,952.00	1,727,050.00	132,850.00	398,550.00
Multilateral climate change funds ^g	1,469,000.00		1,000,000.00			1,951,567.00		1,328,500.00		
Other multilateral climate change funds ^h										
Multilateral financial institutions, including regional	32,085,000.00					42,624,923.00				
development banks										
Specialized United Nations bodies	41,877,800.00	37,600.00	300,000.00	100,000.00	300,000.00	55,634,657.00	49,952.00	398,550.00	132,850.00	398,550.00
Total contributions through bilateral, regional and other		1,490,000.00	20,974,000.00	9,472,500.00			1,979,466.00	27,863,963.00	12,584,217.00	
channels										
Total	75,431,800.00	1,527,600.00	22,274,000.00	9,572,500.00	300,000.00	100,211,147.00	2,029,418.00	29,591,013.00	12,717,067.00	398,550.00

Abbreviation: USD = United States dollars.

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

^b Parties should provide an explanation on methodology used for currency exchange for the information provided in table 7, 7(a) and 7(b) in the box below.

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

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

^e This refers to funding for activities which are cross-cutting across mitigation and adaptation.

^{*f*} Please specify.

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

^h Other multilateral climate change funds as referred in paragraph 17(b) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

Custom Footnotes

Information on how climate specific funding is attributed between adapation and mitigation is set out in the Biennial Report, along with details of the use of a coefficient in line with Rio Markers. & http://www.oecd.org/ireland/ireland.htm

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

Documentation Box:

Ireland has delivered climate finance even in the context of seriously reduced national budget spending. Ireland's contribution in 2013 and 2014 was drawn from grant and other non-refundable contributions provided by Irish Aid via climate- relevant ODA; the Department of the Environment, Community and Local Government; and the Department of Agriculture, Food and the Marine.

Table 7(a)Provision of public financial support: contribution through multilateral channels in 2013^a

		Total a	mount						
Donor funding	Core/gene	eral ^d	Climate-sp	pecific ^e	Status ^b	Funding source ^f	Financial	Type of support ^{f, g}	Sector ^c
2 onor junany	European euro - EUR	USD	European euro - EUR	USD	Dianas	I unung source	instrument [†]	Type of support	Sector
otal contributions through multilateral channels	35,242,781.00	46,805,937.00	605,000.00	803,501.00					
Multilateral climate change funds ^g	1,421,000.00	1,887,230.00	250,000.00	332,025.00					
1. Global Environment Facility	1,421,000.00	1,887,230.00			Provided				
2. Least Developed Countries Fund			200,000.00	265,620.00	Provided	ODA	Grant	Cross-cutting	Cross-cutting
3. Special Climate Change Fund									
4. Adaptation Fund									
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities			50,000.00	66,405.00	Provided	ODA	Grant	Cross-cutting	Other (LEG - Environment)
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks	33,821,781.00	44,918,707.00							
1. World Bank	32,090,000.00	42,618,729.00							
2. International Finance Corporation									
3. African Development Bank									
4. Asian Development Bank	1,731,781.00	2,299,978.00							
5. European Bank for Reconstruction and Development									
6. Inter-American Development Bank									
7. Other									
Specialized United Nations bodies			355,000.00	471,476.00					
1. United Nations Development Programme									
2. United Nations Environment Programme									
3. Other			355,000.00	471,476.00					
UN International Strategy for Disaster Risk Reduction			200,000.00	265,620.00	Provided	ODA	Grant	Cross-cutting	Cross-cutting
FAO			155,000.00	205,856.00	Provided	Other ()	Grant	Adaptation	Agriculture

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

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

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

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

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

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

^f Please specify.

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

Custom Footnotes

Table 7(a)Provision of public financial support: contribution through multilateral channels in 2014^a

		Total a	mount						
Donor funding	Core/gen	eral ^d	Climate-spe	cific ^e	Status ^b	Funding source ^f	Financial	Type of support ^{f, g}	Sector ^c
Donor junturig	European euro - EUR	USD	European euro - EUR	USD	Siaius	Funding source	instrument ^f	1 уре ој ѕирроп	Sector
Total contributions through multilateral channels	75,431,800.00	100,211,147.00	1,737,600.00	2,308,402.00					
Multilateral climate change funds ^g	1,469,000.00	1,951,567.00	1,000,000.00	1,328,500.00					
1. Global Environment Facility	1,469,000.00	1,951,567.00			Provided				
2. Least Developed Countries Fund			900,000.00	1,195,650.00	Provided	ODA	Grant	Adaptation	
3. Special Climate Change Fund									
4. Adaptation Fund									
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities			100,000.00	132,850.00	Provided	ODA	Grant	Adaptation	Other (Environmer
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks	32,085,000.00	42,624,923.00							
1. World Bank	25,385,000.00	33,723,973.00			Provided				
2. International Finance Corporation									
3. African Development Bank									
4. Asian Development Bank	2,500,000.00	3,321,250.00			Provided				
5. European Bank for Reconstruction and Development									
6. Inter-American Development Bank									
7. Other	4,200,000.00	5,579,700.00							
World Bank CGIAR Fund - Support to pro-poor agriculture	4,200,000.00	5,579,700.00			Provided				
Specialized United Nations bodies	41,877,800.00	55,634,657.00	,	979,902.00					
1. United Nations Development Programme	8,500,000.00	11,292,250.00							
1. United Nations Development Programme	8,500,000.00	11,292,250.00			Provided				
2. United Nations Environment Programme	357,800.00	475,337.00		398,550.00					
2. United Nations Environment Programme	357,800.00	475,337.00	300,000.00	398,550.00		ODA	Grant	Other (Water)	Water and sanitation
3. Other	33,020,000.00	43,867,070.00	437,600.00	581,352.00					
UN International Strategy for Disaster Risk Reduction			300,000.00	398,550.00	Provided	ODA	Grant	Adaptation	Other (Disaster preparedness)
World Food Programme	10,000,000.00	13,285,000.00			Provided	ODA			
FAO - LEAP			37,600.00	49,952.00	Provided	ODA	Grant	Mitigation	
FAO - Emergency Section	240,000.00	318,840.00			Provided	ODA			Other (Sustainable agriculture for displaced people)
UN Women	1,500,000.00	1,992,750.00			Provided				
UNAIDS	2,950,000.00	3,919,075.00			Provided				
UN Convention to Combat Desertification	30,000.00	39,855.00			Provided				
UNDOCO	50,000.00	66,425.00			Provided				
UNHCR	6,100,000.00	8,103,850.00			Provided				
UNICEF	7,900,000.00	10,495,150.00			Provided				
Clean Technology Centre and Network			100,000.00	132,850.00	Provided	Other ()		Cross-cutting	
UNFPA	3,100,000.00	4,118,350.00			Provided				
WHO	1,150,000.00	1,527,775.00			Provided				

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

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

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

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

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

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

^f Please specify.

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

Custom Footnotes

	Total an	nount						
<i>Recipient country/</i> region/project/programme ^b	Climate-s	pecific ^f	Status ^c	Funding source ^g	Financial instrument ^g	Type of support ^{g, h}	Sector ^d	Additional information ^e
regionsprojecuprogramme	European euro - EUR	USD		source	mstrunent	support		injormanon
otal contributions through bilateral, regional nd other channels	33,540,000.00	44,548,000.00						
Ethiopia / Productive Safety Nets Programme (PSNP), Ministry of Finance & Economic Development	11,000,000.00	14,609,000.00	Provided	ODA	Grant	Adaptation	Other (Other)	
Ethiopia / Integrated Livelihood Programme, Adigrat Diocese Catholic Secretariat (ADCS)	250,000.00	332,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Ethiopia / 3rd Payment for Technology Dessimination in SNNPR	115,000.00	153,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Ethiopia / DCD1307-Humanitarian Response Fund, UN	250,000.00	332,000.00	Provided	ODA	Grant	Adaptation	Other (Other)	
Ethiopia / DCD1307-IA'S CONTRIBUTION TO 2013 Civil Society Support Programme (CSSP), British Council	685,000.00	910,000.00	Provided	ODA	Grant	Adaptation	Other (Other)	
Ethiopia / DCD1310-Electrifying Rural Health Centres, GIZ	500,000.00	664,000.00	Provided	ODA	Grant	Mitigation	Energy	
Ethiopia / DCD1310-Improve Nutrition & Food Security, CIP	360,000.00	478,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Ethiopia / Payment for Climate Resilience in Lake Hawassa, SOS Sahel Ethiopia	150,000.00	199,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Ethiopia / Payment for two projects agroforestery and smallholders, Tigray Bureau of Agri and Rural Development	1,500,000.00	1,992,000.00	Provided	ODA	Grant	Adaptation	Forestry	
Ethiopia / Support to OR Technology dissimination-TARI	115,000.00	153,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Ethiopia / Promotion of Cookstoves and Fuelwood enhancement, GIZ Ethiopia	500,000.00	664,000.00	Provided	ODA	Grant	Mitigation	Energy	
Ethiopia / DAFM/Teagasc bilateral project	32,000.00	42,000.00	Provided	Other (Bilateral)	Grant	Adaptation	Agriculture	

	Total an	ıount						
<i>Recipient country/</i> region/project/programme ^b	Climate-sp	pecific ^f	Status ^c	Funding source ^g	Financial instrument ^g	Type of support ^{g, h}	Sector ^d	Additional information ^e
region project programme	European euro - EUR	USD		source	instrument	support		injormation
Lesotho / Food Security and Livelihoods Sector, Catholic Relief Services	350,000.00	465,000.00	Provided	ODA	Grant	Cross-cutting	Agriculture	
Lesotho / Programme support - Outcome 2	150,000.00	199,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Malawi / 2013 support to MVAC, UN World Food Programme	500,000.00	664,000.00	Provided	ODA	Grant	Adaptation		
Malawi / AFSP Phase II, International Centre for Research in Agroforestry	500,000.00	664,000.00	Provided	ODA	Grant	Mitigation	Forestry	
Malawi / Development of TEG Stoves, Trinity	120,000.00	159,000.00	Provided	ODA	Grant	Mitigation	Energy	
Malawi / Concern Universal - Stoves Programme	200,000.00	266,000.00	Provided	ODA	Grant	Mitigation	Energy	
Malawi / Enhancing Community Resilience (ECRP), Basket funding with DFID Malawi	450,000.00	598,000.00	Provided	ODA	Grant	Adaptation	Energy, Agriculture, Water and sanitation	
Malawi / Local Development Support Programme (4th year), Concern Universal	600,000.00	797,000.00	Provided	ODA	Grant	Cross-cutting	Energy, Agriculture, Water and sanitation	
Malawi / Community Based Water Filters Promotion Project, Evangelical Assoc. of Malawi	71,000.00	94,000.00	Provided	ODA	Grant	Adaptation	Water and sanitation	
Malawi / Agricultural Sector Wide Approach (ASWAp), World Bank	1,750,000.00	2,324,000.00	Provided	ODA	Grant	Cross-cutting	Agriculture	
Malawi / Social Cash Transfer, UNICEF Resident Representative	262,000.00	348,000.00	Provided	ODA	Grant	Adaptation	Other (Other)	
Malawi / Conservation Agriculture Techniques, NASFAM	250,000.00	332,000.00	Provided	ODA	Grant	Adaptation	Agriculture	

	Total am	nount						
<i>Recipient country/</i> region/project/programme ^b	Climate-sp	pecific ^f	Status ^c	Funding source ^g	Financial instrument ^g	Type of support ^{g, h}	Sector ^d	Additional information ^e
regioniprojeci programme	European euro - EUR	USD		source		support		ingormation
Malawi / Strengthening Community Disaster Resilience, Evangelical Assoc. of Malawi	200,000.00	266,000.00	Provided	ODA	Grant	Adaptation	Energy, Agriculture, Water and sanitation	
Mozambique / Land Registration, Land Fund, DfID Mozambique	100,000.00	133,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Mozambique / PROSAN, Strengthen Household resilience, CARE Livelihood, CARE International	816,000.00	1,084,000.00	Provided	ODA	Grant	Cross-cutting	Agriculture	
Mozambique / ARENA, Natural Resources Agriculture, Niassa, SCC, We Effect	100,000.00	133,000.00	Provided	ODA	Grant	Cross-cutting	Agriculture	
Mozambique / DPA INHAMBANE, Agriculture, DPADR Sector Support	150,000.00	199,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Mozambique / Climate Change, DPOPH INHAMBANE	200,000.00	266,000.00	Provided	ODA	Grant	Adaptation	Water and sanitation	
Mozambique / Multi-year Plan for Water and Sanitation DPOPH NIASSA	138,000.00	183,000.00	Provided	ODA	Grant	Adaptation	Water and sanitation	
Mozambique / Adaptation and Conservation in Agriculture, INGC	200,000.00	266,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Mozambique / Increasing horticultural production, Technoserve	265,000.00	352,000.00	Provided	ODA	Grant	Cross-cutting	Agriculture	
Mozambique / Improved access to and management of resources for vulnerable communities in Cupo, Conselho Cristao de Mocambique (CCM), Inhambane	80,000.00	107,000.00	Provided	ODA	Grant	Adaptation	Water and sanitation	
Mozambique / Municipality Development Programme, PDA MUNICIPALITY, Fundo Comum Programa de Desenvolvimento Autarquico	175,000.00	232,000.00	Provided	ODA	Grant	Cross-cutting	Other (other)	

	Total an	nount						
<i>Recipient country/</i> region/project/programme ^b	Climate-sp	pecific ^f	Status ^c	Funding source ^g	Financial instrument ^g	Type of support ^{g, h}	Sector ^d	Additional information ^e
region project programme	European euro - EUR	USD		source	mstrunent	support		ingormation
Tanzania / Develop sustainable high quality cocoa value chain, Technoserve	500,000.00	664,000.00	Provided	ODA	Grant	Cross-cutting	Agriculture	
Tanzania / Agriculture Sector Development Programme (ASDP)	2,000,000.00	2,656,000.00	Provided	ODA	Grant	Cross-cutting	Agriculture	
Tanzania / Reduce poverty & vulnerability & enhance livelihood, CARE International	200,000.00	266,000.00	Provided	ODA	Grant	Cross-cutting	Agriculture	
Tanzania / Strengthen lobby & advocacy capacity of farmers, MVIWATA	200,000.00	266,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Tanzania / Support UNDAP2011-15 plan as part of Tanzania, One UN, UNDAP	250,000.00	332,000.00	Provided	ODA	Grant	Cross-cutting	Other (other)	
Tanzania / Increase incomes from oilseeds of 120k small farms, SNV Tanzania	100,000.00	133,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Uganda / Building Viable, Resilient Livelihoods for the People of Karamoja, Oxfam	408,000.00	542,000.00	Provided	ODA	Grant	Adaptation	Agriculture	
Uganda / Traidlinks	350,000.00	465,000.00	Provided	ODA	Grant	Mitigation	Other (other)	
Viet Nam / Programme 135, Local Aid Recipient	2,215,000.00	2,942,000.00	Provided	ODA	Grant	Adaptation	Other (other)	
Viet Nam / Technical assistance to P135, UNDP	500,000.00	664,000.00	Provided	ODA	Grant	Adaptation	Other (other)	
Viet Nam / Green Living Exhibition, Action for the City Development	2,000.00	3,000.00	Provided	ODA	Grant	Mitigation	Other (other)	
Viet Nam / RI.2013.VN.4: Post - emergency recovery, CRD Vietnam	75,000.00	100,000.00	Provided	ODA	Grant	Adaptation	Other (other)	
Viet Nam / One UN Vietnam, UNDP	500,000.00	664,000.00	Provided	ODA	Grant	Cross-cutting	Other (other)	
Viet Nam / UNOPS, December 2013	100,000.00	133,000.00	Provided	ODA	Grant	Adaptation	Other (other)	
Zambia / Integrated Research on improved livelihoods, CGIAR Consortium Grant 2013, World Fish Centre	250,000.00	332,000.00	Provided	ODA	Grant	Mitigation	Agriculture	

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

	Total a	mount						
Recipient country/ region/project/programme ^b	Climate-	specific ^f	Status ^c	Funding source ^g	Financial instrument ⁸	Type of support ^{g, h}	Sector ^d	Additional information ^e
regionsprojecu programme	European euro - EUR	USD		source	instrument	suppori		injormation
Zambia / Provincial Coordinating Plan, Northern Province, Provincial Planning Unit, Kasama NP	36,000.00	48,000.00	Provided	ODA	Grant	Mitigation	Other (other)	
Zambia / LUWINGU DAIP FUNDING 2013, Luwingu district council	112,000.00	149,000.00	Provided	ODA	Grant	Cross-cutting	Other (other)	
Zambia / MBALA DAIP FUNDING 2013, MBALA Municipal Council	106,000.00	141,000.00	Provided	ODA	Grant	Mitigation	Other (other)	
Zambia / Local Development Programme, Northern Province Mgmt and Technology Agency, MOBILISATN INCEPTION COSTS Self Help Africa	675,000.00	896,000.00	Provided	ODA	Grant	Cross-cutting	Water and sanitation, Agriculture	
Zambia / ONE UN; DELIVERING AS ONE IN ZAMBIA, UNDP	100,000.00	133,000.00	Provided	ODA	Grant	Cross-cutting	Other (other)	
Sierra Leone / National Early Warning System on Food and Nutrition Security in Sierra Leone, UN FAO	327,000.00	434,000.00	Provided	ODA	Grant	Adaptation	Other (other)	
Multi-Country / IIED - Climate Change and Development	1,050,000.00	1,395,000.00	Provided	ODA	Grant	Adaptation	Other (other)	
Multi-Country / WRI - Adaptation Finance Accountability Initiative - Africa	400,000.00	531,000.00	Provided	ODA	Grant	Adaptation	Other (other)	

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

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

^b Parties should report, to the extent possible, on details contained in this table.

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

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

^e Parties should report, as appropriate, on project details and the implementing agency.

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

Table 7(b) **Provision of public financial support: contribution through bilateral, regional and other channels in 2013**^a

	Total d	Total amount Climate-specific ^f European euro - EUR USD			Financial instrument ⁸	Type of support ^{g, h}	Sector ^d	
Recipient country/	Climate-			Funding				Additional
region/project/programme°	1			source ^s				information [°]

^{*g*} Please specify.

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

Custom Footnotes

The scores included in the Additional Information box refer to the OECD DAC Rio Markers, which work on a three-score system. Activities can be identified with • Principle marker of 2• Significant marker of 1• Or not targeted; 0The choice of principle, significant or not-targeted relates to hierarchy of objectives in the programme or project design. A principle marker is applied if the marker policy is one of the principle objectives of the activity and has a profound impact on the design of the activity. A significant marker is applied if the marker policy was not targeted in the programme or project design. If this is unknown, the marker is left blank. Each project is only counted once as Mitigation, Adaptation or Cross Cutting. A 50% coeffecient has been applied to the significant marker of 1 and a 100% is applied to a Principle marker of 2 (the numbers included here are already adjusted)

	Total an	iount						
<i>Recipient country/</i> <i>region/project/programme</i> ^b	Climate-sp	$pecific^{f}$	Status ^c	Funding source ^g	Financial instrument ^g	Type of support ^{g, h}	Sector ^d	Additional information ^e
regionsprojecs/programme	European euro - EUR	USD		source	instrument	support		
Total contributions through bilateral, regional and other channels	31,936,500.00	42,427,646.00						
Ethiopia / Enhancing integrated Watershed management with climate smart Agriculture in Gergera Watershed.	250,000.00	332,125.00	Provided	ODA	Grant	Mitigation	Agriculture	World Agro-Forestry Center (ICRAF)
Ethiopia / Operational Research and technology Dissemination; Tigray	175,000.00	232,488.00	Provided	ODA	Grant	Adaptation	Agriculture	Tigray Agricultural Research Institute (TARI)
Ethiopia / Operational Research and technology Dissemination; South	175,000.00	232,488.00	Provided	ODA	Grant	Adaptation	Agriculture	South Agricultural research Institute (SARI)
Ethiopia / Support for rural livelihoods that are climate smart through promotion and dissemination of off-grid PV lighting in SNNNp and Tigray region	500,000.00	664,250.00	Provided	ODA	Grant	Mitigation	Energy	GIZ
Ethiopia / Improving smallholder livelihoods and resilience through climate smart agriculture and economic development	950,000.00	1,262,075.00	Provided	ODA	Grant	Adaptation	Agriculture	Consortiumof NGOs (SOS Sahel Ethiopia, Farm Africa, VITA and Self Help Africa)
Ethiopia / Sustainable community based seed production system	500,000.00	664,250.00	Provided	ODA	Grant	Adaptation	Agriculture	Agricultural Transformation Agency
Ethiopia / Productive Safety Net Programme (PSNP)	10,400,000.00	13,816,400.00	Provided	ODA	Grant	Adaptation	Other (Food Security)	Ministry of Agriculture
Ethiopia / Innovative Approaches to Food Security	100,000.00	132,850.00	Provided	ODA	Grant	Cross-cutting	Agriculture	FARM Africa
Ethiopia / Community Driven Climate Resilience Building (Civil Society Support Programme-(CSSP)	500,000.00	664,250.00	Provided	ODA	Grant	Adaptation	Other (Rural Development)	Christian Aid along with other two partners
Ethiopia / Integrated Termite Control and Safe Water Supply-CSSP	60,000.00	79,710.00	Provided	ODA	Grant	Adaptation	Other (rural development)	World Vision
Ethiopia / Environmental Conservation and Economic Empowerment for Poverty Alleviation -CSSP	30,000.00	39,855.00	Provided	ODA	Grant	Adaptation	Other (Environmental Protection)	ADHENO Integrated Rural Development Association

	Total amo	ount							
<i>Recipient country/</i> region/project/programme ^b	Climate-spe	ecific ^f	Status ^c	Funding source ^g	Financial instrument ⁸	Type of support ^{g, h}	Sector ^d	Additional information ^e	
region/project/programme	European euro - EUR	USD		source	instrument	support			
Ethiopia / Climate Change Adaptation and Food Security -CSSP	30,000.00	39,855.00	Provided	ODA	Grant	Adaptation	Other (Environment)	Assosa Environmental Protection Association (AEPA)	
Ethiopia / Improving the Climate Change Resilience of Women through Income Generation Schemes -CSSP	27,000.00	35,870.00	Provided	ODA	Grant	Adaptation	Other (Environment)	Sustainable Agriculture and Natural Resources Management (SANRM)	
Ethiopia / Mitigating Poor Solid Waste Management Impacts through Livelihood Generation -CSSP	15,000.00	19,928.00	Provided	ODA	Grant	Adaptation	Other (Environment)	Green Initiative Ethiopia Development Association (GIEDA)	
Ethiopia / Promotion and Community Based Production of Biodiesel -CSSP	30,000.00	39,855.00	Provided	ODA	Grant	Mitigation	Energy	Save the Environment Ethiopia	
Malawi / Humanitarian Assistance - Emergency Cash Transfer Programme.	500,000.00	664,250.00	Provided	ODA	Grant	Adaptation	Other (Social Welfare)	Save the Children	
Malawi / Development of TEG Stoves	120,000.00	159,420.00	Provided	ODA	Grant	Mitigation	Energy	TCD	
Malawi / Concern Universal Accelerating Uptake of Improved Cookstoves	200,000.00	265,700.00	Provided	ODA	Grant	Mitigation	Energy	Concern Universal	
Malawi / Enhancing Community Resilience (ECRP)	400,000.00	531,400.00	Provided	ODA	Grant	Adaptation	Other (Disaster Prevention and Preparedness)	DFID	
Malawi / Pilot Programme to explore Resilence Enhancing Energy Solutions for Fishing Communities	35,000.00	46,498.00	Provided	ODA	Grant	Mitigation	Energy	RENAMA	
Malawi / Strengthening Community Disaster Resilience -	270,000.00	358,695.00	Provided	ODA	Grant	Adaptation	Other (Social Welfare)	Evangelical Association of Malawi	
Malawi / Balaka Social Cash Transfer (SCT)	776,000.00	1,030,916.00	Provided	ODA	Grant	Adaptation	Other (Social Welfare)	Malawi Government	
Malawi / Research and Pilot Work to advance sustainable bio-mass	100,000.00	132,850.00	Provided	ODA	Grant	Mitigation	Other (Social Welfare)	Total Land Care (TLC)	
Malawi / Agrofrestry Food Security Program (AFSP Phase II).	500,000.00	664,250.00	Provided	ODA	Grant	Adaptation	Other (Agroforestry)	International Center for Research in Agroforestry (ICRAF)	

	Total am	ount						
<i>Recipient country/</i> region/project/programme ^b	Climate-sp	$ecific^{f}$	Status ^c	Funding source ⁸	Financial instrument ^g	Type of support ^{g, h}	Sector ^d	Additional information ^e
region/project/programme	European euro - EUR	USD		source	instrument	support		
Malawi / Agriculture Sector Wide Approach Support Project (ASWAP SP MDTF).	3,500,000.00	4,649,750.00	Provided	ODA	Grant	Cross-cutting	Agriculture	World Bank
Malawi / Conservation Agriculture Techniques.	250,000.00	332,125.00	Provided	ODA	Grant	Mitigation	Agriculture	National Association of Smallholder Farmers in Malawi (NASFAM)
Malawi / Rooting out Hunger Phase II	250,000.00	332,125.00	Provided	ODA	Grant	Cross-cutting	Agriculture	International Potato Center (CIP)
Malawi / Local Development Support Programme	600,000.00	797,100.00	Provided	ODA	Grant	Cross-cutting	Other (Rural Development)	Concern Universal
Malawi / Malawi Seed Industry Programme, ICRISAT	125,000.00	166,063.00	Provided	ODA	Grant	Adaptation	Agriculture	International Crop Research Institute
Mozambique / PROSAN - Programme on Food Security and Nutrition (2012-2017):	800,000.00	1,062,800.00	Provided	ODA	Grant	Adaptation	Agriculture	CARE International, Inhambane Province
Mozambique / ARENA - Agriculture and Natural Resources (2013-2016):	100,000.00	132,850.00	Provided	ODA	Grant	Cross-cutting	Agriculture	We Effect, Niassa province
Mozambique / Provincial multiannual plan for the agriculture sector (DPA) Inhambane (2014-2016)	150,000.00	199,275.00	Provided	ODA	Grant	Cross-cutting	Agriculture	DPA Inhambane
Mozambique / Multiannual provincial support to water and sanitation in Inhambane province (DPOPH 2014-2016)	200,000.00	265,700.00	Provided	ODA	Grant	Adaptation	Water and sanitation	DPOPH, Inhambane Province
Mozambique / Multiannual provincial support to water and sanitation in Niassa province (DPOPH 2014-2016):	138,000.00	183,333.00	Provided	ODA	Grant	Adaptation	Water and sanitation	DPOPH Niassa Province
Mozambique / Preparedness and disaster risk reduction (2013-2015):	200,000.00	265,700.00	Provided	ODA	Grant	Adaptation	Other (Environment)	INGC
Mozambique / Building a Competitive Horticulture Cluster & Revitalising the Coconut Sector:	270,000.00	358,695.00	Provided	ODA	Grant	Cross-cutting	Agriculture	Tecnoserve (TSN)

	Total amo	ount						
<i>Recipient country/</i> region/project/programme ^b	Climate-spe	ecific ^f	Status ^c	Funding source ⁸	Financial instrument ^g	Type of support ^{g, h}	Sector ^d	Additional information ^e
regionoprojecnoprogramme	European euro - EUR	USD		source	instrument	support		
Mozambique / National Programme for decentralised planning and financing (PNPFD)	150,000.00	199,275.00	Provided	ODA	Grant	Adaptation	Other (Government)	Government (MPD/MAE/MOPH, MICOA/MFP)
Mozambique / Municipal Development Programme (PRODEM) for North and North-Central Mozambique (2015-2018):	1,000.00	1,329.00	Provided	ODA	Grant	Cross-cutting	Other (Government)	PRODEM, central and north Mozambique
Mozambique / Improving vitamin A and energy intake of rural households in Niassa with drought tolerant Orange Flesh Sweet Potato	280,000.00	371,980.00	Provided	ODA	Grant	Cross-cutting	Other (Basic Nutrition)	International Potato Center (CIP)
Myanmar / UNOPS- Livelihoods and Food Security Trust Fund (LIFT)	100,000.00	132,850.00	Provided	ODA	Grant	Adaptation	Other (Multisector)	UNOPS
South Africa / BRIDGE	50,000.00	66,425.00	Provided	ODA	Grant	Cross-cutting	Agriculture	Technoserve
Tanzania / Agriculture Sector Development Programme (ASDP).National agriculture programme focusing on small holder farmers productivity and increased incomes	23,000.00	30,556.00	Provided	ODA	Grant	Cross-cutting	Agriculture	Ministry of Agriculture, Food Security and Cooperatives
Tanzania / Cocoa value chain ; developing a high quality cocoa value chain improving production and market access	500,000.00	664,250.00	Provided	ODA	Grant	Cross-cutting	Agriculture	Technoserve
Tanzania / Pastoralist programme: support to pastoral CSO and communities to improve livelihood and mitigate climate change	250,000.00	332,125.00	Provided	ODA	Grant	Cross-cutting	Agriculture	CARE International
Tanzania / MVIWATA; strengthen lobbying and farmers networks, capacity of farmers (farmers voice)	150,000.00	199,275.00	Provided	ODA	Grant	Adaptation	Agriculture	MVIWATA; small holder farmers and farmer's networks

	Total am	ount						
<i>Recipient country/</i> region/project/programme ^b	Climate-sp	ecific ^f	Status ^c	Funding source ^g	Financial instrument ^g	Type of support ^{g, h}	Sector ^d	Additional information ^e
regionoprojecnoprogramme	European euro - EUR	USD		source	instrument	support		
Tanzania / SNV: oil seeds value chain project; improving producer assosiation and oil seed value chain and markets	250,000.00	332,125.00	Provided	ODA	Grant	Cross-cutting	Agriculture	SNV:Tanzania
Tanzania / Increase Income of Poor Households through Job Creation	365,000.00	484,903.00	Provided	ODA	Grant	Adaptation	Agriculture	Agricultural Market Development Trust (AMDT)
Tanzania / Instal solar watersystem& dev poultry project to	4,000.00	5,314.00	Provided	ODA	Grant	Mitigation	Other (Health)	Pallotine Rehabilitation Centre
Uganda / HOMS FUND - PURCHASE COMPUTERS & SOLAR-PRIMARY SCH	1,000.00	1,329.00	Provided	ODA	Grant	Mitigation	Other (Education)	KIDONGOLE PRIMARY SCHOOL
Uganda / Strengthen household resilience	115,000.00	152,778.00	Provided	ODA	Grant	Adaptation	Other (Health)	WFP
Uganda / Sustainable Pig Production sytems in Uganda	170,500.00	226,509.00	Provided	ODA	Grant	Cross-cutting	Agriculture	Africa Agri-Food Development Programme
Viet Nam / Poverty Reduction Program 2012-2015 (Programme 135)	2,215,000.00	2,942,628.00	Provided	ODA	Grant	Adaptation	Other (Multisector)	State Treasury of Vietnam, Poor ethnic minorities residing in the most remote areas of Vietnam, local aid recipient.
Viet Nam / Technical Assistance to Poverty reduction programmes and policies in Vietnam	500,000.00	664,250.00	Provided	ODA	Grant	Adaptation	Other (Government)	UNDP, Government officials engaging in poverty reduction
Viet Nam / Center for Development and Integration (CDI):	58,000.00	77,053.00	Provided	ODA	Grant	Adaptation	Agriculture	CDI, Ethnic minority farmers engaging in coffee production in Central Highlands of Vietnam
Viet Nam / One UN Vietnam	500,000.00	664,250.00	Provided	ODA	Grant	Cross-cutting	Other (UN)	UN agencies and counterparts
Zambia / Integrated Research in Development for improved Livelihoods in Northern Province,	250,000.00	332,125.00	Provided	ODA	Grant	Cross-cutting	Agriculture	World Fish Centre, Small scale farmers in Northern Province
Zambia / Local Development Programme in Northern Province	928,000.00	1,232,848.00	Provided	ODA	Grant	Cross-cutting	Agriculture	Self Help Africa; Small scale farmers in Northern Province
Zambia / + UN delivering as one	100,000.00	132,850.00	Provided	ODA	Grant	Cross-cutting	Other (Government)	UNDP

Table 7(b) **Provision of public financial support: contribution through bilateral, regional and other channels in 2014**^a

	Total an	ıount						
Recipient country/ region/project/programme ^b	<i>Climate-specific</i> ^f		Status ^c	Funding source ⁸	Financial instrument ⁸	Type of support ^{g, h}	Sector ^d	Additional information ^e
	European euro - EUR	USD		source	<i>instrument</i>	support		
Zimbabwe / BRIDGE Programme	50,000.00	66,425.00	Provided	ODA	Grant	Adaptation	Other (Education)	Technoserve
Multi Country / IIED Support to Integrate Climate Change into development programmes	1,050,000.00	1,394,925.00	Provided	ODA	Grant	Cross-cutting	Other (Environment)	International Institute for Environment and Development - IIED
Multi Country / WRI Adaptation Finance Tracking - Zambia and Uganda	500,000.00	664,250.00	Provided	ODA	Grant	Adaptation	Agriculture	World Resources Institute - WRI
Multi Country / Support for the Climate Change Special Envoy	100,000.00	132,850.00	Provided	ODA	Grant	Cross-cutting	Other (Other)	Mary Robinson Foundation for Climate Justice - MRFCJ
Multi Country / Project in support of new agriculture technologies to Ethiopia and Kenya	50,000.00	66,425.00	Provided	ODA	Grant	Cross-cutting	Agriculture	Africa Agri-Food Development Programme

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

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

^b Parties should report, to the extent possible, on details contained in this table.

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

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

^e Parties should report, as appropriate, on project details and the implementing agency.

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

^{*g*} Please specify.

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

Table 7(b) **Provision of public financial support: contribution through bilateral, regional and other channels in 2014**^a

	Total d	umount						
Recipient country/	Climate-specific ^f		Status ^c	Funding	Financial	Type of g, h	Sector ^d	Additional information ^e
region/project/programme"	European euro - EUR	USD		source ^s	instrument [*]	support ^{g, h}		

The scores included in the Additional Information box refer to the OECD DAC Rio Markers, which work on a three-score system. Activities can be identified with • Principle marker of 2• Significant marker of 1• Or not targeted; 0The choice of principle, significant or not-targeted relates to hierarchy of objectives in the programme or project design. A principle marker is applied if the marker policy is one of the principle objectives of the activity and has a profound impact on the design of the activity. A significant marker is applied if the marker policy is a secondary objective, or a planned co-benefit, in the programme or project design. The zero marker is applied to show that the marker policy was not targeted in the programme or project design. If this is unknown, the marker is left blank. Each project is only counted once as Mitigation, Adaptation or Cross Cutting. A 50% coeffecient has been applied to the significant marker of 1 and a 100% is applied to a Principle marker of 2 (the numbers included here are already adjusted)

Table 8Provision of technology development and transfer support^{a,b}

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector ^c	Source of the funding for technology transfer	Activities undertaken by	Status	Addit
	Adaptation	Enhance farmer's access to & use of knowledge & technology	Agriculture	Public	Public	Implemented	The first phase of the ASI aims of the programme ar production and productivi agricultural knowledge to infrastructures and to pro- improved regulatory and p promotes conservation ag crops, agro-forestry practi irrigation and the use of in Year: 2013 Implementing body: Mini Cooperatives Total funding: €4,000
Sierra Leone		National Early Warning System on Food and Nutrition Security in Sierra Leone	Other (Early Warning)	Public	Public	Implemented	This project is aimed at er and its partners to establis and Nutrition National Ea national and district level. reliable information to en- partners and the affected p prevent or reduce food an for effective response. Th and data collection tools t and nutrition insecurity. C will come from the depart rainfall and other agro-me Year: 2013 Total funding: €653,000 Implementing body: UN F
Ethiopia		Technology Dissemination SNNPR	Agriculture	Public	Public	Implemented	Operational research in th farmer participatory resea approach places greater en validation of technologies livestock, natural resource economic analysis. Year: 2013 Total funding: €115,000 Implementing body: South (SARI)

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lditional information^d

ASDP came to an end in June 2013. The e are to enhance sustainable agricultural stivity through better access to and use of e to improved marketing systems and promote private investment based on an nd policy environment. The programme agriculture practices, drought resistant actices, water conservation and improved of indigenous crops and livestock species.

linister of Agriculture, Food Security and

at enhancing the capacity of government blish and operationalise a Food Security Early Warning System (NEWS) both at vel. The NEWS will provide timely and enable government, development ed population to take effective action to and nutrition security risk and prepare The outputs include technical capacity ols to help identify and respond to food y. One group of early warning indicators partment of meteorology and include -meteorological data.

00 N FAO

n the agricultural sector is a form of search and extension. The participatory or emphasis on on-farm trials and farmer gies. This project concentrated on crops, arce management technologies and socio-

000 Southern Agricultural Research Institute

Provision of technology development and transfer support^{*a,b*}

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector ^c	Source of the funding for technology transfer	Activities undertaken by	Status	Addit
Ethiopia	Mitigation	DCD1310-Electrifying Rural Health Centres	Energy	Public	Public	Implemented	IA continued cooperation institutions and scaling-up Technology transfer inclu PV systems in health cent provide health centres wit photovoltaic (Solar PV) sy solar water pumping and Year: 2013 Total funding: €500,000 Implementing body: Deut Zusammenarbeit
Ethiopia	Adaptation	Improve Nutrition & Food Security	Agriculture	Public	Public	Implemented	The International Potato C improved varieties of swe are drought resistant and v conditions prevalent in So Peoples' Region (SNNPR) agronomically suitable an food insecurity in Tigray. maintenance'' crop, that c farmers after some basic t evidence and achievemen opportunities at the nation extension to contribute to of agriculture and nutritio such as climate resilience Year: 2013 Total funding: €720,000 Implementing body: Intern
Malawi	Mitigation	Development of TEG Stoves	Energy	Public	Public	Implemented	Irish Aid previously funde Dublin (TCD) of a therma a clay cooking stove. The tested in a collaboration b The field tests showed tha objective in providing low in the field tests. This pro- is for the development of deployment in rural Mala technology of national rol Year: 2013 Total Funding: €120,000 Implementing body: Trini

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lditional information^d

tion on electrifying rural health g-up activities to Tigray Region. cluded the design and the installation of entres. The IA contribution was used to with access to elect-ricity based on solar) systems, as well as installations of 8 nd 6 solar water heating systems.

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eutsche Gesellschaft für Internationale

to Center is currently working with sweet potato that produce high yields and nd well adapted to the agro-climatic Southern Nations, Nationalities, and PR). The project showed that OFSP is an and socially acceptable crop for reducing ay. It is a hardy, drought tolerant, 'low at can be easily grown by inexperienced sic training. Building on the growing nents at local level, there are timely tional and regional level for the project e to the formulation and implementation ition strategies in priority policy areas nce and child nutrition.

ternational Potato Center

nded development by Trinity College rmal electrical generator (TEG) based on The technology was extensively field n between TCD and Concern Universal. that the TEG cooking stoves met their low cost energy access for the households project, by TCD with Concern Universal, of a prototype and medium-scale alawi with the ultimate aim for the roll-out.

00 inity College Dublin

Provision of technology development and transfer support^{*a,b*}

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector ^c	Source of the funding for technology transfer	Activities undertaken by	Status	Addit
Malawi	Mitigation	Stoves Programme	Energy	Public	Public	Implemented	This programme assists in development and and veri effcient cookstoves as par Cookstoves Programme. 7 target of 2 million energy the emissions saved from efficient stoves and conse deforestation and degrada for the design and mass p software for the tracking or reduction verification. Year: 2013 Total funding: €200,000 Implementing body: Conc
Malawi	Adaptation	Community Based Water Filters Promotion Project,	Water and sanitation	Public	Public	Implemented	This project aimed at asse effectiveness of new acce technology in reducing the mainly during natural disa water borne disease are ra 'disaster prone' area Chik floods and droughts. Villa access to safe and clean w with flooding leading to h This project is linked with Community Disaster Resi and is complementary to in Year: 2013 Total funding: €71,000 Implementing body: Evan
Mozambique	Adaptation	Conservation Agriculture - INGC	Agriculture	Public	Public	Implemented	Technology transfer to de climate change on crop yi water and ground-level oz developed. It also aimed t and to provide training for increase crop yields. Year: 2013 Total funding: €200,000 Implementing body: Instit Calamidades

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lditional information^d

in technology transfer for the design, verification for Carbon Credits for energy part of the rolling out of the National e. The programme proposes to reach a rgy efficient stoves by 2020. Because of om reduced burning of biomass in fuel nsequent reduced emissions from adation technology has been developed production of the stoves as well as ng of each individual stove for emmission

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oncern Universal

ssessing the appropriateness and ccessable membrane water filter the incidences of water borne diseases disasters such as flooding where cases of e rampant. This project is targeted at the hikhwawa which is subject to frequent villages in the target areas have limited water and this is further compounded to high incidence of water-borne disease. with the project "Strengthening desilience (SCDR)" (number 11 below) to it.

vangelical Association of Malawi

demonstrate to farmers the impacts of yields through changes in temperature, l ozone. Two field test locations were ed to demonstrate options for adaptation g for farmers to address impacts and to

stituto Nacional de Gestao de

Provision of technology development and transfer support^{*a,b*}

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector ^c	Source of the funding for technology transfer	Activities undertaken by	Status	Addit
Zambia	Mitigation	Integrated Research on improved livelihoods, CGIAR Consortium Grant 2013	Agriculture	Public	Public	Implemented	The project is investigatin constraining factors and p solutions to the Local Der Luwingu districts. The pr aquaculture crops, livesto of wetlands and diversific captured fisheries; Techn loss onaffected fish breed forests contribute to the e maintain agricultural proo Year: 2013 Total funding: €500,000 Implementing body: Wor
Ethiopia	Adaptation	Operational Research and technology Dissemination; Tigray	Agriculture	Public	Public	Implemented	Operational research in the farmer participatory resear emphasis on on-farm trial technologies. Ethiopia is not least because most ag new crops and varieties c system and contributes to change. This project also facilitating access to impu- Year: 2014 Total funding: €175,000 Implementing body: Tigra (TARI)
Ethiopia	Adaptation	Operational Research and technology Dissemination; South	Agriculture	Public	Public	Implemented	Operational research in th farmer participatory resea emphasis on on-farm trial technologies. Ethiopia is not least because most ag new crops and varieties c system and contributes to change. This project also facilitating access to impr Year: 2014 Total Funding: €175,000 Implementing body: Sout (SARI)

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lditional information^d

ting agricultural and livelihood d provide researched technology Development Programmes in Mbala and programme includes the integration of stock and forest; planning sustainable use ification to included wetland based chnology to assess the impact of forest eeding sites; and to identify how the e ecosystem services necessary to roductivity.

)() Vorld Fish Centre

the agricultural sector is a form of search and extension that places greater ials and farmer validation of is highly vulnerable to climate change, agriculture is rain fed. Introduction of s contributes to diversity of the farming s to food security and resilience to climate so tackles the seed supply challenge by nproved varieties of seed.

igray Agricultural Research Institute

the agricultural sector is a form of search and extension that places greater ials and farmer validation of is highly vulnerable to climate change, agriculture is rain fed. Introduction of s contributes to diversity of the farming s to food security and resilience to climate lso tackles the seed supply challenge by nproved varieties of seed.

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outh Agricultural Research Insitute

Table 8 Provision of technology development and transfer support^{*a,b*}

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector ^c	Source of the funding for technology transfer	Activities undertaken by	Status	Addit
Ethiopia	Adaptation	Dissemination of Sustainable seed production technology systems	Agriculture	Public	Public	Implemented	The aim of this project is growth for women and maproduction of quality seed project also promotes natu supporting nurseries for se environmental damage to growth. Year: 2014 Total funding: €500,000 Implementing body: Agric
Malawi	Adaptation	Agrofrestry Food Security Program (AFSP Phase II) scaling up of agro-forestry innovation and technology	Other (Agroforestry)	Public	Public	Implemented	The AFSP II aims to contr agriculture, i.e. agriculture productivity (food security adaptation) and reduces gr through the scaling up of a technology.This project w government departments, National Adaptation Progr Appropriate Mitigation Ad Sector Wide Approach Prr Year: 2014 Total funding: €500,000 Implementing body: Intern Agroforestry (ICRAF)
United Republic of Tanzania	Mitigation and Adaptation	Agriculture Sector Development Programme (ASDP).National agriculture programme focusing on small holder farmers to enhance sustainable agricultural production and productivity through better access to and use of agricultural technology		Public	Public	Implemented	The aims of the programm based on an improved reg enhance sustainable agricu through better access to an improved marketing syste promotes conservation agi practices, thus supporting resistant crops, water cons the use of indigenous crop supporting climate resilien Year: 2014 Total funding: €45,000 Implementing body: Minis Cooperatives

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lditional information^d

is increased food security and economic men farmers in SNNPR through local eed to increase agricultural yields. The natural resource management through r seedling production to reduce the to land while promoting agricultural

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gricultural Transformation Agency

ontribute towards climate-smart ture that sustainably increases urity), resilience (climate change s greenhouse gas emissions (mitigation), of agro-forestry innovation and t was designed, with input from its, to be closely aligned with Malawi's rogramme of Action (NAPA), Nationally Action (NAMA), and the Agriculture n Programme (ASWAP).

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ternational Center for Research in

mme are to promote private investment regulatory and policy environment and to ricultural production and productivity and use of agricultural technology, stems and infrastructure. The programme agriculture practices, agro-forestry ing carbon sinks and promotes drought conservation and improved irrigation and rops and livestock species, thus lience.

linistry of Agriculture, Food Security and

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

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector ^c	Source of the funding for technology transfer	Activities undertaken by	Status	Additi
United Republic of Tanzania	Adaptation	MVIWATA; strengthens farmers networks, capacity of farmers, and introduces adaptive technologies to improve natural resource management	Agriculture	Public	Public	Implemented	This programme supports Groups in Tanzania. The strengthening of farmer gy including through capacity and advocacy. Climate ch and exacerbates existing p increasing food insecurity for land between "investo programme builds the kno climate change and introd natural resource managem Year: 2014 Total Funding: €300,000 Implmenting body: MVIW farmers' networks
Ethiopia	Mitigation	Support for rural livelihoods that are climate smart through promotion and dissemination of off-grid PV lighting in SNNNp and Tigray region	Energy	Public	Public	Implemented	The overall objective is to development in Tigray and livelihood of rural househ energy technologies. The specific objectives and PV technologies for the ta their dissemination and pr PV systems at social facil community centres so that use of medical equipment information and communi The combined effect of th positive impacts on climat harmful emissions and hat the successful implementa and SNNPR. Year: 2014 Total funding: €500,000 Implementing body: GIZ
Malawi	Mitigation	Development of TEG Stoves	- Energy	Public	Public	Implemented	The overarching objective appropriateness of the TE technology as a low-cost of grid Malawi thus greatly of of the rural off the grid co emissions. Year: 2014 Total funding: €120,000 Implementing body: Trini

lditional information^d

orts the Network of Small-Scale Farmers' the focus of this programme is the er groups and networks at all levels acity building, economic empowerment e change has caused increasing concern ng problems. These are manifested in rity, conflicts over land use and struggle estors" and small, native producers. This knowledge and training of farmers in roduces adaptive technologies to improve gement.

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VIWATA; small holder farmers and

s to contribute to regional energy sector and SNNPR and to improve the seholds by providing access to modern

s are, firstly, to enhance access to small e targeted rural households by supporting d promotion and, secondly, to install small acilities such as schools, health posts and that they can offer improved services (e.g. ents that run on electricity; have access to unication technologies, etc.).

f the above interventions will have mate through mitigation of CO2, other hazardous waste. This will contribute to entation of the CRGE strategy in Tigray

tive of the program is to demonstrate the TEG (Thermal Electric Generator)-Stove ost energy for national rollout for rural offily contributing to the energy requirement d communities at low or net-zero carbon

00 rinity College Dublin

Table 8 Provision of technology development and transfer support^{*a,b*}

Recipient country and/or region	Targeted area	Measures and activities related to technology transfer	Sector ^c	Source of the funding for technology transfer	Activities undertaken by	Status	Addit
Malawi	Mitigation	Concern Universal Accelerating Uptake of Improved Cookstoves -	Energy	Public	Public	Implemented	The overall objective of the national target of having 2 cook stove technology add providing technical support other organisations and log Year: 2014 Total funding: 200,000 Implementing body: Conc
Malawi	Mitigation	Pilot Programme to explore Resilence Enhancing Energy Solutions for Fishing Communities-	Energy	Public	Public	Implemented	Proposed programme focu testing and developing a d clean and energy- efficient the fishermen on Lake Ma used for night fishing. At mainstream other clean er lighting & phone charging solar dryers for fish and v communities (Nkhudzi Ba community entrepreneurs initiative. Year: 2014 Total funding: €35,000 Implementing body: REN

^{*a*} To be reported to the extent possible.

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

^c Parties may report sectoral disaggregation, as appropriate.

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

Custom Footnotes

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lditional information^d

f this program is to contribute to the ng 2 million efficient and low emission adopted in Malawi by 2020 while pport and carbon financing services to local and national stakeholders.

oncern Universal

focus. This pilot programme is aimed at a distribution model for state-of-the art, cient solar-powered night fishing lights for Malawi to replace the kerosene lamps At the same time, the project will n energy technologies (e.g. solar driven ing, and energy efficient cookstoves and d vegetables etc) in the 3 pilot i Bay, Salima, Totu island), using urs to ensure sustainability of the

ENAMA

Provision of capacity-building suppo	rt ^a		
Recipient country/region Zambia	Targeted area Mitigation	Programme or project title Provincial Coordinating Plan, Northern Province, Provincial Planning Unit, Kasama NP	Description of programme or project ^{b,c} The Northern Province faces many challenges arising from environmental degradation including diminishing and in some cases disappearing water bodies due to unsustainable use of forest, water and other natural resources. The main aim of the Province is "the improvement of infrastructure, the environment, human capacity development and access to basic social economic services". Activites are planned to strengthe capacity of provincial staff through training, equipping and staffing provincial and district units to address environmental degradation. Promotion of best practices in forest management, enhancement of sustainable forest income and also participation in afforestation and reforestation are other activities are supported through improved planning and budgetary management. Year: 2013
Zambia	Multiple Areas		The primary goal of this programme is to improve the livelihoods, health status, food and nutrition security of poor households in Northern Province, with a particular focus on women and vulnerable groups. One crucial outcome of the programme is increased household food and nutrition security achieved against a background of improved knowledge in integrated soil management practices. To improve capacity Ministry, Provincisl and District agricultural extension workers are trained and equipped to support appropriate farming practices such as conservation agriculture, sustainable land-use and increased productivity while maintaining ecosystem services. Strict environmental guidelines are applied to ensure sustainable use of resources and protection of ecosystems and biodiversity. One of the four key output areas is organising 360 "Livelihood Enhancement Groups and Natural Resource Management Committees"(NRMCs) that will be trained in climate-smart crop, livestock and aquaculture
Mozambique	Multiple Areas	Municipality Development Programme, PDA MUNICIPALITY, Fundo Comum Programa de Desenvolvimento Autarquico	Production, and sustainable use of wetlands. Year: 2013 The programme contributes to urban poverty reduction and improve the living conditions of vulnerable women and men through improvement in the quality of services, strengthening of the autonomy and balanced and sustainable development of the municipalities, and addressing the challenges resulting from climate change and its implications for the environment. The programme has 6 components as follows; 1) Management of Urban Land and Territorial Planning; 2) Financial Management of Municipal Revenues and Expenditures, 3) Solid Waste Management, 4) Urban Services, 5) Support to the Institutional Framework for Support to the Municipalities; and 6) Cross-Cutting Issues: HIV/AIDS, Gender and Climate change which is already visible and is seen as amongst the main challenges to the country's socio-economic development. Agriculture, fisheries, renewable hydro-power, access to drinking water,
Malawi	Multiple Areas	Agro-forestry Food Security Programme (AFSP) Phase II, International Centre for Research in Agro-forestry	sanitation, waterborne diseases and malaria, and infrastructure are all impacted via increased temperatures, changes in rainfall patterns, or extreme events due to climate change. Therefore, the programme aims to contribute to the creation of structural conditions so that municipalities have increased capacity to respond effectively to these challenges. Year: 2013 The AFSP II aims to contribute towards climate-smart agriculture, i.e. agriculture that sustainably increases productivity (food security), resilience (climate change adaptation) and reduces greenhouse gas emissions (mitigation), through the scaling up of governments capacity to incorporate agro-forestry innovations into agriculture in 3 Districts, namely; 1) fertiliser trees and conservation agriculture to build an evergreen agriculture that enhances accumulation of soil organic matter thus enhancing crop productivity and resilience to climate
Malawi	Multiple Areas	Enhancing Community	risks; 2) fruit trees to improve household nutrition, health and income; 3) Fodder trees to improve milk yields for smallholder dairy farmers to enhance nutrition, health and income; and 4) woodlots for firewood and timber production. This project was designed, with input from government departments, to be closely aligned with Malawi's National Adaptation Programme of Action (NAPA), Nationally Appropriate Mitigation Action (NAMA), and the Agriculture Sector Wide Approach Programme (ASWAP). By supporting planting of trees and conservation agriculture to support soil organic matter, this project contributes significantly to the enhancement of carbon sinks. Year: 2013
		Resilience (ECRP), Basket funding with DFID Malawi	livelihoods and give them a voice in decisions affecting them. The programme reduces existing and future risks caused by natural hazards and climate change and strengthens the capacity of vulnerable communities to cope with current risks and adapt to new ones. ECRP aims to reach 600,000 people in eleven vulnerable districts in central and southern Malawi to build their capacity to increase resilience to climatic risks. As building resilience to climatic risks is a defining objective of this programme and includes design and building of small scale irrigation, training extensionists and lead farmers on conservation agriculture, increase district and community organisation capacity, design of District DRR plans and strengthen the responsive capacity of District structures for DRR and WATSAN. Year: 2013
Malawi	Multiple Areas	Agricultural Sector Wide Approach (ASWAp), World Bank	The objectives of this programme are to improve the effectiveness of investments aimed at food security and sustainable agricultural growth, and strengthen the natural resource base in agricultural lands, through a doubling of the area under sustainable land management as a basis for securing ecosystem services and sustainable agricultural productivity. The programme supports institutional capacity building in districts for planning, agricultural policy, land administration and financial management. The programme also supports capacity building of smallholder farmers in inter alia nutrient management and conservation agriculture techniques, diversified crops including agro-forestry and expansion of farmer advisory services. It also provides support to market based agricultural risk management strategies including payment of weather derivative contracts and insurance premiums to cover agricultural production and studies on macro and micro-weather insurance schemes. The programme also supports sustainable water management such as rainwater conservation agriculture and agro-forestry, this project protects and enhances sinks and thus contributes to climate change mitigation and combats land degradation. By supporting and researching agricultural weatherbased risk management, early warning systems and sustainable water management this project also supports long term adaptation to climate change. Risk management and early warning systems also contribute to Disaster Risk Management. Ireland has placed particular emphasis on the integration of drought resistant legume seed, principally ground nuts, pigeon peas and beans, into the national agricultural systems, to improve soil fertility management and nutritious food production. Year: 2013
Malawi	Multiple Areas	Conservation Agriculture Techniques, NASFAM	The project promotes the principles and practices of conservation agriculture under smallholder farmer conditions in the context of climate change and escalating fertiliser prices in order to achieve sustainable agricultural production, thereby achieving sustainable food and cash crop production while reversing environmental degradation. This project specifically aims at; increasing awareness and adoption of conservation agriculture; building capacity to support adoption of conservation agriculture; documentation and adoption of best-practices; increased nitrogen fixation in soil; water conservation, agro-forestry, promotion of the use of organic matter as fertiliser; and increased policy influence for smallholder farmers. Conservation agriculture contributes both to mitigation of, and adaptation to climate change. Through minimal soil disturbance and maintenance of soil cover, conservation agriculture also combats land degradation. Capacity building for conservation agriculture is an important dimension of this project with training of trainers (1500 NASFAM farmer trainers), training of 60 field officers, use of demonstration plots, development of conservation agriculture resource centres, and field days all included. Year: 2013
Ethiopia	Multiple Areas	Payment for Climate Resilience in Lake Hawassa, SOS Sahel Ethiopia	The project aims to build resilience and adaptation to climate extremes of smallholder households in the Lake Hawassa ecosystem by bringing measurable improvements in their food and nutritional status. The project promotes different climate-smart agricultural practices, technologies and approaches that increase productivity whilst ensuring environmental sustainability. The project will build the resilience of individuals, households and communities by improving and diversifying livelihoods, developing community based management systems of resources critical to resilience (water, wetlands, farmlands, communal land and forestsand protecting biological diversity). The project embeds disaster risk reduction, climate change adaptation and mitigation into long term development, strengthening market access, building institutional capacity for effective disaster risk management and development and action research to generate evidence to influence policy and practices. The project supports adaptation to both slow onset disasters (e.g. droughts) and sudden onset events like floods and landslides. Capacity Building interventions range from strengthening community based integrated watershed management, piloting and testing of various climate-smart agriculture practices, technologies and approaches such as agroforestry, identification and promotion of non-farm rural economic enterprises, strengthening access to rewarding and new market opportunities, institutional building of public and private sectors and community based organisations to effectively manage disaster risk and long-term development, strengthening early warning schemes, access to weather/climate information and provision of reliable and affordable energy. Year: 2013
Ethiopia	Multiple Areas	Payment for two projects agroforestery and smallholders, Tigray Bureau of Agri and Rural Development	The goal of the first project is to contribute to the regional agricultural GTP through effective and efficient use of improved crop varieties that are responsive to climate change and distribution of improved livestock technologies. The project also includes support for Farmer Training Centres. In this way the project contributes to adaptation by assisting farmers capacity to produce climate resilient crops. This project aims to address the seed supply challenge by facilitating access to improved seed varieties, enhanced access to better quality seed and increased seed management capacity. The focus of the second project, "Enhancing Climate Resilient Green Economy through re- afforestation, participatory agro-forestry and alternative energy sources" includes 1) Watershed management through the promotion of multipurpose tree plantation, 2) participatory agro-forestry and 3) provision of alternative energy sources from wasted sesame straw. The project supports capacity building for climate change by training farmers and extension workers in agro-forestry techniques. Forestry and agro-forestry production systems have been found to provide a multitude of goods and services and hence the capacity to address different constraints for different consumers over different time periods. They can contribute to household income/consumption directly through the production of goods and services such as fodder for livestock, reduction of land degradation, improved soil and water conservation. In addition, other benefits can be realised downstream through reduction of soil
Viet Nam	Multiple Areas	Programme 135, Local Aid Recipient	The National Targeted Program on Sustainable Poverty Reduction Program 2012 - 2015 focuses on the following 4 projects: (i) support construction of infrastructures in poor districts, most disadvantaged communes in coastal areas and islands; (ii) support construction of infrastructures in most disadvantaged communes, frontier communes, safe zone communes and most disadvantaged villages; (iii) replication of poverty reduction models; and (iv) support capacity building, communication, monitoring and evaluation of the program implementation. Irish Aid provides earmarked budget support to the most disadvantaged communes in improving their basic infrastructure and accessibility to services for poor ethnic minorities. The infrastructure and services also support the climate resilience of these communities. Year: 2013
Malawi	Adaptation	Agrofrestry Food Security Program (AFSP Phase II).	The AFSP II aims to contribute towards climate-smart agriculture, i.e. agriculture that sustainably increases productivity (food security), resilience (climate change adaptation) and reduces greenhouse gas emissions (mitigation), through the scaling up of agro-forestry innovations. This project was designed, with input from government departments, to be closely aligned with Malawi's National Adaptation Programme of Action (NAPA), Nationally Appropriate Mitigation Action (NAMA), and the Agriculture Sector Wide Approach
Malawi	Multiple Areas	Agriculture Sector Wide Approach Support Project (ASWAP SP MDTF).	Programme (ASWAP). Year: 2014 The objectives of this programme are to improve the effectiveness of investments aimed at food security and sustainable agricultural growth, and strengthen the natural resource base in agricultural lands, through a doubling of the area under sustainable land management as a basis for securing ecosystem services and sustainable agricultural productivity. By supporting conservation agriculture and agro-forestry, this project protects and enhances sinks and thus contributes to climate change mitigation and combats land degradation. By supporting and researching agricultural weather-based risk management, early warning systems and sustainable water management this project also supports long term adaptation to climate change. Risk management and early warning systems also contribute to Disaster Risk Management. Year: 2014
United Republic of Tanzania	Multiple Areas	Agriculture Sector Development Programme (ASDP).National agriculture programme focusing on small holder farmers productivity and increased incomes	The aims of the programme are to promote private investment based on an improved regulatory and policy environment and to enhance sustainable agricultural production and productivity through better access to and use of; agricultural knowledge, improved marketing systems and infrastructures. The programme promotes conservation agriculture practices, agro-forestry practices, thus supporting carbon sinks and promotes drought resistant crops, water conservation and improved irrigation and the use of indigenous crops and livestock species, thus supporting climate resilience. Year: 2014
United Republic of Tanzania	Multiple Areas	Pastoralist programme: support to pastoral CSO and communities to improve livelihood and mitigate climate change	The goal of this programme is to reduce the poverty and vulnerability of pastoralist communities in Tanzania. The pastoralist strategy of flexible tracking of resources is well- adapted to short-term climate variability and is a pre-condition for adaptation to more frequent extreme events and long-term climate changes. By promoting and supporting pastoralism as an adaptive and resilient way of life, this project contributes to adaptation to climate change. By promoting local livestock landraces which have greater resilience to drought, this project also support biological diversity. Year: 2014
United Republic of Tanzania	Adaptation	MVIWATA; strengthen lobbying and farmers networks, capacity of farmers (farmers voice)	This programme supports the Network of Small-Scale Farmers' Groups in Tanzania. The focus of this programme is the strengthening of farmer groups and networks at all levels including through capacity building, economic empowerment and advocacy. Climate change has caused increasing concern and exacerbates existing problems. These are manifested in increasing food insecurity, conflicts over land use and struggle for land between "investors" and small, native producers. This programme builds the knowledge and training of farmers in climate change and mainstreams climate change and environmental concerns in MVIVATA strategy and policy. Poor natural resource management is also addressed. Year: 2014
United Republic of Tanzania	Multiple Areas	SNV: oil seeds value chain project; improving producer assosiation and oil seed value chain and markets	The programme promotes edible oilseeds such as sunflower and sesame seeds to support improved household nutrition and food security in poor communities. Sunflower and sesame seeds were chosen for this project for their potential for increased processing capacity, income and employment, and for being climate smart crops. Year: 2014

Table 9 **Provision of capacity-building support**^a IRL_BR2_v1.0

Recipient country/region	Targeted area	Programme or project title	Description of programme or project b,c
Viet Nam	Adaptation	Technical Assistance to Poverty reduction programmes and policies in Vietnam	The aim of the project is to help mainstream poverty reduction in ministries" plans and policies and to help the National Targeted Program on Sustainable Poverty Reduction (NTP-SPR) be designed and implemented effectively, contributing to rapid poverty reduction in poorest districts, communes and villages and of ethnic minority people. The project will help by providing necessary technical assistance and capacity development support in planning, developing guidelines and providing policy recommendation and advice for poverty reduction. This project is considered crucial to monitor and understand thoroughly the situation of poverty relapse and vulnerability increase due to the impacts of economic shocks, diseases, national disasters and climate change and to use this understanding to design, operate/implement poverty reduction policies and programs. Year: 2014
Mozambique	Multiple Areas	Building a Competitive Horticulture Cluster & Revitalising the Coconut Sector	The aim of this project (2013-2017) is to stimulate growth of the agricultural economy and enhance long-term resilience of the poorest households by improving productivity of horticulture and in particular coconut trees through re-planting and intercropping this is expected to lead to increased productivity due to improved soil fertility while building the capacity of the provincial directorate of agriculture (DPA). Climate change is recognised and the project includes an early objective to increase capacity for mitigation and adaptation at local level. Farmers also receive training in organic farming, improved crop rotation and improved water management and irrigation for conservation of water resources. Year: 2014
LDCs, Ethiopia, Lesotho, Malawi, Mozambique, Sierra Leone, United Republic of Tanzania, Uganda, Viet Nam, Zambia	Multiple Areas	IIED Support to Integrate Climate Change into development programmes	Development of the Climate Change and Development Learning Platform to better integrate climate risk into development planning and programmes. The support provides for capacity building for the Least Developed Countries Group in the UNFCCC, and Irish Aid Partners in 9 key partner countries. Year: 2014
Zambia, Uganda	Adaptation	WRI support for adaptation finance tracking	Developing the capacity of civil society groups and Local Governments to track adaptation financing to the local and its use to address climat change impacts at community. Year: 2014

^{*a*} To be reported to the extent possible.

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

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